

Iris Versicolor.

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IRIS VERSICOLOR.Localities Studied.

Shores:

Burt Lake.
 Ingleside.
 Sedge Point.
 Maple River.
 Shore of Douglas Lake in Maple River Cove.

Bogs:

Mud Lake Bog.
 Lancaster Lake.
 Smith's Bog.

Description of Plant.

Iris versicolor is a perennial herb growing in damp or moist situations. It has a thickened, subterranean stem, somewhat branching. The average length of the rootstock is sixteen decimeters. The rootstock on the outer surface appears to be segmented. The entire rootstock is covered with transverse lines a short distance apart. Joined to these transverse lines are short hair-like structures, closely appressed to the rootstock, and pointing toward the beginning of the rootstock rather than toward the apical end. The roots extend outward and downward from the rootstocks. Near the tip, the roots are covered with fine hairs that extend outward at almost right angles to the root.

The showy part of the plant consists of the leaves, flowers, and fruits.

The leaves are flat, sword-shaped, light green, parallel-veined and smooth. They are held in a vertical position by their sheathing bases. Thus, the light penetrates to their very bases, allowing photosynthesis to be carried on throughout the entire length of the leaf.

The flowers are perfect, having three large, showy divisions. The whitish flower is beautifully veined with deep violet and tinted at the base with yellow. They have three distinct stamens and a single style, usually three-clefted.

The fruit is a long, three-lobed, many-seeded capsule. The capsule is more or less triangular, firm, sub-cylindrical, and stout beaked.

Different Habitats.

Iris versicolor is found in the more or less protected places along the shores of Douglas Lake and Burt Lake. It is also found on the edges of, and on the hummocks in the beach pools at Sedge Point. *Iris* is found growing in more or less boggy regions; such as: along the edges of Lancaster Lake and of Smith's Bog.

At Mud Lake, the *Iris* has entirely disappeared. This is probably due to being crowded out by other plants; such as: *Typha latifolia* which is invading the spot where *Iris* had in previous years been found.

Iris versicolor thrives best along the shores of well-drained lakes where there is protection from wind, waves, ice, and sand. The most *Iris* found was along the shore of Burt Lake (north side) and the shores of Douglas Lake at Ingleside and Maple River Cove. Some *Iris*, but not very much, was found on the edges of the bogs of Lancaster Lake and Smith's Bog.

The size of the plants growing along the shores and those growing in the bogs do not differ greatly as is shown in the table on page nine. The leaves of the *Iris* found in the bogs were on the average narrower than those of the shore plants. As to height and width of the leaves, the bog and shore plants varied from about three decimeters to twelve decimeters in height, and from seven-tenths centimeters to two and eight-tenths centimeters in width.

The rootstock of *Iris versicolor* was found at depths varying from one-half decimeter to almost two decimeters below in the soil, and from one centimeter to almost four decimeters below the water level in water.

Effect of Ice, Waves, Sand, and Wind.

Iris versicolor does not grow where there is much ice or wave action because ice and wave action would break and destroy the rootstocks. If there were a great deal of wave action during the growing season, the leaves and flower branches would be destroyed before they really got started in growing.

Iris grows where there is protection from very strong winds because strong winds would break the leaves, and the flowering and fruiting parts of the plants; thus, destroying the new production of *Iris* plants.

Where sand is piling in, the rootstocks of the *Iris* are killed.

Fruiting Places.

The best fruiting places were found among the *Iris* growing along the shores. At Burt Lake there was a great abundance of fruiting on the *Iris* plants during the first week of July. Along the shore of Douglas Lake at Maple River Cove, there was considerable amount of fruit found July nineteenth.

In the bog at Lancaster Lake there was very little fruiting. AT Smith's Bog there was some fruiting but all of the fruits were very small.

There was very little fruiting at Sedge Point.

Rootstocks.

Where sand is piling in over the rootstocks, the rootstocks are decaying.

Where the rootstock is in the water, it is soft but it has not decayed.

There is no difference in the structure of the rootstock except that the epidermis of those growing in the bogs have thicker walls in the epidermal cells than the shore plants.

Summary.

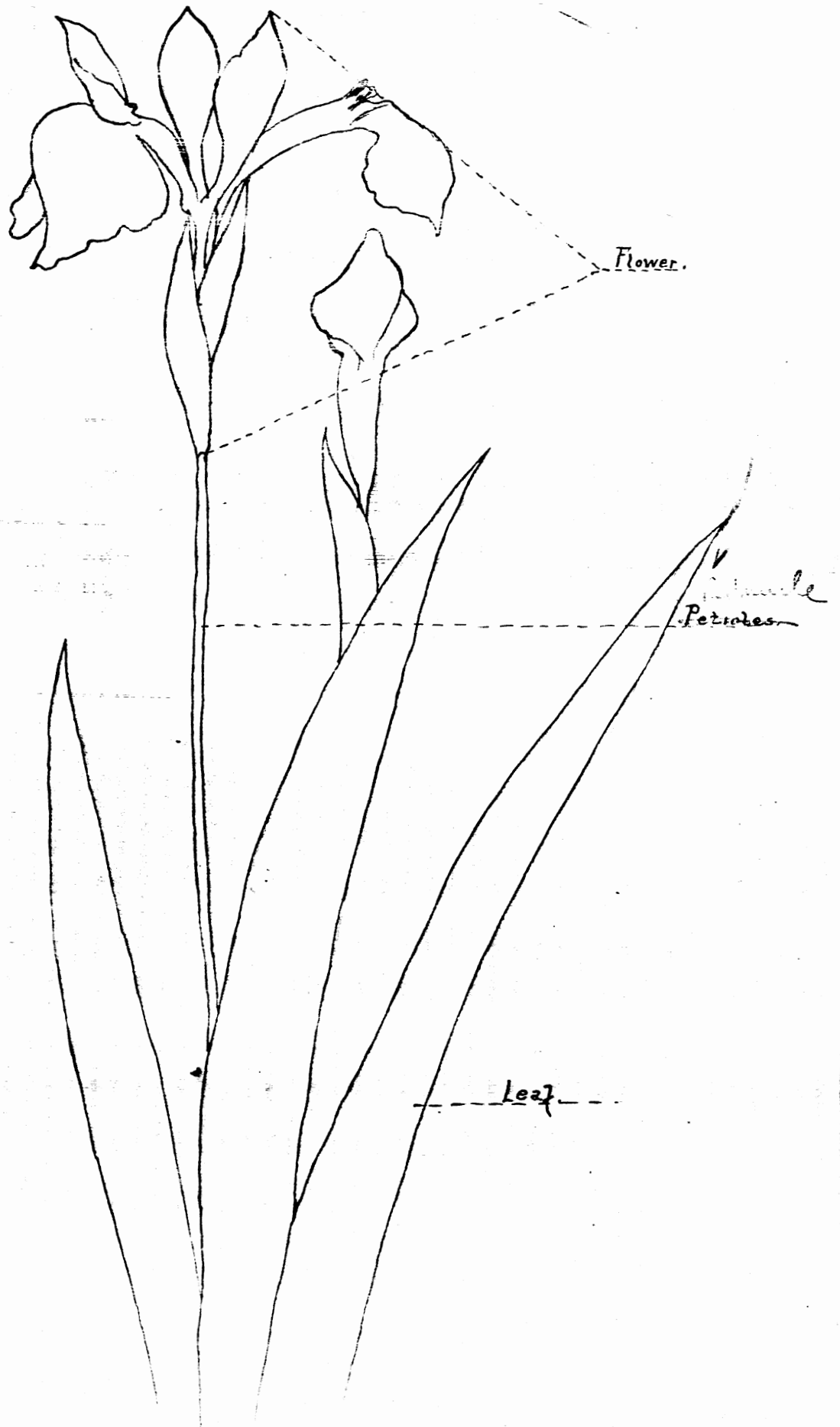
Iris versicolor grows along well drained lakes and beach pools, and in bogs. The most luxuriant growths are found along shores where there is protection from ice, waves, wind, and sand. There is no difference between the plant growing in the bog and those growing along the shore with one exception; namely: the epidermis of the rootstock of the *Iris* growing in the bogs has thicker cell walls than the epidermis of the rootstock of the *Iris* growing along the shores of drained areas.

SIZE OF PLANTS.

ALONG SHORE.

Place.	Height of leaves.	Width of leaves.	Depth of root system.
Burt Lake.	3 dm.- 10 dm.	1 cm.- 2.5 cm.	Average 18 cm.
In soil.			
Dodge Point.			
In soil.	3.5 dm.-8.5 dm.	1 cm.- 2.5 cm.	Average 9 cm.
In water.	4 dm.- 9 dm.	1 cm.- 2.4 cm.	0cm.- 9 cm.
Inglerside.			
East of	4 dm.- 11.5 dm.	.9 cm.- 2.8 cm.	Average 18 cm.
West of	5.8 dm.- 11.1 dm.	1.2 cm.- 2.7 cm.	" 12 cm.
Maple River.			
In water.	4.6 dm.- 7.4 dm.	.8 cm.- 2.2 cm.	5.7 cm.- 15 cm.
In soil.	6 dm.- 9.9 dm.	1.8 cm.- 2.5 cm.	2 cm.- 10.5 cm.
Along shore of Douglas Lake in Maple River Cove.			
In water.	4.5 dm.- 10.6 dm.	1 cm.- 2.2 cm.	1 cm.- 18 cm.
In soil.	4.2 dm.- 11.2 dm.	1.3 cm.- 2.8 cm.	Average 9 cm.
BOG.			
Lancaster Lake.			
In soil.	4 dm.- 12 dm.	.9 cm.- 2.5 cm.	5 cm.- 18 cm.
Smith's Bog.			
In water.	6.7 dm.- 10.1 dm.	.7 cm.- 2.4 cm.	7.5 cm.-36.5 cm.
In soil.	3.6 dm.- 7.2 dm.	.8 cm.- 1.9 cm.	Average 15 cm.

IRIS VERSICOLOR.



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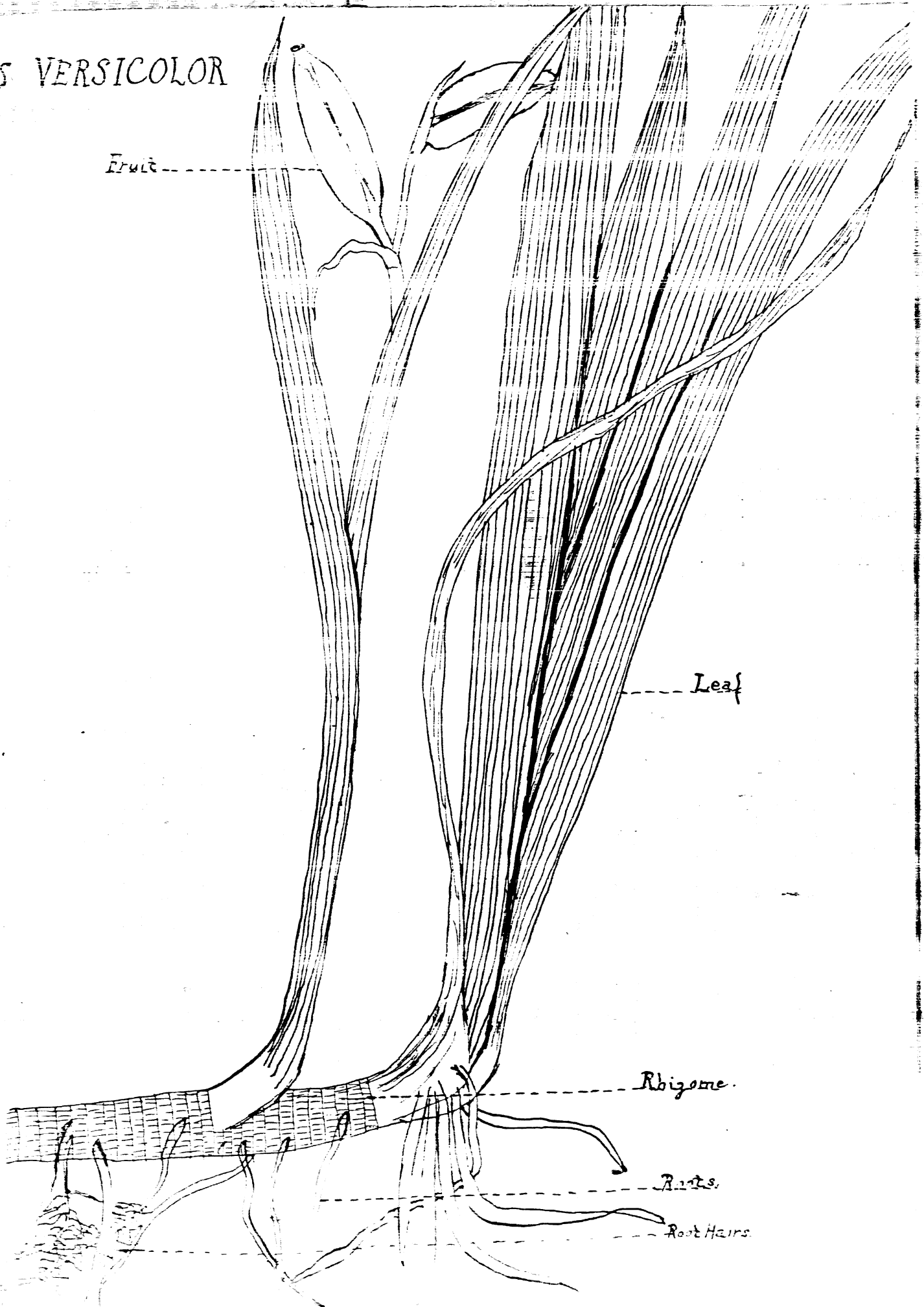
Fruit

Leaf

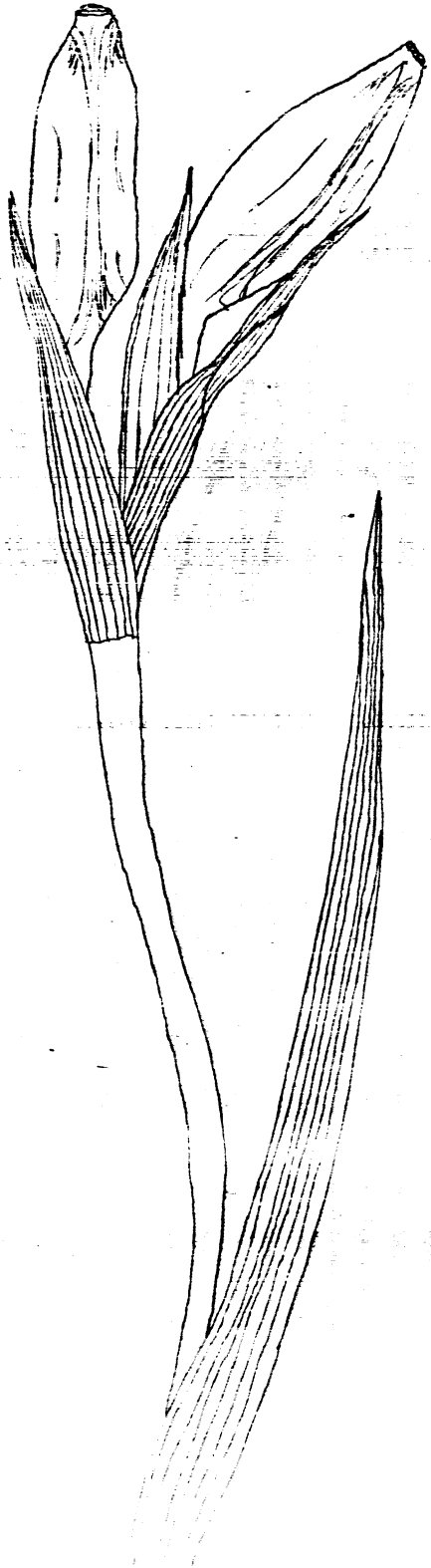
Rhizome

Roots

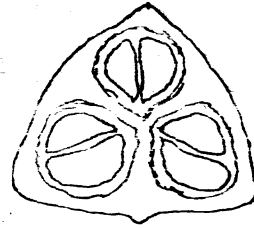
Root Hairs



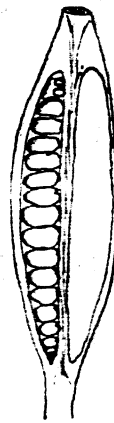
FRUIT



Cross Section.

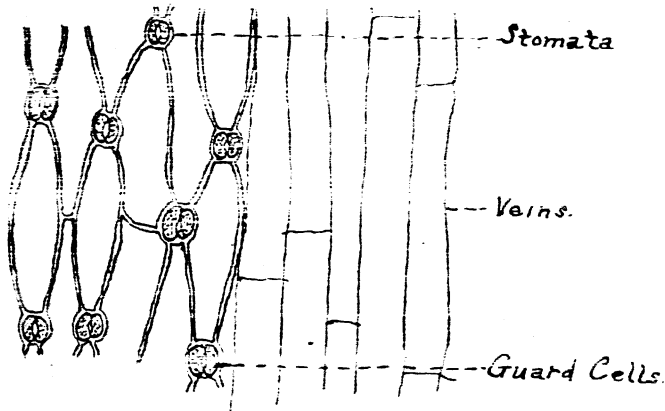


Longitudinal Section.

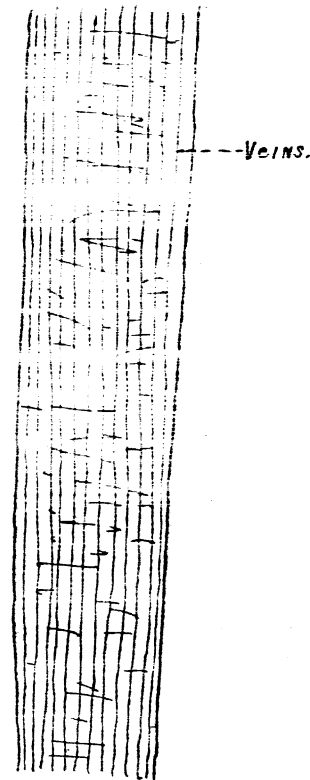


LEAF

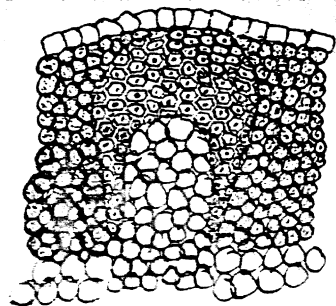
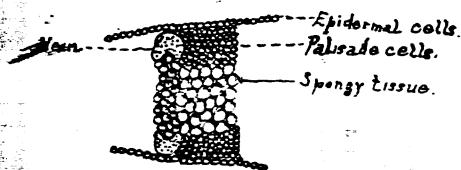
Epidermis of Leaf.



Longitudinal Section.

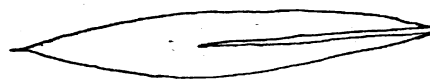


Cross Sections.

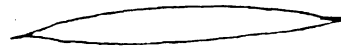


Cross Sections.

Near Base of Leaf.

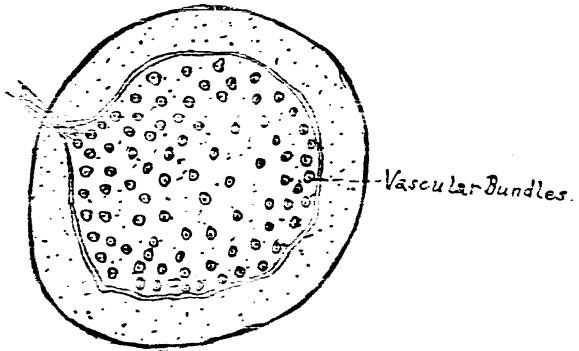


Top of Leaf.

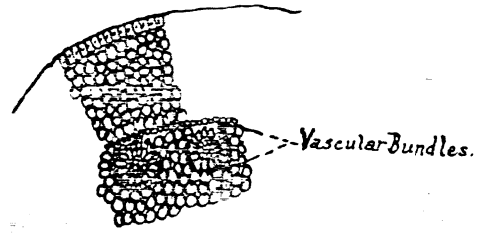


RHIZOME

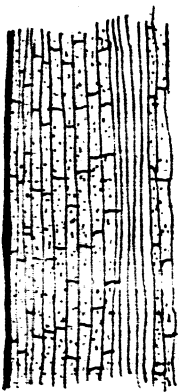
Cross Section.



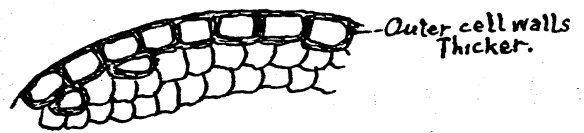
Cross section



Longitudinal Section.

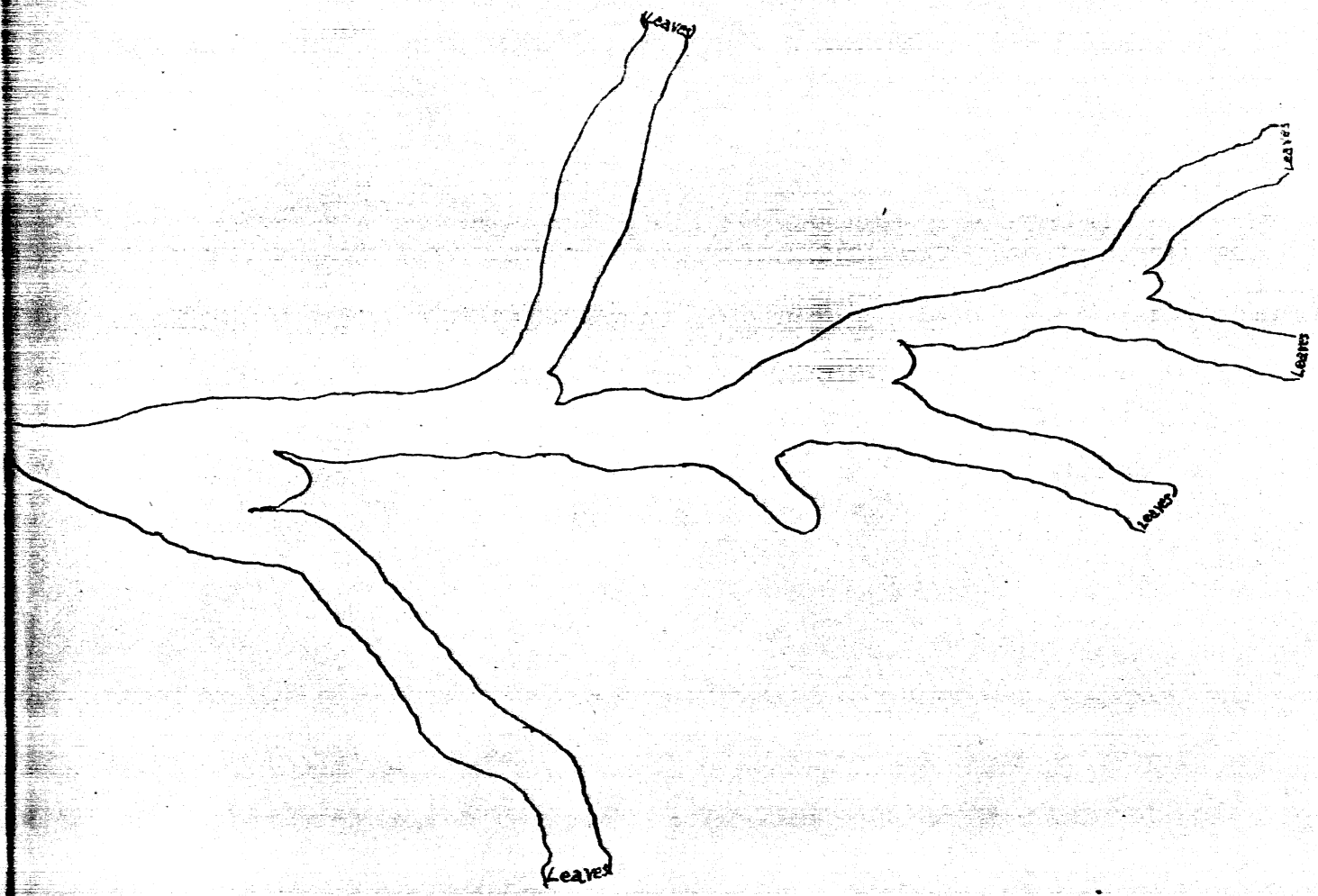


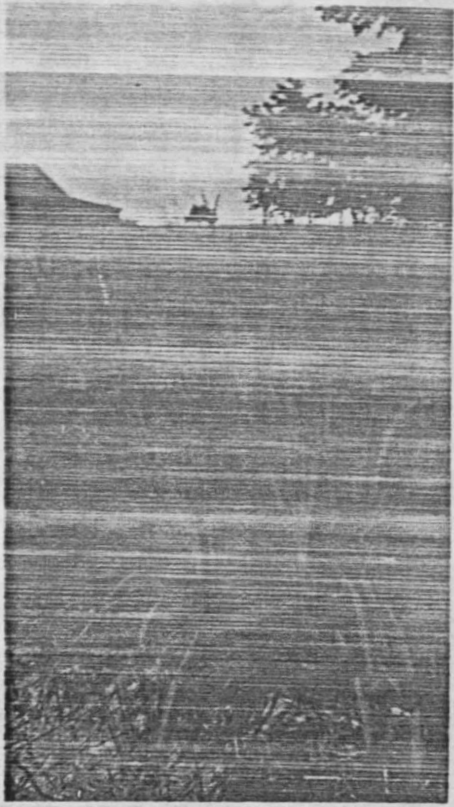
Cross Section --- Bog Type Rhizome.



Top View of Rhizome.

Diagram.

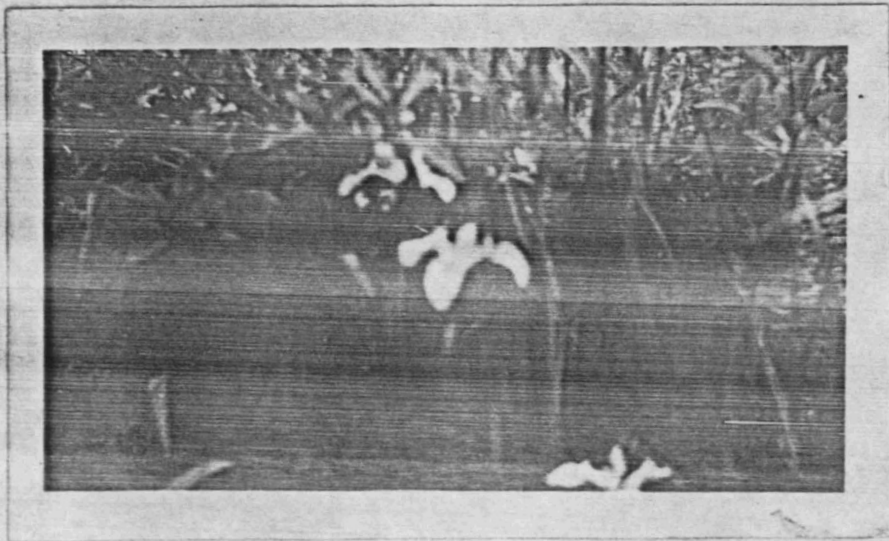




East side of Ingleside.



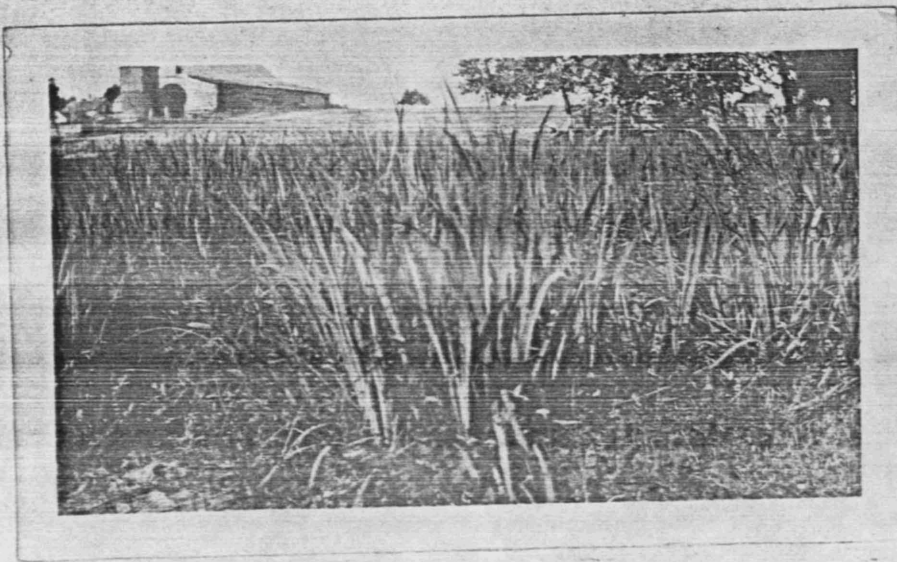
East side of Ingleside.



Burt Lake (North side.



Lancaster Lake.



Ingleside.