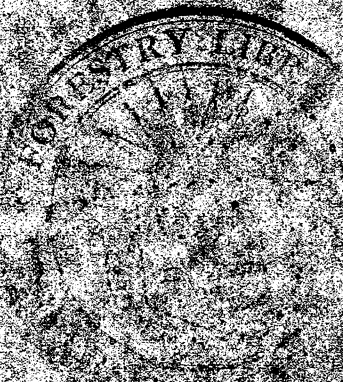


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...Food habits of the skunk
and opossum in Michigan =

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A COMPARATIVE STUDY OF THE FOOD HABITS OF THE
SKUNK AND OPOSSUM IN MICHIGAN

By

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of Science in Forestry in the University of Michigan.

INTRODUCTION

The purpose of making a study of this character is to determine the merits and demerits of the skunk (*Mephitis mephitis*) and the opossum (*Didelphis virginiana*) in regard to their food habits and to give the reader an idea as to the comparison of the food habits.

CHARACTER OF ANALYSIS

The method of study of food habits by the writer was by the analysis of feces and visceral contents. The more durable portions of food, such as hair, feathers, bones, seeds, hard parts of larval and adult insects, fruit skins, and leaves, go through the digestive tract with so little change that they can be readily identified.

The contents of the stomach and intestines of a dead animal reveal the quantity and character of its food for one day only. On the other hand, the daily droppings of a live animal for days or weeks on end give a continuous story of that animal's food through the changing seasons.

SOURCE OF MATERIAL

During 11 weeks between July 1 and September 15, Dr. Ned Dearborn, Assistant Professor of forest zoology, and graduate students Leonard Prichard and Ross Stevens, camped in eight different localities in the counties of Lenawee, Jackson, Ionia, Mecosta, Osceola, Roscommon and Crawford in Michigan. Feces of many animals were collected among them the bulk of the material analyzed by the writer.

Material is also sent in from time to time by trappers, sportsmen, etc. to the University to be analyzed. This material is usually in the form of visceral contents.

Place, Time, and Contents of Feeces and Visceral
Contents of the Skunk.

Measured in terms of cubic centimeters.

Place	Month	Insects	Fruit Mice	Birds	Cottontail	Crawfish	Skunk	Snail	Eggshell	Miscellaneous
Marion	Aug.	1	9							
Marion	Aug.	23								
Marion	Aug.	4								
Lake Odessa	Sept.	2					1			
Marion	Aug.	2	8						T	
Marion	Aug.	3								
Marion	Aug.	14								
Marion	Aug.	27								
Marion	Aug.	34								
Marion	Aug.	22	T	15	T					
Marion	Aug.	84		10						
Marion	Aug.	101	T	10			1			
Marion	Aug.	30								
Onstead	Aug.	52							1	
Onstead	Aug.	26							T	
Onstead	Aug.	25							T	
Onstead	Aug.	25							T	
Grand Rapids	Nov.			10						
Grand Rapids	Nov.	23								
Grand Rapids	Nov.		.3						15	
Grand Rapids	Nov.	60								
Grand Rapids	Nov.	225								
Grand Rapids	Nov.	65	30							
Grand Rapids	Nov.	60	10							
Grand Rapids	Nov.								125	
Leslie	Dec.	7								
Shelbyville	Nov.	10							5	
Onstead	Aug.	50							8	
Onstead	Aug.	24							10	
Onstead	Aug.	21							2	
Onstead	Aug.	25							T	
Onstead	Aug.	51							T	
										1

Table 1 (Cont'd.)

Place	Month	Insects	Fruit	Mice	Cottontail	Crawfish	Skunk	Snail	Eggshell	Miscellaneous	
Onstead	Aug.	26								T	
Onstead	July	200	24							T	
Onstead	Aug.	125		1						T	
Marion	Aug.	69	8	10						T	
Adrian	Aug.	35		1							
Marion	Aug.	40									
Marion	Aug.	31									
Marion	Aug.	62	3	T			2			1	
Ionias Co.	Sept.	126	7							1	
Ionias Co.	Sept.	100	7							1	
Ionias Co.	Sept.	195	9	1							
Ionias Co.	Sept.	215									
Ionias Co.	Sept.	220									
Ionias Co.	Sept.	250	16							T	
Ionias Co.	Sept.	196	50							1	
Ionias Co.	Sept.	190	37	26						T	
Marion	Aug.	216	1								
Onstead	July	340	T	33							
Ionias Co.	Sept.	250	1								
Adrian	Sept.	55		1						T	
Ionias Co.	Sept.	120									
Onstead	Aug.	148									
Onstead	Aug.	205	7					10			
Onstead	Aug.	232		1							
Onstead	Aug.	160									
Onstead	July	101	4	30						1	
Onstead	July	52	6	32					110	1	
Ionias Co.	Sept.	145	12	36							
Ionias Co.	Sept.	100		40				24			
Marion	Aug.	13						11			
Ionias Co.	Sept.	175	7								
Total		5478	256.9	260.6	374.4	45.0	2.0	112.0	.2	7.2	6.2

T = Trace. Trace figured as 1/5 of 1 cc. in percentages.

Table I (Cont'd.)

Summary:

Insects (5478.0 c.c.) mainly grasshoppers, beetles, and crickets.

Fruit (256.9 c.c.) as follows: Prunus pennsylvanicus 9, Highbush huckleberry 8.2, Cornus paniculatus 40.2, Ribes cynobasti 92, Black cherries 9, Wild grapes 30, Mulberries 25, Blackberries 7, Field pepper grass 4, English cherries 6.

Mice (260.6 c.c.) as follows: Microtus 222.2, Peromyscus 38.4.

Birds (374.4 c.c.) as follows: Chicken 372.4, Vesper Sparrow 2. Cottontail (45 c.c.).

Crawfish (2 c.c.).

Skunk (112 c.c.).

Snail (.2 c.c.).

Eggshell (7.2 c.c.) this was all hens egg as far as could be determined.

Miscellaneous (6.2 c.c.) as follows: Wheat 3, Horsehair 1, Bumble bees nest 1, Snake 1, Fish bones.2.

FOOD HABITS OF THE SKUNK

Sportsmen, fur men, and lovers of wild life continue to argue warmly on the subject of the relationships between fur bearers and game. At the same time, widely divergent popular views, founded at best on superficial observations, have profound influence on shaping legislation which affects these animals. Isolated facts may be marshalled to prove, for instance, that the skunk is the farmer's best wild animal friend. Another bit of evidence goes to prove this busy little fur bearer an arch enemy of game birds and domestic fowls.

As demonstrated by Table 3 almost 87% of the diet of the skunk is either insects or mice, both of which are very destructive to agricultural practice. Under these conditions an animal should not be wantonly destroyed just because some member of the species eats an occasional chicken or egg.

It is true that under certain conditions some skunks may become habitual chicken thieves but these cases are not prominent and the destruction of the ones that are doing the damage and leaving the rest seems to be the best solution.

Next to the muskrat (*Ondatra zibethia*), the skunk is the most valuable fur bearer in the state of Michigan. Misleading information has caused the skunk to be put in the predatory animal list at a loss of thousands of dollars annually to the trappers and farmers.

Table 2.

Time and Contents of Feeces and Visceral Contents of
Opossum
Measured in Terms of Cubic Centimeters

Place	Month	Insects	Fruit Mice	Birds	Cottontail	Crawfish	Opossum	Snail	Egg	Shell	Misc.
Burr Oak	Nov.	T	45	115				3			
Shelbyville	Nov.		12	15				3			
White Pigeon	Nov.		3	60					1		
Shelbyville	Nov.		15	63				102			
Burr Oak	Nov.		9	7				115			
Burr Oak	Nov.	3									
Blissfield	July					23					
Blissfield	July	1				24					
Blissfield	July				3						
Blissfield	July	1				6					
Blissfield	July	7									
Burr Oak	Nov.	2	27								
Southern Mich.	Nov.		5								
Southern Mich.	Nov.		5		4						
White Pigeon	Nov.	1	49		5						5
Southern Mich.	Nov.		102	9							
Southern Mich.	Nov.	2	7								
Burr Oak	Nov.	1	9	2	2						
Southern Mich.	Nov.		46	1							6
Coldwater	Nov.	1	7								1
Shelbyville	Nov.	78									5
Burr Oak	Nov.	1	49	1	32						
Southern Mich.	Nov.		18					20		2	
Burr Oak	Nov.		11								
White Pigeon	Nov.	1	13								
Southern Mich.	Nov.	13	4								
Branch	Nov.		4								4
Branch	Nov.	28	6	96							1
Branch	Nov.	7	4					6			
White Pigeon	Nov.	8	3								
Totals		155.2	453	27	369	46	53	243	13	1	17

T = trace. Trace figured as 1/5 of 1 c.c. in percentages.

Table 2 (Cont'd.)

Summary:

Insects (155.2 c.c.) almost entirely grasshoppers, beetles, crickets, and large caterpillars.

Fruit (453 c.c.) as follows: Frost grapes 432, Black cherries 9, Choke cherries 1, Unidentified fruits 11.

Mice (27 c.c.) all microtus.

Birds (369 c.c.) as follows: Mallard duck 96, Chicken 263, Brown thrasher 1, Wilson snipe 7, Unidentified bird remains 2.

Cottontail (46 c.c.).

Crawfish (53 c.c.).

Opossum (243 c.c.).

Snail (13 c.c.).

Egg Shell (1 c.c.) chicken.

Miscellaneous (17 c.c.) as follows: Sorex personatus 5, Snake 7, Frog 5.

FOOD HABITS OF THE OPOSSUM

The opossum does not have as bad a reputation with the general public as the skunk, yet according to the data in Table 3, he is not as desirable an animal. He eats only about 1/7 as many insects and over four times as many birds including poultry and ducks. He seems to be exceptionally fond of fruits, especially grapes.

As the tables demonstrate, both the opossum and the skunk are inclined to be cannibalistic at times and devour large portions of flesh of their own respective species.

Table 3

Comparative Food Habits of Skunk and Opossum in Michigan

	Total Amount Analyzed in C.C.	Per Cent of Total Amount Analyzed										
		Insects	Fruit	Mice	Birds	Cottontail	Crawfish	Skunk	Opossum	Snail	Eggshell	Misc.
Skunk	6542.5	83.7	3.9	4.0	5.7	.7	X	1.7	0	X	.1	.1
Opossum	1367.2	11.3	33.6	1.1	26.9	3.3	3.9	0	17.7	.9	X	1.2

X = less than .1 of 1%.
 Birds include barnyard fowls in the tables.

4/5/66 =

CONSERVATION AND CONTROL

The most ethical manner of conserving these useful animals and still keep them from becoming too abundant is to protect them and have an open season on them when their fur is prime. It is understood of course that any fur bearer which is doing damage to property may be disposed of at any time of the year. This is the system adopted by Missouri and it seems to work out satisfactorily to all concerned.

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