

IFRI Data Entry Log

	Name of Person Entering Data	Team #	Date	Time	List the Plots IDs for the Forms Which You:		Which Question Did you End With?
					Completed Data Entry	Started, But Did Not Complete Data Entry	
1	Walker DePuy	4	10/14/10	12:30	92, 93	91, 94, 111	parts missing noted on form
2	Lisa Parker	4	10-15-10	8a-12	132, 133, 134	94, 112, 113, 114	0 See error log
3	Christoph Nolte	1/4			81	135, 136, 137, 138, 140	C1 issues/wrong date, see error log
4	Nathan Clay	2	10/14/10	2-4pm	76, 77, 78, 79	115	Di - need sweet cherries
5	Kayla Yurco	2	10/15/10	2-4pm	123, 122, 121, 120	85, 86	
6	Bonny Roman	1/4	10/15/10	4-6	85, 86, 88, 89	85, 86, 88, 89	
7	Patrick	3	8/20/2010	3-6:15	115, 116, 117, 118		
8	Jean Paul	1	20/20/10	6:56	90-95-96-97-98-99		
9	Marcelo Clarice	1	21/10/10	8:30am	100-101-102-103-104		
10	Alexander	4	22/10/10	11-2pm	124, 125, 126, 127		
11	Dieter Bonna	3	22/10/10	2-4pm	128, 129, 130, 131, 132, 141		
12	Emily Etue	2	10/23/10	1-4:30pm	108, 109, 110, 119, 83, 84, 82	103, 104, 117, 95, 81, 107, 109, 83, 80 need ?'s from associated	data log
13					105, 106, 81, 80, 107	Finished except: could not get Gen ?'s GEN	
14	VIJAY	4	10/24/10	3-5:12	140, 139, 137, 135, 91	91	
15	Bridget Scallen	4	10/25/10	9am	91, 111	(113)	
16	LISA PARKER	4	10/25/10	11:50	81 WENT THRU EACH TEAM		
17				1: P	2: P		
18					142, 143, 144, 145	146	
19					147		
20							

120 of 10-25 all in need of correction/completion *YDP*

grp 4

IFRI Data Entry Error/Question Log

Name of Person Entering Data: Lisa Arizer

Date: 10 15 10

Page 7 of 7

Plot ID (e.g. 86)	IFRI Question ID (e.g. A7)	IFRI Form Page # (e.g. pg 8)	Comments/Questions
112	C.1	5	2 unspecified Hicories Walker ✓
112	D.1	7	BIK Cherry dbh 11.1 or 17.1 eleven seventeen Walker ✓
113	A.10	3	% of crown cover ✓
113	C.1	6	Missing sp. MISSING SP ✓
114	D.7	7 8	Missing spp. Missing sp. ✓

As of 10-25 Master Error Log

IFRI Data Entry Error/Question Log

Name of Person Entering Data: _____

Date: _____

Page _____ of _____

Plot ID (e.g. 86)	IFRI Question ID (e.g. A7)	IFRI Form Page # (e.g. pg 8)	Comments/Questions
TEAM 1	#86 UNKNOWN species Entered as 88 SAME ✓ 95 SLOPE/ASPECT ✓ 96 UNK SPP →	"GENUS SPP" * GEN #3 subdom ✓	"Genus spp" ✓
	100 SAME ✓		
TEAM 2	#83 UNK SPP - # NOT ENTERED ✓ #107 SAME ✓		
TEAM 3	# 117, 118, 131	SOME CONFUSION regarding Ht. only ✓ Individuals - DATA was entered as such PLEASE CONFIRM INTENT	
TEAM 4	#94 MISSING SLOPE/ASPECT ✓ #112, 113, 114 UNKNOWN species ✓ #124-127 PINE	CONFUSION - PLEASE CONFIRM CORRECTION	○

10.25 TAP

IFRI Data Entry Error/Question Log

Name of Person Entering Data: EmilyDate: 10/23/10

Page _____ of _____

Plot ID (e.g. 86)	IFRI Question ID (e.g. A7)	IFRI Form Page # (e.g. pg 8)	Comments/Questions
10.25 109	D1.	p. 8	Was it determined if the scarlet oak was indeed scarlet oak? or black oak? I entered it as black oak. -
10.25 83	C1.	p. 5	No name on 1st Sapling, did not enter it in, only the 2 other saplings were entered.
81	Plot 87	was entered as Plot 8.	I'm not sure how to change the plot number. 'Plot 81' needs to be changed to 'plot 87' so that the real plot 81 can be entered
10.35 80	C	p. 5	Silky dogwood has not been entered. Species is not in drop down menu so I didn't enter it.
→ CORRECTED			
? 107	C	p. 5	still unidentified sapling, did not enter into ifri database, just entered other two saplings.

10.25

ALL

GEN

p. 10

could not copy and paste the questions into GEN - description of gen.?s methodology used.

Problem solved, we changed it. (Lauren + I)

~~80~~, ~~81~~, ~~82~~, ~~83~~, ~~84~~

fixed all generic 7s

~~105, 106, 107, 108, 109, 110, 111, 120, 121, 122, 123~~

~~85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99~~

~~100, 101, 102, 103, 104~~

~~917 → 907~~

76-

70^s ✓

~~111 → 110~~

#

80^s ✓

124 → 127

90^s ✓

~~132 → 137~~

100^s ✓

~~140~~

110^s ✓

120^s

950 of 10.25

DISREGARD



IFRI Data Entry Error/Question Log

Name of Person Entering Data: _____

Date: _____

Page _____ of _____

Plot ID (e.g. 86)	IFRI Question ID (e.g. A7)	IFRI Form Page # (e.g. pg 8)	Comments/Questions
115	P. 9. 8 11 D1.	pg 8	Sweet cherry has a " ? " I entered as a sweet cherry ✓
117			See comment on stamped on the top of the form ✓
118		pg 8	See stamped comment Black Walnut } not entered. Box Elder ✓
91			there is two plot no 91 (Group Team 4 introduced another plot "91" I leave this over.
95	A7	P2	Data missing

IFRI Data Entry Error/Question Log

Name of Person Entering Data: NATHAN CLAY

Date: 10/15/10

Page 1 of _____

Plot ID (e.g. 86)	IFRI Question ID (e.g. A7)	IFRI Form Page # (e.g. pg 8)	Comments/Questions
86	A7	8	not filled because the <PSTEE/> is missing.

still needs completion/correction

R50f 10.25

IFRI Data Entry Error/Question Log

Name of Person Entering Data: Jean Paul

Date: 20-10-2010

Page _____ of _____

Plot ID (e.g. 86)	IFRI Question ID (e.g. A7)	IFRI Form Page # (e.g. pg 8)	Comments/Questions
91			there is two plot's number 91. after examination, which Rached, one will be a 97 ^{is added} ✓
95	A7	P2	Data missing ^{like that} ✓
95	A7	P.3	field not available. ^{because} ✓
96	D1	p.8	Several botanical names missing. ✓

Asaf 10.25

IFRI Data Entry Error/Question Log

Name of Person Entering Data: _____

Date: _____

Page _____ of _____

Plot ID (e.g. 86)	IFRI Question ID (e.g. A7)	IFRI Form Page # (e.g. pg 8)	Comments/Questions
Last Plots	146 D.1 p8	BIK cherry Missing	dbh ✓

IFRI Data Entry Error/Question Log

Name of Person Entering Data: Christoph
 Page _____ of _____

Date: 10 15 10

Date

Plot ID (e.g. 86)	IFRI Question ID (e.g. A7)	IFRI Form Page # (e.g. pg 8)	Comments/Questions
135	CA	P5	Measured tree heights outside 3m plot. Not sure whether they should be entered ✓
136	CA	P5	see above ✓
137	CA	P5	Code "S" does not exist → position 3 trees not entered into DB ✓
1309 / 140	CA	P5	same as above (135/136) ✓

Own error: entered wrong plot date!

131

Missing accuracy

~~XXXXXXXXXX~~

24
checked
total

123 ✓
122 ✓
146

136

Didn't check 'absent' for epiphytes
Coordinates mistyped

140

Coordinates mistyped

143

No coordinate info.

76.

OK.

77

Ag - incorrect

~~φ 17.2~~

~~φ 18.5~~

~~φ 18.5 - h 24 - 29.2 - 29.2~~

Pinus φ 18.5 - h 24. do not exist or φ = 14.3 → wrong φ.

~~IFPA ~~φ 18.5 - h 24 - 29.2 - 29.2~~~~

~~Quercus alba φ 29.2 - h~~

~~Pinus serotina φ 29.2 - h 29.2~~

missing (2) -

78

Ag - incorrect.

~~Some~~ missing comments.

check about dead tree

79

OK.

80

no coordinates in fo

81

no coordinates in fo.

85

φ 11.2 h - 17 = Pinus serotina not Pinus resinosa

φ 15.2 -

same.

φ 26 -

"

2 missing trees:

~~φ 15.2 = Pinus serotina~~ φ 10 = Pinus serotina

124 missing dead trees.

max φ 26.7, 37.3, 0

127 missing dead trees.

φ ~~24.2~~ 21.4, 29.2, ~~33~~

27 31, 22.9

Plot 1

Observations

Quality

(4)

#87

A 11. incomplete.

Pinus nigra - 22.8 only one.
There is a 22.4 ...
22.8 was changed to 22.4.

Entry coordinate values.

96.

There is a missing trees
(Paper #12 - computer #10)

~~The~~ tree ϕ 11.5 (form = Pinus
serotina, IFR1 database = Pinus
resinosa)

Dead tree ϕ 19.2 (Paper form) \rightarrow
19.5 (Data base).

Missing \rightarrow

Quercus coccinea - ϕ 67.6 - h = 34. ✓

Quercus velutina ϕ 48.6 - h 0. ✓

missing heights
by ϕ class

10-19.9 \rightarrow 1

~~20~~ $>20 \rightarrow$ 2

① a height was measured for a ~~tree~~ ^{dead} tree.

② missing heights by ϕ class - 10-19.9 \rightarrow 0

$>20 \rightarrow$ 3

~~There is not~~

There is not tree heights for

trees < 10 cm or note

that there were not

trees closed by to measure.

~~one~~

Sampling heights \rightarrow only ~~+~~ ^{one measurement} there were

only heights for ϕ class > 20 cm.

101

Ag \rightarrow Northwest / IFR1 - North.

~~Pinus nigra ϕ 55.4 (paper) ϕ 54.5 (IFR1).~~

105

OK

115

Missing coordinates + error
Acer rubrum entered for Acer saccharum

121

DBH entered as '0' instead of '999'
for saplings outside 3m plot

1 Height missing from overstory

109

~~Missing coordinate info.~~
Missing coordinate info.

114

Entered 1.0 instead of 1.5 for slope
Missing coordinate info.

133

Missing 1 tree

~~Missing 1 tree~~

120

Entered '0' instead of '999' for
sapling outside 3m plot

1 Duplicate tree

125

1.0 entered instead of 1.5 for slope
Dead trees not entered

only 4 heights, one on a dead tree

IFRI Data Entry Instructions

Getting Started:

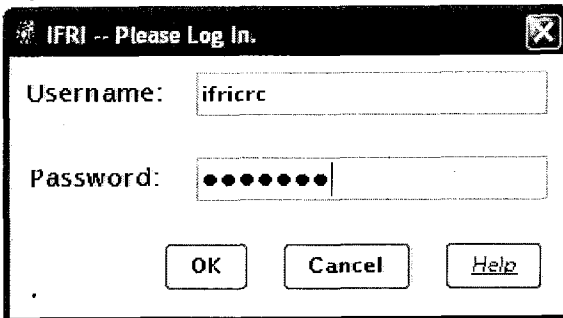
When you arrive at the IFRI Computer Lab (4024 Dana) do the following:

1. If the door is locked, checked with Joan Wolf in 4032 for the key.
2. Go to the computer next to the coffee machine.
3. Sign in on the "IFRI Data Entry Log" Sheet.
4. Log on to the computer using the information below:
 - a. username: **snre-ifridataentry**
 - b. password (case sensitive): **NRE501ifri2010**

5. Please **DO NOT** use any other programs on the computer other than the IFRI Data Entry Program while you are logged in with this username and password. For example, do not look on the internet, check your email, or plug in USB drives. Failure to follow these directions may result in corruption of the database, unknowingly installing viruses on the computer, and other undesirable issues. Also, please do not share this username or password with anyone outside of the IFRI class.
6. Wait a few minutes for the computer to fully boot up.
7. Double click on the IFRI icon on the desktop to open the IFRI Data Entry Program.



8. Log on (username and password are the same)



9. On the "Site Visit" Tab, make sure the "Stinchfield Woods" site is highlighted. Then go to the "Forest Plot" Tab to begin data entry,



Selecting a Plot Form to Begin Data Entry:

1. Look at the "IFRI Data Entry Log" sign in sheet to find out if someone one your team has started a form but did not complete it. If there is a partially completed form from your team, you should begin where the last person left-off (see log sheet for the question they left off at).
2. Open the file folder with the name of your team (e.g. Team 1, Team 2, etc.).
3. Look in the folder named "Partially Completed Forms."
 - a. If there is a Plot Form in this folder, you should begin with this plot.
 - b. If there is not a Plot Form in this folder, move to Step 3.
4. Look in the folder named "Available Forms."
 - a. Select the Plot Form with the lowest plot ID to begin data entry.
5. After you complete a form, move it to your team's folder that says "Completed Forms."
6. Select a new form from the "Available Forms" folder and continue data entry for your two hour time block.
7. When you are finished, fill out the "IFRI Data Entry Log" form with the forms you completed, partially completed (and if so, where you left off).

Keeping Track of Progress:

1. After you enter each question on a form, make a check mark on the paper form next to the question. This will help everyone keep track of where they left off. This is especially important when entering the vegetation data.
2. If you encounter a question or problem,
 - a. Put a star next to the question on the paper form.
 - b. Enter it on one of the "IFRI Data Entry Error/Question Log" sheets in the "Error Log Sheets" folder.
 - c. Move on to the next question to continue data entry.

How to save back-up copies of the database:

Back-up copies of the database should be saved after each data entry session, and preferably after every new plot is entered.

Steps to back-up the database:

- a. Open the database back up folder: C:\Program Files\IFRI\DataBase\backups.
- b. Create a new folder with your name (e.g. Rachel).
- c. Open the folder on the C drive where the IFRI database is stored: C:\Program Files\IFRI\Database\ifri.mdb
- d. Copy ifri.mdb from the C drive and paste it into C:\Program Files\IFRI\DataBase\backups\yourname\ folder.
- e. Rename the copy of the database which you have just pasted into the IFRI_Database_Backups, using the following format: ifri_backup1, ifri_backup2, ifri_backup3, etc.

General info related to entering Forest Plot data:

1. A species must be listed in the Master Species List under the Forest Form before it will appear as in the species drop-down menu in the Forest Plot Form. I've created a Master Species List based on the species we've encountered already in Saginaw, but you will need to add any new species to the Master Species List as you encounter them. To do that:
 - a. Click on the Forest Form, and Choose Stinchfield.
 - b. Click on the Product Species Tab and scroll to section C2 (Master Species List for Plants)
 - c. Click on "Add New"
 - d. Highlight 'Please Select...' under the Botanical Name, and delete that text, then enter the Latin name for the species in that field.
 - e. Enter the Common name for that species in the Local Name field.
 - f. Enter Yes or No for <F_ABUNDANT> based on your judgement of whether the species is commonly encountered in the forest or relatively uncommon.
 - g. Click OK

- h. Now you can go back to the Forest Plot Form, and the species will appear in the drop-down menu when you are entering sapling & tree data...
2. Updating a record in the Master Species List: Select the species record which you would like to modify. Alter the existing species name by adding a character at the end of the name (e.g., change *Acer rubrum* to *Acer rubrumx*). Choose 'Apply'. Click on the newly altered record (e.g., *Acer rubrumx*). Update the other fields in that record which you want to modify, then also change the species name back to its correct name. Choose 'Apply'.
3. Entering Latitude and Longitude: You do NOT need to enter the latitude and longitude information for each plot. We are going to import these coordinates from the GPS unit at a later time.

How to enter standing dead trees:

For Standing Dead Trees, I've created a species called XXXX (local name = Standing Dead Tree). Please use this for all the Standing Dead Trees, regardless of their species.

How to enter stems measured for understory height, which are OUTSIDE the 3m radius shrub and sapling plot:

These stems should be entered under section C1 of the Forest Plot form (Shrubs and Saplings tab):

- a. Enter the stem as normal (species, plant type, and height).
- b. For the Stem Diameter (DBH), enter '999'.

How to enter the generic questions for each plot form:

1. Click on the Generic Fields tab of the Forest Plot form. Select and copy the text under the 'GEN. Description of the generic questions and the methodology used' section from a previous plot form for Saginaw Forest. Paste this text into the new plot form. (Also pasted below here):

PGENSNUM1: Is the Understory canopy layer present within the 10m radius plot? (1 = yes; 0 = no). Understory layer is stems 2.5 - 9.0 cm DBH.

PGENSNUM2: Is the Sub-dominant overstory canopy layer present within the 10m radius plot? (1 = yes; 0 = no). Sub-dominant overstory is stems 9.1 - 20 cm DBH.

PGENSNUM3: Is the Dominant Overstory canopy layer present within the 10m radius plot? (1 = yes; 0 = no). Dominant overstory is stems > 20 cm DBH

PGENTEXT1: Names the dominant species in the understory layer

PGENTEXT2: Names the dominant species in the sub-dominant overstory layer

PGENTEXT3: Names the dominant species in the dominant overstory layer

2. Enter 0 or 1 under PGENSNUM1, PGENSNUM2, and PGENSNUM3, according to the above description. If dominant species are also recorded on the plot form, list them for the corresponding canopy layer under PGENTEXT1 (understory), PGENTEXT2 (sub-dominant overstory), or PGENTEXT3 (dominant overstory).

Getting Started:

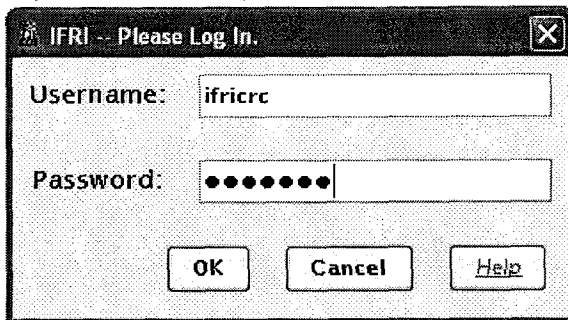
When you arrive at the IFRI Computer Lab (4024 Dana) do the following:

1. • If the door is locked, checked with Joan Wolf in 4032 for the key.40
2. • Go to the computer next to the coffee machine.
3. • Sign in on the "IFRI Data Entry Log" Sheet.
4. • Log on to the computer using ~~your unique name, Windows Active Directory Password, and "UMROOT" selections.~~
5. Double click on the IFRI icon on the desktop to open the IFRI Data Entry Program.



username: snre-ifridataentry
password: NRE 501ifri2010

6. Log on (username and password are the same)



7. On the "Site Visit" Tab, make sure the "Stinchfield Woods" site is highlighted. Then go to the "Forest Plot" Tab to begin data entry,



Selecting a Plot Form to Begin Data Entry:

1. Look at the "IFRI Data Entry Log" sign in sheet to find out if someone on your team has started a form but did not complete it. If there is a partially completed form from your team, you should begin where the last person left off (see log sheet for the question they left off at).
2. Open the file folder with the name of your team (e.g. Team 1, Team 2, etc.).
3. Look in the folder named "Partially Completed Forms."
 - a. If there is a Plot Form in this folder, you should begin with this plot.
 - b. If there is not a Plot Form in this folder, move to Step 3.
4. Look in the folder named "Available Forms."
 - a. Select the Plot Form with the lowest plot ID to begin data entry.
5. After you complete a form, move it to your team's folder that says "Completed Forms."
6. Select a new form from the "Available Forms" folder and continue data entry for your two hour time block.
7. When you are finished, fill out the "IFRI Data Entry Log" form with the forms you completed, partially completed (and if so, where you left off).

Keeping Track of Progress:

1. After you enter each question on a form, make a check mark on the paper form next to the question. This will help everyone keep track of where they left off. This is especially important when entering the vegetation data.
2. If you encounter a question or problem,
 - a. Put a star next to the question on the paper form.
 - b. Enter it on one of the "IFRI Data Entry Error/Question Log" sheets in the "Error Log Sheets" folder.
 - c. Move on to the next question to continue data entry.

How to save back-up copies of the database:

Back-up copies of the database should be saved after each data entry session, and preferably after every new plot is entered.

Steps to back-up the database:

- a. Open the database back up folder: C:\Program Files\IFRI\DataBase\backups.
- b. Create a new folder with your name (e.g. Rachel).
- c. Open the folder on the C drive where the IFRI database is stored: C:\Program Files\IFRI\DataBase\ifri.mdb
- d. Copy ifri.mdb from the C drive and paste it into C:\Program Files\IFRI\DataBase\backups\yourname\ folder.
- e. Rename the copy of the database which you have just pasted into the IFRI_Database_Backups, using the following format: ifri_backup1, ifri_backup2, ifri_backup3, etc.

General info related to entering Forest Plot data:

1. A species must be listed in the Master Species List under the Forest Form before it will appear as in the species drop-down menu in the Forest Plot Form. I've created a Master Species List based on the species we've encountered already in Saginaw, but you will need to add any new species to the Master Species List as you encounter them. To do that:
 - a. Click on the Forest Form, and Choose Stinchfield.
 - b. Click on the Product Species Tab and scroll to section C2 (Master Species List for Plants)
 - c. Click on "Add New"
 - d. Highlight 'Please Select...' under the Botanical Name, and delete that text, then enter the Latin name for the species in that field.
 - e. Enter the Common name for that species in the Local Name field.
 - f. Enter Yes or No for <F_ABUNDANT> based on your judgement of whether the species is commonly encountered in the forest or relatively uncommon.
 - g. Click OK
 - h. Now you can go back to the Forest Plot Form, and the species will appear in the drop-down menu when you are entering sapling & tree data...
2. Updating a record in the Master Species List: Select the species record which you would like to modify. Alter the existing species name by adding a character at the end of the name (e.g., change Acer rubrum to Acer rubrumx). Choose 'Apply'. Click on the newly altered record (e.g., Acer rubrumx). Update the other fields in that record which you want to modify, then also change the species name back to its correct name. Choose 'Apply'.
3. Entering Latitude and Longitude: You do NOT need to enter the latitude and longitude information for each plot. We are going to import these coordinates from the GPS unit at a later time.

How to enter standing dead trees:

For Standing Dead Trees, I've created a species called XXXX (local name = Standing Dead Tree). Please use this for all the Standing Dead Trees, regardless of their species.

How to enter stems measured for understory height, which are OUTSIDE the 3m radius shrub and sapling plot:

These stems should be entered under section C1 of the Forest Plot form (Shrubs and Saplings tab):

- a. Enter the stem as normal (species, plant type, and height).
- b. For the Stem Diameter (DBH), enter '999'.

How to enter the generic questions for each plot form:

1. Click on the Generic Fields tab of the Forest Plot form. Select and copy the text under the 'GEN. Description of the generic questions and the methodology used' section from a previous plot form for Saginaw Forest. Paste this text into the new plot form. (Also pasted below here):

PGENNUM1: Is the Understory canopy layer present within the 10m radius plot? (1 = yes; 0 = no). Understory layer is stems 2.5 - 9.0 cm DBH.

PGENNUM2: Is the Sub-dominant overstory canopy layer present within the 10m radius plot? (1 = yes; 0 = no). Sub-dominant overstory is stems 9.1 - 20 cm DBH.

PGENNUM3: Is the Dominant Overstory canopy layer present within the 10m radius plot? (1 = yes; 0 = no). Dominant overstory is stems > 20 cm DBH

PGENTEXT1: Names the dominant species in the understory layer

PGENTEXT2: Names the dominant species in the sub-dominant overstory layer

PGENTEXT3: Names the dominant species in the dominant overstory layer

2. Enter 0 or 1 under PGENNUM1, PGENNUM2, and PGENNUM3, according to the above description. If dominant species are also recorded on the plot form, list them for the corresponding canopy layer under PGENTEXT1 (understory), PGENTEXT2 (sub-dominant overstory), or PGENTEXT3 (dominant overstory).

DON'T
MISS
STEP

How to save back-up copies of the database:

Back-up copies of the database should be saved after each data entry session, and preferably after every 5 new plots are entered as well (or more frequently as you wish). Steps to back-up the database:

- a. Open the database back up folder: Q:\esa\UM Forests\IFRI_Database_Backups
- b. Open the folder on the C drive where the IFRI database is stored: C:\Program Files\IFRI\Database\ifri.mdb
- c. Copy ifri.mdb from the C drive and paste it into Q:\esa\UM Forests\IFRI_Database_Backups
- d. Rename the copy of the database which you have just pasted into the IFRI_Database_Backups, using the following format: ifri_backup1, ifri_backup2, ifri_backup3, etc.

General info related to entering Forest Plot data:

1. A species must be listed in the Master Species List under the Forest Form before it will appear as in the species drop-down menu in the Forest Plot Form. I've created a Master Species List based on the species we've encountered already in Saginaw, but you will need to add any new species to the Master Species List as you encounter them. To do that:
 - a. Click on the Forest Form, and Choose Saginaw Forest
 - b. Click on the Product Species Tab and scroll to section C2 (Master Species List for Plants)
 - c. Click on "Add New"
 - d. Highlight 'Please Select...' under the Botanical Name, and delete that text, then enter the Latin name for the species in that field
 - e. Enter the Common name for that species in the Local Name field
 - f. Enter Yes or No for <F_ABUNDANT> based on your judgement of whether the species is commonly encountered in the forest or relatively uncommon.
 - g. Click OK
 - h. Now you can go back to the Forest Plot Form, and the species will appear in the drop-down menu when you are entering sapling & tree data...
2. Updating a record in the Master Species List: Select the species record which you would like to modify. Alter the existing species name by adding a character at the end of the name (e.g., change Acer rubrum to Acer rubrumx). Choose 'Apply'. Click on the newly altered record (e.g., Acer rubrumx). Update the other fields in that record which you want to modify, then also change the species name back to its correct name. Choose 'Apply'.
3. Entering Latitude and Longitude: For the Longitude reading, do not enter a negative sign to denote West. This enables you to enter 5 digits after the decimal point for that reading. (The IFRI data entry program restricts the total number of characters in that field to 8). We will add the negative sign back to all of the Longitude readings later.

How to enter standing dead trees:

For Standing Dead Trees, I've created a species called XXXX (local name = Standing Dead Tree). Please use this for all the Standing Dead Trees, regardless of their species.

How to enter stems measured for understory height, which are OUTSIDE the 3m radius shrub and sapling plot:

These stems should be entered under section C1 of the Forest Plot form (Shrubs and Saplings tab):

- a. Enter the stem as normal (species, plant type, and height). For the Stem Diameter (DBH), enter '999'.

How to enter the generic questions for each plot form:

1. Click on the Generic Fields tab of the Forest Plot form. Select and copy the text under the 'GEN. Description of the generic questions and the methodology used' section from a previous plot form for Saginaw Forest. Paste this text into the new plot form. (Also pasted below here):

PGENSNUM1: Is the Understory canopy layer present within the 10m radius plot? (1 = yes; 0 = no). Understory layer is stems 2.5 - 9.0 cm DBH.

PGENSNUM2: Is the Sub-dominant overstory canopy layer present within the 10m radius plot? (1 = yes; 0 = no). Sub-dominant overstory is stems 9.1 - 20 cm DBH.

PGENSNUM3: Is the Dominant Overstory canopy layer present within the 10m radius plot? (1 = yes; 0 = no). Dominant overstory is stems > 20 cm DBH

PGENTEXT1: Names the dominant species in the understory layer

PGENTEXT2: Names the dominant species in the sub-dominant overstory layer

PGENTEXT3: Names the dominant species in the dominant overstory layer

2. Enter 0 or 1 under PGENSNUM1, PGENSNUM2, and PGENSNUM3, according to the above description. If dominant species are also recorded on the plot form, list them for the corresponding canopy layer under PGENTEXT1 (understory), PGENTEXT2 (sub-dominant overstory), or PGENTEXT3 (dominant overstory).

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): ~~6-24-10~~

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 1

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6-24-10

Record the area (in square meters) of each plot below.

Lot Plot No 2: N-1-1

- Small Plot <PAREASmall>
- 28.26 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Name of person filling out this form: Danielle Foryth

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 331m

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|--------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 0° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Moderate amount of downed woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 75 %

(60-85 range)

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

X. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
	<i>Accr saccharum</i>			2	

Danella = 1.7 m

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer Saccharum	Sugar Maple	P	3.25 3.3	3m

→ for 3 stems of each of the dominant spp.

* Other 2 understory tree heights are 3.0 + 3.2 but DBH is less than 2.5cm (both sugar maples)

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer Saccharum	Sugar Maple	T	27.2	
* Aceraceae	Acer Saccharum	↓	T	14.4	16 SD.0
* Aceraceae	Acer Saccharum		T	18.4	18 SD.0
* Aceraceae	Acer saccharum		T	39.1	23 D.0
* Pinaceae	Pinus Ponderosa		Ponderosa Pine	T	27.1
Rosaceae	Prunus serotina	Black Cherry	T	36.0	
Pinaceae	Pinus Ponderosa	Ponderosa pine	T	37.1	17 D.0
* Aceraceae	Acer Saccharum	Sugar Maple	T	27.1	18 D.0
Aceraceae	Acer Saccharum	Sugar Maple	T	54.5	23 D.0
* Rosaceae	Pinus ponderosa	Ponderosa pine	T	47.5	26 D.0.
* Aceraceae	Acer Saccharum	Sugar Maple	T	19.2	11 SD.0
Rosaceae	Prunus serotina	Black Cherry	T	34.4	

for 3 stems of each of the dominant spp. in
 ① Dom. Overstory (>20 cm DBH)
 ② Sub-D. Overstory (>9 to 20 cm dbh)

Forest Plot Form (P), Version 13, Page 7

Rev. 5/07

Dominant Overstory ~ 2 spp. co-dominant → P. ponderosa : A. saccharum
 Sub-Dom. Overstory ~ 1 sp. : A. saccharum

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus ponderosa	ponderosa pine	T	37.0	
Aceraceae	Acer saccharinum	Silver maple	T	31.7	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

~~83.60841 W~~ (decimal degrees)

42.27029 N
or
____ ° ____ ' ____ " (degrees-minutes-seconds)

UTM: Easting _____
Northing _____
Zone _____

E2. What is the longitude of this plot? <PLONGITUDE>

~~42.27029 N~~ (decimal degrees)

83.90841 W
or
____ ° ____ ' ____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP>

~~9.5 m~~

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.5 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory Present? (1 = Y; 0 = N)
 stems 2.5 to 9 cm dbh
 ↳

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number): Sub-dominant Overstory Present (1 = Y; 0 = N)
 ↳ > 9 to 20 cm dbh

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number): Dominant Overstory Present (1 = Y; 0 = N)
 ↳ > 20 cm dbh

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Text question 3:

Answer to question specified by researcher (*text*) <PGENTEXT3>

Question 1 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM1> _____

Question 2 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM2> _____

Question 3 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM3> _____

Question 4 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM4> _____

Answer(s) to question(s) specified by researcher that require(s) more than 250 characters (*long text*) <PGENMEMO>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPN>: 2

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6-24-10

Record the area (in square meters) of each plot below.

Small Plot <PAREASmall>

28.26 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot_PlotNo: V-1-2

Name of person filling out this form: Daniel Foryth

A. CONDITIONS OF THE PLOT

~~A1.~~

Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 310m

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|--------------------------------------------------|---------------------|
| (1) <input checked="" type="checkbox"/> North 2° | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of dead trees, old downed woody debris
 old, not recent
 at least 2 old tree falls

Many dead ponderosa pine, insect damage

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya ovata	Shagbark hickory	P	4.2	4.2

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	30.1	
Moraceae	<i>Morus alba</i>	White mulberry	T	21.7	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	11.3	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	52.2	
			T	34.1	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	21.7	19 SDO
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	12.7	12 SDO
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	31.8	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	Carya ovata	Shagbark hickory	T	4.2	4.2
Aceraceae	Acer saccharum	Sugar maple	T	14.7	12 S.D. *
Aceraceae	Acer saccharum	Sugar maple	T	13.4	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	36.2	27 D.O. * D.O.S
Moraceae	Morus rubra alba	^{white} Red mulberry	T	18.0	
Moraceae	Morus rubra alba	^{white} Red mulberry	T	16.2	
Moraceae	Morus rubra alba	^{white} Red mulberry	T	24.2	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	37.0	
Juglandaceae	Carya ovata	Shagbark hickory	T	13.8	
Pinaceae	^{Pinus} Ponderosa pine	Ponderosa pine	T	28.3	
Pinaceae	^{Pinus} Ponderosa pine	Ponderosa pine	T	28	16 D.O.
Pinaceae	Pinus ponderosa	Ponderosa pine	T	44.1	23 D.O.
Pinaceae	Pinus ponderosa	Ponderosa pine	T	36.5	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	34.8	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE> 42.27043 N
83.80779 W (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE> 83.80779 W
~~42.27043 N~~ (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> 6.5

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.5m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): understory present? 1=yes 0=no

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number): subdominant overstory 1=yes 0=no

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number): dominant overstory 1=yes 0=no

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Text question 3:

Answer to question specified by researcher (*text*) <PGENTEXT3>

Question 1 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM1> _____

Question 2 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM2> _____

Question 3 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM3> _____

Question 4 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM4> _____

Answer(s) to question(s) specified by researcher that require(s) more than 250 characters (*long text*) <PGENMEMO>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 3

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6-24-10

Record the area (in square meters) of each plot below.

- _____ Small Plot <PAREASmall>
- _____ Medium Plot <PAREAMEDIUM>
- _____ Large Plot <PAREALARGE>

Lot - Plot No 2: V-1-3

Name of person filling out this form: Danielle Fonyth

A. CONDITIONS OF THE PLOT

~~A.~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 313 m

A7. What is the steepness of the slope in degrees? <PSTEEP> 1.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North ^{345°} (5) South
 (2) Northeast (6) Southwest
 (3) East (7) West
 (4) Southeast (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Decent amount of downed, coarse woody debris
 & dead trees
 Many standing but dead *Pondarosa* pines

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Asteraceae	Acer Saccharum	Sugar Maple	P	4.0	4.5
Asteraceae	Acer Saccharum	Sugar Maple	P	2.5	4.0

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer Saccharum	sugar maple		40.9	
Pinaceae	Pinus ponderosa	Ponderosa pine		37.5	22
Juglandaceae	Juglans nigra	black walnut		16.0	
Pinaceae	Pinus ponderosa	Ponderosa pine		34.0	24
Pinaceae	Pinus ponderosa	Ponderosa pine		43.5	26
	Pinus ponderosa	Ponderosa pine		38	
Rosaceae	Prunus serotina	Black Cherry		29.4	
Rosaceae	Prunus serotina	Black Cherry		24.3	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE> ~~42.27043 N~~ 42.27043 N (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE> ~~42.27043 N~~ 83.80715 W (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.6m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. *(long text)* <PWKSPMEMO>

Question 1 (answer requires a whole number): *Understory 1*

Answer to question specified by researcher (*integer*) <PGENNUM1> _____

Question 2 (answer requires a whole number): *Subdominant overstory 0*

Answer to question specified by researcher (*integer*) <PGENNUM2> _____

Question 3 (answer requires a whole number): *Dominant overstory 1*

Answer to question specified by researcher (*integer*) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (*integer*) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (*text*) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (*text*) <PGENTEXT2>

Text question 3:

Answer to question specified by researcher (*text*) <PGENTEXT3>

Question 1 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM1> _____

Question 2 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM2> _____

Question 3 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM3> _____

Question 4 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM4> _____

Answer(s) to question(s) specified by researcher that require(s) more than 250 characters (*long text*) <PGENMEMO>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw

Plot identification number <PPIN>: 4

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/29/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- Medium Plot <PAREAMEDIUM>
- Large Plot <PAREALARGE>

Lot Plot No 2: V-2-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 323

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North (5) South
(2) Northeast 50° (6) Southwest
(3) East (7) West
(4) Southeast (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Coarse downed woody debris
2 old downed trees

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 70 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	35.0	
Aceraceae	Acer saccharum	Sugar maple	T	20.6	
Fagaceae	Q Quercus rubra	Red oak	T	52.4	32
Fagaceae	Quercus rubra	Red oak	T	28.0	32
Aceraceae	Acer saccharum ^{saccharum}	Sugar maple	T	28.9	
Aceraceae	Acer saccharum	Sugar maple	T	23.2	
Aceraceae	Acer saccharum	Sugar maple	T	23.8	
Fagaceae	Quercus rubra	Red Oak	T	38.2	
Fagaceae	Quercus rubra.	Red Oak	T	58.2	32 26
Fagaceae	Quercus rubra	Red Oak	T	36.5	
Fagaceae	Quercus rubra	Red Oak	T	45.8	
Aceraceae	Acer saccharum	Sugar Maple	T	25.4	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar Maple	T	10.5	
Aceraceae	Acer saccharum	Sugar Maple	T	10.9	
Aceraceae	Acer saccharum	Sugar Maple	T	10.1	
Fagaceae	Quercus Rubra	Red Oak	T	36.3	
Aceraceae	Acer saccharum	Sugar Maple	T	16.6	
Fagaceae	Quercus rubra	Red Oak	T	37.4	27
Aceraceae	Acer saccharum	Sugar Maple	T	11.9	
Aceraceae	Acer saccharum	Sugar Maple	T	11.6	
Aceraceae	Acer saccharum	Sugar maple	T	39.9	

E. **GEOGRAPHIC AND POSITIONING INFORMATION**

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27055 N (decimal degrees)

or

42 ° 16 ' 15 " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80791 (decimal degrees)

or

83 ° 48 ' 47 " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.6 m

elevation 323 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): understory present? 1 = yes 0 = no

Answer to question specified by researcher (integer) <PGENNUM1> 0

Question 2 (answer requires a whole number): subdominant ^{canopy} present? 1 = yes 0 = no
sugar maple

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number): dominant overstory? 1 = yes 0 = no
oak

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Text question 3:

Answer to question specified by researcher (*text*) <PGENTEXT3>

Question 1 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM1> _____

Question 2 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM2> _____

Question 3 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM3> _____

Question 4 (answer requires a decimal number):

Answer to question specified by researcher (*decimal*) <PGENLNUM4> _____

Answer(s) to question(s) specified by researcher that require(s) more than 250 characters (*long text*) <PGENMEMO>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Sajina w

Plot identification number <PPIN>: 5

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/24/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- Medium Plot <PAREAMEDIUM>
- Large Plot <PAREALARGE>

Lot - Plot No 2: V-2-2

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

~~X~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 304

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 20° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Dead, downed coarse woody debris
Dead standing pines

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer Saccurum	Sugar Maple	P	6.0	4.7
Aceraceae	Acer Sacunum	Sugar Maple	P	3.1	3.0

C1. *Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued*

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer Saccharum	Sugar Maple	T	11.5	
Rosaceae	Prunus serotina	Black Cherry	T	40.1	
Aceraceae	Acer Saccharum	Sugar Maple	T	10.4	8m
Rosaceae	Prunus serotina	Black Cherry	T	32.2	
Fagaceae	Quercus rubra	Red oak	T	16.2	
Pinaceae	Picea abies	Norway Spruce	T	30.7	31m
Pinaceae	Picea abies	Norway Spruce	T	47.0	33m
Aceraceae	Acer Saccharum	Sugar Maple	T	11.3	
Aceraceae	Acer Saccharum	Sugar Maple	T	12.0	
Pinaceae	Picea abies	Norway Spruce	T	20.0	
Aceraceae	Acer Saccharum	Sugar maple	T	14.2	
Aceraceae	Acer Saccharum	Sugar maple	T	17.6	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway Spruce		45.7	36
Pinaceae	Picea abies	Norway Spruce		27.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude ³ of this plot? <PLATITUDE>
42.27067 N (decimal degrees)

or
____° ____' ____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>
8380773 (decimal degrees)

or
____° ____' ____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

15.4 m

1. Understory 1 yes
2. Subdominant ~~over~~ overstory 0 no
3. Dominant overstory 1 yes

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr):

Name of forest <FK_FOREST>: Sajinaw

Plot identification number <PPIN>: 50

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 25 June 2010

Record the area (in square meters) of each plot below.

Plot - Lot No 2 - V-2-3

- Small Plot <PAREASMALL>
- 28 m Medium Plot <PAREAMEDIUM>
- 314 m Large Plot <PAREALARGE>

Name of person filling out this form: Lauren Perzich

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321 m

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

358°

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Lots of downed coarse woody debris, ~ 7 boles on ground, advanced decay. Very sparse understory.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 80 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

~~BX~~ What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar Maple	P	5.0	5m
Aceraceae	"	"	Outside of 3m radius; for height info only. }	X	4.5m
Aceraceae	"	"		X	5.5m

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	* <i>Quercus rubra</i>	Red oak	T	44.0	26m DO sp1
Aceraceae	* <i>Acer saccharum</i>	Sugar Maple	T	42.0	18m DO sp2
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	33.7	
Fagaceae	* <i>Quercus rubra</i>	Red oak	T	33.8	19m DO sp1
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	27.0	
Aceraceae	* <i>Acer saccharum</i>	Sugar Maple	T	28.0	21m DO Sp2
Aceraceae	* <i>Acer saccharum</i>	Sugar Maple	T	43.0	27m DO Sp2
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	40.5	
Fagaceae	<i>Quercus rubra</i>	Red Oak	T	41.0	19m D.O. Sp1
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	43.6	
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	41.5	
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	37.1	

Forest Plot Form (P), Version 13, Page 7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	T	36.0	
Aceraceae	Acer saccharum	Sugar Maple	T	15.0	13m SDO
Aceraceae	Acer saccharum	Sugar Maple	T	12.3	9m SDO
	X Dead Stranding Bole	to 5m.	T	19.7	
Fagaceae	Quercus rubra	Red Oak	T	41.0	
Aceraceae	Acer saccharum	Sugar Maple	T	10.0	18m SDO
Aceraceae	Acer saccharum	Sugar Maple	T	31.6	
Aceraceae	Acer saccharum	Sugar Maple	T	32.2	
Aceraceae	Acer saccharum	Sugar Maple	T	18.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27067 (decimal degrees) N 42.27067

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80724 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.8m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): *Understory Present*

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number): *Midcan Sub-dominant ~~Canopy~~ ^{Overstory}*

Answer to question specified by researcher (integer) <PGENNUM2> 1 (but v. sparse)

Question 3 (answer requires a whole number): *Dominant Overstory*

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw

Plot identification number <PPIN>: 7

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 25 June 2010

Record the area (in square meters) of each plot below.

Plot - Lot No 2: V-3-1

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Name of person filling out this form: Lauren Persha

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

*Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A **clinometer** is typically used for measuring slope (steepness) in degrees.*

A6. Plot elevation in meters. <PELEVATION>: 321

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

40

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

downed coarse woody debris
4 downed boles.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50%

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

C1. *Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued*

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	41.9	25
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	10	
Pinaceae	<i>Picea abies</i>	Norway spruce.	T	24.2	
Pinaceae	<i>Pinus strobus</i>	White pine.	T	46.6	
Aceraceae	<i>Acer saccharum</i>	Sugar maple.	T	12.4	14
Pinaceae	<i>Picea abies</i>	Norway spruce.	T	30 31.7	
Aceraceae	<i>Acer saccharum</i>	Sugar maple.	T	11.7	12
Pinaceae	<i>Picea abies</i>	200 Norway spruce	T	30.4	31
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	18	20
Pinaceae	<i>Picea abies</i>	Norway spruce	T	47.6	25
Pinaceae	<i>Picea abies</i>	Norway spruce	T	39	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	27	

X SDB

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	30.6	
Pinaceae	Picea abies	Norway spruce	T	30	
Pinaceae	Picea abies	Norway spruce	T	40	
Pinaceae	Picea abies	Norway spruce	T	46	
Pinaceae	Picea abies	Norway spruce	T	49.3	26
Pinaceae	Picea abies	Norway spruce	T	54.7	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27131 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80727 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.1m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

understory (spruce)

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

subaluminant (spruce)

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

overstory (Norway spruce)

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 082 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: SF

Plot identification number <PPIN>: 8

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/25/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot NO 2 V-3-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 311

A7. What is the steepness of the slope in degrees? <PSTEEP> 1.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>



Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

6°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

1 downed tree

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rhamnaceae	Frangula alnus	dogwood glossy buckthorn	P	3cm	3.3m
Rhamnaceae	Frangula alnus	dogwood glossy buckthorn	P	3.5	3.2m
		sugar maple	P	3.1	4m

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea Abies	norway spruce	T	42.2	27
Pinaceae	Picea Abies	norway spruce	T	28.7	
Pinaceae	Picea Abies	norway spruce	T	33.1	
Pinaceae	Picea Abies	norway spruce	T	43.3	
Moraceae	Morus Alba Alba	white mulberry	T	11.0	9
Pinaceae	Picea Abies	norway spruce	T	31.4	
Pinaceae	Picea Abies	norway spruce	T	51.4	
Pinaceae	Picea Abies	norway spruce	T	29.9	
Moraceae	Morus Alba	white mulberry	T	11.5	10
Pinaceae	Picea Abies	norway spruce	T	31.2	
Moraceae	Morus Alba	white mulberry	T	7.7	
Moraceae	Morus Alba	white mulberry		11.8	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea Abies	norway spruce	T	41.5	
Pinaceae	Picea Abies	norway spruce	T	46.6	
			T	27.8	26m
			T	25.5	
Pinaceae	Picea Abies	norway spruce	T	29.7	
Pinaceae	Picea Abies	norway spruce	T	35.0	
Aceraceae	Acer Saccharum	sugar maple	T	13.8	16
Aceraceae	Acer Saccharum	sugar maple	T	12.3	
Pinaceae	Picea Abies	norway spruce	T	34.0	33m
Pinaceae	Picea Abies	norway spruce	T	39.0	
Pinaceae	Picea Abies	norway spruce	T	37.9	
Pinaceae	Picea Abies	norway spruce	T	29.1	
Pinaceae	Picea Abies	norway spruce	T	51.7	37m

standing dead bole
→
standing dead bole
→

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27113 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80780 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.6 m

Understory: 1
mixed species

Sub-dominant overstory: ~~1~~
dominant overstory = 1
spruce

(mud berry)



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw

Plot identification number <PPIN>: 10 (for data entry)

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 25 June 2010

Record the area (in square meters) of each plot below.

7 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

100 Lot_Plot 2: new plot (but, 7 V-3-4 coords)

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

*Section
no
longer
covered*

1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION> from livestock, etc

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

not likely in Ulu Forests

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

no - not active mgmt in Ulu Forests

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 315

from GPS

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

enter in a positive number

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

45° around each major direction
i.e. 270-290 is west

Mark only one answer.

- | | |
|--------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 2° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody debris
4 downed boles

A10. What is the percentage of crown cover in this plot? <PCROWN COV>

60% visual estimate

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

ferns or other
climbers growing
on trees

80-90% is extremely
dark in forest
50-70% is more
typical

Must be > 1.5 m, measure stem @ thickest point @ height

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

if > 10 cm dbh \rightarrow tree

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

will become a tree
only those become trees
that don't

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	3.6	4.6
Rosaceae	Prunus serotina	Black cherry	P	6.4	5.7
Rhamnaceae	Frangula alnus	Glossy buckthorn	P	2.5	
Rhamnaceae	Frangula alnus	Glossy buckthorn	P	4.1	4.1
Aceraceae	Acer negundo	Box elder	P	5.2	

Dead but new shoots sprouting at base

D. TREE, PALM, AND WOODY CLIMBER INFORMATION *do not record dead trees*

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	43.5	
Moraceae	<i>Morus alba</i>	White mulberry	T	10.4	11
Ulmaceae	<i>Ulmus americana</i>	Elm	T	14	14
Pinaceae	<i>Picea abies</i>	Norway spruce	T	37.5	36
Pinaceae	<i>Picea abies</i>	Norway spruce	T	32	34
Pinaceae	<i>Picea abies</i>	Norway spruce	T	44.5	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	33.4	31
Pinaceae	<i>Picea abies</i>	Norway spruce	T	45.7	
Moraceae	Morus <i>Morus alba</i>	White mulberry	T	10	11
Pinaceae	<i>Picea abies</i>	Norway spruce	T	46.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	46.9	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	50	

not likely (pointing to 'Is this a tree...')
not likely (pointing to 'Maximum stem diameter...')

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.2729 (decimal degrees) UTM

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80797 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.8m

understory - 1

Subdominant - 1.

overstory - 1

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Sajinaw

Plot identification number <PPIN>: 11 10 (for date entry) [11 on Plot ID list]

Date data collected for this form (mm-dd-yr) <PDATE>: 25 June 2010

Record the area (in square meters) of each plot below.

Plot - Lot No2: V-3-5

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Name of person filling out this form: Karen

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 319m

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

~~00~~
75°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of downed coarse woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 75 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer Saccharum	sugar maple	P	5.8	9
Aceraceae	Acer Saccharum	sugar maple	P	8.1	10
Aceraceae	Acer Saccharum	sugar maple	P	9.1	12

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea Abies	Norway spruce	T	38.3	31
Pinaceae	Picea Abies	Norway spruce	T	43.2	27
Pinaceae	Picea Abies	Norway spruce	T	37.4	
Pinaceae	Picea Abies	Norway spruce	T	34.1	35
Aceraceae	Acer saccharum	Sugar maple	T	23.3	20
Standing dead bole				53.4	
Pinaceae	Picea Abies	Norway spruce	T	44.4	
Aceraceae	Acer saccharum	Sugar maple	T	15.6	16
Pinaceae	Picea Abies	Norway spruce	T	23.8	
Pinaceae	Picea Abies	Norway spruce	T	58.4	
Aceraceae	Acer saccharum	Sugar maple	T	10.3	
Aceraceae	Acer saccharum	Sugar maple	T	15.0	17

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	PIcea Abies	norway spruce	T	47.6	
Aceraceae	Acer Saccharum	sugar maple	T	19.9	
Pinaceae	PIcea Abies	norway spruce	T	29.2	
Pinaceae	PIcea Abies	norway spruce	T	29.8	
Pinaceae	PIcea Abies	norway spruce	T	30.9	
Aceraceae	Acer Saccharum	sugar maple	T	13.3	
Pinaceae	PIcea Abies	norway spruce	T	26.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27079 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80768 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.9

Understory very sparse

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory Present (1/0)

Answer to question specified by researcher (integer) <PGENSNUM1> _____

Question 2 (answer requires a whole number): Sub-Dominant Overstory Present (1/0)

Answer to question specified by researcher (integer) <PGENSNUM2> _____

Question 3 (answer requires a whole number): Dominant Overstory Present (1/0)

Answer to question specified by researcher (integer) <PGENSNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Suginaw

Plot identification number <PPIN>: 12 ~~9 (for data entry)~~ ~~(12 on Plot-ID list)~~

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 25 June 2010

Record the area (in square meters) of each plot below.

Plot - Lot No 2: V-3-6

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Name of person filling out this form: Lauren Persh

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 311

A7. What is the steepness of the slope in degrees? <PSTEEP> ~~2~~ 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | | |
|-----------------------------------------------|----------------------------------------|------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South | 320° |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest | |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West | |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest | |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Downed coarse woody debris; 2 old boles down in plot.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 65 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	None.				

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	11.5	14 m SD
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	33.3	36 m SD
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	52.9	
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	30.8	
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	41.2	
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	11.5	13 m SD
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	38.5	31 m SD
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	37.1	
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	12.5	
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	10.9	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	33.3	
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	54.6	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	24.6	
Pinaceae	<i>Picea abies</i> <i>Acer saccharum</i>	Norway spruce Sugar maple	T	38.8	
	X Dead Standing Bole (Norway Spruce)		X	14.6	
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	28.9	
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	37.8	33 m. DO
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	13.8	18 m. SD0
Pinaceae	<i>Picea abies</i>	Norway spruce	T	43.9	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	28.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

~~N 42.27103~~ (decimal degrees) N 42.27082

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

~~W 83.80660~~ (decimal degrees) W 83.80740

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

~~to 0 m~~ 5.8 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory Present (1/0)

Answer to question specified by researcher (integer) <PGENNUM1> 0 (none)

Question 2 (answer requires a whole number): Sub-dominant Overstory Present (1/0)

Answer to question specified by researcher (integer) <PGENNUM2> 1 (Bogus Maple)

Question 3 (answer requires a whole number): Dominant Overstory Present (1/0)

Answer to question specified by researcher (integer) <PGENNUM3> 1 (Norway Spruce)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw

Plot identification number <PPIN>: 13

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/25/10

Record the area (in square meters) of each plot below.

x Small Plot <PAREASmall>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: V-4a-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 295

A7. What is the steepness of the slope in degrees? <PSTEEP> 1.5

25 June 2010; Plot # 13

Lot - Plot NB2: V-4a-1

V-4a-1

N 42.27130

W 83, 80825

Acc. 7.9m

Elev 2950

Slope 1.5°

Aspect 11° N

Canopy cover 60%

Plot conditions all in'

sparse understory

sparse subdominant.

overstory present - Norway spruce

Outside 3m but heights recorded for canopy structure

Ulmus americana 4.4

Acer saccharum 4.3

Acer saccharum 4.6

Trees:

			DBH	Height
Picea abies	Norway Spruce	T	62.3cm	41m 10
Ulmus americana	American Elm	T	10.2cm	
Picea abies	Norway Spruce	T	34.0	28m 10
Ulmus americana	American Elm	T	11.3	
Ulmus americana	American Elm	T	14.8	14.3
Picea abies	Norway Spruce	T	44.0	
Acer saccharum	Sugar Maple	T	12.2	15
x Dead standing Bole			38.4	
Picea abies	Norway Spruce	T	40.2	
Ulmus americana	American Elm	T	11.2	
Picea abies	Norway Spruce	T	38.7	25m 10
Picea abies	Norway Spruce	T	43.0	
Prunus serotina	Black Cherry	T	12.2	15
Picea abies	Norway Spruce	T	30.7	

Trees (cont'd)

			DBH	Height
<i>Picea abies</i>	Norway Spruce	T	30.0 cm	
<i>Acer saccharum</i>	Sugar Maple	T	14.4 cm	
<i>Pinus strobus</i>	White Pine	T	36.7	
<i>Picea abies</i>	Norway Spruce	T	47.0	
<i>Picea abies</i>	" "	T	31.9	

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | | |
|-----------------------------------------------|-----|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | 11° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	Elm	P		4.4
Aceraceae	Acer saccharum	Sugar maple	P		4.3
Aceraceae	Acer saccharum	Sugar maple	P		4.6

Outside 3m but heights recorded for canopy structure

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>	
	Botanical	Local				
Pinaceae	<i>Picea abies</i>	Norway spruce	T	62.3	41m	DO
Ulmaceae	<i>Ulmus americana</i>	American elm	T	10.2		
Pinaceae	<i>Picea abies</i>	Norway spruce	T	34.0	28	DO
Ulmaceae	<i>Ulmus americana</i>	American elm	T	11.3		
Ulmaceae	<i>Ulmus americana</i>	American elm	T	14.8	14.3	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	44.0		
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	12.2	15	
	X Dead standing bole		T	38.4		
Pinaceae	<i>Picea abies</i>	Norway spruce	T	40.2		
Ulmaceae	<i>Ulmus americana</i>	American elm	T	11.2		
Pinaceae	<i>Picea abies</i>	Norway spruce	T	38.7	25	DO
Pinaceae	<i>Picea abies</i>	Norway spruce	T	43.0		

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	12.2	15
Pinaceae	Picea abies	Norway spruce	T	30.7	
Pinaceae	Picea abies	Norway spruce	T	30.0	
Aceraceae	Acer saccharum	Sugar maple	T	14.4	
Pinaceae	Pinus strobus	White pine	T	36.7	
Pinaceae	Picea abies	Norway spruce	T	47.0	
Pinaceae	Picea abies	Norway spruce	T	31.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27130 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80825 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.9 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

understory = 1 (sparse)

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

subdominant
understory = 1 (sparse)

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

overstory = 1 (Norway spruce)

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw

Plot identification number <PPIN>: 14

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 28 June 2010

Record the area (in square meters) of each plot below.

Small Plot <PAREASmall>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Plot - Lot No 2: V-4a-2

Name of person filling out this form: Lauren Risher

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort? Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 309

A7. What is the steepness of the slope in degrees? <PSTEEP> 1.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

40

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 70 %

A11. Are epiphytes <PE<PIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

~~B~~ What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	— None present —				
Aceraceae	Acer saccharinum	} only measured for understory height - stems are outside 3m radius	x	4.2	
Aceraceae	Acer saccharum		x	4.4	
Juglandaceae	Carya ovata		y	4.7	

CI. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus strobus</i>	White Pine	T	26.4	
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	15.4	12m. SD
	x Standing Dead Tree	(Black cherry)		20.8	
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	20.7	
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	36.1	
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	29.2	
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	48.5	
Pinaceae	<i>Picea abies</i>	Norway Spruce	T	55.9	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	46.9	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	<i>Acer saccharum</i>	Sugar Maple	T	11.1	
	<i>Acer saccharum</i>	Sugar Maple	T	15.6	
	<i>Pinus strobus</i>	White Pine	T	32.5	28 DO
	<i>Pinus strobus</i>	White Pine	T	42.6	26 DO
	X Standing Dead tree	(White Pine)	T	19.7	
	<i>Acer saccharum</i>	Sugar Maple	T	11.7	
	<i>Pinus strobus</i>	White Pine	T	47.0	
	x Standing Dead Tree	(White Pine)	T	35.5	
	<i>Pinus strobus</i>	White Pine	T	50.5	23 DO
	x Standing Dead Tree	(Black cherry)		22.0	
	x Standing Dead Tree	(White Pine)		22.2	
	<i>Acer saccharum</i>	Sugar Maple	T	14.0	9 SDO
	<i>Acer saccharum</i>	Sugar Maple	T	16.7	15 SDO
	<i>Pinus strobus</i>	White Pine	T	39.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27144 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80775 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.7m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory Present : V. Sparse

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number): sub-dominant Overstory : V. sparse

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number): Dominant Overstory

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw

Plot identification number <PPIN>: 15

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 28 June 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 317 Large Plot <PAREALARGE>

Plot - Lot No: ~~5-42a~~
V-42-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 308

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North 41° (5) South
 (2) Northeast (6) Southwest
 (3) East (7) West
 (4) Southeast (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Open
 thick layer of dense herbaceous vegetation
 old downed coarse woody debris.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 30 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

Bone w/viv
10
H

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Juglans nigra	Black Walnut	T	59.1	28m
Aceraceae	Acer saccharum	Sugar maple	T	20.0	13m
	Acer saccharum	Star Sugar maple	T	12.9	10m
	Acer saccharum	Sugar maple	T	16.1	11m
Fagaceae	Quercus rubra	Red Oak	T	15.3	
Aceraceae	Acer saccharum	Sugar maple	T	17.0	13m
dead		Standing Dead Tree		13.7	
dead		Standing Dead Tree		5.5	

Rev. 5-07

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27141 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80724 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.5m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

*Please write your question(s) and the answer(s) where indicated below. **Enter the methodology and all questions together into the database under <PWKSPMEMO>.** Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.*

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. *(long text)* <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (*integer*) <PGENNUM1> _____

Question 2 (answer requires a whole number):

Answer to question specified by researcher (*integer*) <PGENNUM2> _____

Question 3 (answer requires a whole number):

Answer to question specified by researcher (*integer*) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (*integer*) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (*text*) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (*text*) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: ~~002~~ 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw

Plot identification number <PPIN>: 96

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6-28-10

Record the area (in square meters) of each plot below.

Plot Label V-4b1-1

____ Small Plot <PAREASmall>

____ Medium Plot <PAREAMEDIUM>

____ Large Plot <PAREALARGE>

Name of person filling out this form: Daniel Forsyth

A. CONDITIONS OF THE PLOT

~~X~~

Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321.5 315

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North <u>344°</u> | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Downed coarse woody debris
(Tree falls)

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 75 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum (dead)		P	3	
Aceraceae	Acer saccharum	Sugar maple	P	6.3	9m
Aceraceae	Acer saccharum	sugar maple	P	3.2	6m
Aceraceae	Acer saccharum (dead)	sugar maple	P	6.1	9m
Aceraceae	Acer saccharum	Sugar maple	P		8m

Not in 3m plot

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>	
	Botanical	Local				
Dead	Pinaceae	Pinus Ponderosa	Ponderosa pine	T	43.5	
Dead	Pinaceae	Pinus ponderosa	Ponderosa pine	T	27.6	
Dead	Pinaceae	Pinus Ponderosa	Ponderosa pine	T	36.6	29
	Pinaceae	Pinus Ponderosa	Ponderosa pine	T	32.6	29
	Aceraceae	Acer Saccharum	Sugar Maple	T	11.8	
	Pinaceae	Pinus ponderosa	Ponderosa pine	T	38.4	
	Rosaceae	Prunus serotina	Black Cherry	T	11.8	
	Aceraceae	Acer Saccharum	Sugar Maple	T	11.3	18
	Pinaceae	Pinus strobus	White pine	T	44	27
dead			White pine	T	35.9	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	T	46.3	
Aceraceae	Acer saccharum	Sugar Maple	T	10.3	11m
Dead	white pine? (Dead)		T-	16.2	
Dead	Norway Spruce white pine (dead)	Pinus strobus	T	50.2	
Aceraceae	Acer saccharum	sugar maple	T	23.6	
Aceraceae	Acer saccharum	sugar maple	T	10.7	19m
Rosaceae	Prunus serotina	Black cherry	T	37.9	
Dead		White pine (dead)	T	25.9	
Pinaceae	Pinus strobus	White pine	T	44.5	
Pinaceae	Pinus strobus	White pine	T	39.3	28m
Pinaceae	Pinus strobus	White pine	T	35	29
Dead		Black Cherry (dead)	T	20	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27161 (decimal degrees) 42.27166

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 083.80812 (decimal degrees) 83.80816

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

19.9 14.2

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. **Enter the methodology and all questions together into the database under <PWKSPMEMO>.** Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory → 1 yes (sparse)

Answer to question specified by researcher (integer) <PGENNUM1> Subdominant Overstory

Question 2 (answer requires a whole number): 1 yes (sparse) sugar maples

Answer to question specified by researcher (integer) <PGENNUM2> Dominant 1 yes ponderosa white pine

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 033

Date of site visit (mm-dd-yr): ~~##~~ _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 17

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/28/10

Record the area (in square meters) of each plot below.

28 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

316 Large Plot <PAREALARGE>

Plot - Lot 102V-467-2
[V-467-2]

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Lots of damaged coarse woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 72 % 70

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	sugar maple	P	9.5	
Aceraceae	Acer saccharum	Sugar maple	P	9.5	3.1
Aceraceae	Acer saccharum	Sugar maple	P		3.9
Aceraceae	Acer saccharum	Sugar maple	P		3.0

not measured for DBH
"
"

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	28.0	27
Rosaceae	<i>Prunus avium</i>	Sweet Cherry	T	18.0	
Aceraceae	<i>Acer saccharum</i>	sugar maple	T	11.1	9
Aceraceae	<i>Acer saccharum</i>	sugar maple	T	12.9	11
Rosaceae	<i>Prunus ponderosa</i> <i>Prunus avium</i>	ponderosa pine Sweet cherry	T	2.5	
Pinaceae	<i>Pinus ponderosa</i>	ponderosa pine	T	23.3	28
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	20.5	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	28.9	
Rosaceae	<i>Prunus avium</i>	Sweet Cherry	T	18.2	
Pinaceae	<i>Pinus ponderosa</i>	ponderosa pine.	T	28.9	
Pinaceae	<i>Pinus ponderosa</i>	pondrosa pine	T	34.5	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	35.3	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	x <i>Acer saccharum</i>	Sugar maple	T	24.2	
	x <i>Pinus ponderosa</i>	ponderosa pine	T	24.5	
Juglandaceae	x <i>Juglans nigra</i>	black walnut	T	14.9	
	x <i>Pinus ponderosa</i>	ponderosa pine	T	24.1	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	24.5	
Aceraceae	<i>Acer saccharum</i>	sugar maple.	T	13.2	15
Pinaceae	<i>Pinus ponderosa</i>	ponderosa pine	T	42.3	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	27.3	
Rosaceae	<i>Prunus</i> <i>Prunus serotina</i>	black cherry	T	26.3	
Pinaceae	<i>Pinus ponderosa</i>	ponderosa pine	T	25	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	39.6	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	28.2	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	37.7	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	32.2	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	29.0	

Dead
Dead
Dead

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE> 42.27150
~~42.2714150~~ (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>
83.80759 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>
9.9m

18 ✓

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 033

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Sagindaw

Plot identification number <PPIN>: 18

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/28/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDIUM>
- Large Plot <PAREALARGE>

Lot - Plot NO 2 ~ V-416-3
[V-416-3]

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 322

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------|---------------------|
| (1) <u>N</u> North <u>W</u> | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 25 ~~30~~ %

A11. Are epiphytes <PEPIPHYTES>

- (1) X absent?
- (2) _____ few?
- (3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	* MG01			5.4	3.2

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Juglans nigra	Black Walnut	T	47.6	22 22
Aceraceae	Acer saccharum	Sugar maple	T	12.2	
Fagaceae	Quercus rubra	Red oak	T	29.2	
Ulmaceae	Ulmus americana	Elm	T	22	22
	X Dead standing tree	(Ponderosa pine)	T	27.1	
Rosaceae	Prunus serotina	Black cherry	T	14.7	17
Pinaceae	Pinus ponderosa	Ponderosa pine	T	36.5	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	46.3	23
Rosaceae	Prunus serotina	Black cherry	T	39.4	15 15
Rosaceae	Prunus serotina	Black cherry	T	16.3	11 11
	X standing dead bole	(Ponderosa pine)	T	30.4	
	X standing dead bole	(Ponderosa pine)	T	33.6	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X standing dead bole	(Sugar maple)	T	29.3	
Juglandaceae	Juglans nigra	Black Walnut	T	39.4	25
Juglandaceae	Juglans nigra	Black walnut	T	32.1	
	X standing dead bole	Ponderosa pine	T	27.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27176 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80715 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.5

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

understory = 0
Shrub

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

subdominant = 1, mixed

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

dominant overstory = 1
mixed

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw

Plot identification number <PPIN>: 19

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6-28-10

Record the area (in square meters) of each plot below.

Plot - hot No2: ~~V-6-1~~
L → V-6-1

- Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Name of person filling out this form: Danielle Forsyth

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 291

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|--------------------------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest 320° |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some down coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 65 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
		sugar		9.4	

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar maple	P	4.8	11
Aceraceae	Acer saccharum	sugar maple	P	4.4	9
Ulmaceae	Ulmus americana	elm	P		7

not
in
3m

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Silver maple Red maple	T	25.8	
Pinaceae	Pinus ponderosa	ponderosa pine	T	50.6	24
Pinaceae	Pinus ponderosa	ponderosa pine	T	43.3	28
Ulmaceae	Alnus americana	American elm	T	11.3	
Pinaceae	Pinus ponderosa	ponderosa pine	T	30.1	
Rosaceae	Prunus serotina	Black cherry	T	15.7	
Pinaceae	Pinus ponderosa	ponderosa pine	T	47.2	
Ulmaceae	Alnus americana	American elm	T	21.8	
Pinaceae	Pinus ponderosa	ponderosa pine	T	30.9	25
Rosaceae	Prunus serotina	Black cherry	T	28.5	
Pinaceae	Pinus ponderosa	ponderosa pine	T	32.7	
Pinaceae	Pinus ponderosa	Black cherry	T	35.8	

~~Maple~~

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar Maple	T	14.7	20
Aceraceae	Acer saccharum Acer rubrum	Sugar Red maple	T	13.3	14
Rosaceae	Prunus serotina	Black Cherry	T	42.2	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	25.3	
Rosaceae	Prunus serotina	Black Cherry	T	19.9	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	26.4	
Pinaceae	Picea abies abies	Norway spruce	T	20.8	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	33.7	
	dead	pine	T	32.2	
Pinaceae	Picea abies	Norway Spruce	T	36.0	
Ulmaceae	Alnus americana	American elm	T	18.1	15m
Rosaceae	Prunus avium Prunus avium	Sweet Cherry	T	12.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27369 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80824 W (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory 1 yes sugar maple

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number): subcanopy mix 1 yes (maples & cherry elm)

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number): canopy 1 yes pine

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

297.4 10.2m
4227328
83.80840 ✓

MAY 2007
Version 13

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: 4 Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 20

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/30/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot_PlotNO2: V-6-2

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) N No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) Y No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) N No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) N No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 297.4

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|--------------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <input checked="" type="checkbox"/> Northwest 301° |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

3 treefalls

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry Black cherry	P	4.0	3.3
Rhamnaceae	Frangula alnus	Glossy buckthorn	P	3.4	4.2
Rhamnaceae	Frangula alnus	Glossy buckthorn	P	3.0	
Rhamnaceae	Frangula alnus	Glossy buckthorn	P	2.9	
Aceraceae	Acer negundo	Box elder	P	7.3	7

C1. *Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued*

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	47.1	29
	X standing dead bole	(Ponderosa pine)		37.7	
Rosaceae	Prunus serotina	Black cherry	T	29.1	29
	X standing dead bole	(Black cherry)		14.6	
Aceraceae	Acer saccharum	Sugar maple	T	12.4	12.5 ¹³
Moraceae	Morus alba	White mulberry	T	12.5	11.5 ¹²
Pinaceae	Pinus ponderosa	Ponderosa pine	T	40	30
Pinaceae	Pinus ponderosa	Ponderosa pine	T	28	8
Rosaceae	Prunus serotina	Black cherry	T	43.5	
Aceraceae	Acer rubrum	Red maple	T	28.7	19
	X standing dead bole	(Ponderosa pine)	T	38.0	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	49.2	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X standing dead bole	(Black cherry)		13	
Rosaceae	Prunus serotina	Black cherry		17.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27328 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80840 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.2m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory? ~~≠~~ (sparse)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1?

subdominant? =

1 hickory

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?

black cherry / ponderosa pine.

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 21

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/30/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-plotND2: V-6-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 328.5 ³²⁹

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|--------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 2° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Downed coarse woody debris
(+ 2 tree falls)

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 70 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	Aceraceae	Acer saccharum	sugar maple		4.7
	Aceraceae	Acer saccharum	sugar maple		7.5
	Aceraceae	Acer saccharum	sugar maple		6.5

Not in 3m, but measured for height

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	acer saccharum	sugar maple	T	18.8	
Pinaceae	Pseudotsuga taxifolia	douglas fir	T	67.0	27
Rosaceae	Prunus serotina	black cherry	T	28.4	
Rosaceae	Prunus serotina	black cherry	T	17.6	
Pinaceae	Pseudotsuga taxifolia	douglas fir	T	57.4	
Pinaceae	Pinus pondera	ponderosa pine	T	28.3	
Pinaceae	Pinus ponderosa	ponderosa pine	T	31	
Aceraceae	Acer saccharum	sugar maple	T	12.2	11

black cherry?
bc?

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	sugar maple	T	27	20m
dead standing	X Pinus ponderosa ^{Dead standing}	ponderosa spruce? ponderosa pine	T	30.7	
Aceraceae	Acer saccharum	sugar maple	T	33.5	
Pinaceae	Pseudotsuga taxifolia	douglas fir spruce	T	66.5	26
Pinaceae	Pseudotsuga taxifolia	douglas fir spruce	T	45.4	
Rosaceae	Prunus avium	sweet cherry	T	13.2	
Pinaceae	Pseudotsuga taxifolia	douglas fir spruce	T	50.7	
Rosaceae	Prunus serotina	black cherry	T	10.5	12
Rosaceae	Prunus serotina	black cherry	T	59.7	27
Pinaceae	Pseudotsuga taxifolia	douglas fir	T	35.2	
Aceraceae	Acer saccharum	sugar maple	T	29.0	
	X dead standing	douglas fir	T	18.7	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27341 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80776 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

~~0.8~~ 8.4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

(1 yes) understory → very sparse, 1 maple

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number): subdominant → maple (1 yes)

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number): Overstory - mixed (1 yes)

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 22

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/30/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: V-6-4

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 280.5 ²⁸¹

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

8°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

woody debris - 3 treefalls

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Moraceae	Morus alba	^{white} mulberry	P	3.8	3.0
Aceraceae	Acer saccharum	sugar maple	P	outside 3m plot	7.0
Rhamnaceae	Frangula alnus	glossy buckthorn	P	outside 3m plot	4.2

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus ponderosa	ponderosa pine	T	44.6	30
Pinaceae	Prunus Atkinsonii	sweet cherry	T	36.3	
Rosaceae	Prunus serotina	black cherry	T	27.3	14
Pinaceae	Pinus ponderosa	ponderosa pine	T	35.3	28
Pinaceae	Prunus serotina	black cherry	T	20.3	23
Pinaceae	Pinus ponderosa	ponderosa pine	T	38.3	31 31
Rosaceae	Prunus serotina	black cherry	T	14.5	
Pinaceae	Pinus ponderosa	ponderosa pine	T	42.2	
Aceraceae	Acer rubrum	red maple	T	10	9
Rosaceae	Prunus serotina	black cherry	T	11.2	
Aceraceae	Acer rubrum	red maple	T	13.4	
Pinaceae	Pinus ponderosa	ponderosa pine	T	29.9	
Pinaceae	Pseudotsuga taxifolia	Douglas Fir	T	48.2	
	X dead standing pole	Douglas fir	T	21.3	
Pinaceae	Pinus ponderosa	ponderosa pine	T	46.8	

Rev. 5-07

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	T	19.5	
X	dead standing bole	Douglas fir	T	21.7	
λ	dead standing bole	ponderosa pine	T	30	
Rosaceae	Prunus Atkinson	Sweet cherry	T	24	
Rosaceae	Prunus Atkinson	sweet cherry	T	29.4	
X	dead standing bole	black cherry	T	13.3	
Rosaceae	Prunus serotina	black cherry	T	23.4	
⊗	dead standing bole	ponderosa pine	T	28.1	
Rosaceae	Prunus serotina	black cherry	T	19	
Rosaceae	Prunus serotina	black cherry	T	13.5	
⊗	dead standing bole	ponderosa pine	T	31.7	
X	dead standing bole	ponderosa pine	T	29.3	

Pinaceae	Pinus ponderosa	ponderosa pine	T	40.3
Ulmaceae	Ulmus americana	elm	T	13.1
Ulmaceae	Ulmus americana	elm	T	41.1

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27337 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80756 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

1.3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory:
sparse
maple, mulberry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

overstory:
mixed
black cherry
ponderosa pine
tall maple

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

sub-dominant:
sparse
red maple
sugar maple

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 23

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/30/10

Record the area (in square meters) of each plot below.

- 7 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot NO2 - V-6-5

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 337.3 333

A7. What is the steepness of the slope in degrees? <PSTEEP> 0.5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North
- (2) Northeast
- (3) East
- (4) Southeast
- (5) South
- (6) Southwest
- (7) West 260°
- (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

3 tree falls

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 70 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American Elm	P		7.5
Aceraceae	Acer saccharum	Sugar maple	P		7.5
Ulmaceae	Ulmus americana	American Elm	P		7.0

Not in 3m
but measured for height

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus ponderosa	Ponderosa pine	T	38.0'	28.5 29
Aceraceae	Acer rubrum	Red maple	T	11.0'	21.0
Pinaceae	Pinus ponderosa	Ponderosa pine	T	42.3'	
Rosaceae	Prunus serotina	Black cherry	T	49.5'	31.0
	X standing dead bole	(Black cherry)	T	16.0'	
Rosaceae	Prunus serotina	Black cherry	T	37.5'	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	51.0'	
Aceraceae	Sugar maple	↔ Acer saccharum	T	15.6'	11.0
Aceraceae	Sugar maple	↔ Acer saccharum	T	10.3'	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	34.7'	
Rosaceae	Prunus serotina	Black cherry	T	27.3'	
Rosaceae	Prunus avium	Sweet cherry	T	23.0'	
Aceraceae	Acer saccharum	Sugar maple	T	21.6'	
Aceraceae	Acer saccharum	Sugar maple	T	30.7'	16.5 17

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X standing dead bole	(Ponderosa pine)	T	24.2'	
Rosaceae	Prunus serotina	Black cherry	T	32'	
Rosaceae	Prunus serotina	Black cherry	T	43.9'	36.0
Rosaceae	Prunus avium	Sweet cherry	T	25.2'	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	43.5'	
	X standing dead bole	(Ponderosa pine)	T	38.0'	
Aceraceae	Acer saccharum	Sugar maple	T	26.5'	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27302 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80869 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> _____

understory?
(very sparse)
map 6
1 elm

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> _____

subdominant?
sparse - maple

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> _____

overstory?
mixed

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 24

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/30/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - PlotNO2: V-6-6

Name of person filling out this form: Danville Forsyth

CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 275.3

A7. What is the steepness of the slope in degrees? <PSTEEP> 0.75°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 255° |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Downed woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 65 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway Maple P		6.3	8

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus ponderosa	Pine Ponderosa pine	T	29.5	
Aceraceae	Acer rubrum	Red maple	T	11.4	18
Pinaceae	Pinus ponderosa	Ponderosa pine	T	31.3	18
	X Dead standing		T	19	
Rosaceae	Prunus serotina	Black cherry	T	42.7	27
Rosaceae	Prunus serotina	Black cherry	T	4.2	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	28	
	X Dead standing		T	10.8	
	X Dead standing		T	28.5	
Rosaceae	Prunus serotina	Black cherry	T	32.4	
Rosaceae	Prunus serotina	Black cherry	T	35.0	
Rosaceae	Prunus serotina	Black cherry	T	25.8	
	X Dead standing		T	33.0	
Rosaceae	Prunus serotina	Black cherry	T	40.7	31

~~Red Maple~~

~~127 22~~

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina Black cherry	Black cherry		22.7	
	X Dead standing			35.3	
Aceraceae	Acer rubrum	Red Maple		12.7 12.7	22
Rosaceae	Prunus serotina	Black cherry		15.8	
Aceraceae	Acer rubrum	Red Maple		25.0	20
Pinaceae	Pinus ponderosa	Ponderosa pine		29.4	
Rosaceae	Prunus avium	Sweet cherry		24.7	
Pinaceae	Pinus ponderosa	Ponderosa pine		47.2	
	X Dead standing	1		11.4	
Pinaceae	Pinus ponderosa	Ponderosa pine		30.5	
Aceraceae	Acer platanoides	Norway maple		34.2	
	*Dead standing			22.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.2313 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80789 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

16.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory 1 yes sparse

Answer to question specified by researcher (integer) <PGENSNUM1> _____

Question 2 (answer requires a whole number): Subdominant overstory → 1 yes Mayh

Answer to question specified by researcher (integer) <PGENSNUM2> _____

Question 3 (answer requires a whole number): Dominant overstory → 1 yes; ~~dominant~~ mixed

Answer to question specified by researcher (integer) <PGENSNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 25

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 6/30/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - PlotND2: V-6-7

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 292.7 293

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |
- 112

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

4 tree falls - some coarse woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	elm	B P	out of 3m plot	4
Aceraceae	Acer rubrum	red maple	P	out of 3m plot	6.5
Aceraceae	Acer saccharum	sugar maple	P	out of 3m plot	6

C1. *Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued*

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus ponderosa	ponderosa pine	T	39.3	28
Rosaceae	Prunus serotina	black cherry	T	16.8	17
	x dead standing bole	ponderosa pine	T	27.5	
Rosaceae	Prunus serotina	black cherry	T	24.4	
	x Prunus dead standing	black cherry	T	13.6	
	x dead standing	ponderosa pine	T	25	
Pinaceae	Pinus ponderosa	ponderosa pine	T	34	
	x dead standing	black cherry	T	10.2	
Rosaceae	Prunus serotina	black cherry	T	17	26
Pinaceae	Pinus ponderosa	ponderosa pine	T	41.1	30
	x dead standing	ponderosa pine	T	30.9	
Rosaceae	Prunus serotina	black cherry	T	31.2	
Pinaceae	Pinus ponderosa	ponderosa pine	T	40.6	
Aceraceae	Acer platanoides	norway maple	T	37.1	20

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	dead standing	out of plot	T	28.4	
Pinaceae	Pinus ponderosa	ponderosa pine	T	38	
Aceraceae	Acer saccharum	sugar maple	T	19.8	18
Rosaceae	Prunus serotina	black cherry	T	21.5	
Pinaceae	Pinus ponderosa	ponderosa pine	T	46.7	
Aceraceae	Acer platanoides	norway maple	T	20.6	
Pinaceae	Pinus ponderosa	ponderosa pine	T	31.5	
Rosaceae	Prunus serotina	black cherry	T	35.9	
Pinaceae	Pinus ponderosa	ponderosa pine	T	25.5	
Pinaceae	Pinus ponderosa	ponderosa pine	T	40.5	
Rosaceae	Prunus avium	sweet cherry	T	28.6	
Pinaceae	Pinus ponderosa	ponderosa pine	T	37.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27309 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80755 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

~~10.9~~ 7.2

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

sparse
understory:
elm
norway maple

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

sub dominant:
~~XXXX~~

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

overstory: mixed
ponderosa
pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

norway maple
black cherry

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 26

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 1/7/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNO2: IV-1a-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 328

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North (5) South
(2) Northeast (6) Southwest
(3) East (7) West
(4) Southeast (8) Northwest

315°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 75 %

A11. Are epiphytes <PE<PIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Blackcherry	P	4.7	5.2
Ulmaceae	Ulmus americana	American Elm	P	3.9	1.8
Aceraceae	Acer saccharum	Sugar maple	P		4.4

measured for height outside 3M

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	15.2	19.0
Fagaceae	Quercus alba	White oak	T	31.5	24.0
Pinaceae	Pinus strobus	White pine	T	22.9	25.0
Pinaceae	Pinus strobus	White pine	T	38.6	25.0
Fagaceae	Quercus alba	White oak	T	39.4	24.0
Rosaceae	Prunus serotina	Black cherry	T	14.2	
Fagaceae	Quercus alba	White oak	T	36.3	28.0
Pinaceae	Pinus strobus	White pine	T	31.8	
Pinaceae	Pinus strobus	White pine	T	37.5	32.0
Rosaceae	Prunus avium	Sweet cherry	T	18.4	
Pinaceae	Pinus strobus	White pine	T	44.2	29.0
Rosaceae	Prunus serotina	Black cherry	T	12.5	
Rosaceae	Prunus serotina	Black cherry	T	12.1	
Pinaceae	Quercus alba	White pine	T	47.2	

Fagaceae Quercus alba White oak T 32.3

~~Rosaceae Prunus serotina Black cherry~~ T 18.5

Pinaceae Picea abies Norway spruce

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	18.4	16.0
	X standing dead bole	(White oak?)	T	20.3	
Rosaceae	Prunus serotina	Black cherry	T	10.5	
Pinaceae	Pinus strobus	White pine	T	38.5	
Rosaceae	Prunus serotina	Black cherry	T	20.2	
	X standing dead bole	(White oak?)	T	28.0	
Rosaceae	Prunus serotina	Black cherry	T	10.8	
Pinaceae	Pinus strobus	White pine	T	30.7	
Rosaceae	Prunus serotina	Black cherry	T	12.0	12.0
Fagaceae	Quercus alba	White oak	T	42.0	
Fagaceae	Quercus alba	White oak	T	24.5	
Ulmaceae	Ulmus americana	American Elm	T	11.8	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27190 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80497 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

*understory
maple, elm, black
cherry*

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

*subdominant?
Black cherry*

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

*overstory?
white oak
white pine*

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 27

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 1 July 2010

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - PlotND2: IV-1a-2

Name of person filling out this form: Lauren Persha

A. CONDITIONS OF THE PLOT

~~A1~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 307

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Coarse Woody Debris

A10. What is the percentage of crown cover in this plot? <PCROWN Cov> 70 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	<i>Acer platanoides</i>	Norway Maple	P	7.2	8.
Aceraceae Outside 3m radius; for height only	} <i>Acer saccharum</i>	Sugar Maple (For Height only - outside 3m radius.)		Ø	6
		Sugar Maple			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

~~27~~
~~31~~

~~19~~ ~~White oak next to dead tree.~~

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X Standing Dead Tree (Black Cherry)		==	10.9	
Rosaceae	Prunus serotina	Black Cherry	T	12.7	
	X Standing Dead Tree (Black Cherry)		==	10.4	
	X Standing Dead Tree	(White Oak)	==	24.3	
	X Standing Dead Tree (Black Cherry)		==	11.0	
	X Standing Dead Tree (White Pine)		==	43.8	
Fagaceae	Quercus alba	White Oak	T	34.0	22
Rosaceae	Prunus serotina	Black Cherry	T	13.5	
Rosaceae	Prunus serotina	Black Cherry	T	10.9	
Pinaceae	Pinus strobus	White Pine	T	38.9	
Fagaceae	Quercus alba	White Oak	T	25.0	21
Rosaceae	Prunus serotina	Black Cherry	T	11.0	
Fagaceae	Quercus alba	White Pine oak	T	35.6	
Fagaceae	Quercus alba	White Oak	T	46.3	
Fagaceae	Quercus alba	White Oak	T	36.2	
Rosaceae	Prunus serotina	Black Cherry	T	10.8	
	X Standing Dead Tree (White Oak)		=	35.5	

Rev. 5-07

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X Standing Dead Tree	(White Oak)	—	30.6	
Rosaceae	Prunus serotina	Black Cherry	T	12.9	12
Rosaceae	Prunus serotina	Black Cherry	T	12.0	
	X Standing Dead Tree		—	23.1	
Rosaceae	Prunus serotina	Black Cherry	T	11.5	
Rosaceae	Prunus serotina	Black Cherry	T	14.3	11
Rosaceae	Prunus serotina	Black Cherry	T	10.4	
Fagaceae	Quercus alba	White Oak	T	35.2	
Rosaceae	Prunus serotina	Black Cherry	T	17.5	12
Pinaceae	Picea abies	Norway Spruce Tree	T	41.4	
Fagaceae	Quercus alba	White Oak	T	32.0	
Fagaceae	Quercus alba	White Oak	T	26.8 27.8	

Fagaceae Quercus alba White Oak T 4.9 19
 Fagaceae Quercus alba White Oak T 25.3
 Rosaceae Prunus serotina Black Cherry T 20.0
 Fagaceae Quercus alba White Oak T 28.1

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27194 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80459 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.5m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory (Maples)

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Question 2 (answer requires a whole number): Sub-dominant Overstory (Black Cherries)

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Question 3 (answer requires a whole number): Dominant Overstory (White Oaks)

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 28

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 1 July 2010

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot - Plot No 2: 1V-2a2b-1

Name of person filling out this form: Danielle Forsyth

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 317

A7. What is the steepness of the slope in degrees? <PSTEEP> 10°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- (1) North (5) _____ South
(2) _____ Northeast (6) _____ Southwest
(3) _____ East (7) _____ West
(4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Downed coarse woody debris (tree falls)

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 70 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

(in 3m area)	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>	
	What is the family name of this plant species?	Botanical				Local
these should be on the CI page	Aceraceae	Acer platanoides	Norway maple	P	40	4.7
	Rosaceae	Prunus serotina	Black cherry	P	4.5	3.1
	Aceraceae	outside plot 3m Acer saccharum	sugar maple	P		8.0
outside 3m plot	Rosaceae	Prunus serotina	black cherry	t	13.8	16
		X standing dead tree		t	28.8	
	Rosaceae	Prunus avium	Sweet cherry	t	11.2	13
		X standing dead tree	red oak	t	26.9	
	Rosaceae	Prunus avium	sweet cherry	T	25.0	
	Fagaceae	Quercus rubra	Red oak	T	42.6	24
	Aceraceae	Acer platanoides	Norway maple	T	10.9	
		X standing dead tree	sweet cherry	T	10.0	
	Rosaceae	Prunus serotina	black cherry	T	11.0	14
	Aceraceae	Acer platanoides	Norway maple	T	19.1	

Rev. 5-07

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	29.2	21
Rosaceae	Prunus serotina	black cherry	T	10.5	
Fagaceae	Quercus rubra	Red oak	T	38.2	
	X Dead standing tree	Red oak	T	24 26.5	
	X Dead standing tree	 Norway spruce	T	15.7	
Fagaceae	Quercus rubra	Red oak	T	54.8	
	X Dead standing tree		T	15.6	
Fagaceae	Quercus rubra	Red oak	T	36.6	19
Aceraceae	Acer saccharum	sugar maple	T	11.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27208 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80534 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

16.4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): 1 yes mixed

Answer to question specified by researcher (integer) <PGENSNUM1> _____

Question 2 (answer requires a whole number): 1 yes (black cherry + sweet cherry)

Answer to question specified by researcher (integer) <PGENSNUM2> _____

Question 3 (answer requires a whole number): 1 yes (red oak)

Answer to question specified by researcher (integer) <PGENSNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 29

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 1 July 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2 : 1V-2a+2b-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 315

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North <i>20°</i> | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry		4.8	8
Rosaceae	Prunus avium	Sweet cherry		6.5	6
Rosaceae	Prunus serotina	Black cherry		2.5	3.5
	M602			2.9	3
Acernaceae	Acer platanoides	Norway maple		3.3	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X standing dead bole	(Red oak)	T	29.4	
Fagaceae	Quercus rubra	Red oak	T	37.1	24
Rosaceae	Prunus serotina	Black cherry	T	12.1	
Pinaceae	Pinus strobus	White pine	T	37.4	
Fagaceae	Quercus rubra	Red oak	T	47.2	24
Fagaceae	Quercus rubra	Red oak	T	36.2	27
Fagaceae	Quercus rubra	Red oak	T	48.6	29
	X standing dead bole	(white pine?)	T	22.0	
Fagaceae	Quercus rubra	Red oak	T	30.2	
Rosaceae	Prunus serotina	Black cherry	T	13.8	14
Rosaceae	Prunus avium	Sweet cherry	T	12.1	17
Rosaceae	Prunus avium	Sweet cherry	T	12.2	18
Pinaceae	Pinus strobus	White pine	T	17.2	
Aceraceae	Acer platanoides	Norway maple	T	34.9	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	39.2	
Fagaceae	Quercus rubra	Red oak	T	40.4	
Rosaceae	Prunus serotina	Black cherry	T	11.1	
Pinaceae	Pinus strobus	White pine	T	18.4	
Rosaceae	Prunus avium	Sweet cherry	T	17.5	
Rosaceae	Prunus serotina	Black cherry	T	13.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.7180 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80589 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

understory?
1 b/s cherry, maple

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

Subdominant?
1 black cherry, sweet cherry

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

dominant overstory?
1 red oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 30

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 1 July 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNO2: 1V-2a-2b-3

Name of person filling out this form: Lauren Persha

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 320

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | | |
|-----------------------------------------------|----------------------------------------|-----|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South | 350 |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest | |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West | |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest | |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

CWD.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 70 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae Outside of 3m Shrub/Sapling plot - for height only.	<i>Acer saccharum</i>	Sugar Maple	XXXX	XXXX	10
	<i>Acer platanoides</i>	Norway Maple	XXX	XXX	6
	<i>Acer platanoides</i>	Norway Maple	XXX	XXX	7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	T	47.5	30
	X Standing Dead Tree		T	18.2	
Fagaceae	Quercus rubra	Red Oak	T	46.0	32
	X Standing Dead Tree		T	28.1	
Fagaceae	Quercus rubra	Red Oak	T	48.0	
Rosaceae	Prunus serotina	Black cherry	T	11.5	
Aceraceae	Acer saccharum	Sugar Maple	T	12.5	
Fagaceae	Quercus rubra	Red oak	T	46.1	
Fagaceae	Quercus rubra	Red Oak	T	37.4	30
Rosaceae	Prunus serotina	Black cherry	T	14.0	
	X Standing Dead Tree		T	29.8	
Pinaceae	Pinus strobus	White Pine	T	31.5	
Fagaceae	Quercus rubra	Red Oak	T	40.0	
Rosaceae	Prunus avium	Sweet cherry	T	13.7	16
Aceraceae	Acer platanoides	Norway Maple	T	23.1	19

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	T	48.9	
Aceraceae	Acer platanoides	Norway Maple	T	20.9	17
Fagaceae	Quercus rubra	Red Oak	T	32.5	
Rosaceae	Prunus serotina	Black Cherry	T	13.6	
Fagaceae	Quercus rubra	Red Oak	T	38.5	
	X Standing Dead Tree		T	22.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27160 N (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

~~83.80572 W~~ (decimal degrees)

or 83.80572 W

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

Approx 6.2 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory (Sugar & Norway Maple)

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Question 2 (answer requires a whole number): Sub-dominant Overstory (mixed spp.)

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Question 3 (answer requires a whole number): Dominant Overstory (Red Oak)

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 31

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 1 July 2010

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: 1V-3a+3b-1

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

~~A1.~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 318

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|---------------------|
| (1) <input checked="" type="checkbox"/> North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

350°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some CWD.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 65 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rhamnaceae	Rhamnus cathartica	European (common) Buckthorn	P	2.8	
Rosaceae	Prunus serotina	Black Cherry	P	5.0	4
Rosaceae	Prunus serotina	Black Cherry	P	3.1	3
Rosaceae	Prunus serotina	Black Cherry	P	3.2	4

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus avium	Sweet cherry	T	10.5	
Fagaceae	Quercus rubra	Red oak	T	53.6	
Aceraceae	Acer platanoides	Norway Maple	T	18	
Fagaceae	Quercus rubra	Red oak	T	33.8	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_Type>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_Height>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	32.4	28
Aceraceae	Acer platanoides	Norway Maple	T	13.3	12
Fagaceae Fagaceae	Quercus rubra	Red oak	T	33.4	25 25
Fagaceae	Quercus rubra	Red oak	T	31.4	26
Aceraceae	Acer platanoides	Norway Maple	T	16.6	15
Fagaceae	Quercus rubra	Red oak	T	37.2	25
Fagaceae	Quercus rubra	Red oak	T	29.9	
Fagaceae	Quercus rubra	Red oak	T	36.7	
Fagaceae	Quercus rubra	Red oak	T	35.2	
Rosaceae	Prunus avium	Black Cherry	T	12.6	13m
Fagaceae	Quercus rubra	^{Sweet} Red oak	T	34.1	
	X Dead standing	Red oak?	T	18.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27191 N (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80669 W (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.0m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory 1 yea

Answer to question specified by researcher (integer) <PGENSNUM1> _____

Question 2 (answer requires a whole number): SubDominant overstory → 1 yea (mix) cherries, maple

Answer to question specified by researcher (integer) <PGENSNUM2> _____

Question 3 (answer requires a whole number): Dominant → Red oaks 1 yea

Answer to question specified by researcher (integer) <PGENSNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 32

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/7/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: 1V-3a+3b-2

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 291 m

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North *330°* (5) South
(2) Northeast (6) Southwest
(3) East (7) West
(4) Southeast (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

2 treefalls

A10. What is the percentage of crown cover in this plot? <PCROWN Cov> 75 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	P	4.8	5
Rosaceae	Prunus serotina	black cherry	P	3.9	5
Rosaceae	Prunus serotina	black cherry	P	8.1	6

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
			T	14.2	13
Rosaceae	Prunus avium	Sweet cherry	T	34.9	32
Fagaceae	Quercus rubra	Red oak	T	34.7	27
Fagaceae	Quercus rubra	Red oak	T	47.6	32
Fagaceae	Quercus rubra	Red oak	T	14.0	
Rosaceae	Prunus avium	Sweet cherry	T		
Fagaceae	Quercus rubra	Red oak	T	37.1	
Rosaceae	Prunus avium	Sweet cherry	T	21.8	
Fagaceae	Quercus rubra	Red oak	T	32.8	
Rosaceae	Prunus avium	Sweet cherry	T	10.3	8
Fagaceae	Quercus rubra	Red oak	T	46.2	
Rosaceae	Prunus avium	Sweet cherry	T	14.0	
Rosaceae	Prunus serotina	Black cherry	T	11.5	

CI. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	28.1	
Fagaceae	Quercus rubra	Red oak	T	37.1	
Aceraceae	Acer rubrum	Red maple	T	17.4	
	X standing dead bole			29.6	
Fagaceae	Quercus rubra	Red oak	T T	38.2	
Fagaceae	Quercus rubra	Red oak	T T	28.9	
Fagaceae	Quercus rubra	Red oak	T	31.8	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.2718~~2~~1 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80630 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.2m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
blackcherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?
ch

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?
red oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 33

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7 July 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 29 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: 1V - 3a + 3b - 3

Name of person filling out this form: Lauren Pershke

~~A.~~ CONDITIONS OF THE PLOT

~~A.~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 311

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 70 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	<i>Acer platanoides</i>	Norway Maple	P	6.2	7.5
	<i>Ulmus americana</i>	American Elm	P	3.2	3.5
	<i>Acer platanoides</i>	Norway Maple	P	3.5	4.0

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	T	32.7	31
	x Standing Dead Tree		#	29.3	
Fagaceae	Quercus rubra	Red Oak	T	49.2	
Aceraceae	Acer platanoides	Norway Maple	T	15.2	15
Fagaceae	Quercus rubra Quercus rubra	Red Oak	T	29.3	
Fagaceae	Quercus rubra	Red Oak	T	43.3	28
Fagaceae	Quercus rubra Acer rubrum	Sweet Red Oak	T	29.2	
Fagaceae	Quercus rubra Acer rubrum	Red Oak	T	28.6	
Fagaceae	Quercus rubra	Red Oak	T	28.5	22
Aceraceae	Acer platanoides	Norway Maple	T	25.4	20
Fagaceae	Quercus rubra	Red Oak	T	43.5	
Fagaceae	Quercus rubra	Red Oak	T	36.7	
Aceraceae	Acer platanoides	Norway Maple	T	10.7	
Aceraceae	Acer platanoides	Norway Maple	T	22.8	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	T	30.0	
Aceraceae	Acer platanoides	Norway Maple	T	15.2	16
Fagaceae	Quercus rubra	Red Oak	T	47.2	
Rosaceae	Prunus serotina	Black Cherry	T	10.3	
Fagaceae	Quercus rubra	Red Oak	T	36.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27198 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80676 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.4 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory - Norway Maple, American Elm

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Question 2 (answer requires a whole number): Sub-dominant Overstory - Norway Maple

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Question 3 (answer requires a whole number): Dominant Overstory - Red Oak

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: ~~33~~ 34

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7 July 2010

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot_PlotNo2: IV-4-1

Name of person filling out this form: Lauren Persha

A. CONDITIONS OF THE PLOT

~~A.~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 302

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN Cov> ~~60~~ 50 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Oleaceae	Fraxinus pennsylvanica	Green Ash CL	P	5.2	10
		Green Ash CL	P	4.3	12
		Green Ash CL	P	3.4	10
		Green Ash CL	P	7.0	
		Green Ash CL	P	3.5	
		Green Ash CL	P	3.0	
		Green Ash CL	P	2.9	
		Green Ash CL	P	6.0	
		Green Ash CL	P	3.8	

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	24.2	22
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	30.0	22
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	31.9	
Fagaceae	<i>Quercus rubra</i>	Red Oak	T	10.9	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	23.2	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	36.2	
Oleaceae	<i>Fraxinus pennsylvanica</i>	Green Ash	T	14.3	16
Oleaceae	<i>Fraxinus pennsylvanica</i>	Green Ash	T	10.5	14
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	31.8	27
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	28.0	
	x Standing Dead Tree		==	10.8	
	x Standing Dead Tree		==	11.6	
	x Standing Dead Tree		==	14.1	
Fagaceae	<i>Quercus rubra</i>	Red Oak	T	52.6	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

- D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Oleaceae	<i>Fraxinus pennsylvanica</i>	Green Ash	T	11.3	17
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	21.9	
	x Standing Dead Tree		T	15.8	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	18.2	
	x Standing Dead Tree		T	10.7	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	22.2	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	15.6	
	x Standing Dead Tree		T	13.2	
	x Standing Dead Tree		T	17.8	
Oleaceae	<i>Fraxinus pennsylvanica</i>	Green Ash	T	11.7	
	x Standing Dead Tree		T	12.4	
	x Standing Dead Tree		T	15.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27116 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80455 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

~~5.8~~ 5.6m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory - Green Ash

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Question 2 (answer requires a whole number): Sub-dominant Overstory - Green Ash

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Question 3 (answer requires a whole number): Dominant Overstory → ~~Walnut~~ Black Walnut

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 35

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/7/10

Record the area (in square meters) of each plot below.

4 Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot-PlotNO2: IV-4-2

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 298

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 328° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

dense underbrush

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
				8.5	

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Oleaceae	Fraxinus pennsylvanica	Green ash	P	5.5	10
Ulmaceae	Ulmus americana	Elm	P	8.4	
Cornaceae	Comus stolonifera ^{alternifolia}	Alternate-leaf dogwood?	P	4.2	4
Fagaceae	Quercus macrocarpa ^{alba}	White Oak	P	5.6	
Oleaceae	Fraxinus pennsylvanica	Green ash	P	3.4	3

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
			F	40.2	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Juglans nigra	Black walnut	T	40.2	25
Fagaceae	Quercus alba	White oak	T	38.5	
	X standing dead bole		T	25.0	
Juglandaceae	Juglans nigra	Black walnut	T	30.0	27
Juglandaceae	Juglans nigra	Black walnut	T	20.0	
Fagaceae	Quercus alba	White oak	T	37.2	
	X standing dead bole		T	12.6	
Tiliaceae	Basswood	Tilia americana	T	29.0	
Fagaceae	Quercus alba	White oak	T	18.2	14
	X standing dead bole			11.1	
Fagaceae	Quercus alba	White oak	T	35.2	
Fagaceae	Quercus alba	White oak	T	38.0	25
Juglandaceae	Juglans nigra	Black walnut	T	30.2	
Fagaceae	Quercus alba	White oak	T	43.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X dead standing bole			43.0	
Juglandaceae	Juglans nigra	black walnut	T	34.0	
			T		

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 47.27²⁵ ~~11~~ (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.805~~05~~ 10 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.56.1 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory? sparse
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Subdominant?
oak

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

overstory?
black walnut

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 36

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7 July 2010

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: 1V-4-3

Name of person filling out this form: Daniel H. Forsyth

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 312

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North 338° (5) _____ South
 (2) _____ Northeast (6) _____ Southwest
 (3) _____ East (7) _____ West
 (4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some coarse downed woody debris (treefall)

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

not
w/in
3m

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Oleaceae	Fraxinus pennsylvanica	Green ash		10.7	10
Oleaceae	Fraxinus pennsylvanica	Green ash	P	5.6	9
Oleaceae	Fraxinus pennsylvanica	Green ash	P		6
Oleaceae	Fraxinus pennsylvanica	Green ash	P		5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Oleaceae	Fraxinus pennsylvanica	Green ash	T	10.7	10
Juglandaceae	juglans ^{nigra} mangra	Black walnut	T	36.5	27 27 X
Juglandaceae	juglens mangra	Black walnut	T	32.2	24
	X Dead standing tree		T	12.0	
Juglandaceae	juglens mangra	Black walnut	T	25.2	
Oleaceae	Fraxinus pennsylvanica	Green ash	T	10.1	
Juglandaceae	juglens mangra	Black walnut	T	27.2	
Juglandaceae	juglens mangra	Black walnut	T	42.0	
Oleaceae	Fraxinus pennsylvanica	Green ash	T	11.4	19m
Oleaceae	Fraxinus pennsylvanica	Green ash	T	15.4	16m
	Dead standing		T	11.0	
Oleaceae	juglens mangra	Black walnut	T	33.2	26
	X Dead standing		T	30.7 28.7	
	X Dead standing		T	14.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Juglans nigra	Black walnut	T	29.1	
	standing dead trees		T	11.4	
Juglandaceae	Juglans nigra	Black walnut	T	27.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.827089 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80478 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

11.4m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

understory ash 1 yes

Answer to question specified by researcher (integer) <PGENSNUM1> _____

Question 2 (answer requires a whole number):

subdominant overstory 1 yes ash

Answer to question specified by researcher (integer) <PGENSNUM2> _____

Question 3 (answer requires a whole number):

dominant overstory 1 yes walnut

Answer to question specified by researcher (integer) <PGENSNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 37 [37]

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7 July 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: IV-4-4

Name of person filling out this form: Lauren Persha

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North (5) South 10°
(2) Northeast (6) Southwest
(3) East (7) West
(4) Southeast (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Oleaceae	Fraxinus pennsylvanica	Green Ash	P	4.1	4.6
Fagaceae	Quercus macrocarpa	White Burr Oak	P	2.6	2.0
Fagaceae	Quercus rubra	Red Oak	P	8.2	6.0

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	<i>Quercus macrocarpa</i>	Burr Oak	T	10.5	5
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	52.5	33
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	38.9	
	x Standing Dead Tree		/	13.5	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	44.9	
	x Standing Dead Tree		/	20.3	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	42.2	31
Oleaceae	<i>Fraxinus pennsylvanica</i>	Green Ash	T	11.8	9
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	41.1	30
	x Standing Dead Tree		/	14.5	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	30.1	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	42.3	
Juglandaceae	<i>Juglans nigra</i>	Black Walnut	T	53.4	
	x Standing Dead Tree	Black Walnut	/	13.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	T	11.7	
Fagaceae	Quercus rubra	Red Oak	T	12.6	16
Fagaceae	Quercus macrocarpa	Burr Oak	T	11.0	
Juglandaceae	Juglans nigra	Black Walnut	T	32.5	
Juglandaceae	Juglans nigra	Black Walnut	T	35.9	
	x Standing Dead Tree		≠	25.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27083 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80505 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

12.2m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Understory - Red Oak (Sparse)

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Question 2 (answer requires a whole number): Sub-dominant overstory - Oaks

Answer to question specified by researcher (integer) <PGENSNUM2> ~~0~~ 1

Question 3 (answer requires a whole number): Dominant Overstory - Black Walnut

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 38

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7 July 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot-PlotNo2: IV-5-1

Name of person filling out this form: Danielle Forsyth

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 298

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East 120° | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Lots of downed coarse woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	Prunus serotina	Black cherry	P	11.4	11
Rosaceae	Prunus serotina	Black Cherry	P	3.3	6.5
Rosaceae	Prunus serotina	Black cherry	P	5.8	7.5
Rosaceae	Prunus serotina	Black cherry	P	6.9	10
Rosaceae	Prunus serotina	Black cherry	P	6.1	
Rosaceae	Prunus serotina	Black cherry	P	7.3	
Rosaceae	Prunus serotina	Black cherry	P	2.5	
Rosaceae	Prunus serotina	Black cherry	P	4.8	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	11.4	11
Rosaceae	Prunus serotina	Black cherry	T	12.6	11
Fagaceae	Quercus rubra	Red oak	T	48.6	28
	X standing dead tree		T	49.7	
Rosaceae	Prunus serotina	Black cherry	T	18.5	15
Fagaceae	Quercus rubra	Red oak	T	37.5	
	X standing dead tree		T	24.6	
Fagaceae	Prunus serotina	Black cherry	T	10.1	
Fagaceae	Quercus rubra	Red oak	T	52.0	27
Fagaceae	Quercus rubra	Red oak	T	38.0	
Rosaceae	Prunus serotina	Black cherry	T	12.5	
Ulmaceae	Ulmus americana	American Elm	T	23.9	
Fagaceae	Quercus rubra	Red oak	T	41.0	
Fagaceae	Quercus rubra	Red oak	T	42.3	22

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Pourmo serding	Black cherry	T	10.7	
Asteraceae	Acer platanooides	Norway maple	T	18.4	
Fagaceae Rubiacae	Quercus rubrum	Red oak	T	36.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27131 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 88.0555 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.4 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. **Enter the methodology and all questions together into the database under <PWKSPMEMO>.** Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

1 Yes understory black cherry

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

dammit overstory Red oak 1 yes

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

Subdammit overstory black cherry 1

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 39

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/7/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-PlotNo2: IV-5-2

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 309 _____

A7. What is the steepness of the slope in degrees? <PSTEEP> 1° _____

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

several treefalls

A10. What is the percentage of crown cover in this plot? <PCROWN Cov> 10 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name . of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	8.4	10
Rosaceae	Prunus serotina	Black cherry	P	6.7	7
Rosaceae	Prunus serotina	Black cherry	P	7.5	4.5
Rosaceae	Prunus serotina	Black cherry	P	5.2	

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

11 BC

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	44.9	26
Fagaceae	Quercus rubra	Red oak	T	27.8	28
Fagaceae	Quercus rubra	Red oak	T	29.1	
Fagaceae	Quercus rubra	Red oak	T	48.9	
Fagaceae	Quercus rubra	Red oak	T	29.0	25
Rosaceae	Prunus serotina	Black cherry	T	12.7	
Rosaceae	Prunus serotina	Black cherry	T	10.5	11
Ulmaceae	Ulmus americana	elm	T	10.6	
Fagaceae	Quercus rubra	Red oak	T	35.3	
Fagaceae	Quercus rubra	Red oak	T	41.0	
Fagaceae	Quercus rubra	Red oak	T	28.8	
Rosaceae	Prunus serotina	Black cherry	T	12	
Rosaceae	Prunus serotina	Black cherry	T	10.5	10
Fagaceae	Quercus rubra	Red oak	T	26.7	

Rev. 5-07

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.2109 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80589 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.1m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory?
black cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

subdominant ?
~~black cherry~~

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

dominant ?
red oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 40

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/8/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot_PlotNo 2: 1V-5-3

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 302.4

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North <u>320°</u> | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of coarse woody debris
4 treefalls
fairly open
many dead trees

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Oleaceae	Fraxinus pennsylvanica	green ash	P	3.8	4.5
Oleaceae	Fraxinus pennsylvanica	green ash	P	2.9	3.0
Oleaceae	Fraxinus pennsylvanica	green ash	P	2.6	3.5

C1. *Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued*

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

OUTSIDE
OF PLOT
BOUNDARIES

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X standing dead bole			14.9.	
	X standing dead bole			15.7.	
Fagaceae	Quercus rubra	Red oak	T	45.9.	34
Oleaceae	Fraxinus pennsylvanica	Green ash	T		
Juglandaceae	Juglans nigra	Black walnut	T		33
Juglandaceae	Juglans nigra	Black walnut	T	36.9"	
Oleaceae	Fraxinus pennsylvanica	Green ash	T	14.9'	
Fagaceae	Quercus rubra	Red oak	T	42.0'	31
Fagaceae	Quercus rubra	Red Oak	T	33.0'	21
	X dead standing bole		T	18.0'	
	X dead standing bole		T	37.9'	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27090 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80537 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

*understory?
ash*

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 0

subdominant?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

*dominant?
red oak*

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 41

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/8/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 38 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: IV-5-4

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 310

A7. What is the steepness of the slope in degrees? <PSTEEP> 0.5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East 13° | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (*text*) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (D. 1999)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	9.5	7
Rosaceae	Prunus serotina	Black cherry	P	6.2	4.5
Rosaceae	Prunus serotina	Black cherry	P	3.1 3.1	3
Rosaceae	Prunus serotina	Black cherry	P	8.0	
Rosaceae	Prunus serotina	Black cherry	P	5.9	
Rosaceae	Prunus serotina	Black cherry	P	8.6	
Rosaceae	Prunus serotina	Black cherry	P	3.1	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus Rubra	Red oak	T	41.5	27
Fagaceae	Quercus rubra	Red oak	T	41.4	29
Fagaceae	Quercus rubra	Red oak	T	32.5	25
Rosaceae	Prunus serotina	Black cherry	T	13	16
Rosaceae	Prunus serotina	Black cherry	T	10.5	
Fagaceae	Quercus Rubra	Red oak	T	49.9	
Fagaceae	Quercus Rubra	Red oak	T	29.6	
Rosaceae	Prunus avium	Sweet cherry	T	15.0	11
Fagaceae	Quercus Rubra	Black Red oak	T	96.7	
Aceraceae	Acer platanoides	Norway maple	T	19.0	20
Aceraceae	Acer platanoides	Norway maple	T	14.6	
Fagaceae	Quercus Rubra	Red oak	T	33.7	
	X Dead standing tree		T	26.6	
Fagaceae	Quercus rubra	Red oak		38.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	34.5	
Rosaceae	Prunus avium	Sweet cherry	T	16.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.270995 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80584 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

16.9

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
black cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?
red oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 42

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/8/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: 1V-6-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 314.8

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|--------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 0° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

downed woody debris
several treefalls

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
None					
Aceraceae	Acer platanoides	Norway maple	P	measured for height outside 3m	4.5
Rosaceae	Prunus serotina	black cherry	P		4.0
Rosaceae	Prunus serotina	black cherry	P		6.0

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	T	25.2	25 13
Fagaceae	Quercus rubra	Red oak	T	39.5	33
Fagaceae	Quercus rubra	Red oak	T	39.2	29
Aceraceae	Acer platanoides	Norway maple	T	27.7	
Fagaceae	Quercus rubra	Red oak	T	28.3	25
Fagaceae	Quercus rubra	Red oak	T	30.2	
Aceraceae	Acer platanoides	Norway maple	T	25.5	19
Fagaceae	Quercus rubra	Red oak	T	29.2	
Aceraceae	Acer platanoides	Norway maple	T	27.0	25 14
	X standing dead bole			31.6	
Fagaceae	Quercus rubra	Red oak	T	46.7	
Fagaceae	Quercus rubra	Red oak	T	30.3	
Rosaceae	Prunus serotina	Black cherry	T	11.0	
Fagaceae	Quercus rubra	Red oak	T	39.7	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	11.9	
Fagaceae	<i>Quercus rubra</i>	Red oak	T	34.0	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	11.1	
Fagaceae	<i>Quercus rubra</i>	Red oak	T	30.9	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	14.9	13
Fagaceae	<i>Quercus rubra</i>	Red oak	T	47.5	
Fagaceae	<i>Quercus rubra</i>	Red oak	T	36.5	
		Red oak			

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

~~N 89.80629~~ (decimal degrees)

or 42.27126 N

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

~~W 93.80629~~ (decimal degrees)

or 93.80629 W

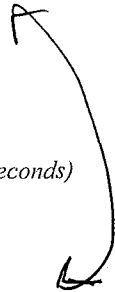
_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ 8.8 m _____



GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

*understory?
chem map ce.*

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

subdominant?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

*overstory?
red oak*

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 43

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/5/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: 1V-6-2

Name of person filling out this form: Danell Furup

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 328

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North 338° (5) South
(2) Northeast (6) Southwest
(3) East (7) West
(4) Southeast (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

downed coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	4.5	
Aceraceae	Acer platanoides	Norway maple	P	4	
Aceraceae	Acer platanoides	Norway Maple	P	5	

Outside 3m

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	48.5	
Aceraceae	Acer platanoides	Norway maple	T	29.8	
Fagaceae	Quercus rubra	Red oak	T	36.0	29
Rosaceae	Prunus serotina	Black cherry	T	2 11.2	26.9
Fagaceae	Quercus rubra	Red oak	T	41.8	26
Aceraceae	Acer platanoides	Norway maple	T	19	17
Fagaceae	Quercus rubra	Red oak	T	35.2	27
Fagaceae	Quercus rubra	Red oak	T	35.6	
Fagaceae	Quercus rubra	Red oak	T	35.8	
Fagaceae	Quercus rubra	Red oak	T	32.6	
Rosaceae	Prunus serotina	Black cherry	T	15.2	10
	X Dead standing			28.3	
	X Dead standing			27	
	X Dead standing			29.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
<i>Aceraceae</i>	<i>Acer platanoides</i>	Norway maple	T	17.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27116 (decimal degrees)

or 27116

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80656 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

11.5

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
black
cherry + norway maple
(sparse)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?
black cherry +
norway maple

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?
red oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 44

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/8/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: 1v-6-3

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 352° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

downed coarse woody debris
w/ treefalls

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Hippocastanaceae	Aesculus glabra	^{Ohio} Buckeye	P	6.3	6.2
Rosaceae	Prunus serotina	Black cherry	P	4.3	2
Juglandaceae	Carya glabra	^{Pignut} hickory	P	2.8	4.5

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	14.8	15
Fagaceae	Quercus rubra	Red oak	T	49.0	31
	X dead standing bole			28.5	
Rosaceae	Prunus serotina	Black cherry	T	11.5	10
Aceraceae	Acer platanoides	Norway maple	T	21.1	7
Rosaceae	Prunus serotina	Black cherry	T	12.5	
Rosaceae	Prunus serotina	Black cherry	T	11.2	
Fagaceae	Quercus rubra	Red oak	T	46.0	28
Aceraceae	Acer platanoides	Norway maple	T	11.1	11
Fagaceae	Quercus rubra	Red oak	T	40.1	28
Fagaceae	Quercus rubra	Red oak	T	39.4	32
Rosaceae	Prunus serotina	Black cherry	T	10.4	
Fagaceae	Quercus rubra	Red oak	T	42.8	
Rosaceae	Prunus serotina	Black cherry	T	10.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Blackcherry	T	10.2	
	X dead standing bole			12.7	
Fagaceae	Quercus rubra	Red oak	T	31.3	
Fagaceae	Quercus rubra	Red oak	T	28.2	
Fagaceae	Quercus rubra	Red oak	T	38.0	
Rosaceae	Prunus serotina	Black cherry	T	10.5	
Fagaceae	Quercus rubra	Red oak	T	26.8	
Fagaceae	Quercus rubra	Red oak	T	31.9	
Fagaceae	Quercus rubra	Red oak	T	42.0	
Fagaceae	Quercus rubra	Red oak	T	48.5	
Rosaceae	Prunus serotina Prunus serotina	Black cherry	T	10.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27098 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80634 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.7m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory?
mixed, black cherry
maples

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

subdominant?
black cherry, maple

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

overstory?
red oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 45

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/8/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: 1V-6-4

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 318.8

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|--------------------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast 50° | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some downed coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 70 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	norway maple	P	4.2	3.2
Rosaceae	Prunus serotina	black cherry	P	outside 3m plot	6
Rosaceae	Prunus serotina	black cherry	P	outside 3m plot	4.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	norway maple	T	24.6	
Fagaceae	Quercus rubra	red oak	T	27.9	
Fagaceae	Quercus rubra	red oak	T	34.7	27
Fagaceae	Quercus rubra	red oak	T	42.1	
Fagaceae	Quercus rubra	red oak	T	42.9	28
Fagaceae	Quercus rubra	red oak	T	29.6	
Aceraceae	Acer platanoides	norway maple	T	21.9	
Aceraceae	Acer platanoides	norway maple	T	46.3	19
Aceraceae	Acer platanoides	norway maple	T	26.2	
Aceraceae	Acer platanoides	norway maple	T	15.1	13
	AAAAA	AAAAA	T	15.1	
Fagaceae	Quercus rubra	red oak red oak	T	24.3	
Fagaceae	Quercus rubra	red oak	T	31.9 30.7	17
X	Standing dead			30.7	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	red oak	T	33.4	
Rosaceae	Prunus serotina	black cherry	T	11	
Aceraceae	Acer platanoides	norway maple	T	14.2	10
Fagaceae	Quercus rubra	red oak	T	41	
Aceraceae	Acer platanoides	norway maple	T	25.3	
	x dead standing		T	15.6	
Rosaceae	Prunus serotina	black cherry	T	13.1	
	x dead standing		T	21.9	
Fagaceae	Quercus rubra	red oak	T	29	
Aceraceae	Acer platanoides	norway maple	T	12.2	
Fagaceae	Quercus rubra	red oak	T	50.3	
Rosaceae	Prunus serotina	black cherry	T	30.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27070 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80653 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.1m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory:
sparse
few norway maple
few black cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

sub-dominant:
sparse norway maple
black cherry

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

overstory:
red oak
1 black cherry

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 46

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/9/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASmall>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: 1V-7-1

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 311.4

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- (1) North 24° (5) _____ South
(2) _____ Northeast (6) _____ Southwest
(3) _____ East (7) _____ West
(4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some coarse woody debris
heavy underbrush
shrubby

A10. What is the percentage of crown cover in this plot? <PCROWN Cov> 40 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Caprifoliaceae	Lonicera mackii	Amur honey suckle		3.2	3
Caprifoliaceae	Lonicera mackii	Amur honey suckle		3.0	3
Caprifoliaceae	Lonicera mackii	Amur honey suckle		3.5	3
Oleaceae	Fraxinus pennsylvanica	green ash		6.2	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer negundo	box elder	T	15.0	11
	X dead standing bole			13.6	
	X dead standing bole	(spruce)		20.3	
Aceraceae	Acer platanoides	Norway maple	T	20.5	2
Aceraceae	Acer platanoides	Norway maple	T	20.5	2
Pinaceae	Picea abies	Norway spruce	T	27.8	23
Aceraceae	Acer platanoides	Norway maple	T	27.8	23
Pinaceae	Picea abies	Norway spruce	T	33.3	23
Aceraceae	Acer platanoides	Norway maple	T	33.3	23
Pinaceae	Picea abies	Norway spruce	T	36.3	24
Aceraceae	Acer platanoides	Norway maple	T	36.3	24
Pinaceae	Picea abies	Norway spruce	T	16.7	
Aceraceae	Acer platanoides	Norway maple	T	16.7	
Aceraceae	Acer negundo	box elder	T	13.3	
	X standing dead bole	(Norway spruce)		28.2	
Pinaceae	Picea abies	Norway spruce	T	31.0	
Ulmaceae	Ulmus americana	Elm	T	19.0	13
Pinaceae	Picea abies	Norway spruce	T	25.6	
Pinaceae	Picea abies	Norway spruce	T	21.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	28.4	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	40.4	
	X dead standing bole	(spruce)		15.8	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	29.0	
	dead climber		X		
Moraceae	<i>Morus alba</i>	white mulberry	T	12.2	13
Moraceae	<i>Morus alba</i>	white mulberry	T	13.3	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	46.4	33
	X dead standing bole			22.0	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	35.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	32.8	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27064 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80471 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

12.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory?
mixed (shrubs, tree)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

subdominant?
sparse, mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

dominant?
Norway spruce

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 47

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/9/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDIUM>
- Large Plot <PAREALARGE>

Lot - Plot No 2: IV-7-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 314.9

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open

Mostly shrubs
dense understory
of
brush

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 5 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

CI. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Oleaceae	Fraxinus pennsylvanica	green ash	P	5	5.5
Caprifoliaceae	Lonicera mackii	Amur honeysuckle	P	6.4	3.8
Caprifoliaceae	Lonicera mackii	Amur honeysuckle	P	3.6	4.5
Caprifoliaceae	Lonicera mackii	Amur honeysuckle	P	2.8	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
			T	14.3	
Pinaceae	Picea abies	norway spruce	T	29	20
			T	29.4	
Pinaceae	Picea abies	norway spruce	T	31	23

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

- D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27081 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80449 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

11.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory:
1 green
1 ash

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 0

Sub dominant:
nothing

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Overstory:
sparse
spruce

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 103

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 48

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/9/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: 1V-7-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 908.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

30°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed woody debris
Shrubby

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	P	5	5
Rosaceae	Prunus serotina	black cherry	P	4.7	4
Aceraceae	Acer negundo	box elder	P	outside 3m plot	5

Cl. *Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued*

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	norway spruce	T	38.4	11.5 22
x	dead standing			14.6	
Oleaceae	Fraxinus pennsylvanica	green ash	T	10.4	8.5 (9)
Aceraceae	Acer negundo	box elder	T	20	
Pinaceae	Picea abies	norway spruce	T	29.9	22
Pinaceae	Picea abies	norway spruce	T	39	11.5 30
Aceraceae	Acer negundo	box elder	T	26.4	13
Pinaceae	Picea abies	norway spruce	T	31.2	
Ulmaceae	Ulmus americana	elm	T	16.3	11.5 (11)
x	dead standing		T	12.3	
Pinaceae	Picea abies	norway spruce	T	31.5	
Pinaceae	Picea abies	norway spruce	T	27.1	
Moraceae	Morus alba	white mulberry	T	24.8	
Pinaceae	Picea abies	norway spruce	T	42.6	35

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	norway spruce	T	36.1	
Moraceae	Morus alba	white mulberry	T	17	
Aceraceae	Acer negundo	box elder	T	19.9	
Aceraceae	Acer negundo	box elder	T	16.4	
Pinaceae	Picea abies	norway spruce	T	40.8	
Pinaceae	Picea abies	norway spruce	T	35.3	
Moraceae	Morus alba	white mulberry	T	15.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27054 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80509 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.2 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1>

1 understory: mixed sparse

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2>

black cherry

1 small box elder

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3>

1 Sub-dominant:

Question 4 (answer requires a whole number):

mixed mulberry
sparse elm

Answer to question specified by researcher (integer) <PGENSNUM4>

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

dominant:
norway spruce

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 49

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/9/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: IV-R-1

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 300 m

A7. What is the steepness of the slope in degrees? <PSTEEP> 0.5

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

68°

~~Northwest~~

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

1 treefall
some downed woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 45 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	P	2.7	3.2
Aceraceae	Acer platanoides	norway maple	P	3.4	4
Rosaceae	Prunus serotina	black cherry	P	3.3	3.8
Caprifoliaceae	Lonicera mackenzii	araleaf honey suckle	P	3.8	3
Rosaceae	Prunus serotina	black cherry	P	3.8	4
Rosaceae	Prunus serotina	black cherry	P	6.5	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Juglans nigra	black walnut	T	21.5	
Fagaceae	Quercus rubra	Red oak	T	22.7	
Fagaceae	Quercus rubra	Red oak	T	24.0	
Fagaceae	Quercus rubra	Red oak	T	36.8	24
Juglandaceae	Juglans nigra	Black walnut	T	18.8 ^{15.8}	19
Fagaceae	Quercus rubra	Red oak	T	41.5	24
Fagaceae	Quercus rubra	Red oak	T	29.2	
Fagaceae	Quercus rubra	Red oak	T	33.0	
Aceraceae	Acer platanoides	Norway maple	T	14.0	10
Fagaceae	Quercus rubra	Red oak	T	24.6	
Fagaceae	Quercus rubra	Red oak	T	32.6	
Fagaceae	Quercus rubra	Red oak	T	37.0	23
Fagaceae	Quercus alba	White oak	T	46.0	
	Dead standing		T	25.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X dead standing bole			19.0	
Fagaceae	Quercus rubra	Red oak	T	37.3	
Fagaceae	Quercus rubra	Red oak	T	39.0	
Fagaceae	Quercus rubra	Red oak	T	30.5	
	X standing dead bole		T	13.0	
Fagaceae	Quercus rubra	Red oak	T	28.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27049 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80646 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory:
cherry
norway maple

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

sub-dominant:
sparse cherry

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

dominant:
red oak

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 50

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/9/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>
28 Medium Plot <PAREAMedium>
314 Large Plot <PAREALarge>

Lot - Plot No 2: IV-8-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 324.9

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North 48° (5) _____ South
(2) _____ Northeast (6) _____ Southwest
(3) _____ East (7) _____ West
(4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some downed coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	elm	P	out of 3m plot	4.5
Ulmaceae	Ulmus americana	elm	P	out of 3m plot	3.5
Rosaceae	Prunus serotina	black cherry	P	out of 3m plot	7.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	red oak	T	46.4	32
Fagaceae	Quercus rubra	red oak	T	34.5	28
Fagaceae	Quercus rubra	red oak	T	36.4	
Fagaceae Aceraceae	Acer platanoides	norway maple	T	34.3	
x	dead standing		T	25.4	
Rosaceae	Prunus serotina	black cherry	T	10.8	6.8
Fagaceae	Quercus rubra	red oak	T	29.8	
Fagaceae	Quercus rubra	red oak	T	48.2	
Rosaceae	Prunus avium	sweet cherry	T	11.8	8
x	dead standing		T	28.5	
Fagaceae	Quercus rubra	red oak	T	27.2	33
Fagaceae	Quercus rubra	red oak	T	35.6	
Fagaceae	Quercus rubra	red oak	T	36.8	
Fagaceae	Quercus rubra	red oak	T	45.7	

(1)

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	norway maple	T	34.3	
Aceraceae	Acer platanoides	norway maple	T	23.6	
Fagaceae	Quercus rubra	red oak	T	38.	
Fagaceae	Quercus rubra	red oak	T	34.8	
Fagaceae	Quercus rubra	red oak	T	27.9	
Fagaceae	Quercus rubra	red oak	T	37.1	
Ulmaceae	Ulmus americana	elm	T	11	13
	dead standing		T	22	
Aceraceae	Acer platanoides	norway maple	T	15.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27074 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80604 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
sparse, elm/maple

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?
red oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 51

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/09/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2 IV-8-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 306.5

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

downed woody debris, 6 tree falls
dense shrubs
dense buckthorn, 1 canopy tree

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 5 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rhamnaceae	Rhamnus cathartica	Common buckthorn	P	4.6	4
Rhamnaceae	Rhamnus cathartica	Common buckthorn	P	4.5	4.5
Rhamnaceae	Rhamnus cathartica	Common buckthorn	P	5.4	5
Rhamnaceae	Rhamnus cathartica	Common buckthorn	P	2.9	
Rhamnaceae	Rhamnus cathartica	Common buckthorn	P	4.8	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American Elm	T	38.3	29
X dead standing bole			T	36.1	
Ulmaceae	Ulmus americana	American elm	T	15.8	13
X dead standing bole				39.0	
X dead standing bole				34.8	
Ulmaceae	Ulmus americana	American elm	T	14.5	11
X dead standing bole				27.0	
Fagaceae	Quercus rubra	Red oak	T	13.0	12
X dead standing bole				10.0	
X dead standing bole				24.0	
Fagaceae	Quercus alba	White oak	T	11.5	10

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27060 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80553 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.8m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
shrubby, common
bulletwood

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?
elm/oak - sparse

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

dominant?
1 elm

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 52

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/12/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

31 Large Plot <PAREALARGE>

Let - Plot No 2: 111-10a-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-45h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 303.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 290° |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 70 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

LM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and record maximum diameter and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	P	6.2	5.5
Aceraceae	Acer platanoides	Norway maple	P	4.1	5.0
Aceraceae	Acer platanoides	Norway maple	P	8.5	10.0
Rosaceae	Prunus serotina	black cherry	P	2.9	

Rev. 5-07

Rev. 5-07

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	T	11.8	13
Fagaceae	Quercus rubra	red oak	T	28.2	
Fagaceae	Quercus rubra	red oak	T	50.6	30
	x dead standing bole			19.0	
Rosaceae	Prunus serotina	black cherry	T	13.0	17
	x dead standing bole			21.9	
	x dead standing bole			20.0	
Fagaceae	Quercus rubra	Red maple	T	18.1	17
Fagaceae	Quercus rubra	Red oak	T	33.3	24
Fagaceae	Quercus rubra	Red oak	T	32.5	
Rosaceae	Prunus serotina Prunus serotina	black cherry	T	13.0	
Fagaceae	Quercus rubra	Red oak	T	36.1	
Fagaceae	Quercus rubra	Red oak	T	38.2	27
Aceraceae	Acer saccharum	Sugar maple	T	20.6	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	29.0	
Fagaceae	Quercus rubra	Red oak	T	26.3	
Aceraceae	Acer platanoides	Norway maple	T	21.5	
Fagaceae	Quercus rubra	Red oak	T	42.8	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27281 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80672 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.6 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
mixed cherry, maples, palm

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?
mixed cherry, maple

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant?
red oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 53

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/12/10

Record the area (in square meters) of each plot below.

x Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: 111-10a-2

Name of person filling out this form: Danielle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

27260
80643
312.7 7.7

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 312.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|--------------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <input checked="" type="checkbox"/> Northwest 310° |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	4.1	4
Rosaceae	Prunus serotina	Black cherry	P	3.6	3.5
Rosaceae	Prunus serotina	Black cherry	P	3.3	3.5
Rosaceae	Prunus serotina	Black cherry	P	3.2	3.5

D. Tree, Palm d woody climber

C1. ~~Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued~~

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Maple	T	15.7	16
Fagaceae	Quercus rubra	Red oak	T	31.8	
Fagaceae	Quercus rubra	Red oak	T	32.1	
Fagaceae	Quercus rubra	Red oak	T	35.1	25
Fagaceae	Quercus rubra	Red oaks	T	32.2	
Fagaceae	Quercus rubra	Red oak	T	37.2	20
Fagaceae	Quercus rubra	Red oak	T	42.8	25 27
Fagaceae	Quercus rubra	Red oak	T	25.6	
Fagaceae	Quercus rubra	Red oak	T	33	
Fagaceae	Quercus rubra	Red oak	T	37.2	
Fagaceae	Quercus rubra	Red oak	T	38.4	
Fagaceae	Quercus rubra	Red oak	T	28.8	
Fagaceae	Quercus rubra	Red oak	T	44.7	
Fagaceae	Quercus rubra	Red oak	T	32.8	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	96.7	
Fagaceae	Quercus rubra	Red oak	T	45.6	
Fagaceae	Quercus rubra	Red oak	T	33.7	

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory?
cherry, maple, elm,
blackthorn

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> ~~1~~

subdominant?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

1 ven sparse

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

overstory?
red oak

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 303.6

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

27422 9.0
80569 303.6



IFRI FORM P

MAY 2007
Version 13

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 54

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/12/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No2: 111-4a+4b - 1

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of downed coarse woody debris
several treefalls
shrubby

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer negundo	box elder	P	4.6	6
Moraceae	Morus alba	white mulberry	P	5.1	3
Rhamnaceae	Rhamnus cathartica	common buckthorn	P	2.5	3
		black cherry			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry		19.2	18 19
	X dead standing bole			26.0	
Aceraceae	Acer rubrum	red maple		38.0	19
Rosaceae	Prunus serotina	black cherry		19.1	18
Rosaceae	Prunus serotina	black cherry		25.2	
Rosaceae	Prunus serotina	black cherry		29.0	
	X standing dead bole			39.0	
Pinaceae	Pinus sylvestris	scotch pine		33.2	
Rosaceae	Prunus serotina	black cherry		13.8	9
Rosaceae	Prunus serotina	black cherry		38.5	19
Pinaceae	Pinus sylvestris	scotch pine		24.2	
Pinaceae	Pinus sylvestris	scotch pine		22.4	
Pinaceae	Pinus sylvestris	scotch pine		42.9	30
Pinaceae	Pinus sylvestris	scotch pine		36.6	30

30°N
1°

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus avium	sweet cherry		10.5	
Rosaceae	Prunus serotina	black cherry		22.0	
Aceraceae	Acer platanoides	Norway maple		29.7	
	x dead standing			17.5	
Rosaceae	Prunus serotina	black cherry		21.8	
	x dead standing			20.1	
	x dead standing			21.2	
Pinaceae	Pinus sylvestris	Scotch pine		38.5	
	x dead standing			33.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27422 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80569 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.0 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?
black
cherry

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?
maple, blackcherry

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 55

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/12/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>
29 Medium Plot <PAREAMEDM>
314 Large Plot <PAREALARGE>

Lot - Plot ~~No~~ 2: 111-4a+4b-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 274.4

A7. What is the steepness of the slope in degrees? <PSTEEP> 1.5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North **330°** (5) South
 (2) Northeast (6) Southwest
 (3) East (7) West
 (4) Southeast (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of coarse downed woody
 many treefalls
 ground open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple		4.4	8 5
Aceraceae	Acer platanoides	Norway maple		6.5	3.5
Aceraceae	Acer platanoides	Norway maple		4.5	5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	T	11.8 .	10
		Black cherry	T	22.2	(low)
	∞ Dead standing tree	Black cherry	T	10.3 .	
Aceraceae	Acer platanoides	Norway maple	T	16.5 .	
Pinaceae	Pinus sylvestris	Japanese Scotch pine	T	36.5	25
	∞ Dead standing		T	17.9 .	
Rosaceae	Prunus serotina	Black cherry	T	32.8 .	
Pinaceae	Pinus sylvestris	Japanese Red pine Scotch pine	T	31.2 .	24
Pinaceae	Pinus sylvestris	Japanese Red pine Scotch pine	T	45.6 .	29
Aceraceae	Acer platanoides platanoides	Norway maple	T	21.3 .	
Aceraceae	Acer platanoides platanoides	Norway maple	T	10.0 .	
Pinaceae	Pinus densiflora densiflora	Japanese red pine Scotch pine	T	28.3 .	25
Aceraceae	Acer platanoides	Norway maple	T	13.3 .	15
Aceraceae	Acer platanoides	Norway maple	T	10.4 .	12

(pinus)
Cpin
Forest Plot Form (D1)
Revision 13, Page 8
pin
(penley)

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus densiflora</i>	Japanese red pine Scotch pine	T	27.3	24
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	12.1	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	10.5	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	49.2	26
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	24.5	20
Pinaceae	<i>Pinus densiflora</i>	Japanese red pine Scotch pine	T	28.7	23
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	21.1	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	32.0	19
	X dead standing	Scotch pine	T	30.4	
	X dead standing		T	12.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27337 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80566 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.7m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
sparse, maple

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?
maple
sparse

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?
maple

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

300.1
4.5
27341
80584



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 56

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/12/10

Record the area (in square meters) of each plot below.

- 7 Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot-Plot No 2: 111-4a+4b-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 300-1

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Coarse downed woody debris
Several tree falls

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	Elm	P	7.7	13
Aceraceae	Acer platanoides	Norway maple	P	7.4	13
Aceraceae	Acer platanoides	Norway maple	±P	out of 3m	5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		x standing dead bole	12.7	T	
Rosaceae	Prunus serotina	black cherry	26.2	T	
Aceraceae	Acer platanoides	Norway maple	13.9	T	15
Rosaceae	Prunus serotina	black cherry	31.7	T	
Aceraceae	Acer platanoides	Norway maple	22.7	T	
Rosaceae	Prunus serotina	black cherry	32.0	T	
Moraceae	Morus alba	white mulberry	14.7	T	
		x dead standing bole	32.0	T	25
		x dead standing bole	30.1	T	25
Rosaceae	Prunus serotina	black cherry	41.6	T	25
Rosaceae	Prunus serotina	black cherry	13.5	T	18
Rosaceae	Prunus serotina	black cherry	20.3	T	
Rosaceae	Prunus serotina	black cherry	22.2	T	
Pinaceae	Pinus sylvestris	scotch pine	38.0	T	26

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	49.6 T	26	
Rosaceae	Prunus serotina	black cherry	17.0 T	18	
	X Standing dead		24.5 T		
Rosaceae	Prunus serotina	black cherry	32.2 T	22	
	X standing dead		18.0 T		
Rosaceae	Prunus serotina	black cherry	35.7 T		
Rosaceae	Prunus serotina	black cherry	20.4 T		
Aceraceae	Acer platanoides	Norway maple	14.0 T		
Rosaceae	Prunus serotina	black cherry	22.9 T		
	x dead standing	black cherry	T		

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.17361 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80584 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ 6.5 _____

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
sparse, maple

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?
sparse, maple

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

blackcherry,
pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 57

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 07.14.10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDM>

314 Large Plot <PAREALARGE>

Name of person filling out this form: _____

Carlin Ryan

Lot - Plot No 2: 111-4a+4b-4
7/14/10

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 2974

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North ⁹⁶ (5) _____ South
 (2) _____ Northeast (6) _____ Southwest
 (3) _____ East (7) _____ West
 (4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A lot of coarse woody downed woody debris.
 Many tree-falls.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	ABIS <i>Ulmus americana</i>	Elm	P	6.2	4
Aceraceae	<i>Acer platanoides</i>	Norway maple	P	outside 3 m	5
Aceraceae	<i>Acer platanoides</i>	Norway maple	P	outside 3 m	8

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	black cherry	T	34.3	
Aceraceae	<i>Acer platanoides</i>	norway maple	T	26.9	24
Rosaceae	<i>Prunus serotina</i>	black cherry	T	25.3	21
Aceraceae	<i>Acer platanoides</i>	norway maple	T	11.2	9
Rosaceae	<i>Prunus serotina</i>	black cherry	T	20.5	
	X dead standing			37.1	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	10	10
Aceraceae	<i>Acer platanoides</i>	norway maple	T	20.2	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	32	25
Aceraceae	<i>Acer platanoides</i>	norway maple	T	10.4	
Aceraceae	<i>Acer platanoides</i>	norway maple	T	36.7	24
	X dead standing			25.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X dead standing			41.3	
Rosaceae	Prunus serotina	black cherry	T	40.5	24
Rosaceae	Prunus serotina	black cherry	T	26.2	
	X dead standing			32.6	
Rosaceae	Prunus serotina	black cherry	T	17.4	12
Pinaceae Rosaceae	Pinus sylvestris Prunus serotina	scotch pine black pine	T	34.2	
Rosaceae	Prunus serotina	black cherry	T	20.4	
Asteraceae	Acer platanoides	hazy norway maple	T	20.4	21
Rosaceae	Prunus serotina	black cherry	T	26.5	
	X standing dead			22.2	
Pinaceae	Pinus sylvestris	scotch pine	T	39.9	
Pinaceae	Pinus sylvestris	black scotch pine	T	28.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27353 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80529 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

14 297.4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> _____

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Handwritten notes on the right side of the page:
1/0
dbh
2.5 - 9.9
understory?
sparse
Norway spruce
elm / beech
10 - 19-9
subdominant?
very sparse
20 +
dominant?
mixed

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 58

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/19/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- 29 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot - Plot No 2: 111-5a, 5b, 5c-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 301.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|--------------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North ^{44°} | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some ^{coarse} downed woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	black cherry	P	} outside 3m	5
Rosaceae	<i>Prunus serotina</i>	black cherry	P		5
Rosaceae	<i>Prunus serotina</i>	black cherry	P		5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	- Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	T	63	
Fabaceae	Robinia pseudoacacia	black locust	T	49.3	25
Pinaceae	Picea abies	Norway spruce	T	37.4	28
Pinaceae	Picea abies	Norway spruce	T	31.2	
Pinaceae	Picea abies	Norway spruce	T	24.2	
Pinaceae	Picea abies	Norway spruce	T	28.6	23
Pinaceae	Picea abies	Norway spruce	T	32.1	
Pinaceae	Picea abies	Norway spruce	T	35.1	29 23
Fabaceae	Robinia pseudoacacia	black locust	T	53.6	28 29
	Xstanding dead bole		T	14.5	
Pinaceae	Picea abies	Norway spruce	T	21.3	
Pinaceae	Picea abies	Norway spruce	T	29.1	
Pinaceae	Picea abies	Norway spruce	T	31.7	
Pinaceae	Picea abies	Norway spruce	T	32.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	33.5	
	X dead standing bole		T	26.5	
Fabaceae	Robinia pseudoacacia	Black locust	T	29.1	28 28

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27401 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.86621 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.5 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
sparse, cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 0

subdominant?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?
black locust, norway
spruce

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 59

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/14/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-PlotNo2: 111-5a, 5b, 5c - 2

Name of person filling out this form: Danielle Farnyth

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 288.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 0.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North 30° (5) _____ South
 (2) _____ Northeast (6) _____ Southwest
 (3) _____ East (7) _____ West
 (4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of downed ^{coarse} woody debris & treefalls
open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American Elm	P	outside 3m	6

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	33.5	26
	X Dead standing		T	31.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	32.5	
Fabaceae	<i>Robinia pseudoacacia</i>	Black locust	T	41.0	21
Pinaceae	<i>Picea abies</i>	Norway spruce	T	42.5	29
Fabaceae	<i>Robinia pseudoacacia</i>	Black locust	T	51.3	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	19.3	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	23.2	
	X Dead standing	Black locust	T	34.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	39.1	25
Fabaceae	<i>Robinia pseudoacacia</i>	Black locust	T	44.4	31
Pinaceae	<i>Picea abies</i>	Norway spruce	T	32.7	
Fabaceae	<i>Robinia pseudoacacia</i>	Black locust	T	38.0	
Fabaceae	<i>Robinia pseudoacacia</i>	Black locust	T	36.7	27

Forest Plot Form (P), Version 13, Page 8

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	31.2	
Pinaceae	Picea abies	Norway spruce	T	34.0	
Fabaceae	Robinia pseudoacacia	Black locust	T	52.8	
	X Dead standing	Black locust	T	29.7	
Pinaceae	Picea abies	Norway spruce	T	33.1	
Pinaceae	Picea abies	Norway spruce	T	33.0	
	X Dead standing	Black locust	T	49.53	
Pinaceae	Picea abies	Norway spruce	T	37.9	
	X Dead standing		T	27.2	
Fabaceae	Robinia pseudoacacia	Black locust	T	35.5	
Pinaceae	Picea abies	Norway spruce	T	42.4	
	X Dead standing		T	32.6	
Pinaceae	Picea abies	Norway spruce	T	32.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27372 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80659 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

12.0m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 0

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4>

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

understory?
~~conifer (deciduous)~~
| very sparse
subdominant?

overstory?
Norway spruce +
black locust

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 60

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/14/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Plot-Plot No2: 111-Sa, Sb, Sc-3

Name of person filling out this form: ~~JTB~~ Daniela / Caitlyn

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 319.9

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 280 |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

~~SBAA~~ Downed coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 70 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fabaceae	Robinia pseudoacacia	Black locust	T	30.5	
Pinaceae	Picea abies	Norway spruce	T	40.5	29 29
Fabaceae	Robinia pseudoacacia	Black locust	T	36.2	27
Pinaceae	Picea abies	Norway spruce	T	35.0	
	X Standing dead tree		T	27.5	
Fabaceae	Robinia pseudoacacia	Black locust	T	44.9	27
Ulmaceae	Ulmus americana	elm	T	11.8	
	X Standing dead tree		T	23.3	
Fabaceae	Robinia pseudoacacia	Black locust	T	53.2	30
	X Standing dead tree		T	25.8	
Pinaceae	Picea abies	Norway spruce	T	20.5	
Pinaceae	Picea abies	Norway spruce	T	51.5	
	X standing dead tree			35.8	
Pinaceae	Picea abies	Norway spruce	T	30.9	27

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fabaceae	Robinia pseudoacacia	black locust	T	53.2	
Pinaceae	Picea abies	norway spruce	T	34.8	28
	x dead standing tree	black locust	T	25.8	
Pinaceae	Picea abies	norway spruce	T	33.2	
Rosaceae	Prunus serotina	black cherry	T	55.4	
	x dead standing tree		T	34.5	
Pinaceae	Picea abies	norway spruce	T	43.3	
	x dead standing tree		T	35.3	
Pinaceae	Picea abies	norway spruce	T	26.8	
Pinaceae	Picea abies	norway spruce	T	23.5	
	x dead standing tree		T	42.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27367 (decimal degrees)

27367 80704 11.1
319.9

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80704 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

11.1

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

~~understory + yes sparse~~

Answer to question specified by researcher (integer) <PGENNUM1> 0

Question 2 (answer requires a whole number):

Subdom in ant overstory 0 no

Answer to question specified by researcher (integer) <PGENNUM2>

Question 3 (answer requires a whole number):

dominant overstory - mixed Blade to ast / primary spruce, yes

Answer to question specified by researcher (integer) <PGENNUM3>

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4>

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): Saginaw Forest

Name of forest <FK_FOREST>: _____

Plot identification number <PPIN>: 61

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/14/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: III-Sa, Sb, Sc - 4

Name of person filling out this form: Carthly n Ryan

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 319.8

A7. What is the steepness of the slope in degrees? <PSTEEP> 0.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North 340° (5) _____ South
 (2) _____ Northeast (6) _____ Southwest
 (3) _____ East (7) _____ West
 (4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of downed coarse woody debris and tree falls

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	}	outside	4
Rosaceae	Prunus serotina	black cherry		3m	5
Rosaceae	Prunus serotina	black cherry			5

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	norway spruce	T	29.8	
	X dead standing		T	31.9	
Pinaceae	Picea abies	norway spruce	T	22	
Fabaceae	Robinia pseudoacacia	black locust	T	59.8	35
Pinaceae	Picea abies	norway spruce	T	41.9	30
	X dead standing	dot	T	38.2	
	X dead standing		T	22.5	
Pinaceae	Picea abies	norway spruce	T	68.8	33
Rosaceae	Prunus serotina	black cherry	T	55.5	
Pinaceae	Picea abies	norway spruce	T	29.1	
Pinaceae	Picea abies	norway spruce	T	57.2	
Fabaceae	Robinia pseudoacacia	black locust	T	38.2	
Pinaceae	Picea abies	norway spruce	T	28.8	19
Pinaceae	Picea abies	norway spruce	T	32.2	

m
m
m

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber; or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fabaceae	Robinia pseudoacacia	black locust	T	40.5	27
Fabaceae	Robinia pseudoacacia	black locust	T	40.8	29
Pinaceae	Picea abies	norway spruce	T	44.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <LATITUDE>

83.80616 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

~~27360~~
27360
80616
6.2
319.8 = elev

E2. What is the longitude of this plot? <LONGITUDE>

47.27360 (decimal degrees)

~~27360~~

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.2 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Understory?
Sparse, black cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 0

Subdominant?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Overstory?
Norway spruce
(black locust)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Handwritten notes: 5.8, 21.5, 7.3, 1.0, 2.0

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 62

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/14/10

Record the area (in square meters) of each plot below.

- κ Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2 : III - Sa, Sb, Sc - 5

Name of person filling out this form: Danielle Curryn

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 291.9

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 252° |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some damaged coarse woody debris
very open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_Info}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

2
18
~~18~~
7

*
None in
3m

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	6 →	
Ulmaceae	Ulmus americana	Elm	P	4 →	
Aceraceae	Acer platanoides	Norway maple	P	4 →	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X Dead standing		T	25.0	
Pinaceae	Picea abies	Norway spruce	T	30.6	21
Pinaceae	Picea abies	Norway spruce	T	35.7	27
Pinaceae	Picea abies	Norway spruce	T	26.2	
	X Dead standing		T	29.5	
Aceraceae	Acer rubrum	Red maple	T	31.3	
Rosaceae	Prunus serotina	Black cherry	T	22.1	
	X Dead standing	Black locust	T	30	
Rosaceae	Prunus serotina	Black cherry	T	27.5	
Rosaceae	Prunus serotina	Black cherry	T	21.2	
	X Dead standing		T	24.2	
Fabaceae	Robinia pseudoacacia	Black locust	T	35.4	23
Pinaceae	Picea abies	Norway spruce	T	32.7	
Fabaceae	Robinia pseudoacacia	Black locust	T	69.1	28

m
m

m

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fabaceae	Robinia pseudoacacia	Black locust	T	54.0	
Fabaceae	Robinia pseudoacacia	Black locust	T	21.2	
Fabaceae	Robinia pseudoacacia	Black locust	T	46.3	
Pinaceae	Picea abies	Norway spruce	T	32.4	
Pinaceae	Picea abies	Norway spruce	T	49.9	31
Fabaceae	Robinia pseudoacacia	Black locust	T	36.9	25
Pinaceae	Robinia pseudoacacia Picea abies	Norway spruce	T	25.3	
Fabaceae	Robinia pseudoacacia	Black locust	T	28.5	
Pinaceae	Robinia pseudoacacia Picea abies	Norway spruce	T	14.6	17

AM

W
W

Forest Plot Form (P), Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

~~041~~ 42.27341 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80668 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Understory 1 Yes - extremely sparse

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

Subdominant 1, very sparse

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

dominant - 1 yes 10% at her way spruce

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 63

Date data collected for this form (mm-dd-yr) <PLOTDATE>: ~~7/15/10~~ 7/15/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: 111-6-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 317.0

A7. What is the steepness of the slope in degrees? <PSTEEP> 0.5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North <i>19°</i> | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed coarse woody debris,

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 70 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharinum	sugar maple	P	3.1	4
Aceraceae	Acer saccharum	sugar maple	P	} outside 3m	5
Aceraceae	Acer ^{saccharum} platanoides	sugar maple maple	P		6

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Tiliaceae	<i>Tilia americana</i>	basswood	T	63.0	26 (leaning)
Aceraceae	<i>Acer saccharum</i>	sugar maple	T	15.0	13
	X dead standing	(black cherry)	T	11.5	
Tiliaceae	<i>Tilia americana</i>	basswood	T	33.7	
Pinaceae	<i>Pinus strobus</i>	white pine	T	12.0	
Aceraceae	<i>Acer saccharum</i>	o sugar maple	T	14.0	15
Tiliaceae	Basswood	↙ <i>Tilia americana</i>	T	36.6	25
Tiliaceae	Basswood	↘ <i>Tilia americana</i>	T	28.2	
Tiliaceae	Basswood	<i>Tilia americana</i>	T	44.2	27
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	13.3	19
Tiliaceae	<i>Tilia americana</i>	Basswood	T	33.8	23
Pinacea	<i>Pinus strobus</i>	white pine	T	12.4	
	X standing dead bole	(white pine)	T	14.0	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	17.9	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	Xstanding dead bole	(white pine)		12.1	
Tiliaceae	Tilia americana	passwood	T	37.9	
Aceraceae	Acer saccharum	sugar maple	T	14.8	
Aceraceae	Acer saccharum	sugar maple	T	12.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27283 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80428 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.7m

27283 8.7
✓0928 317

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
sparse, maples

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant?
sparse, maples

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant?
basswood

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 64

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 07 / 15 / 10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot_PlotNo2: 111-6-2

Name of person filling out this form: Caitlin Ryan

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 316.7m

A7. What is the steepness of the slope in degrees? <PSTEEP> NO .5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

~~WAB~~ 0°
NE 0°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed woody debris
fairly open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar maple	P		6
Aceraceae	Acer saccharum	Sugar maple	P		5
Rosaceae	Acer Prunus serotina	black cherry	P		9

outside
3m
outside
3m
outside
3m

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	sugar maple	T	21	
Fabaceae	Robinia pseudoacacia	black locust	T	28.9	
	x dead standing		T	12	
Tiliaceae	Tilia americana	basswood	T	34	23
Tiliaceae	Tilia americana	basswood	T	36.1	
Pinaceae	Pinus strobus	white pine	T	17.1	
Rosaceae	Prunus serotina	black cherry	T	22.1	
Aceraceae	Acer saccharum	maple sugar maple	T	16.4	16
Tiliaceae	Tilia americana	basswood	T	18.7	
Aceraceae	Acer saccharum	sugar maple	T	23.3	18.5
Aceraceae	Acer saccharum	Sugarmaple	T	15.2	15
Aceraceae	Acer saccharum	SUGAR maple	T	12.5	
Tiliaceae	Tilia americana	basswood	T	46	21
	x dead standing	basswood	T	21.8	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Tiliaceae	Tilia americana	basswood	T	26.9	
Tiliaceae	Tilia americana	basswood	T	41.9	18
Tiliaceae	Tilia americana	basswood	T	30.3	
Tiliaceae	Tilia americana	basswood	T	43.9	
Tiliaceae	Tilia americana	basswood	T	24.8	
Tiliaceae	Tilia americana	basswood	T	40.2	
Aceraceae	Acer saccharum	sugar maple	T	17.1	16

m

Forest Plot Form (P), Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27255 _____ (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.40437 _____ (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.7m _____

314.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

0/1

understory
sparse
mostly maple
subdominant
sugar maple
dominant
basswoods

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 65

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/15/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDM>

314 Large Plot <PAREALARGE>

Lot, Plot No: ~~III-7-1~~ III-7-1

Name of person filling out this form: Daniel Fuszth

A. CONDITIONS OF THE PLOT

~~A1~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: ~~299.6~~ 299.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 3.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North ²⁵ (5) _____ South
 (2) _____ Northeast (6) _____ Southwest
 (3) _____ East (7) _____ West
 (4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Very small amount of downed coarse woody debris
 -Note: plot was near/on trail, so was moved 10m

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar maple	Sugar maple		4
Aceraceae	Acer saccharum	Sugar maple	Sugar maple		5
Aceraceae	Acer platanoides	Norway maple	Sugar Norway maple		5

Outside 3M
↓

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	20.8	
	X Dead standing tree		T	16.4	
Aceraceae	<i>Acer saccharum</i>	sugar maple	T	20.5	
Aceraceae	<i>Acer saccharum</i>	sugar maple	T	40.4	23
Aceraceae	<i>Acer saccharum</i>	sugar maple	T	22.9	
Fabaceae	<i>Robinia pseudoacacia</i>	Black locust	T	36.5	
	X Dead standing tree		T	28.0	
Ulmaceae	<i>Ulmus americana</i>	elm	T	18.2	9
	X Dead standing tree			8.5	(too small)
Fabaceae	<i>Robinia pseudoacacia</i>	Black locust	T	30.0	
	X Dead standing	Black locust	T	17.4	
	X Dead standing	Black locust	T	25.1	
	X Dead standing tree	elm?	T	23.8	
Aceraceae	<i>Acer saccharum</i>	sugar maple	T	29.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X Dead standing tree	pine?	T	20.7	
	X Dead standing tree	.	T	16.6	
	X Dead standing tree	elm?	T	26.8	
	X Dead standing tree		T	18.4	
Aceraceae	sugar maple	Acer saccharum	T	20.0	
Ulmaceae	elm	Ulmus americana	T	13.0	9 9
Aceraceae	sugar maple	Acer saccharum	T	30.7	23
Aceraceae	sugar maple	Acer saccharum	T	31.6	
Aceraceae	sugar maple	Acer saccharum	T	20.9	
Aceraceae	sugar maple	Acer saccharum	T	32.3	
Aceraceae	sugar maple	Acer saccharum	T	29.7	
Aceraceae	sugar maple	Acer saccharum	T	31.3	22
Aceraceae	sugar maple	Acer saccharum	T	19.2	12

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27319 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

~~83.80471~~ 83.80480 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

~~12.1~~ 10.4

80480
10.4
299.2

83.80471
42.27319

27319
80476 12.1
290.6

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

1 yes very sparse (maples)

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

1 yes

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

1 yes mixed

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 002

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 166

Date data collected for this form (mm-dd-yr) <PDATE>: 7/15/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No: III-7-2

Name of person filling out this form: Caitlyn Ryan Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 300.0

A7. What is the steepness of the slope in degrees? <PSTEEP> 12

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open, many maple seedlings

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	P	2.7	3.5
Aceraceae	Acer saccharum	sugar maple	P	outside 3m	6

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	sugar maple	30 T	32.8	23
Aceraceae	Acer saccharum	sugar maple	T	33.3	25
Aceraceae	Acer saccharum	sugar maple	T	25.2	
Aceraceae	Acer saccharum	sugar maple	T	36.2	
Aceraceae	Acer saccharum	sugar maple	T	3 25.0	
Aceraceae	Acer saccharum	sugar maple	T	31.4	
Aceraceae	Acer saccharum	sugar maple	T	29.6	
Aceraceae	Acer saccharum	sugar maple	T	10.9	15
Aceraceae	Acer saccharum	sugar maple	T	33.7	
Aceraceae	Acer saccharum	sugar maple	T	26.8	
Aceraceae	Acer saccharum	sugar maple	T	30.6	27
Aceraceae	Acer saccharum	sugar maple	T	23.1	
Aceraceae	Acer saccharum	sugar maple	T	21.4	
	X standing dead bole		3	43.1	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	Xstanding dead bole			12.7	
	Xstanding dead bole			13.5	
Aceraceae	Acer saccharum	sugar maple		23.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27276 (decimal degrees)

plot moved because too close to others

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80475 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.5

~~27279~~
8

27276
80475
8.5
300.0

804651, 272844

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 0

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

understory?
sparse, sugar maple

subdominant?

dominant?
sugar maple

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 203

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 67

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 07-15-10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot - Plot No 2: III - 8a+8b-1

Name of person filling out this form: Caitlin Ryan

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 324

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

352

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed woody debris
Pit (filled with rain water)

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> _____%

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
			NA	2.9	
Rosaceae	Prunus serotina	black cherry	P	2.9	4
Rosaceae	Prunus serotina	black cherry	P	2.9	4
Acer saccharum	Acer platanoides	norway maple	P		5

outside 3M
outside 3M

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	sugar maple	T	26.1	
Aceraceae	Acer saccharum	sugar maple	T	32.2	24
	X dead standing		T	15.5	
Aceraceae	Acer saccharum	sugarmaple	T	36.2	28
Aceraceae	Acer saccharum	sugar maple	T	16.8	16
Aceraceae	Acer saccharum	sugar maple	T	31.8	
Aceraceae	Acer saccharum	sugar maple	T	30.6	
Aceraceae	Acer saccharum	sugar maple	T	16.8	19
Aceraceae	Acer saccharum	sugar maple	T	35.5	
Aceraceae	Acer saccharum	sugar maple	T	60.7	32
Aceraceae	Acer saccharum	sugar maple	T	38.6	
Aceraceae	Acer saccharum	sugar maple	T	11.9	21
Aceraceae	Acer saccharum	sugar maple	T	30.7	
Aceraceae	Acer saccharum	sugar maple	T	27.7	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar maple	T	29.2	
Aceraceae	Acer saccharum	Sugarmaple	T	12.3	
Aceraceae	Acer saccharum	Sugar maple	T	25.7	
Aceraceae	Acer saccharum	Sugarmaple	T	37.8	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.7²⁷2743 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80511 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ ^{9.3}
324

80511
27243

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

0/1

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

understory
sparse
many seedlings
maple & cherry
subdominant
maple
dominant
sugar maple

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 68

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/15/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDMUM>
- Large Plot <PAREALARGE>

Lot - Plot Noz: III-8a+8b-2

Name of person filling out this form: Danielle Forsyth

CONDITIONS OF THE PLOT

A.

A1.

Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 304.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

None
 Very open, lots of seedlings

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <R_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Caprifoliaceae	Lonicera mackii	amur honeysuckle	B	3.3	2
Aceraceae	Acer platanoides	Norway maple	P		5
Aceraceae	Acer platanoides	Sugar maple	P		5

Outside
3m

height of 15 cm

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar maple	T	32.0	23
Aceraceae	Acer saccharum	sugar maple	T	15.4	16
Aceraceae	Acer saccharum	sugar maple	T	82.2	26
Aceraceae	Acer saccharum	Sugar maple	T	16.4	17
Aceraceae	Acer saccharum	sugar maple	T	24.7	
	X Dead standing	Sugar maple	T	17.0	
Aceraceae	Acer saccharum	sugar maple	T	16.1	18
Aceraceae	Acer saccharum	Sugar maple	T	21.4	
Aceraceae	Acer saccharum	sugar maple	T	27.4	
Aceraceae	Acer saccharum	sugar maple	T	29.7	(24.4)
Aceraceae	Acer saccharum	Sugar maple	T	29.1 29.1	
Aceraceae	Acer saccharum	sugar maple	T	27.2	
Aceraceae	Acer saccharum	sugar maple	T	44.2	25
Aceraceae	Acer saccharum	sugar maple	T	28.3	

m

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	sugar maple	T	21.5	
Aceraceae	Acer saccharum	sugar maple	T	37.1	
Fagaceae	Quercus alba white oak	sugar maple	T	30.1	
Fagaceae	Quercus alba white oak	sugar maple	T	50.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27235 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80539 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4.5

304.2

-83.80537
42.27238

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

understory - 1 yes sparse (maples)

Answer to question specified by researcher (integer) <PGENSNUM1> _____

Question 2 (answer requires a whole number):

subdominant overstory 1 yes (maples)

Answer to question specified by researcher (integer) <PGENSNUM2> _____

Question 3 (answer requires a whole number):

overstory 1 yes (sugar maple)

Answer to question specified by researcher (integer) <PGENSNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 69

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/15/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot-Plot No 2: III - 8c - 1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 299.5

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 18° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open
some downed coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	P	2.5	3
Juglandaceae	Carya ovata	Shagbark hickory	P	3.4	7
Aceraceae	Acer platanoides	Norway maple	P	outside 3m	6

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	Elm	T	14.8'	12
	X standing dead bole			14.0'	
Aceraceae	Acer saccharum	sugar maple	T	12.0'	12
	X standing dead bole			20.2'	
Bignoniaceae	Catalpa speciosa	catalpa	T	24.9'	19
	X standing dead bole			17.2'	
	X standing dead bole			21.2'	
	X standing dead bole			16.2'	
Pinaceae	Pinus resinosa	red pine red pine	T	23.0'	
Pinaceae	Pinus resinosa	red pine	T	20.4'	
Aceraceae	Acer platanoides	Norway maple	T	18.0'	11
Pinaceae	Pinus resinosa	red pine	T	17.6'	
Aceraceae	Acer platanoides	Norway maple	T	22.1'	
Rosaceae	Prunus serotina	black cherry	T	58.5'	25
	X standing dead bole			12.9'	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	T	27.3	
Pinaceae	Pinus resinosa	red pine	T	30.4	24
Pinaceae	Pinus resinosa	red pine	T	18.9	
	Xdead standing bole		T	18.5	
Pinaceae	Pinus resinosa	Red pine	T	26.2	
Pinaceae Aceraceae	Pinus resinosa Acer platanoides	Norway maple	T	14.1	
Pinaceae	Pinus resinosa	Red pine	T	24.8	23
Pinaceae	Pinus resinosa	Red pine	T	23.0	19
Fabaceae	Robinia pseudoacacia	black locust	T	26.6	
Rosaceae	Prunus serotina	black cherry	T	39.4	
Aceraceae	Acer platanoides	Norway maple	T	25.2	14
Juglandaceae	Carya ovata	shagbark hickory	T	11.5	
Tiliaceae	Tilia americana	basswood	T	20.8	
	Xstanding dead		T	22.3	
	Xstanding dead		T	13.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27326 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80521 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.9 m

299.5

805192, 273253

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory?
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

subdominant?
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

~~overstory?~~
mixed

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plot is a demarcated area useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 70

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 07-15-10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot - Plot No 2: III-8c-2

Name of person filling out this form: Caitlin Ryan

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 309.4

A7. What is the steepness of the slope in degrees? <PSTEEP> .5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|-----------------------------------------------|
| (1) _____ North | (5) <input checked="" type="checkbox"/> South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

145°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Fairly Sparse

Some downed woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar maple	P		5
Rosaceae	Prunus serotina	black cherry	P		13
Aceraceae	Acer saccharum	sugar maple	P		5

4
3
2
1
0
4
3
2
1
0
4
3
2
1
0
4
3
2
1
0

C1. *Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued*

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Magnoliaceae	Liriodendron tulipifera	tulip tree poplar	T	26.1	
	X dead standing		T	23	
Pinaceae	Pinus resinosa	red pine	T	28	22
Pinaceae	Picea abies	norway maple	T	21.8	
	X dead standing	red pine	T	22.8	
Juglandaceae	Carya ovata	shag bark hickory	T	17.6	21
Pinaceae	Pinus resinosa	red pine	T	24.1	15
Aceraceae	Acer platanoides	norway maple	T	21.162	
Aceraceae	Acer platanoides	norway maple	T	17.4	
Rosaceae	Prunus serotina	black cherry	T	43.2	
Aceraceae	Acer platanoides	norway maple	T	18	19
	X dead standing	maple	T	18.4	
	X dead standing	red pine	T	22.5	
	X dead standing		T	22.3	

Pinaceae Pinus resinosa red pine T 28.4 a 20m
 Rosaceae Prunus avium sweet cherry T 13
 Pinaceae Pinus resinosa red pine T 25.2
 x dead standing T 17.4

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

x dead standing T 29.2

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	x dead standing		T	20	
	x dead standing		T	21	
Aceraceae	Acer platanoides	norway maple	T	25.3	
Aceraceae	Acer platanoides	norway maple	T	24.4	
	x dead standing		T	21	
Aceraceae	Acer platanoides	norway maple	T	15.5	
	x dead standing		T	24.1	
Pinaceae	Pinus resinosa	red pine	T	21.2	
Aceraceae	Acer platanoides	norway maple	T	13.3	18
Pinaceae	Pinus resinosa	red pine	T	22.2	
	x dead standing		T	17.2	
	x dead standing		T	24.5	

Pinaceae Pinus resinosa red pine T 23.7
 Aceraceae Acer platanoides norway maple T 22.2
 Pinaceae Pinus resinosa red pine T 22
 x dead standing T 25.3

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.27293 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.80543 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.3

309.6

83.805423

42.27297

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

*understory
very sparse
maple mixed*

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

*subdominant
horsey maple*

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

*dominant
~~horsey maple~~ / red
pine*

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 71

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/19/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot-Plot No 2: II-1a+1b-1

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 296.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- (1) North **38°** (5) South
 (2) Northeast (6) Southwest
 (3) East (7) West
 (4) Southeast (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody debris + tree falls
open

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

3m

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus avium	sweet cherry	P	9.2	8
Ulmaceae	American elm	elm	P	outside 3m	3
Rosaceae	Prunus serotina	black cherry	P	outside 3m	4

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	25.9	20
Pinaceae	<i>Picea abies</i>	Norway spruce	T	35.1	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	20.5	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	45.4	30
Pinaceae	<i>Picea abies</i>	Norway spruce	T	31.2	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	35.8	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	33.4	
Pinaceae	<i>Pinus strobus</i>	White pine	T	50.6	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	42.8	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	21.8	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	29.3	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	42.3	25
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	21.0	
Pinaceae	<i>Picea abies</i>	Norway spruce		19.7	14

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	21.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	41.3	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	37.1	
Pinaceae	<i>Picea abies</i> <i>Acer platanoides</i>	Norway maple	T	15.6	8
Pinaceae	<i>Picea abies</i>	Norway spruce	T	31.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	35.4	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	39.0	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	35.1	
Moraceae	<i>Morus alba</i>	white mulberry <i>Morus alba</i>	T	21.0	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	40.0	
	X dead standing bole			10.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	24.1	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	39.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27554 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80443 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

11.7m

11.7 296.2

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

yes
1/0
2.5-9.9
understory

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

10-19.9
subdominant
space

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

20+
overstory
norway spruce

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 72

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/19/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot_Plot No2: II-1a+1b-2

Name of person filling out this form: MARCO BRUSLHTEIN

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 298.8 m

A7. What is the steepness of the slope in degrees? <PSTEEP> 4°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 344 | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

- a few tree falls
→ fairly open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

out
3 meter
plot →
↓

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya ovata	shagbark Hickory	P	3.5	5.5m
Rosaceae	Prunus serotina	Black Cherry	P		8m
Moraceae	White Mulberry	Morus Alba	P		9m

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	14.3	13
Rosaceae	Prunus serotina	" Black Cherry	T	12	12
Rosaceae	Prunus serotina	Black Cherry	T	12	
Pinaceae	Picea Abies	Norway Spruce	T	29.8	
Aceraceae	Acer rubrum	Red MAPLE	T	12.3	9
Rosaceae	✓ Prunus serotina	Black Cherry	T	11.9	
Pinaceae	Norway Spruce	Picea Abies	T	38.5	
Pinaceae	Norway Spruce	Picea Abies	T	38.41	32
Pinaceae	Norway Spruce	Picea Abies	T	27.7	
Pinaceae	Norway Spruce	Picea Abies	T	40.4	27
Aceraceae	Norway Maple	Acer platanoides	T	16.6	
Pinaceae	White Pine	Pinus Strobus	T	45.4	
Rosaceae	Black Cherry	Prunus serotina	T	14.2	
Rosaceae	Black cherry	Prunus serotina	T	15.6	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
X Dead standing		Poderosa Pine?	T	26.14	
Pinaceae	Pinus strobus	White Pine	T	45.5	
Rosaceae	Prunus serotina	Black Cherry	T	11.7	
Rosaceae	Prunus serotina	Black Cherry	T	15.1	
Pinaceae	Pinus strobus	White Pine	T	60.2	
Pinaceae	Picea abies	Norway Spruce	T	34.8	25
Rosaceae	Prunus serotina	Black Cherry	T	10.6	
Rosaceae	Prunus serotina	Black Cherry	T	15.3	
Rosaceae	Prunus serotina	Black Cherry	T	14.0	
X Dead Stand			T	26.6	
Rosaceae	Prunus serotina	Black Cherry	T	11	

Dead stand

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27532 (decimal degrees)

or

42 ° 16 ' 32 " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80479 (decimal degrees)

or

83 ° 48 ' 49 " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.9 m

80479
27532

27532
80479
10.9
298.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

- Under story
very sparse
mixed
cherry
mulberry

- Sub dominant overstory
sparse mixed

- Overstory
norway spruce

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): 7-19-2010

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 73

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/19/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: II-1a+1b-3

Name of person filling out this form: Danielle Forsyth

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION> 304.1

A7. What is the steepness of the slope in degrees? <PSTEEP> 3° slope

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-------------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North ³⁰ | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed coarse woody debris
Very open, lots of blackberries

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |



26

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

Outside
3m
circle

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P		7
Rosaceae	Prunus serotina	Black cherry	P		8
		Red maple	P		11
Rhamnaceae	Rhamnus cathartica	Common buckthorn	P		4

(DBH 700 kg)

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	32 37.5	23
Pinaceae	<i>Picea abies</i>	Norway spruce	T	44.0	
Aceraceae	<i>Acer rubrum</i>	Red maple	T	11.1	10 10
Pinaceae	<i>Picea abies</i>	Norway spruce	T	38.0	17
Pinaceae Aceraceae	<i>Picea abies</i> <i>Acer</i> ^{platanoide} <i>rubrum</i>	Norway maple	T	27.0	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	28.0	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	39.0	20
Moraceae	<i>Morus alba</i>	white mulberry	T	10.0	6
	X Dead standing tree		T	31.2	
	X Dead standing tree		10 T	19.1	
	X Dead standing tree		T	20.8	
	X Dead standing tree	Norway spruce	T	40.2	
Pinaceae	<i>Picea abies</i> <i>Picea abies</i>	Norway spruce	T	25.8	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	30.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X Dead standing tree		T	12.3'	
Pinaceae	Picea abies	Norway spruce	T	34.4'	
	X Dead standing tree		T	11.5 11.5	
Rosaceae	Prunus serotina	Black cherry	T	11.6'	7
	X Dead standing		T	30.6'	
Rosaceae	Prunus serotina	Black cherry	T	10.0'	
Pinaceae	Picea abies	Norway spruce	T	30.8'	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27510 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80434 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.1

W 83.80433
N 42.275132
N 27510
W 80434
304.1
5.1 Error

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

1 yes really sparse mixed

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

1 yes very sparse

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

1 yes Norway spruce

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 74

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/19/00

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot - Plot No2: II-1a+1b-4

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 299.6

A7. What is the steepness of the slope in degrees? <PSTEEP> 5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North 330° (5) _____ South
(2) _____ Northeast (6) _____ Southwest
(3) _____ East (7) _____ West
(4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some coarse woody debris
fair number of seedlings,

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	P	3.5	4.5
Aceraceae	Acer platanoides	Norway maple	P	outside 3m	5
Aceraceae	Acer rubrum	Red maple	P	outside 3m	7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	32.1	24
Pinaceae Aceraceae	<i>Picea abies</i> <i>Acer platanoides</i>	Norway maple	T	15.5	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	42.0	25
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	17.1	8 9
Pinaceae	<i>Picea abies</i>	Norway spruce	T	37.4	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	43.9	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	43.0	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	28.4	
Pinaceae	<i>Picea abies</i>	Norway spruce.	T	32.3	
Moraceae	<i>Morus alba</i>	White mulberry	T	13.3	9
Pinaceae	<i>Picea abies</i>	Norway spruce	T	42.8	26
Pinaceae	<i>Picea abies</i>	Norway spruce	T	35.5	
	X standing dead bole	(black cherry)		12.8	
	X standing dead bole	(Norway spruce)			

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	11.0	
Rosaceae Aceraceae	Rosaceae <i>Acer platanoides</i>	Norway maple	T	14.2	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	44.5	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	42.3	
Moraceae	<i>Morus alba</i>	White mulberry	T	11.2	13
Pinaceae	<i>Picea abies</i>	Norway spruce	T	47.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	16.2	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	10.0	13
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	12.6	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	18.3	13
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	28.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27508 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

299.6
17.1
27508
80507

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80507 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

~~13.1~~ 13.1 m

83.80509
42.275065

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

understory
norway maple
back than seedling
sparse
subdominant
mixed
sparse
overstory
Norway spruce

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 75

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/19/00

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: II-2-1

Name of person filling out this form: Marco Bruschi

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 318.1

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8 . If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------|--------------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <input checked="" type="checkbox"/> Northwest 308° |

A9 . Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Tree falls - some downed coarse woody debris
fairly open

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

outside
2 meter
plot
↓
↓
↓

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	P		6
Rhamnaceae	Rhamnus cathartica	common buck thorn	P		3
Bignoniaceae	Catalpa speciosa	Catalpa	P		3

Fagaceae
 Aceraceae

Quercus rubrum
 Acer plantanoides

Red Oak
 Nonwoody Maple

T 13.8
 T 25.8

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
DEAD		(Red Pine)	T	22.2	
Aceraceae	Acer negundo	Box Elder	T	11	12
Pinaceae	Pinus resinosa	Red Pine	T	34	26
Rosaceae	Prunus serotina	Black Cherry	T	23.3	
Pinaceae	Pinus resinosa	Red Pine	T	23.5	
Rosaceae	Prunus serotina	Black Cherry	T	13.5	
Pinaceae	Pinus resinosa	Red Pine	T	24.8	
Aceraceae	Acer Rubrum	Red Maple	T	18.0	14
Rosaceae	Prunus serotina	Black cherry	T	11.6	
DEAD		(Red Pine)	T	24.1	
Rosaceae	Prunus serotina	Black Cherry	T	11.2	13
Rosaceae	Prunus serotina	Black Cherry	T	27.9	
Rosaceae	Prunus serotina	Black Cherry	T	23.7	
Rosaceae	Prunus Serotina	Black Cherry	T	18.6	
Rosaceae	Prunus serotina	Black Cherry	T	24.2	
		DEAD (Red Pine)	T	21.6	
Pinaceae	Pinus resinosa	Red Pine	T	24.3	

DEAD

REV. 5-07

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	21	
Pinaceae	<i>Prunus serotina</i> <i>Pinus resinosa</i>	Black Cherry	T	13.4	
Pinaceae	<i>Pinus resinosa</i>	Red Red Pine	T	27.7	26
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	26	
Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	14.9	
Aceraceae	<i>Acer rubrum</i>	Red Maple	T	16	
Pinaceae	<i>Pinus Resinosa</i>	Red Pine	T	23.3	
Rosaceae	<i>Prunus serotina</i> <i>Pinus resinosa</i>	Black Cherry	T	22.6	
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	28.5	25
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	24.8	
Aceraceae	<i>Acer platanoides</i>	Norway Maple	T	17.1	
Aceraceae	<i>Acer negundo</i>	Box Elder	T	16.4	
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	28.5	
Aceraceae	<i>Acer negundo</i>	Box Elder	T	10.7	
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	23.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27474 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80445 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.1m

~~83.81286~~
42.274705
83.804286

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

- understory
very sparse & mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

- sub dominant
overstory

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

① - mixed

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

- Overstory
red pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 002

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 76

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/19/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: II-2-2

Name of person filling out this form: Damelle Fayn

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

- 83,80488 W
- 42,27448 E^N

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 299.3

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 270 |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Downed coarse woody debris
Some tree falls

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rhamnaceae	Rhamnus cathartica	Common Buckthorn	P	4	4
Aceraceae	Acer nagundo	Box Elder	P	5.9	5
Rhamnaceae	Rhamnus cathartica	Common Buckthorn	P	2.6	3
	X Dead standing tree		T	17.5	
Pinaceae	Pinus resinosa	Red pine	T	24.8	
Pinaceae	Pinus resinosa	Red pine	T	22.8	
Pinaceae	Pinus resinosa	Red pine	T	28.3	
	Acer nagundo	Box elder	T		
Pinaceae	Pinus resinosa	Red pine	T	19.7	
Juglandaceae	Carya ovata	shagbark hickory	T	13.1	
Rosaceae	Prunus serotina	Black cherry	T	19.0	
Pinaceae	Pinus resinosa	Red pine	T	31.6	
Pinaceae	Pinus resinosa	Red pine	T	10.4	
Pinaceae	Pinus resinosa	Red pine	T	28.6	

trees contained



Rev. 5-07

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	15.8	
Pinaceae	Pinus resinosa	Red pine	T	22.4 22.4	
Pinaceae	Pinus resinosa	Red pine	T	21.7	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	20.2	
	X Dead standing tree	Red pine	T	20.1	
Aceraceae	<i>Acer platanoides</i>	Red maple	T	18.2 16.6	16
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	29.2	17
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	12.4	13
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	24.6	18
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	22.7 21.7	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	10.7	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	24.1	
	X Dead standing tree		T	23.9	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	23.6	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	26.2	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	26.8	
Aceraceae	<i>Acer ^{rubrum} platanoides</i>	Red maple	T	16.7	

m
m
m
m

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	29.0	21
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	30.2	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	25.2	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	25.7	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	26.0	
Aceraceae	<i>Acer negundo</i>	Box elder	T	13.0	
	X Dead standing tree	Acer negundo?	T	9.7	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	27.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	20.2 20.1	
Moraceae	<i>Morus alba</i>	^{white} mulberry	T	12.5 12	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	22.2	
Aceraceae	<i>Acer negundo</i>	Box elder	T	14.3	

Pinaceae *Pinus resinosa* Red pine T 27.4
 Pinaceae *Pinus resinosa* Red pine T 25.5
 Rosaceae *Prunus serotina* Black cherry T 10.9

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27448 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80465 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

27448
80465
7.7
299.3

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.7 m

W 83.804568
N 42.27448

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

1 yes present - mixed (understory)

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

1 yes mixed (subdominant overstory)

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

1 yes Red pine (dominant overstory)

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 77

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/19/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: II-2-3

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 311 m

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|--------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <input checked="" type="checkbox"/> West 25° |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some downed coarse woody debris
fair amount of treefalls
fairly shrubby (buckthorn)

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm). <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rhamnaceae	Rhamnus cathartica	common buckthorn	P	3.4	3
Rhamnaceae	Rhamnus cathartica	common buckthorn	P	3.2	2.5
Rhamnaceae	Rhamnus cathartica	common buckthorn	P	3.5	3
Rhamnaceae	Rhamnus cathartica	common buckthorn	P	6.1	3

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer negundo	box elder	T	21.0	
Pinaceae	Pinus resinosa	Red pine	T	31.2	14
Aceraceae	Acer negundo	Box elder	T	15.7	10
Pinaceae	Pinus resinosa	Red pine	T	23.3	
Aceraceae	Acer negundo	Box elder	T	18.5	
Pinaceae	Pinus resinosa	Red pine	T	25.7	
Rosaceae	Prunus serotina	Black cherry	T	17.0	
Pinaceae	Pinus resinosa	Red pine	T	21.2	
Rosaceae	Prunus serotina	Black cherry	T	14.5	
Pinaceae	Pinus resinosa	Red pine	T	23.0	
Aceraceae	Acer negundo	Box elder	T	14.5	
Pinaceae	Pinus resinosa	Red pine	T	18.8	
Pinaceae	Pinus resinosa	Red pine	T	30.2	
Moraceae	Morus alba	White mulberry	T	11.0	
Pinaceae	Pinus resinosa	Red pine	T	21.1	
Fagaceae	Quercus rubra	Red oak	T	17.2	14

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	23.5	
Aceraceae	<i>Acer negundo</i>	Box elder	T	20.4 18.6	8
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	20.4	
Pinaceae Pinaceae	<i>Pinus resinosa</i>	Red pine	T	23.5	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	24.9	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	14.7	8
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	23.2	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	35.3	17 17
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	27.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	23.7	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	23.2	15
Rosaceae	<i>Prunus serotina</i>	Black cherry		22.7	

Pinaceae *Pinus resinosa* Red pine 26.5
 Pinaceae *Pinus resinosa* Red pine 29.3
 Pinaceae *Pinus resinosa* Red pine 26.6

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27422 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80445 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.1

83.804322
42.274208

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed, blackthorn,
box elder

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
mixed - black cherry
box elder

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
red pine.

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 78

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/21/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot_PlotNo2: I-4-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 306

A7. What is the steepness of the slope in degrees? <PSTEEP> 4.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest 330° |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Very open

some coarse woody debris.

trees tagged

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 65 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

2.5-9.9 cm

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
none					

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	53.3	25
Aceraceae	Acer rubrum	Red maple	T	18.2	
Pinaceae	Pinus strobus	White pine	T	44.9	
Pinaceae	Pinus strobus	White pine	T	41.9	
Aceraceae	Acer rubrum	Red maple	T	28.8	
Rosaceae	Prunus avium	Sweet cherry	T	15.3	
Aceraceae	Acer platanoides	Norway maple	T	21.2	
	X dead standing bole	(white pine)	T	40.4	
Aceraceae	Acer platanoides	Norway maple	T	22.0	
Pinaceae	Pinus strobus	White pine	T	50.4	
	X dead standing bole		T	37.3	
Aceraceae	Acer platanoides	Norway maple	T	13.1	15
Pinaceae	Pinus strobus	White pine	T	46.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	44.5	28
Betulaceae	Ostrya virginiana	Ironwood	T	14.0	15
Pinaceae	Pinus strobus	White pine	T	44.6	
Aceraceae	Acer rubrum	Red maple	T	12.5	15
	X dead standing bole	(white pine)	T	26.9	
Aceraceae	Acer platanoides	Norway maple	T	20.0	
Pinaceae	Pinus strobus	White Pine Red Maple	T	41.7	26
Pinaceae	Pinus strobus	White pine	T	41.0	
Aceraceae	Acer platanoides	Norway maple	T	24.6	
Aceraceae	Acer platanoides	Norway maple	T	22.0	
Pinaceae	Red Maple Pinus strobus	White pine	T	36.8	
Pinaceae	Pinus strobus	white pine	T	40.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27735 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80708 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

~~E3.~~ What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

17.5m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0

1/0
understory? 25-9.9

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

10-19.9
subdominant overstory?
normal maple

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant overstory?
white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 79

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 07/21/2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot_PlotNo2: I-4-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 329

A7. What is the steepness of the slope in degrees? <PSTEEP> 0°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

no aspect

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some coarse woody debris; open trees tagged; flaged

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

out of 3 meter range

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer subarum ^{saccharum}	Red ^{sapling} Maple	P		13
Aceraceae	Acer rubrum ^{saccharum}	Red ^{sapling} Maple	P		10
Aceraceae	Acer subarum ^{saccharum}	Red ^{sapling} Maple	P		14

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharinum floridum	sugar Red Maple	T	10.2	
Pinaceae	Pinus strobus	White Pine	T	40.8	
Aceraceae	Acer saccharum	Sugar Maple	T	14.5	16
Pinaceae	Pinus strobus	White Pine	T	50.4	30
Aceraceae	Acer saccharum	Sugar Maple	T	14.2	17
Aceraceae	Acer saccharum	Sugar Maple	T	15.1	
Pinaceae	Pinus strobus	Pine White Pine	T	38.3	
Aceraceae	Acer saccharum	Sugar Maple	T	17.6	18.0
Rosaceae	Prunus serotina	Bitch Cherry	T	55.7	
Aceraceae	Acer platanoides	Norway Maple	T	11.9	
Aceraceae	Acer saccharum	Sugar Maple	T	13	
Rosaceae	Prunus serotina	Black Cherry	T	26.1	
Pinaceae	Pinus strobus	White Pine	T	44.5	26 26
Pinaceae	Pinus strobus	White Pine	T	44.3	28

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway Maple	T	29.5	
X	DEAD (Pinus Strobus)	White Pine	T (DEAD)	26.8	
Pinaceae	Pinus Strobus	White Pine	T	33.5	
Aceraceae	Acer saccharum	Sugar Maple	T	13.5	
Pinaceae Pinaceae	Pinus Strobus	White Pine	T	48.7	
Aceraceae	Acer saccharum	Sugar Maple	T	11.0	
Pinaceae	Pinus strobus	White Pine	T	30.5	
Aceraceae	Acer saccharum	Sugar Maple	T	13.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42. ~~42739~~ (decimal degrees)
or
27739

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80661 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.6 m

80660
27738

27739
80661
329 6.6
Rev. 3-073

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory
Very sparse - Acer ^{Saccharum} ~~Rubrum~~

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

sub dominant

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

^{Sugar} ~~Red~~ maple

overstory
White Pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 80

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 07/21/2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot_PlotNo2: I-4-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 363.8

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|----------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <u>X</u> Northwest 305 |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

coarse woody debris, fairly open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	P	outside 3m	6
Aceraceae	Acer platanoides	Norway maple	P	outside 3m	4.5
Aceraceae	Acer platanoides	Norway maple	P	outside 3m	8

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	T	17.5	16
Pinaceae	Pinus strobus	white pine	T	41.5	32
	A	X dead tree (Norway maple)	T	13.3	
Pinaceae	Pinus strobus	white pine	T	43.6	32
Aceraceae	Acer platanoides	Norway maple	T	20.7	
Aceraceae	Acer rubrum	Red maple	T	12.6	
Aceraceae	Acer platanoides	Norway maple	T	14.6	
		X dead tree (white pine)	T	41	
Pinaceae	Pinus strobus	white pine	T	52	29
Aceraceae	Acer platanoides	Norway maple	T	23.2	
Pinaceae	Pinus strobus	white pine	T	35.1	
Aceraceae	Acer platanoides	Norway maple	T	13.3	
Aceraceae	Acer platanoides	Norway maple	T	14.9	
Pinaceae	Pinus strobus	white pine	T	45.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	46.5	
Pinaceae	Pinus strobus	white pine	T	60.1	
Pinaceae	Pinus strobus	white pine	T	48.4	
Aceraceae	Acer platanoides	Norway maple	T	18.6	15
Pinaceae	Pinus strobus	white pine	T	56	
Aceraceae	Acer platanoides	Norway maple	T	16	20
Aceraceae	Acer platanoides	Norway maple	T	18.1	
Aceraceae	Acer platanoides	Norway maple	T	21.4	
Pinaceae	Pinus strobus	white pine	T	55.1	30

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27706 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80692 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.5

Error
363.8
14.9
7.5
~~15.2~~

~~42.27706~~
~~83.80692~~

83.806923
~~80692~~
42.277091

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

1 Understory:
sparse, Norway maple

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

1 Sub-dominant:
maples,

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

1 Overstory:
white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 81

Date data collected for this form (mm-dd-yr) <PLOTDATE>: July 21, 2010

Record the area (in square meters) of each plot below.

7 Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot - Plot No2: I-4-4

Name of person filling out this form: Karlai Zhang

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

80662
27688

27687
80662

276.6
6.6

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 276.6

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <u>90</u> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody debris, open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> ~~50~~ 60 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	sugar maple	outside 3m		6.5
Aceraceae	Acer saccharum	sugar maple	outside 3m		5.5
Aceraceae	Acer saccharum	sugar maple	outside 3m		6

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway Maple	T	23.1	
Pinaceae	Pinus strobus	White Pine	T	29.6	27
DEAD	X (Pinus strobus)	(White Pine)	T	34.4	
Aceraceae	Acer sacra rubrum	Red Sugar Maple	T	11.1	15
Pinaceae	Pinus strobus	White Pine	T	47.6 42.5	27
Aceraceae	Acer platanoides	Norway Maple	T	15	
DEAD	X Pine (White?)		T	32.2	
Aceraceae	Acer platanoides	Norway Maple	T	16.6	
Pinaceae	Picea Abies	Norway Spruce	T	36.4	
Pinaceae	Pinus strobus	White Pine	T	32.4	
Pinaceae	Pinus strobus	White Pine	T	50.6	32
Pinaceae	Pinus strobus	White Pine	T	31.1	
Aceraceae	Acer rubrum	Red Maple	T	13.3	14
Aceraceae	Acer platanoides	Norway Maple	T	14.4	13

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus Strobus	White Pine	T	30.9	23
Pinaceae	Pinus Strobus	White Pine	T	31.1	
Pinaceae	Pinus strobus	White Pine	T	54.1	
Aceraceae	Acer platanoides	Norway Maple	T	23.3	
Pinaceae	Pinus strobus	White Pine	T	49	
Pinaceae	Pinus strobus	White Pine	T	40.9	
Pinaceae	Pinus strobus	White Pine	T	43.4	
Aceraceae	Acer rubrum	Red Maple	T	10.5	
Pinaceae	Pinus strobus	White Pine	T	30.1	
Aceraceae	Acer rubrum	Red Maple	T	15	
Aceraceae	Acer rubrum	Red Maple	T	12	12
Aceraceae	Acer rubrum	Red Maple	T	13.1	
Pinaceae	Pinus strobus	White Pine	T	50.3	
	Pinus strobus	White Pine	T	62.1	35

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

+42.27687 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-87.80662 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.6

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory:
Very sparse, maples

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Sub-dominant:
maples

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

~~dominant~~

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Overstory:
white pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 82

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 07/21/2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: I-5-1

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 273

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|----------------------------------------------------|
| (1) _____ North | (5) <input checked="" type="checkbox"/> South 160° |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

downed coarse woody debris, several tree falls

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

Trees

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	T	21.5	
		X dead (cedar)	T	17	
Pinaceae	Pinus ponderosa	ponderosa pine	T	46.8	23
Aceraceae	Acer platanoides	Norway maple	T	13.8	
Pinaceae	Pinus ponderosa	ponderosa pine	T	40	
Simarubaceae	Ailanthus altissima	Tree-of-heaven	T	20.1	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	36.7	
Rosaceae	Prunus serotina	black cherry	T	14.8	13
Rosaceae	Prunus serotina	black cherry	T	19.9	
Pinaceae	Pinus ponderosa	ponderosa pine	T	31	
Pinaceae	Pinus ponderosa	ponderosa pine	T	43.1	
Simarubaceae	Ailanthus altissima	Tree-of-heaven	T	16.8	

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

Trees

D1

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X dead	(ponderosa pine)	T	31	
Aceraceae	Acer platanoides	Norway maple	T	12.5	
Simaroubaceae	Ailanthus altissima	Tree-of-heaven	T	15.4	
Pinaceae	Pinus ponderosa	ponderosa pine	T	36	
Simaroubaceae	Ailanthus altissima	Tree-of-heaven	T	24.8	
Aceraceae	Acer rubrum	Red maple	T	13.7	
Simaroubaceae	Ailanthus altissima	Tree-of-heaven	T	14.5	
		pa			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple		4.3	6
Aceraceae	Acer platanoides	Norway maple		8.0	14
Aceraceae	Acer platanoides	Norway maple		Outside 3m	5.5

Saplings

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		<i>ponderosa</i>			
		X dead tree (white pine)	T	18.5	
Pinaceae	<i>Pinus ponderosa</i>	ponderosa pine	T	26.4	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	16.1	
Pinaceae	<i>Pinus ponderosa</i>	ponderosa pine	T	36.1	21
Ulmaceae	<i>Ulmus americana</i>	American elm	T	16.8	
Ulmaceae	<i>Ulmus americana</i>	American elm	T	12.5	8
Rosaceae	<i>Prunus serotina</i>	black cherry	T	39.3	
Moraceae	<i>Morus alba</i>	white mulberry	T	10.6	
Pinaceae	<i>Pinus ponderosa</i>	ponderosa pine	T	26.5	20
Pinaceae	<i>Pinus ponderosa</i>	ponderosa pine	T	26	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	11	13
Simaroubaceae	<i>Ailanthus altissima</i>	Tree-of-heaven	T	20.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.2113 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80782 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.9

281.5
G11
273.1 59
27713
80782

~~80782~~
127714
180775

83.807829
42.277133

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

*underspry
rowley maple
very sparse*

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

*subdominant
mixed*

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

*Overstory
ponderosa pine*

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 83

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/22/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot - Plot No 2: I-5-2

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 238.6 m

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 30° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some downed coarse woody debris
open

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	72.2'	
Aceraceae	Acer platanoides	Norway maple	T	10.4'	
Aceraceae	Acer platanoides	Norway maple	T	20.9'	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	28.8'	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	40.8'	24
Aceraceae	Acer platanoides	Norway maple	T	40.1'	
Aceraceae	Acer platanoides	Norway maple	T	36.0'	
	Xdead standing hole	(Ponderosa pine)	T	21.9'	
Hippocastanaceae	Aesculus glabra	Ohio buckeye	T	16.2'	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red maple	T	31.6	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	30.2	20
Pinaceae	Pinus ponderosa	Ponderosa pine	T	37.4	21
Aceraceae	Acer platanoides	Norway maple	T	16.8	15
Rosaceae	Prunus serotina	Black cherry	T	33.3	
	x dead standing bole	(ponderosa pine)	T	26.8	
Aceraceae	Acer platanoides	Norway maple	T	15.8	15
Pinaceae	Pinus ponderosa	Ponderosa pine	T	24.5	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	28.7	
Aceraceae	Acer rubrum	Red maple	T	26.8	
Aceraceae	Acer rubrum	Red maple Red maple	T	13.3	14
	x dead standing bole	(ponderosa pine)	T	27.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27738 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

2020 8.16
10754
27733

E2. What is the longitude of this plot? <PLONGITUDE>

W 8 3.80783 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

X moved b/c too close to edge

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

~~42.27733
83.80763
2 12.5
38.6~~

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

12.5m

80754
277734

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
sparse - norway maples

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
sparse, maple?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant
ponderosa pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 84

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/22/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot-Plot No2: I-7-1

Name of person filling out this form: Danielle Foyth

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 8°

A7. What is the steepness of the slope in degrees? <PSTEEP> 291.4

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|------------------------------------|
| (1) _____ North | (5) <u>X</u> South ^{200°} |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Lots of downed coarse woody debris
Tree falls

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
 (2) _____ few?
 (3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	P	2.8	4
Aceraceae	Acer platanoides	Norway maple	P	2.8 6.2	7.5
Ulmaceae	Ulmus americana	elm	P	3.0	4

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus</i> serotina ^{avium}	Sweet cherry	T	29.3	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	18.3	15
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	16.1	15
	X Dead standing pruned	climber	T	59.5	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	11.9	12
Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	44.7	22
Aceraceae	<i>Acer rubrum</i>	Red maple	T	26.6	
	X Dead standing	scotch pine	T	35.9	
	X Dead standing		T	37.0	
Rosaceae	<i>Prunus avium</i>	sweet cherry	T	30.0	
Pinaceae	<i>Pinus sylvestris</i>	scotch pine	T	37.9	22 31
	X Dead standing		T	29.5	
	X Dead standing		T	37.7	
Aceraceae	<i>Acer platanoides</i>	Norway maple	T	12.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus avium	Sweet cherry	T	23.1	
	X Dead standing		T	33.7	
	X Dead standing			13.2	
Pinaceae	Pinus sylvestris	Scotch pine	T	34.7	22
	X Dead standing		T	35.8	
	X Dead standing		T	37.4	
	X Dead standing		T	31.4	
	X Dead standing		T	17.4	
Rosaceae	Prunus serotina	Black cherry	T	10.0	
	X Dead		T	28.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27663 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80692 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.6m

291.4
8.6
27663
80692

8 0692
27655

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

understory (mixed)

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

subdomina - mixed (black, cherry & maple)

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

dominat - scotch pine

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 85

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/22/10

Record the area (in square meters) of each plot below.

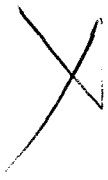
- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: I-7-2

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.



Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 281.6

A7. What is the steepness of the slope in degrees? <PSTEEP> ~~281.6~~ 8°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|----------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input checked="" type="checkbox"/> South 180° |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

moved due to trail & treefall
 some damage to coarse woody debris
 open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red maple	P	2.8	4
Aceraceae	Acer saccharum	Sugar maple	P	5.2	6
Rosaceae	Prunus serotina	Black cherry	P	9.5	7 7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer platanoides	Norway maple	T	23.2	
Rosaceae	Prunus serotina	Black cherry	T	10.4	
	X standing dead bole	(scotch pine)	T	35.0	
Rosaceae	Prunus serotina	Black cherry	T	16.6	
Bignoniaceae	Catalpa speciosa	catalpa	T	39.4	
Pinaceae	Pinus sylvestris	Scotch pine	T	41.9	22
	X dead standing bole	(black cherry)	T	14.8	
Rosaceae	Prunus serotina	Black cherry	T	18.2	
Aceraceae	Acer platanoides	Norway maple	T	10.5	
	X dead standing bole	(scotch pine)	T	39.4	
Rosaceae	Prunus serotina	Black cherry	T	15.4	12
Aceraceae	Acer platanoides	Norway maple	T	12.8	
	X dead standing bole		T	10.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X dead standing bole	(scotch pine)	T	44.6	
Aceraceae	Acer saccharum	Sugar maple	T	10.5	13
Rosaceae	Prunus serotina	Black cherry	T	17.4	10
Aceraceae	Acer saccharum	Sugar maple	T	18.8	
Pinaceae	Pinus sylvestris	Scotch pine	T	38.3	19
Rosaceae	Prunus serotina	Black cherry	T	17.6	
Aceraceae	Acer saccharum	Sugar maple	T	23.4	
Aceraceae	Acer saccharum	Sugar maple	T	11.3	
Pinaceae	Pinus sylvestris	Scotch pine	T	37.5	20
	X standing dead bole	(scotch pine)	T	43.5	20
Rosaceae	Prunus serotina	sweet cherry	T	34.2	
	X standing dead bole	(scotch pine)	T	39.8	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.276594 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80630 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.3

83.806375, 42.276594

80630, 27669

6.3 281.6

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

underson?
sparse, mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

subdominant?
Mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Dominant?
scrub pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 86

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/29/10

Record the area (in square meters) of each plot below.

7 Small Plot <PAREASMALL>

24 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: I-2a+2b-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 291

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|-------------------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest ^{228°} |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West ^{180°} |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

2 large tree falls
 some coarse woody debris
 very open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 35 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	14.2	9
Pinaceae	Pinus strobus	White pine	T	35.2	
Pinaceae	Pinus strobus	White pine	T	46.1	
Rosaceae	Prunus serotina	Black cherry	T	15.2	8
Aceraceae	Acer platanoides	Norway maple	T	10.5	
Pinaceae	Pinus strobus	White pine	T	38	
Aceraceae	Acer platanoides	Norway maple	T	31.6	
Pinaceae	Pinus strobus	White pine	T	39.8	
Pinaceae	Pinus strobus	White pine	T	42.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	18.0	13
Pinaceae	Pinus strobus	White pine	T	39.0	23
Pinaceae	Pinus strobus	White pine	T	73.7	
Aceraceae	Acer rubrum	Red maple	T	29.1	
Pinaceae	Pinus strobus	White pine	T	37.5	24
	XDEAD	(black cherry)	T	15.3	
Pinaceae	Pinus strobus	White pine	T	38.2	
Pinaceae	Pinus strobus	White pine	T	45.4	27
Pinaceae	Pinus strobus	White pine	T	35.0	
Pinaceae	Pinus strobus	White pine	T	49.2	
Pinaceae	Pinus strobus	White pine	T	41.0	
	XDEAD	(Black cherry)	T	15.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.27733 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80811 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

291

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 87

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/29/10

Record the area (in square meters) of each plot below.

4 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: I-2a+2b-2

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 288

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 320 |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Several large treefalls
very open
Some coarse woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> _____% 20

A11. Are epiphytes <PEPIPHYTES> 45

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	(no understory)				

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	33.4	
Ulmaceae	Ulmus americana	American elm	T	26.6	
Rosaceae	Prunus serotina	Black cherry	T	17.2	14
Pinaceae	Pinus strobus	White pine	T	48.5	

slope = 2
370°

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	41.8	26
Pinaceae	Pinus strobus	White pine	T	47.7	
Pinaceae	Pinus strobus	White pine	T	47.0	28
Pinaceae	Pinus strobus	White pine	T	48.6	30
Rosaceae	Prunus serotina	Black cherry	T	23.3	
Aceraceae	Acer rubrum	Red maple	T	14.3	12
Pinaceae	Pinus strobus	White pine	T	40.1	
Pinaceae	Pinus strobus	White pine	T	53.1	
Pinaceae	Pinus strobus	White pine	T	47.0	
Aceraceae	Acer rubrum	Red maple	T	25.1	
Rosaceae	Prunus serotina	Black cherry	T	15.7	13
Pinaceae	Pinus strobus	White pine	T	44.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.2721 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.80550 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

288

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0 Understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Acer rubrum, Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?
(Pinus strobus)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Saginaw Forest

Plot identification number <PPIN>: 88

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/29/10

Record the area (in square meters) of each plot below.

- 0 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: 1-2a+2b-3

Name of person filling out this form: Daniel Fuzith

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 293

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) <u>110</u> East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Very open, not very much ground cover

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) _____ few? |
| (3) _____ abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

Outside
3 m
↓

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
Aceraceae	Acer Acer platanoides	Norway Maple	P	0%	6

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	49	30
Pinaceae	Pinus strobus	White pine	T	50.6	.
Aceraceae	Acer rubrum	Red maple	T	20.8	
Pinaceae	Pinus strobus	White pine	T	32.4	25
Aceraceae	Acer platanoides	Norway maple	T	26.4	
Pinaceae	Pinus strobus	White pine	T	34.3	
	X DEAD	Dead	T	14.7	
Pinaceae	Pinus strobus	White Pine	T	49.1	30
Rosaceae	Prunus serotina	Black Cherry	T	20	
Fagaceae	Quercus rubra	Red oak	T	12.3	18
Pinaceae	Pinus strobus	White pine	T	49.3	
Pinaceae	Pinus strobus	White pine	T	33.3	
Aceraceae	Acer platanoides	Norway Maple	T	17.3	23
Pinaceae	Pinus strobus	White Pine	T	42.6	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red maple	T	16.2	20
Aceraceae	Acer platanoides	Norway maple	T	27.9	
Aceraceae	Acer platanoides	Norway maple	T	26.1	
Pinaceae	Pinus strobus	White pine	T	34.6	
Pinaceae	Pinus strobus	White pine	T	51.2	
Pinaceae	Pinus strobus	White pine	T	48.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.27132 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.80576 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

292

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
(very sparse - Acer platanoides)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant overstory?
(Pinus strobus)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 1

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/28/00

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDMUM>

314 Large Plot <PAREALARGE>

Lot - Plot/No2: SW75-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 236.1

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input checked="" type="checkbox"/> South 90° |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed coarse woody debris.
dense undergrowth

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

DI

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	31.8	
Pinaceae	Pinus strobus	White pine	T	21.0	
Pinaceae	Pinus strobus	White pine	T	31.5	
Pinaceae	Pinus strobus	White pine	T	24.5	

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer negundo	box elder	P	2.7	4
Rosaceae	Prunus serotina	black cherry	P	3.1	4
Aceraceae	Acer negundo	box elder	P	3.4	5
Aceraceae	Acer negundo	box elder	P	3.2	→ 5
				4	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	xdead standing bole		T	16.1	
Pinaceae	Pinus strobus	white pine	T	30.9	
Pinaceae	Pinus strobus	white pine	T	37.3	30
	xdead standing bole		T	17.9	
	xdead standing bole		T	24.3	
Pinaceae	Pinus strobus	white pine	T	36.4	
Pinaceae	Pinus strobus	white pine	T	22.8	
	xdead standing bole		T	20.6	
Pinaceae	Pinus strobus	white pine	T	28.5	
Pinaceae	Pinus strobus	white pine	T	34.0	29
	xdead standing bole			18.8	
Pinaceae	Pinus strobus	white pine	T	34.2	24
Pinaceae	Pinus strobus	white pine	T	38.3	
Pinaceae	Pinus strobus	white pine	T	33.8	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	34.4	
Pinaceae	Pinus strobus	White pine	T	33.0	
Pinaceae	Pinus strobus	White pine	T	24.5	
Pinaceae	Pinus strobus	White pine	T	37.0	
Pinaceae	Pinus strobus	White pine	T	23.5	
Pinaceae	Pinus strobus	White pine	T	37.7	
Pinaceae	Pinus strobus	White pine	T	34.0	
Pinaceae	Pinus strobus	White pine	T	22.1	
Pinaceae	Pinus strobus	White pine	T	46.6	
Pinaceae	Pinus strobus	White pine	T	37.7	
Pinaceae	Pinus strobus	White pine	T	31.4	
Pinaceae	Pinus strobus	White pine	T	35.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39357 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.94135 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

203.1

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.3

42.393654
- 83.941035

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
300' elder, cherry
(dense)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 0

subdominant

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 2

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/28/60

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot - Plot No 2: SW75-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 302.8

A7. What is the steepness of the slope in degrees? <PSTEEP> 4°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|-----------------------|
| (1) _____ North | (5) <u>160°</u> South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

1 tree fall

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|----------------------|
| (1) <u>X</u> absent? |
| (2) _____ few? |
| (3) _____ abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black Cherry	P	2.5	4
Rosaceae	<i>Prunus serotina</i>	Black Cherry	P	3.2	4
Aceraceae	<i>Acer negundo</i>	Box Elder	P	3.2 outside 3m	3.5

outside 3m

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

DI. TREES
DEAD
DEAD

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X dead standing bole	White Pine		13.9	
	X dead standing bole	White Pine?		23.8	
Pinaceae	Pinus strobus	White Pine	T	36.8	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	30.2	
Pinaceae	Pinus strobus	White Pine	T	32.1	23 *
Pinaceae	Picea abies	? Norway spruce	T	13.8	10 *
Pinaceae	Pinus strobus	White Pine	T	33.5	
Pinaceae	Pinus strobus	White Pine	T	36.6	23 *
Pinaceae	Pinus strobus	White Pine	T	23.5	
	DEAD	White Pine	DEAD	11.4	
Pinaceae	Pinus strobus	White Pine	T	28.5	
Pinaceae	Pinus strobus	White Pine	T	36.5	
Pinaceae	Pinus strobus	White Pine	T	32.8	
	DEAD	White Pine?		21.1	
Pinaceae	Pinus strobus	White Pine	T	25.6	
Pinaceae	Pinus strobus	White Pine	T	32.7	
Pinaceae	Pinus strobus	White Pine	T	24.1	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	22.0	
Pinaceae	Pinus strobus	White Pine	T	27.3	
Pinaceae	Pinus strobus	White Pine	T	33.5	
Pinaceae	Pinus strobus	White Pine	T	23.7	
Pinaceae	Pinus strobus	White Pine	T	27.0	
Pinaceae	Pinus strobus	White Pine	T	19.3	24 *
	X dead standing bole	White Pine?		16.5	
Pinaceae	Pinus strobus	White Pine	T	23	
Pinaceae	Pinus strobus	White Pine	T	26.8	
Pinaceae	Pinus strobus	White Pine	T	38.0	24 *
Pinaceae	Pinus strobus	White Pine	T	25.6	
Pinaceae	Pinus strobus	White Pine	T	29.9	

DEAD

*

Forest Plot Form (P), Version 13, Page 7

Rev. 5-07

DEAD

Pinaceae
Pinaceae

X dead standing bole

Pinus strobus
Pinus strobus

White Pine
White Pine

T
T

11.4
23.8
35.2

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39407 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.94073 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.3

39407
94073
10.3
302.5

42.394078
-83.940729

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

Understory: 1
Sparse

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

? Subdominant:
sparse, white pine / Norway spruce
Dominant: 1
White Pine

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 3

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/29/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDMUM>

314 Large Plot <PAREALARGE>

Lot_PlotNo2: SW75-3

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 282.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 0°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	46.5	27
Pinaceae	<i>Picea abies</i>	Norway spruce	T	46.9	29
Pinaceae	<i>Picea abies</i>	Norway spruce	T	47.8	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	39.9	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	44.6	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	63.5	32
Pinaceae	<i>Picea abies</i>	Norway spruce	T	54.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39331 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

N 42.39337
W -83.939761
331
998
6.9
~~272.0~~
282.2

E2. What is the longitude of this plot? <PLONGITUDE>

W -83.93976 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.9

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 0

1/0 dbh
under story 2.5-9.9

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 0

10-19.9
subdominant

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

overstory 20+
noway space

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4>

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
 Date of site visit (mm-dd-yr): ~~07-21-10~~
 Name of forest <FK_FOREST>: Stinchfield Woods
 Plot identification number <PPIN>: 4
 Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/29/10
 Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot Plot No 2: SW75-4

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
 Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 303.5

A7. What is the steepness of the slope in degrees? <PSTEEP> 2.25°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East 10° | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 35 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B: GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	P	3	4 4
Rosaceae	Prunus serotina	Black cherry	P		4
Rosaceae	Prunus serotina	Black Cherry	P		3

outside 3m plot

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		X Dead standing	T	22.3	
		X Dead standing	T	16	
Pinaceae	Pinus strobus	White Pine	T	28.5	
Pinaceae	Pinus strobus	White Pine	T	30.9	
		X Dead standing	T	17.8	
		X Dead standing	T	9.0	
		X Dead standing	T	30.3	
		X Dead standing	T	25.0	
		X Dead standing	T	19.9	
Pinaceae	Pinus strobus	White Pine	T	33.9	
Pinaceae	Pinus strobus	White Pine	T	36.0	
Pinaceae	Picea abies	Norway Spruce	T	16.2	21
		X Dead standing	T	21.2	
		X Dead standing	T	14.0	
Pinaceae	Picea abies	Norway Spruce	T	34.0	
Pinaceae	Pinus strobus	White Pine	T	40.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway Spruce		36	
		X Dead standing X		23	
Pinaceae	Pinus strobus	White Pine		40	28
		X Dead standing X		21	
Pinaceae	Picea abies	Norway Spruce		28.5	
Pinaceae	Pinus strobus	White Pine White Pine		40.5	27
Pinaceae	Pinus strobus	White Pine		23	27
		X Dead standing X		20.5	
		X Dead standing X		28.3	
Pinaceae	Pinus strobus	White Pine		29	
Pinaceae	Pinus strobus	White Pine		24	
Pinaceae	Pinus strobus	White Pine		39.4	28

Pinaceae Pinus strobus White Pine 37
Pinaceae Picea abies Norway Spruce 33
 Pinaceae Pinus strobus White Pine 32

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39466 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93997 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.4

303.5
8.4
42.39466
83.93997

42.394647
83.939994

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory
very sparse, black cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 0 subdominant

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 overstory
white pine, norway spruce

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 5

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 5

Date data collected for this form (mm-dd-yr) <PLOTDATE>: July 29, 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW 75-5

Name of person filling out this form: Kailani

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 337.9

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | | |
|----------------------------------------|-----------------------------------------------|------|
| (1) <input type="checkbox"/> North | (5) <input checked="" type="checkbox"/> South | 115° |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest | |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West | |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest | |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

One tree fall
open.
close to edge.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	15	16
Pinaceae	Pinus strobus	white pine	T	22.5	
Pinaceae	Picea abies	Norway spruce XXXXXX	T	34.1	24
		X dead (white pine)	T	18.3	
Pinaceae	Pinus strobus	white pine	T	24.2	
Pinaceae	Picea abies	Norway spruce	T	42.5	27
		X dead	T	22	
Rosaceae	Prunus serotina	black cherry	T	36.4	
Pinaceae	Pinus strobus	white pine	T	27.3	19
Pinaceae	Pinus strobus	white pine	T	27.1	
Pinaceae	Picea abies	Norway spruce	T	22.5	
Pinaceae	Pinus strobus	white pine	T	27.2	
		X dead	T	12	
Pinaceae	Pinus strobus	white pine	T	26.4	29

Pinaceae

Picea abies

Norway spruce

T

25.4

Pinaceae

Pinus strobus

(subdominant)

White pine

T

16.3

25

D. ~~TREE, PALM AND WOODY CLIMBER INFORMATION~~

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

Pinaceae What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine (subdominant)	T	26	38.8
Pinaceae	Pinus strobus	white pine	T	19.9	28
Pinaceae	Picea abies	Norway spruce	T	29.7	
Pinaceae	Pinus strobus	white pine	T	28.1	31
		X dead	T	19.5	
Pinaceae	Picea abies	Norway spruce	T	26.7	
Pinaceae	Pinus strobus	white pine	T	23.8	
Pinaceae	Pinus strobus	white pine	T	22.1	
Pinaceae	Pinus strobus	white pine	T	23.6	
		white pine	T	28	
Pinaceae	Pinus strobus	white pine	T	39.8	
Pinaceae	Pinus strobus	white pine	T	30.5	
Pinaceae	Pinus strobus	white pine	T	32	
Pinaceae	Pinus strobus	white pine	T	34.4	
Pinaceae	Pinus strobus	white pine	T	26	
Pinaceae	Pinus strobus Picea abies	Norway spruce	T	33.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.39477 (decimal degrees)

or

____° ____' ____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.94132 (decimal degrees)

or

____° ____' ____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP>

~~14.0~~

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

14.0

42.394773
-83.941327

337.9 (20)
39477 14.0
94132

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

understory: 0

~~substory~~:
subdominant

overstory: 1

(white pine)

1 Overstory:

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

Norway spruce

white pine

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 6

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/29/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-PlotNo 2: SW73-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 295.8

A7. What is the steepness of the slope in degrees? <PSTEEP> 5°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 254° |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Very open

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
none		no			
D1 / Pinaceae	Picea abies	Norway spruce	T	20.4	
X dead standing bole		(Norway spruce)			
Rosaceae	Prunus serotina	black cherry	T	19.4	
X dead standing bole		(black cherry)	T	13.0	
Rosaceae	Prunus serotina	black cherry	T	42.2	

D/CI.

Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	26.3	21
Pinaceae	Picea abies	Norway spruce	T	23.1	
Pinaceae	Picea abies	Norway spruce	T	11.3	13
	X dead standing bole		-		
Pinaceae	Picea abies	White pine	T	22.6	
Pinaceae	Pinus strobus	Norway spruce	T	15.8	
Pinaceae	Picea abies	(white pine)	T	16.5	
	X dead standing bole		T	22.1	
Pinaceae	Pinus strobus	White pine	T	16.2	
	X dead standing bole	(white pine)	T	24.8	
Pinaceae	Pinus strobus	White pine	T	40.8	
Pinaceae	Pinus strobus	White pine	T	21.9	
Pinaceae	Pinus strobus	White pine	T	16.0	
Pinaceae	X dead standing bole				

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	24.2	26
Pinaceae	Picea abies	Norway spruce	T	17.0	
Pinaceae	Picea abies	Norway spruce	T	18.7	
Pinaceae	Picea abies	Norway spruce	T	23.2	
Pinaceae	Picea abies	Norway spruce	T	16.1	
Pinaceae	Pinus strobus	White pine	T	28.4	
Pinaceae	Picea abies	Norway spruce	T	16.1	16
Pinaceae	Picea abies	Norway spruce	T	18.6	
Pinaceae	Pinus strobus	White pine	T	17.5	17
Pinaceae	Picea abies	Norway spruce	T	12.8	
Pinaceae	Pinus strobus	White pine	T	31.4	
Pinaceae	Pinus strobus	White pine	T	34.1	25
	X dead standing bole			10.0	
Pinaceae	Picea abies	Norway spruce	T	12.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	12.0	
Pinaceae	Picea abies	Norway spruce	T	31.0	24
	X dead standing bole	(Norway spruce)		16.8	
Pinaceae	Picea abies	Norway spruce	T	20.6	
Pinaceae	Picea abies	Norway spruce	T	18.7	
Pinaceae	Picea abies	Norway spruce	T	19.5	
Pinaceae	Picea abies	Norway spruce	T	22.1	
Pinaceae	Picea abies	Norway spruce	T	22.0	
Pinaceae	Picea abies	Norway spruce	T	19.5	19
Pinaceae	Picea abies	Norway spruce	T	19.8	
	X dead standing bole			12.8	
Pinaceae	Picea abies	Norway spruce	T	26.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39597 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93554 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

14.3

42.39595
-83.93754

42.39597
93554
14.3
295.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 0

understory

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

*subdominant
Norway spruce*

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

*dominant
white pine / Norway spruce*

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): ~~27 July 2010~~

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 1

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 29 July 2010

Record the area (in square meters) of each plot below.

x Small Plot <PAREASmall>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot Plot No2: SW73-2

Name of person filling out this form: ACG

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 338.0

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|-------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest 228 |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

(none)

SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

DI

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	N. Spruce		21.3	
Pinaceae	Pinus strobus	W Pine		26.3	
Rosaceae	Prunus serotina	Bk. Cherry		41.5	
Pinaceae	Picea abies	N. Spruce		21.5	
Pinaceae	Picea abies	N Spruce		26.2	

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	N. Spruce	T	13	15
		X Dead standing	T	13.1	
		X Dead standing	T	12	
Pinaceae	<i>Picea abies</i>	N Spruce	T	22.1	
Pinaceae	<i>Picea abies</i>	N Spruce	T	28	
Pinaceae	<i>Picea abies</i>	N Spruce	T	19.8	
Rosaceae	<i>Prunus serotina</i>	Bk. Cherry	T	22.8	
Rosaceae	<i>Prunus serotina</i>	Bk. Cherry	T	13	
Pinaceae	<i>Picea abies</i>	N. Spruce	T	13.2	
		X Dead standing	T	19.8	
Pinaceae	<i>Picea abies</i>	N. Spruce	T	23.5	
Pinaceae	<i>Picea abies</i>	N. Spruce	T	30.3	
		X Dead standing	T	30.9	
Pinaceae	<i>Picea abies</i>	N. Spruce	T	18.5	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus strobus</i>	W Pine	T	21	
Pinaceae	<i>Pinus strobus</i>	W Pine	T	25.9	
		X Dead standing	T	22	
Pinaceae	<i>Pinus strobus</i>	W Pine	T	27.4	
		X Dead standing	T	13.8	
		X Dead standing	T	24.9	
		X Dead standing	T	14	
Pinaceae	<i>Picea abies</i>	N Spruce	T	26.0	
Pinaceae	<i>Picea abies</i>	N Spruce	T	23.7	
Pinaceae	<i>Picea abies</i>	N Spruce	T	29.5	30
		X Dead standing	T	13.4	
Pinaceae	<i>Picea abies</i>	N Spruce	T	29.5	
Pinaceae	<i>Picea abies</i>	N Spruce	T	23.0	
Pinaceae	<i>Picea abies</i>	N Spruce	T	26.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	N Spruce	T	33	18
Pinaceae	Picea abies	N Spruce	T	30.5	21
		X Dead standing	T	16	
		X Dead standing	T	10.5	
		X Dead standing	T	11.5	
Pinaceae	Pinus strobus	W Pine	T	32.5	27
Pinaceae	Pinus strobus	W Pine	T	24.6	23
Pinaceae	Pinus strobus	W Pine	T	30.4	
Pinaceae	Picea abies	N Spruce	T	25.7	
Pinaceae	Picea abies	N Spruce	T	15.4	18
Pinaceae	Pinus strobus	W Pine	T	32.3	27
Pinaceae	Picea abies	N Spruce	T	14.8	14

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39630 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93814 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.7

42.396304
-83.938129

N 630
W 814
Acc 9.7
E 338.0

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0 under

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant
spruce - norway spruce

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 canopy
Norway Spruce/White Pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 8

Date data collected for this form (mm-dd-yr) <PLOTDATE>: July 29, 2010

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>
28 Medium Plot <PAREAMEDMUM>
314 Large Plot <PAREALARGE>

Lot - Plot No 2 - SW 73-3

Name of person filling out this form: Karlan

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 299.9

A7. What is the steepness of the slope in degrees? <PSTEEP> 4

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest 22b. |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open
a couple trees fall
several metres from an old ~~tree~~ trail

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		X dead tree	T	11.4	
Pinaceae	Picea abies	Norway spruce	T	26.8	29
Pinaceae	Picea abies	Norway spruce	T	16.4	
Pinaceae	Picea abies	Norway spruce	T	19.5	30
Pinaceae	Pinus strobus	white pine	T	29.7	
Pinaceae	Picea abies	Norway spruce	T	25.5	
Pinaceae	Picea abies	Norway spruce	T	27.5	28
Pinaceae	Pinus strobus	white pine	T	34.4	
Pinaceae	Picea abies	Norway spruce	T	18.6	
Pinaceae	Picea abies	Norway spruce	T	24.9	
Pinaceae	Picea abies	Norway spruce	T	28.3	28
Pinaceae	Pinus strobus	white pine	T	27.2	
Pinaceae	Picea abies	Norway spruce	T	17	26
Pinaceae	Picea abies	Norway spruce	T	14.9	

Pinaceae Pinus strobus White pine T 28.2
 Pinaceae Picea abies Norway spruce T 24
 Pinaceae Pinus strobus White pine T 29.2

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

Pinaceae Picea abies Norway spruce T 20.5
 Pinaceae Picea abies Norway spruce T 21.1
 Pinaceae Picea abies Norway spruce T 20.6

Pinaceae	Picea abies	Norway spruce	Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
Pinaceae	Picea abies	Norway spruce	T	26.8	
Pinaceae	Picea abies	X Deerel		11.3	
Pinaceae	Picea abies	Norway spruce	T	26.5	
Pinaceae	Pinus strobus	White pine	T	34.5	
Pinaceae	Picea abies	Norway spruce	T	14.9	
Pinaceae	Picea abies	Norway spruce	T	18.1	
Pinaceae	Pinus strobus	White pine	T	43	
Pinaceae	Picea abies	Norway spruce	T	31.1	25
Pinaceae	Picea abies	Norway spruce	T	17.3	
		X Deerel	T	10.3	
Pinaceae	Picea abies	Norway spruce	T	30.2	
Pinaceae	Picea abies	Norway spruce	T	41.2	
Pinaceae	Picea abies	Norway spruce	T	19.7	23
		X Deerel	T	13.9	
Pinaceae	Picea abies	Norway spruce	T	22.7	
Pinaceae	Picea abies	Norway spruce	T	25.5	

REV. 5-07

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.39653 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.93758 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.8

42.39658
83.93759

653

758

Acc 8.8
E 299.9m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> _____

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> _____

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

understory: 0

subdominant: 1
Norway spruce

dominant: 1
spruce

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 9

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/29/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW73-4

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 335.5

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest 200° |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Several small treefalls
open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
(none)					

DL

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	29.2	
Pinaceae	Picea abies	Norway spruce	T	11.9	
Pinaceae	Picea abies	Norway spruce	T	13.4	
Pinaceae	Picea abies	Norway spruce	T	36.5	
Pinaceae	Picea abies	Norway spruce	T	10.6	
Pinaceae	Picea abies	Norway spruce	T	19.2	
Pinaceae	Pinus strobus	White pine	T	39.9	
Pinaceae	Picea abies	Norway spruce	T	27.7	
Pinaceae	Pinus strobus	White pine	T	32.8	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	27.0	24
Pinaceae	<i>Pinus strobus</i>	White pine	T	40.4	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	33.7	22
	Xdead	(Norway spruce)	T	13.0	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	28.0	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	15.8	21
Pinaceae	<i>Picea abies</i>	Norway spruce	T	31.6	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	25.1	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	21.8	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	23.3	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	15.6	20
Pinaceae	<i>Picea abies</i>	Norway spruce	T	29.5	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	22	
Pinaceae	<i>Pinus strobus</i>	White pine	T	32.8	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	15.3	
Pinaceae	Picea abies	Norway spruce	T	21.8	
Pinaceae	Picea abies	Norway spruce	T	22.6	
Pinaceae	Picea abies	Norway spruce	T	34.2	27
Pinaceae	Picea abies	Norway spruce	T	31.6	
	X dead standing bole	(Norway spruce)	T	11.2	
Pinaceae	Picea abies	Norway spruce	T	13.4	15
Pinaceae	Picea abies	Norway spruce	T	23.9	
Pinaceae	Picea abies	Norway spruce	T	22.5	
Pinaceae	Picea abies	Norway spruce	T	32.0	
Pinaceae	Picea abies	Norway spruce	T	13.7	
Pinaceae	Picea abies	Norway spruce	T	23.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39671 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93803 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ 6.3

42.39671
-83.93800

671
803

6.3

335.5

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0

underspry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
Norway spruce

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstray
Norway spruce

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 10

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/30/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASmall>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW85-1

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 349

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some downed coarse woody debris
several treefalls

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	7.0	1
Rosaceae	Prunus serotina	Black cherry	p	5.9	5
Rosaceae	Prunus serotina	Black cherry	P	3.0	4
Rosaceae	Prunus serotina	Black cherry	P	5.5	
Rosaceae	Prunus serotina	Black cherry	P	2.6	

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American elm	T	16.6	19
Pinaceae	Pinus strobus	White pine	T	20.5	
Pinaceae	Pinus strobus	White pine	T	29.8	
	X dead standing bole	(White pine)	T	22.0	
Pinaceae	Pinus strobus	White pine	T	22.2	
	X dead standing bole	(White pine)	T	22.7	
Pinaceae	Pinus strobus	White pine	T	22.3	
Pinaceae	Pinus strobus	White pine	T	23.6	
Pinaceae	Pinus strobus	White pine	T	28.0	
Pinaceae	Pinus strobus	White pine	T	30.6	
Pinaceae	Pinus strobus	White pine	T	21.0	
	X dead standing bole	(White pine)	T	26.5	
	X dead standing bole	(White pine)	T	28.0	
Pinaceae	Pinus strobus	White pine	T	35.5	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	35.0	
	X standing dead bole	(white pine)	T	25.0	
Pinaceae	Pinus strobus	White pine	T	34.8	
Pinaceae	Pinus strobus	White pine	T	27.0	
Pinaceae	Pinus strobus	White pine	T	38.5	
	X dead standing bole		T	21.5	
Pinaceae	Pinus strobus	White pine	T	41.0	
Pinaceae	Pinus strobus	White pine	T	26.7	
Pinaceae	Pinus strobus	White pine	T	20.3	
Pinaceae	Pinus strobus	White pine	T	34.5	
	X dead standing bole	(white pine)	T	18.5	
Pinaceae	Pinus strobus	White pine	T	35.9	
	X dead standing bole	(white pine)	T	20.3	
Pinaceae	Pinus strobus	White pine	T	31.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	41.5	21
Pinaceae	Pinus strobus	White pine	T	32.0	22
	X dead standing bole	(white pine)	T	18.5	
	X dead standing bole	(White pine)	T	30.1	
Pinaceae	Pinus strobus	White pine	T	24.5	
Pinaceae	Pinus strobus	White pine	T	28.5	
	X dead standing bole	(white pine)	T	15.8	
Pinaceae	Pinus strobus	White pine	T	36.6	24
Pinaceae	Pinus strobus	White pine	T	31.7	
Pinaceae	Pinus strobus	White pine	T	29.8	
Pinaceae	Pinus strobus	White pine	T	25.5	
Pinaceae	Pinus strobus	White pine	T	24.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39257 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

* Moved slightly east because close to road

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93641 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

16.4

42.392557
-83.936487

39257
93641
16.4
349

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
black cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
(very sparse) elm

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 11

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/30/16

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- Medium Plot <PAREAMEDIUM>
- Large Plot <PAREALARGE>

Lot-PlotNo2: SW8S-2

Name of person filling out this form: Kailai / Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 213.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|--------------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) <input checked="" type="checkbox"/> Southwest 250° |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

downed coarse woody debris, several tree falls
many saplings

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus Prunus serotina	Black cherry	P	2.5	3
Rosaceae	Prunus serotina	Black cherry	P	3.2	3
Rosaceae	Prunus serotina	Black cherry	P	2.9	4

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

D1.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	34.2	
X Dead standing bole				22.6	
X Dead standing bole				30.4	
Pinaceae	Pinus strobus	White pine	T	26	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	27.3	
Pinaceae	Pinus strobus	White pine	T	21.7	
	x dead standing bole			16.2	
Pinaceae	Pinus strobus	White pine	T	30.5	
	x dead standing bole			14.6	
Rosaceae	Prunus serotina	Black cherry	T	27.5	
Rosaceae	Prunus serotina	Black cherry	T	24.0	
Pinaceae	Pinus strobus	White pine	T	27.0	
Pinaceae	Pinus strobus	White pine	T	24.3	
Pinaceae	Pinus strobus	White pine	T	30.2	
Pinaceae	Pinus strobus	White pine	T	22.6	
Pinaceae	Pinus strobus	White pine	T	24.3	
	x dead standing bole			18.6	
Pinaceae	Pinus strobus	White pine	T	31.8	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	42.0	28
Pinaceae	Pinus strobus	White pine	T	35.0	21
Pinaceae	Pinus strobus	White pine	T	19.0	14
Pinaceae	Pinus strobus	White pine	T	31.5	24
Pinaceae	Pinus strobus	White pine	T	26.2	
X dead standing bole		(white pine)	T	21.9	
Pinaceae	Pinus strobus	White pine	T	32.0	
Pinaceae	Pinus strobus	White pine	T	21.5	
X dead standing bole		(white pine)	T	19.0	
Pinaceae	Pinus strobus	White pine	T	24.7	
Pinaceae	Pinus strobus	White pine	T	39.0	
Pinaceae	Pinus strobus	White pine	T	32.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39324 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93575 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

13.1

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
(black cherry)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
(very sparse white pine)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
(white pine)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 12

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/30/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW85-3

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 280.9

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-------------------------------------------------------------|--------------------------------------------------------|
| (1) <input checked="" type="checkbox"/> North SW | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest 278° |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open, dense underbrush
plot moved slightly north because of edge

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
(none)					

D1

Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	20.0	
Pinaceae	Pinus strobus	White pine	T	33.2	
Pinaceae	Pinus strobus	White pine	T	31.3	
X dead standing bole		(white pine)		15.8	
X dead standing bole		(white pine)		12.1	
Pinaceae	Pinus strobus	White pine	T	32.9	
X dead standing bole		(white pine)		17.0	
Ulmaceae	Ulmus americana	American elm	T	22.0	
Pinaceae	Pinus strobus	White pine	T	24.9	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	26.6	22
Pinaceae	Pinus strobus	White pine	T	32.0	23
Pinaceae	Pinus strobus	White pine	T	24.5	
Pinaceae	Pinus strobus	White pine	T	27.4	
Pinaceae	Pinus strobus	White pine	T	33.3	
Pinaceae	Pinus strobus	White pine	T	32.5	
X dead standing bole		(white pine)		12.0	
Rosaceae	Prunus serotina	Black cherry	T	22.5	
Rosaceae	Prunus serotina	Black cherry	T	28.8	
Rosaceae Pinaceae	Pinus strobus	White pine	T	29.2	
Rosaceae Pinaceae	Pinus strobus	White pine	T	27.3	
Rosaceae Pinaceae	Pinus strobus	White pine	T	27.5	
Pinaceae	Pinus strobus	White pine	T	32.7	25
Pinaceae	Pinus strobus	White pine	T	22.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	33.0	
Pinaceae	Pinus strobus	White pine	T	27.5	
Pinaceae	Pinus strobus	White pine	T	20.4	
Pinaceae	Pinus strobus	White pine	T	29.0	
Pinaceae	Pinus strobus	White pine	T	36.0	
X dead standing hole		(white pine)		20.0	
X dead standing hole		(white pine)		19.0	
Pinaceae	Pinus strobus	White pine	T	32.0	
Pinaceae	Pinus strobus	White pine	T	24.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39278 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93523 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.5

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0

understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 0

subdominant?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory?

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

white pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 13

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/30/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW 85-4

Name of person filling out this form: Kailai / Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5h here should correlate to answers for B2-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 302.6

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest 190° |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open, dense underbrush
 moved slightly north b/c of edge

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer spicatum	Sugar maple	P	outside 3m	5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
			T	18.3	
X dead standing bole					
Pinaceae	Pinus strobus	White pine	T	22.5	
Pinaceae	Pinus strobus	White pine	T	35.5	
Pinaceae	Pinus strobus	White pine	T	27.7	
Pinaceae	Pinus strobus	White pine	T	28.2	
Pinaceae	Pinus strobus	White pine	T	21.6	
Pinaceae	Pinus strobus	White pine	T	31.8	
Pinaceae	Pinus strobus	White pine	T	27.0	
X dead standing bole			T	20.0	
Pinaceae	Pinus strobus	White pine	T	31.2	
Rosaceae	Prunus serotina	Black cherry	T	38.1	
Rosaceae	Prunus serotina	Black cherry	T	33.0	
Pinaceae	Pinus strobus	White pine	T	23.5	
Ulmaceae	Ulmus americana	American elm	T	46.6	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	36	29
Pinaceae	Pinus strobus	White pine	T	25.6	
X dead standing bole		(White pine)		28.0	
Fagaceae	Quercus rubra	Red oak	T	15.7	
X dead standing bole				36.8	
Pinaceae	Pinus strobus	White pine	T	36.5	25
Pinaceae	Pinus strobus	White pine	T	22.7	
Pinaceae	Pinus strobus	White pine	T	28.5	
Pinaceae	Pinus strobus	White pine	T	24.5	27
Pinaceae	Pinus strobus	White pine	T	30.6	
Pinaceae	Pinus strobus	White pine	T	29.9	
Pinaceae	Pinus strobus	White pine	T	26.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39262 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93~~2~~23
4 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory?
Very sparse, 1 sugar maple

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

subdominant?
very sparse, 1 red oak

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

overstory?
white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 14

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7/30/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDMUM>
- Large Plot <PAREALARGE>

Plot-Plot No 2: SW85-5

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5 -A5b here should correlate to answers for B2-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 216.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 44° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

a few tree falls, many saplings + seedlings

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	2.5	3
Rosaceae	Prunus serotina	Black cherry	P	2.9	4
Rosaceae	Prunus serotina	Black cherry	P	2.9	4
Rosaceae	Prunus serotina	Black cherry	P	3.9	
Rosaceae	Prunus serotina	Black cherry	P	2.7	
Rosaceae	Prunus serotina	Black cherry	P	3.5	
Rosaceae	Prunus serotina	Black cherry	P	2.6	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus Pinus strobus	White pine	T	36.5	30
Pinaceae	Pinus strobus	White pine	T	32.1	
Pinaceae	Pinus strobus	White pine	T	31.5	
Pinaceae	Pinus strobus	White pine	T	32.0	
Pinaceae	Pinus strobus	White pine	T	35.0	28
X dead standing bole			T	22.5	
X dead standing bole			T	16.0	
Pinaceae	Pinus strobus	White pine	T	40.2	29
X dead standing bole		(white pine)	T	33.0	
X dead standing bole			T	18.6	
X dead standing bole			T	19.2	
Pinaceae	Pinus strobus	White pine	T	22.0	
Pinaceae	Pinus strobus	White pine	T	20.5	
Ulmaceae	Ulmus americana	American elm	T	35.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39306 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93463 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.2

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

undertory?
(black cherry)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 0

subdominant?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant?
(white pine)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 052 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 15

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/2/10

Record the area (in square meters) of each plot below.

4 Small Plot <PAREASMALL>
28 Medium Plot <PAREAMEDIUM>
314 Large Plot <PAREALARGE>

Lot - Plot No: SW85-6

Name of person filling out this form: Marco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 284.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 6°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|-----------------------|
| (1) _____ North | (5) <u>270°</u> South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

60°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

~~None undergrowth - saplings~~

little ~~some~~ coarse woody debris

Autumn Olive shrubs -

quite
abit

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
- (2) _____ few?
- (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

outside
3m ↘

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Eleagnaceae	Eleagnus umbellata	Autumn Olive	B P	2.6	3.5
Eleagnaceae	Eleagnus umbellata	Autumn Olive	B		3.5
Rosaceae	Prunus serotina	Black Cherry	P		4.0

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
X		(White Pine)	T	14.4	
Pinaceae	Pinus Strobus	White Pine	T	38.6	20 *
Pinaceae	Pinus strobus	White Pine	T	24.4	
Pinaceae	Pinus strobus	White Pine	T	31.0	
Pinaceae	Pinus strobus	White Pine	T	27.0	16 x
Pinaceae	Pinus strobus	White Pine	T	26.7	
Pinaceae	Pinus sylvestris	Scotch Pine	T	22.2	
Pinaceae	Pinus strobus	White Pine	T	27.2	
Pinaceae	Pinus strobus	White Pine	T	41.7	40 32 *
Pinaceae	Pinus sylvestris	Scotch Pine	T	22.5	20 *
Pinaceae	Pinus sylvestris	Scotch Pine	T	19.3	20 *
X			T	20.3	
X			T	13.7	
Pinaceae	Pinus strobus	White Pine	T	39.5	

DEAD

DEAD
DEAD

Rev. 5-07

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	T	33.2	
Pinaceae	Pinus strobus	White Pine	T	29.0	
Pinaceae	Pinus sylvestris	Scotch Pine	T	26.0	
DEAD X			T	13.1	
Pinaceae	Pinus strobus	White Pine	T	18.2	16
Pinaceae	Pinus strobus	White Pine	T	26.2	
Pinaceae	Pinus strobus	White Pine	T	36.5	
Pinaceae	Pinus strobus	White Pine	T	22.7	
Pinaceae	Pinus strobus	White Pine	T	25.2	
Pinaceae	Pinus strobus	White Pine	T	24.5	
Pinaceae	Pinus strobus	White Pine	T	20.2	

DEAD

E

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

~~42.39707~~ (decimal degrees) 42.39465

or

~~86~~ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

~~-83.93469~~ (decimal degrees) -83.93565

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

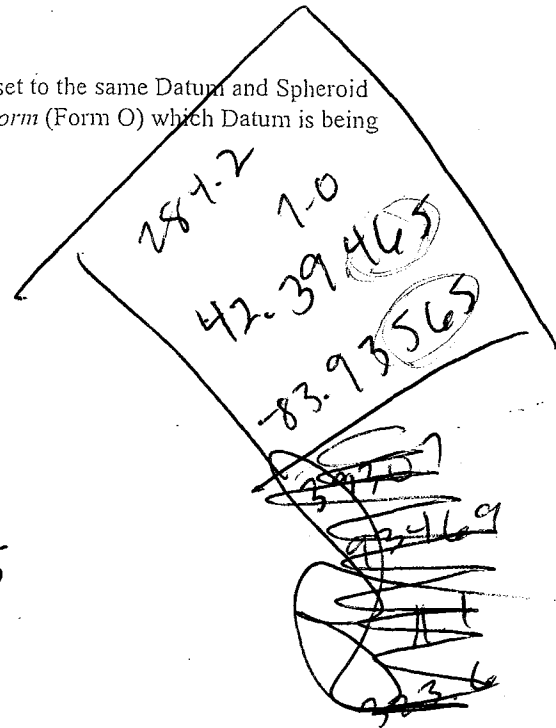
E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ 7.0 ~~9.2~~

42.39465 393465
-83.93464
934567



GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Understory
Autumn Olive
→ Hickory
Subdominant
Pines? very sparse,
white pine
Overstory
White Pine
Scotch Pine

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 16

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/2/06

Record the area (in square meters) of each plot below.

- 0 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW85-7

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 295.6

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 252° |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some autumn olive

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	outs. of 3m	4.5
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	4.5
Eleagnaceae	Eleagnus umbellata	Antenna olive	B	outside 3m	3

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	20.0	
Pinaceae	Pinus strobus	White pine	T	22.1	
Pinaceae	Pinus strobus	White pine	T	30.6	23
Pinaceae	Pinus strobus	White pine	T	22.8	
Pinaceae	Pinus strobus	White pine	T	32.3	23
Pinaceae	Pinus strobus	White pine	T	31.3	
Pinaceae	Pinus strobus	White pine	T	33.4	24
Pinaceae	Pinus strobus	White pine	T	25.9	
Rosaceae	Prunus serotina	Black cherry	T	37.7	
Pinaceae	Pinus strobus	White pine	T	34.9	
Pinaceae	Pinus strobus	White pine	T	21.9	
Pinaceae	Pinus strobus	White pine	T	41.5	
Pinaceae	Pinus strobus	White pine	T	17.9	21
	X dead standing bole	(white pine)		15.9	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	24.5	
Pinaceae	Pinus strobus	White pine	T	36.1	
	X dead standing bole	(white pine)	T	11.6	
	X dead standing bole	(white pine)		17.2	
	X dead standing bole			11.3	
Pinaceae	Pinus strobus	White pine	T	22.8	
Pinaceae	Pinus strobus	White pine	T	35.3	
	X dead standing bole	(white pine)		21.8	
Rosaceae	Prunus serotina	Black cherry	T	32.0	
Pinaceae	Pinus strobus	White pine	T	33.4	
Pinaceae	Pinus strobus	White pine	T	37.3	
Pinaceae	Pinus strobus	White pine	T	27.9	
Pinaceae	Pinus strobus	White pine	T	22.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39345 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

42.39345
83.93404
295.6
10.2

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93404 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.2

42.39349
-83.93403

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
very sparse, black cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

very sparse, white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

overstory
white pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield

Plot identification number <PPIN>: 17

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/2/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

lot - Plot No 2: SW85-8

Name of person filling out this form: Marco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECT>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 306.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 4°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|----------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <u>276°</u> West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

little coarse woody debris
 sm. ravine to one side of plot

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Amelanchier spp.	Service Berry	P	2.5	2.5
Eleagnaceae	Eleagnus umbellata	Autumn Olive			3.0
Juglandaceae	Carya Glabra	Hickory	T	8.0	8.0
Rosaceae	Prunus serotina	Black Cherry	T	12.8	12.8

DL. TREES
OUTSIDE →

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	T	15.2	
Rosaceae	Prunus serotina	Black Cherry	T	23.4	
Juglandaceae	Carya glabra	Pignut Hickory	T	11.4	
Rosaceae	Prunus serotina	Black Cherry	T	14.5	
Fagaceae	Quercus rubra	Red Oak	T	14.6	
Fagaceae	Quercus rubra	Red Oak	T	23.8	
Rosaceae	Prunus serotina	Black Cherry	T	24.3	
	X	DEAD		13.2	
Juglandaceae	Carya glabra	Pignut Hickory			

DEAD

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.39317 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.93277 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ 10.4

42.39318
-83.93277

42.39317
-83.93277

10.4
306.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

- understory
sparse &
mixed

- subdominant
cherry
maple
mixed

- Dominant
Hickory
cherry
(mixed?)

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 18

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/2/10

Record the area (in square meters) of each plot below.

x Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

311 Large Plot <PAREALARGE>

Lot Plot No 2: NT999-1

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 314.3

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <input checked="" type="checkbox"/> West 258° |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

very open,
dry ravine running through plot
some field-like vegetation & shrubs

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 5 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Cupressaceae	Juniperus virginiana	Red cedar	P	7.4	4
Cupressaceae	Juniperus virginiana	Red cedar	P	outside 3m	3
Cupressaceae	Juniperus virginiana	Red cedar	P	outside 3m	2.5
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	5.6	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	5.3	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	3.3	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	2.6	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	5.0	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	4.0	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	3.5	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	3.0	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	3.0	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	5.5	
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	4.0	

↓ Below line are large shrubs that had large bases and split into many stems. They are outside the 3m, but because of their size we measured (where could not measure, estimated) DBH.

Rev. 5-07

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Eleagnaceae	<i>Elaeagnus umbellata</i>	Autumn olive	B	4.5	
Caprifoliaceae	<i>Lonicera mackii</i>	Amur honeysuckle	B	2.5	
Caprifoliaceae	<i>Lonicera mackii</i>	Amur honeysuckle	B	3.0	
Caprifoliaceae	<i>Lonicera mackii</i>	Amur honeysuckle	B	3.0	
Caprifoliaceae	<i>Lonicera mackii</i>	Amur honeysuckle	B	3.0	
Caprifoliaceae	<i>Lonicera mackii</i>	Amur honeysuckle	B	2.7	
Caprifoliaceae	<i>Lonicera mackii</i>	Amur honeysuckle	B	3.3	
Caprifoliaceae	<i>Lonicera mackii</i>	Amur honeysuckle	B	3.0	
Caprifoliaceae	<i>Lonicera mackii</i>	Amur honeysuckle	B	2.5	
Caprifoliaceae	<i>Lonicera mackii</i>	Amur honeysuckle	B	3.5	
Eleagnaceae	<i>Elaeagnus umbellata</i>	Autumn olive	B	5.0	
		12 stems @ 12-15 cm	B		
			B		
			B		

base ~25

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Tiliaceae	Tilia americana	Baswood	T	12.5	6
Tiliaceae	Tilia americana	Basswood	T	11.2	6

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39684 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93472 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.7

-42.396831
83.934748
4718

314.3
5.7
42.396841
83.93472

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 0

understory
shrubs, a few red cedars

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 0

subdominant
2 basswoods

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 0

dominant

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 19

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/4/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: NT999-2

Name of person filling out this form: ~~_____~~ Marco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
 <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 314

A7. What is the steepness of the slope in degrees? <PSTEEP> 20

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Dense shrubs
autumn olive
honey suckle

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 20 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	2.7	2.0
Caprifoliaceae	Lonicera mackii	Amur honeysuckle	B	2.5	3.0
Eleagnaceae	Eleagnus umbellata	Autumn olive		outside 3m	3.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red Pine	T	24	11
Pinaceae	Pinus resinosa	Red Pine	T	18.2	11
Rosaceae	Prunus serotina	Black Cherry	T	21.0	19
Rosaceae	Prunus serotina	Black Cherry	T	19	9
Fagaceae	Quercus velutina	Black Oak?	T	23.4	11
Pinaceae	Pinus resinosa	Red Pine	T	18.8	
Pinaceae	Pinus resinosa	Red Pine	T	19.9	
Pinaceae	Pinus resinosa	Red Pine	T	17.5	
Rosaceae	Prunus serotina	Black Cherry	T	33.3	
Pinaceae	Pinus resinosa	Red Pine	T	20.2	
Pinaceae	Pinus resinosa	Red Pine	T	17.4	
Fagaceae	Quercus velutina	Black Oak?	T	22.1	
Pinaceae	Pinus resinosa	Red Pine	T	14.9	
DEAD	X	DEAD		20.6	

Pin? Scarlet

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	17.5	
DEAD		DEAD		17.0	
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	17.6	
Rosaceae	<i>Prunus serotina</i>	Black Cherry		13.5	
Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	17.7	
Fagaceae	<i>Quercus velutina</i>	Black Oak	T	21.9	
Fagaceae	<i>Quercus velutina</i>	Black Oak	T	22.0	15
Fagaceae	<i>Quercus velutina</i>	Black Oak	T	11.2	8
Fagaceae	<i>Quercus velutina</i>	Black Oak	T	11.2	
Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	20.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.39720 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.93511 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> 3.5

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.5

42.39723
-83.93512

314.
5.5

42.39720
83.93511

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> 1

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Understory
mixed
guttaria olive
Lonicea
subdominant
mixed

overstory
mixed

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinefield Woods

Plot identification number <PPIN>: 20

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/4/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDIUM>
- Large Plot <PAREALARGE>

Lot - Plot No 2: NT999-3

Name of person filling out this form: Marco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 328.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|----------------------------------------|----------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input checked="" type="checkbox"/> 162° South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots Honey Suckle
Dense shrub

A10. What is the percentage of crown cover in this plot? <PCROWN Cov> 20 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record maximum diameter and height in metric units. For saplings, record DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Caprifoliaceae	Lonicera ^{madrasi} japonica	Amor ^{honey suckle} honey suckle	B	2.1	2
Rosaceae	Prunus serotina	Black Cherry	P	4	5
Rosaceae	Prunus serotina	Black Cherry	P	9	9
Rosaceae	Prunus serotina	Black Cherry	P	6.4	7
Caprifoliaceae	Lonicera ^{madrasi} japonica	Amor ^{honey suckle} honey suckle	B	2	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	25.3	
Rosaceae	Prunus serotina	Black Cherry	T	12.5	
Rosaceae	Prunus serotina	Black Cherry	T	10.5	8
Rosaceae	Prunus serotina	Black Cherry	T	10.8	
Fagaceae	Quercus rubra	Red Oak	T	13.1	11
Pinaceae	Pinus strobus	White Pine	T	20.9	17
Rosaceae	Prunus serotina	Black Cherry	T	20.7	14
Rosaceae	Prunus serotina	Black Cherry	T	14.7	10
Rosaceae	Prunus serotina	Black Cherry	T	19.3	
Rosaceae	Prunus serotina	Black Cherry	T	16.3	
Rosaceae	Prunus serotina	Black Cherry	T	2.7	
Rosaceae Fagaceae	Quercus velutina	Black Oak 25.0	T	62.7	24

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.39746 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.93579 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.8

328.7
6.8

42.397472, 39746
-83.936076
93579

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Understory
Sparse mixed
dense shrubs
Lonicera
sub dominant
Blank chemy
Dominant

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinefield Woods

Plot identification number <PPIN>: 21

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 9/9/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: NT999-4

Name of person filling out this form: Marco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 313.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|----------------------------------------------------|
| (1) _____ North | (5) <input checked="" type="checkbox"/> South 152° |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Dense underbrush - honeysuckle + autumn olive

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 35 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) _____ few? |
| (3) _____ abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus avium	Sweet Cherry	P	5.9	5
Rosaceae	Prunus avium	Sweet Cherry	P	8.7	7
Rosaceae	Prunus avium	Sweet Cherry	P		6

out

DI.

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus avium	Sweet Cherry	T	14.1	
? Cupressaceae	Juniperus virginiana	Red Cedar	T	17.4	17
Cupressaceae	Juniperus virginiana	Red Cedar	T	22.7	8
? Fagaceae	Quercus velutina	Black Red Oak ^{Spiral Pin}	T	20.7	
Cupressaceae	Juniperus virginiana	Red Cedar	T	22.5	
Cupressaceae	Juniperus virginiana	Red Cedar	T	15.7	
Rosaceae	Prunus serotina	Black Cherry	T	24.4	
Pinaceae	Pinus strobus	White Pine	T	39.4	
Rosaceae	Prunus serotina	Black Cherry	T	25.4	18
Lauraceae	Sassafras albidum	Sassafras	T	19.5	14.0
		Black Cherry DEAD		16	
? Rosaceae	Quercus velutina	Black Red Oak	T	26.4	15
Lauraceae	Sassafras albidum	Sassafras	T	12	9
Lauraceae	Sassafras albidum	Sassafras	T	16.5	

Rev. 5-07

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	T	20	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39816 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93866 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.6

understory

species → Sweet Cherry

canopy cover 35%

Subdominant

mixed

Dominant

Mixed

Dense underbrush
Low concern
attribution @.12

Slope 5°

Aspect S. 152°

H = 313.2
Error 6.6

42.39816
83.93866

42,398305
- 83,936675
9366

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
sparse - sweet cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
mixed

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 22

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/4/10

Record the area (in square meters) of each plot below.

- 6 Small Plot <PAREASMALL>
- 29 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: NT999-5

Name of person filling out this form: Marco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h have should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 317.8

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <u>X</u> West <u>26°</u> |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Plot moved because too close to observatory fence.
Lots of shrubs (honeysuckle + autumn olive)

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
 (2) _____ few?
 (3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Oak Black	P	7.9	8.9
Lamiaceae	Sarcocass acbida.	Sarcocass	P	6.8	7
Fagaceae	Quercus velutina	Black Oak	P	4.2	5
Eleagnaceae	Eleagnus umbellata	Autumn Olive	B	3.5	
Eleagnaceae	Eleagnus umbellata	Autumn Olive	B	9.2	
Eleagnaceae	Eleagnus umbellata	Autumn Olive	B	10.0	
Eleagnaceae	Eleagnus umbellata	Autumn Olive	B	7.3	
Eleagnaceae	Eleagnus umbellata	Autumn Olive	B	6.0	
Eleagnaceae	Eleagnus umbellata	A. autumn Olive	B	9.6	
Eleagnaceae	Eleagnus umbellata	Autumn Olive	B	6.3	

classified as shrub so can't be included in 3m plot.

01

Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	12	9
Cupressaceae	Juniperus virginiana	Red Cedar	T	12.4	23 7
Fagaceae	Quercus velutina	Oak ^{black}	T	29.4	17
Fagaceae	Quercus velutina	Oak ^{black}	T	17.2	
Fagaceae	Quercus velutina	Oak ^{black}	T	19.3	
Rosaceae	Prunus serotina	Bl. Cherry	T	13.2	10
Fagaceae	Quercus velutina	Oak ^{black}	T		
Fagaceae	Quercus velutina	Oak ^{black}	T	42.1 49.5	20
		Oak	T		
Cupressaceae	Juniperus virginiana	Red Cedar	T	46.1	15
Fagaceae	Quercus velutina	Oak ^{black}	T	47.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39834 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

* move away from fence

lots o shrubs
Lonicera
autumn olive

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93542 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

Prominent
mixed

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.7

Understory
mixed

Subdominant
mixed

83.93542
42.39834
error = 7.7
n = 3178
Slope = 20
W 264°
30% cover
42.398481
-83.935299

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory
(mixed)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant
(mixed)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Overstory
(mixed)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

move the plot northwest
b/c too close to the edge & plot 23 ✓

IFRIFORM P

MAY 2007
Version 13

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Shrubfield

Plot identification number <PPIN>: 23

Date data collected for this form (mm-dd-yr) <PLOTDATE>: Aug 5, 2010

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot_PlotNo2: NT999-6

Name of person filling out this form: Kailai

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 336.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 0 + 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

230

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

somewhat open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) _____ few?
- (3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	P	4.1	4
Juglandaceae	Carya glabra	piñon hickory	outside 3m P	4	4
Juglandaceae	Carya glabra	piñon hickory	outside 3m P		5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra</i>	pignut hickory	T	32	25
Fagaceae	<i>Quercus velutina</i>	black oak	T	49.0	
Fagaceae	<i>Quercus velutina</i>	black oak	T	33.8	25
Juglandaceae	<i>Carya glabra</i>	^{pignut} hickory	T	12	8
Juglandaceae	<i>Carya glabra</i>	^{pignut} hickory	T	43.5	20
Juglandaceae	<i>Carya glabra</i>	^{pignut} hickory	T	35.5	
Juglandaceae	<i>Carya glabra</i>	^{pignut} hickory	T	26	-
Juglandaceae	<i>Carya glabra</i>	^{pignut} hickory	T	12.5	12
Juglandaceae	<i>Carya glabra</i>	^{pignut} hickory	T	38.8	27
Fagaceae	<i>Quercus alba</i>	white oak	T	32	0
		X DEAD	T	12.7	
Fagaceae	<i>Quercus velutina</i>	black oak	T	39	
Juglandaceae	<i>Carya glabra</i>	^{pignut} hickory	T	16.9	16
Juglandaceae	<i>Carya glabra</i>	^{pignut} hickory	T	35.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra</i>	pignut hickory	T	18	
Juglandaceae	<i>Carya glabra</i>	pignut hickory	T	31.5	
Fagaceae	<i>Quercus velutina</i>	black oak	T	15	
Lauraceae	<i>Sassafras albidum</i>	sassafras	T	11.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.39958 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.93609 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

1.8 3.4

42.39901
-83.93609

9/16/09
39967
1.2
319.6

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

understory: 1
black cherry
hickory

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

subdominant: 1
hickory

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

dominant: 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

hickory

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

oak

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Baggona Stinchfield

Plot identification number <PPIN>: 24

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/5/10

Record the area (in square meters) of each plot below.

- 7 Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

LA - Plot No 2: NT999-7

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B2-B2g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 344

A7. What is the steepness of the slope in degrees? <PSTEEP> 20

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North 36° (5) _____ South
 (2) _____ Northeast (6) _____ Southwest
 (3) _____ East (7) _____ West
 (4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Ravine running through plot
 Plot moved because of observatory edge

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	P	outside 3m	3
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	4
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	3

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	Norway spruce	T	35.2	23
Pinaceae	Picea abies	Norway spruce	T	28.6	14
Pinaceae	Picea abies	Norway spruce	T	13.0	5
Rosaceae	Prunus serotina	Black cherry	T	18.1	12
Pinaceae	Picea abies	Norway spruce	T	33.5	19
Juglandaceae	Carya glabra	Pignut hickory	T	28.4	
Juglandaceae	Carya glabra	Pignut hickory	T	26.2	
Pinaceae	Picea abies	Norway spruce	T	15.5	
	X standing dead bole			15.0	} tree
	X standing dead bole			17.5	
	X standing dead bole			20.9	
	X standing dead bole			13.4	
	X standing dead bole			19.2	
	X standing dead bole			18.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	15.6	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	16.8	19
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	21.9	
Aceraceae	<i>Acer rubrum</i>	Red maple	T	32.8	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	39.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39940 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93525 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.7

42.39915
-83.93525

39940 8.7344
93525

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
sparse, mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

sparse, black cherry,

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

overstory
Norway spruce

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield

Plot identification number <PPIN>: 25

Date data collected for this form (mm-dd-yr) <PLOTDATE>: Aug 5, 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDIUM>
- Large Plot <PAREALARGE>

Cot-Plot No 2: NT99-8

Name of person filling out this form: Karlan

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5- A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 3200.1

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- 9°
- (1) North (5) _____ South
(2) Northeast (6) _____ Southwest
(3) _____ East (7) _____ West
(4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Shrubby.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	black cherry	P	2.5	3
Caprifoliaceae	<i>Lonicera mackii</i>	amur honey suckle	P	3.2	2.5
Caprifoliaceae	<i>Lonicera mackii</i>	amur honey suckle	P	5	3

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		X DEAD	T	11	
Juglandaceae	Carya glabra ^{pinut}	hickory	T	17.7	19
Rosaceae	Prunus serotina	black cherry	T	18.3	15
Juglandaceae	Carya glabra	hickory ^{pinut}	T	14.4	16
Fagaceae	Quercus alba	white oak	T	15	
Elaeagnaceae	Elaeagnus umbellata	autumn olive	T	12.2	
Rosaceae	Prunus serotina	black cherry	T	40.2	23
Fagaceae	Quercus velutina	black oak	T	15	
Juglandaceae	Carya glabra ^{pinut}	hickory	T	24.4	17
Juglandaceae	Carya glabra ^{pinut}	hickory	T	20.3	20
Rosaceae	Prunus serotina	black cherry	T	18.2	
Juglandaceae	Carya glabra ^{pinut}	hickory	T	11.5	
		X DEAD	T	13	
Juglandaceae	Carya glabra ^{pinut}	hickory	T	16	

shrub, not tree

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra</i>	hickory ^{hickory}	T	13.1	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	14.3	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	14.9	
		X DEAD (black cherry)	T	11.7	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.39893 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.93442 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.5

42.39893
-83.93442
893
402
6.5
324.1

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Understory: |
~~honey~~ Amur honey suckle

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

Subdominant:
Mix: black cherry
oak
hickory
dominant: |

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Mix

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 26

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/5/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

29 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot Plot No 2: NT 999-9

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5 - A5b here should correlate to answers for B3 - B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 311

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 18° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

small ridge 3/4 way to north

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	7
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	5
Pinaceae	Picea abies	Norway spruce	P	outside 3m	5

DCI

Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway spruce	T	23.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	15.5	15
Pinaceae	<i>Picea abies</i>	Norway spruce	T	21.1	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	14.0	15 9
Ulmaceae	<i>Ulmus americana</i>	American elm	T	26.0	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pseudotsuga taxifolia</i>	Douglas fir	T	39.5	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	14.5	14
Pinaceae	<i>Picea abies</i>	Norway spruce	T	20.0	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	31.5	22
Pinaceae	<i>Picea abies</i>	Norway spruce	T	19.7	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	35.8	
Fagaceae	<i>Quercus velutina</i>	Black oak	T	36.0	
	A standing dead pole		T	11.4	
Fagaceae	<i>Quercus velutina</i>	Black oak	T	17.8	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	11.7	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	19.0	
Pinaceae	<i>Pseudotsuga taxifolia</i>	Douglas fir	T	16.5	
Pinaceae	<i>Picea abies</i>	Norway spruce	T	19.9	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	20.1	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	21.8	
Rosaceae	Prunus serotina	Black cherry	T	23.5	
Rosaceae	Prunus serotina	Black cherry	T	28.2	
Pinaceae	Pinus strobus	White pine	T	35.8	
Pinaceae	Pseudotsuga taxifolia	Douglas fir	T	16.6	⊙
Pinaceae	Picea abies	Norway spruce	T	24.8	
Pinaceae	Picea abies	Norway spruce	T	26.4	20
Pinaceae	Picea abies	Norway spruce	T	18.2	
Pinaceae	Picea abies	Norway spruce	T	20.0	
Pinaceae	Picea abies	Norway spruce	T	32.8	18
Pinaceae	Picea abies	Norway spruce	T	31.1	
Pinaceae	Picea abies	Norway spruce	T	12.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.39865 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.93302 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.6

Jib
3112

39865
93302

42.398⁴⁰~~65~~
-83.933329

N S W

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory
sparse, norway spruce,
black cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

subdominant
spruce

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

overstory
spruce

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1: \

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 21

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/9/00

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>
28 Medium Plot <PAREAMEDIUM>
314 Large Plot <PAREALARGE>

SW59-1
Lot - Plot No 2: ~~HT999-4~~

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 275.5

A7. What is the steepness of the slope in degrees? <PSTEEP>

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (*text*) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|----------------------|
| (1) <u>A</u> absent? |
| (2) _____ few? |
| (3) _____ abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

Out side →
↓

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut hickory	P	3.3	3.5
Juglandaceae	Carya glabra	Pignut hickory	P		4.5
Rosaceae	Amelanchier spp.	Servia berry	P	4	3.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Black Oak	T	22.3	10
Fagaceae	Quercus velutina	Bl Oak	T	53.3	26
Rosaceae	Prunus serotina	Bl. Cherm	T	11.5	
Rosaceae	Prunus serotina	B, Cherry	T	14.2	
Juglandaceae	Carya glabra	Pignut Hich	T	13.0	12
Juglandaceae	Carya glabra	Pignut Hich	T	11.0	10
Juglandaceae	Carya glabra	Pignut Hich	T	16.5	13
Juglandaceae	Carya glabra	Pignut Hich	T	26.7	
Juglandaceae	Carya glabra	Pignut Hich	T	19.7	
Juglandaceae	Carya glabra	Pignut Hich	T	20.6	
Juglandaceae	Carya glabra	Pignut Hich	T	17.9	
		DEAD		16.2	
Fagaceae	Quercus velutina	Bl Oak	T	41.6	22
Juglandaceae	Carya glabra	Pignut Hich	T	10.1	

DEAD

Rev. 5-07

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Bl Oak	T	26.6	
Fagaceae	Quercus alba	Wh. Oak	T	52.2	
Rosaceae	Prunus serotina	Bl Cherry	T	22.5	
Juglandaceae	Carya glabra	Pignut Hick	T	14.2	
Fagaceae	Quercus velutina	Bl. Oak	T	38.2	
Juglandaceae	Carya glabra	Pignut Hick	T	11.5	
Fagaceae	Quercus velutina	Bl Oak	T	32.1	
Juglandaceae	Carya glabra	Pignut Hick	T	11.3	
Fagaceae	Quercus alba	Wh. Oak	T	34.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40053 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93311 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.4

Under story
mixed
fairly open

sub dominant
cherry, hickory

Dominant
oak
some Hick
and cherry

~~N 42~~
42.400506
-83.933003
40053
93311
5.4
275.5
342° S
50% cover

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Understory?
Sparse mixed

Subdominant?
Pignut hickory

overstory?
Blank oak

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 28

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/9/00

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

SW 59-2
Lot-PlotNo2: ~~AT999-3~~

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 313

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------|------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <u>X</u> West 318° |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Lots of brush
Fairly open
Moved because of trail

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|----------------------|
| (1) <u>X</u> absent? |
| (2) _____ few? |
| (3) _____ abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut	P	9.2	13
Juglandaceae	Carya glabra	Pignut	P		5.5
Rosaceae	Amelanchier spp.	Servia berry	P		5.5

out →
↓

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Bl. Oak	T	64.5	20
Juglandaceae	Carya glabra	Pignut Hick	T	17.8	11 11
Fagaceae	Quercus rubra	R. Oak	T	13.6	16
Fagaceae	Quercus alba	White Oak	T	12.1	
Rosaceae	Prunus serotina	Bl. Cherry	T	17.4	12
Juglandaceae	Carya glabra	Pignut Hick	T	20.7	
Juglandaceae	Carya glabra	Pignut Hick	T	19.8	
Fagaceae	Quercus velutina	Bl Oak	T	53.0	
Fagaceae	Quercus rubra	Red Oak	T	41.5	30
Fagaceae	Quercus velutina	Bl. Oak	T	20.9	
Juglandaceae	Carya glabra	Pignut Hick	T	56.4	34
Juglandaceae	Carya glabra	Pignut Hick	T	23.7	
Rosaceae	Prunus serotina	Bl. Cherry	T	11.9	
Juglandaceae	Carya glabra	Pignut Hick	T	24.7	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 40.40149 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 93.93363 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.6

understory
Hickory

sub dom
Oak?

overstory
Oak

- Brush
- semi open

40% cover

20
318 West N West

318
~~321~~

5.6

more cover of
+ trail

- 42,00155
83 93363
639

40154
93360

40149
93363

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
(hidden)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> 1

oak/hickory

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 29

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/9/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

29 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - plot No 2: SW59-3
~~NT999-5~~

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 310.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|----------------------------------------------------|
| (1) _____ North | (5) <input checked="" type="checkbox"/> South 106' |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

out
out

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red Maple	B P	3.3	4.5
Aceraceae	Acer rubrum	Red Maple	B P		5
Aceraceae	Acer rubrum	Red Maple	B P		6

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus alba	Wh Oak	T	23.4	
Aceraceae	Acer rubrum	Red Maple	T	12.9	19
Fagaceae	Quercus velutina	Bl. Oak	T	54.5	36 34
Aceraceae	Acer rubrum	Red Maple	T	10.9	10
Aceraceae	Acer rubrum	Red Maple	T	10.6	9
Juglandaceae	Carya glabra	Pignut Hick	T	20.5	
		Cornus F			
Fagaceae	Quercus velutina	Bl. Oak	T	62.3	35 35
		Bl. Oak DEAD	DEAD	36.5	
Aceraceae	Acer rubrum	Red Maple	T	12.4	
Fagaceae	Quercus velutina	Bl. Oak	T	51.7	
		Bl. cherry	DEAD	12.5	
Aceraceae	Acer rubrum	Red Maple	T	13.0	
Fagaceae	Quercus velutina	Bl Oak	T	49.5	27

DEAD

DEAD

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40035 _____ (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93446 _____ (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.0 _____

Some coarse woody debris

55° over

30° SSE
156

H = 310.2

ac = 6.0

42,400297 400 35
- 83,934488 9344

understory

red maple
Pignut Hickory
sub dominant

Red Maple

Dominant

Bl. Oak

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
red maple / hickory

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
red maple

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
black oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 30

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/11/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-plot No 2: SW59-4
NT999-6

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 313

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|--------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East 92° | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

fairly open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut hickory	P	7	5
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	4.6
Eleagnaceae	Eleagnus umbellata	Autumn olive	B	outside 3m	3.7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Black oak		45.4	
Fagaceae	Quercus velutina	Black oak		47.3	27
Fagaceae	Quercus velutina	Black oak		47.0	
Juglandaceae	Carya ^{glabra} glabra	Pignut hickory		11.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya alba glabra	Pignut hickory		10.7	14
Juglandaceae	Carya alba glabra	Pignut hickory		13.7	
Fagaceae	Quercus velutina	Black oak		29.1	
Fagaceae	Quercus velutina	Black oak		32.5	22
	X dead standing bole			13.6	9
Fagaceae	Quercus velutina	Black oak		48.1	
Fagaceae	Quercus velutina	Black oak		43.6	20
Juglandaceae	Carya alba glabra	Pignut hickory		13.7	7
Fagaceae	Quercus velutina	Black oak		38.5	
Juglandaceae	Carya glabra	Pignut hickory		15.7	14
Juglandaceae	Carya glabra	Pignut hickory		15.5	
Juglandaceae	Carya glabra	Pignut hickory		15.7	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40071 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93594 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.4

42.400722
- 83.935919

42.40071
83.93594
313.1
6.4 m acc.

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

unders tony

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

~~deep~~ mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

subdominant
hickory

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

overs tony
black oak

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 31

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/11/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No: SWS9-5

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321

A7. What is the steepness of the slope in degrees? <PSTEEP> 4

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

91

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of downed woody debris
(8 trees)

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
		Pignat herbaceous	S		

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut wicker	P	5.3	5
Rosaceae	Amelanchier spp.	serviceberry	P	outside 3m plot	6
Rosaceae	Prunus serotina	black cherry	P	outside 3m plot	6

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	black oak	T	36.2	18 20
Rosaceae	Prunus serotina	black cherry	T	11	6.8 7
Juglandaceae	Carya oxata glabra	piñnut hickory	T	25	18 19
Juglandaceae	Carya oxata glabra	piñnut hickory	T	37.7	
Juglandaceae	Carya oxata glabra	piñnut hickory	T	13	
Fagaceae	Quercus velutina	black oak	T	26.6	13
Fagaceae	Quercus velutina	black oak	T	30.9	
Fagaceae	Quercus velutina	black oak	T	23.2	12
Rosaceae	Prunus serotina	black cherry	T	10.6	
Rosaceae	Amelanchier spp.	serviceberry	T	17.4	8.8 9
Rosaceae	Prunus serotina	black cherry	T	14.6	
Rosaceae	Prunus serotina	black cherry	T	11.4	8
Fagaceae	Quercus alba	white oak	T	55.9	10.8 18
Fagaceae	Quercus alba	white oak	T	32.8	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra glabra</i>	hignut hickory	T	33.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40163 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

40163
93444

E2. What is the longitude of this plot? <PLONGITUDE>

⁸³
W 83.93444 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

6.5
320.9

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.5

42.40163
83.93444

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

1 understory: mixed
1 sub-dominant:
black cherry
1 dominant: black oak

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinsonfield

Plot identification number <PPIN>: 32

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/11/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

29 Medium Plot <PAREAMEDIUM> Lot-PlotNo2: SW59-6

314 Large Plot <PAREALARGE>

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 306.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 2.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

358

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

1 treefall

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	P	out of 3m	3m
Rosaceae	Prunus serotina	black cherry	P	out of 3m	3.2m
Rosaceae	Prunus serotina	black cherry	P	out of 3m	4m

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut hickory	T	40.0	
Juglandaceae	Carya glabra	Pignut hickory	T	18.1	17
Fagaceae	Quercus velutina	Black oak		45.0	24
Fagaceae	Quercus alba	White oak		23.2	20
	X dead standing bole			27.9	
Fagaceae	Quercus alba	White oak		54.0	22
	X dead standing bole			12.7	
	X dead standing bole			11.0	
Juglandaceae	Carya glabra	Pignut hickory		14.8	10
Juglandaceae	Carya glabra	Pignut hickory		16.9	14
Fagaceae	Quercus alba	White oak		45.0	23
	X dead standing bole			15.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40257 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93572 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.7 m

42.40254
- 83.93572

~~42.40258~~

~~83.935~~

42.40257

83.93572

8.7
acc. 306.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

1 understory: sparse mixed black cherry
1 Sub dominant: pinet hickory
1 dominant: oak

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 33

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/13/06

Record the area (in square meters) of each plot below.

- ~~0~~ 0 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 319 Large Plot <PAREALARGE>

LOT-Plot No 2: SW59-7

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 261

A7. What is the steepness of the slope in degrees? <PSTEEP> 4°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North 0° (5) _____ South
 (2) _____ Northeast (6) _____ Southwest
 (3) _____ East (7) _____ West
 (4) _____ Southeast (8) _____ Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed coarse woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut hickory	P	5.9	
Juglandaceae	Carya glabra	Pignut hickory	P	5.7	5.5
Juglandaceae	Carya glabra	Pignut hickory	P	4.1	3.5
Juglandaceae	Carya glabra	Pignut hickory	P	5.1	5.0
Aceraceae	Acer platanoides	Norway Maple	P	8.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	72.0	30
Aceraceae	Acer platanoides	Norway maple	T	10.2	10
Juglandaceae	Carya ^{glabra} glabra	Pignut hickory	T	21.4	
Fagaceae	Quercus alba	White oak	T	32.0	
Fagaceae	Quercus rubra	Red oak	T	45.7	26
Fagaceae	Quercus rubra	Red oak	T	54.8	29
	X dead standing bole	(hickory)		34.9	
Fagaceae	Quercus rubra	Red oak	T	47.8	26
Fagaceae	Quercus rubra	Red oak	T	33.7	
Fagaceae	Quercus rubra	Red maple	T	17.7	16

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40300 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.³⁹~~98~~382 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.4

261

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Understory
Norway maple,
hickory, black cherry

subdominant
sparse, maple

overstory
oak

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: _____

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 34

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/13/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>
28 Medium Plot <PAREAMEDIUM>
3/4 Large Plot <PAREALARGE>

Lot - Plot No 2: SW59-8

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 305

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

N/A

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

N/A

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) _____ few?
- (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Hamamelidaceae	Hamamelis virginiana	Witch Hazel	B	3.3	4
Hamamelidaceae	Hamamelis virginiana	4	B	3.9	5
Fagaceae Hamamelidaceae	Quercus velutina Hamamelis virginiana	Black Oak	P	3.3	10

out

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	T	11.1	
		* Dead	T	26.5	
Rosaceae	Prunus serotina	Black Cherry	T	15.5	
Juglandaceae	Carya glabra	Pignut Hickory	T	17.4	
Rosaceae	Prunus serotina	Black Cherry	T	11.5	
Lauraceae	Sassafras albidum	Sassafras	T	10.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut Hickory	T	13.2	22
Juglandaceae	Carya glabra	"	T	44.3	
Fagaceae	Quercus velutina	Black oak	T	13.5	24
Juglandaceae	Carya glabra	Pignut Hickory	T	11	
Fagaceae	Quercus velutina	Black oak	T	28.4	25
Lauraceae	Sassafras albidum	Sassafras	T	26.5	
		* Dead	T	14.2	
Juglandaceae	Carya glabra	Pignut Hickory	T	11.2	
Rosaceae	Prunus serotina	Black cherry	T	10.5	
		* Dead	T	13.9	
Fagaceae	Quercus velutina	Black Oak	T	41.5	30
Fagaceae	Quercus rubra	Red Oak	T	34.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the Site Overview which Datum is used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40293 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93694 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.4

42.40289	8.4
-83.93695	305

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory

Question 2 (answer requires a whole number):

Witch hazel / Mixed

Answer to question specified by researcher (integer) <PGENNUM2> 1

subclimax

Question 3 (answer requires a whole number):

Mixed

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory

Question 4 (answer requires a whole number):

Oak / Hickory

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 35

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/13/10

Record the area (in square meters) of each plot below.

1 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: SWS9-9

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

42.403998
83.935387

40100
39542
311.7
14.9

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 311.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 26° |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Plot in wide depression.
Several tree falls

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red maple	P	7.0	9.0
Hamamelidaceae	Hamamelis virginiana	Witch hazel	B	outside 3m	3.5
Hamamelidaceae	Hamamelis virginiana	Witch hazel	B	outside 3m	4.0

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus alba	White oak	T	31.8	22
Rosaceae	Prunus serotina	Black cherry	T	14.0	13
Fagaceae	Quercus velutina	Black oak	T	52.2	23
Aceraceae	Acer rubrum	Red maple	T	13.0	
Rosaceae	Prunus serotina	Black cherry	T	11.0	
Fagaceae	Quercus alba	White oak	T	26.0	2
Rosaceae	Prunus serotina	Black cherry	T	12.2	
Fagaceae	Quercus rubra	Red oak	T	50.4	23
Rosaceae	Prunus serotina	Black cherry	T	12.3	8
Rosaceae	Prunus serotina	Black cherry	T	18.0	12

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40900 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.39542 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

14.9

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
mixed ^{blacks} cherry

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
oak

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4>

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield Woods

Plot identification number <PPIN>: 36

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/13/00

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

24 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot_PlotNo2: SW46-1

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-4.5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 270

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

N/A

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 75 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Norway Red Maple	P	5	10
Juglandaceae	Carya glabra	Pignut Hickory	P		7
Rosaceae	Prunus serotina	Black Cherry	P		9

outside
outside

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Lauraceae	Sassafras albidum	Sassafras	T	16.5	
Lauraceae	Sassafras albidum	"	T	12.2	
Lauraceae Pinaceae	Sassafras Pinus resinosa	Red Pine	T	34.3	
Rosaceae	Prunus serotina	Black Cherry	T	11.6	8
Pinaceae	Pinus resinosa	Red Pine	T	33.3	
Lauraceae	Sassafras albidum	Sassafras	T	17.3	21
Pinaceae	Pinus resinosa	Red Pine	T	26.5	
Rosaceae	Prunus serotina	Black Cherry	T	10.5	
Pinaceae	Pinus resinosa	Red Pine	T	36.2	
Aceraceae	Acer platanoides	Norway Maple	T	18.7	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	34.2	26
Aceraceae	<i>Acer platanoides</i>	Norway Maple	T	13.6	
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	35.3	19
Aceraceae	<i>Acer rubrum</i>	Red Maple	T	13	12
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	34.3	27
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	26.8	
Pinaceae	<i>Pinus resinosa</i>	"	T	31.8	
Pinaceae	<i>Pinus resinosa</i>	"	T	26.4	
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	21.5	
Aceraceae	<i>Acer rubrum</i>	Red Maple	T	13.2	
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	10.3	
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	38.8	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40432 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.93409 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.1m

42.40435
-83.93414

42.40432
83.93409
6.1
270m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

1 Under mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

1 Sub mixed

Question 3 (answer requires a whole number):

Norway Maple

Answer to question specified by researcher (integer) <PGENNUM3> _____

1 Canopy

Question 4 (answer requires a whole number):

Red Pine

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 37

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/13/10

Record the area (in square meters) of each plot below.

- x Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No2: SW46-2

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

42 404 ~~00~~ 58

83.93389

7/16/10
6/27/10
8/2/10

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 294

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|-------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <u>X</u> West <u>290°</u> |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	10
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	4
Juglandaceae	Carya glabra	Pignut hickory	P	outside 3m	7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	31.6	
Pinaceae	Pinus resinosa	Red pine	T	38.6	
Lauraceae	Sassafras albidum	Sassafras	T	14.7	
Pinaceae	Pinus resinosa	Red pine	T	33.7	
Pinaceae	Pinus resinosa	Red pine	T	29.3	
Pinaceae	Pinus resinosa	Red pine	T	36.8	
Pinaceae	Pinus resinosa	Red pine	T	31.0	
Rosaceae	Prunus serotina	Black cherry	T	15.0	
Rosaceae	Prunus serotina	Black cherry	T	16.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	30.4	20
Pinaceae	Pinus resinosa	Red pine	T	23.2	
Pinaceae	Pinus resinosa	Red pine	T	32.0	
Pinaceae	Pinus resinosa	Red pine	T	23.0	
Pinaceae	Pinus resinosa	Red pine	T	34.3	22
Pinaceae	Pinus resinosa	Red pine	T	29.1	
Pinaceae	Pinus resinosa	Red pine	T	38.0	24
Lauraceae	Sassafras albidum	Sassafras	T	15.1	15
Pinaceae	Pinus resinosa	Red pine	T	29.6	
Rosaceae	Prunus serotina	Black cherry	T	16.5	12
Pinaceae	Pinus resinosa	Red pine	T	28.7	
Juglandaceae	Juglans nigra	Black walnut	T	16.4	15

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40459 _____ (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93388 _____ (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ 6.1 _____

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
red pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 38

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/13/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW46-3

Name of person filling out this form: Amanda Graham

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 287.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|-------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest 220 |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Plot center is on top of a ^{ridge} moraine.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	T	4.2	7.5
Rosaceae	Prunus serotina	Black cherry	T	5.8	8
Rosaceae	Prunus serotina	B. cherry	T	4.6	7
Rosaceae	Prunus serotina	B. Cherry	T	9.2	
Fagaceae	Quercus velutina	Black Oak	T	3.1	
DI Tree Pinaceae	Pinus resinosa	Red Pine	T	27.1	33

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red Pine	T	32.6	
Pinaceae	Pinus resinosa	Red Pine	T	20.4	
Rosaceae	Prunus serotina	Black cherry	T	10	9
Pinaceae	Pinus resinosa	Red Pine	T	28.8	
Pinaceae	Pinus resinosa	Red Pine	T	27.6	
Pinaceae	Pinus resinosa	Red Pine	T	31.0	29
Pinaceae	Pinus resinosa	Red Pine	T	31.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red Pine	T	25.2	
Pinaceae	Pinus resinosa	Red Pine	T	30.7	26
Rosaceae	Prunus serotina	Black Cherry	T	10.6	11
Pinaceae	Pinus resinosa	Red pine	T	22.3	
Pinaceae	Pinus resinosa	Red Pine	T	31.2	25
Pinaceae	Pinus resinosa	11	T	26.4	
Pinaceae	Pinus resinosa	11	T	26.3	
Pinaceae	Pinus resinosa	11	T	27.5	
Pinaceae	Pinus resinosa	11	T	23	
Pinaceae	Pinus resinosa	11	T	28.5	
Pinaceae	Pinus resinosa	11	T	31.5	
Pinaceae	Pinus resinosa	11	T	33	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40483 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.93480 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.1

42.40483
-83.93489
287.7
7.1

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 under

Question 2 (answer requires a whole number):

Black Cherry

Answer to question specified by researcher (integer) <PGENNUM2> 1 sub

Question 3 (answer requires a whole number):

Black Cherry

Answer to question specified by researcher (integer) <PGENNUM3> 1 canopy

Question 4 (answer requires a whole number):

Red Pine

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: _____ Country ID: _____ Site ID: _____

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: _____

Plot identification number <PPIN>: 39

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/16/10

Record the area (in square meters) of each plot below.

_____ Small Plot <PAREASMALL>

_____ Medium Plot <PAREAMEDIUM>

_____ Large Plot <PAREALARGE>

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5b here should correlate to answers for B2-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: _____

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------------------------------------|
| (1) _____ North | (5) <input checked="" type="checkbox"/> South 150 |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 55 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) _____ few? |
| (3) _____ abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		Black cherry	P	7.5	8
		Black cherry	P	8.0	8
		Black cherry	P	outside 3m	7.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		JASJOFRASS	T	16,4	9
		BLACK CHERRY	T	10,8	
		Red pine	T	33,0	
		Red pine	T	28,3	
	X	DEAD (red pine)	T	21,4	
	Red pine	→	T	29,2	
		Red pine	T	29	
		Red pine	T	32	
		Red pine	T	26	
		White Red Pine	T	27,9	
		Red Pine	T	27,5	
		Red Oak	T	11,8	
		Red pine	T	21,2	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		Red pine	T	34.6	22
		Red pine	T	25.7	
		Red pine	T	17.6	17
		Red pine	T	25.4	
		BLACK LOCUST	T	12	
		Red pine	T	32	22
		OAK RENOVA BLACK	T	10.1	
		Red Pine	T	33	
		BLACK CHERRY	T	17	9
		Red pine	T	27.4	
		Red pine	T	30.9	
		Red pine	T	33.2	24

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40490 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93358 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.0

40490
93358
8.0
290.9

42.40490
-83.93358

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

invertebrate
black cherry

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
red pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 40

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/16/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASmall>
28 Medium Plot <PAREAMEDIUM>
314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW45-1

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 326

A7. What is the steepness of the slope in degrees? <PSTEEP> _____

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

out 3m
out
out

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Picea abies</i>	Norway Spruce	P		3m
Rosaceae	<i>Prunus serotina</i>	Black Cherry	P		3.3
		Arizona Hill	P		
Eleagnaceae	<i>Eleagnus umbellata</i>	Autumn Olive	P		2.6

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red Maple	T	22.3	
Pinaceae	Pinus resinosa	Red Pine	T	34.8	23
Pinaceae	Pinus resinosa	Red Pine	T	24.9	
Pinaceae	Pinus resinosa	Red Pine	T	31.0	20
Aceraceae	Acer platanoides	Norway Maple	T	26.0	
Aceraceae	Acer platanoides	Norway Maple	T	20.3	
Pinaceae	Pinus resinosa	Red Pine	T	34.0	
Aceraceae	Acer platanoides	Norway Maple	T	33.0	
Pinaceae	Pinus resinosa	Red Pine	T	34.4	28
Aceraceae	Acer rubrum	Red Maple	T	18.0	15
Lauraceae	Sassafras albidum	Sassafras	T	17.8	14
Pinaceae		Red Pine	DEAD	31.2	
Lauraceae	Sassafras albidum	Sassafras	T	12.8	10
Lauraceae	Sassafras albidum	Sassafras	T	10.5	

07/10

Rev. 5-07

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

DEAD

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		Red Pine	DEAD	25.0	
Lauraceae	Sassafras albidum	Sassafras	T	11.4	
Pinaceae	Pinus resinosa	Red Pine	T	29.0	
Pinaceae	Pinus resinosa	Red Pine	T	36.6	
Pinaceae	Pinus resinosa	Red Pine	T	31.2	
Aceraceae	Acer saccharum	Sugar Maple	T	10.8	
Lauraceae	Sassafras albidum	Sassafras	T	15.8	
Lauraceae	Sassafras albidum	Sassafras	T	13.6	10

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40466 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93285 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

20.4

42.40459
- 83.93285
42.40466
83.93285
50% crown cover

Understory
Sparse

164°
S

325.5 - Height
20.4 - error

Subdominant
Sparse

Plot conditions
Open

Over story
red pine

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
sparse, mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
surface

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
red pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>



FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 41

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/16/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDMUM>
- Large Plot <PAREALARGE>

Lot - Plot No 2 = SW 45-2

Name of person filling out this form: Mario

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 336

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

on a ridge
some woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) x absent?
(2) _____ few?
(3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Bl. Cherry	P	3.6	4.5
Rosaceae	Prunus serotina	Bl. Cherry	P	4.3	6
Fabaceae	Robinia pseudacacia	Bl. Locust	P	6.4	8
Rosaceae	Prunus serotina	Bl. Cherry	P	5.5	
Rosaceae	Prunus serotina	Bl. Cherry	P	5.0	
Rosaceae	Prunus serotina	Bl. Cherry	P	7.7	
Rosaceae	Prunus serotina	Bl. Cherry	P	4.5	
Rosaceae	Prunus serotina	Bl. Cherry	P	4.8	
Aceraceae	Acer negundo	Box Elder	P	5.3	

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	29.1	22
Fabaceae	<i>Robinia pseudoacacia</i>	Bl. locust	T	11.2	12
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	32.4	21
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	32.3	
		Bl. locust		8	
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	32.2	
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	37.2	24
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	33.7	
DEAD		(Red Pine)	T	25.5	
Rosaceae	<i>Prunus serotina</i>	Bl. Cherry	T	12.4	15
DEAD		(Red Pine)	T	25.3	
Rosaceae	<i>Prunus serotina</i>	Bl. Cherry	T	14.7	12 th
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	29.2	
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	29.1	

Rev. 5-07

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red Pine	T	26.7	
Pinaceae	Pinus resinosa	Red Pine	T	15.6	
Pinaceae	Pinus resinosa	Red Pine	T	24.5	
Pinaceae	Pinus resinosa	Red Pine	T	22.5	
Pinaceae	Pinus resinosa	Red Pine	T	31.0	
Pinaceae	Pinus resinosa	Red Pine	T	28.0	
Pinaceae	Pinus resinosa	Red Pine	T	31.3	
Pinaceae	Pinus resinosa	Red Pine	T	36.3	
Rosaceae	Prunus serotina	Bl. Cherry	T	12.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40512 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93297 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.9

Plot Condition
on a ridge
Some woody debris

55%

315°
134° SE
320° N
335.7 = height
6.9 = error

Understory

Mixed

42,404942
-83,932872

.40512
.93297

Sub dominant

Mixed

Dominant

Red Pine

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

red pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 42

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/16/10

Record the area (in square meters) of each plot below.

- 8 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW45-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 291

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|------------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North ^W | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	RED OAK	P	4.5	6
Rosaceae	Prunus serotina	BLACK CHERRY	P	5	7.5
Rosaceae	Prunus serotina	" "	P	3.6	4.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red Pine	T	35,2	23
Pinaceae	Pinus resinosa	Red Pine	T	23,1	
Rosaceae	Prunus serotina	Black Cherry	T	10,5	
Pinaceae	Pinus resinosa	Red Pine	T	32,3	
Lauraceae	Sassafras albidum	SASSAPARILLA	T	12,1	12
Pinaceae	Pinus resinosa	Red Pine	T	26,5	
Rosaceae	Prunus serotina	Black Cherry	T	13,1	
Pinaceae	Pinus resinosa	Red Pine	T	30,4	
Pinaceae	Pinus resinosa	Red Pine	T	36,9	
Rosaceae	Prunus serotina	Black Cherry	T	21,5	
Pinaceae	Pinus resinosa	Red Pine	T	32,4	
Aceraceae	Acer rubrum	Red Maple	T	17,7	
Pinaceae	Pinus resinosa	Red Pine	T	24	
Rosaceae	Prunus serotina	Black Cherry	T	10,2	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	BLACK CHERRY	T	11.5	13
Lauraceae	Sassafras albidum	SASSAFRASS	T	19.6	
Pinaceae	Pinus resinosa	Red Pine	T	30.5	21
	X	DEAD (RED PINE)	T	25.8	
Pinaceae	Pinus resinosa	Red Pine	T	33.2	21
Aceraceae	Acer rubrum	Red Maple	T	13.1	
Juglandaceae	Carya glabra	PIG-NUT Hickory	T	12.3	
Aceraceae	Acer rubrum	Red Maple	T	14	12
Pinaceae	Pinus resinosa	Red Pine	T	30.2	
Pinaceae	Pinus resinosa	Red Pine	T	28.3	
Pinaceae	Pinus resinosa	Red Pine	T	30.0	
Lauraceae	Sassafras albidum	SASSAFRASS	T	16.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40580 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93292 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.6

Site
Some coarse woody
debris

42,405804 .40580
-83,932938 .93292

understory
Mixed

297, 2 - height
5.6 error

Sub
Prunus Hickory

1°
10° N
50%

Dom
Red Pine

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Subdominant
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

overstory
red pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 43

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/16/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

1/8 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW45-4

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 289

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North <i>22°</i> | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	6
Juglandaceae	Carya glabra	Pignut hickory	P	outside 3m	5
Rosaceae	Amelanchier spp.	Serviceberry	P	outside 3m	3.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae Pinaceae	Pinus resinosa	Red pine	T	27.3	
Pinaceae	Pinus resinosa	Red pine	T	32.8	
Fabaceae	Robinia pseudoacacia	Black locust	T	11.2	
Pinaceae	Pinus resinosa	Red pine	T	33.2	22
Pinaceae	Pinus resinosa	Red pine	T	27.5	
Rosaceae	Prunus serotina	Black cherry	T	14.6	13
Pinaceae	Pinus resinosa	Red pine	T	28.9	
Rosaceae	Prunus serotina	Black cherry	T	20.4	
Pinaceae	Pinus resinosa	Red pine	T	29.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	28.4	20
Pinaceae	Pinus resinosa	Red pine	T	29.5	
Fabaceae	Robinia Robinia pseudoacacia	Black locust	T	11.5	
Rosaceae	Prunus serotina	Black cherry	T	21.1	
Rosaceae	Prunus serotina	Black cherry	T	15.5	10
Rosaceae	Prunus serotina	Black cherry	T	15.7	
Pinaceae	Pinus resinosa	Red pine	T	25.4	
Pinaceae	Pinus resinosa	Red pine	T	26.6	
Rosaceae	Prunus serotina	Black cherry	T	11.0	13
Pinaceae	Pinus resinosa	Red pine	T	29.6	
Pinaceae	Pinus resinosa	Red pine	T	32.9	23
Rosaceae	Prunus serotina	Black cherry	T	22.8	

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
sparse, mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
black cherry

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
red pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 44

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/16/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>
28 Medium Plot <PAREAMEDIUM>
314 Large Plot <PAREALARGE>

Lot-PlotNo2: SWS2-1

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 292

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|--------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <input checked="" type="checkbox"/> West 25° |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Thick groundcover of ferns
fairly open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	6.8	6
Fagaceae	<i>Quercus rubra</i>	Red Oak	P		6
Aceraceae	<i>Acer negundo</i>	BOX ELDER	D		4.5
Pinaceae	<i>Pinus strobus</i>	White Pine	T	38.5	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	20.6	

out
out

TREES

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	50.0	35
Pinaceae	Pinus strobus	White Pine	T	29.4	
Pinaceae	Pinus strobus	White Pine	T	27.5	
Pinaceae	Pinus strobus	White Pine	T	36.3	33
Pinaceae	Pinus strobus	White Pine	T	26.8	
Pinaceae	Pinus strobus	White Pine	T	22.8	
Pinaceae	Pinus strobus	White Pine	T	34.0	
Pinaceae	Pinus strobus	White Pine	T	25.4	
Pinaceae	Pinus strobus	White Pine	T	41.6	
Pinaceae	Pinus strobus	White Pine	T	24.6	22
Pinaceae	Pinus strobus	White Pine	T	22.0	
Pinaceae	Pinus strobus	White Pine	T	37.4	
Pinaceae	Pinus strobus	White Pine	T	33.3	
Pinaceae	Pinus strobus	White Pine	T	23.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
		(White Pine)	(DEAD)	13.5	
Pinaceae	Pinus strobus	White Pine	T	23.4	
Aceraceae	Acer negundo	Box Elder	T	11.1	7
Pinaceae	Pinus strobus	White Pine	T	29.9	
Ulmaceae	Ulmus americana	Red American Elm	T	11.6	12
		(White Pine)	DEAD	30.2	
Pinaceae	Pinus strobus	White Pine	T	17.8	20
Pinaceae	Pinus strobus	White Pine	T	24.5	
Pinaceae	Pinus strobus	White Pine	T	45.4	
Pinaceae	Pinus strobus	White Pine	T	29.9	
		(White Pine)	DEAD	20.0	
Pinaceae	Pinus strobus	White Pine	T	37.8	
Pinaceae	Pinus strobus	White Pine	T	30.4	
Pinaceae	Pinus strobus	White Pine	T	36.0	
Pinaceae	Pinus strobus	White Pine	T	35.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40467 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93797 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

11.2

42.40468

40467

Slope

83.93794

93 797

Direction

291.7°

crow

11.2

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
sparse, mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 45

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/18/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

319 Large Plot <PAREALARGE>

lot - Plot No 2, SW 52-2

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 300

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <input checked="" type="checkbox"/> West 292° |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

dense ferns
several treefalls

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum ^{rubrum}	Red maple	P	5.1	6
Aceraceae	Acer rubrum	Red maple	P	4.5	5
Fagaceae	Quercus rubra	Red oak	P	outside 3m	3.8

D1

Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		White pine	T	24.4	
		White pine	T	37.3	
		White pine	T	40.6	
		White pine	T	33.8	
		White pine	T	37.7	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	47.7	32
Pinaceae	Pinus strobus	White pine	T	43.7	
Pinaceae	Pinus strobus	White pine	T	38.0	
Pinaceae	Pinus strobus	White pine	T	41.8	
Pinaceae	Pinus strobus	White pine	T	53.7	34
Pinaceae	Pinus strobus	White pine	T	27.9	
Pinaceae	Pinus strobus	White pine	T	40.8	
Pinaceae	Pinus strobus	White pine	T	27.3	
Pinaceae	Pinus strobus	White pine	T	24.5	
Lauraceae	Sassafras albidum	Sassafras	T	11.0	11
	X dead standing bole	(white pine)	T	13.0	
Aceraceae	Acer rubrum	Red maple	T	12.5	
Pinaceae	X dead standing bole	(white pine)	T	18.0	
Ulmaceae	Ulmus americana	American elm	T	10.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	32.5	24
Pinaceae	Pinus strobus	White pine	T	33.5	25
Pinaceae	Pinus strobus	White pine	T	37.0	31
Aceraceae	Acer rubrum	Red maple	T	12.8	12
Pinaceae	Pinus strobus	White pine	T	28.9	
Pinaceae	Pinus strobus	White pine	T	21.0	
Pinaceae	Pinus strobus	White pine	T	39.4	
Pinaceae	Pinus strobus	White pine	T	26.1	
Pinaceae	Pinus strobus	White pine	T	22.3	
Pinaceae	Pinus strobus	White pine	T	31.0	
Pinaceae	Pinus strobus	White pine	T	28.5	
Rosaceae	Prunus serotina	Black cherry	T	10.5	11

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40506 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93809 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.4

42.40504
-83.93811

506
809
9.4
300.

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinsonfield Woods

Plot identification number <PPIN>: 46

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/18/10

Record the area (in square meters) of each plot below.

N Small Plot <PAREASMALL>

29 Medium Plot <PAREAMEDIUM>

304 Large Plot <PAREALARGE>

Lot Plot No 2: SW52-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 290.3

A7. What is the steepness of the slope in degrees? <PSTEEP> 0.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|----------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

259

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

3 tree falls

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	P	outside 3m plot	6 m
Aceraceae	Acer rubrum	red maple	P	outside 3m plot	6.5 m
Ulmaceae	Ulmus americana	american elm	P	outside 3m plot	2.8 m

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	44.2	24 m
Aceraceae	Acer rubrum	red maple	T	16.0m	14 m
	dead standing (black cherry)		T	16.3	
Pinaceae	Pinus strobus	white pine	T	47.3	
Pinaceae	Pinus strobus	white pine	T	54.4	28 34 m
Pinaceae	Pinus strobus	white pine	T	47.5	
	dead standing		T	12.1	
Pinaceae	Pinus strobus	white pine	T	47.4	
Pinaceae	Pinus strobus	white pine	T	44.2	
Ulmaceae	Ulmus americana	american elm	T	11.0	8.5 m ⁽⁹⁾
Pinaceae	Pinus strobus	white pine	T	32.1	
Rosaceae	Prunus serotina	black cherry	T	15.5	
Pinaceae	Pinus strobus	white pine	T	51.4	28 m
Pinaceae	Pinus strobus	white pine	T	51.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	40.1	23.5m (24)
Rosaceae	Prunus serotina	black cherry	T	17.5	15m
Pinaceae	Pinus strobus	white pine	T	51.7	25m
Aceraceae	Acer rubrum	red maple	T	16.3	
Rosaceae	Prunus avium	sweet cherry	T	17.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40545 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.93839 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP>

10.1 m

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.1 m

42.40545
-83.93834

42.40545
83.93839
10.1 acc
290.3 m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

red maple & cherry

understory: sparse
Sub-dominant:
cherry & maple

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

dominant:

Answer to question specified by researcher (integer) <PGENNUM2> _____

(White pine)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 47

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/18/10

Record the area (in square meters) of each plot below.

- 8 Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2 SW 52-4

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 290

A7. What is the steepness of the slope in degrees? <PSTEEP> 20

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|-------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <u>X</u> West <u>256°</u> |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody debris
Some dense underbrush

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
- (2) _____ few?
- (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	8.0	7.5
Rosaceae	Prunus serotina	Black cherry	P	8.7	7.5
Fagaceae	Quercus rubra	Red oak	P	4.4	6.0

DI. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American elm	T	13.3	12
Pinaceae	Pinus strobus	White pine	T	40.5	
Pinaceae	Pinus strobus	White pine	T	52.5	
Pinaceae	Pinus strobus	White pine	T	38.0	
Pinaceae	Pinus strobus	White pine	T	30.0	
Rosaceae	Prunus serotina	Black cherry	T	14.7	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	48.4	35
Aceraceae	Acer rubrum	Red maple	T	15.3	14
Pinaceae	Pinus strobus	White pine	T	48.0	
Pinaceae	Pinus strobus	White pine	T	45.5	
Aceraceae	Acer rubrum	Red maple	T	11.2	9
Rosaceae	Prunus serotina	Black cherry	T	10.0	
Pinaceae	Pinus strobus	White pine	T	37.3	32
Pinaceae	Pinus strobus	White pine	T	41.5	
Pinaceae	Pinus strobus	White pine	T	31.4	
Pinaceae	Pinus strobus	White pine	T	32.9	
Pinaceae	Pinus strobus	White pine	T	54.0	34
Pinaceae	Pinus strobus	White pine	T	45.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40600 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.93875 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

40600
93875
18.0
290.0

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

18

42.406002
83.938753

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory
(sparse, mixed)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

subdominant
(red maple)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

overstory (white pine)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Strawfield Woods

Plot identification number <PPIN>: 48

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/18/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot_Plot No 2: SW52-5

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 303.6

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

330

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

underbrush is dense
1 small treefall

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 45 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra Quercus rubra	red oak	P	outside 3m plot	3.5m
Rosaceae	Prunus serotina	black cherry	P	outside 3m plot	6m
Rosaceae	Prunus serotina	black cherry	P	outside 3m plot	5.5m

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
				ES	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobilus	white pines	T	45	25
Ulmaceae	Ulmus americana	american elm	T	13.4	12
Pinaceae	Pinus strobilus	white pine	T	45.5	
Pinaceae	Pinus strobilus	white pine	T	42.5	
Pinaceae	Pinus strobilus	white pine	T	45.5	
Pinaceae	Pinus strobilus	white pine	T	41.1	33
Pinaceae	Pinus strobilus	white pine	T	42	33
Pinaceae	Pinus strobilus	white pine	T	42.3	28
Aceraceae	Acer rubrum	red maple	T	11.7	13.5 (14)
Pinaceae	Pinus strobilus	white pine	T	43.8	
Pinaceae	Pinus strobilus	white pine	T	32.9	
Ulmaceae	Ulmus americana	american elm	T	15.6	12.5 (13)
Pinaceae	Pinus strobilus	white pine	T	36.3	
Pinaceae	Pinus strobilus	white pine	T	30.9	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	50.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40607 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.93835 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ 6.1 m

42.40606
-83.93833

42.40607

83.93835

6.1 m acc

303.6 elev

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

understory: mixed
semi-sparse
oak, elm

Sub-dominant:
elm, maple

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

dominant:
white pines

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): ~~02/28/2010~~

Name of forest <FK_FOREST>: Spinefield Woods

Plot identification number <PPIN>: 49

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/18/10

Record the area (in square meters) of each plot below.

- 1 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SWS2-6

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 298

A7. What is the steepness of the slope in degrees? <PSTEEP> 4°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <u>X</u> West 306° |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 45 %

A11. Are epiphytes <PEPIPHYTES>

- (1) X absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	8.3	6
Rosaceae	Prunus serotina	Black cherry	P	8	6
Aceraceae	Acer rubrum	Red maple	P	outside 3m	7.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	48.3	35
Pinaceae	Pinus strobus	White pine	T	25.0	
Aceraceae	Acer rubrum	Red maple	T	12.7	10
Pinaceae	Pinus strobus	White pine	T	47.5	
Rosaceae	Prunus serotina	Black cherry	T	14.4	
Pinaceae	Pinus strobus	White pine	T	40.4	
Aceraceae	Acer rubrum	Red maple	T	25.4	
Pinaceae	Pinus strobus	White pine	T	42.3	
Pinaceae	Pinus strobus	White pine	T	28.0	
Pinaceae	Pinus strobus	White pine	T	33.5	
Rosaceae	Prunus serotina	Black cherry	T	10.0	
Pinaceae	Pinus strobus	White pine	T	36.7	
Pinaceae	Pinus strobus	White pine	T	32.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	40.7	28
Pinaceae	Pinus strobus	White pine	T	43.3	
Rosaceae	Prunus serotina	Black cherry	T	10	7
Pinaceae	Pinus strobus	White pine	T	19.3	24
Pinaceae	Pinus strobus	White pine	T	28.5	
Pinaceae	Pinus strobus	White pine	T	35.5	
Pinaceae	Pinus strobus	White pine	T	30.5	
Pinaceae	Pinus strobus	White pine	T	37.7	
Pinaceae	Pinus strobus	White pine	T	33.0	
Pinaceae	Pinus strobus	White pine	T	38.4	
Pinaceae	Pinus strobus	White pine	T	31.5	30
Pinaceae	Pinus strobus	White pine	T	48.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40635 _____ (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93796 _____ (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ 10.3 _____

298 10.3
42.40635
83.93796

42.406354
83.937936

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield Woods

Plot identification number <PPIN>: 50

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/18/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW52-7

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 303.9

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|----------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <input checked="" type="checkbox"/> West |
| (4) _____ Southeast | (8) _____ Northwest |

288

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

1 treefall
sparse groundcover

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	red maple	P	3.2	4.8
Aceraceae	Acer rubrum	red maple	P	2.7	6.2
Aceraceae	Acer rubrum	red maple	P	2.7	4.6
Aceraceae	Acer rubrum	red maple	P	6.1	8.3
Aceraceae	Acer rubrum	red maple	P	3	
Aceraceae	Acer rubrum	red maple	P	4.5	
Aceraceae	Acer rubrum	red maple	P	3.4	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	29.3	33.5
Pinaceae	Pinus strobus	white pine	T	40.2	
Pinaceae	Pinus strobus	white pine	T	30.5	32
Aceraceae	Acer rubrum	red maple	T	10.2	16
Aceraceae	Acer rubrum	red maple	T	11.8	15
Pinaceae	Pinus strobus	white pine	T	35.7	
Pinaceae	Pinus strobus	white pine	T	41	
Pinaceae	Pinus strobus	white pine	T	40.2	
Pinaceae	Pinus strobus	white pine	T	41.5	38
Pinaceae	Pinus strobus	white pine	T	38.7	
Pinaceae	Pinus strobus	white pine	T	27	
Aceraceae	Acer rubrum	red maple	T	10.9	15
Pinaceae	Pinus strobus	white pine	T	34.6	
Pinaceae	Pinus strobus	white pine	T	34.2	

(34)

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	30	
Pinaceae	Pinus strobus	white pine	T	36.1	
Pinaceae	Pinus strobus	white pine	T	27	
Pinaceae	Pinus strobus	white pine	T	26.1	
Pinaceae	Pinus strobus	white pine	T	32	
Pinaceae Aceraceae	Pinus strobus Acer rubrum	red maple	T	11.8	17
Aceraceae	Acer rubrum	red maple	T	10.4	
Pinaceae	Pinus strobus	white pine	T	29	
Pinaceae	Pinus strobus	white pine	T	38.4	
Pinaceae	Pinus strobus	white pine	T	40.2	
Pinaceae	Pinus strobus	white pine	T	31.4	
Pinaceae	Pinus strobus	white pine	T	31.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40670 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.93827 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.3

42.40674
-83.93827

42.40670

83.93827

6.3 acc

303.9 elev

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

1 Understory:
red maple

Question 1 (answer requires a whole number):

1 Sub-dominant:
red maple

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____ 1 dominant:

Question 3 (answer requires a whole number):

white pines

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 51

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/18/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW53-1

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 305

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|------------------------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast ^{48°} | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 45 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Lauraceae	Sassafras albidum	Sassafras	P	5	4.5
Lauraceae	Sassafras albidum	Sassafras	P	3.4	3.3
Lauraceae	Sassafras albidum	Sassafras	P	4	3.3
Rosaceae	Prunus serotina	Black cherry	P	4	3.3

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	26.6	
Ulmaceae	Ulmus americana	American elm	T	11.4	
Pinaceae	Pinus strobus	White pine	T	39.6	
Pinaceae	Pinus strobus	White pine	T	41.0	
Aceraceae	Acer rubrum	Red maple	T	11.7	
Pinaceae	Pinus strobus	White pine	T	51.0	
Pinaceae	Pinus strobus	White pine	T	62.2	34

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	49.8	31
Pinaceae	Pinus strobus	White pine	T	51.5	
Pinaceae	Pinus strobus	White pine	T	44.0	
Pinaceae	Pinus strobus	White pine	T	39.0	28
Pinaceae	Pinus strobus	White pine	T	42.7	
Rosaceae	Prunus serotina	Black cherry	T	11.0	10
Aceraceae	Acer rubrum	Red maple	T	13.7	14
Pinaceae	Pinus strobus	White pine	T	44.5	30
Pinaceae	Pinus strobus	White pine	T	50.3	
Aceraceae	Acer rubrum	Red maple	T	10.2	10
Pinaceae	Pinus strobus	White pine	T	48.3	
Pinaceae	Pinus strobus	White pine	T	36.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40368 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93926 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

68
26

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.8

8.8
305

42.403684
83.939247

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant
mixed maple

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
white pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 52

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 19 August 2010

Record the area (in square meters) of each plot below.

4 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - plot No 2: SW53-2

Name of person filling out this form: Amanda Goldman

A. CONDITIONS OF THE PLOT

AI. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 284

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | | |
|----------------------------------------------|----------------------------------------|-----|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South | 92° |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest | |
| (3) <input checked="" type="checkbox"/> East | (7) <input type="checkbox"/> West | |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest | |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	4.8	6.0
Lauryaceae	Sassafras albidum OUTSIDE 3m Plot	Sassafras			5.0
Rosaceae	Prunus serotina NOT IN PLOT -	Black Cherry	JUST FOR HEIGHT	-	3.1

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus strobus</i>	White Pine	T	31.7	28
Pinaceae	<i>Pinus strobus</i>	White Pines	T	46.7 46.7	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	38.6	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	41.2	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	11.5	12
Pinaceae	<i>Pinus strobus</i>	White Pine	T	46.0	32
Pinaceae	<i>Pinus strobus</i>	White Pine	T	37.7	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	26.3	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	40.2	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	38.8	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	39.5	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	38.5	35
Pinaceae	<i>Pinus strobus</i>	White Pine	T	50.2	
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	10.1	13

~~22 sample~~

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	34.4	
Pinaceae	Pinus strobus	White Pine	T	41.1	
Pinaceae	Pinus strobus	White Pine	T	28.6	
Pinaceae	Pinus strobus	White Pine	T	51.0	
Acernaceae	Acer rubrum	Red maple	T	19.4	22

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40394 (decimal degrees)

or

~~42 403 94~~ (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93936 (decimal degrees)

or

~~83 939 36~~ (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.7

284m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): *Dom. Overstory - Yes; White Pine*

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number): *Sub-dominant Overstory - Sparse; Mixed broadleaved spp*

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number): *Understory - Yes; Very sparse.*

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
 Date of site visit (mm-dd-yr): 19 August 2010
 Name of forest <FK_FOREST>: Stinchfield
 Plot identification number <PPIN>: 53
 Date data collected for this form (mm-dd-yr) <PLOTDATE>: 19 August 2010

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>
 28 Medium Plot <PAREAMEDIUM>
 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW53-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
 Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 297

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|--------------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast 153° | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

n/a

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 45 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
			B	3	3
Pinaceae	Pinus strobus	White Pine	P	3	3
Rosaceae	Prunus serotina	Black cherry	P	at	4
Rosaceae	Prunus serotina	Black cherry	P	at	4

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	22.4	
Pinaceae	Pinus strobus	White Pine	T	38	
Pinaceae	Pinus strobus	White Pine	T	45	
Pinaceae	Pinus strobus	White Pine	T	49.2	
Lauraceae	Sassafras albidum	Sassafras	T	10	9
Pinaceae	Pinus strobus	White Pine	T	29.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	47.5	31
Aceraceae	Acer platanoides	Norway Maple	T	16.5	12
Pinaceae	Pinus strobus	White Pine	T	40.3	29
Pinaceae	Pinus strobus	White Pine	T	31.6	
Pinaceae	Pinus strobus	White Pine	T	44.5	
Pinaceae	Pinus strobus	White Pine	T	26.2	
Rosaceae	Prunus serotina	Black cherry	T	13.4	10
Pinaceae	Pinus strobus	White Pine	T	28.1	
Pinaceae	Pinus strobus	White Pine	T	38.6	24
Pinaceae	Pinus strobus	White Pine	T	40.5	
Pinaceae	Pinus strobus	White Pine	T	38.8	
Pinaceae	Pinus strobus	White Pine	T	31.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40463 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93940 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

1.0

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 *Mixed understanding*

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 *Mixed subdam*

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 *White Pine dam*

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 54

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 19 August 2010

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

214 Large Plot <PAREALarge>

Lot - Plot No 2.5WS3-4

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

42.40545

83.93939

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: ~~23~~ 306

A7. What is the steepness of the slope in degrees? <PSTEEP> 30

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North (5) South 0°
(2) Northeast (6) Southwest
(3) East (7) West
(4) Southeast (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

N/A

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red maple	P	5.9	7.5
Aceraceae	Acer rubrum	Red maple	P	4.0	4.5
Aceraceae	Acer rubrum	Red maple	P	outside 3m	7.0

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	36.4	
Pinaceae	Pinus strobus	White pine	T	37.6	
Pinaceae	Pinus strobus	White pine	T	30.6	
Pinaceae	Pinus strobus	White pine	T	24.1	
Aceraceae	Acer rubrum	Red maple	T	12.2	12
Pinaceae	Pinus strobus	White pine	T	41.4	
Rosaceae	Prunus serotina	Black cherry	T	10.5	
Pinaceae	Pinus strobus	White pine	T	42.1	
Pinaceae	Pinus strobus	White pine	T	26.7	
Lauraceae	Sassafras albidum	Sassafras	T	10.3	
Pinaceae	Pinus strobus	White pine	T	36.1	
Pinaceae	Pinus strobus	White pine	T	33.7	
Aceraceae	Acer rubrum	Red maple	T	11.4	
Aceraceae	Acer rubrum	Red maple	T	12.1	
Pinaceae	Pinus strobus	White pine	T	40.2	
Pinaceae	Pinus strobus	White pine	T	27.4	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	34.8	36
Pinaceae	Pinus strobus	White pine	T	30.3	
Pinaceae	Pinus strobus	White pine	T	47.4	31
Pinaceae	Pinus strobus	White pine	T	33.1	
Pinaceae	Pinus strobus	White pine	T	42.0	35
Pinaceae	Pinus strobus	White pine	T	26.1	
Pinaceae	Pinus strobus	White pine	T	39.8	
Rosaceae	Prunus serotina	Black cherry	T	10.4	9
Pinaceae	Pinus strobus	White pine	T	37.5	
Pinaceae	Pinus strobus	White pine	T	42.1	
Rosaceae	Prunus serotina	Black cherry	T	10.2	15

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40559 N (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93951 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> X

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.1m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> 1

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

understory
~~red maple~~ Red maple
subdominant
Cherry maple
overstory
white pine

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 55

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 19 Aug. 2010

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDM> Lt-Plot No 25W54-1

314 Large Plot <PAREALARGE>

Name of person filling out this form: Laura Roshz

~~A~~ CONDITIONS OF THE PLOT

~~A~~ Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 280 m.

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | | |
|-----------------------------------------------|----------------------------------------|------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South | 330° |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest | |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West | |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest | |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

N/A

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	NOT IN 3m Plot	Black Cherry	✓ P		11
	NOT IN 3m Plot	Black Cherry	✓ P		12
	NOT IN 3m Plot	White Pine	✓ P		7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	12.5	18
Aceraceae	<i>Acer rubrum</i>	Red Maple	T	18.0	18
Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	26.0	
Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	17.1	
Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	20.3	
Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	11.9	
Pinaceae	<i>Pinus ponderosa</i>	White Pine Ponderosa Pine	T	38.9	21
Pinaceae	<i>Pinus strobus</i>	White Pine	T	12.5	
Aceraceae	<i>Acer rubrum</i>	Red Maple	T	18.3	18
Aceraceae	<i>Acer rubrum</i>	Red Maple	T	14.3	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa Pine	T	43.0	26
Fagaceae	<i>Quercus velutina</i>	Black Oak	T	32.7	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	14.6	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa Pine	T	32.3	23

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red Maple	T	20.8	
	Standing Dead Tree	✗	T	13.8	
Aceraceae	Acer rubrum	Red Maple	T	18.6	
	STANDING DEAD TREE	✗	T	10.3	
Aceraceae	Acer rubrum	Red Maple	T	15.3	
Aceraceae	Acer rubrum	Red Maple	T	27.0	
Aceraceae	Acer rubrum	Red Maple	T	27.4	
Pinaceae	Pinus strobus	White Pine	T	13.0	
Pinaceae	Pinus strobus	White Pine	T	12.8	
Pinaceae	Pinus strobus	White Pine	T	10.8	
Pinaceae	Pinus strobus	White Pine	T	24.6	
Rosaceae	Prunus serotina	Black Cherry	T	16.0	
Rosaceae	Prunus serotina	Black Cherry	T	33.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40536 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.94003 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.7m

42.40535

-83.94002

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): Dom. Overstory Ponderosa Pine

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number): Sub-dom. Overstory Mixed Red Maple Black Cherry

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number): U. Spruce

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number): Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1: Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2: Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 56

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 19 August 2010

Record the area (in square meters) of each plot below.

4 Small Plot <PAREASMALL>
28 Medium Plot <PAREAMEDIUM>
314 Large Plot <PAREALARGE>

Lot-plot No2: SW 54-2

Name of person filling out this form: Amanda Grimm

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 274m

A7. What is the steepness of the slope in degrees? <PSTEEP> 1°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|-------------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <input checked="" type="checkbox"/> Northwest 350 |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

N/A

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40%

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	P	2.8	6
Pinaceae	Pinus strobus	White Pine	P	7.4	5
Rosaceae	Prunus serotina	Black Cherry	P	cut	>

D1

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	T	Black Oak	18.1	13
Aceraceae	Acer rubrum	T	Red Maple	13.9	
Fagaceae	Quercus velutina	T	Black Oak	14.7	
Rosaceae	Prunus serotina	T	Black Cherry	10.7	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	22	17
	#	Dead	T	15.6	
Pinaceae	Pinus strobus	White Pine	T	15.6	
Pinaceae	Pinus strobus	White Pine	T	18.5	
Pinaceae	Pinus strobus	White Pine	T	23.6	
Fagaceae	Quercus velutina	Black Oak	T	10.5	
Rosaceae	Prunus serotina	Black Cherry	T	10	
Fagaceae	Quercus velutina	Black Oak	T	11	
Fagaceae	Quercus velutina	Black Oak	T	15.5	14
Fagaceae	Quercus velutina	Black Oak	T	20.1	
Fagaceae	Quercus velutina	Black Oak	T	11.2	
Fagaceae	Quercus velutina	Black Oak	T	22.8	
Rosaceae	Prunus serotina	Black Cherry	T	15.9	
Fagaceae	Quercus velutina	Black oak	T	19.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Black Oak	T	21.5	15
Salicaceae	Populus grandidentata	Big-toothed Aspen	T	42	19
Fagaceae	Quercus velutina	Black oak	T	22.7	
Pinaceae	Pinus strobus	White Pine	T	29.2	19
Pinaceae	Pinus strobus	White Pine	T	11.4	11
Pinaceae	Pinus strobus	White Pine	T	13.3	
Aceraceae	Acer rubrum	Red Maple	T	10.5	
Pinaceae	Pinus strobus	White Pine	T	23	
Pinaceae	Pinus strobus	White Pine	T	10.7	
Pinaceae	Pinus strobus	White Pine	T	13.4	
Fagaceae	Quercus velutina	Black oak	T	15.5	
Fagaceae	Quercus velutina	Black oak	T	24.2	22

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40491 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.94090 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> X

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.0m

42.404964
-83.940961

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> _____

Mixed
1 Under

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> _____

Mixed
1 subcanopy

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> _____

Mixed
1 dominant

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield

Plot identification number <PPIN>: 51

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 19 Aug. 2010

Record the area (in square meters) of each plot below.

2 Small Plot <PAREASMALL>
28 Medium Plot <PAREAMEDIUM>
314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW 54-3

Name of person filling out this form: Laura Peres

A. CONDITIONS OF THE PLOT

~~A1.~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

42.40454
83.94075

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 291

A7. What is the steepness of the slope in degrees? <PSTEEP> 20

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|-------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest 350 |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

N/A

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red Maple	P	4.0	8
Aceraceae	Acer rubrum	Red Maple	P	4.7	8.5
Fagaceae	Quercus velutina NOT IN 3m PLOT	Black Oak	P		14.

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	<i>Quercus velutina</i>	Black Oak	T	17.8	18
Pinaceae	<i>Pinus strobus</i>	White Pine	T	20.7	
Salicaceae	<i>Populus grandidentata</i>	Big Tooth Aspen	T	18.6	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	10.2	
Salicaceae	<i>Populus grandidentata</i>	Big Tooth Aspen	T	24.2	24
Pinaceae	<i>Pinus strobus</i>	White Pine	T	24.0	21
Pinaceae	<i>Pinus strobus</i>	White Pine	T	18.4	
Salicaceae	<i>Populus grandidentata</i>	Big Tooth Aspen	T	33.1	26
Salicaceae	<i>Populus grandidentata</i>	Big Tooth Aspen	T	29.5	
Salicaceae	<i>Populus grandidentata</i>	Big Tooth Aspen	T	14.5	
Salicaceae	<i>Populus grandidentata</i>	Big Tooth Aspen	T	25.5	23
Pinaceae	<i>Pinus strobus</i>	White Pine	T	29.6	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	22.1	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	10.4	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	12.5	
Aceraceae	<i>Acer rubrum</i>	Red Maple	T	12.7	
Aceraceae	<i>Acer rubrum</i>	Red Maple	T	17.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Salicaceae	<i>Populus grandidentata</i>	Big Tooth Aspen	T	22.4	
Salicaceae	<i>Populus grandidentata</i>	Big Tooth Aspen	T	32.5	
Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	11.1	11
Salicaceae	<i>Populus grandidentata</i>	Big Tooth Aspen	T	14.9	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	20.5	20
Pinaceae	<i>Pinus strobus</i>	White Pine	T	21.5	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	28.0	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	20.9	20
Pinaceae	<i>Pinus strobus</i>	White Pine	T	15.4	
Fagaceae	<i>Quercus velutina</i>	Black Oak	T	15.5	
Fagaceae	<i>Quercus velutina</i>	Black Oak	T	13.4	17
Pinaceae	<i>Pinus strobus</i>	White Pine	T	17.5	

Salicaceae *Populus grandidentata* Big Tooth Aspen T 19.0
 STANDING DEAD TREE T 19.3
 Pinaceae *Pinus strobus* White Pine T 14.3
 STANDING DEAD TREE (White Pine) T 23.4

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

4.40464 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.94073 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.1

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number): *Dominant Overstory: Big Tooth Aspen / white pine*

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number): *Sub-dom. Overstory Black Cherry / white pine*

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number): *Understory: Red maple, Very sparse.*

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: _____

Plot identification number <PPIN>: 58

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/23/10

Record the area (in square meters) of each plot below.

8 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Let-plot No 2: SW54-4

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 286

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <u>✓</u> West <u>212</u> |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) ✓ absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red maple	P	3.6	4.5
Fagaceae	Quercus rubra	Red oak	P	9.2	8
Aceraceae	Acer rubrum	Red maple	P	6.5	9
Aceraceae	Acer rubrum	Red maple	P	7.6	
Aceraceae	Acer rubrum	Red maple	P	8.6	

10.2

Del.

Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	15.2	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	35.3	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Salicaceae	Populus grandidentata	Big-toothed aspen	T	25.6	
Fagaceae	Quercus velutina	Black oak	T	11.5	
Fagaceae	Quercus velutina	Black oak	T	13.5	
Pinaceae	Pinus strobus	White pine	T	22.5	
Aceraceae	Acer rubrum	Red maple	T	20.6	
Rosaceae	Prunus serotina	Black cherry	T	12.8	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	38.3	
Pinaceae	Pinus strobus	White pine	T	22.0	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	29.0	
Fagaceae	Quercus velutina	Black oak	T	11.0	
Aceraceae	Acer rubrum	Red maple	T	13.8	
Aceraceae	Acer rubrum	Red maple	T	27.0	
Aceraceae	Acer rubrum	Red maple	T	18.3	
Fagaceae	Quercus velutina	Black oak pine?	T	18.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	10.2	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	32.0	18
Pinaceae	Pinus ponderosa	Ponderosa pine	T	41.0	22
Fagaceae	Quercus velutina	Black oak	T	15.0	16
Pinaceae	Pinus ponderosa	Ponderosa pine	T	34.0	
Pinaceae	Pinus strobus	White pine	T	14.0	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	33.2	22
Aceraceae	Acer rubrum	Red maple	T	12.4	13
	X Standing dead bole	(white pine)	T	18.5	
Aceraceae	Acer rubrum	Red maple	T	12.3	13
Aceraceae	Acer rubrum	Red maple	T	13.0	
Salicaceae	Populus grandidentata	Big-toothed aspen	T	19.8	20

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40394 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.94091 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

14.3

42.403943
83.940914

14.3
40394
94091
286-1

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

undisturbed
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

ponderosa pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 59

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/23/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW54-5

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark ~~only one~~ answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark ~~only one~~ answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark ~~only one~~ answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark ~~only one~~ answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 304

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|--------------------------|--------------------------|
| (1) _____ North | (5) _____ South |
| (2) <u>60°</u> Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <u>60°</u> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some cork woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 45 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
- (2) _____ few?
- (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus strobus</i>	White Pine	T	13	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa	T	30.4	
Rosaceae	<i>Prunus serotina</i>	Bl Cherry	T	16.3	

TREES

53
11/23/82
50/16
82

CI. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	P	9.3	6.5
Lauraceae	Sassafras albidum	Sassafras	P	7.6	6.5
Fagaceae	Quercus velutina	Bl. Oak	P		8.25

out

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	T	13.3	13.5 (14)
Pinaceae	Pinus ponderosa	Ponderosa	T	33.2	24
Pinaceae	Pinus strobus	White Pine	T	17.2	12.5 (13)
Rosaceae	Prunus serotina	Bl. Cherry	T	14.7	15.0
Pinaceae	Pinus ponderosa	Ponderosa	T	43.1	24
Fagaceae	Quercus rubra	Red Oak	T	16	
Pinaceae	Pinus strobus	White Pine	T	11.5	
Pinaceae	Pinus strobus	White Pine	T	15.8	
Rosaceae	Prunus serotina	Bl. Cherry	T	14.7	
Rosaceae	Prunus serotina	Bl. Cherry	T	16	
		DEAD	T	13.6	
Lauraceae	Sassafras albidum	Sassafras	T	11.4	
Pinaceae	Pinus strobus	White Pine	T	11.9	
Pinaceae	Pinus ponderosa	Ponderosa Pine	T	43.1	20

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus ponderosa	Ponderosa	T	33.8	23
Pinaceae	Pinus strobus	Wh. Pine	T	22.6 15.6	
		DEAD	T	14.2	
Rosaceae	Prunus serotina	Bl. Cherry	T	10.8	
Pinaceae	Pinus strobus	White Pine	T	12.8	
Fagaceae	Quercus velutina	Bl. Oak	T	11.0	
Pinaceae	Pinus strobus	White Pine	T	10.0	
Pinaceae	Pinus strobus	White Pine	T	10.3	
Rosaceae	Prunus serotina	Bl. Cherry	T	19.0	
		White Pine	T	11.5	
Pinaceae	Pinus strobus	White Pine	T	23.7	
Aceraceae	Acer rubrum	Red MAPLE	T	10.4	

Aceraceae Acer rubrum red Maple T 17.4
 Aceraceae Acer rubrum red Maple T 14.8
 Pinaceae Pinus strobus white Pine T 15.3

REV. 5-07

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40383 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.94020 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

301.473
40383
94020

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.3

42.40381
-83.94021

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Under
mixed

Sub
mixed

Dominant
Ponderosa

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: ~~03~~ 003

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 00

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/23/10

Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

24 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW54-6

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 315

A7. What is the steepness of the slope in degrees? <PSTEEP> 1.5°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North <i>4°</i> | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

*Some coarse woody debris
several treefalls*

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 45 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Caprifoliaceae	Lonicera maackii	Amur honeysuckle	B	2-8	3.0
Aceraceae	Acer rubrum	Red maple	P	outside 3m	7.0
Pinaceae	Pinus strobus	White pine	P	outside 3m	3.2

D1.

Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	13.6	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	26.8	
Rosaceae	Prunus serotina	Black cherry	T	21.7	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	30.9	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	32.8	
Aceraceae	<i>Acer rubrum</i>	Red maple	T	12.5	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	19.5	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	40.9	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	14.0	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	39.5	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	29.3	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	12.8	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	10.3	
Pinaceae	<i>Pinus ponderosa</i>	Ponderosa pine	T	27.4	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	16.0	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	10.9	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	13.9	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	25	
Rosaceae	Prunus serotina	Black cherry	T	15.5	18
Rosaceae	Prunus serotina	Black cherry	T	12.2	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	33.9	22
Aceraceae	Acer rubrum	Red maple	T	11.8	
Pinaceae	Pinus ponderosa	Ponderosa pine	T	42.2	24
Pinaceae	Pinus ponderosa	Ponderosa pine	T	25.2	15
Pinaceae	Pinus ponderosa	Ponderosa pine	T	27.0	
Rosaceae	Prunus serotina	Black cherry	T	14.9	13
Pinaceae	Pinus ponderosa	Ponderosa pine	T	38.8	24
Rosaceae	Prunus serotina	Black cherry	T	14.0	11
Pinaceae	Pinus ponderosa	Ponderosa pine	T	25.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40378 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.94123 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.5

42.40378
83.94123
10.5
314.9

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
~~mixed~~
Black cherry

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
ponderosa pine

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 61

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/23/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDM>

314 Large Plot <PAREALARGE>

Lot Plot No: SW54-7

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 291

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|----------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <u>352°</u> West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody debris

Under
50 Mixed

Sub
Mixed

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

Dom
Mixed

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	B1 Cherry	\$ P	5.1	7.25
Rosaceae Aceraceae	<i>Acer rubrum</i>	Red Maple	\$ P	3.6	6.0
Ulmaceae	<i>Ulmus americana</i>	? American Elm	\$ P	2.5	6.75
Ulmaceae	<i>Ulmus americana</i>	American Elm	\$ P	5.3	6.25
Juglandaceae	<i>Carya glabra</i>	Hickory ^{Pishut}	\$ P	4.4	
Ulmaceae	<i>Ulmus americana</i>	B1 Cherry American Elm	\$ P	4.5	
Ulmaceae	<i>Ulmus americana</i>	American Elm	\$ P	6.6	
Ulmaceae	<i>Ulmus americana</i>	American Elm	\$ P	4.2	
		B1 Oak		15.4	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Bl. Oak	T	15.4	11
Ulmaceae	Ulmus americana	American Elm	T	14.6	12
Ulmaceae	Ulmus americana	A. Elm	T	19.3	
Rosaceae	Prunus serotina	Bl. Cherry	T	12.2	10
Rosaceae	Prunus serotina	Bl. Cherry	T	13.0	
Rosaceae	Prunus serotina	Bl. Cherry	T	10.3	
Rosaceae	Prunus serotina	Bl. Cherry	T	17.0	
Rosaceae	Prunus serotina	Bl. Cherry	T	12.0	
		DEAD (W. Pine)	T	20.1	
Fagaceae	Quercus rubra	Red Oak	T	17.4	
Fagaceae	Quercus rubra	Red Oak	T	13.0	
Rosaceae	Prunus serotina	Bl. Cherry	T	12.9	
Rosaceae	Prunus serotina	Bl. Cherry	T	15.8	
Rosaceae	Prunus serotina	Bl. Cherry	T	15.9	

DEAD

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

DEAD

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Bl. Cherry	T	17.1	
		(Elm?)	T	19.4	
Ulmaceae	<i>Ulmus americana</i>	American Elm	T	12	
Fagaceae	<i>Quercus alba</i>	White Oak	T	21.4	18
Aceraceae	<i>Acer rubrum</i>	Red Maple	T	38.5	21
Rosaceae	<i>Prunus serotina</i>	Bl. Cherry	T	32.8	24

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40512 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.94161 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.6

42.40512
-83.94162

291
6.6
40512
94162

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
cherry

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> 1

mixed

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 62

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/23/10

Record the area (in square meters) of each plot below.

- 7 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW54-8

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only ~~one~~ answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only ~~one~~ answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only ~~one~~ answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only ~~one~~ answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 289

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> 300° West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody debris / small

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	S P	6.7	8
Rosaceae	Prunus serotina	Bl. Cherry	S P	2.9	5
Rosaceae	Prunus serotina	Bl. Cherry	S P	8.5	8 9
				17.2	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Red Oak	T	17.2	15
Fagaceae	Quercus rubra	Red Oak	T	13.5	
Fagaceae	Quercus rubra	Red Oak	T	15.2	14
Fagaceae	Quercus rubra	Red Oak	T	19.3	
Fagaceae	Quercus rubra	Red Oak	T	21.2	17
Aceraceae	Acer rubrum	Red Maple	T	10.2	
Fagaceae	Quercus rubra	Red Oak	T	25.1	
Aceraceae	Acer rubrum	Red Maple	T	10.6	10
Fagaceae	Quercus rubra	Red Oak	T	13.5	
Fagaceae	Quercus rubra	Red Oak	T	18.3	
Fagaceae	Quercus alba	White Oak	T	15.3	
Fagaceae	Quercus rubra	Red Oak	T	10.6	
Fagaceae	Quercus rubra	Red Oak	T	17.7	
Pinaceae	Pinus strobus	White Pine	T	32.9	22

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		White Pine	T	31.7	
Fagaceae	Quercus rubra	Red Oak	T	24.8	19.0
Pinaceae	Pinus strobus	White Pine	T	45.2	
Fagaceae	Quercus rubra	Red Oak	T	29.7	19.0
Fagaceae	Quercus rubra	Red Oak	T	15.7	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40537 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.94132 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.1

42.405387
-83.941349

40537
94132

10.1
287.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Under

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Sub

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Mixed Red oak

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Over

Mixed

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stimfield Woods

Plot identification number <PPIN>: 63

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/29/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDIUM>
- Large Plot <PAREALARGE>

Lot-Plot No 2: SW55-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 271

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 256° |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

some coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	9
Rosaceae	Prunus serotina	Black cherry	P	outside 3m	8
Aceraceae	Acer rubrum	Red maple	P	outside 3m	11

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	25.5	
Pinaceae	<i>Pinus nigra</i>	^E Black pine	T	36.8	23
Ulmaceae	<i>Ulmus americana</i>	American elm	T	13.3	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	18.3	
Aceraceae	<i>Acer rubrum</i>	Red maple	T	24.1	
Pinaceae	<i>Pinus nigra</i>	^C Black pine	T	47.0	24
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	12.0	
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	T	12.4	
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	14.0	
Ulmaceae	<i>Ulmus americana</i>	American elm	T	23.7	
Pinaceae	<i>Pinus nigra</i>	^E Black pine	T	40.6	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	15.4	
Pinaceae	<i>Pinus nigra</i>	^E Black pine	T	45.2	
Ulmaceae	<i>Ulmus americana</i>	American elm	T	14.0	15

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American elm	T	42.0	
Ulmaceae	Ulmus americana	American elm	T	21.0	
Ulmaceae	Ulmus americana	American elm	T	24.2	
Rosaceae	Prunus serotina	Black cherry	T	15.7	13
Pinaceae	Pinus nigra	^{E.} Black pine	T	45.0	18
Aceraceae	Acer rubrum	Red maple	T	13.9	15
Aceraceae	Acer rubrum	Red maple	T	15.4	
Aceraceae	Acer rubrum	Red maple	T	12.5	
Aceraceae	Acer rubrum	Red maple	T	10.4	
Aceraceae	Acer rubrum	Red maple	T	10.4	
Aceraceae	Acer rubrum	Red maple	T	13.3	
Aceraceae	Acer rubrum	Red maple	T	16.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40584 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.94110 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.6

271
10.6
40584
94110

42.40588
-83.94105

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
maple

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

black pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 09

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/24/10

Record the area (in square meters) of each plot below.

- 2 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SWSS-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 286.7

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

318

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse debris : 4 damaged trees

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red maple	P	outside 3m plot	9
Ulmaceae	Ulmus americana	American elm	P	out of 3m plot	4.7
Rosaceae	Prunus serotina	black cherry	P	out of 3m plot	9

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	black pine	T	28.5	23m
Aceraceae	Acer rubrum	red maple	T	14.9	8.5m (9)
Pinaceae	Pinus nigra	black pine	T	36	
Pinaceae	Pinus nigra	black pine	T	29	
Rosaceae	Prunus serotina	black cherry	T	10.7	
Pinaceae	Pinus nigra	black pine	T	30.1	20m
Pinaceae	Pinus nigra	black pine	T	26.5	
	dead standing am. elm		T	15.6	
Ulmaceae	Ulmus americana	american elm	T	19.6	17m
Rosaceae	Prunus serotina	black cherry	T	19.7	16.5m (7)
Pinaceae	Pinus nigra	black pine	T	34	16m
Pinaceae	Pinus nigra	black pine	T	27.2	
Pinaceae	Pinus nigra	black pine	T	24.2	15m
Pinaceae	Pinus nigra	black pine	T	31.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American Elm	T	14.4	9m
Pinaceae	Pinus nigra	black pine	T	33	23m
Pinaceae	Pinus nigra	black pine	T	28.7	23
Ulmaceae	Ulmus americana	American Elm	T	18.2	
Ulmaceae	Ulmus americana	American Elm	T	10.2	
Ulmaceae	Ulmus americana	American Elm	T	21.3	
Rosaceae	Prunus serotina	black cherry	T	21.1	16m
Pinaceae	Pinus nigra	black pine	T	32.2	
Pinaceae	Pinus nigra	black pine	T	48.6	
Aceraceae	Acer rubrum	red maple	T	33.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40608 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.94133 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.8 m

42.40609

83.94136

42.40608
83.94133
9.8 m
256.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

semi-open
understory: mixed red maple black cherry
sub-dominant: elm, maple, cherry
dominant: black pine

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 65

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8-29-10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW55-3

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 303

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West <u>278°</u> |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
- (2) _____ few?
- (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	<i>Ulmus americana</i>	American elm	P	8	4.0
Aceraceae	<i>Acer rubrum</i>	Red maple	P	6.4	11
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	outside 3m	8

(Leaning)

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X dead standing bole	(Black pine)		28.5	
Aceraceae	Acer rubrum	Red maple	T	12.1	
Pinaceae	Pinus nigra	E. Black pine	T	30.5	20
Pinaceae	Pinus nigra	E. Black pine	T	32.4	
Ulmaceae	Ulmus americana	American elm	T	23.4	
Pinaceae	Pinus nigra	E. Black pine	T	43.5	
Pinaceae	Pinus nigra	E. Black pine	T	39.4	
Aceraceae	Acer negundo	Box elder	T	14.0	
Aceraceae	Acer negundo	Box elder	T	10.0	
Aceraceae	Acer negundo	Box elder	T	16.0	
Fagaceae	Quercus rubra	Red oak	T	17.3	
Aceraceae	Acer rubrum	Red maple	T	20.3	
Aceraceae	Acer rubrum	Red maple	T	16.1	
Aceraceae	Acer rubrum	Red maple	T	14.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	<i>Ulmus americana</i>	American elm	T	11.5	18
Aceraceae	<i>Acer rubrum</i>	Red maple	T	18.9	22
Aceraceae	<i>Acer rubrum</i>	Red maple	T	22.8	
Pinaceae	<i>Pinus nigra</i>	E. Black pine	T	36.2	24
Ulmaceae	<i>Ulmus americana</i>	American elm	T	16.4	
Pinaceae	<i>Pinus nigra</i>	E. Black pine	T	30.3	
Pinaceae	<i>Pinus nigra</i>	E. Black pine	T	47.5	26
Aceraceae	<i>Acer rubrum</i>	Red maple	T	44.0	
Pinaceae	<i>Pinus nigra</i>	E. Black pine	T	39.0	
Ulmaceae Rosaceae	<i>Prunus serotina</i>	Black cherry	T	12.0	15
Ulmaceae	<i>Ulmus americana</i>	American elm	T	24.0	
Launaceae	<i>Sassafras albidum</i>	Sassafras	T	12.5	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40621 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.94173 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.6

42.40621
83.94173

302.6
7.6
94173
40621

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory
mixed

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
mixed

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

European black pine

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 66

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8/24/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot - Plot No 2 ' SWSS - 4

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 288.3

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

33a

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some coarse woody
debris

fairly open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	red maple	P	6.5	4.5
Aceraceae	Acer rubrum	red maple	P	4.7	4.5
Aceraceae	Acer rubrum	red maple	P	3.6	6.5
Aceraceae	Acer rubrum	red maple	P	4.3	6.5
Ulmaceae	Ulmus americana	american elm	P	4.5	4

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	american elm	T	18	12.5 (13)
Pinaceae	Pinus nigra	black pine	T	48.5	
Ulmaceae	Ulmus americana	american elm	T	10.2	9.5 (10)
Pinaceae	Pinus nigra	black pine	T	32.7	
Pinaceae	Pinus nigra	black pine	T	28.3	17.5 (18)
Pinaceae	Pinus nigra	black pine	T	32	20
Pinaceae	Pinus nigra	black pine	T	27.5	20.5 (21)
Pinaceae	Pinus nigra	black pine	T	38.7	22.5 (23)
Aceraceae	Acer rubrum	red maple	T	10	10
Aceraceae	Acer rubrum	red maple	T	23.3	16.5 (17)
Rosaceae	Prunus serotina	black cherry	T	15.7	
Aceraceae	Acer rubrum	red maple	T	13.9	
Aceraceae	Acer rubrum	red maple	T	14.7	
Pinaceae	Pinus nigra	black pine	T	35.2	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	red maple	T	18.2	
		dead standing	T	16.6	
Ulmaceae	Ulmus americana	american elm	T	24	
Ulmaceae	Ulmus americana	american elm	T	10.7	
Rosaceae	Prunus serotina	black cherry	T	21.4	
Ulmaceae	Ulmus americana	american elm	T	21.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.40616 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

83.94110 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

1.1 m

42.40634
- 83.94109

9.1 m 288.3 m
42.40616
83.94110

~~42.40629
83.94109~~
1.6 m
327.5

moved due to
closeness to
edge of
road

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

understory: mixed
black cherry
red maple

Question 1 (answer requires a whole number):

sub-dominant:

Answer to question specified by researcher (integer) <PGENNUM1> 1

elm
cherry
maple

Question 2 (answer requires a whole number):

dominant:

Answer to question specified by researcher (integer) <PGENNUM2> 1

black pine

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM



Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinsonfield Woods

Plot identification number <PPIN>: 67

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 8-24-10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDMUM>
- Large Plot <PAREALARGE>

Lot_PlotNo2: NT999-1

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 286

A7. What is the steepness of the slope in degrees? <PSTEEP> 5

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East 108° | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Very shrubby - lots of autumn olive

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 30 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record maximum diameter and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Elagnaceae	Eleagnus umbellata	Autumn olive	B	3.2	3.5 2.5
Elagnaceae	Eleagnus umbellata	Autumn olive	B	4.2	3.5m
Elagnaceae	Eleagnus umbellata	Autumn olive	B	5.2	4.0m
Elagnaceae	Eleagnus umbellata	Autumn olive	B	3.3	
Elagnaceae	Eleagnus umbellata	Autumn olive	B	4.2	
Elagnaceae	Eleagnus umbellata	Autumn olive	B	3.3	
Elagnaceae	Eleagnus umbellata	Autumn olive	B	3.2	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Cupressaceae	Juniperus virginiana	Red cedar	T	11.7	5
Cupressaceae	Juniperus virginiana	Red cedar	T	23.3	11
Rosaceae	Prunus serotina	Black cherry	T	31.7	17
Rosaceae	Prunus serotina	Black cherry	T	27.0	
Ulmaceae	Ulmus americana	American elm	T	49.9	18
Ulmaceae	Ulmus americana	American elm	T	14.0	10
Cupressaceae	Juniperus virginiana	Red cedar	T	14.9	5
Fagaceae	Quercus rubra	Red oak	T	26.0	
Ulmaceae	Ulmus americana	American elm	T	10.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40574 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93192 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.3

285.7
5.3
40574
93192

42.405732
83.931886

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

undersory
autumn drive

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
cedar, elm

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

overstory
mixed

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Hi Lauren,

All coordinates should be correct now. I fixed them in the Access database + made a new Excel file, which I sent to Xueying. The exception is plot # ~~76~~ 76, which was recorded by a student team. (Karen + I had begun marking plots at # 77, so they had to mark their own.)

The coordinates for #76 are $42.00000 + -83.92986$

but, for the latitude, Stinefield is between 42.39 + 42.41
Not sure how we can fix this!

Michela

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 09-25-2010

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 76

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 09-25-2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW02-1

Name of person filling out this form: Silvia Cardenas

A. CONDITIONS OF THE PLOT

1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

42 0000 HST lot 7
83. 92986 lon — New
coordinates.

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321

A7. What is the steepness of the slope in degrees? <PSTEEP> 20°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|-----------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input checked="" type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Low dense forest. Close to a little water pond.
Wind damage (branches all around)

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 55 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Lauraceae	Sassafras albidum	Sassafras	P	9.0	8.5
Rosaceae	Amelanchier spp.	Serviceberry	P	3.2	
Rosaceae	Amelanchier spp.	Serviceberry	P	3.7	
Rosaceae	Amelanchier spp.	Serviceberry	P	3.5	
Rosaceae	Amelanchier spp.	Serviceberry	P	6.1	6.0
Rosaceae	Prunus serotina	Black cherry	P	3.1	3.5
Lauraceae	Sassafras albidum	Sassafras	P	3.9	

DI. TREES

Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	12.8	
Fagaceae	Quercus alba	white oak	T	17.8	17.5
Aceraceae	Acer rubrum	Maple	T	12.2	
Fagaceae	Quercus rubra	Red oak	T	57.6	47.5
Rosaceae	Prunus serotina	Black cherry	T	12.8	
Juglandaceae	Carya ovata	Shagbark hickory	T	19.7	
Juglandaceae	Carya glabra	Pignut hickory	T	35.3	44.0
Juglandaceae	Carya glabra	Pignut hickory	T	28.2	
Fagaceae	Quercus alba	White oak	T	44.5	44.0
Rosaceae	Prunus serotina	Black cherry	T	19.0	21.5
Lauraceae	Sassafras albidum	Sassafras	T	10.5	
Lauraceae	Sassafras albidum	Sassafras	T	20.0	
Lauraceae	Sassafras albidum	Sassafras	T	10.5	
Lauraceae	Sassafras albidum	Sassafras	T	15.2	

Forest Plot Form (P), Version 13, Page 6

Rev. 5-07

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	14.0	
Lauraceae	Sassafras albidum	Sassafras	T	14.1	11.0
Lauraceae	Sassafras albidum	Sassafras	T	10.5	
Juglandaceae	Carya glabra	Pignut hickory	T	44.4	

1
1
0

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.00000 _____ (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92986 _____ (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
(Amelanchier spp.)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant
overstory?
(Mixed hardwoods)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

10-20
20+

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
 Date of site visit (mm-dd-yr): 09/25/10
 Name of forest <FK_FOREST>: Stinchfield Woods
 Plot identification number <PPIN>: 77
 Date data collected for this form (mm-dd-yr) <PLOTDATE>: 09/25/10
 Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW02-2

Name of person filling out this form: Dicker Bourma

A. CONDITIONS OF THE PLOT

XI. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 300.2

A7. What is the steepness of the slope in degrees? <PSTEEP> 10°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Coarse woody debris - fallen branches

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	P	6.8	10
Rosaceae	Amelanchier spp.	Serviceberry	P	6.4	6
Betulaceae	Ostrya virginiana	Ironwood	P	6.6	9

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	<i>Quercus rubra</i>	Red oak	T	15.4	19
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	18.5	23
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	14.3	24
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	11.0	
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	21.7	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	12.3	
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	15.1	

Forest Plot Form (F), Version 1.3, Page 8

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus alba	White oak	T	29.2	31
Rosaceae	Prunus serotina	Black cherry	T	19.0	
Rosaceae	Prunus serotina	Black cherry	T	25.1	28
Rosaceae	Prunus serotina	Black cherry	T	19.3	
Juglandaceae	Carya glabra	Pignut hickory	T	24.7	27
Juglandaceae	Carya glabra	Pignut hickory	T	18.1	
Aceraceae	Acer rubrum	Red maple	T	16.2	
Rosaceae	Prunus serotina	Black cherry	T	29.5	
Juglandaceae	Carya glabra	Pignut hickory	T	20.1	
Rosaceae	Prunus serotina	Black cherry	T	23.3	
Lauraceae	Sassafras albidum	Sassafras	T	16.2	
Rosaceae	Prunus serotina	Black cherry	T	17.5	

Forest Plot Form (P), Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39974 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92861 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.2

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
(Mixed species)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant
overstory?
(Prunus serotina,
Sassafras albidum)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant
overstory?
(Mixed hardwood
species)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> 1

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 09/25/10

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 78

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 09/25/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW02-3

Name of person filling out this form: Dieter Brauma

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 325

A7. What is the steepness of the slope in degrees? <PSTEEP> 12°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

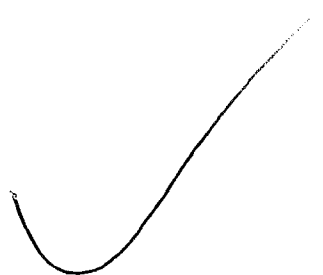
Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

High number of fallen branches
 Dogwood and some grass undergrowth
 Few dead trees in understory

A10. What is the percentage of crown cover in this plot? <PCROWN Cov> 70 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?



C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra</i>	^{Pignut} Hickory	P	2.1	10
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	6.8	
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	P	3.7	5
Rosaceae	X dead standing tree	(Black cherry)	Dead	8.0	
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	9.3	8
Rosaceae	<i>Amelanchier</i> spp.	Serviceberry	P	3.0 (Base)	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red Oak	T	78.6	33
Fagaceae	Quercus alba	White Oak	T	22.2	27
Rosaceae	Prunus serotina	Black cherry	T	17.2	20
Lauraceae	Sassafras albidum	Sassafras	T	10.3	11.5
Rosaceae	Prunus serotina	Black cherry	T	22.2	
Rosaceae	Prunus serotina	Black cherry	T	14.2	
Rosaceae	Prunus serotina	Black cherry	T	14.5	
Fagaceae	Quercus rubra	Red oak	T	26.2	
Rosaceae	Prunus serotina	Black cherry	T	14.7	
Fagaceae	Quercus rubra	Red oak	T	38.2	28
Rosaceae	Prunus serotina	Black cherry	T	19.5	16.5
Rosaceae	Prunus serotina	Black cherry	T	14.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39957 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92904 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.2

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory?
(Carya glabra,
Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Subdominant overstory?
(Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

dominant overstory?
(Quercus rubra,
Quercus alba)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> 1

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
 Date of site visit (mm-dd-yr): 09/25/10
 Name of forest <FK_FOREST>: Stinchfield Woods
 Plot identification number <PPIN>: 79
 Date data collected for this form (mm-dd-yr) <PLOTDATE>: ~~9/25/10~~ 9/25/10
 Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW02-4

Name of person filling out this form: Dieter Bouma

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 327

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed coarse woody debris
Heavy undergrowth

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		Iron tree	P	3.3	3
		Red maple	P	4.2	4.5
Aceraceae	Acer rubrum	Red maple	P	8.2	11.5
Rosaceae	Prunus serotina	Black cherry	P	6.7	5
Rosaceae	Prunus avium	Sweet cherry	P	4.4	6
Betulaceae	Ostrya virginiana	Ironwood	P	2.9	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	11.7	
Fagaceae	<i>Quercus alba</i>	White oak	T	24.1	
Fagaceae	<i>Quercus alba</i>	White oak	T	57.3	42
Fagaceae	<i>Quercus alba</i>	White oak	T	41.3	
Fagaceae	<i>Quercus rubra</i>	Red oak	T	44.0	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	35.5	
Juglandaceae	<i>Carya glabra</i>	Pignut Hickory	T	19.5	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	10.5	18
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	10.0	18

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Prunus serotina	Black cherry	T	13.8	
		Black oak	T	55.5	26
		Service berry	T	12.1	
		Black oak	T	51.4	40
		black cherry	T	21.8	
		Sassafras	T	14.6	
	X dead	(American elm)	T	11.5	
	X dead	(Sassafras)	T	10.4	
Fagaceae	Quercus alba	White oak	T	42.0	40
Juglandaceae	Carya ovata	Shagbark Hickory	T	11.8	
Juglandaceae	Carya glabra	Pignut hickory	T	15.4	25
Fagaceae	Quercus rubra	Red oak	T	61.8	45

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39943 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92840 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5.5

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

understory?
~~subdominant?~~
(Mixed species)
Subdominant?
overstory
(Prunus serotina)
dominant?
overstory
(Quercus alba)

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 80

Date data collected for this form (mm-dd-yr) <PLOTDATE>: Sep. 28, 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW02-5



Name of person filling out this form: Xuerong Yu

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 326

A7. What is the steepness of the slope in degrees? <PSTEEP> ~~22~~ 6

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest 2.20 |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

N/A

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

- What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

10-25 ✓
not entered
in IFRI
database
5/23/10

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Cornaceae	Cornus amomum	silly dog wood	dog P	7.4	3
Juglandaceae	Carya ovata not in plot	shagbark hickory	P		3.3
Juglandaceae	Carya ovata not in plot	shagbark hickory	P		4.8

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	red oak	T	44.6	26
Fagaceae	Quercus alba	white oak	T	25.6	
Lauraceae	Sassafras albidum	sassafras albidum	T	10.2	
Lauraceae	Sassafras albidum	Sassafras	T	10.8	
Lauraceae	Sassafras albidum	sassafras	T	23.5	20
Lauraceae	Sassafras albidum	Sassafras	T	12.5	15
Lauraceae	Sassafras albidum	Sassafras	T	30 13.7	21
Salicaceae	populus grandidentata	big tooth aspen	T	24	
Lauraceae	Sassafras albidum	Sassafras	T	10.6	24
Lauraceae	Sassafras albidum	Sassafras	T	17.8	
Juglandaceae	Karya Carya ovata	Shagbark hickory	T	22	
Lauraceae	Sassafras albidum	Sassafras	T	16.8	
Rosaceae	Prunus serotina	black cherry	T	23.2	
	X dead.	(Sassafras)	T	14	
	Sassafras albidum.				

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Lauraceae	Sassafras albidum	Sassafras	T	20.9	18
Lauraceae	Sassafras albidum	Sassafras	T	20.2	
Fagaceae	Sassafras albidum Quercus rubra	red oak	T	43.2	
Lauraceae	Sassafras albidum	Sassafras	T	18.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39929 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93122 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

11.6

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

understory?
(Larya ovata)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

subdominant overstory?
(Sassafras albidum)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

dominant overstory?
(Mixed species)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spindfield Woods

Plot identification number <PPIN>: 81

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 09-25-10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo 2: SW02-6

Emily Etue

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 322

A7. What is the steepness of the slope in degrees? <PSTEEP> 4°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

dwd inside and outside plot.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	B P	9	12
Rosaceae	Prunus avium	Sweet cherry	B P	5.9	5
Rosaceae	Prunus avium	Sweet cherry	B P	4.1	5.5
Rosaceae	Prunus avium	Sweet cherry	B P	6.8	
			—	13.1	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer Rubra	Red Maple	T	13.8	14
	X Dead	(Red Oak)	T	46.4	
Rosaceae	Prunus Serotina	Black Cherry	T	10.9	
Rosaceae	Prunus Serotina	Black Cherry	T	12.4	
Rosaceae	Prunus Serotina	Black Cherry	T	12.8	
Rosaceae	Prunus Serotina	Black Cherry	T	15.6	20
Rosaceae	Prunus Serotina	Black Cherry	T	10.9	7
	Dead	Black cherry	T	12.9	
Rosaceae Fagaceae	Quercus Alba	White Oak	T	11.2 49.2	27
Rosaceae	Prunus Serotina	Black Cherry	T	12.8	
Fagaceae	Quercus Alba	White Oak	T	51.9	27
	Dead	White Oak	T	25.8	
Rosaceae	Prunus Serotina	Black cherry	T	13.5	
Fagaceae	Quercus Alba	White Oak	T	50.2	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus Alba	White Oak	T	33.5	26
Fagaceae	Quercus Rubra	Red Oak	T	68.8	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39906 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92999 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.1

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?
(Prunus avium)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Quercus alba)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): ~~09-25-10~~ _____

Name of forest <FK_FOREST>: Steinfeld Woods

Plot identification number <PPIN>: 82

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 09-25-10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot_PlotNo2: SW02-7

Name of person filling out this form: Kayla Yurwo

A. CONDITIONS OF THE PLOT

X. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 324

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|----------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <input checked="" type="checkbox"/> West |
| (4) _____ Southeast | (8) _____ Northwest |

270

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some downed coarse woody debris on edge of plot.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> ~~100~~ ~~45~~ %

45

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya ovata	shagbark hickory	P	3	4
Aceraceae	Acer saccharum	sugar maple	P	outside 3m?	7
Rosaceae	Prunus serotina avium	sweet cherry	P	outside 3m?	4.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Rosaceae	Prunus serotina	Black cherry	T	13.5	7 ✓
Juglandaceae	Carya ovata	shagbark hickory	T	23.7	
Fagaceae	Quercus velutina rubra	Black oak Red	T	46.5	
✓ Juglandaceae	Carya ovata	shagbark hickory	T	51	31 ✓
✓ Fagaceae	Q Quercus velutina rubra	Black oak Red	T	41	25 ✓
Rosaceae	Prunus serotina	Black cherry (standing dead)	T	10.2	
✓ Aceraceae	Acer saccharum	sugar maple	T	14.8	14 ✓
Fagaceae	Quercus rubra	Red oak	T	27.2	
Juglandaceae	Carya ovata	shagbark hickory	T	17.6	
✓ Aceraceae	Acer saccharum	Sugar maple	T	18.5	15 ✓
Fagaceae	Quercus rubra	Red oak	T	49.5	34 ✓
Aceraceae	Acer saccharum	sugar maple	T	13.5	
Fagaceae	Quercus rubra	Red oak	T	55	
Aceraceae	Acer saccharum	Sugar maple	T	12.9	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	35.6	
Juglandaceae	Carya ovata	shagbark hickory	T	13.5	
Juglandaceae	Carya ovata	shagbark hickory	T	13	
Juglandaceae	Carya ovata	shagbark hickory	T	12.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39904 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93041 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

6.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?
(Mixed species)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant overstory?
(Acer saccharum, Carya ovata)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Quercus rubra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 83

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 09/25/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot_PlotNo 2: SW02-8

Name of person filling out this form: ~~Emily J. ...~~ Kayla Yurco

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

✓

10.25

C.7 P5

Sapling

NO SPECIES

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321

A7. What is the steepness of the slope in degrees? <PSTEEP> 4

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest 312° |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

~~No understory~~ NO.
~~No ground layer herbaceous layer~~

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
*	(Not Recorded)	?		2.6	3 2.5
Juglandaceae	Carya ovata	shagbark hickory	P	outside 3m?	2.5
Rosaceae	Prunus serotina	Black cherry	P	outside 3m?	1.6

all of this should be on Form D!

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	12.2	9 ✓
Rosaceae	Prunus serotina	Black cherry	T	10	20 ✓
Pinaceae	Picea glauca	white spruce	T	22.3	
Fagaceae	Quercus alba	white oak	T	47.2	27 ✓
Fagaceae	Quercus alba	white oak	T	41.4 41.4	26 ✓
Fagaceae	Quercus rubra	Red Red oak	T	62	
Rosaceae	Prunus serotina	Black cherry	T	25.8	
	X DEAD	dead standing	T	13.5	
Juglandaceae	Carya ovata	shagbark hickory	T	18.7	22 ✓
Fagaceae	Quercus alba	white oak	T	39.1	29 ✓

Entered in as Picea abies

Form D

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39870 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93101 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.1

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?
(Carya ovata, Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant overstory?
(Carya ovata, Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Quercus alba)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 84

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 09/25/10

Record the area (in square meters) of each plot below.

- x Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW02-9

Name of person filling out this form: Emily Etee

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 315

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <POrient>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |
- ~~326~~

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

No herbaceous layer
No understory

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 55 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

~~B1.~~ What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	Not in Plot	Sugar Maple			18
Aceraceae	Acer Saccharum	Sugar Maple	P	6.5	8
Aceraceae	Not in Plot ^{Acer} saccharum	Sugar Maple	P		4.5
Aceraceae	Not in Plot ^{Acer} saccharum	Sugar Maple	P		13

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar Maple	T	23.5	23
	Standing Dead Tree	gibb Unknown	T	17	
Fagaceae	Quercus Kelatina	Black Oak	T	17.6	
Juglandaceae	Rarya Ovata	ShagBark Hickory	T	20.5	
Aceraceae	Acer Saccharum	Sugar Maple	T	12.6	
Aceraceae	Acer Saccharum	Sugar Maple	T	15	
Aceraceae	Acer Saccharum	Sugar Maple	T	24.6	26
Fagaceae	Quercus Velutina	Black Oak	T	53.5	31
Aceraceae	Acer Saccharum	Sugar Maple	T	20.1	
Aceraceae	Acer Saccharum	Sugar Maple	T	13.1	
Aceraceae	Acer Saccharum	Sugar Maple	T	19.8	19
Aceraceae	Acer Saccharum	Sugar Maple	T	17.5	20
Aceraceae	Acer Saccharum	Sugar Maple	T	10	17
Rosaceae	Prunus Serotina	Black Cherry	T	29.2	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya Ovata	Shag Bark Hickory	T	20.8	
Fagaceae	Quercus	Black Oak	T	64.5	

GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N. 42.39815 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93135 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.9

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
(Acer saccharum)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant overstory?
(Acer saccharum)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant overstory?
(Acer saccharum, Quercus velutina)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): Sept/25/2010

Name of forest <FK_FOREST>: Spinchfield Woods

Plot identification number <PPIN>: 85

Date data collected for this form (mm-dd-yr) <PLOTDATE>: Sept/25/2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 914 Large Plot <PAREALARGE>

lot-PlotNo2: SW01-1

Name of person filling out this form: Ronny Roca

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

NO.
Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort? ?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 313

A7. What is the steepness of the slope in degrees? <PSTEEP> 37.

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Out close to the pathways many dead trees in the plot. Less regeneration. We couldn't find any trees on the plot.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 80 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Lauraceae	Sassafras albidum	Sassafras	T	17.5	
Oleaceae	Fraxinus americana	White ash	T	23.6	25
Oleaceae	Fraxinus americana	White ash	T	28.1	
Lauraceae	Sassafras albidum	Sassafras	T	17.4	
	Acer saccharinum	Maple (sugar)	T	28.9	
	Acer negundo	Maple	T	23.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum +	Red Maple	T	10.5	
Rosaceae	Prunus serotina	black cherry	T	27.4	
Aceraceae	Acer negundo *	Box elder	T	14.9	
Lauraceae	Sassafras albidum	Sassafras	T	16.4	
Lauraceae	Sassafras albidum	Sassafras	T	23.7	
Lauraceae	Sassafras albidum	Sassafras	T	10.7	
Aceraceae	Acer rubrum	Red Maple	T	26	
Lauraceae	Sassafras albidum	Sassafras	T	16.4	
Pinaceae	Pinus nigra	Black Pine	T	39.8	29
Lauraceae	Sassafras albidum	Sassafras	T	30.5	
Pinaceae	Pinus nigra	Black Pine	T	48.4	32
Aceraceae	Acer rubrum	Red maple	T	11.5	

~~Geogon oak~~
~~Geogon oak~~ Sassafras
~~Geogon oak~~
 H. Harry Sassafras T 19.6
 H. Harry Sassafras T 19.6
 H. Harry Sassafras T 12.7
 H. Harry Sassafras T 11

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39762 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93165 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____ understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> _____ 1 subdominant overstory?
(Sassafras albidum, Carya)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____ 1 dominant overstory?
(Mixed species)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): Sept 125 / 2010

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 86

Date data collected for this form (mm-dd-yr) <PLOTDATE>: Sept 125 / 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

lot-Plot No: 2: SW01-2

Name of person filling out this form: Ronny Roma

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

✓

lg. 8 - Hickories - what kind?

lg. 8 - Oak - what kind?

lg. 7 - Ash - what kind?

↑

un'k spp
entered

as
genus
spp.

DONE

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321

A7. What is the steepness of the slope in degrees? <PSTEEP> 27

A8. If the plot is on a slope, what direction does the plot face? <POrient>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

many Dead trees. Human interference (bottle of seeds, blew pines, No much regeneration, weeds and kind of moros. No erosion. Initially was a plant pine plantation. Pine dominated.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya tomentosa	^{mockernut} Hickory	B	4.9	4.75
Juglandaceae	Carya tomentosa	^{mockernut} Hickory	B	5.5	
Aceraceae	Acer rubrum	Red maple	B	8.3	12
Fagaceae	Quercus rubra	red oak	B	8.5	11

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra</i>	hickory ^{Pignut}	T	18.5	
Aceraceae	<i>Acer rubrum</i>	Red maple	T	16.3	
Pinaceae	<i>Pinus nigra</i>	Black pine	T	41.2	29
Pinaceae	<i>Pinus nigra</i>	Black pine	T	33	
Pinaceae	<i>Pinus nigra</i>	Black pine	T	33.2	
Fagaceae	<i>Quercus nigra</i>	Red oak Black oak	T	16.5	
Pinaceae	<i>Pinus nigra</i>	Black pine	T	44.2	
Juglandaceae	<i>Carya glabra</i>	hickory ^{Pignut}	T	15.3	
Pinaceae	<i>Pinus nigra</i>	black pine	T	35.2	
Pinaceae	<i>Pinus nigra</i>	black pine	T	29.1	
Pinaceae	<i>Pinus nigra</i>	black pine	T	35.8	
Pinaceae	<i>Pinus nigra</i>	b. pine	T	29.5	
Pinaceae	<i>Pinus nigra</i>	b. pine	T	44.2	21
Juglandaceae	<i>Carya glabra</i>	hickory ^{Pignut}	T	15.2	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus nigra</i>	b. Pine	T	40.3	
Pinaceae	<i>Pinus nigra</i>	b. Pine	T	38	
Pinaceae	<i>Pinus nigra</i>	b. Pine	T	23.9	
Fagaceae	<i>Quercus rubra</i>	red oak	T	11.5	
Oleaceae	<i>Fraxinus americana</i>	white ash	T	10.2	
Pinaceae	<i>Pinus nigra</i>	b. Pine	T	43.5	
Aceraceae	<i>Acer rubrum</i>	Red maple	T	14.7	
Pinaceae	<i>Pinus nigra</i>	b. Pine	T	33.3	
Pinaceae	<i>Pinus nigra</i>	b. Pine	T	43.9	31
Aceraceae	<i>Acer rubrum</i>	Red maple	T	18.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39742 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93080 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.6

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?
(Mixed species)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Pinus nigra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 2/25/2010

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 87

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 2/25/2010

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW01-3

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 320

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

✓A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <input checked="" type="checkbox"/> Northwest |

✓A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

in the water zone, falling pine trees. Polyporus
fungi on tree trunks. Some other
small tree damage

✓A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

✓A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) _____ few?
(3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

~~1.~~ What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
				9. -	

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya ovata	Hickory	P	9.5	19
Aceraceae	Acer rubrum	Red maple	P		
Juglandaceae	Carya ovata	Hickory	P		
Juglandaceae	Carya ovata	Hickory	P		
Aceraceae	Acer saccharum	Sugar maple	P	5	9

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	T	10.6	✓
Pinaceae	Pinus nigra	black pine	T	28.9	✓
Pinaceae	Pinus nigra	black pine	T	36	30 ✓
Pinaceae	Pinus nigra	black pine	T	29.2	✓
Pinaceae	Pinus nigra	black pine	T	40	✓
Pinaceae	Pinus nigra	black pine	T	28.9	32 ✓
Lauraceae	Sassafras albidum	Sassafras	T	11.4	✓
Pinaceae	Pinus nigra	black pine	T	40.8	✓ ✓
Pinaceae	Pinus nigra	black pine	T	27.1	✓
Rosaceae	Prunus serotina	black cherry	T	11.5	✓
Pinaceae	Pinus nigra	black pine	T	12.7	✓
Pinaceae	Pinus nigra	black pine	T	25	✓
Pinaceae	Pinus nigra	black pine	T	24.2	✓
Pinaceae	Pinus nigra	black pine	T	22.2	✓

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	T	11.3 ✓	✓
Pinaceae	Pinus nigra	black pine	T	27.3	✓
Rosaceae	Prunus serotina	black cherry	T	15.1	✓
Pinaceae	Pinus nigra	black pine	T	27.3	✓
Pinaceae	Pinus nigra	b. pine	T	34.9 ✓	✓
Pinaceae	Pinus nigra	black pine	T	32.8	✓
Aceraceae	Acer rubrum	Red maple	T	14.5	✓
Pinaceae	Pinus nigra	black pine	T	22.6	✓
Lauraceae	Sassafras albidum	Sassafras		10.2	✓
Pinaceae	Pinus nigra	black pine		22.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39725 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92996 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

13.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Carya ovata)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant overstory?
(Pinus nigra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): Sept 25 / 2010

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 88

Date data collected for this form (mm-dd-yr) <PLOTDATE>: Sept 25 / 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW01-4

Name of person filling out this form: Ronny Roma

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

Pg. 8 Hickory - what kind?
 10.23
 482 spp entered
 as genus spp.
 DONE

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 305

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <u>X</u> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

The dominant species pines, there is no regeneration. No erosion. Many pines dead. There are some other species and some vines. The slope is 2%. Some patas and human garbage in the forest.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
 (2) _____ few?
 (3) _____ abundant?

B. GROUND COVER AND SEEDLING INFORMATION

~~B1~~ What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	blaw Cherry	P	6	5.5
Rosaceae	<i>Prunus serotina</i>	blaw Cherry	P	6.4	
Fagaceae	<i>Quercus velutina</i>	blaw oak	P	4.9	5

broken

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	Black pine	T	36.4	30
Pinaceae	Pinus nigra	Black pine	T	33.8	
Aceraceae	Acer rubrum	Red maple	T	14.6	
Pinaceae	Pinus nigra	Black pine	T	33.6	
Pinaceae	Pinus nigra	Black pine	T	32.2	
Pinaceae	Pinus nigra	Black pine	T	35.5	
Lauraceae	Sassafras albidum	Sassafras	T	17.8	
Pinaceae	Pinus nigra	Black pine	T	39.2	
Pinaceae	Pinus nigra	Black pine	T	38.2	
Juglandaceae	Carya glabra	Hickory	T	17.1	
Pinaceae	Pinus nigra	Black pine	T	36.8	
Pinaceae	Pinus nigra	Black pine	T	35	
Pinaceae	Pinus nigra	Black pine	T	38	31
Aceraceae	Acer rubrum	Red maple	T	22.5	23

SASSAPRAS albidum

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	Black Pine	T	40.7	
Pinaceae	Pinus nigra	Black Pine	T	40.3	
Rosaceae	Prunus serotina	Black cherry	T	14.4	
Pinaceae	Pinus nigra	b. pine	T	44.8	
Lauraceae	Sassafras albidum	Sassafras	T	11.5	
Pinaceae	Pinus nigra	b. pine	T	34.2	
Aceraceae	Acer rubrum	Red maple	T	12.5	
Pinaceae	Pinus nigra	b. pine	T	34.5	
Aceraceae	Acer rubrum	Red maple	T	39.7	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39706 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93073 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

12.3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Pinus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant overstory?
(Pinus nigra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinsonfield Woods

Plot identification number <PPIN>: 89

Date data collected for this form (mm-dd-yr) <PLOTDATE>: _____

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW01-5

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 323

A7. What is the steepness of the slope in degrees? <PSTEEP> 25.1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

There are many shrubs and some small trees.
Pine is the dominant species. There are some little
shrubs and the amount of death trees is not high
as the other plot. Was a forest plantation but has
now regrown.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 65 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	P	3.2	2.5
Rosaceae	Prunus serotina	Black chry.	P	7.2	5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	black pine	T	29.3	29
Pinaceae	Pinus nigra	black pine	T	44	
Pinaceae	Pinus nigra	black pine	T	32.1	
Lauraceae	Sassafras albidum	Sassafras	T	10.7	
Pinaceae	Pinus nigra	black pine	T	29.3	
Rosaceae	Prunus serotina	black cherry	T	10.5	
Pinaceae	Pinus nigra	black pine	T	40.6	32
Rosaceae	Prunus serotina	black cherry	T	12	
Pinaceae	Pinus nigra	black pine	T	27.4	
Pinaceae	Pinus nigra	black pine	T	35.3	
Pinaceae	Pinus nigra	black pine	T	20.5	deck
Rosaceae	Prunus serotina	black cherry	T	10.3	
Pinaceae	Pinus nigra	black pine	T	40.5	
Pinaceae	Pinus nigra	black pine	T	27.6	
Pinaceae	Pinus nigra	black pine	T	35.4	
Pinaceae	Pinus nigra	black pine	T	40	
Pinaceae	Pinus nigra	black pine	T	32.8	

✗

Rev. 5-07

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for Woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	black pine	T	38.7	
Pinaceae	Pinus nigra	black pine	T	41.2	
Lauraceae	Sassafras albidum	Sassafras	T	14.0	
Pinaceae	Pinus nigra	black pine	T	29.3	
Rosaceae	Prunus serotina	black cherry	T	11.8	
Rosaceae	Prunus serotina	black cherry	T	19.9	21
Rosaceae	Prunus serotina	black cherry	T	11.1	12.6
Pinaceae	Pinus nigra	black pine	T	37.9	
Pinaceae	Pinus nigra	black pine	T	46.6	
Pinaceae	Pinus nigra	black pine	T	28	
Pinaceae	Pinus nigra	black pine	T	32	
Pinaceae	Prunus serotina	black cherry	T	12.4	
Pinaceae	Prunus serotina	black cherry	T	10.1	

Pinaceae Pinus nigra black pine T 24.4 dead

Rosaceae Prunus serotina black cherry T 17

Pinaceae Pinus nigra black pine T 38

Rosaceae Prunus serotina black cherry T 17.2

separate
Forest Plot Form (P), Version 13, Page

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39650 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.93175 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

13.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?
(Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant overstory?
(Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Pinus nigra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): Sept 15 / 2010

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 90

Date data collected for this form (mm-dd-yr) <PLOTDATE>: Sept 15 / 2010

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASmall>
- 25 Medium Plot <PAREAMedium>
- 314 Large Plot <PAREALarge>

Lot-PlotNo2: SW01-6

Name of person filling out this form: Ronny Roma

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 304

A7. What is the steepness of the slope in degrees? <PSTEEP> 27

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

The plot has a lot of ^{hard pine} trees. There is little amount of saplings. The main sps are h. pines and acer.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	b. pine	T	40.0	
Pinaceae	Pinus nigra	black pine	T	39.2	
Pinaceae	Pinus nigra	black pine	T	38.1	
Pinaceae	Pinus nigra	b. pine	T	17.5	
Aceraceae	Acer rubrum	Red maple	T	13	
Pinaceae	Pinus nigra	black pine	T	35.7	
Pinaceae	Pinus nigra	black pine	T	39.2	
Pinaceae	Pinus nigra	b. pine	T	25.3	
Pinaceae	Pinus nigra	b. pine	T	33.5	
Pinaceae	Pinus nigra	b. pine	T	34.3	
Aceraceae	Acer saccharum	Sugar maple	T	20	
Pinaceae	Pinus nigra	b. pine	T	51.3	
Pinaceae	Pinus nigra	b. pine	T	38.1	
Pinaceae	Pinus nigra	b. pine	T	32.2	
Rosaceae	Prunus serotina	black cherry	T	10.2	
Aceraceae	Acer saccharum	Sugar maple	T	22.1	

Aceraceae Acer saccharum Sugar maple T 20.9 -
 Pinaceae Pinus nigra b. pine T 35.3 -
 Pinaceae Pinus nigra b. pine T 22 -
 Rosaceae Prunus serotina b. cherry T 11.6 -

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	b. pine	T	95.2	31
Lauraceae	Sassafras albidum	Sassafras	T	16.3	
Pinaceae	Pinus nigra	b. pine	T	12.2	
Aceraceae	Acer saccharum	Sugar maple	T	22.1	
Pinaceae	Pinus nigra	b. pine	T	36.4	28
Pinaceae	Pinus nigra	b. pine	T	31.3	
Aceraceae	Acer rubrum	Red maple	T	13.5	
Pinaceae	Pinus nigra	b. pine	T	19.7	
Pinaceae	Pinus nigra	b. pine	T	39.5	
Pinaceae	Pinus nigra	b. pine	T	25.7	
Pinaceae	Pinus nigra	b. pine	T	39.1	
Aceraceae	Acer rubrum	Red maple	T	15.1	18

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.92684 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92992 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0 understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Pinus nigra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Uncertain hickory species

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 25 Sept 2010

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 91

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 9/25/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW05C-1

→ Name of person filling out this form: Bridget Scollen

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 320

A7. What is the steepness of the slope in degrees? <PSTEEP> 4

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|--------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 25° |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

shrub undergrowth, acorn alive

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 35 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra</i>	nut tree	P		5 3m
Rosaceae	<i>Prunus serotina</i>	black cherry	P		6 3m
Ulmaceae	<i>Ulmus americana</i>	American elm	P		8.5 3m

nut tree
3m
black cherry
3m
American elm
3m

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus nigra	black pine	T	37.9	
✓ Rosaceae	Prunus serotina	black cherry	T	24.6	
✓ Pinaceae	Pinus nigra	black pine	T	23.1	
✓ Pinaceae	Pinus nigra	black pine	T	39.2	
✓ Pinaceae	Pinus nigra	black pine	T	30.3 (30.3)	
✓ Pinaceae	Pinus nigra	black pine	T	32 (32)	
✓ Pinaceae	Pinus nigra	black pine	T	26.7	
✓ Pinaceae	Pinus nigra	black pine	T	26.9	
✓ Ulmaceae	Ulmus americana	Am elm	T	14	
✓ Pinaceae	Pinus nigra	black pine	T	35.4	
✓* Juglandaceae	Carya ovata	nut hickory (?)	T	19.4	9
✓ Pinaceae	Pinus nigra	black pine	T	19.2	
✓ Rosaceae	Prunus serotina	black cherry	T	19.1	
✓ Pinaceae	Pinus nigra	black pine	T	28.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus nigra	black pine	T	40.0	18.5 21
✓ Pinaceae	Pinus nigra	black pine	T	23	•
✓ Rosaceae	Prunus serotina	black cherry	T	10.5	9
✓ Pinaceae	Pinus nigra	black pine	T	33	24
✓ Pinaceae	Pinus nigra	black pine	T	39.5	20 20
✓ Pinaceae	Pinus nigra	black pine	T	22.1	
✓ Rosaceae	Prunus serotina	black cherry	T	17.0	13
✓ Pinaceae	Pinus nigra	black pine	T	36.9	
✓ Pinaceae	Pinus nigra	black pine	T	21.5	
✓ Pinaceae	Pinus nigra	black pine	T	28.2	
✓ Pinaceae	Pinus nigra	black pine	T	34.6	
✓ Rosaceae	Prunus serotina	black cherry	T	17.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1: What is the latitude of this plot? <PLATITUDE>

N 42.39666 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2: What is the longitude of this plot? <PLONGITUDE>

W 83.92896 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3: What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4: What is the Estimated Position Error (EPE) for this position? <PEPE>

11.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓
Top

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?
(Mixed species)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?
(Pinus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?
(Pinus nigra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
Date of site visit (mm-dd-yr): 4/1
Name of forest <FK_FOREST>: Stimufield Woods
Plot identification number <PPIN>: 92
Date data collected for this form (mm-dd-yr) <PLOTDATE>: 9/25/2010
Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW05C-2

Name of person filling out this form: Walker DePuy

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT> 250°

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of honeysuckle
lots of coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 35 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus strobus	white pine	P	9.5	3
✓ Pinaceae	Pinus strobus	white pine	P	18 4.8	
✓ Rosaceae	Prunus serotina	black cherry	P	5.4	
✓ Pinaceae	Pinus strobus	white pine	P	4	4
✓ Rosaceae	Prunus serotina	black cherry	P	6.2	5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	black pine	T	32.3	
Pinaceae	Pinus nigra	black pine	T	32.5	
Pinaceae	Pinus nigra	black pine	T	36.4	
Pinaceae	Pinus nigra	black pine	T	35.7	
Pinaceae	Pinus nigra	black pine	T	24.3	
Pinaceae	Pinus nigra	black pine	T	32.5	17
Pinaceae	Pinus nigra	black pine	T	32.6	17
Pinaceae	Pinus nigra	black pine	T	32.9	13
Pinaceae	Pinus strobus	White pine	T	10.5	7

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
/	pinus nigra	black pine	T	20.3	
/	pinus strobus	white pine	T	11.5	
/	pinus nigra	black pine	T	34.1	
/	pinus nigra	black pine	T	29	
/	prunus serotina	black cherry	T	13	+ 4.5
/	pinus nigra	black pine	T	31.7	
/	pinus nigra	black pine	T	28 27.4	
/	pinus nigra	black pine	T	34	
/	pinus strobus	white pine	T	10	+ 6
/	pinus nigra	black pine	T	40.9	
/	pinus nigra	black pine	T	29.8	
/	pinus serotina strobus	white pine	T	12	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39669 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92851 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

12.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓
✓
✓

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Pinus strobus, Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?
(Pinus strobus)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?
(Pinus nigra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Handwritten scribble

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 93

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 09 25 10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW05C-3

Name of person filling out this form: LISA

A. CONDITIONS OF THE PLOT

~~X~~

Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> 45 years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 322

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|----------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input checked="" type="checkbox"/> South 200° |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Autumn Olive
little to no CWI

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 35 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

0 Trees p3

B. GROUND COVER AND SEEDLING INFORMATION

What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
✓ Pinaceae	Pinus strobus	Wht pine	T	34.8	
✓ Pinaceae	Pinus strobus	Wht pine	T	39.8	
✓ Pinaceae	Pinus nigra	blk pine	T	35.8	
✓ Pinaceae	Pinus nigra	blk pine	T	21.4	
✓ Pinaceae	Pinus nigra	blk pine	T	29.7	
✓ Rosaceae	Prunus serotina	blk cherry	T	11.2	
✓ Pinaceae	Pinus nigra	blk pine	T	34.4	

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red Maple	P	4.6	6M
Pinaceae	Pinus strobus	White pine	P	3.8	3.5M
Pinaceae	Pinus strobus	White Pine	P	CUT	11.0 M

OUT

S
S
S CUT

D1. Tree, Palm, and Woody Climber Information, continued

Pa

C
P JBM

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	blk pine	T	33.3	
Pinaceae	Pinus nigra	blk pine	T	34.8	28M L
Pinaceae	Pinus nigra	blk pine	T	24.9	
Pinaceae	Pinus nigra	blk pine	T	24.4	
Pinaceae	Pinus nigra	blk pine	T	25.4	
Pinaceae	Pinus nigra	blk pine	T	39.4	
Rosaceae	Prunus serotina	blk cherry	T	16.8	
Pinaceae	Pinus nigra	blk pine	T	23.4	
Pinaceae	Pinus nigra	blk pine	T	18.9	
Rosaceae	Prunus serotina	blk cherry	T	11.8	
Pinaceae	Pinus nigra	blk pine	T	34.8	
Pinaceae	Pinus nigra	blk pine	T	32.3	
Pinaceae	Pinus strobus	wht pine	T	35.2	
Pinaceae	Pinus strobus	wht pine	T	24.2	

Rek. 5-07

$$M = 10 \text{ cm} \rightarrow 19.9 \text{ cm}$$

$$L < 20.0 \text{ cm} \rightarrow$$

p7

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	BLK Cherry	T	11.3	12 M
Pinaceae	Pinus nigra	black pine	T	36.4	21 M
Pinaceae	Pinus strobus	white pine	T	13.4	14 M
Rosaceae	Prunus serotina	blk cherry	T	11.8	17.0 M
Rosaceae	Prunus serotina	blk cherry	T	9.2	
Rosaceae	Pinus nigra	blk pine	T	34.6	
Pinaceae	Pinus nigra	blk pine	T	34.2	
Pinaceae	Pinus nigra	blk pine	T	31.0	21.0 M
Pinaceae	Pinus strobus	white pine	T	17.5	
Pinaceae	Pinus nigra	black pine	T	34.0	
Pinaceae	Pinus nigra	black pine	T	36.0	
Pinaceae	Pinus nigra	black pine	T	35.2	

M
L
M
M

L

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39684 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92804 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓
y
top

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Pinus strobus, Acer rubrum)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant overstory?
(Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant overstory?
(Pinus nigra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
Date of site visit (mm-dd-yr): 09.25.10
Name of forest <FK_FOREST>: Stinchfield Woods
Plot identification number <PPIN>: 94
Date data collected for this form (mm-dd-yr) <PLOTDATE>: 09.25.10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>
28 Medium Plot <PAREAMedium>
314 Large Plot <PAREALarge>

Lot-PlotNo2: SW03C-4

Name of person filling out this form: Lise

A. CONDITIONS OF THE PLOT

X 1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in S

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

Missing slope
(so slope & aspect
not entered)

A7, A8
as of 10.25 ✓

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: ~~1234~~ 364

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-------------------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East 90° | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

backthorn in understory
- CWID - little

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <PE<PIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

BM
elm

D. ~~TR~~ 13

~~B.~~ GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
✓ Aceraceae	Acer rubrum	Red Maple	T	12.0	

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	bk cherry	P	8.7	3M
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	P	3.9	4M
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	P	—	6M

OUT

D. TREE, PALM, AND WOODY CLIMBER INFORMATION P1

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Rosaceae	Prunus serotina	blk cherry	T	14.5	
✓ Pinaceae	Pinus strobus	Wt pine	T	10.5	
✓ Pinaceae	Pinus nigra	blk pine	T	42.2	
✓ Rosaceae	Prunus Prunus serotina	blk cherry	T	18.0	15 M
✓ Pinaceae	Pinus nigra	blk pine	T	36.4	
✓ Pinaceae	Pinus nigra	blk pine	T	38.4	20 M
✓ Pinaceae	Pinus nigra	blk pine	T	33.7	20 M
✓ Ulmaceae	Ulmus americana	am elm	T	16.2	12 M
✓ Pinaceae	Pinus nigra	blk pine	T	33.6	
✓ Pinaceae	Pinus nigra	blk pine	T	30.6	
✓ Rosaceae	Prunus serotina blk cherry	blk cherry	T	13.8	
✓ Rosaceae	Prunus serotina	blk cherry	T	18.3	

M
L
L
M

D1. Tree, Palm, and Woody Climber Information, continued p2

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus nigra	blk pine	T	34.8	
✓ Pinaceae	Pinus nigra	blk pine	T	29.5	
✓ Rosaceae	Amelanchier spp.	service berry	T	13.0	
✓ Pinaceae	Pinus nigra ^{strobilus}	blk white pine	T	22.0	
✓ Rosaceae	Prunus serotina	blk cherry	T	12.3	
✓ Pinaceae	Pinus strobilus	blk white pine	T	36.8	
✓ Pinaceae	Pinus strobilus	blk white pine	T	13.4	
✓	DEAD	blk (white pine)	T	10.4	
✓ Pinaceae	Pinus nigra	blk pine	T	32.9	
✓ Rosaceae	Prunus serotina	blk cherry	T	13.7	12.M
✓ Ulmaceae	Ulmus americana	AM elm	T	29.3	30.M
✓ Pinaceae	Pinus strobilus	Wht pine	T	10.6	
✓ Pinaceae	Pinus nigra	blk pine	T	35.6	
✓ Rosaceae	Prunus serotina.	blk cherry	T	17.0	

~~Handwritten scribble~~

DEAD

M
L

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39658 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92759 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

vd
ldp

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?

Question 2 (answer requires a whole number):

(Larix glabra, Prunus serotina)

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant overstory?

Question 3 (answer requires a whole number):

(Pinus strobus, Prunus serotina)

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?

Question 4 (answer requires a whole number):

(Pinus nigra)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
 Date of site visit (mm-dd-yr): Sept 195 / 2010
 Name of forest <FK_FOREST>: Stinchfield Woods
 Plot identification number <PPIN>: 95
 Date data collected for this form (mm-dd-yr) <PLOTDATE>: Sept 125 / 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW62-1

Name of person filling out this form: RANNY ROMA

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
 Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes


A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 312

 A7. What is the steepness of the slope in degrees? <PSTEEP> 2



A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

many Dead trees, ^{hickory} Pi g nut dominated the plot. Regeneration
 promising. Is not a forest plantation and are all native
 species which are not in other plots. Perhaps 50% of
 canopy cover lend an opportunity for saplings

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Betulaceae	Betula alleghaniensis	Yellow birch	P	4.1	3.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	T	36.2	33
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	T	30.2	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	11.2	17
Rosaceae	<i>Prunus serotina</i>	black cherry	T	2.4	
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	T	36.8	
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	T	1.9	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	15.2	
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	T	31.4	29
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	T	3.0	
Aceraceae	<i>Acer sacharum</i>	sugar maple	T	1.0	
Rosaceae	<i>Prunus serotina</i>	black cherry	T	1.0	
Juglandaceae	<i>Carya glabra</i> DEAD	(Pignut hickory)	T	52	dead
	DEAD	who knows	T	32.5	dead
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	T	37.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39636 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92587 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

7.1

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?
 sparse - Betula alleghaniensis

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant overstory?
 (Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
 (Carya glabra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): Sept 25/2010

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 96

Date data collected for this form (mm-dd-yr) <PLOTDATE>: Sept 25/2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW62-2

Name of person filling out this form: RONNY ROMA

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

✓

eg. 3 Hickories - which kind?

as. of 10.25

* sub dom

gen. 3

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

N Forest

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321

A7. What is the steepness of the slope in degrees? <PSTEEP> 34

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Regeneration prominent for different species. many fallen trees
 Hickory, ^{bluer} oak, The canopy is widely open.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 30 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

D1. Tree, Palm, and Woody Climber Information, continued

31

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Oak	T	23.3	23 ✓
Fagaceae	Quercus velutina	Oak	T	51.9	27 ✓
Rosaceae	Prunus serotina	black cherry	T	11.5	✓
	DEAD	(hickory)	T	19.2	dead ✓
Juglandaceae	Carya glabra	Pignut hickory	T	15.4	✓
* Juglandaceae	Carya glabra	pignut hickory	T	10.5	✓
* Juglandaceae	Carya glabra	pignut hickory	T	29.9	✓
Fagaceae	Quercus coccinea	Scarlet Oak	T	67.6	34 ✓
* Juglandaceae	Carya glabra	pignut hickory	T	15.3	✓
Fagaceae	Quercus velutina	black oak	T	48.6	✓
* Juglandaceae	Carya glabra	pignut hickory	T	19.1	✓
* Juglandaceae	Carya glabra	pignut hickory	T	12.9	✓

Forest Plot Form (P), Version 13, Page 8

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

42.39618 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

-83.97520 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

8.9

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0 understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant understory?
(hickory)



Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Quercus velutina)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Group 1

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 10/02/010

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 97

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/02/010

Record the area (in square meters) of each plot below.

X Small Plot <PAREASmall>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW62-3

Name of person filling out this form: BONNY ROSS

A. CONDITIONS OF THE PLOT

X Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 310

A7. What is the steepness of the slope in degrees? <PSTEEP> 8

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Many dead trees, stems on the slope, Many underground
saplings of Cecropia, Acor, no erosion for some
open.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	blackcherry	P	7	2

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubra	Red oak	T	48.6	28
Lauraceae	Sassafras albidum	Sassafras	T	17.1	
Betulaceae	Betula alleghaniensis	yellow birch	T	10.1	
Aceraceae	Acer saccharum	sugar maple	T	12.1	
Lauraceae	Sassafras albidum	Sassafras	T	15.5	
Juglandaceae	Carya glabra	Pignut hickory	T	20	22
Fagaceae	Quercus rubra	Red oak	T	35.24	27

Main tree
Forest Plot Form (P), Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39534 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92362 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.9

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Understory?
(Prunus serotina - sparse)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Subdominant Overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Dominant Overstory?
(Quercus rubra, Lanya glabra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 204
Date of site visit (mm-dd-yr): 10/2/010
Name of forest <FK_FOREST>: Stinchfield Woods
Plot identification number <PPIN>: 98
Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/010

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>
28 Medium Plot <PAREAMEDM>
314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW 62-4

Name of person filling out this form: Russell Brown

A. CONDITIONS OF THE PLOT

~~X~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 304

A7. What is the steepness of the slope in degrees? <PSTEEP> 8

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Open canopy. Steep slope so many dead trees standing.
 Has many regeneration at sapling stage. No direction
 Pigout is the predominant species, the slope is
 in the southeast on the other.

A10. What is the percentage of crown cover in this plot? <PCROWN Cov> 30 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

~~B4.~~ What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Broussonetia americana	Arroyo chico	P	5.2	6

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut hickory	T	29.9	29
Juglandaceae	Carya glabra	Pignut hickory	T	19.8	22
Juglandaceae	Carya glabra	Pignut hickory	T	25	
Juglandaceae	(Carya glabra) X DEAD	(Pignut hickory)	T	29.7	
Juglandaceae	Carya glabra	Pignut hickory	T	22.1	
Fagaceae	Quercus velutina	Black Oak	T	54 + 46!	
Juglandaceae	Carya glabra	Pignut hickory	T	19.6	
Juglandaceae	(Carya glabra) X DEAD	(Pignut hickory)	T	34.3	dead
Juglandaceae	Carya glabra	Pignut hickory	T	30.5	30

dead tree

TC

Forest Plot Form (P), Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39575 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92300 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

9.7

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Sparse - Ulmus americana)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant Overstory?
(Carya glabra)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant Overstory?
(Carya glabra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
Date of site visit (mm-dd-yr): 10/2/01
Name of forest <FK_FOREST>: Finchfield Woods
Plot identification number <PPIN>: 99
Date data collected for this form (mm-dd-yr) <PLOTDATE>: 2/10/01

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW62-5

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 270.8

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Gentle slope. Not on the yellow line of the plot.
 No erosion. Some more trees in the plot.
 Dog droppings everywhere. Pigeons in the plot.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae.	<i>Pteris caudata</i>	Blat chery	P	7.2	0

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut hickory	T	15.8	
Fagaceae	Quercus velutina	Black oak	T	58.	31
Juglandaceae	Carya glabra	Pignut hickory	T	39.1	28
Juglandaceae	Carya glabra	Pignut hickory	T	12.3	
Lauraceae	Sassafras albidum	Sassafras	T	10	
Rosaceae	Pyrus serotina	Black cherry	T	13	
	Carya glabra X DEAD	Pignut hickory	T	21.9	dead tree
Juglandaceae	Carya glabra	Pignut hickory	T	52.1	30
Juglandaceae	Carya glabra	Pignut hickory	T	22.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39626 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92281 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

10.5

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> _____

Understory?

Question 2 (answer requires a whole number):

(Sparse - *Prunus serotina*)

Answer to question specified by researcher (integer) <PGENNUM2> _____

Subdominant Overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> _____

Dominant Overstory?

Question 4 (answer requires a whole number):

(*Carya glabra*)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
Date of site visit (mm-dd-yr): 10/01/2010
Name of forest <FK_FOREST>: Stinchfield Woods
Plot identification number <PPIN>: 100
Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/02/2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW62-6

Name of person filling out this form: Tommy Roma

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

✓

-Pg. 7 Quercus - what kind?

Quercus spp.

05 of 10.25

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 296

A7. What is the steepness of the slope in degrees? <PSTEEP> 1.5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

It is in the valley. It is a bottom plot, and on the slopes. Scarcely disturbed area. Canopy open, many regeneration, because it is also in the bottle. No erosion. Dominant trees: large american sycamore and black cherry. No many death trees.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 30 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American Elm	P	8.1	10
Rosaceae	Prunus serotina	blackcherry	P	8.2	11

1.57.

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American Elm	T	10.2	
Ulmaceae	Ulmus americana	American Elm	T	11.6	18
Rosaceae	Prunus serotina	blackcherry	T	11.4	21
Fagaceae	Quercus X DEAD		T	6.2	broken tree
Rosaceae	Prunus serotina	blackcherry	T	12.1	
Juglandaceae	Carya glabra	Pignut hickory		23.2	26
Rosaceae	Prunus serotina	blackcherry	T	10.5	
Juglandaceae	Carya glabra	Pignut hickory	T	27.5	23

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39640 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92409 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

14

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

(Prunus serotina, Ulmus americana)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Subdominant overstory?
(Prunus serotina, Ulmus americana)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

dominant overstory?
(Carya glabra oak)

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

Group 2.

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 10/2/01

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 101

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/01

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDMUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW06-1

Name of person filling out this form: Ronny Romz.

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

555-A

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

~~A5.~~ Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

~~A5a.~~ If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?
 Please use whole numbers. <PYEARS> _____ years

~~A5b.~~ If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 310

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer:

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

All pine stands. No dead trees. No charcoal burning. No storm damage. No fire damage. No insect damage. No other observations.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 75 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar maple	P	5.4	10
Juglandaceae	Carya glabra	Pignut hickory	P	2.4	

D1. Tree, Palm, and Woody Climber Information, continued

	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>	
	Botanical	Local				
13	Rosaceae	Prunus serotina	black cherry	T	19.5	-
14	Aceraceae	Acer saccharum	sugar maple	T	10.5	-
15	Aceraceae	Acer saccharum	sugar maple	T	17.3	-
17	Pinaceae	Pinus nigra	black pine	T	17.3	-
12	Pinaceae	Pinus nigra	black pine	T	31.3	-
18	Pinaceae	Pinus nigra	black pine	T	21.3	-
14	Pinaceae	Pinus nigra	black pine	T	26	-
20	Pinaceae	Pinus strobus	white pine	T	27	-
21	Pinaceae	Pinus nigra	black pine	T	54.5	-
22	Pinaceae	Pinus nigra	black pine	T	55.4	-
23	Pinaceae	Pinus strobus	white pine	T	22.5	-
24	Pinaceae	Pinus strobus	white pine	T	22.5	-
25	Pinaceae	Pinus nigra	black pine	T	50.9	-
26	Pinaceae	Pinus nigra	black pine	T	26.5	-

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

	What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
		Botanical	Local			
1	Pinaceae	Pinus nigra	black pine	T	34.9	33
2	Pinaceae	Pinus nigra	black pine	T	18.9	
3	Pinaceae	Pinus nigra	black pine	T	34.9	
4	Pinaceae	Pinus nigra	black pine	T	17.7	
5	Pinaceae	Pinus nigra	black pine	T	40.6	38
6	Aceraceae	Acer saccharum	sugar maple	T	19.5	
7	Rosaceae	Prunus serotina	black cherry	T	39.7	
8	Aceraceae	Acer rubrum	sugar maple	T	14.6	
9	Aceraceae	Acer rubrum	sugar maple	T	23.2	
10	Rosaceae	Prunus serotina	black cherry	T	14.4	
11	Pinaceae	Pinus nigra	black pine	T	15.5	
12	Pinaceae	Pinus nigra	black pine	T	31.4	??

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.39704 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92673 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

11.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Acer saccharum, Carya glabra)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Acer saccharum, Pinus nigra,
Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?
(Pinus nigra)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield Woods

Plot identification number <PPIN>: 102

Date data collected for this form (mm-dd-yr) <PLOTDATE>: _____

Record the area (in square meters) of each plot below.

~~224~~ X Small Plot <PAREASmall>

~~1644~~ 78 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Lot - Plot No 2 : SW06-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

X Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 313

A7. What is the steepness of the slope in degrees? <PSTEEP> 31

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

[Faint handwritten notes, likely describing plot conditions or species observations.]

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 65 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) _____ absent?
- (2) _____ few?
- (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus americana</i>	Black Cherry	P	2.5	1
Ulmaceae	<i>Ulmus americana</i>	Smooth elm	P	2.5	1
Juglandaceae	<i>Carya amara</i>	Mockernut hickory	P	2.5	1

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Pinus strobus</i>	White Pine	T	21.5	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	15.0	
Aceraceae	<i>Acer rubrum</i>	Red maple	T	15.0	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	21.5	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	39.0	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	21.5	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	21.5	
Juglandaceae	<i>Carya ovata</i>	Mockernut hickory	T	10	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	21.5	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	21.5	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	39.0	
Pinaceae	<i>Pinus strobus</i>	White Pine	T	21.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar maple	T	40.7	37
Aceraceae	Acer saccharum	Sugar maple	T	40.2	37
Aceraceae	Acer glabrum	Sugar maple	T	20	
Pinaceae	Pinus nigra	black pine	T	12.4	
Aceraceae	Acer saccharum	Sugar maple	T	41.2	
Aceraceae	Acer glabrum	Sugar maple	T	24.1	
Pinaceae	Pinus nigra	black pine		11	
Rosaceae	Prunus serotina	black cherry	T	25	
Aceraceae	Acer saccharum	Sugar maple	T	18.0	
Pinaceae	Pinus strobus	white pine	T	29.3	
Pinaceae	Pinus strobus	white pine	T	29.7	
Pinaceae	Pinus nigra	black pine	T	19.4	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <LATITUDE>

N 42.39759 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <LONGITUDE>

W 83.92689 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

11.4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1 Understory?
(Mixed species)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1 Subdominant Overstory?
(Acer saccharum)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1 Dominant Overstory?
(Acer saccharum, Pinus strobus)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
Date of site visit (mm-dd-yr): 10/2/010
Name of forest <FK_FOREST>: Stinchfield Woods
Plot identification number <PPIN>: 103
Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/010
Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No2: SW06-3

Name of person filling out this form: Ronny Rana

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 313

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Handwritten notes:
 Look for signs of fire damage in north
 Look for signs of storm damage in south

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 60 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	20	
Juglandaceae	Carya formicivora	Worm-eating	T	11.2	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus nigra	black pine	T	52.5	37
Pinaceae	Pinus nigra	black pine	T	58.5	24
Ulmaceae	Ulmus americana	American elm	T	15.2	
Pinaceae	Pinus nigra	black pine	T	48.1	
Rosaceae	Prunus serotina	black cherry	T	28.5	25
Pinaceae	Pinus nigra	black pine	T	42	
Aceraceae	Acer saccharum	Sugar maple	T	21.7	
Rosaceae	Prunus serotina	black cherry	T	47.4	
Pinaceae	Pinus strobus	white pine	T	22.5	
Aceraceae	Acer saccharum	Sugar maple		14.4	
Pinaceae	Pinus strobus	white pine	T	29.8	
Pinaceae	Pinus strobus	white pine	T	32.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.39801 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92667 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

14.8

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0 Understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?
(Pinus nigra, Pinus strobus)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
Date of site visit (mm-dd-yr): 10/2/07
Name of forest <FK_FOREST>: Sturtevant Woods
Plot identification number <PPIN>: 104
Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/07
Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot Plot No 2: SWD6-4

Name of person filling out this form: Rachel Pava

A. CONDITIONS OF THE PLOT

Describe the soil within the forest plot: (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 347

A7. What is the steepness of the slope in degrees? <PSTEEP> 0

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|-----------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input checked="" type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Many dead trees. No acacias and high
tree density and also many fallen
logs on ground. And high canopy cover.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 75 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer saccharum	Sugar maple	P	5.6	
Aceraceae	Acer saccharum	Sugar maple	P	3	
Juglandaceae	Corylus glabra	Black walnut	P	5.5	6
Aceraceae	Acer saccharum	Sugar maple	P	3.3	2
Aceraceae	Acer saccharum	Sugar maple	P	7	
Aceraceae	Acer saccharum	Sugar maple	P	1	

Dropped by DBH < 2.5 cm (LP)

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
(Juglandaceae)	(Eurya glabra) X DEAD	(Sour Beating)	T	12	10
Pinaceae	Pinus strobus	White Pine	T	48	
(Pinaceae)	(Pinus strobus) X DEAD	(White Pine)	T	12.4	10
Aceraceae	Acer saccharum	Sugar maple	T	19.5	
(Pinaceae)	(Pinus strobus) X DEAD	(White Pine)	T	31.1	10
Pinaceae	Pinus strobus	White Pine	T	22.8	
Aceraceae	Acer saccharum	Sugar maple	T	19.5	
Rosaceae	Prunus serotina	Black Cherry	T	37.8	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Asteraceae	Acer saccharum	Sugar Maple	T	29.2	31
Lauraceae	Sassafras albidum	Sassafras	T	19	
Lauraceae	Sassafras albidum	Sassafras	T	17	
Pinaceae	Pinus strobus	White Pine	T	27.3	
Fagaceae	Quercus rubra	red oak	T	39.5 ³⁹	28
Aceraceae	Acer saccharum	Sugar maple	T	34.2	10.5
(Fagaceae)	(Quercus rubra) X DEAD	(red oak)	T	39.4 ³⁹	dead
Pinaceae	Pinus strobus	White pine	T	19.5	
Pinaceae	Pinus strobus	White pine	T	17.6	
Juglandaceae	Carya glabra	Pignut hickory	T	17.3	
Pinaceae	Pinus strobus	White Pine	T	29	
(Pinaceae)	(Pinus strobus) X DEAD	(White Pine)	T	29.5	dead

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.39863 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92724 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

14.6

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1>

1

Understory?
(Acer saccharum)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2>

1

Subdominant Overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3>

1

Dominant Overstory?

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4>

1

(Acer saccharum, Pinus strobus)
Quercus rubra

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 105

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 11/22/10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW13-1

Name of person filling out this form: Emily Etue

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 322

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|--------------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast 140° | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

thick herbaceous layer.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
		Red maple	N/A		

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer Rubrum	Red Maple	P	6.1	5.5
Ulmaceae	Ulmus Americana	American Elm	P	3.7	3
Ulmaceae	Ulmus americana Not in Plot	American Elm	PA	N/A	3

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus Alba	White Oak	T	21.2	
Juglandaceae	Carya Glabra	Pignut Hickory	T	18.9	22
Juglandaceae	Carya Ovata	Shagbark Hickory	T	13.2	
Juglandaceae	Carya Glabra	Pignut Hickory	T	10.6	
Fagaceae	Quercus Velutina	Black Oak	T	35.8	25

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya Glabra	Shag Bark Hickory	T	17.5	15
Fagaceae	Quercus Velutina	Black Oak	T	28.5	23
	Standing Dead	N/A	T	17.9	
	Standing Dead	N/A	T	14.1	
Fagaceae	Quercus Velutina	Black Oak	T	40.0	32
Juglandaceae	Carya Glabra	Shag Bark Hickory	T	10.3	
Rosaceae	Prunus Serotina	Black Cherry	T	21.0	
Fagaceae	Quercus Velutina	Black Oak	T	31.1	
Rosaceae	Prunus Serotina	Black Cherry	T	30.1 ^{3.1}	
Fagaceae	Quercus Velutina	Black Oak	T	35.1	
Fagaceae	Quercus Velutina	Black Oak	T	32.9	
Juglandaceae	Carya Glabra	Shag Bark Hickory	T	10.1	15
Juglandaceae	Carya Glabra	Pignut Hickory		15.9	
Fagaceae	Quercus Velutina	Black Oak	T	27	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40176 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92231 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

2m

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Acer rubrum, Ulmus americana)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant Overstory?
(Carya glabra)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant Overstory?
(Quercus velutina)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinfield Woods

Plot identification number <PPIN>: 106

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10-2-10

Record the area (in square meters) of each plot below.

- x Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW13-2

Name of person filling out this form: Kayla Yurca

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 321

A7. What is the steepness of the slope in degrees? <PSTEEP> 3

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

158

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open somewhat grassy.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Amelanchier spp.	Serviceberry	P	7.8	11
Rosaceae	Brunus xerantha	Black cherry	not in plot P	7.8	4
Rosaceae	Amelanchier spp.	Serviceberry	not in plot P		5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Black oak	T	24	19
Fagaceae	Quercus velutina	Black oak	T	35	15
Fagaceae	Quercus alba	White oak	T	14.9	9
Juglandaceae	Carya glabra	Pignut hickory	T	13.4	14
Fagaceae	Quercus velutina	Black oak	T	28	
Juglandaceae	Carya glabra	Pignut hickory	T	13	6
Fagaceae	Quercus velutina	Black oak	T	35.5	
Juglandaceae	Carya glabra	Pignut hickory	T	15	
	—	standing dead	T	24.3	
Fagaceae	Quercus velutina	Black oak	T	36.5	
Fagaceae	Quercus velutina	Black oak	T	29.3	
Rosaceae	Prunus serotina	Black cherry	T	20.0	26
Rosaceae	Prunus serotina	Black cherry	T	18.5	
Juglandaceae	Quercus	Black oak	T	16.2	

Carya ovata

shagbark hickory

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut hickory	T	11.3	
Fagaceae	Quercus velutina	Black oak	T	37.1	
Fagaceae	Quercus velutina	Black oak	T	32.3	
Fagaceae	Quercus velutina	Black oak	T	38.3	
Juglandaceae	Carya glabra	Pignut hickory	T	15.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40137 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92205 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Amelanchier spp., Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant overstory?
(Carya glabra)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Quercus velutina)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 107

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW13-3

Name of person filling out this form: Kayla Yurw

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

✓

for the unknown pg. 5

could the ^A horns be large pores

as of 10.25

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 322

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

200

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

open, grassy.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 35 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	6.9	5
Rosaceae	Prunus serotina	Black cherry	P	4.7	1.8
	MGZ unknown	unknown?		4.5	1.8
		[<ul style="list-style-type: none"> alternating leaves serrated margins pubescent/furry underneath Small nut sharp pointed buds possibly many in bigger branches]		4.5	

did not enter into ifri database
 Emily Edue
 10/23/10

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya ovata	Shagbark hickory	T	13.8	20
Fagaceae	Quercus alba	White oak	T	17.6	18
Fagaceae	Quercus velutina	Black oak	T	26.1	16
Fagaceae	Quercus velutina	Black oak	T	44.7	23
Fagaceae	Quercus alba	White oak	T	40.0 24.5	14 14
Fagaceae	Quercus velutina	Black oak	T	26.4	25
Fagaceae	Quercus velutina	Black oak	T	34.7	
Fagaceae	Quercus velutina	Black oak	T	31.4	
	—	standing dead	T	11	
Rosaceae	Prunus serotina	Black cherry Black cherry	T	11	9
Fagaceae	Quercus velutina	Black oak	T	13	
Juglandaceae	Carya glabra	Pignut hickory	T	30 32.9	
Fagaceae	Quercus velutina	Black oak	T	39	
Juglandaceae	Carya glabra	Pignut hickory	T	13.9	

Fagaceae Quercus alba White oak T 20.7
 Fagaceae Quercus alba White oak T 10.1 →

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus velutina	Black oak	T	47	
Fagaceae	Quercus venetina	Black oak	T	43.3	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40144 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92251 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant overstory?
(Quercus velutina)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stratfield Woods

Plot identification number <PPIN>: 108

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No2: SW13-4

Name of person filling out this form: Kayla Yurco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
 <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 314

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|----------------------------------------|----------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

274

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

down woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 45 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
- (2) few?
- (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	p	3	1.8
Juglandaceae	Carya glabra	Pignut Hickory	p	6.2	5.5
Juglandaceae	Carya glabra	Pignut Hickory	not in plot p		2.5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra</i>	Pignut Hickory	T	13.6	34
Fagaceae	<i>Quercus velutina</i>	Black oak	T	32.9	40
Fagaceae	<i>Quercus velutina</i>	Black oak	T	26.9	35
Fagaceae	<i>Quercus velutina</i>	Black oak	T	25.3	
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	15.2	
	—	standing dead	T	12.3	
	←	standing dead	T	19.4	
Rosaceae	<i>Prunus avium</i>	Sweet cherry	T	17.8	21
Fagaceae	<i>Quercus velutina</i>	Black oak	T	34	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	24	27
Fagaceae	<i>Quercus velutina</i>	Black oak	T	36.9	
Fagaceae	<i>Quercus velutina</i>	Black oak	T	38.8	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	10.2	7.5
Fagaceae	<i>Quercus velutina</i>	Black oak	T	28.2	1

8 rounded up to 8 in IFRI database
Emig duo

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus alba	white oak	T	11.7	
Fagaceae	Quercus alba	white oak	T	14.4	
Fagaceae	Quercus alba	white oak	T	20.5	
Fagaceae	Quercus alba	white oak	T	23.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40111 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92153 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Understory?

Question 2 (answer requires a whole number):

(Carya glabra, Prunus serotina)

Answer to question specified by researcher (integer) <PGENSNUM2> 1

Subdominant overstory?

Question 3 (answer requires a whole number):

(Mixed species)

Answer to question specified by researcher (integer) <PGENSNUM3> 1

Dominant overstory?

Question 4 (answer requires a whole number):

(Quercus velutina)

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 109

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW13-5

Name of person filling out this form: Kayla Yurco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 310

A7. What is the steepness of the slope in degrees? <PSTEEP> 6

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

212

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

rocky

A10. What is the percentage of crown cover in this plot? <PCROWN Cov> 60 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer rubrum	Red Maple	p	6.6	7.5 7.5
Rosaceae	Prunus serotina	Black cherry	p	7.3	7.5
Rosaceae	Amelanchier spp.	Black serviceberry	p	6.9	8
Juglandaceae	Carya glabra	Pignut hickory	p	6.9	
Rosaceae	Prunus serotina	Black cherry	p	6.4	
Rosaceae	Amelanchier spp.	serviceberry	p	2.6	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus alba	white oak	T	25.9 19.9	27 ✓
Fagaceae	Quercus velutina	Black oak	T	38.4	32 ✓
Fagaceae	Quercus alba	White oak	T	28.1	28 ✓
Juglandaceae	Carya glabra	Pignut Hickory	T	11.2	18 ✓
Fagaceae	Quercus velutina	Black oak	T	51.7	36 ✓
Juglandaceae	Carya glabra	Pignut Hickory	T	14.8	
Fagaceae	Quercus velutina	Black oak	T	17.6	32 ✓
Fagaceae	Quercus coccinea Quercus velutina	Scarlet oak ? Black oak	(if not, then black oak.)	39.0	
Juglandaceae	Carya glabra	Pignut Hickory	T	12.0	
Juglandaceae	Carya glabra	Pignut Hickory	T	13.0	
Fagaceae	Quercus velutina	Black oak	T	25.7	
Fagaceae	Quercus velutina	Black oak	T	54.3	
Fagaceae	Quercus alba	white oak	T	13.5	
Fagaceae	Quercus alba	white oak	T	25.8	

Entered
no
black oak
omit tree
10/26/10



D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus alba	White oak	T	17.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40060 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92118 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?

Question 2 (answer requires a whole number):

(Mixed species)

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Carya glabra, Quercus alba)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?

Question 4 (answer requires a whole number):

(Quercus alba, Quercus velutina)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinsonfield Woods

Plot identification number <PPIN>: 110

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW 13-6

Name of person filling out this form: Kayla yarrow

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 319

A7. What is the steepness of the slope in degrees? <PSTEEP> 2.5

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

110

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 30 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	P	4.1	3
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	not in plot P		4
Juglandaceae	<i>Carya glabra</i>	Pignut hickory	not in plot P		5

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus alba	white oak	T	18.0	14
Fagaceae	Quercus velutina	Black oak	T	41.3	20
Fagaceae	Quercus velutina	Black oak	T	40.2	23
Juglandaceae	Carya glabra	Pignut hickory	T	21.1	
Juglandaceae	Carya glabra	Pignut hickory	T	10.1	7
Fagaceae	Quercus alba	white oak	T	20.9	
Fagaceae	Quercus velutina	Black oak	T	40.7	24
Juglandaceae	Carya glabra	Pignut hickory	T	16.2	13
Fagaceae	Quercus alba	white oak	T	24.5	
Fagaceae	Quercus velutina	Black oak	T	34.4	
Fagaceae	Quercus alba	white oak	T	17.6	
Fagaceae	Quercus velutina	Black oak	T	36.6	
Rosaceae	Prunus serotina	Black cherry	T	17.1	
Fagaceae	Quercus velutina	Black oak	T	33.1	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Juglandaceae	Carya glabra	Pignut hickory	T	15.6	
Rosaceae	Prunus serotina	Black cherry	T	15.1 → 15.1	
Rosaceae	Prunus serotina	Black cherry	T	25.5	
Juglandaceae	Carya glabra	Pignut hickory	T	10.5	
Fagaceae	Quercus alba	white oak	T	22.1	
Rosaceae	Prunus serotina	Black cherry	T	18.6	
Juglandaceae	Carya glabra	Pignut hickory	T	10.5	
	(white oak) —	standing dead	T	15.1	
Rosaceae	Prunus serotina	Black cherry	T	18.4	
Juglandaceae	Carya glabra	Pignut hickory	T	35.9	
Juglandaceae	Carya glabra	Pignut hickory	T	15.5	
Fagaceae	Quercus velutina	Black oak	T	15.5	
				40.2	
Rosaceae	Prunus serotina	Black cherry	T	15.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40115 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92063 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Carya glabra)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?
(Carya glabra, Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?
(Quercus velutina)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

✓ Missing % crown cover

Group 4

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 111

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 2 Oct 2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASmall>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW23-1

Name of person filling out this form: Bridget Scallen

A

CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: ~~328m~~ ~~328m~~ 328m

A7. What is the steepness of the slope in degrees? <PSTEEP> ~~10~~ 10

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

- low amount of underbrush
- primarily deciduous

A10. What is the percentage of crown cover in this plot? <PCROWN COV> _____%

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	Am elm	sapling	2.7	2 2
Ulmaceae	Ulmus americana	Am elm	sapling	2.8	3
Aceraceae	Acer saccharum	Sugar maple	sapling	6	8

out of circle
in circle
out of circle

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Aceraceae	Acer saccharum	sugar maple	tree	16.1	
✓ Rosaceae	Prunus serotina	black cherry	tree	17	
✓ Rosaceae	Prunus serotina	black cherry	tree	17.8	
✓ Rosaceae	Prunus serotina	black cherry	tree	24	
✓ Rosaceae	Prunus serotina	black cherry	tree	21	
✓ (Pinaceae)	(Pinus nigra) X DEAD	(black pine)	tree	36	
✓ Lauraceae	Sassafras albidum	sassafras	tree	36.5	21
✓ Lauraceae	Sassafras albidum	Sassafras	tree	29	
✓ Aceraceae	Acer saccharum	Sugar maple	tree	31	
✓ Lauraceae	Sassafras albidum	Sassafras	tree	15.1	11
✓ Rosaceae	Prunus serotina	black cherry	tree	10	
✓ Lauraceae	Sassafras albidum	Sassafras	tree	10.7	

leaf
logs
5
Forest Inventory Form (F), Version 13, Page 8

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	black cherry	tree	24	24
Rosaceae	Prunus serotina	black cherry	tree	36.5	26
Lauraceae	Sassafras albidum	sassafras	tree	15.1	
Aceraceae	Acer saccharum	sugar maple	tree	11.5	14
Lauraceae	Sassafras albidum	sassafras	tree	11.7	12
Lauraceae	Sassafras albidum	sassafras	tree	11	
Lauraceae	Sassafras albidum	sassafras	tree	12	
Rosaceae	Prunus serotina	black cherry	tree	13	
Rosaceae	Prunus serotina	black cherry	tree	15	
Rosaceae	Prunus serotina	black cherry	tree	32.8	
Rosaceae	Prunus serotina	black cherry	tree	20.6	
Aceraceae	Acer saccharum	sugar maple	tree	25	

large
large
medium

Rev. 5-07

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40260 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.91984 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Vd
ldp

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Acer saccharum, Ulmus americana)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?
(Prunus serotina, Sassafras albidum)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?
(Prunus serotina)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: 8 Finchfield Woods

Plot identification number <PPIN>: 112

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/2010

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW23-2

Name of person filling out this form: Walker DeRuy

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

fg. 5 - Horizons - what kind?

Color/soil drainage (A and B horizons):

2 ↗ Not entered ✓
as of 10.25

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: ~~328~~ 328

A7. What is the steepness of the slope in degrees? <PSTEEP> 20

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

170°

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input checked="" type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A lot of saplings + understory.
A lot of invasive rose.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 35 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
* Juglandaceae	Carya glabra	Hickory ^{Pignut}	P	2.6 cm	2.25m
* Juglandaceae	Carya glabra	Hickory ^{Pignut}	P	5.1 cm	6m
* → Ulmaceae	Ulmus americana	American Elm	P	3.7 cm	5m

outside 3m ring

2-3

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Lauraceae	Sassafras albidum	Sassafras	T	12.2	24
✓ Lauraceae	Sassafras albidum	Sassafras	T	12.6	
✓ Lauraceae	Sassafras albidum	Sassafras	T	15.4	
✓ Fagaceae	Quercus velutina	Black Oaks	T	10.2	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Rosaceae	<i>Prunus serotina</i>	Black cherry	T	37.5	21
✓ Rosaceae	<i>Prunus serotina</i>	Black cherry	T	19	26
✓ Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	24.2	
✓ Aceraceae	<i>Acer rubrum</i>	Red Maple	T	49.5	26
✓ Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	11.2	
✓ Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	19.7	
✓ Aceraceae	<i>Acer saccharum</i>	Red Sugar Maple	T	19.1	
✓ Fagaceae	<i>Quercus rubra</i>	Red Oak	T	21.4	
* Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	17.1	16.5-16.7
✓ Rosaceae	<i>Prunus serotina</i>	Black Cherry	T	31.1	22
✓ Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	18.3	
✓ Fagaceae	<i>Quercus rubra</i>	Red Oak	T	35.6	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.90296 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92001 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

- Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?
hickory

- Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant overstory?
(Prunus serotina, Sassafras albidum)

- Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant overstory?
(Mixed species)

- Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 113

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 7 OCT 2010

Record the area (in square meters) of each plot below.

- 2 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot_PlotNo2: SW23-3

Name of person filling out this form: Bridget Seillon

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

~~Pg. 6 - 3rd sapling unclear ✓~~
~~black cherry? ✓~~
 -Pg 8 - cyrus → cedar? 10.25 ✓
 -hickories - what kind? ✓
 P 3 A 10V

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> 1 years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 326

A7. What is the steepness of the slope in degrees? <PSTEEP> 3.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Very few large - DBH trees
 Lots of undergrowth / new growth
 Moss-covered rocks are within
 1/4 of plot

Deer excrement

~~A10.~~ What is the percentage of crown cover in this plot? <PCROWN COV> 35 %

~~A11.~~ Are epiphytes <PEPIPHYTES>
 (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	See pag 6				

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		Scallop oak			
✓ Fagaceae	Quercus coccinea	oak ^{Scallop}	tree	41.2	28
* MGL unknown		(Cypripis?)	tree	13.7	8
✓* Juglandaceae	Carya ovata	hickory ^{shagbark}	tree	16.1	14
✓* Juglandaceae	Carya ovata	hickory ^{shagbark}	tree	13.5	16 ↗
✓ Fagaceae	Quercus coccinea	Scallop oak	tree	48.8	24
✓ Aceraceae	Acer saccharum	sugar maple	tree	10.1	
✓ Fagaceae	Quercus coccinea	Scallop oak (?)	tree	17	
✓ Fagaceae	Quercus coccinea	Scallop oak	tree	48.7	33
✓ Fagaceae	Quercus coccinea	Scallop oak	tree	22.2	15
✓ Fagaceae	Quercus coccinea	Scallop oak	T	47.5	33

33

13

Forest Plot Form (P), Version 13, Page 8

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	see pg 8				

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40325 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 93.91965 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

✓ E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓
2
70

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?

(Ulmus americana)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Mixed species)

Question 3 (answer requires a whole number):

M
Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?
(Quercus coccinea)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

~~14~~

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 114

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/2010

Record the area (in square meters) of each plot below.

- 1 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot_PlotNo2 : SW23-4

Name of person filling out this form: Walker DePuy

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

P. g 8 - "unknown II" ? ✓
 pg 7 - "unknown" ? ✓
 as. of 10.25 ✓

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: _____

~~327M~~ 325

A7. What is the steepness of the slope in degrees? <PSTEEP> _____

1.5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

~~180~~ 200°

Mark only one answer.

- | | |
|----------------------------------------|-----------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input checked="" type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Not much understorey or coarse woody debris

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- ✓ C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Aceraceae	Acer rubrum	Red Maple	P	7.9	6.5
✓ Rosaceae	Prunus serotina	Black Cherry	P	7	7.5
✓ Rosaceae	Prunus serotina	Black Cherry	P	7.2	7.5

25'

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Fagaceae	Quercus velutina	Black Oak	T	22	
✓ Fagaceae	Quercus velutina	Black Oak	T	15.4	
✓ Rosaceae	Prunus serotina	Black Cherry	T	17.5	
✓ Fagaceae	Quercus coccinea	Scarlet Oak	T	22.7	
✓ Fagaceae	Quercus velutina	Black oak Oak	T	15.4	
✓ Aceraceae	Acer saccharum	Sugar Maple	T	10.6	
✓ Aceraceae	Acer saccharum	Sugar Maple	T	11.7	
✓ Fagaceae	Quercus velutina	Black Oak	T	12.7	
✓ Lauraceae	Sassafras albidum	Sassafras	T	18.6	
✓	X DEAD	(Black Cherry)	T	18	dead
* Lauraceae	Sassafras albidum	Sassafras Sassafras	T	16	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
		Big tooth Aspen			
✓ Salicaceae	Populus grandidentata	Black Cherry	T	33.5	25
✓ Rosaceae	Prunus serotina	Black cherry	T	14.5	13
✓ Rosaceae	Prunus serotina	Black cherry	T	11.6	14
✓ Fagaceae	Quercus velutina	Black Oak	T	17.5	14
✓ Salicaceae	Populus grandidentata	unknown Big tooth aspen	T	20.1	
✓ Salicaceae	Populus grandidentata	Big tooth aspen	T	24	17
✓ Rosaceae	Prunus serotina	Black Cherry	T	15	
* Salicaceae	Populus grandidentata	unknown Big tooth aspen Black Cherry	T	44	21.5
✓ Aceraceae	Acer saccharum	Sugar Maple	T	15.4	
✓ Aceraceae	Acer saccharum	Sugar Maple	T	16.8	
✓ Rosaceae	Prunus serotina	Black cherry	T	20.5	
✓ Fagaceae	Quercus velutina	Black Oak	T	17.6	

unknown
24'

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40293 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.91966 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

✓ E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

52
70

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Acer rubrum, Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant Overstory?
(Acer saccharum, Quercus velutina,
Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant overstory?
(Populus grandidentata)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
Date of site visit (mm-dd-yr): 10/2/10
Name of forest <FK_FOREST>: Stinchfield Woods
Plot identification number <PPIN>: 115
Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/10
Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW29-1

Name of person filling out this form: Diana Puma / Silvia Cordova

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 326

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Raspberry undergrowth, some fern
 Pine needle O-hat
 Few fallen, rotting trees

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 35 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	4.9	6
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	P	6.7	6
Aceraceae	<i>Acer saccharum</i>	Sugar maple	P	3.4	
Betulaceae	<i>Ostrya virginiana</i>	Ironwood	P	6.7	6

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
				19.2	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	13.7	10.2
Pinaceae	<i>Pinus resinosa</i>	Burl pine	T	27.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	25.5	
Pinaceae	<i>Pinus resinosa</i>	Red pine	TT	36.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	TT	20.4	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	37.8	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	38.1	
Fagaceae	<i>Quercus velutina</i>	Black oak	T	32.5	
Pinaceae	<i>Pinus strobus</i>	White pine	T	30.2	
Pinaceae	<i>Pinus strobus</i>	White pine	T	28.3	
Pinaceae	<i>Pinus resinosa</i>	Burl pine	T	31.5	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	12.3	10.0
Rosaceae	<i>Prunus avium</i>	Sweet cherry?	T	11.3	11
Pinaceae	<i>Pinus strobus</i>	White pine	T	47.1	33

~~8~~

Rev. 5-07

Forest Plot Form (P), Version 13, Page 8

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X dead standing tree	Red pine (dead)	T	19.2	
Pinaceae	Pinus resinosa	Red pine	T	26.1	
Pinaceae	Pinus resinosa	Red pine	T	28.2	28.0
Pinaceae	Pinus resinosa	Red pine	T	40.6	
Pinaceae	Pinus resinosa	Red pine	T	26.8	
Pinaceae	Pinus resinosa	Red pine	T	30.4	
Pinaceae	Pinus resinosa	Red pine	T	24.3	18
Pinaceae	Pinus resinosa	Red pine	T	33.0	
Pinaceae	Pinus resinosa	Red pine	T	25.0	
Pinaceae	Pinus resinosa	Red pine	T	40.1	
Pinaceae	Pinus resinosa	Red pine	T	26.0	
Pinaceae	Pinus resinosa	Red pine	T	25.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40346 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92050 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1 understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1 (Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1 subdominant overstory?
(Mixed species)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1 dominant overstory?
(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 116

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10-02

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM> /
- 314 Large Plot <PAREALARGE> /

Lot-Plot No2: SW29-2

Name of person filling out this form: _____

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 328

A7. What is the steepness of the slope in degrees? <PSTEEP> 15

A8. If the plot is on a slope, what direction does the plot face? <POrient>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Ground covered by ~~1~~ ^{wide spruce} ~~roughly 100%~~ ^{automotive} ~~pine~~ ^{horizon}

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			
		Black Cherry	S	8.3	

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	8.3	8.5
Rosaceae	Prunus serotina at 3m plot	Black cherry	P	5.6	7.0
Rosaceae	Prunus serotina	Black cherry	P	3.8	5.0

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	13.7	20.0
Pinaceae	Pinus resinosa	Red pine	T	21.2	
Pinaceae	Pinus resinosa	Red pine	T	22.2	
Pinaceae	Pinus resinosa	Red pine	T	18.0	
Pinaceae	Pinus resinosa	Red pine	T	25.5	
Pinaceae	Pinus resinosa	Red pine	T	21.5	
Pinaceae	Pinus resinosa	Red pine	T	20.2	
Pinaceae	Pinus resinosa	Red pine	T	28.3	
Pinaceae	Pinus resinosa	Red pine	T	24.4	
Pinaceae	Pinus resinosa	Red pine	T	21.4	
Pinaceae	Pinus resinosa	Red pine	T	23.4	22.0
Pinaceae	Pinus resinosa	Red pine	T	20.2	
Pinaceae	Pinus resinosa	Red pine	T	22.8	20.5
Pinaceae	Pinus resinosa	Red pine	T	23.9	
Pinaceae	Pinus resinosa	Red pine	T	20.1	/
Pinaceae	Pinus resinosa	Red pine	T	20.6	

Forest Plot Form (P), Version 13, Page 8

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	11.2	6.5
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	26.7	25.5
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	28.5	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	25.4	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	15.4	
Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	11.0	10.5
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	26.0	
Betulaceae	<i>Ostrya virginiana</i>	Hop hour. beam	T	12.2	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	28.4	
Juglandaceae	<i>Juglans nigra</i>	Black walnut	T	11.1	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	23.9	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	16.3	

Forest Plot Form (P), Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40358 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92106 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

understory?

Question 2 (answer requires a whole number):

(Pinus serotina)

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant overstory?

Question 3 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
Date of site visit (mm-dd-yr): 10/2/10
Name of forest <FK_FOREST>: Stinchfield Woods
Plot identification number <PPIN>: 117
Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/10
Record the area (in square meters) of each plot below.

- 8 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW29-3

Name of person filling out this form: Peter Bouma

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

- Preparation of soil sample hole:
- Location of plot topographically:
- Surface description and depth of humus layer:
- Depth of A and B horizons:
- Color/soil drainage (A and B horizons):
- Texture (A and B horizons):
- Hardness of soil (A and B horizons):

pg. 5 Sassafras written at bottom of page - was it outside 3m?
(had written similarly on another plot form) ✓
10.25 ?

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 322

A7. What is the steepness of the slope in degrees? <PSTEEP> 15

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Buckthorn present
Black Oak undergrowth

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	2.5	3
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	4.7	5

Rev. 5-07

* Lauraceae *Sassafras albidum* Sassafras ? 0.4T 8

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red Pine	T	23.4	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	22.1	
Pinaceae	<i>Pinus resinosa</i>	Red pine	-	17.0	22
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	27.2	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	28.5	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	29.5	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	31.1	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	24.4	
(Pinaceae)	(<i>Pinus resinosa</i>) X DEAD	(Red pine)	T	21.2	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	30.5	
Aceraceae	<i>Acer saccharum</i>	Sugar Maple	T	10.3	3.9
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	27.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	33.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	27.1	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	24.4	24
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	22.0	26
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	25.4	25
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	19.0	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	22.2	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	22.2	
Lauraceae	<i>Sassafras albidum</i>	Sassafras	T	10.1	13
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	22.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	23.3	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	28.7	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	29.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	24.9	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	26.1	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	20.2	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	22.2	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	22	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40407 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92118 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?

(Pinus serotina, Sassafras albidum)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?

(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?

(Pinus resinosa)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004
 Date of site visit (mm-dd-yr): 10/2/10
 Name of forest <FK_FOREST>: Stinchfield Woods
 Plot identification number <PPIN>: 118
 Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/2/10
 Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No: SW29-4

Name of person filling out this form: Dieter Bouma

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
 Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

as of 10.25 ?

fg 8 - Black Walnut + Box Elder
 both with "?" ✓

fg 8 - Saplings at bottom of
 page? Assume they intended
 to put those in Part C?
 outside 3m? ✓

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 315

A7. What is the steepness of the slope in degrees? <PSTEEP> 18

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Some fallen, decaying logs
 Pine-needles ^{on} ground
 Some gaps from fallen trees
 Few undergrowth
 Some invasive spp. (blackberry)

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	57.2	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	31.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	310.8	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	38.2	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	15.7	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	21.1	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	29.2	
Juglandaceae	<i>Juglans nigra</i>	Black walnut?	T	13.4	
Aceraceae	<i>Acer negundo</i>	Box Elder?	T	15.3	
Pinaceae	<i>Pinus resinosa</i>	Red pine	-	27.4	32
Pinaceae	Pinus resinosa	Red pine	⊙		
Pinaceae	Pinus resinosa	Red pine	⊙		
			⊙		

1
1
1
1
1
1
1

Forest Plot Form (P), Version 1.3, Page 8

outside 3m

Rev. 5-07

C1.

Aceraceae	<i>Acer saccharum</i>	Sugar Maple	P	2.2	5	1
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	1	8.5	1
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	9.8	12	1

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa Pinus resinosa	Red pine	T	26.4	24
Pinaceae	Pinus resinosa	Red pine	T	25.5	
Rosaceae	Prunus serotina	Black cherry	T	11.4	9
Rosaceae	Prunus serotina	Black cherry	T	12.7	17
Pinaceae	Pinus resinosa	Red pine	T	31.2	36
Rosaceae	Prunus serotina	Black cherry	T	18.5	20
Pinaceae	Pinus resinosa	Red pine	T	26.2	
Pinaceae	Pinus resinosa	Red pine	T	27.7	
Pinaceae	Pinus resinosa	Red pine	T	29.0	
Rosaceae	Prunus serotina	Black cherry X	T	10.9	
Pinaceae	Pinus resinosa	Red pine	T	29.0	
(Rosaceae)	(Prunus serotina) X DEAD	(Black cherry)	T	34.0	
(Rosaceae)	(Prunus serotina) X DEAD	(Black cherry)	T	46.0	

Forest Plot Form (R), Version 13, Page 7

Dead

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40466 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92190 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Pinus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Pinus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?
(Pinus resinosa)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield Woods

Plot identification number <PPIN>: 119

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/9/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDM>

314 Large Plot <PAREALARGE>

Lot-plot No 2: SW30-1

Name of person filling out this form: Kayla Yuro

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5h here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 325

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | | |
|----------------------------------------|----------------------------------------------|-----|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South | |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest | |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West | 270 |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest | |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Scrub of vegetation besides pines
 1/2 thick covering pine needles + coarse woody debris
 1/2 brambles
 little to no herbaceous layer

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
			none in 10m plot		

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	24.3	28 28 ✓
Pinaceae	Pinus resinosa	Red pine	T	14.9	28 28 ✓
Pinaceae	Pinus resinosa	Red pine	T	19.2	
Pinaceae	Pinus resinosa	Red pine	T	22.8	
Pinaceae	Pinus resinosa	Red pine	T	25.0	
Pinaceae	Pinus resinosa	Red pine	T	19.4	20 ✓
Pinaceae	Pinus resinosa	Red pine	T	23.7	
Pinaceae	Pinus resinosa	Red pine	T	24.1	
Pinaceae	Pinus resinosa	Red pine	T	24.8	
Pinaceae	Pinus resinosa	Red pine	T	25.1	
Pinaceae	Pinus resinosa	Red pine	T	25.5	
Pinaceae	Pinus resinosa	Red pine	T	26.2	20 ✓
Pinaceae	Pinus resinosa	Red pine	T	24.8	
Pinaceae	Pinus resinosa	Red pine	T	30.1	

Pinaceae
Pinaceae
Rosaceae
Pinaceae

Pinus resinosa
Pinus resinosa
Prunus serotina
Pinus resinosa

Red pine
Red pine
Black cherry
Red pine

T
T
T
T

32.0
20.2
31.1
19.4

22
22 ✓

	Pinaceae	Pinus resinosa	Red pine	T	21.6
Altre:	Pinaceae	Pinus resinosa	Red pine	T	23.5
	Pinaceae	Pinus resinosa	Red pine	T	25.3

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Pinus serotina	Black cherry	T	33.1	
Pinaceae	Pinus resinosa	Red pine	T	22.3	
Pinaceae	Pinus resinosa	Red pine	T	25.0	
Rosaceae	Pinus serotina	Black cherry	T	13.4	
Pinaceae	Pinus resinosa	Red pine	T	28.7	
Rosaceae	Pinus serotina	Black cherry	T	25.5	
Pinaceae	Pinus resinosa	Red pine	T	30.1	
Pinaceae	Pinus resinosa	Red pine	T	28.2	
Pinaceae	Pinus resinosa	Red pine	T	25.1	
Pinaceae	Pinus resinosa	Red pine	T	23.5	
Rosaceae	Pinus serotina	Black cherry	T	28.1	
Pinaceae	Pinus resinosa	Red pine	T	23.3	
Pinaceae	Pinus resinosa	Red pine	T	25.6	
Pinaceae	Pinus resinosa	Red pine	T	18.0	

Pinaceae	Pinus resinosa	Red pine	T	23.1
Pinaceae	Pinus resinosa	Red pine	T	23.3
Pinaceae	Pinus resinosa	Red pine	T	23.0

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40482 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92097 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0 Understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?
(Pinus resinosa)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?
(Pinus resinosa)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 120

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/9/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW30-2

Name of person filling out this form: Kayla Yuro

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 333

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

0

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

site of permanent plot.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> ~~100~~ 40 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
			Prunus avium		
			Prunus avium		
Rosaceae	Prunus avium	Sweet cherry	not in plot		2
			no others in plot (10 m)		

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	26.0	28
Pinaceae	Pinus resinosa	Red pine	T	21.9	28
Pinaceae	Pinus resinosa	Red pine	T	25.6	
Pinaceae	Pinus resinosa	Red pine	T	24.1	
Pinaceae	Pinus resinosa	Red pine	T	29.9	
Pinaceae	Pinus resinosa	Red pine	T	25.8	
Pinaceae	Pinus resinosa	Red pine	T	24.6	
Pinaceae	Pinus resinosa	Red pine	T	29.2	
Pinaceae	Pinus resinosa	Red pine	T	24.5	
Pinaceae	Pinus resinosa	Red pine	T	25.8	
Pinaceae	Pinus resinosa	Red pine	T	26.2	
Pinaceae	Pinus resinosa	Red pine	T	22.3	22
Pinaceae	Pinus resinosa	Red pine	T	26.1	
Pinaceae	Pinus resinosa	Red pine	T	26.1	

Pinaceae

Pinus resinosa

Red pine

T

21.9

Pinaceae

Pinus resinosa

Red pine

T

20.1

Pinaceae

Pinus resinosa

Red pine

T

26.6

Pinaceae
more
Pinaceae

Pinus resinosa
Pinus resinosa

Red pine
Red pine

T
T

28.1
22.1

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	24.3	
Pinaceae	Pinus resinosa	Red pine	T	26.5	
Pinaceae	Pinus resinosa	Red pine	T	22.8	
Pinaceae	Pinus resinosa	Red pine	T	25.1	
Pinaceae	Pinus resinosa	Red pine	T	22.0	
Pinaceae	Pinus resinosa	Red pine	T	23.3	
Pinaceae	Pinus resinosa	Red pine	T	22.9	
Pinaceae	Pinus resinosa	Red pine	T	27.0	
Pinaceae	Pinus resinosa	Red pine	T	25.3	
Pinaceae	Pinus resinosa	Red pine	T	21.0	
Rosaceae	Prunus serotina	Black cherry	T	33.5	
Rosaceae	Prunus serotina	Black cherry	T	31.2	

Pinaceae
Pinaceae
Pinaceae

Pinus resinosa
Pinus resinosa
Pinus resinosa

Red pine
Red pine
Red pine

T
T
T

23.6
21.0
24.3

REV. 5-07

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40442 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.91973 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

J

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1>

1 Understory?

Question 2 (answer requires a whole number):

(^{Very} sparse - Prunus avium)

Answer to question specified by researcher (integer) <PGENNUM2>

0 Subdominant overstory?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3>

1 Dominant overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENNUM4>

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinefield Woods

Plot identification number <PPIN>: 121

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/9/10

Record the area (in square meters) of each plot below.

- 4 Small Plot <PAREASMALL>
- 29 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW30-3

Name of person filling out this form: Kayla Yurco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 325

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |
- 70

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

dense brambles
very little understory.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus americana	American plum	not in plot	P	2.5
Rosaceae	Prunus serotina	Black cherry	not in plot	P	3.5
Rosaceae	Prunus americana	American plum	not in plot (outside 10m plot)	P	3

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	19.8	23
Pinaceae	Pinus resinosa	Red pine	T	28.0	
Pinaceae	Pinus resinosa	Red pine	T	18.4	28
Pinaceae	Pinus resinosa	Red pine	T	29.0	
Rosaceae	Prunus serotina Prunus serotina	Black cherry	T	10.3	7
Pinaceae	Pinus resinosa	Red pine	T	22.3	
Pinaceae	Pinus resinosa	Red pine	T	31.2	
Pinaceae	Pinus resinosa	Red pine	T	20.5	
Pinaceae	Pinus resinosa	Red pine	T	22.0	
Pinaceae	Pinus resinosa	Red pine	T	17.7	
Pinaceae	Pinus resinosa	Red pine	T	23.8	
Pinaceae	Pinus resinosa	Red pine	T	28.7	
Pinaceae	Pinus resinosa	Red pine	T	24.4	
Pinaceae	Pinus resinosa	Red pine	T	27.5	

Pinaceae	Pinus resinosa	Red pine	T	22.4	28
Pinaceae	Pinus resinosa	Red pine	T	25.4	26
Pinaceae	Pinus resinosa	Red pine	T	16.5	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	27	
Pinaceae	Pinus resinosa	Red pine	T	23.1	26 ✓
Pinaceae	Pinus resinosa	Red pine	T	25.8	
Pinaceae	Pinus resinosa	Red pine	T	26.8	
Pinaceae	Pinus resinosa	Red pine	T	29.0	
Pinaceae	Pinus resinosa	Red pine	T	25.4	
Pinaceae	Pinus resinosa	Red pine	T	22.8	
Pinaceae	Pinus resinosa	Red pine	T	24.1	
Pinaceae	Pinus resinosa	Red pine	T	22.8	
Pinaceae	Pinus resinosa	Red pine	T	23.0	
Pinaceae	Pinus resinosa	Red pine	T	26.5	
Pinaceae	Pinus resinosa	Red pine	T	27.4	
Pinaceae	Pinus resinosa	Red pine	T	23.1	
Pinaceae	Pinus resinosa	Red pine	T	22.7	
Pinaceae	Pinus resinosa	Red pine	T	25.1	
Pinaceae	Pinus resinosa	Red pine	T	23.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40512 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92004 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Prunus americana, Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Pinus resinosa)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?
(Pinus resinosa)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 122

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/9/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2 : SW 30-4

Name of person filling out this form: Kayla Yurus

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 323

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

thorny, ~~at the top~~
dense brambles.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

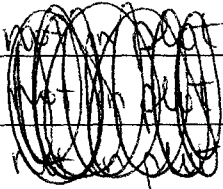
A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
					
Fagaceae	Quercus alba	white oak	not in plot		3
Oleaceae	Fraxinus americana	white ash	not in plot		6

CI. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	27.5	
Pinaceae	Pinus resinosa	Red pine	T	19.6	34 ✓
Pinaceae	Pinus resinosa	Red pine	T	18.9	29 ✓
Pinaceae	Pinus resinosa	Red pine	T	21.0	
Pinaceae	Pinus resinosa	Red pine	T	16	27 ✓
Pinaceae	Pinus resinosa	Red pine	T	23.2	
Pinaceae	Pinus resinosa	Red pine	T	26.3	
Pinaceae	Pinus resinosa	Red pine	T	20.5	29 ✓
Pinaceae	Pinus resinosa	Red pine	T	20.3	
Pinaceae	Pinus resinosa	Red pine	T	21.1	30 ✓
Pinaceae	Pinus resinosa	Red pine	T	24.3	
Pinaceae	Pinus resinosa	Red pine	T	29.2	
Pinaceae	Pinus resinosa	Red pine	T	24.3	
Pinaceae	Pinus resinosa	Red pine	T	21.8	24 ✓

Forest Plot Form (P), Version 13, Page 6

one more:
 Pinus resinosa (dbh)
 Red pine 26.1

Pinaceae	Pinus resinosa	Red pine	T	26
Pinaceae	Pinus resinosa	Red pine	T	22.5
Pinaceae	Pinus resinosa	Red pine	T	25.8
Pinaceae	Pinus resinosa	Red pine	T	19.1

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	25.8	
Pinaceae	Pinus resinosa	Red pine	T	25.4	
Pinaceae	Pinus resinosa	Red pine	T	21.7	
Pinaceae	Pinus resinosa	Red pine	T	21.8	
Pinaceae	Pinus resinosa	Red pine	T	19.8	
Pinaceae	Pinus resinosa	Red pine	T	24.2	
Pinaceae	Pinus resinosa	Red pine	T	19.4	
Pinaceae	Pinus resinosa	Red pine	T	19.2	
Pinaceae	Pinus resinosa	Red pine	T	24.3	
Pinaceae	Pinus resinosa	Red pine	T	23.7	
Pinaceae	Pinus resinosa	Red pine	T	25.2	
Pinaceae	Pinus resinosa	Red pine	T	19.3	
Pinaceae	Pinus resinosa	Red pine	T	23.2	
Pinaceae	Pinus resinosa	Red pine	T	28	

Pinaceae

Pinus resinosa

Red pine

T

20.3

Pinaceae

Pinus resinosa

Red pine

T

23.9

Pinaceae

Pinus resinosa

Red pine

T

15.5

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

W 42.40535 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 93.92075 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?

Question 2 (answer requires a whole number):

(sparse - Quercus alba
Fraxinus americana)

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?

Question 3 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield Woods

Plot identification number <PPIN>: 123

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/9/10

Record the area (in square meters) of each plot below.

- x Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW 30-5

Name of person filling out this form: Kayla Yurco

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5h here should correlate to answers for B2-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 319

A7. What is the steepness of the slope in degrees? <PSTEEP> 1

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

30

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

thorny understory

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry Black cherry	P	8.1	6
Rosaceae	Prunus americana	American plum	not in plot		5
Oleaceae	Fraxinus pennsylvanica	Green ash	not in plot		6

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	23.4	28 ✓
Pinaceae	Pinus resinosa	Red pine	T	30.1	29 ✓
	standing dead	(Red pine)	T	22	
Aceraceae	Acer negundo	Box elder	T	10.5	9 ✓
Pinaceae	Pinus resinosa	Red pine	T	24.7	
Pinaceae	Pinus resinosa	Red pine	T	22.9	
Pinaceae	Pinus resinosa	Red pine	T	23.2	
Pinaceae	Pinus resinosa	Red pine	T	33.8	28 ✓
Pinaceae	Pinus resinosa	Red pine	T	27.5	
Pinaceae	Pinus resinosa	Red pine	T	21.4	
Pinaceae	Pinus resinosa	Red pine	T	30.0	
Pinaceae	Pinus resinosa	Red pine	T	28.0	
Pinaceae	Pinus resinosa	Red pine	T	23.6	
Pinaceae	Pinus resinosa	Red pine	T	27.7	

~~Pinus resinosa~~

~~27.7~~

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	31.4	
Pinaceae	Pinus resinosa	Red pine	T	25.2	
Pinaceae	Pinus resinosa	Red pine	T	19.4	32.0 ✓
Pinaceae	Pinus resinosa	Red pine	T	26.9	
Pinaceae	Pinus resinosa	Red pine	T	23.5	
Pinaceae	Pinus resinosa	Red pine	T	19.5	33.0 ✓
Pinaceae	Pinus resinosa	Red pine	T	22.8	
Pinaceae	Pinus resinosa	Red pine	T	29.9	
Pinaceae	Pinus resinosa	Red pine	T	24.9	
Pinaceae	Pinus resinosa	Red pine	T	27.1	
Pinaceae	Pinus resinosa	Red pine	T	27.9	
Pinaceae	Pinus resinosa	Red pine	T	26.0	

Pinaceae Pinus resinosa Red pine T 27.1
 Pinaceae Pinus resinosa Red pine T 23.0
 Pinaceae Pinus resinosa Red pine T 23.0

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

~~W 42.40522~~ N 42.40522 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92155 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

_____ 4 _____

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1 Understory?

Question 2 (answer requires a whole number):

(Mixed species)

Answer to question specified by researcher (integer) <PGENSNUM2> 1 Subdominant Overstory?

Question 3 (answer requires a whole number):

(Pinus resinosa, Acer negundo)

Answer to question specified by researcher (integer) <PGENSNUM3> 1 Dominant Overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 124

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/9/2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW31-1

Name of person filling out this form: Walker DePuy

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

#124 were pine 10's
correct or is?
ref #125

were the pines on this
supposed to be changed
as well? (like #125?)

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
<PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 317

A7. What is the steepness of the slope in degrees? <PSTEEP> 1^o

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT> 290

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

low density understory
 } ground cover is mostly pine needles.
 3 logs downed w/in plot
 no saplings btwn 2.5-10cm w/in 20m diameter.
 very close (10m) from plot edge to road.

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 30 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	23	⊙
Pinaceae	Pinus strobus	white pine	T	34.2	⊙
Pinaceae	Pinus strobus	white pine	T	20.5	⊙
(Pinaceae)	(Pinus strobus) XDEAD	(white pine)	T	18.5	- dead
Pinaceae	Pinus strobus	white pine	T	36.7	⊙
Pinaceae	Pinus strobus	white pine	T	23	⊙
(Pinaceae)	(Pinus strobus) DEAD	(white pine)	T	16.5	16 dead
Pinaceae	Pinus strobus	white pine	T	28.9	⊙
Pinaceae	Pinus strobus	white pine	T	19.2	23 ⊙
Pinaceae	Pinus strobus	white pine	T	23	⊙
Pinaceae	Pinus strobus	white pine	T	26.1	⊙
Pinaceae	Pinus strobus	white pine	T	35.3	37 ⊙
Pinaceae	Pinus strobus	white pine	T	12.6	17 ⊙
Pinaceae	Pinus strobus	white pine	T	33.4	⊙

25M

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

Pinaceae Pinus strobus white pine T 24.5

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	23.4	
Pinaceae	Pinus resinosa	red pine	T	28	
Pinaceae	Pinus resinosa	red pine	T	25.5	
Pinaceae	Pinus strobus	white pine	T	21.3	
Pinaceae	Pinus resinosa	red pine	T	26	
Pinaceae	Pinus strobus	white pine	T	30.6	
Pinaceae	Pinus resinosa	red pine	T	26.8	
Pinaceae	Pinus strobus	white pine	T	34.2	37
Pinaceae	Pinus strobus	white pine	T	30.9	
(Pinaceae)	(Pinus strobus) X DEAD	(white pine)	T	26.7	✓
Pinaceae	Pinus strobus	white pine	T	32.3	35
Pinaceae	Pinus strobus	white pine	T	33.2	
Pinaceae	Pinus strobus	white pine	T	39.3	
Pinaceae	Pinus strobus	white pine	T	42.6	
(Pinaceae)	(Pinus strobus) X DEAD	(white pine)	T	37.3	dead

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40545 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92217 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0 Understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?

Question 3 (answer requires a whole number):

(Pinus strobus)

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?

Question 4 (answer requires a whole number):

(Pinus strobus)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinnfield Woods

Plot identification number <PPIN>: 125

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/9/2010

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- Medium Plot <PAREAMEDMUM>
- Large Plot <PAREALARGE>

Lot-Plot No 2: SW31-2

Name of person filling out this form: Walker DePuy

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
(2) Yes, minor erosion; surface vegetation and humus layer are absent
(3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
(2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
(2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
(2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 313

A7. What is the steepness of the slope in degrees? <PSTEEP> 1.5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT> 320°

Mark only one answer.

- (1) _____ North
- (2) _____ Northeast
- (3) _____ East
- (4) _____ Southeast
- (5) _____ South
- (6) _____ Southwest
- (7) _____ West
- (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

* low density understory
pine needle ground high
nine fallen trees/logs in plot

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
- (2) _____ few?
- (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	7.2	12
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	9.6	12
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	7.9	11

outside
3m
ring

important :

white = red
 black = white
 so need to change names

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	white pine Red	T	17.5	
Pinaceae	Pinus strobus	black pine white	T	45.3	31
Pinaceae	Pinus resinosa	white pine Red	T	22.6	
Pinaceae	Pinus resinosa	white pine Red	T	21.8	
(Pinaceae)	(Pinus resinosa) X DEAD	white pine Red	T	29.9	
Pinaceae	Pinus resinosa	white pine Red	T	21.3	
Pinaceae	Pinus resinosa	white pine Red	T	24.7	
Pinaceae	Pinus strobus	black pine white	T	29.9	
Pinaceae	Pinus strobus	black pine white	T	33.8	32
Pinaceae	X DEAD	white pine black Red	T	19.9	25
Pinaceae	Pinus strobus	black pine white	T	42.5	
Pinaceae	Pinus strobus	black pine white	T	32.3	
Pinaceae	Pinus strobus	black pine white	T	45.6	33
Pinaceae	Pinus resinosa	white pine Red	T	27.4	

dead

dead

tree names fixed
on this page.

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X DEAD	(red pine)	T	41.1	
Pinaceae	Pinus strobus	white pine	T	48.1	
Pinaceae	Pinus resinosa	red pine	T	26.6	
Pinaceae	Pinus strobus	white pine	T	37.9	
Pinaceae	Pinus resinosa	red pine	T	23.4	
Pinaceae	Pinus resinosa	red pine	T	21.1	
Pinaceae	Pinus resinosa	red pine	T	28.3	
Pinaceae	Pinus resinosa	red pine	T	24.3	

dead

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40583 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92165 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Pinus resinosa)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?
(Pinus resinosa, Pinus strobus)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinehfield Woods

Plot identification number <PPIN>: 126

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/9/2010

Record the area (in square meters) of each plot below.

Small Plot <PAREASmall>

Medium Plot <PAREAMEDIUM>

Large Plot <PAREALARGE>

Lot-Plot No: SW31-3

Name of person filling out this form: Walker DeRuy

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 311

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

40°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input checked="" type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

groundcover is coarse woody debris & pine needles.
 4 large trees are downed in plot.
 Forest, like the others, ~~are~~^{is} dominated by white pine.
 understory is black cherry mostly.

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. (P_INFO)

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	9.9	12
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	8.4	11
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	5.2	7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	32.3	
Pinaceae	Pinus strobus	White Pine	T	22.3	
Pinaceae	Pinus strobus	White Pine	T	33.6	29
Pinaceae	Pinus strobus	White Pine	T	39.8	
Rosaceae	Prunus serotina	Black Cherry	T	13.5	12
		Black Cherry	T	10.2	18

outside low ring

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	54.1	34
Pinaceae	Pinus resinosa	Red Pine	T	35.2	30
Pinaceae	Pinus resinosa	Red Pine	T	30.3	
Pinaceae	Pinus strobus	White Pine	T	48.9	
Pinaceae	Pinus strobus	White Pine	T	26.5	
Rosaceae	Prunus serotina	Black Cherry	T	13.1	18
Pinaceae	Pinus strobus	White Pine	T	41	
Pinaceae	Pinus strobus	White Pine	T	47.7	
Pinaceae	Pinus strobus	White Pine	T	27.8	
Pinaceae	Pinus strobus	White Pine	T	38.9	
Pinaceae	Pinus strobus	White Pine	T	22.3	
Pinaceae	Pinus strobus	White Pine	T	31.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.90627 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92130 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1 Understory?
(Pinus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM2> 1 Subdominant overstory?
(Pinus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM3> 1 Dominant overstory?
(Pinus strobus)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinfield Woods

Plot identification number <PPIN>: 127

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/9/2010

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot plot No 2: SW31-4

Name of person filling out this form: Walker DePuy

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 308

A7. What is the steepness of the slope in degrees? <PSTEEP> 2

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT> 330°

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

medium understory
 ground ~~cover~~ cover is mostly pine needles
 seven downed logs in plot
 pretty close to road [40m from plot edge]

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50%

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	P	5	7
Rosaceae	Prunus serotina	Black Cherry	P	3	6
Rosaceae	Prunus serotina	Black Cherry	P	5.6	7

outside
3m
ring

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	39.3	38
Pinaceae	Pinus strobus	white pine	T	34.6	
Pinaceae	Pinus strobus	white pine	T	36.4	
Pinaceae	Pinus strobus	white pine	T	34.3	
Pinaceae	Pinus strobus	white pine	T	28.1	
Pinaceae	Pinus strobus	white pine	T	28.8	
Pinaceae	Pinus strobus	white pine	T	29.7	
Pinaceae	X DEAD	(white pine)	T	22.9	
Pinaceae	Pinus strobus	white pine	T	21.6	

dead

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	white pine	T	44.5	33
Pinaceae	Pinus strobus	white pine	T	34.7	31
(Pinaceae)	(Pinus strobus) X DEAD	(white pine)	T	21.4	
Pinaceae	Pinus strobus	white pine	T	34.3	
Pinaceae	Pinus strobus	white pine	T	22	
Pinaceae	Pinus strobus	white pine	T	32.3	
(Pinaceae)	(Pinus strobus) X DEAD	(white pine)	T	29.2	
Pinaceae	Pinus strobus	white pine	T	31.3	
Pinaceae	Pinus strobus	white pine	T	31.6	
(Pinaceae)	(Pinus strobus) X DEAD	(white pine)	T	27	
(Pinaceae)	(Pinus strobus) X DEAD	(white pine)	T	34	
Pinaceae	Pinus strobus	red pine white	T	39.6	

dead ✓

dead / broken top

dead

dead

F:\SIS\01071111 (P)\SIS\01071111 Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40641 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92181 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?

Question 2 (answer requires a whole number):

(Pinus serotina)

Answer to question specified by researcher (integer) <PGENNUM2> 0 Subdominant Overstory?

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?

Question 4 (answer requires a whole number):

(Pinus strobus)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 128 ✓

Date data collected for this form (mm-dd-yr) <PLOTDATE>: Oct 9, 2010 ✓

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW 33-1 ✓

Name of person filling out this form: Natalie CLAY

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 ✓ (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- ✓ (1) No
 (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- ✓ (1) No
 (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices?
 <PLOCATION>

The answers to A5-A5b here should correlate to answers for B2-B3g on the Forest Form.

Mark only one answer

- ✓ (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

✓ A6. Plot elevation in meters. <PELEVATION>: 304 298

✓ A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

- ✓ = A lot of buckthorn ground cover
 = There are many choke cherry ~ 3cm DBH

✓ A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

✓ A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black Cherry	P	6.7	4
Rosaceae	Prunus serotina	Black cherry	P	5.0	5
Rosaceae	Prunus serotina	Black cherry	P	7.4	7
Rosaceae	Prunus serotina	Black cherry	P	4.6	

✓
✓
✓
✓

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White Pine	T	44.0	
Pinaceae	Pinus strobus	White pine	T	27.8	
Pinaceae	Pinus strobus	white pine	T	50.8	
Pinaceae	Pinus strobus	White pine	T	31.0	
Pinaceae	Pinus strobus	white pine	T	43.6	
Pinaceae	Pinus strobus	White pine	T	36.6	
Pinaceae	Pinus strobus	White pine	T	31.9	33
Pinaceae	Pinus strobus	White pine	T	49.8	
Pinaceae	Pinus strobus	White pine	T	53.3	
Pinaceae	Pinus strobus	White pine	T	39.3	
	X DEAD	(white pine)	T	35.6	33
Pinaceae	Pinus strobus	White pine	T	32.3	
Rosaceae	Prunus serotina	Black Cherry	T	11.9	
Aceraceae	Acer negundo	Box Elder	T	10.2	

Forest Plot Form (P), Version 13, Page 8

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
(Pinaceae)	(Pinus strobus) X DEAD	(White Pine)	T (Dead)	42.7	
Pinaceae	Pinus strobus	White pine	T	47.1	30

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40665 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.42054 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?
(~~Prunus serotina~~ Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant overstory?
(Sparse - Acer negundo, Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Pinus strobus)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield Woods

✓ Plot identification number <PPIN>: 129

✓ Date data collected for this form (mm-dd-yr) <PLOTDATE>: Oct 9 2010

Record the area (in square meters) of each plot below.

- ✓ 8 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW33-2

Name of person filling out this form: Patrick Rohazzi

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

✓ A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
 (2) Yes, minor erosion; surface vegetation and humus layer are absent
 (3) Yes, major erosion; large gullies are present in barren soil.

✓ A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
 (2) Yes

✓ A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
 (2) Yes

✓ A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
 (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 349 298

A7. What is the steepness of the slope in degrees? <PSTEEP> 5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) <u>X</u> West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Small cherry trees
1, + lichens

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) X absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	4.9	
Rosaceae	Prunus serotina	Black cherry	P	6.2	7
Rosaceae	Prunus serotina	Black cherry	P	9.5	9
Rosaceae	Prunus serotina	Black cherry	P	7.2	4

Dead ✓
✓
✓
✓

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	42,9	✓
Pinaceae	Pinus strobus	White pine	T	31,6	✓

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	42.5	34.0
Pinaceae	Pinus strobus	White pine	T	56	
Pinaceae	Pinus strobus	White pine	T	44.9	33.5
Pinaceae	Pinus strobus	White pine	T	22.3	
Pinaceae	Pinus strobus	White pine	T	39.6	
Pinaceae	Pinus strobus	White pine	T	34.5	
Pinaceae	Pinus strobus	White pine	T	54.3	
Rosaceae	Prunus serotina	Black cherry	T	10	11
Pinaceae	Pinus strobus	White Pine	T	33.4	
Pinaceae	Pinus strobus	White pine	T	46.4	
Pinaceae	Pinus strobus	White pine	T	44.9	
Pinaceae	Pinus strobus	White pine	T	41.7	31

✓
 ✓
 ✓
 ✓
 ✓
 427 ✓
 428 ✓
 Forest Plot Form (P), Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.70687 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.91994 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 understory?
(Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 subdominant overstory?
(Sparse - Prunus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Pinus strobus)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

✓ Plot identification number <PPIN>: 130

✓ Date data collected for this form (mm-dd-yr) <PLOTDATE>: Oct 9, 2010

✓ Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW33-3

Name of person filling out this form: Palish

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

✓ A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

✓ A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

✓ A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

✓ A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

✓ A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

✓ A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

✓ A6. Plot elevation in meters. <PELEVATION>: ~~287~~ ~~288~~ 302

✓ A7. What is the steepness of the slope in degrees? <PSTEEP> 4

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|----------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

One tree fell

Heavy undergrowth.

Many invasive species - Box elders - Buckthorn

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

No tree in the 3 m radius

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of ~~3-meter~~ radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Aceraceae	Acer negundo	Box elder	P	8,7	6
Aceraceae	Acer negundo	Box elder	P	7,5	6
Rosaceae	Prunus serotina	Black cherry	P	3,1	4

→ out of 3 m Rad.

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	39,8	
Pinaceae	Pinus strobus	White pine	T	46,2	
Pinaceae	Pinus strobus	White pine	T	39,4	
Pinaceae	Pinus strobus	White pine	T	41,2	
Aceraceae	Acer saccharum	Sugar Maple	T	13,6	22
Aceraceae	Acer saccharum	Sugar Maple	T	11,6	14

✓
✓
✓
✓
✓
✓

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus strobus	White pine	T	33	31
Pinaceae	Pinus strobus	white pine	T	40.4	36
Pinaceae	Pinus strobus	White pine	T	55	
Pinaceae	Pinus strobus	White pine	T	30.9	
Pinaceae	Pinus strobus	White pine	T	32.0	
Pinaceae	Pinus strobus	White pine	T	35.1	
Pinaceae	Pinus strobus	White pine	T	42.8	32
Pinaceae	Pinus strobus	White pine	T	42.5	
Pinaceae	Pinus strobus	White pine	T	30.0	
Pinaceae	Pinus strobus	White pine	T	41.0	
Pinaceae	Pinus strobus	White pine	T	32.8	
Pinaceae	Pinus strobus	White pine	T	30.9	

Forest Plot Form (P) Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40089 (decimal degrees)

OR

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.91910 (decimal degrees)

OR

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Acer negundo, Prunus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

subdominant overstory?
(Acer saccharum)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant overstory?
(Pinus strobus)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield Woods

Plot identification number <PPIN>: 131

✓ Date data collected for this form (mm-dd-yr) <PLOTDATE>: _____

✓ Record the area (in square meters) of each plot below.

0 Small Plot <PAREASMALL>

29 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW33-4

Name of person filling out this form: Nathan CLAY

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

as of 10.25

✓
Pg. 5 - height of sapling?

~~Pg. 8 - DBH 210 at
bottom → meant to
include in part of?
for outside sm height?~~

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 305 292

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input checked="" type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

A lot of ground cover (Invasive species)

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
* Betulaceae	Ostrya virginiana	Hophorn Beam	P	8.2	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Picea abies	White Spruce	T	43.0	27
Pinaceae	Pinus strobus	White pine	T	38.7	
Pinaceae	Pinus strobus	White pine	T	42.4	
Pinaceae	Pinus strobus	White pine	T	36.5	
Pinaceae	Picea abies	Norway Spruce	T	59.3	
Pinaceae	Pinus strobus	White Pine	T	53.5	37
Pinaceae	Picea abies	Norway Spruce	T	54.0	37
		Black Cherry		10.5	10
		Hophornbeam		11	16
		Hophornbeam		16	16
Rosaceae	Prunus serotina	Black Cherry	T	10	6
Rosaceae	Prunus serotina	Black Cherry	T	10	7

✓
✓
✓
✓
✓
✓
✓

Outside Plot
10-20 cm DBH

Cl. outside 3m
Rev 3-07

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40700 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92122 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓ Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1

Understory?
(Prunus serotina, Ostrya virginiana)

Question 2 (answer requires a whole number):

✓ Answer to question specified by researcher (integer) <PGENSNUM2> 0

subdominant overstory?

Question 3 (answer requires a whole number):

✓ Answer to question specified by researcher (integer) <PGENSNUM3> 1

dominant overstory?

Question 4 (answer requires a whole number):

(Picea abies, Pinus strobus)

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 10.09.10

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 132

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10.09.10

Record the area (in square meters) of each plot below.

- x Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW21-1

Name of person filling out this form: Tisa Parizer

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 289

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

✓ A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North (5) South
(2) Northeast 50° (6) Southwest
(3) East (7) West
(4) Southeast (8) Northwest

✓ A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Red Pine dominant - Plantation
No pine regen
Some shrub / vines

✓ A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 35 %

✓ A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
(2) few?
(3) abundant?

B. GROUND COVER AND SEEDLING INFORMATION

B1. What are the different ground cover plant species in the plot? To obtain the names of all of the species, the field researcher may ask the residents of the village the local name(s) of the species and cross-check the local name with the botanical name. {P_GCOVER}

Starting at the center of the plot, create a circle with a 1-meter radius. For each woody seedling species in this area, identify the species name and count the number of stems of that particular species in the 1-meter circle. Do this for each woody seedling species. Remember that woody seedlings are defined as young trees, shrubs, or woody climbers with stem diameters less than 2.5 cm or a height less than 1 m. If the researcher chooses to group nonseedling ground cover, grouping choices should be created in the Master Species List ({F_ORGAN}) as follows: "Grasses," "Herbs," "Total Grasses and Herbs," and "Bamboo." The researcher is encouraged to record the names of as many individual species as funds and time allow, and if possible, collect a sample of each unknown species. At a minimum, select the aggregate names as suggested here.

What is the family name of this plant species?	Name of Species		Is the species a woody seedling or a herbaceous plant? Write "S" for seedling or "H" for herbaceous plant. <P_TYPE>	What percent of the 1-meter circle does this species (non-woody seedling) cover? <P_PERCENT>	If the species is a woody seedling, how many seedlings are there? <P_STEMCNT>
	Botanical	Local			

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Rosaceae	Prunus Serotina	Blk Cherry	P	9.9	13M * S
✓ Rosaceae	Prunus Serotina	Blk Cherry	P	6.4	6M * S
✓ Fabaceae	Robinia pseudoacacia	Blk Locust	P	—	5M OUT

v Di TREE P3/3

~~CL Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued~~

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus Resinosa	Red Pine	T	24.9	
✓ Pinaceae	Pinus Resinosa	Red Pine	T	23.2	
✓ Juglandaceae	Juglans Nigra	Blk Walnut	T	12.0	

DI. Tree, Palm, and Woody Climber Information, continued

P 2/3

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus Resinosa	Red Pine	T	37.0	-
✓ Fabaceae	Robinia Pseudacacia	Blk Locust	T	10.9	
✓ Pinaceae	Pinus Resinosa	Red Pine	T	29.3	
✓ Pinaceae	Pinus Resinosa	Red Pine	T	27.0	
✓ Pinaceae	Pinus Resinosa	Red Pine	T	21.8	
✓ Pinaceae	Pinus resinosa	Red Pine	T	25.5	
✓ Pinaceae	Pinus resinosa	Red Pine	T	31.0	
✓ Rosaceae	Prunus AVIUM	Sweet Cherry	T	18.2	15m x
✓ Pinaceae	Pinus Resinosa	Red Pine	T	30.3	
✓ (Pinaceae)	Pinus Resinosa X DEAD	(Red Pine)	T	20.5	DEAD
✓ Pinaceae	Pinus Resinosa	Red Pine	T	30.4	
✓ Pinaceae	Pinus resinosa	Red Pine	T	24.0	
✓ Fagaceae	Quercus Rubra	Red Oak	T	13.3	12m x
✓ Pinaceae	Pinus Resinosa	Red Pine	T	33.1	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

- D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus Resinosa	Red Pine	T	22.7	21m x
✓ Pinaceae	Pinus resinosa	Red Pine	T	25.6	
✓ Pinaceae	Pinus resinosa	Red Pine	T	24.3	
✓ Pinaceae	Pinus resinosa	Red Pine	T	29.3	22M x
✓ Pinaceae	Pinus resinosa	Red Pine	T	23.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	31.2	
✓ Rosaceae	Prunus Serotina	Blk Cherry	T	10.1	
✓ Pinaceae	Pinus Resinosa	Red Pine	T	28.4	
✓ Pinaceae	Pinus resinosa	Red Pine	T	26.0	20M x
✓ Pinaceae	Pinus resinosa	Red Pine	T	31.7	
✓ Rosaceae	Prunus AVILUM	Sweet Cherry	T	16.8	10M x
✓ Pinaceae	Pinus Resinosa	Red Pine	T	26.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40678 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

N43.92394 (decimal degrees)

or

_____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

✓ E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?

Question 2 (answer requires a whole number):

(Prunus serotina, Robinia pseudoacacia).

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?

Question 3 (answer requires a whole number):

(Mixed species).

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa).

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most farms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 10 09 10

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 133

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10 09 10

Record the area (in square meters) of each plot below.

- W Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW21-2

Name of person filling out this form: Maria Parker

A. CONDITIONS OF THE PLOT

- ✓ A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: _____ 295

A7. What is the steepness of the slope in degrees? <PSTEEP> _____ 3

✓ A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-------------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) <u>20</u> Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

✓ A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Red Pine dominant - Plantation
↳ no regeneration
No saplings

✓ A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

✓ A11. Are epiphytes <P<EPIPHYTES>

- | |
|--------------------------------|
| (1) _____ absent? |
| (2) _____ few? |
| (3) _____ abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- ✓ C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>	
	Botanical	Local				
✓ Caprifoliaceae	Lonicera mackii	Honey Suckle	P	3.0	2M	5
✓ Fagaceae	Quercus mbrn	Red Oak	P CUT	X	3M	5

V/DI TREE pg 3/3

Cl. ~~Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued~~

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus Resinosa	Red Pine	T	27.5	
✓ Pinaceae	Pinus Resinosa	Red Pine	T	28.4	
✓ Pinaceae	Pinus Resinosa	Red Pine	T	26.3	

TREE

D1. Tree, Palm, and Woody Climber Information, continued

p 2/3

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus Resinosa	Red Pine	T	36.1	
✓ Pinaceae	Pinus resinosa	Red Pine	T	28.8	
✓ Pinaceae	Pinus resinosa	Red Pine	T	22.3	
✓ Pinaceae	Pinus resinosa	Red Pine	T	31.4	
✓ Pinaceae	Pinus resinosa	Red Pine	T	39.5	
✓ Pinaceae	Pinus resinosa	Red Pine	T	29.5	
✓ Pinaceae	Pinus resinosa	Red Pine	T	32.1	
✓ Pinaceae	Pinus resinosa	Red Pine	T	29.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	25.9	
✓ Pinaceae	Pinus resinosa	Red Pine	T	21.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	29.5	
✓ Pinaceae	Pinus resinosa	Red Pine	T	31.5	
✓ Pinaceae	Pinus resinosa	Red Pine	T	26.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	25.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

P1/3

- D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus Resinosa	Red Pine	T	30.8	30M x L
✓ Pinaceae	Pinus resinosa	Red Pine	T	26.3	28M x L
✓ Pinaceae	Pinus resinosa	Red Pine	T	22.8	
✓ Pinaceae	Pinus resinosa	Red Pine	T	25.7	
✓ Pinaceae	Pinus resinosa	Red Pine	T	21.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	23.5	
✓ Pinaceae	Pinus resinosa	Red Pine	T	16.5	24M x
✓ Pinaceae	Pinus resinosa	Red Pine	T	31.5	27M
✓ Pinaceae	Pinus resinosa	Red Pine	T	25.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	28.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	28.5	
✓ Pinaceae	Pinus resinosa	Red Pine	T	33.7	

28M -

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40623 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92422 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Handwritten initials/signature in the top right corner.

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1>

1 Understory?
(Sparse - Lonicera mackii,
Quercus rubra)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2>

1 Subdominant overstory?
(Very sparse - Pinus resinosa)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3>

1 Dominant overstory?
(Pinus resinosa)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4>

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 10 09 10

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 134

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10.09.10

Record the area (in square meters) of each plot below.

- 1 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW21-3

Name of person filling out this form: Yea Parker

A. CONDITIONS OF THE PLOT

- ~~A1.~~ Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

- A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

- A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

- A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

- A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5h here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

- A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

- A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>
-

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

- A6. Plot elevation in meters. <PELEVATION>: 289

- A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) North
- (2) Northeast
- (3) East
- (4) Southeast
- (5) South
- (6) Southwest
- (7) West
- (8) Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

- Red Pine plantation
no regen

- Blk Oak, Sweet Cherry, Pignut Hickory
saplings

A10. What is the percentage of crown cover in this plot? <P<CROWN Cov> 45 %

~~A11. Are epiphytes <P<EPIPHYTES>~~

- ~~(1) absent?~~
- ~~(2) few?~~
- ~~(3) abundant?~~

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Fagaceae	Quercus Velutina	Blk Oak	P	2.5	2.5 M
✓ Fagaceae	Quercus Velutina	Blk Oak	P	2.6	3.5 M
✓ Juglandaceae	Carya glabra	Pignut Hickory	P	3.8	
✓ Juglandaceae	Carya glabra	Pignut Hickory	P	4.8	5.0 M
✓ Rosaceae	Amelanchier spp.	ServiceBerry	P	4.2	
✓ Rosaceae	Amelanchier spp.	ServiceBerry	P	2.5	

D1. Tree, Palm, and Woody Climber Information, continued

p2.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	PINUS RESINOSA	Red Pine	T	27.8	
✓ Pinaceae	Pinus resinosa	Red Pine	T	25.7	
✓ Pinaceae	pinus resinosa	Red Pine	T	34.5	
✓ Pinaceae	Pinus resinosa	Red Pine	T	23.1	
✓ Pinaceae	Pinus resinosa	Red Pine	T	26.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	27.6	
✓ Pinaceae	Pinus resinosa	Red Pine	T	31.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	26.3	
✓ Pinaceae	pinus resinosa	Red Pine	T	31.0	
✓ Pinaceae	Pinus resinosa	Red Pine	T	26.6	
✓ Rosaceae	PRUNUS AVIUM	Sweet Cherry	T	13.0	14.1 x M
✓ Pinaceae	PINUS RESINOSA	Red Pine	T	32.8	
✓ Pinaceae	Pinus resinosa	Red Pine	T	31.5	
✓ Pinaceae	Pinus resinosa	Red Pine	T	35.5	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

- D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red Pine	T	26.9	27m x L
Pinaceae	Pinus resinosa	Red Pine	T	25.7	
Pinaceae	Pinus resinosa	Red Pine	T	32.5	
Pinaceae	Pinus resinosa	Red Pine	T	29.8	
Pinaceae	Pinus resinosa	Red Pine	T	26.2	
Pinaceae	Pinus resinosa	Red Pine	T	31.0	32m x
Pinaceae	Pinus resinosa	Red Pine	T	25.5	31m x
Oleaceae	Fraxinus americana	Wht Ash	T	10.3	12m x
Aceraceae	Acer negundo	Box Elder	T	10.7	10m x
	XDEAD	(Red Pine)	DEAD	24.0	
Pinaceae	Pinus resinosa	Red Pine	T	30.6	
Pinaceae	Pinus resinosa	Red Pine	T	28.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40647 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92471 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

✓ E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1>

1

Understory? ✓

Question 2 (answer requires a whole number):

(Quercus velutina, Lanya glabra, Amelanchier spp.)

Answer to question specified by researcher (integer) <PGENNUM2>

1

Subdominant Overstory? ✓

Question 3 (answer requires a whole number):

(Prunus avium, Fraxinus americana, Acer regundo) ✓

Answer to question specified by researcher (integer) <PGENNUM3>

1

Dominant Overstory? ✓

Question 4 (answer requires a whole number):

(Pinus resinosa) ✓

Answer to question specified by researcher (integer) <PGENNUM4>

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 10 09 10

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 135

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10 09 10

Record the area (in square meters) of each plot below.

1 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

319 Large Plot <PAREALARGE>

Lot-PlotNo2: SW21-4

Name of person filling out this form: Yvonne Parke

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 284

A7. What is the steepness of the slope in degrees? <PSTEEP> 05°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|--------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <u>340</u> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

near road
Red Pine Plantation -
No pine regeneration

Cement wall?, tank, water cistern?

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 35 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) _____ absent?
(2) _____ few?
(3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
———— NOTHING IN 3 M PLOT —————					
* Fagaceae	Quercus Velutina	BIK Oak	P		6 M
Rosaceae	Prunus Serotina	BIK Cherry	P		6 M
Rosaceae	Prunus Serotina	BIK Cherry	P		5 M

DI. Tree

C1. ~~Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued~~

p3

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus Resinosa	Red Pine	T	34.0	
Pinaceae	Pinus resinosa	Red Pine	T	28.9	
Pinaceae	Pinus resinosa	Red Pine	T	29.5	
Pinaceae	Pinus resinosa	Red Pine	T	23.5	
Pinaceae	Pinus resinosa	Red Pine	T	33.7	
Aceraceae	Acer Rubrum	Red Maple	T	19.5	
Pinaceae	Pinus Resinosa	Red Pine	T	28.3	
Lauraceae	Sassafras albidum	Sassafras	T	10.4	
Pinaceae	Pinus Resinosa	Red Pine	T	34.0	

D1. Tree, Palm, and Woody Climber Information, continued

pa

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	PINUS RESINOSA	Red Pine	T	25.4	28M x L
Pinaceae	PINUS RESINOSA	Red Pine	T	26.0	
Pinaceae	PINUS RESINOSA	Red Pine	T	23.5	24M x L
Rosaceae	PRUNUS SEROTINA	Blk Cherry	T	10.4	7.5 x M
Pinaceae	PINUS RESINOSA	Red Pine	T	26.1	
Rosaceae	PRUNUS SEROTINA	Blk Cherry	T	22.1	
Aceraceae	ACER RUBRUM	Red Maple	T	12.7	
Pinaceae	PINUS RESINOSA	Red Pine	T	31.2	
Pinaceae	PINUS RESINOSA	Red Pine	T	25.6	
Pinaceae	PINUS RESINOSA	Red Pine	T	29.8	
Pinaceae	PINUS RESINOSA	Red Pine	T	30.0	
Pinaceae	PINUS RESINOSA	Red Pine	T	20.4	
Pinaceae	PINUS RESINOSA	Red Pine	T	34.5	
Lauraceae	Sassafras albidum	Sassafras	T	11.9	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

P 1

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus Resinosa	Red Pine	T	18.2	27M x M
Pinaceae	Pinus resinosa	Red Pine	T	23.4	
Pinaceae	Pinus resinosa	Red Pine	T	24.8	
Pinaceae	Pinus resinosa	Red Pine	T	27.5	30M x L
Pinaceae	Pinus resinosa	Red Pine	T	23.7	
Pinaceae	Pinus resinosa	Red Pine	T	31.4	
Juglandaceae	Juglans Nigra	Blk Walnut	T	11.8	9M x M
Pinaceae	Pinus Resinosa	Red Pine	T	23.0	
Pinaceae	Pinus resinosa	Red Pine	T	27.3	
Pinaceae	Pinus resinosa	Red Pine	T	29.0	
Pinaceae	Pinus resinosa	Red Pine	T	24.3	
Pinaceae	Pinus resinosa	Red Pine	T	21.5	

Forest Plot Form (P), Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40690 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W ~~83.92592~~ (decimal degrees)

or

83.92592
_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1>

1

Understory?

Question 2 (answer requires a whole number):

(Prunus serotina, Quercus velutina)

Answer to question specified by researcher (integer) <PGENNUM2>

1

Subdominant overstory?

Question 3 (answer requires a whole number):

(Mixed species)

Answer to question specified by researcher (integer) <PGENNUM3>

1

Dominant overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENNUM4>

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 10 09 10

Name of forest <FK_FOREST>: Spinchfield Woods

Plot identification number <PPIN>: 136

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10 09 10

Record the area (in square meters) of each plot below.

Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW21-5

Name of person filling out this form: Tisa Parker

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 258

A7. What is the steepness of the slope in degrees? <PSTEEP> 10

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|-------------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) <u>20</u> Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

High Mortality
 Open spot - little
 no regeneration of pines
 Many briars
 American ELM!

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 10 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record maximum diameter and height in metric units. For saplings, record DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
* ALL OUT!	Ulmaceae	AMER EIM	P	—	5.5M S
NOTHING INSIDE 3 METERS					

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus Sylvestris	Scots Pine	T	27.3	21M
Rosaceae	Prunus Serotina	BIK Cherry	T	26.5	
Juglandaceae	Juglans Nigra	BIK Walnut	T	12.8	
Rosaceae	Prunus Serotina	BIK Cherry	T	16.7	
Ulmaceae	ULMUS thomasi	Rock Elm	T	20.2	

L

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
XDEAD	(Pinus Strobus)	(White Pine)	T DEAD	24.3	DEAD
Pinaceae	Pinus Sylvestris	Scotch Pine	T	31.7	21M
Ulmaceae	Ulmus Americana	Amer Elm	T	14.2	12M
Ulmaceae	Ulmus Americana	Amer Elm	T	17.7	10M
Ulmaceae	Ulmus Americana	Amer Elm	T	37.2	
Pinaceae	Pinus Sylvestris	Scots Pine	T	37.7	22M
Ulmaceae	Ulmus Americana	Amer Elm	T	14.7	9M
XDEAD	(Ulmus Americana)	(Amer Elm)	T DEAD	31.0	DEAD
Ulmaceae	Ulmus American	Amer Elm	T	14.0	
XDEAD		Unknown	T DEAD	29.4	DEAD
Pinaceae	Pinus Sylvestris	Scots Pine	T	42.7	
Rosaceae	Prunus Serotina	Blk Cherry		23.1	

L
M
M
L
M

Forest Plot Form (P), Version 13, Page 7

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40641 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92601 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

4

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Very sparse - Ulmus americana)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?
(Ulmus americana)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 dominant overstory?
(Pinus sylvestris)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 10 09 10

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 137

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10.09.10

Record the area (in square meters) of each plot below.

- Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2 : SW21-6

Name of person filling out this form: Mica Parker

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 290

A7. What is the steepness of the slope in degrees? <PSTEEP> 05

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|--------------------------|---------------------|
| (1) _____ North | (5) _____ South |
| (2) <u>40°</u> Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) _____ Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

red pine plantation
no pine regen
some hardwood entry

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 50 %

~~A11. Are epiphytes <PE<PIPHYTES>~~

- ~~(1) X absent?
(2) _____ few?
(3) _____ abundant?~~

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
* Fagaceae	Quercus velutina	Blk Oak	§ sapling? P	2.8	4M x S
* Fagaceae	Quercus velutina	Blk Oak	§ P	CUT	5.5M x S
* Fagaceae	Quercus velutina	Blk Oak	§ P	CUT	5.0M x S

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus thomasi	Rock Elm	T DEAD	12.8	DEAD
Pinaceae	Pinus resinosa	Red Pine	T	26.8	
Pinaceae	Pinus resinosa	Red Pine	T	28.4	22M
Juglandaceae	Juglans Nigra	Blk Walnut	T	11.5	6.5 * M
Pinaceae	Pinus resinosa	Red Pine	T	19.7	18M * M
Pinaceae	Pinus resinosa	Red Pine	T	37.2	28M * L
Pinaceae	Pinus resinosa	Red Pine	T	23.3	
Pinaceae	Pinus resinosa	Red Pine	T	25.5	
Pinaceae	Pinus resinosa	Red Pine	T	30.2	
Pinaceae	Pinus resinosa	Red Pine	T	23.5	
Pinaceae	Pinus resinosa	Red Pine	T	22.2	
Rosaceae	Prunus serotina	Blk Cherry	T	10.0	5.5M * M

Forest Plot Form (P), Version 13, Page 7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus Resinosa	Red Pine	T	29.1	31 M x L
Rosaceae	Prunus Avium	Sweet Cherry	T	22.8	
Pinaceae	Pinus Sylvestris	Scots Pine	T	34.9	
Pinaceae	Pinus Resinosa	Red Pine	T	27.5	
Pinaceae	Pinus resinosa	Red Pine	T	30.8	
Pinaceae	Pinus resinosa	Red Pine	T	25.7	
Pinaceae	Pinus resinosa	Red Pine	T	30.5	
Pinaceae	Pinus resinosa	Red Pine	T	27.0	
Rosaceae	Prunus Serotina	Black Cherry	T	10.4	
Pinaceae	Pinus Resinosa	Red Pine	T	32.0	
Pinaceae	Pinus resinosa	Red Pine	T	30.5	
Pinaceae	Pinus resinosa	Red Pine	T	22.5	
Pinaceae	Pinus resinosa	Red Pine	T	22.1	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40623 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92640 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?

Question 2 (answer requires a whole number):

(Quercus velutina)

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant Overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

~~Subdominant~~ Dominant Overstory?
(Pinus resinosa)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinch field woods

✓ Plot identification number <PPIN>: 138

✓ Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10-09-2010

Record the area (in square meters) of each plot below.

- ✓ X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Plot Lot No2: SW20-1

Name of person filling out this form: Silvia Cordero-Sanchez

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

✓ *Mark only one answer.*

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

✓ A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

✓ A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

✓ A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

✓ A6. Plot elevation in meters. <PELEVATION>: ~~290~~ 290

✓ A7. What is the steepness of the slope in degrees? <PSTEEP> 5 1/2

✓ A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input checked="" type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

✓ A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Invasive sp —

= Honey suckte / Garlic mustard.

Blanket of "nipples" all over.

Shrubs, ferns & small plants.

couple of fallen trees around, (canopy openings.)

✓ A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 10 %

✓ A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rhamnaceae	Rhamnus cathartica	Buck Thorn.	out of the 3m plot		4m
Fagaceae	Quercus velutina	Black oak.	"		5m
Rosaceae Fagaceae	Prunus serotina Quercus velutina	Black cherry	"		4m.

✓
✓
✓

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	29.3	28
Pinaceae	Pinus resinosa	Red pine.	T	29.5	32
Pinaceae	Pinus resinosa	Red pine	T	34.5	
Fagaceae	Quercus velutina	Black oak	T	12.6	
(Oleaceae)	(Fraxinus americana) ^{DEAD}	(white ash)	Dead (T)	10.8	
Pinaceae	Pinus resinosa	Red pine	T	32.3	
Pinaceae	Pinus resinosa	Red pine	T	27.0	
Pinaceae	Pinus resinosa	Red pine	T	29.1	
(Oleaceae)	(Fraxinus americana) ^{DEAD}	(white ash)	Dead (T)	13.6	
Pinaceae	Pinus resinosa	Red pine	T	29.8	
Juglandaceae	Juglans nigra	Black walnut	T	14.2	14.0
Pinaceae	Pinus resinosa	Red pine	T	34.3	

Forest Plot Form (P), Version 13, Page 7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	27.4	
Juglandaceae	<i>Juglans nigra</i>	Black walnut	T	10.5	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	25.5	29
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	32.4	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	28.9	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	11.0	11.0
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	25.2	
Rosaceae	<i>Prunus serotina</i>	Black cherry	T	18.2	21.5
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	30.0	
Pinaceae	<i>Pinus resinosa</i>	Red pine	T	21.5	
Juglandaceae	<i>Juglans nigra</i>	Black walnut	T	11.2	
Rosaceae	<i>Prunus avium</i>	Sweet cherry	T	19.0	

Forest Plot Form (P), Version 13, Page 8

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40622 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92692 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. **Enter the methodology and all questions together into the database under <PWKSPMEMO>.** Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



✓ Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?

✓ Question 2 (answer requires a whole number):

(Quercus velutina, Rhamnus cathartica)

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant overstory?

✓ Question 3 (answer requires a whole number):

(Juglans nigra, Prunus serotina)

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): 10 09 10

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 139

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/09/10

Record the area (in square meters) of each plot below.

X Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

314 Large Plot <PAREALARGE>

Plot of No 2: SW20-2

Name of person filling out this form: M. Parker

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMOUNTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 291

A7. What is the steepness of the slope in degrees? <PSTEEP> 1.5

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|--------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <u>290</u> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

— Red pine plantation
 no pine regen
 Zinc tabs nailed to trees indicating ongoing research
 — Open

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 40 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|------------------------------|
| (1) _____ absent? |
| (2) _____ few? |
| (3) _____ abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	blk cherry	P	7.0	6M x S
Rosaceae	Prunus serotina	blk cherry	P	4.0	4M x S
* Juglandaceae	Carpa glabra	piñon hickory	P	0.17	4.0M x S

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	<i>Pinus Resinosa</i>	red pine	T	31.4	32m * L
Pinaceae	<i>Pinus resinosa</i>	red pine	T	26.0	28 * L
Pinaceae	<i>Pinus resinosa</i>	red pine	T	31.8	
Aceraceae	<i>Acer saccharum</i>	sugar maple	T	10.1	* M
Pinaceae	<i>Pinus resinosa</i>	red pine	T	23.8	
Pinaceae	<i>Pinus resinosa</i>	red pine	T	26.9	28m * L
Aceraceae	<i>Acer saccharum</i>	sugar maple	T	11.2	14m * M
Pinaceae	<i>Pinus resinosa</i>	red pine	T	31.0	
Pinaceae	<i>Pinus resinosa</i>	red pine	T	30.5	
Pinaceae	<i>Pinus resinosa</i>	red pine	T	27.0	
Pinaceae	<i>Pinus resinosa</i>	red pine	T	27.7	
Pinaceae	<i>Pinus resinosa</i>	red pine	T	28.9	

Forest Plot Form (P), Version 13, Page 7

M

Estimated height of the tree or palm (not climbers) <P_HEIGHT> (m)	Maximum stem diameter or DBH of the climber, tree or palm (cm) <P_DBH>	Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Name of Species	
			Local	Botanical
9.0M	10.8	T	bir cherry	Prunus serotina
	25.6	T	red pine	Pinus resinosa
	26.1	T	red pine	Pinus resinosa
	27.1	T	red pine	Pinus resinosa
9.0M	26.7	T	red pine	Pinus resinosa
	24.2	T	red pine	Pinus resinosa
	23.9	T	red pine	Pinus resinosa
	28.1	T	red pine	Pinus resinosa
	30.6	T	red pine	Pinus resinosa
	31.3	T	red pine	Pinus resinosa
	31.3	T	red pine	Pinus resinosa
	34.8	T	red pine	Pinus resinosa
	34.1	T	red pine	Pinus resinosa

pg 2

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40648 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 93.92734 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?

Question 2 (answer requires a whole number):

(Carya glabra, Prunus serotina)

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?

Question 3 (answer requires a whole number):

(Acer saccharum, Prunus serotina)

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 009

Date of site visit (mm-dd-yr): 10 09 10

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 140

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/09/10

Record the area (in square meters) of each plot below.

Plot No 2: SW20-3

1 Small Plot <PAREASMALL>

28 Medium Plot <PAREAMEDIUM>

319 Large Plot <PAREALARGE>

Name of person filling out this form: Mae Porzko

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

*Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A **clinometer** is typically used for measuring slope (steepness) in degrees.*

A6. Plot elevation in meters. <PELEVATION>: 288

A7. What is the steepness of the slope in degrees? <PSTEEP> 6°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

- red pine plantation - no pine regen.
 edge effect - 20 m S of road
 - open conditions
 - on hill - Midway

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 35 %

A11. Are epiphytes <PEPIPHYTES>

- | |
|-------------------------------------------------|
| (1) <input checked="" type="checkbox"/> absent? |
| (2) <input type="checkbox"/> few? |
| (3) <input type="checkbox"/> abundant? |

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

No *
trees
in
3m
plot

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Fagaceae	Quercus Alba	white oak	P	OUT	4.5M
✓ Fagaceae	Quercus alba	white oak	P	OUT	3.0M
✓ Rosaceae	Prunus serotina	black cherry	P	OUT	6.0M

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

pg 1/2

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	red pine	T	28.3	
Pinaceae	Pinus resinosa	red pine	T	25.5	
Rosaceae	Prunus Serotina	blk cherry	T	14.5	14M *
Pinaceae	Pinus resinosa	red pine	T	36.2	
Pinaceae	Pinus resinosa	red pine	T	35.1	
Pinaceae	Pinus resinosa	red pine	T	29.9	
Pinaceae	Pinus resinosa	red pine	T	35.7	
Pinaceae	Pinus resinosa	red pine	T	26.0	
Pinaceae	Pinus resinosa	red pine	T	32.5	32M *
Pinaceae	Pinus resinosa	red pine	T	24.0	
Pinaceae	Pinus resinosa	red pine	T	30.6	32M *
Pinaceae	Pinus resinosa	red pine	T	27.5	

due N 6

DI. Tree, Palm, and Woody Climber Information, continued

Tree p 2/2

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	red pine	T	33.1	
Pinaceae	Pinus resinosa	red pine	T	27.4	
Pinaceae	Pinus resinosa	red pine	T	27.7	
Pinaceae	Pinus resinosa	red pine	T	24.2	
Pinaceae	Pinus resinosa	red pine	T	28.5	29m x L
Pinaceae	Pinus resinosa	red pine	T	24.0	
Pinaceae	Pinus resinosa	red pine #	T	26.7	
Pinaceae	Pinus resinosa	red pine	T	27.6	
Pinaceae	Pinus resinosa	red pine	T	25.3	
Pinaceae	Pinus resinosa	red pine	T	30.6	
Pinaceae	Pinus resinosa	red pine	T	24.7	
Pinaceae	Pinus resinosa	red pine	T	28.0	
Pinaceae	Pinus resinosa	red pine	T	28.3	
Pinaceae	Pinus resinosa	red pine	T	32.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40686 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92159 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

* E1, E2 entered as 00,00
VR

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENSNUM1> 1 Understory?

Question 2 (answer requires a whole number):

(Quercus alba, Pinus serotina)

Answer to question specified by researcher (integer) <PGENSNUM2> 1 Subdominant Overstory?

Question 3 (answer requires a whole number):

(Very sparse - Pinus serotina)

Answer to question specified by researcher (integer) <PGENSNUM3> 1 Dominant Overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENSNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 141

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 110-09-2010

Record the area (in square meters) of each plot below.

Small Plot <PAREASmall>

28 Medium Plot <PAREAMedium>

314 Large Plot <PAREALarge>

Plot/Lot No: SW20-4

Name of person filling out this form: Silvia Cordero.

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>

Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

✓ A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

✓ A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

✓ A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

✓ A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?
Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

✓ A6. Plot elevation in meters. <PELEVATION>: 315 288

✓ A7. What is the steepness of the slope in degrees? <PSTEEP> 15 °/°

✓ A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------|----------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

✓ A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

near to road. covered by pine needle "blanket"
 Not a lot of vegetation on ground, some ferns and
 other minor plants.
 Grape vines on canopy of lower canopy trees.

✓ A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40%

✓ A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	7.3	4.5
Rosaceae	Prunus serotina	Black cherry	1 P (dead)	5.3	
Aceraceae	Acer saccharum	Sugar maple	wt of the 3m plot	9.1	8.0
Rosaceae	Prunus serotina	Black cherry	out	7.5	4 m

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	27	26.0
Rosaceae	Prunus serotina	Black cherry	T	16.1	13.5
Pinaceae	Pinus resinosa	Red pine	T	25.9	
Pinaceae	Pinus resinosa	Red pine	T	25.5	26.0
Pinaceae	Pinus resinosa	Red pine	T	34.3	
Pinaceae	Pinus resinosa	Red pine	T	32.8	
Pinaceae	Pinus resinosa	Red pine	T	25.2	
Rosaceae	Prunus serotina	Black cherry	T	13.7	17.0
Pinaceae	Pinus resinosa	Red pine	T	28.9	
Pinaceae	Pinus resinosa	Red pine	T	29.5	
Pinaceae	Pinus resinosa	Red pine	T	23.7	
Rosaceae	Prunus serotina	Black cherry	T	11.7	

Pinaceae

Pinaceae

Pinus resinosa

Pinus resinosa

X DEAD

Red pine

Red pine

Red pine

T

T

T (dead)

25.8

24.0

Forest Plot Form (P), Version 13, Page 7

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus resinosa	Red pine	T	24.8	
Rosaceae	Prunus serotina	Black cherry	T	17.7	
Pinaceae	Pinus resinosa	Red pine	T	30.7	
Pinaceae	Pinus resinosa	Red pine	T	29.2	
Aceraceae	Acer saccharum	Sugar maple	T	13.2	9.5
Pinaceae	Pinus resinosa	Red pine	T	31.8	
Pinaceae	Pinus resinosa	Red pine	T	31.8	
Pinaceae	Pinus resinosa	Red pine	T	29.0	
Rosaceae	Prunus serotina	Black cherry	T	20.4	15
Pinaceae	Pinus resinosa	Red pine	T	29.9	26.5
Pinaceae	Pinus resinosa	Red pine	T	23.0	
Pinaceae	Pinus resinosa	Red pine	T	28.7	
Pinaceae	Pinus resinosa	Red pine	T	22.8	
Rosaceae	Prunus serotina	Black cherry	T	11.5	

Pinaceae Pinus resinosa Red pine T 24.2
 Pinaceae Pinus resinosa Red pine T 24.8
 Pinaceae Pinus resinosa Red pine T 27.8

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40605 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92742 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Acer saccharum, Pinus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant overstory?
(Pinus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

dominant overstory?
(Pinus resinosa)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinefield Woods

Plot identification number <PPIN>: 445 142

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10.23.10

Record the area (in square meters) of each plot below.

- 8 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo 2: SW 17 ~~1~~

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 282

A7. What is the steepness of the slope in degrees? <PSTEEP> 4°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 3-16° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Several tree falls

Some can be standing stumps

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 50 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Ulmaceae	Ulmus americana	American elm	P	5.6	7
Ulmaceae	Ulmus americana	American elm	P	0.5	6
Ulmaceae	Ulmus americana	American elm	P	0.5	5

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Rosaceae	<i>Prunus serotina</i>	Black cherry	T	19.8	15
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	39.1	22
✓ Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	11.1	10
✓ Pinaceae	<i>Pinus strobus</i>	Scotch pine	T	36.3	20
✓ Pinaceae	<i>Pinus strobus</i>	Scotch pine	T	32.9	
✓ Aceraceae	<i>Acer saccharum</i>	Sugar maple	T	12.7	10
✓ Rosaceae	<i>Prunus serotina</i>	Black cherry	T	14.0	
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	31.2	
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	33.9	21
✓ Rosaceae	<i>Prunus avium</i>	Sweet cherry	T	18.4	
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	39.9	
✓	X DEAD		T	16.2	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Rosaceae	<i>Prunus serotina</i>	Black cherry	T	10.4	
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	37.4	
✓ Salicaceae	<i>Populus grandidentata</i>	Big-tooth aspen	T	40.3	
✓ Rosaceae	<i>Prunus serotina</i>	Black cherry	T	27.0	
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	41.3	
✓ Rosaceae	<i>Prunus serotina</i>	Black cherry	T	11.2	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40553 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92567 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. **Enter the methodology and all questions together into the database under <PWKSPMEMO>.** Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory

Question 2 (answer requires a whole number):

(*Umus americana*)

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant Overstory?

Question 3 (answer requires a whole number):

(*Acer saccharum*, *Pinus serotina*)

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant Overstory?

Question 4 (answer requires a whole number):

(*Pinus sylvestris*)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Spinchfield Woods

Plot identification number <PPIN>: 143

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/23/10

Record the area (in square meters) of each plot below.

- 7 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-PlotNo2: SW17-2

Name of person filling out this form: Michelle

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 283

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- (1) _____ North
- (2) _____ Northeast
- (3) _____ East
- (4) _____ Southeast
- (5) _____ South
- (6) _____ Southwest
- (7) _____ West
- (8) 332° Northwest

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Many treefalls & coarse woody debris
fairly open

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 43 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
- (2) _____ few?
- (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Ulmaceae	Ulmus americana	American elm	P	9.5	7
✓ Rosaceae	Prunus serotina	Black cherry	P	8.3	9.5
✓ Rosaceae	Prunus serotina	Black cherry	P	3.0	5
✓ Rosaceae	Prunus serotina	Black cherry	P	4.6	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Rosaceae	Prunus serotina	Black cherry	T	27.2	
✓ Rosaceae	Prunus serotina	Black cherry	T	10.1	6
✓	X DEAD		T	33.3	
✓ Ulmaceae	Ulmus americana	American elm	T	11.6	
✓ Rosaceae	Prunus serotina	Black cherry	T	20.3	
✓ Rosaceae	Prunus serotina	Black cherry	T	14.3	11
✓ Pinaceae	Pinus sylvestris	Scotch pine	T	33.2	25
✓ Lauraceae	Sassafras albidum	Sassafras	T	14.8	
✓ Rosaceae	Prunus serotina	Black cherry	T	18.2	13
✓ Rosaceae	Prunus serotina	Black cherry	T	17.0	
✓	X DEAD	(Scotch pine)	T	34.2	
✓ Aceraceae	Acer rubrum	Red maple	T	14.5	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Pinaceae	Pinus sylvestris	Scotch pine	T	29.7	20
✓ Pinaceae	Pinus sylvestris	Scotch pine	T	30.4	21
✓ Rosaceae	Prunus serotina	Black cherry	T	16.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40652 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92513 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

✓

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Pinus serotina)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant Overstory?
(Pinus serotina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant Overstory?
(Pinus sylvestris)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

- Name of forest <FK_FOREST>: Spinch field Woods
- Plot identification number <PPIN>: 144
- Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/23/10

Record the area (in square meters) of each plot below.

- 0 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 614 Large Plot <PAREALARGE>

Lot-PlotNo2: SW17-3

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5-A5b here should correlate to answers for B3-B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: _____ 288 _____

A7. What is the steepness of the slope in degrees? <PSTEEP> _____ 3 _____

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|---------------------|----------------------------------------------------------------|
| (1) _____ North | (5) _____ South |
| (2) _____ Northeast | (6) _____ Southwest |
| (3) _____ East | (7) _____ West |
| (4) _____ Southeast | (8) <input checked="" type="checkbox"/> Northwest <i>2 2 2</i> |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

*Many tree falls
otherwise open*

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 45 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) _____ few?
 (3) _____ abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Rosaceae	Prunus serotina	Black cherry	P	9.2	6.0
✓ Rosaceae	Prunus serotina	Black cherry	P	6.0	3.0 (sapling)
✓ Moraceae	Morus alba	White mulberry	P	0.67	2.0

DI. TREES

61. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus sylvestris	Scotch pine	T	30.1	
Pinaceae	Pinus sylvestris	Scotch pine	T	34.6	25
Pinaceae	Pinus sylvestris	Scotch pine	T	33.4	
Launaceae	Sassafras albidum	Sassafras	T	12.3	

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Pinaceae	Pinus sylvestris	Scotch pine	T	31.8	
Aceraceae	Acer rubrum	Red maple	T	22.2	
Pinaceae	Pinus sylvestris	Scotch pine	T	23.6	
Rosaceae	Prunus serotina	Sweet cherry	T	10.3	
Pinaceae	Pinus sylvestris	Scotch pine	T	38.8	
Pinaceae	Pinus sylvestris	Scotch pine	T	27.0	
Pinaceae	Pinus sylvestris	Scotch pine	T	25.9	
Pinaceae	Pinus sylvestris	Scotch pine	T	23.2	
Rosaceae	Prunus serotina	Black cherry	T	10.5	
Pinaceae	Pinus sylvestris	Scotch pine	T	26.4	
Aceraceae	Acer rubrum	Red maple	T	16.4	
Aceraceae	Acer rubrum	Red maple	T	16.0	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
✓ Cornaceae	<i>Cornus florida</i>	Flowering Dogwood	T	10.1	
✓ Rosaceae	<i>Prunus serotina</i>	Black cherry	T	14.6	10
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	34.6	22
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	28.0	
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	26.9	20
✓ Rosaceae	<i>Prunus avium</i>	Sweet cherry	T	34.2	
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	20.9	
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	25.6	
✓ Rosaceae	<i>Prunus avium</i>	Sweet cherry	T	16.9	18
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	25.5	
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	27.1	
✓ Rosaceae	<i>Prunus avium</i>	Sweet cherry	T	17.7	11
✓ Pinaceae	<i>Pinus sylvestris</i>	Scotch pine	T	27.6	
✓ Aceraceae	<i>Acer rubrum</i>	Red maple	T	24.9	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40565 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.72462 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>



Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?

Question 2 (answer requires a whole number):

(Pinus serotina)

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant Overstory?

Question 3 (answer requires a whole number):

(Mixed species)

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant Overstory?

Question 4 (answer requires a whole number):

(Pinus resinosa)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: ~~142~~ 145

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/23/10

Record the area (in square meters) of each plot below.

- 1 Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW17-4

Name of person filling out this form: Michele

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 291

A7. What is the steepness of the slope in degrees? <PSTEEP> 3°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|------------------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North 35-45° | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

MANY tree falls & downed woody debris
otherwise fairly open

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 40 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C1. Shrub, Sapling, Palm, and Woody/Herbaceous Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	<i>Prunus serotina</i>	Black cherry	P	8.7	8
Moraceae	<i>Morus alba</i>	White mulberry	P	007	5
Aceraceae	<i>Acer rubrum</i>	Red maple	P	047	8

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Prunaceae	Prunus avium	Sweet cherry	T	19.9	20
Pinaceae	Pinus sylvestris	Scotch pine	T	36.8	32
Pinaceae	Pinus sylvestris	Scotch pine	T	38.4	
Pinaceae	Pinus sylvestris	Scotch pine	T	25.4	
Pinaceae	Pinus sylvestris	Scotch pine	T	31.9	31
Pinaceae	Pinus sylvestris	Scotch pine	T	37.3	
Pinaceae	Pinus sylvestris	Scotch pine	T	28.6	30
Pinaceae	Prunus serotina	Black cherry	T	16.3	
Aceraceae	Acer rubrum	Red maple	T	20.9	23
Pinaceae	Pinus sylvestris	Scotch pine	T	38.7	
	X DEAD	(Scotch pine)	T	32.9	
Rosaceae	Prunus avium	Sweet cherry	T	28.6	

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X DEAD	(Black cherry)	T	10.9	
Pinaceae	Pinus sylvestris	Scots pine	T	24.7	
Pinaceae	Pinus sylvestris	Scots pine	T	31.1	
Rosaceae	Prunus serotina	Black cherry	T	22.0	
Ulmaceae	Ulmus americana	American elm	T	10.4	
Pinaceae	Pinus sylvestris	Scots pine	T	33.7	
Rosaceae	Prunus serotina	Black cherry	T	10.1	8
Rosaceae	Prunus serotina	Black cherry	T	12.0	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40574 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.90686 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____ ✓

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

5

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?

Question 2 (answer requires a whole number):

(Mixed species)

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant Overstory?

Question 3 (answer requires a whole number):

(Mixed species)

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant Overstory?

Question 4 (answer requires a whole number):

(Pinus sp.)

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 146

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/23/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot_PlotNo2: SW17-5

Name of person filling out this form: Walker DePuy

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A clinometer is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: ~~312~~ 307

A7. What is the steepness of the slope in degrees? <PSTEEP> 5°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|-----------------------------------------------|----------------------------------------|
| (1) <input checked="" type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input type="checkbox"/> East | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

5°

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Heavy coarse woody debris
light understory
lots of downed trees

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 20 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	P	6	4
Juglandaceae	Carya ovata	Pignut Hickory	P	999 7.3	8
Aceraceae	Acer saccharum	Sugar maple	P	999 6	8

outside ring outside ring

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	XDEAD		T	20.5	
Rosaceae	Prunus serotina	Black Cherry	T	27.9	25
	XDEAD		T	24.5	
Aceraceae	Acer saccharum	Sugar Maple	T	30.2	35
Rosaceae	Prunus Avium	Sweet cherry	T	39.2	29
Aceraceae	Acer saccharum	Sugar maple	T	28.4	
Rosaceae	Prunus serotina	Black Black Cherry	T	14.4	13
Rosaceae	Prunus serotina	Black cherry	T	16	20
Aceraceae	Acer saccharum	sugar maple	T	21.3	
Rosaceae	Prunus serotina	Black cherry	T	12	13
Pinaceae	Pinus resinosa	Japanese Red Pine	T	41.3	
Rosaceae	Prunus serotina	Black Cherry	T	20.3	

dead
dead

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X DEAD		T	18.8	
Aceraceae	Acer saccharum	sugar maple	T	46.5	
Pinaceae	Pinus resinosa	red pine	T	30.7	
Aceraceae	Acer saccharum	sugar maple	T	18	
Rosaceae	Prunus serotina	Black cherry	T	11.9	
Rosaceae	Prunus serotina	Black cherry	T	13	
* Rosaceae	Prunus serotina	Black cherry	T	Not recorded	
Juglandaceae	Carya ovata	Pignut Hickory	T	14.5	
Rosaceae	Prunus serotina	Black cherry	T	15.2	
Pinaceae	Picea Glauca	White spruce	T	10.6	
dead	X (Pinus resinosa) DEAD	(red pine)	T	27.5	

dead

dead

dead

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40490 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92403 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1 Understory?
(Mixed species)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Panicum sentina)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant Overstory?
(Mixed species)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbaceous matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: _____ Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 147

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/23/10

Record the area (in square meters) of each plot below.

- X Small Plot <PAREASmall>
- 25 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot - Plot No 2: SW17-6

Name of person filling out this form: Michela

A. CONDITIONS OF THE PLOT

- A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the *Forest Form*, B3g? <PMGMTNAME>

*Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A **clinometer** is typically used for measuring slope (steepness) in degrees.*

A6. Plot elevation in meters. <PELEVATION>: 313

A7. What is the steepness of the slope in degrees? <PSTEEP> 2°

A8. If the plot is on a slope, what direction does the plot face? <PORIENT>

Mark only one answer.

- | | |
|---------------------------------------------------|----------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East 108° | (7) <input type="checkbox"/> West |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <PCONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

Several treefalls
Lots of coarse woody debris

A10. What is the percentage of crown cover in this plot? <PCROWN COV> 35 %

A11. Are epiphytes <PEPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	X DEAD	(maple ^{Red})	T	22.4	
Fagaceae	Quercus velutina	Black oak	T	12.2	9
Fagaceae	Quercus velutina	Black oak	T	14.3	
Aceraceae	Acer rubrum	Red maple	T	10.0	10
Fagaceae	Quercus Quercus velutina	Red oak	T	17.4	14
Juglandaceae	Carya glabra	Pignut hickory	T	15.6	
Pinaceae	Picea abies	Norway spruce	T	13.1	
Aceraceae	Acer rubrum	Red maple	T	18.2	
Pinaceae	Pinus sylvestris	Scotch pine	T	34.4	15
	X DEAD	(Scotch pine)	T	29.4	
Aceraceae	Acer rubrum	Red maple	T	23.2	
Aceraceae	Acer rubrum	Red maple	T	39.5	20

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus serotina	Black cherry	T	22.2	10
	X DEAD	(Scotch pine)	T	31.7	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N 42.40450 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W 83.92370 (decimal degrees)

or

_____ ° _____ ' _____ " (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

2

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 0 Understory?

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1 Subdominant Overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1 Dominant overstory?
(Mixed species)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>

FOREST PLOT FORM

Plots are demarcated areas useful for studying the ecology of a forest. IFRI researchers use them to identify the trees, saplings, and herbacious matter found in the forests they are examining. By carefully determining the number and distribution of plots, IFRI researchers can hypothesize how local populations use (or misuse) forest resources. Plots, in other words, are the key link between the social and institutional data collected on most forms and the biological data collected in the forest(s).

A plot can be any geometric shape. The IFRI manual guidelines explain the methods used for circles and squares. Be sure to record the area in square meters below and describe the forest sampling methods used on Form F.

Using the Forest Plots Map drawn in the Forest Form (B1a), the field researcher should record below the Plot Identification Number that corresponds to this Forest Plot.

Research ID: 032 Country ID: 4 Site ID: 004

Date of site visit (mm-dd-yr): _____

Name of forest <FK_FOREST>: Stinchfield Woods

Plot identification number <PPIN>: 148

Date data collected for this form (mm-dd-yr) <PLOTDATE>: 10/23/10

Record the area (in square meters) of each plot below.

- x Small Plot <PAREASMALL>
- 28 Medium Plot <PAREAMEDIUM>
- 314 Large Plot <PAREALARGE>

Lot-Plot No 2: SW17-7

Name of person filling out this form: Walker DeRuy

A. CONDITIONS OF THE PLOT

A1. Describe the soil within the forest plot. (long text) <PSOIL>
Soils may be sampled in any location in the forest plot. Include a description of this sample by addressing each of the items listed below. Please refer to Tables 5, 6, and 7, and Figures 10 and 11 in Section III.A.3. of the Field Manual.

Preparation of soil sample hole:

Location of plot topographically:

Surface description and depth of humus layer:

Depth of A and B horizons:

Color/soil drainage (A and B horizons):

Texture (A and B horizons):

Hardness of soil (A and B horizons):

A2. Is there evidence of active soil erosion in the forest plot? <PEROSION>

Mark only one answer.

- (1) No
- (2) Yes, minor erosion; surface vegetation and humus layer are absent
- (3) Yes, major erosion; large gullies are present in barren soil.

A3. Is there evidence of livestock use within the forest plot? <PLIVESTOCK>

Mark only one answer.

- (1) No
- (2) Yes

A4. Is there evidence of extreme damage by insects/pests within the forest plot? <PINSECTS>

Mark only one answer.

- (1) No
- (2) Yes

A5. Is this plot located within a section of the forest that is set aside for specific forest management practices? <PLOCATION>

The answers to A5–A5b here should correlate to answers for B3–B3g on the Forest Form.

Mark only one answer

- (1) No
- (2) Yes

A5a. If yes, how many years has it been since this section of the forest was subject to a major harvesting effort?

Please use whole numbers. <PYEARS> _____ years

A5b. If yes, what is the name of this unit as listed on the Forest Form, B3g? <PMGMTNAME>

Information for the following three questions is required for each plot so eventually it may be recorded on a GIS map of the forest. Information about the species and sizes of trees may be related to the elevation of the plot, the direction toward which the plot faces (e.g., primarily south facing or primarily northeast facing), and the steepness of the plot. A *clinometer* is typically used for measuring slope (steepness) in degrees.

A6. Plot elevation in meters. <PELEVATION>: 314m 315

A7. What is the steepness of the slope in degrees? <PSTEEP> 5°

A8. If the plot is on a slope, what direction does the plot face? <P<ORIENT>

Mark only one answer.

- | | |
|----------------------------------------------|---------------------------------------------------|
| (1) <input type="checkbox"/> North | (5) <input type="checkbox"/> South |
| (2) <input type="checkbox"/> Northeast | (6) <input type="checkbox"/> Southwest |
| (3) <input checked="" type="checkbox"/> East | (7) <input checked="" type="checkbox"/> West 270° |
| (4) <input type="checkbox"/> Southeast | (8) <input type="checkbox"/> Northwest |

A9. Provide any other observations that pertain to plot conditions, e.g., tree falls, evidence of charcoal burning, fire damage, storm damage, etc. (text) <P<CONDITION>

Take note of any observed species of interest in or around the plot and be specific about its relative abundance, location, and apparent condition.

lots of coarse woody debris &
brambles.
11 ~~to~~ downed logs

A10. What is the percentage of crown cover in this plot? <P<CROWN COV> 35 %

A11. Are epiphytes <P<EPIPHYTES>

- (1) absent?
 (2) few?
 (3) abundant?

C. SHRUB, SAPLING, PALM, AND WOODY/HERBACEOUS CLIMBER INFORMATION

- C1. Record the local and botanical names of each shrub, sapling, palm, and woody/herbaceous climber found in the circle of 3-meter radius. For shrubs and climbers, record **maximum diameter** and height in metric units. For saplings, record **DBH** and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 3-meter radius. For each sapling, shrub, palm, and woody/herbaceous climber species in this area, answer the questions below. Remember that a sapling is defined as a young tree with a DBH greater than 2.5 cm but less than 10 cm.

What is the family name of this plant species?	Name of Species		Is this a shrub, sapling, palm, or climber? Write "B" for shrub, "P" for sapling, "L" for palm, "W" for woody climber. <P_TYPE>	Maximum stem diameter of the shrub or climber, or DBH of the sapling (cm) <P_DBH>	Estimated height of the shrub or sapling (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Rosaceae	Prunus AVIUM	sweet cherry	P	8.0	7
Rosaceae	Prunus AVIUM	Sweet cherry	P	8.1 9.9	12
Aceraceae	acer saccharum	sugar maple	P	8.8 9.9	10

outside ring
outside ring

D. TREE, PALM, AND WOODY CLIMBER INFORMATION

D1. Record the local and botanical names of each tree, palm, and woody climber found in the circle of 10-meter radius. For each tree, record its DBH and height in metric units. {P_INFO}

Starting at the center of the plot, create a circle with a 10-meter radius. For each tree, palm, and woody climber species in this area, answer the questions below. Remember to record only those trees with a DBH greater than or equal to 10 cm. If possible, collect a sample of each unknown species.

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
	XDEAD		T	44.3	
Rosaceae	Prunus Avium	sweet cherry	T	24	21
	XDEAD		T	32.8	
Tagaceae	Quercus rubrum	red oak	T	14.8 14.8	13
Rosaceae	Prunus serotina	Black cherry	T	24.4	25
Aceraceae	acer saccharum	sugar maple	T	10.2	11
Rosaceae	Prunus serotina	Black cherry	T	18.6	14
Rosaceae	Prunus Avium	sweet cherry	T	35.4	30
Pinaceae	Picea glauca	white spruce	T	17.4	
Fagaceae	Quercus velutina	Black Oak	T	15.1	
Rosaceae	Prunus serotina	Black Cherry	T	13	
Rosaceae	Prunus serotina	Black Cherry	T	33.3	

dead

dead

D1. Tree, Palm, and Woody Climber Information, continued

What is the family name of this plant species?	Name of Species		Is this a tree, palm, or woody climber? Write "T" for tree, "M" for palm, or "C" for woody climber. <P_TYPE>	Maximum stem diameter of the climber, or DBH of the tree (cm) <P_DBH>	Estimated height of the tree or palm (not climbers) (m) <P_HEIGHT>
	Botanical	Local			
Fagaceae	Quercus rubrum	Black Red Oak	T	19.5	
Pinaceae	Pinus densiflora	Japanese Red Pine	T	43.8	
Rosaceae	Prunus Avium	Sweet Cherry	T	27.3	
Rosaceae	Prunus Avium	Sweet cherry	T	30.4	
Rosaceae	Prunus serotina	Black cherry	T	18.5	
Fagaceae	Quercus rubrum	Red Oak	T	27	
Rosaceae	Prunus serotina	Black Cherry	T	24	

E. GEOGRAPHIC AND POSITIONING INFORMATION

If using GPS technology to collect data for this section, all GPS units must be set to the same Datum and Spheroid while collecting data across all plots. Be sure to specify in the *Site Overview Form* (Form O) which Datum is being used across all plots.

Use decimal degrees or degrees-minutes-seconds for latitude and longitude.

E1. What is the latitude of this plot? <PLATITUDE>

N42.40415 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E2. What is the longitude of this plot? <PLONGITUDE>

W83.92457 (decimal degrees)

or

_____° _____' _____" (degrees-minutes-seconds)

E3. What is the Dilution of Precision (DOP) for this position? <PDOP> _____

Please enter a decimal number from 1 to 10.

E4. What is the Estimated Position Error (EPE) for this position? <PEPE>

3

GEN. GENERIC QUESTIONS FOR USE BY RESEARCHERS

Please write your question(s) and the answer(s) where indicated below. Enter the methodology and all questions together into the database under <PWKSPMEMO>. Enter each answer into the database under the data name specified for each answer below. See Section II of the Field Manual for more detailed instructions.

Please describe why you are asking the generic questions below and/or what methodology you used to collect the data provided below. (long text) <PWKSPMEMO>

Question 1 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM1> 1

Understory?
(Pinus arinum)

Question 2 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM2> 1

Subdominant Overstory?
(Mixed species)

Question 3 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM3> 1

Dominant Overstory?
(Mixed species)

Question 4 (answer requires a whole number):

Answer to question specified by researcher (integer) <PGENNUM4> _____

Text question 1:

Answer to question specified by researcher (text) <PGENTEXT1>

Text question 2:

Answer to question specified by researcher (text) <PGENTEXT2>