

SURVEY OF TREES AND SHRUBS OF MORGAN COUNTY.

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INTRODUCTION.

Since 1922, a few students under the direction of Dr. Isabel Seymour Smith of Illinois College, Jacksonville, Illinois, have been working on a survey of the trees of Morgan county. Careful work on the subject was begun by Mr. Glenn Riley during the college year 1921-1922. Mr. Riley left considerable data which he has kindly passed on to Miss Glenna V. Smith of the class of 1925 and to myself. We have repeated Mr. Riley's work and have gone to different locations in some cases. Typical wooded areas of the county were selected in order that characteristic trees of the county would be included.

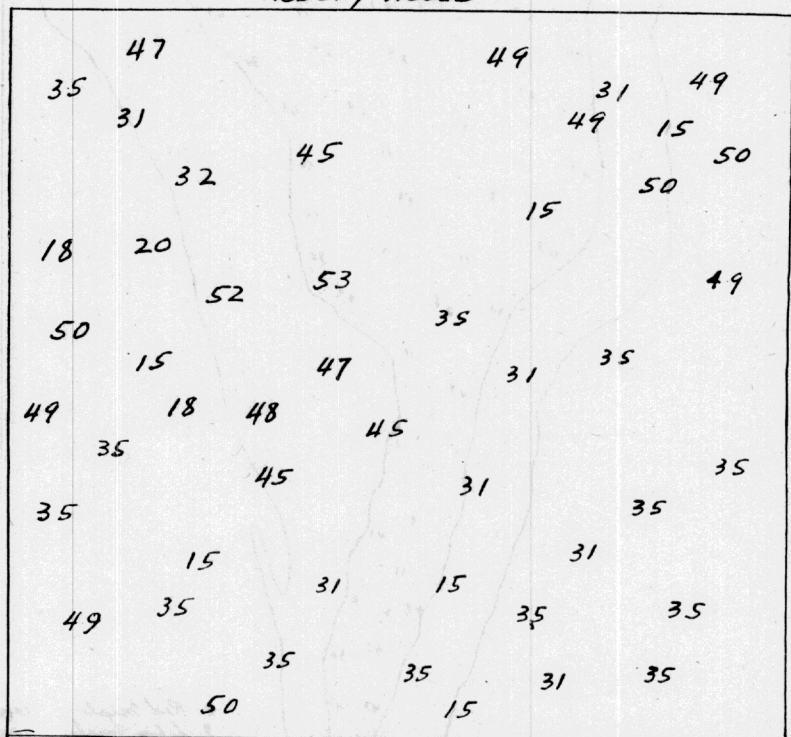
The soil is largely humus, providing little chance for variety in trees. Near the Illinois River there is much sandy soil—former river beds.

In addition to studying the location and classification of the different trees other things of interest were noted and these will be brought out in the discussion.

MEREDOSIA ISLAND.

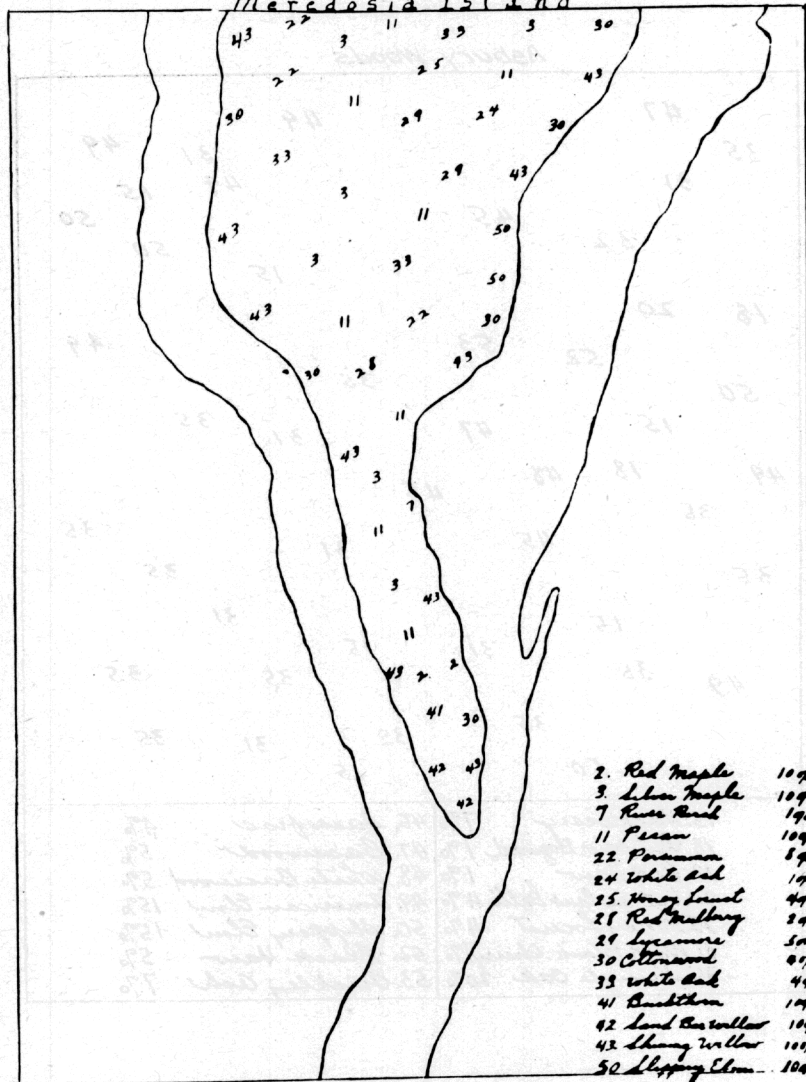
This piece of land in the Illinois River appears to be an island, but in reality it is a peninsula. It is a typical flood plain. The southern part of the island was low and due to heavy rains was partially covered with water. At the time of our first trip, October 11, 1924, the greater part of the island was submerged. On a point of sand, covered by water, were found the sand bar willow and the shining willow. This represented the primitive succession. Near the shore there was a dense thicket of buckthorn and an occasional river birch. The red maple, slippery elm, cottonwood, honey locust, sycamore, with an occasional silver maple formed the climax forests of the bottoms. Latest of the succession and on the highest point of the island was an abundance of pecan trees and a few white oaks. Besides these there were occasional mulberries, persimmons, and white ashes. Both

Asbury Woods

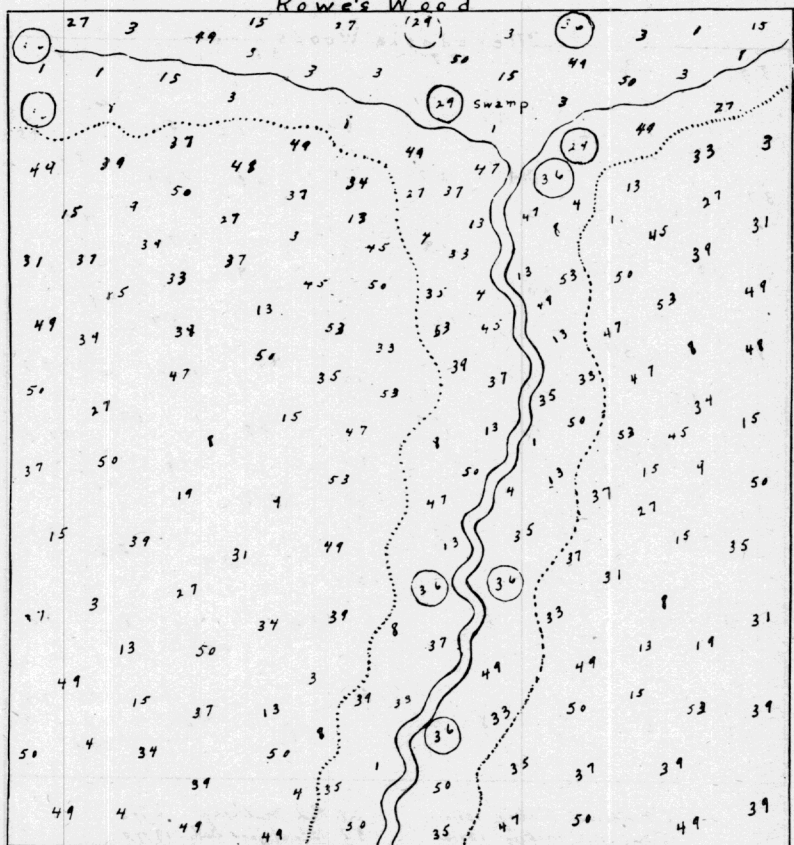


15. Hackberry	7%	45. Sassafras	4%
18. Red Osier Dogwood	1%	47. Basswood	5%
19. Red Haw	1%	48. White Basswood	5%
20. Crotagus Crus Galli	4%	49. American Elm	15%
25. Honey Locust	4%	50. Slippery Elm	15%
31. Wild Black Cherry	7%	52. Black Haw	5%
35. Shingle Oak	20%	53. Pickley Ash	7%

Mercedosa Island



Rowe's Wood



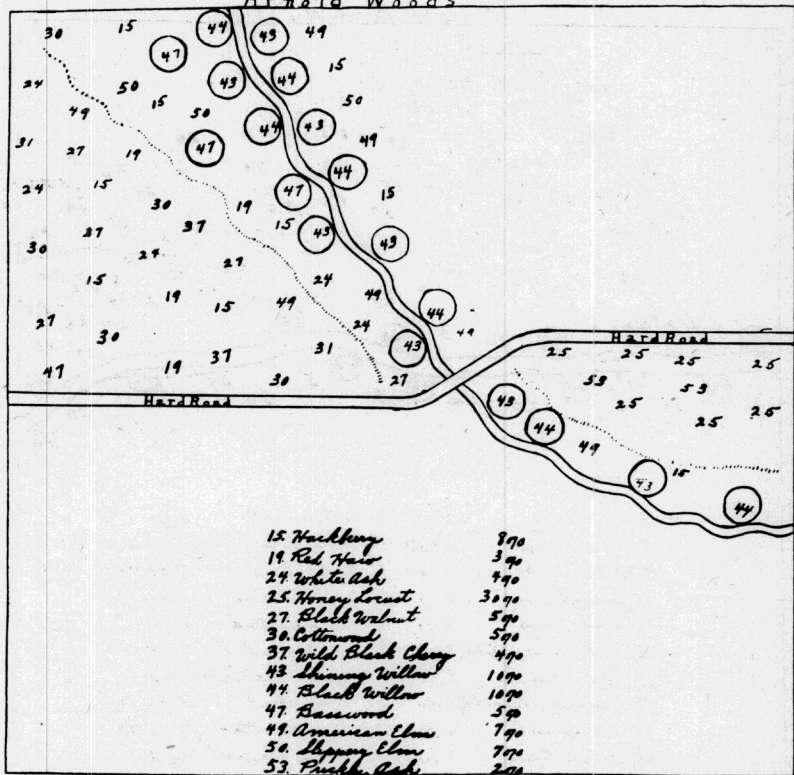
1 Box Elder	270	27 Black Walnut	49	39 Red Oak	770
3 Silver Maple	390	29 Sycamore	570	45 Basswood	370
4 Sugar Maple	270	31 Wild Black Cherry	570	47 Basswood	470
8 Buckhorn Hickory	570	33 White Oak	670	48 White Basswood	370
9 Bitternut Hickory	470	34 Swamp White Oak	570	49 American Elm	670
13 Shagbark Hickory	570	35 Chingle Oak	670	50 Shaggy Elm	670
15 Hogcherry	370	36 Bur Oak	570	53 Pinch Oak	270
19 Red Haw	270	37 Black Oak	770		

Meredosia Woods

37	37	37	37	37	37
	8	1	49	44	12 50 40 25
		40	39	27	40 28 34 34
37	1		12		
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		13			40 37
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					49

8 Mockernut Hickory	10.70	28 Red Mulberry	4.70
12 Am. B. Hickory	12.70	37 Black Jack Oak	13.70
13 Shagbark Hickory	10.70	39 Red Oak	10.70
15 Hackberry	7.70	40 Black Oak	10.70
17 Dogwood	2.70	47 Basswood	3.70
25 Ironwood	4.70	49 American Elm	5.70
27 Black Walnut	5.70	50 Slippery Elm	5.70

Arnold Woods



elms and silver maples appeared showing telescoping of succession.

Years ago the water plants in the ponds of the Illinois River basin were varied and abundant. Now they have almost entirely disappeared because of the draining of the ponds in the reclaiming of the land.

SAND RIDGE WOODS.

East of the Illinois river and about one-half mile from the shore was another native woods. The soil was very sandy and was mixed with a little humus, indicating that this region had at one time been the river bed. In the open were found the prickly pear, the sand bur, the earth star, and other sand vegetation. The woods itself was a typical oak-hickory forest. On the outskirts were many black jack oaks. These represented the most primitive succession. The remainder of the forest, the climax forest, was made up almost entirely of hickories and oaks. These consisted of mockernut hickory, kingnut hickory, shagbark hickory, red oak, and black oak. Associated with these were the American elm, slippery elm, basswood, black walnut, honey locust, and hackberry. The red osier dogwood and elderberry were also found frequently.

A very interesting feature of these woods was that the Indian pipe (*monotropa uniflora*) and *ammita verna* were found.

ROWE'S WOODS.

The trip to Rowe's Woods was made on October 24, 1924. This is a tract of twenty acres about three-fourths of a mile north of Jacksonville, Illinois. A valley extends through the woods. A little stream, a branch of Mauvaisterre Creek, flows through the valley. On the north side of the woods is a low, marshy, tract which appears to be an old creek bed. In studying the trees we found four environments; those on the high, level land, on the slopes, in the valley and in the swamp.

The most abundant trees in the woods were the American elm, slippery elm, black oak, bur oak, red oak, black walnut, and hackberry.

The trees found on the high, level land were the American elm, slippery elm, black oak, black walnut, red oak, hackberry and wild black cherry. On the slopes were the white basswood, American elm, slippery elm, white oak, hard maple, black oak, shagbark hickory, red oak, black walnut, wild black cherry, bitternut hickory, and swamp white oak. Those found in the flood plain were American elm, slippery elm, shingle oak, hard maple, black oak, red oak, mockernut hickory, bur oak, shagbark hickory, white oak, basswood, sassafras, box elder, and black walnut. The shrub, prickly ash, was also abundant. In the marshy district were the silver maple, American elm, slippery elm, sycamore, red haw, hackberry, box elder, mockernut hickory, papaw, black walnut, and bur oak.

This woods is one of the finest examples of early spring flora, since the owner has never used it for grazing purposes.

MARKHAM WOODS.

This woods is along Mauvaisterre Creek about one-half mile north of Markham, Illinois. It extends along the bank and up over a steep, rather sandy bluff. Thus we have the flood environment near the dry bluff environment. Trips were made to this woods on November 7, 1924, and on May 8, 1925, so that a thorough survey was made.

The trees may be studied as to succession by starting with those on the edge of the creek and going to the top of the bluff.

Beginning at the edge of the creek were black willows, many of which were twenty to twenty-five feet in height. Next to the willows were the silver maples, closely followed by an abundance of white ash, cottonwood, sycamore, and box elder. At the edge of the bluff were hackberry, slippery elm, (American elm, and honey locust. Continuing up the bluff were the trees and shrubs accustomed to drier environment. These consisted of the redbud, red haw, white oak, white basswood, red osier, dogwood, crataegus crus galli; wild black cherry, bur oak, bitternut hickory, persimmon, red mulberry, black haw, and butter nut. Near the top of the bluff and extending

up on the level were the yellow chestnut oak, shingle oak, red oak, slippery elm, American elm, and crab apple.

ASBURY WOODS.

This woods, occupying an area of about ten acres, is four miles south of Jacksonville. The land was rather rolling but no streams were flowing through it.

An abundance of oaks and elms was the prominent feature of the woods. The shingle oak was the most numerous with a great number of American and slippery elms. Then came the honey locust, hackberry, wild black cherry, sassafras, basswood, and white basswood. Associated with these and fewer in number were the red haw, black haw, prickly ash, *crataegus crus galli*, and red stemmed dogwood.

Apparently some trees had been removed since the woods was not dense but there were no indications to show that it had been done lately.

ARNOLD WOODS.

The trip to this woods was made on October 25, 1924. The woods, one-half mile east of Arnold, Illinois on the state road, is divided by the viaduct of the Wabash railway. A small stream flows through the center of the tract. Nearest the stream and most primitive in the succession were the shining and black willows. Next came the hack berry, slippery elm, box elder, American elm, and basswood. Then extending up the small slope were the black walnut, white ash, red haw, wild black cherry, cottonwood, black locust, and white basswood.

On the opposite or south side of the road and on higher, better drained land was a two acre grove of honey locust. These trees were growing very close together, tall and straight. The prickly ash was found occasionally in this grove.

In the fall this woods is gorgeous, since many of the trees are covered with shrubby bittersweet (*celastrus scandens*).

GRAVEL SPRINGS WOODS.

This is a large and interesting woods along Mauvais-terre Creek about five miles north-west of Jacksonville,

Illinois. The land is cut up by deep ravines from which gush natural springs of excellent water sold commercially as Gravel Springs Water. Years ago some slopes in this wood were literally covered by the maiden hair fern. Now very few specimens remain. When the trip was made to this woods, *Marchantia polymorpha* and *Ricciocarpus revoluta* were found on the flood plain.

Since I have no slide of this woods, the names of the trees for each part will be given with special emphasis on those found only in this woods.

On the flood plain were found the white willow, cottonwood, butternut, white oak, slippery elm, hackberry, red mulberry, silver maple, and red maple.

On the slopes were the pignut hickory, American hop hornbeam, water beech, shingle oak, slippery elm, American elm, hackberry, and red mulberry.

On the high level land were the black walnut, shag-bark hickory, kingnut hickory, white oak, red oak, black oak, American elm, wild apple, honey locust, bladdernut, *Amelanchier virginica*, red haw, wild black cherry, silver maple, sweet buckeye, basswood, white ash, and green ash.

The trees characteristic to this woods only were the white willow, (*Salix fragilis*), American hop hornbeam (*Ostrya virginiana*), water beech, (*Carpinus caroliniana*), wild apple (*Pyrus angustifolia*), bladdernut (*Staphylea trifolia*), *Amelanchier canadensis*, and the green ash (*Fraxinus pennsylvanica* var. *lanceolata*).

CONCLUSION.

There were forty-five different species of trees and fourteen different species of shrubs found. The formations were chiefly flood plain together with the slopes and level land. The forests were chiefly oak-hickory with an abundance of elms. On the sand near the Illinois River we have conditions very similar to dune conditions.