THE ORIGINAL VEGETATION
OF
PICKAWAY COUNTY, OHIO

A Thesis Presented for the
Degree of Master of Science
by
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Approved by:
Acknowledgment

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Purpose and Scope

The primary purpose of this thesis is to locate as accurately as possible the original vegetation of Pickaway county, particularly forest types and prairie areas. Since the topography of the county in general is comparatively level and the land is so valuable for agricultural purposes, the original forest cover has been removed until little more than remnants remain. The chief source of information east of the Scioto river has been these forest remnants, the statements of the older inhabitants of any particular locality, Howe's "Historical Collections", Williams Bros' "History of Franklin and Pickaway Counties", and the writings of Caleb Atwater an early Ohio historian who lived for a number of years in Circleville, county seat of Pickaway county.

For that part of the county west of the Scioto, besides forest and prairie remnants, an almost invaluable source is found in the original survey records of the Virginia Military Lands. Here we get the original forest types and prairies almost by farms.

Besides forests and prairies noted and investigated, several separate areas were given special attention. One of these is a marsh known as Stage Pond, located in Walnut township. Another marsh is located at the junction of the Jackson pike and the Pennsylvania railroad in Wayne township. Both contain remnants that are there only because the topography of the land is such that they cannot be conveniently drained for agricultural purposes.

The third area given special consideration is a large "ket-
tle hole" northwest of Circleville in Circleville township. Un-
til recently there was a series of "kettle holes", but the small-
er ones have been destroyed and the large one is being filled
with dirt, due to the activities of a gravel company. This hole
is known locally as the Devil's Pot. It seems but fitting that
a record of some of the vegetation in this famous formation be
preserved, since its disappearance seems to be but a matter of
a few years.

East of Duvall in the northern part of the county there are
several swamps that have yielded a few species found nowhere
else in the county. West of Duvall is rather a large tract of
black soil that would seem to indicate an extensive pre-historic
prairie. Around the edge of this were found a number of prairie
species.

Besides these, lists were made from a few isolated spots.
The general surface of the County is comparatively level and constitutes a part of the smooth and unbroken country that stretches away to the north and west through a large number of countries. The valley of the Scioto becomes in Pickaway county wide enough to include nearly all of the County. No high, rough hills border the river; but in the distance, especially on the east, we find a somewhat elevated horizon as the lowlands gradually pass by beautiful uninulations into the highlands which divide the waters of the Scioto from those of the Hocking. It is among these gentle hills that we find the finest scenery of the County.

The whole County is covered with drift, and everywhere can we find in gravel or bowlders evidences of an agency which has wrought foreign materials and scattered them over the surface. The bowlders are composed of granites, diorites, quartzites, etc., which have come from the region north of the lakes. Occasionally a limestone bowlder is seen and much of the drift gravel is composed of the same material. The whole surface of the county presents the appearance of having been once the bed of a shallow sea, for the gravel and sand show ripple marks and other modifications such as water only could produce. The bowlders were, as I think, dropped from floating ice. They are seen almost everywhere, but perhaps more along the eastern edge of the County, especially in Saltcreek Township. (Then follows a description of the Saltcreek valley).
The soil of Pickaway County is of great fertility and is probably the richest county, agriculturally considered, in the Second Geological District. The alluvial lands along the Scioto River, Darby and Deer Creek are remarkably rich, while the terraced plains, with their limestone gravels are scarcely less so. On the uplands the soil is also good. So far as I have seen there is less waste land than in any County in the District. Indian corn is, perhaps, the staple crop, and in summer we may ride for miles with scarcely a break in the continuity of the cornfields. With such soil, with clear and beautiful streams, and with such a fine climate, the farmers of Pickaway County have a "goodly heritage", and may consider themselves well compensated for the want of the more important minerals.

GEOLOGICAL FORMATIONS

The leading features of the Geology of the County are simply and easily understood. The Waverly sandstone, Corniferous limestone, and Huron shale are all found within the County. (Then follows a discussion of the various formations)

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The underlying rock strata of the county are too deeply buried to exert any fertilizing (???) effect upon the surface soils. (Rather an interesting observation, considering the date). The soil derives its peculiar fertility from the calcareous nature of the Drift materials and from the rich alluvial deposits that border the streams. Such soil is alone a noble endowment for the county. Coals and ores must in any locality be exhausted in time, but the soil of Pickaway, with proper tillage, will be a perpetual source of prosperity and wealth".
Topography of Western Pickaway County

The topography of western Pickaway county is marked by as narrow a range of elevations as perhaps almost any county in the state. The lowest point is in the central part of the county the Scioto river. The elevation increases slightly from south to north. The lowest point according to the United States Geological Survey is in Wayne Township near Westfall, 653 feet. In Scioto Township in the north-central part of the county, near the Scioto river, the elevation is given as 680 feet. Accordingly the Scioto is very sluggish.

Westward from the river there is a gradual elevation but nothing compared to that reached in going like distances east of the river. In going from Circleville, on the Scioto, to New Holland, near the western line, by a road as nearly straight as can be found in western Pickaway, we ascend just 200 feet, from 660 to 860 feet. In the northern part of the county the ascent from the Scioto river directly west on the Franklin-Pickaway line to its junction with the Madison county line is from about 700 feet to 900 feet, a rise of 233 feet.

This western area is drained by two tributaries to the Scioto, Deer Creek in the south and west and Darby Creek in the north and east. The most abrupt changes in topography occur along these streams. Numerous "high banks" may be found there where one of these streams has swung to one side of its valley or the other.

There is little more to be said as to topography. The stream valleys are comparatively narrow and a short distance back from the streams the elevations never vary more than 100 feet. This
gives a very level aspect to the topography. Naturally the drain-
age is poor except along the streams and there were originally
many places that stood under water most of the year.
The western part of Pickaway County belongs in what was originally the Virginia Military Tract. As the Revolutionary war was conducted by the colonies individually, as well as by their united efforts, each colony sought to induce enlistment of troops by whatever means it possessed. Virginia owned much unsettled land southeast of the Ohio river and proposed in 1779 and also in 1780 to give to each officer, soldier or sailor who would serve in the army or navy to the end of the war or to their heirs or legal representatives of any slain, or to their heirs or assigns unappropriated land ranging in amounts from 100 acres for a soldier or sailor serving less than three years in the war up to 15,000 acres for a Major General. When in 1783 Virginia ceded all claims to lands northwest of the Ohio river to the United States, she provided that, in case she did not have sufficient land southeast of the Ohio to satisfy her troops with army bounty warrants, which she had promised them, that such deficiency would be made up in land between the Scioto and the Little Miami rivers.

The grants in Pickaway county varied in amounts from several hundred to several thousand acres. The tracts were granted as "surveys" and without regard to east-west or north-south lines. Reference to a map of the country west of the river will reveal something resembling a patchwork quilt. The generally level topography of the country permitted the location of roads almost anywhere. And they were located "almost anywhere" without regard to where they started or ended. This makes it difficult to locate places by the cardinal points.
Little did Virginia know of the destined wealth of the domain which she cut out of the heart of Ohio and so generously gave to her soldiers and sailors. Most of the territory was covered with valuable timber, and contained within its boundaries vast tracts of black soil, some covered by the original prairies, but for the most part possessed by forests of the oak-hickory association.
TREES IN WESTERN PICKAWAY COUNTY
AS INDICATED BY
THE ORIGINAL SURVEY RECORDS
KEPT IN THE PICKAWAY
COUNTY COURT HOUSE
AT
CIRCLEVILLE, OHIO

As was the custom of early surveyors, the boundaries of
the original surveys of the Virginia Military tract were marked
by the trees. The records for the entire Military district may
be found in a large volume kept in the Surveyors office in the
Court House at Circleville, the county seat of Pickaway county.
From this original volume another sizable volume has been com-
piled of the surveys of western Pickaway, that part of the county
contained in the Virginia Military lands. This latter volume is
kept in the Recorders office of the Pickaway court house.

Not only are the trees of the region named, but what is
more important considering the information desired, note is
also made of the prairies of the part of Pickaway county. Since
some of these surveys are large, it would be easy to enclose a
prairie area within one of them and no record would be kept of
it. Tracts of a thousand acres are quite commonly recorded,
those of thirty-five hundred to four thousand are not uncommon,
the extreme being around six thousand acres.

Because of a lack of time, records were taken from only
about one survey in ten, but an attempt was made to distribute
the records so as to get a representative list of the trees of
any particular region.
The value and authenticity of these records are undoubted. The only question that might be raised would be concerning the accuracy of identification of the trees used as markers. Did the surveyor of 1801 (the date of the first survey records) know the trees accurately enough to make these records of any scientific value? Without a doubt they did. They, as was almost everyone living in this region at that time, were outdoor men. They lived among the trees and knew them better than they knew their neighbors.
The following is a list of the surveys studied and of the trees mentioned therein: Darby Township

1466-Black oak, hickory, ash, black walnut, white oak.
15045-Hickory, but oak, jack oak.
2648-Hickory, black oak, white oak, Spanish oak.
6358-Black oak, hickory, jack oak, post oak, elm.
755-Hickory, black oak.
10772- Hickory, black oak, white oak, elm.
7654-Hickory, black oak, elm, ash, RED ELM, post oak, but oak, black oak
7195-RED ELM, post oak, bur oak, elm, honey locust.
10476-RED ELM, jack oak, ash, elm, honey locust, hickory, black oak, bur oak.
10478-Ash, elm, honey locust, RED ELM, post oak, bur oak, black oak.
6287-Bur oak, elm, Thorn bush, jack oak, bur oak,

Cornered in large prairie, hickory

10550-White oak, hickory, barren oak, post oak, black oak, burr oak.
534-Walnut, elm, honey locust, rei oak, white oak, hickory
9321-Jack oak, Stake in prairie, white oak, but oak, elm, Two jack oaks in a prairie, sugar.
5461-Elm, hickory, black oak, Stake in eige of prairie, jack oak, bur oak, black walnut.
5824-Hickory, bur oak, white oak, post oak.
6434-Black oak or jack oak, elm, bur oak, hickory, white oak.
8870-Black oak, hickory, white oak.
12939-Jack oak, elm, hickory, bur oak.
9271-Jack oak, Stake in prairie, hickory, white oak.
10934-White oak, hickory, black walnut.
12204-Hickory, white oak, Stake in a prairie.
5824-Hickory, bur oak, jack oak, white oak, post oak.
9272-White oak, hickory, elm, bur oak, black oak.
Darby Township (cont'd)

8474(3) Hickory, white oak, elm, bur oak, Stake in a prairie, black oak.
13394- Hickory, white oak, bur oak.
10794- Hickory, elm, black oak, but oak, Stake in a prairie, Jack oak

Stake in a prairie, honey locust, post oak
12199- Bur oak, red oak, Stake in a prairie, hickory, white oak, prairie
10713- Jack oak, bur oak, elm, ash bushes, black oak, Stake in a prairie.
6525- Small ash bushes in a prairie, black oak, hickory
9270- White oak, hickory, elm, bur oak, jack oak.
6197-6254- White oak, white oak in the edge of the plains
2595- Honey locust, elm hickory, white oak.
1405- Sugar, white oak, ash, hackberry, black oak.
1313- Ash, sugar, hickory, elm, white oak.
7493- Elm, hickory, white oak, black oak, white oak near a small prairie.
1286- Red oak, white oak, ash, sugar.
13875- White oak, bur oak.
6225- White oak, hickory, red oak, bur oak.
5421- White oak, jack oak, hickory.
9416- White oak, black oak, bur oak.
9437- White oak, hickory, jack oak, Plum Bushes, Stake in a prairie

Stake in a meadow (?)
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Deer Creek Township

7762-Hickory, elm, white oak, barren oak, bur oak, Spanish oak, Jack oak, black oak.
5966-Black oak, white oak, Spanish oak, ash, sycamore, elm, hickory, walnut.
8009-Bur oaks, hickory, barren oaks, white oak.
5226-Elm, bur oak, white oak, hickory.
9574-Black oak, white oak, red oak, hickory, burr oak.
3671-Prairie, elm, white oak, hickory.
3718-Black walnut, white oak, hickory, elm.
4721-White oak, black oak, bur oak, hickory, elm.
4724-Hickory, white elm, red elm.
4395-Black oak, bur oak, white oak, elm in a prairie.
4204-Hickory, bur oak, white oak, black oak, red oak, jack oak.
8701-Hickory, black oak, bur oaks.
12290-Bur oak, hickory, white oak, post oak, elm.
3716-Elm, white oak, black oak, hickory.
4216-White oaks.
4146-Bur oak, white oak, elm.
3714-Ash, white oak, black walnut, black oak, elm.
7427-Black oak, barren or post oak, bur oak, elm in prairie, hickory.
8340-White oak, hickory, black oak, bur oak.
10517-Barren oak, black oak, elm, bur oak.
4728-Barren oak, hickory.
9765-Hickory, barren oak, white oak, black oak, bur oak.
6559-North edge of prairie, black oak, white oak, bur oak, hickory.
  Jack oak, black walnut, barren oak, red oak.
Jackson Township

4484-Black oak, hickory, white oak.
4754- Same as above
8053-Black oak, white oak, hickory.
6289-White oak, bur oak, black jack, black oak, hickory.
8054-White oak, hickory, Prairie.
8060-Sycamore, ash, elm.
668-Buckeye, ash, white oak, maple, sycamore.
10632-White oak, red oak, jack oak, hickory.
4766-White oak, elm, maple, honey locust, sycamore.
5197-Honey locust, maple, sycamore, white oak, hickory, red oak, elm.
6791-Hickory, elm, white oak.
6223-Black oak, white oak, bur oak, elm, hickory.
914-Hickory, white oak, black oak, elm, bur oak, maple
465-Hickory, elm, honey locust, ash, elm.
903-Hackberry, hickory, white oak, bur oak, elm.
450-Elm, sugar tree, white oak, hickory, black oak.
5779-Black walnut, buckeye, box elder, sugar tree, elm, black oak, hickory.
549-Buckeye, hickory, hackberry, white oak, black oak.
8085-Black jack Prairie, barren oak, black oak, hickory, bur oak, jack oak.
8086- Same as above
7776-Black oak, hickory, bur oak.
7910-White oak, bur oak.
7947-Sugar tree, white oak, barren oak, hickory, black oak.
501-Elm, hackberry, white oak, buckeye, ash.
8130-Black oak, white oak, post oak, elm, hickory, jack oak.
8163-Hickory, jack oak, barren oak, bur oak, Prairie.
13256-Bur oak, jack oak, barren oak, white oak, hickory.
8240-White oak, hickory, bur oak.
4309-White oak, hickory, black jack.
Monroe Township

10457-Hickory, elm, ash, black, oak, Spanish oak.
470-Hickory, white oak.
6282-Elm, bur oak, red oak, white oak, ash.
9827-White oak, black oak, elm, red oak, ash, maple, bur oak, hickory.
7572-Ash, elm, honey locust, maple, black oak, white oak, bur oak,
Prairie.
7874-Jack oak, elm, bur oak, hickory, Prairie, black oak.
6943-Elm, jack oak, hickory, elm, bur oak.
6946-White oak, hickory, bur oak, elm, black oak, black jack, honey locust.
4289-Spanish oak, black oak, black walnut, hickory.
4292-White oak, elm.
10479-White oak, black oak, Spanish oak, hickory, black walnut, bur oak.
10407-Black oak, Spanish oak, post oak, red oak, hickory, bur oak, elm, white oak.
463-White oak, elm, hickory, red oak, white oak.
6681-Elm, black oak, hickory, red oak, white oak.
4289-Spanish oak, black oak, walnuts, mulberry, hickory.
9179-Elm, black oak, white oak, bur oak, hickory, red oak.
10549-Black oak, bur oak, hickory, barren oak.
8039-Hickory, ash, elm, honey locust, red oak.
4290-White oak, jack oak, elm, black walnut, mulberry, hickory.
755-Hickory, black oak.
2649-Hickory, white oak, black oak.
7569-White oak, bur oak, hickory, black oak, elm, Spanish oak, barren oak, jack oak.
8935-Hickory, black oak, bur oak, white oak.
10458-Hickory, post oak, white oak, black oak, bur oak, jack oak.
Monroe (Cont'd)

767-Hickory, white oak, swamp oak.
7568-Black walnut, hickory, white oak, bur oak, post oak, ash, elm, red oak, jack oak.
10770-Post oak, hickory, elm, bur oak.
3716-Elm, white oak, black oak, hickory.
472-White oak, black oak, hickory, ash.
Muhlenberg Township

6790-Hickory, white oak, ash, sugar tree.
6845-Honey locust, ash, elm, white oak.
4012-Honey locust, ash, elm, bur oak, hickory.
2609-Honey locust, box elder, hackberry, cherry, sugar tree.
2608-Elm, hackberry, black walnut, honey locust, box elder, black oak, white oak.
7947-Sugar tree, white oak, hickory, black oak.
515-Elm, red oak, white oak, swamp oak.
8934-Bur oak white oak, post oak.
9584-White oak, bur oak.
2648-Hickory, black oak, white oak.
534-Walnut, elm, honey locust, red oak, white oak, hickory.
5553-Elm, walnut, honey locust, hickory, bur oak, white oak.
8936-Honey locust, hickory, black oak, bur oak, white oak.
6183-Elm, sycamore, white oak, sugar tree, hickory, bur oak, red oak.
Perry Township

7249—Bur oak, hickory, white oak.
4138—Hickory, white oak.
9658—White oak, hickory, bur oak.
10539—Barren oak, bur oak, hickory.
7358—Jack oak, post oak, bur oak, ash.
4263—Bur oak, elm, white oak.
6835—Elm, bur oak, hickory, white oak, ash.
7866—Bur oak, post oak, elm, ash, hickory.
6258—Black oak, barren oak, bur oak, hickory, elm, Prairie.
7621—Bur oak, black oak, white oak, hickory.
8023—Bur oak, barren oak, hickory, jack oak.
8750—White oak, bur oak, hickory, elm.
7745—Bur oak, black oak, hickory.
8062—Post oak, black oak, bur oak, hickory, elm.
12708—Barren oak, bur oak.
6226—Hickory, black oak, elm, bur oak, Edge of Prairie.
13319—Six post oaks, bur oak.
9489—Prairie (number of times), Stake in Prairie, black oak, white oak, elm, bur oak, Spanish oak, hickory.
3714—Ash, 2 white oaks, black walnut, black oak, elm.
8396—Elm, hickory, black oak, white oak.
7078—Elm, black walnut, white oak, hickory, black oak.
7955—Hickory, white oak, Elm in Prairie, barren oak, black oak.
2699—Black oak, white oak, hickory.
487—White oak, hackberry, walnut, willow, maple.
5647—Forked cherry, elm, hickory, bur oak, swamp oak, elm, red oak, white oak.
6192—Bur oak, white oak, hickory.
7956-Hickory, elm, barren oak, black oak.

8056-Hickory, white oak, Edge of Prairie, black oak on edge of Prairie, bur oak on edge of Prairie.

8948-Post oak, jack oak, hickory, black oak, bur oak.

6479-Post oak, bur oak, black oak, hickory, elm.
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Scioto Township

931-Blue ash, elm, buckeye, sycamore, hickory, ash, red oak, black walnut.

6115-Hickory, white oak, black oak, maple, elm, bur oak.

6844-Black oak, cherry ASPEN, white oak, bur oak.

5871-Hickory, bur oak, elm.

6830-White oak, black oak, hickory, bur oak.

6845-Honey locust, ash, elm, white oak.

6841-White oak.

2446-White oak, black oak, hickory, sugar.

4013-White oak, bur oak, elm.

6772-White oak, bur oak, black oak.

654-White oak, honey locust, ash, elm, bur oak.

4014-Elm, bur oak, hickory, white oak.

1108-Box elder, on bank of river, white oak, hickory, black oak, 4 buckeyes.

557-3 Buckeyes, white oak, maples, black oak, cherry, hickory.

6176-Hickory, white oak, red oak, ash, bur oak.

1189-Black oak, hickory, bur oaks, elm, white oak.

6829-White oaks.

6556-White oak, elm, bur oak.

1194-Maple, sugar, white oak, hickory, mulberry, aspen.

6773-Black oak, white oak, elm, hickory.

6176-Hickory, white oak, red oak, ash, bur oak.

6463-Black oak, elm, ash, bur oak, red oak, hickory, white oak.

1289-Elm, ash, Swamp white oak.

6541-Hickory, white oak, ash, elm.

6775-Hickory, black oak, white oak.
Sciotc Tp. (cont'd)

1894- Black oak, hickory, maple, elm, white oak.
9083- White oak, ash, sugar, black oak, maple, elm.
6210- Maple, elm, hickory, black walnut, ash, white oak, bur oak.
931- Blue ash, elm, buckeye, 3 sycamores (all on bank of Darby),
    hickory, ash, red oak, black walnut.
6253- Walnut, hickory, ash, white oak, red oak, elm.
1678- White oak, Spanish oak, sycamores, red oak, hickory, buckeye,
    ash, sugar, elm, bur oak.
13247- Hickory, bur oak, elm, white oak.
6557- Black oak, elm, white oak, bur oak, dogwood.
621- Maple, sycamore, mulberry, box elder, elm.
1405- White oak, sugar, ash, hackberry, black oak.
4892- White oak, hickory, mulberry, black oak.
6812- White oak, Spanish oak, maple, sycamore, ash, red oak.
Wayne Township

6480-White oak, barren oak, hickory, bur oak.
1069-White oak, hickory, black walnut, honey locust, white hickory, bur oak.

446-White oak, sugar, Stake in Prairie.
4719-White oak, black jack.
3626-White oak, hickory, cherrym black oak.
12914-Barren oak, hickory, bur oak, oak, post oak.
457-Hickory, red oak, white oak, black oak.
5765-Sycamore, buckeye, white oak, black oak, Stake in Prairie.
827-White oak, Stake in Prairie.
12960-Jack oak, post oak, bur oak, hickory, black oak.
8206-White oak, hickory, Stake in Prairie.
8857-White oak, black oak, bur oak, hickory.
9499-White oak, hickory, White oak on edge of Prairie, Stake in Prairie, Bur oak on edge of Prairie, White oak on edge of Prairie, Bur oak in Prairie.
8026-Black jack oak, hickory, barren oak, black oak, Stake in Prairie.
10147-Black oak, barren oak, Stake in Prairie, 3 Stakes in Prairie, hickory.

449-White oak, Stake in Prairie, elm, white walnut.
7309-Hickory, post oak, bur oak, post oak on edge of Prairie.
10548-Black oak, bur oak, hickory, barren oak, jack oak, white oak.
Virginia Military Lands
Key Map of Survey Numbers
Pickaway Co., Ohio
Summary of Trees

The following is a summary of the trees mentioned in the Survey records examined.

White oak - Quercus alba
Post or Barren oak - Quercus stellata
Bur oak - Quercus macrocarpa
Black oak - Quercus velutina
Jack oak - " "
Black Jack oak - " "
Red oak - Quercus rubra
Spanish oak - Quercus palustris or Q. coccinea
Swamp oak - Quercus bicolor
Swamp White oak - Quercus bicolor
Ash - Fraxinus americana or F. lanceolata
Blue ash - Fraxinus Quadrangulata
Elm - Ulmus americana
Red Elm - Ulmus fulva
Sycamore - Platanus occidentalis
Hackberry - Celtis occidentalis
Maple or Sugar tree - Acer saccharum or A. nigrum
Box Elder - Acer negundo
Mulberry - Morus rubra
Dogwood - Cynoxylon (Cornus) florida
Cherry - Prunus virginiana ( serotina)
Honey Locust - Gleditsia triacanthus
Buckeye - Aesculus glabra
Willow - Salix sp
Aspen - Populus tremuloides
Ash Bushes - Zanthoxylum americanum
Prairies

In all twenty prairie areas have been mapped in western Pickaway. These have all been located on evidence found in the survey records except one. This one was located in the southeastern corner of Deer Creek township. All present signs point to an extensive prairie area in this region. Elsewhere in this paper we have referred to the testimony of Mr. Sweetman, present County Engineer of Pickaway county, in regard to Bennett's Blue Grass Pasture of 1000 acres. Survey number 4721, within which this area would be contained, aggregated 3500 acres; so that the prairie part was probably entirely surrounded by the boundary lines of this huge survey. An immense expanse of black soil and patches of *Spartina michauxiana*, *Andropogon furcatus* and *Sorghastrum nutans* seem to be prima facie evidence of an extensive prairie or possibly prairie interspersed with barrens.

Old records, particularly Williams Bros' history, state that there were places a few acres in extent in western Muhlenberg township that were covered with a luxuriant growth of wild grass that would reach to the height of a man's shoulders when mounted on horseback. No mention is made of prairies in western Muhlenberg in the surveys.
The most common association west of the Scioto river in Pickaway county was the Oak-Hickory. Of the oaks, the White oak (Quercus alba) was the most abundant and the most widely distributed. Next in abundance was the Bur oak (Q. macrocarpa). It is still a quite common remnant in many localities where it was once abundant. Around the old homesteads there are quite a number of the original trees preserved for shade. These may be seen along the Five Points pike, about Pherson in Jackson and Muhlenberg townships, west of Commercial Point in Scioto township, around Williamsport in Deer Creek township and generally scattered over the other townships. West of Williamsport there stood until a few years ago seven Bur oaks on one stump.

In the townships where prairies abounded, namely Darby, Perry, Deer Creek and Wayne, Bur oak and Post oak (Quercus stellata) were, found on or around the edge of these prairies. The topography of Wayne township has a peculiar hummocky appearance. The Post oak seems to appear on these slight rises more commonly than elsewhere. The Bur oak-Post oak association is very marked in this part of the county.

Of the other oaks named, Black oak is probably Quercus velutina. Black oak and Jack oak are no doubt the same. In fact the tree is sometimes called Black or Jack oak. Spanish oak is more of a speculation. It is not the Spanish oak listed in Schaffner's "Flora of Ohio." The Ohio vascular catalog gives this species for Lawrence county only. The writer is inclined to think that it is either Pin oak (Quercus palustris), a common enough tree among the remnants, or Scarlet oak (Quercus coccinea) Illick says: "The Scarlet oak, also called Spanish oak." The latter, according to
the Ohio catalog, is found in the adjoining counties of Franklin and Fairfield, and it would seem reasonable to suppose that it might be found in Hickaway, although the writer has never seen it there. Swamp oak is no doubt Swamp white oak (*Quercus bicolor*). This species is not so plentiful west of the river at present as it is east of the river. Although they are not mentioned in the surveys, two other oaks are found distributed over almost the whole county, Chestnut or Yellow oak (*Quercus muehlenbergii*) and Shingle oak (*Q. imbricaria*).

Hickory is never named by species. The most common species found now are *Hicoria cordiformis*, *Hicoria glabra* and *Hicoria ovata*. Next to White oak, hickory was the most commonly mentioned tree.

Ash was very frequently used as a marker. Where the term "ash" was used alone the species *Fraxinus americana* was ascribed. Twice in Scioto township the name of Blue ash (*Fraxinus quinquefolia*) appears.

Black Walnut (*Juglans nigra*) was found but not frequently mentioned. Inquiry among the older inhabitants seemed to bring out the fact that Walnut was rather abundant around Williamsport originally. White Walnut (*Juglans cinerea*) was mentioned but once. It is common enough at present along the streams.

Elm holds third place in point of abundance. Where not specifically stated, "elm" is taken to mean *Ulmus americana*. An abundance of White Elm is to be expected from the general flat topography of the land. In four adjoining surveys in Darby township, Red Elm (*Ulmus fulva*) is mentioned. Cork Elm (*Ulmus comosa*) is found along the streams at present.

Sycamore (*Platanus occidentalis*) is found only where the
survey runs to the streams. It is typically a flood plain species.

Hackberry (Celtis occidentalis) was rather generally distributed, although not plentiful.

Maple is found in Oak-Maple association along Deer Creek in north-western Perry township, along Darby Creek in Muhlenberg township, along Buskirk Creek in Monroe township and in scattered places elsewhere. This is not so much the evidence from the surveys as personal observation. Maple sugar making in western Pickaway by the early settlers and even by the Indians, seemed to center in Muhlenberg township. "Sugar tree" is quite frequently mentioned by the surveyors. The two observed "sugar trees" of this locality are Acer saccharum and Acer nigrum. Acer rubrum and Acer saccharinum are quite plentiful, especially the latter along the larger streams.

Another of the Acer genus, Box elder (Acer negundo) is mentioned in half a dozen of the surveys. From the survey records we would assume that it was rather abundant along Darby Creek. This bears out the observations of the writer.

Honey Locust (Gleditsia triacanthus) seemed to center in Muhlenberg township, of fourteen surveys examined in Muhlenberg, seven made mention of Honey Locust as markers. It was also found sparingly in the townships joining Muhlenberg.

The trees which apparently were rather sparsely distributed in western Pickaway were: Mulberry (Morus rubra), mentioned twice in Monroe township; Dogwood (Cynoxylon florida), found but once, in the records of Scioto township; Buckeye (Aesculus glabra), found in the records for Jackson a few times and in those of Scioto about ten times, Cherry (Frunus virgiana); Willow
(Salix sp); Aspen (Populus tremuloides); and Ash Bushes, taken to mean Prickley Ash (Zanthoxylum americanum). Prickley Ash has been observed in Monroe and Deer Creek townships. Aspen has been seen along the high banks of both Deer creek and Darby creek.

The trees listed above comprise all observed species except a few. Cottonwood (Populus deltoides) and Linien (Tilia americana), were found along Darby creek. As stated above, Quercus muhlenbergii, Q. imbricaria, and Q. palustris were not named, at least not under the names used at present.
Legend
- Oak-Hickory
- Beech-Maple
- Swamp Forest
- Prairie
- Oak-Maple
- Bur Oak Forest
- Marshes
- Mixed Mesophytic

Original Vegetation, Pickaway Co., Ohio
The Black Soil

The question arises as to the origin of the black soils of western Pickaway. The blackerths, according to Marbut and Shantz are of climatic origin. It is only in a region where decay is arrested for a part of the year that there is an accumulation of humus and consequent formation of the blackerths. This happens where the land is frost-locked for several months of the year.

Wolfanger describes two kinds of blackerths, viz: chernozems and prairyerths. Climatically it would not be possible for chernozems to be formed on this region under present conditions for they belong to a region of rainfall deficiency. They typical of the middle west where the land was originally covered with tall grass, some occurring even on the eastern edge of the shortgrass plains. But the question arises: Can the black soils of western Pickaway county be explained on the same basis as the chernozems of the plains and prairies? Considering the climate of the present, evidently not. The chernozems are non-acid and have lime accumulating in a distinct zone in the subsoil. The prairyerths are somewhat acid in reaction. They were formed in regions of greater rainfall than that of the chernozems but still not so great as in the region under consideration. There are, however, enough prairie remnants in western Pickaway to indicate that the prairies must have been much more extensive in ages past, even in comparatively recent geological history, than they were when the first settlers arrived. Without a doubt the vast amount of black soil was formed under prairie conditions. Only in comparatively recent time have the forests en-
croached upon the prairies, and that not long enough ago to cause much change in the color of the soil. In certain parts of Pickaway, notably east of the river in Harrison Tp. north of Ashville, the land was covered with swamp forest, and was under water the greater part of the year. The soil was formed in the forest. Yet the soil is not typically blacker than except in very low places where the forest had replaced swamps. The evidence points to the fact that the black soil of western Pickaway was not formed in the forest but that the forest has occupied the land that, sometime since the glacial period, was prairie. It may be that the prairies were formed during the xerothermic period that followed the glaciers.

Large areas of the soils of Wayne and Deer creek townships in the south-central part of the county are black. This area is drained by two sluggish streams. The larger, Yellowbud creek, flows south-east through eastern Deer creek and southwestern Wayne. Wolf Run flows northeast through this part of Wayne and empties into Yellowbud creek not far from the Pickaway-Ross county line. Somewhat north-west of this junction in Deer creek Tp. there is all evidence of an extensive prairie region, a region which was probably treeless when the early settlers arrived. Just south of the Bennett school a road leads off in a generally southeast direction. Along this road are patches of Spartina michauxina and Sorghastrum natans.

The present county engineer of Pickaway county Mr. Sweetman, tells the writer that some 40 years ago when a young chairman for the county engineer of that time he helped to survey a township ditch through this territory. He says that, at that time, there was a field of a thousand acres or more that was known as
Bennett's Blue Grass Pasture. The ditch was cut through the prairie area and, although dug to a depth of from five to six feet, the bottom of the black soil was not reached.
"There are two species of natural meadow, which in popular language are called prairies. The name is derived from the early French travelers, who in their language called them prairies or meadows. They are clothed with tall grass and flowering plants in the spring, summer and autumnal months, and on the whole produce an aspect in those months, on a first view, very agreeable. It must be confessed, though, from their uniformity and sameness, having few or no hills in them, that their beauties soon become tiresome to the weary traveler who traverses these plains, for such is their uniformity in appearance that, after riding all day across them, on looking around at night we fancy ourselves exactly where we started in the morning.

Yet prairies generally have a rivulet winding its devious way through them. Its waters are of a reddish hue, of a reddish hue, of a disagreeable flavor to the taste, and unfit for the use of man. They are sometimes very wet and miry, and it is not uncommon for many of them during the winter and spring to be covered with water to a considerable depth. Lying as they do, either on almost a dead level, or surrounded by higher grounds, the water which accumulates on their surface, runs off slowly, while the main body is left, either to stagnate or evaporate, under the influence of a summer's sun.

On the north of Circleville commences a wet prairie, extending northwardly several miles. In width, from west to east, it averages from half a mile to one mile. Its escient toward
the south is about one foot in a mile as ascertained by a com-
petent engineer, employed for that purpose, by our Canal Commis-
sioners. The Ohio and Lake Erie Grand Canal passes through it
from north to south. A small rivulet winds its way from near its
center towards it southwestern corner, where it finds itself
in the bottom lands near Hargus's Creek, and a similar rivulet
discharges its turbid waters into the Scioto river near the
northwestern corner of the natural meadow. Near its centre is
its highest elevation, owing to the mouth of "try run" being
discharged there from the east. A ridge of land of considerable
elevation, in some places, separates the prairie from the Scioto,
on the west, the river being from one fourth to a half mile
distant from its western edge. These particulars must supply
the absence of an accompanying map.

Several years since, for the double purpose of making a
fence and a draining a portion of these wet lands, a ditch was
dug in them of considerable length and from appearance, we
should say, some four feet wide and amy in depth. By examining
this ditch while digging was going on, as well as the materials
excavated from it, we ascertained that this prairie contained a
great abuniance of peat. We have specimens of it which burns
briskly, and produces a good degree of heat. Its quality is of
the very best species; it exists in great quantities entirely
sufficient amply to supply with fuel the surrounding country,
for ages to come. It is composed of fibres and is of that species
called "compact". Similar peat exists in a prairie through which
the main road from this town to Columbus passes, six miles south
of the state Capitol. It exists in all of the wet prairies which
we examined for it, in this county, and in those of Madison,
Champaign, Clark and Montgomery. In December, 1814 we found it in the wet prairies adjoining to and east of the town of Urbana. While on a smaller tour, we saw peat in the prairie skirting the Mad river, from near to Springfield, Clark county, almost all the way to Dayton, situate at the confluence of the Mad river with the Great Miami. The prairie north of Circleville appears to have been the bed of some considerable stream, the Scioto river, perhaps. In some places it is four feet from the present surface to the ancient one. On the latter once stood a thick forest of white cedar trees; these trees now lie on the ancient surface, in different stages of decay. Some of them appear to have been broken down by violence, others were turned up with their roots entire, while others seemed to have mouldered away and died of old age. We have a fragment of one of these trees which has on it evident marks of an axe or some other sharp edged tool. From its appearance, since the axe was applied to it, this fragment must have lain many, very many centuries in the earth, where it was interred four feet below the present surface. There can be but little doubt that the axe used, was owned by one of the people who erected the ancient works here. The whole prairie was once a cedar swamp, and from undoubted sources of information we are satisfied that many of our wet prairies were once cedar swamps also. Near Royalton in Fairfield county, and in several places in the western part of Pickaway county; and also in Warren county, similar proofs of the former existence of cedar groves in wet prairies have been discovered. Time and the accumulation of a deep soil on the former surface, have made these prairies what they are.
THE DRY PRAIRIES—They are not, as in Kentucky, underlaid with limestone: nor have we, in this part of Ohio, any barrens thus underlaid. Ours are, so far as we know and believe, in appearance like the bottom lands along our streams. The surface is a rich, black, deep loam, underlaid with pebbles, which are water worn rounded and smooth. Many of these natural meadows lie high above any stream of water, now or probably in existence.

If we have any tracts in Ohio very properly denominated DILUVIUM, Pickaway Plains, three miles below Circleville, belong to that class of formations. This is a dry prairie, or was until a few years since. This prairie is about seven miles long and about three miles broad. It was in this plain, that a human skeleton was dug up, which circumstance was mentioned by me in a former volume of Silliman's Journal, to which I refer the reader. The works of man too are often found in such prairies, at a great depth in the earth. Such a natural meadow, being for the most part, destitute of trees, have induced superficial persons (who never reflect and who are too indolent to examine into the real facts in the case) to conclude that fires have been employed by the aborigines to produce that effect. The formation of the diluvium plains is entirely different from that of the country around them; as much so beneath the surface as above it. In tracts of country denuded of trees, briers and bushes, forthwith appear in their stead. In fact the growth of grass and flowering plants, which cover these delightful plains, is abundantly able to prevent the taking of root of any forest tree. The falling of a walnut, an acorn, or
the seed of any other tree, is hardly sufficient to possession of the present occupants of these ancient domains. The plum sometimes gets a foothold in them; and the sweet prairie grape is sure to take advantage of the circumstance and climb up to and cover the tops of the bushes with its vines, its leaves and its purple clusters of fruit in due season.

Besides had fires destroyed the trees on Pickaway Plains, charcoal would have been discovered there, which is not the case, although the land has been cultivated with the plow, during fifteen or twenty years past. Charcoal is as indestructible, almost as the diamond itself, where it is not exposed to the action of the atmosphere. On a surface so large, as that occupied by the plains, it is hardly possible, if they had been denuded of their woods by fire, that no charcoal should have been found. With me the argument is entirely a conclusive one.

The botany of these natural meadows is rich, and would afford matter enough for a volume. A Torrey, a Nuttall, a Mitchell, a Mulenburgh, a Barton, an Elliott, or even a Linnaeus might here usefully employ himself for years, without exhausting his subject, or gathering all the harvest which these vast fields present. It appears to me that our botanists have neglected our prairies; but let us hope that the day is not far distant, when some future Linnaeus will appear in them. If the field is vast and the laborers, the harvest of fame will be all the richer.

Among the flowering plants growing in them, the helianthus offers, perhaps, the greatest number of varieties.

From a careful examination of our prairies, wet and dry, we are satisfied that the dry ones are the most ancient of the two,—that fires produce neither of them—that in their
natural state, a luxuriant vegetation is raising their present surface, every year; that the dry ones are extremely valuable for cultivation, and that the wet ones will, at not a very distant day, furnish us with an abundance of fuel, in a country but thinly timbered, indeed almost destitute of wood, and without fossil coal, so common in our hilly regions. If, as is known to be a fact, our hilly regions be well supplied with ironstone and other useful minerals, together with salt water, nature has supplied the same region with inexhaustible mines of coal for their manufacture. If the level parts of this state, where the dry prairies abound, contain large tracts of rich land, the time is at hand, when they will be covered with well cultivated farms, where the rich harvests will wave, and where naturalized grasses will afford food for large flocks of domestic animals.

These remarks on our prairies were written originally more than twenty years since, and apply especially to that period of time. The reader will see how our then predictions have been verified, within the immediate space of time. They are now (about 1838) well cultivated fields, cloathed with tame grasses, and grains. Our herds of domestic animals feed and fatten, where, so recently, only wild animals and still wilder men, roamed over the surface of these diluvial plains. In the conclusion of this article, may we say, that this state contains the most and best part of any state in the union.

The most valuable native vine, now attempted to be introduced to public notice, is the Sault Prairie Grape. (He calls it Vitis Sciotoensis). Its fruit is red, and when wild
grew extensively along the banks of the Scioto, in our once extensive natural meadows. It never grew more than twenty feet in height, and its vine, was only one inch in diameter. It grew near the plum bushes and covered them, in the proper season, with its vines loaded with the delicious sweet clusters of its fruit. Twenty years since, we have seen, at one view, (near us on the Scioto) treeless meadows, with whole acres of these vines, loaded with fruit, and covering the low plum bushes. Packed in sugar, these grapes produce excellent raisins, and pressed, their juice makes a most delicious wine, which we prefer to any imported from Europe.

There is a larger grape than these (Sweet Prairie Grape) found originally on Deer Creek, some twenty miles southwest of Circleville. The fruit is larger but hardly so sweet as our Scioto, sweet prairie grape. The last one or Deer Creek Grape (Vitis Rubia maxima), is naturalized and thrives well.
"Prairies and Barrens of the West"

Caleb Atwater
American Journal of Science
P. 116-125 Vol. 1. 1818

In a letter to Benjamin Silliman, editor of the American Journal of Science, dated from Circleville, Ohio, May 28, 1818 and published in the first volume of the Journal, Caleb Atwater gives his views of the prairies and barrens of the west. Most of his observations are valuable as source material but his deductions are faulty. The following is taken from this letter because of its reference to the Pickaway Plains:

"Prairie is a French word signifying a meadow, but is here applied only to natural meadows. They are found in all states and territories west of the Alleghany mountains, more or less numerous, or greater or less extent. They are covered with a coarse kind of grass, which, before the country is settled in their vicinity, grows to a height of six or seven feet. After these natural meadows are fed upon by domestic animals, the grass does not grow to a greater height than it does in common pastures. Sometimes this grass is intermingled with weeds and plum-bushes. Some of these prairies are dry while others are moist. Pickaway Plains, in Pickaway county in the State of Ohio, lying a small distance south of this place (Circleville) are nearly seven miles in length and about three in width on ground considerably elevated above the Scioto river, almost perfectly level, and, in their native state, were covered with a great quantity of grass, some weeds and plum-bushes, and in the most elevated places there were a few trees. This was one great prairie."
His observation on wet prairies are substantially the same as found in the extract from his "History of Ohio" and given elsewhere in this paper.

His "Description of the Barrens" might well be used for parts of Wayne and Deer Creek townships in south-central Pickaway county. It is altogether possible that he had in mind just such a region mentioned when he wrote this letter. Reference has been made to the peculiar hummocky appearance of parts of Wayne township. Without doubt a great part of it was "barrens" in the sense used by Atwater. The term "barren oak" was used for Post oak (Quercus stellata) by the surveyors of the Virginia Military Tract no doubt means "barrens oak" or oak of the barrens." We quote as follows:

"But besides these prairies there were also extensive tracts of country in this part of the Union which deserve and shall receive our notice; they are called "Barrens." From their appellation "barrens", the person unacquainted with them is not to suppose them thus called from their sterility because most of them are quite the reverse. These barrens are found in a level country, with here and there a gentle rise, only a few feet higher than the land around it. On these little rises, for they are not hills, trees grow, and grass also, but grass and weeds are the only occupants of the soil where there is no rise of ground. The soil is alluvial to greater or less depth in these barrens, though on some of the higher rises there is little or none; the lower the ground the deeper the alluvion. On these gentle rises, where there is no alluvion, we find stiff, blue clay and no pebbles. Under the alluvial black soil, in the lower
grounds, we find pebbles similar to those in the prairies, owing to similar causes. *This is very doubtful.* On the little ridges, wherever the land is not too moist, the oak or the hickory has taken possession, and there grows to a moderate height, in clusters. It would seem, that whenever the land became sufficiently dry for an acorn or a hickory nut to sprout, take root and grow, it did so; and from one or more of these trees, in time, others have grown around them in such clusters as we now behold. Where the land is lower, the soil deeper, more moist, and more fertile, the grass was too thick (?) and the soil too wet for such kind of trees to grow in as were found in the immediate vicinity. Imagine, then, natural meadows, of various dimensions, and of every figure which the imagination can conceive, with here and there a gentle rise of ground, decked with a few scattering trees, or a thick cluster of the, and bearing a tall coarse grass, which is thin on the rises, but on the lower grounds thick and luxuriant; imagine, also, a rill of a reddish color scarcely meandering through ground a little lower than the surrounding plain, and you will have a very correct idea of the appearance of these barrens. They are generally (not always) found on what is called, in our western dialect, second bottom, and not on a level with any streams of magnitude, but rather at their sources."

The term "barrens" has been encountered by the writer several times in different parts of Pickaway county. A region north of Ashville in Harrison township, was known as "barrens" and the people who lived in this part of the township were known as "barrenites". The land was not "barrens" or not even barren in the usual sense of the terms. It was covered with swamp forest, and
one of the older inhabitants of Ashville has told the writer that it was practically impossible to get over that part of the country almost any time of the year except on horseback. The land was considered entirely useless from an agricultural standpoint, hence the term.

Almost the same story was told by an older resident of Williamsport of some of the land near that town. Again the statement was made that the land was not "barrens" in the sense used by Atwater but land that was considered useless for agriculture. When cleared and properly drained this land proved extremely productive.
From "History of Franklin and Pickaway Counties
Williams Bros., 1880

Muhlenberg Tp.
"Prairies (P. 334)

"When the first settlers came on the ground there were places a few acres in extent, in the west part of the township, and in adjoining townships, that were called prairies, as no timber grew on them, and they were covered with a luxuriant growth of wild grass that would sometimes reach to the height of a man's shoulders when mounted on horseback. The surface of these prairies was covered with a heavy mat of moss on which the numerous herds of deer fed in some seasons of the year. This heavy growth of moss would lead to the inference that these places, denuded of timber, were originally peat bogs, that had been covered up and filled by the constantly encroaching moss, and the accumulation of decaying vegetable matter."

"Timber"

"When the white settlers first came to this country, the face of the land was covered with a heavy growth of timber, such as walnut, maple, ash, honey-locust, and sycamore, on the bottoms, besides much oak on the uplands."

For a number of years after the country was settled, the Indians returned annually, early in the spring for the purpose of making maple sugar...." This would indicate that this part of the country contained an abundance of the sugar producing maples, viz., Acer saccharum and Acer nigrum. The two varieties have been noted along the streams not only of this part of the county but also in the eastern part in Madison and Harrison townships along Walnut Creek. Acer saccharinum predominates in
all the valleys along the edge of the water or at least on the very banks of the streams.
"Natural Features-Soil" (p. 342)

"Harrison is a comparatively level township, with sufficient
incline generally to carry off the surplus water. Along the river
and creeks there are hills, but none of great elevation. The country
along the bottoms and about Bloomfield has always been accounted
the best in the township, and undoubtedly this is true. The land
about Bloomfield, north and south, was what is known as plain
land, being entirely free from timber, and ready for immediate
cultivation......... Heavy timber covered the greater portion of
your ownership, in fact, all except the plain in the south and
west, about Bloomfield. This plain land was the first to be set-
tled, as it was ready for immediate cultivation."

"Timber"

"The timber in Harrison was oak, hickory, ash, elm, and
honey locust. On the banks of the Scioto river and Walnut creek,
along the bottoms, were many black walnut and maple trees."

"Settlement"

"The early settlers of Harrison township located on Walnut
plains, in the southwest part of the township, where they found
large tracts of the best land in the state, free of timber, with
the exception of small groves, and all ready for tilling...........
At the sales of land in Chillicothe in 1801 James Short bought
section number fifteen and fractional section number sixteen,
in Harrison the greater part of which was plain land. His home
was made on the lower part of section fifteen, near the old Indian
trail which ran almost on the line now covered by the Columbus
and Chillicothe pike. Mr. Short died August 12, 1815. At the pres-
ent time (1880) or previous) two large elm trees, standing in
the center of the pike, a short distance south of South Bloomfield are pointed out as the place where, in his old age, he passed much time in contemplation of the past and in observing the improvements made in sixteen years. On building of the road it was stipulated that these trees should be allowed to remain as a monument to the first settler, and the first owner of this tract."

When the Columbus-Chillicothe pike was paved in 1927-8 there was quite a controversy over the removal of these famous twin elms as a safety measure. The Director of Highways issued an edict for their removal. This aroused such a storm of protest that it was finally decided to "let the old trees stand". And they are still standing as a monument to the old settler who so beneficently bequeathed them to a posterity which has shown its appreciation by preventing them from being sacrificed on the altar of civilization.
"Three and a half miles south of Circleville are the celebrated Pickaway Plains, said to contain the richest body of land in Ohio. They are divided into two parts, the greater or upper plain and the lesser or lower one. The soil was very black when first cultivated; the result of vegetable decomposition through a long succession of ages. These plains are based on water-worn gravel and pebbles. The upper plain is at least 150 feet above the bed of the river, which passes about a mile west of them. Their form is elliptical, with the longest diameter from north-east to south-west, being from seven miles by three and a half or four miles. They were destitute of trees when first visited by the white man. The fertility was said to be such as to produce 100 bushels of corn or 50 bushels of wheat to the acre for many years, but they are now less productive. These plains have but few trees or shrubs within the reach of the eye, except along the distant borders. The early settlers in the region procured all their fodder, a coarse natural head. It was extremely difficult to break up, requiring the strongest teams. The cultivation of corn, which grew up to a height of twelve to fifteen feet, weakened their natural fertility. Originally the plains were adorned with a great variety of beautiful flowers."

When the writer visited the Plains in August 1929, he found growing in a remnant of wet prairie a few scattered patches of the "coarse natural grass" no doubt, referred to by Howe. It was *Andropogon furcatus*. Associated with it was also a few scattered patches of *Solidago ohiensis*. 
MAP OF THE ANCIENT SHAWANOSE TOWNS, ON THE PICKAWAY PLAINS.

[Explanations.—A. Ancient works, on which Circleville now stands.
B. Logan’s cabin at Old Chillicothe, now Westfall, four miles below Circleville: from this place a trail led through Grenadier Squaw town, and from thence up the Congo valley, and crossed to the opposite side of the creek, about 1½ miles from its mouth.
C. Black mountain, a short distance west of the old Barr mansion.
D. Council house, a short distance northeast of the residence of Wm. Renick, Jr. The two parallel lines at this point represent the gauntlet through which prisoners were forced to run, and O the stake at which they were burnt, which last is on a commanding elevation.
F. The camp of Col. Lewis, just south of the residence of Geo. Wolf. The Logan elm is about a mile north of the site of the camp of Lewis on Congo creek.
E. The point where Lord Dunmore met with and stopped the army of Lewis when on their way to attack the Indians: it is opposite the mansion of Major John Boggs.
G. The residence of Judge Gills, near which is shown the position of Camp Charlotte.]
"The annexed map is reduced from one twenty and one half inches by seventeen and one half inches, made from the survey of P.N. White, for Felix Renick of Ross. The country represented is about seven miles square" - Howe. No date is given but it was probably made early in the last century. The Logan elm, one of the famous trees of the State, is located within this area.
East of Duvall

About two miles east of Duvall in Harrison township there are several small swamps and marshes that contain some plants which are fast disappearing because of the drainage of such areas. The dominant plant of these places is probably Swamp Rose (Rosa carolina). They are springfed and afford just such a habitat as required by two of the plants found there: Marsh Marigold (Caltha palustris), and Skunk Cabbage (Spathyema foetida). These two plants are still rather abundant in these marsh areas that may be found all along the west side of Walnut creek, in Harrison township. The Caltha will soon be picked to extinction by thoughtless persons. The following list is made up of species found in and around these marshes:

Typha latifolia  
Cornus stolonifera  
Cornus asperifolia  
Ridan alternifolia  
Sambucus canadensis  
Heliopsis helianthoides  
Urtica gracilis  
Humulus lupulus  
Collinsonia canadensis  
Spathyema foetida  
Caltha palustris  
Convolvulus sepium  
Salix interior  
Carex tribuloides  
Carex frankii  
Scirpus validus  
Scirpus astrovirens  
Pastinaca sativa  
Eupatorium perfoliatum  
Mentha spicata  
Eupatorium purpureum  
Verbena urticaefolia  
Impatiens biflora  
Similax hispida  
Celastrus scandens  
Acorus calamus  
Iris  
Lathyrus myrtifolius  
Cephalanthus occidentalis  
Rosa carolina  
Valerianella radiata  
Silphium perfoliatum  
Silphium trifoliatum  
Steironema cibatum
East of Duvall

The following trees were growing around these marshes:

- Quercus alba
- Quercus imbricaria
- Ulmus americana
- Juglans nigra
- Gleditsia triacanthus
- Morus rubrum
- Fraxinus americana
- Hicoria ovata
- Hicoria cordiformis
- Sassafras sassafras
- Viburnum prunifolium
- Prunus virginiana

West of Duvall

West of Duvall about a half a mile is a large tract of black soil, the site, no doubt, of a pre-historic prairie. An older resident describes the original vegetation as swamp forest. Like most of the land around Duvall, this black soil area was probably covered with water most of the year. A township ditch has drained it and transformed it into some of the best farming land in Ohio. It was along this ditch that a good size patch of *Silphium terebinthinaceum*, var. *pinnatifidum* was found. This was the only place in the county that the pinnatifid variety of Prairie Dock was found. Other prairie plants found were *Ritibida lanceolata* and *Koellia virginiana*. A short distance south, along the roadside there was growing a rather large patch of *Spirea alba*. 
Silphium terebinthenaceum, var. pinnatifidum, near Duvall

Scirpus fluviatilis
Stage Pond

The "Devils Pot" near Circleville
"High Banks", Near Williamsport

On November 15th last, it was the writers great pleasure to find and admire for the first time the famed flower of poetry, the Fringed Gentian (Gentiana crinata). This occurred along the slope of what is locally known as the "High Banks" just north of Williamsport. A few of these rare flowers were found in a wet place just below a spring that the Indians who formerly roamed that region knew of and used. Growing very close to the Fringed Gentian was another Gentiana, the Stiff Gentian (Gentiana quinquefolia). Growing rather abundantly over this bank were also Solidage riddelli and Andropogon scoparius. The latter was growing near the top of the slope.

A few hundred yards east of the "High Banks" there starts one of the prairie areas noted in the Virginia Military Survey records. All along the west side of the road leading out of Williamsport to the north, where the road has cut through this prairie, are patches of Andropogon furcatus and Spartina michauxiana.

Old Canal Bed, South of Circleville

The old Ohio Canal traversed Pickaway county from north to south. It has been abandoned for a number of years and for the greater part of its length through the county is now dry. But south of Circleville it still runs full of water. Besides the usual aquatic plants found in such habitats, there was found growing very abundantly, and for several miles, in the canal bed, Wild Rice (Zizania aquatica). It is quite possible that the duck hunters have planted it there.
Extending entirely through Pickaway county from north to south, east of the Scioto river, is a lateral morain, almost continuous but broken or lower in places. In this morain are numerous "kettle holes", for the most part dry, either naturally or because of artificial drainage. But there is one just north of Circleville along the east bank of the Scioto, and near what is known as the Red River Bridge, which is said to be one of the largest in Ohio. It is known locally as the Devil's Pot. There are several of these kettle holes of varying size but only this one has water at the bottom of it. In it is a Button Rush (Cephalanthus occidentalis) swamp. When visited on June 12 last and again on October 26 it was very wet but probably water would not stand very high in it. Such water would naturally drain out through the gravel into the River.

The species in the swamp proper are few in number. The dominant plant is Cephalanthus occidentalis. Associated with it is Dulichium arundinaceum, Nymphaea avena and Peltandra virginica. The Dulichium is probably the most remarkable the most remarkable plant in the swamp. It is probably not to be found closer to this region than Cranberry Bog at Buckeye Lake. Lemma minor was floating in small pockets of water. The swamp is entirely encircled by a border of Salix nigra.

This kettle hole is rather decidedly egg shaped, with the point extending toward the south-east. The sides slope gently to abruptly from all sides except from this south-east end. Here the descent is very gradual, remnants of a wagon road being noticeable but now overgrown with brush. The sloping sides of this bowl contains as rich a variety of vegetation as any spot of
similar size in the county. Plant species noted and listed numbered fifty-three.

Just south of the Red Bridge the road approaches the very edge of the River bank. In the few feet between the road and the steep bank were found such interesting species as Asclepias verticillata, Acerates viridiflora, and Ruellia ciliosa. Growing very abundantly on the dry gravelly bank is Schmaltzia crenata.
List of Plants from Kettle Hole ("Devil's Pot") near Circleville

Shrubs and Second Story Trees

Schmaltzia crenata
Rhus glabra
Cynoxylon florida
Sassafras variifolium
Sambucus canadensis
Cercis canadensis
Zanthoxylum americanum
Rosa setigera
Staphylea trifolium
Rubus alleghaniensis

Cephalanthus occidentalis

Vines

Smilax glauca
" hispida
" ecirrhata
Viorna viorna
Celastrus scandens
Menispermum canadense
Toxicodendron radicans

Herbs

Elymus striatus
Aralia nudicaulis
Aureolaria flava
Campanula rapunduloides
Julichium arundenaceum
Nymphaea advena
Ripsacus sylvestris
Scirpus atrovirens
Feltandra virginica
Sparganium eurycarpum
Penthorum sedoides
Carex tribuloides
Cyperus strigosus
Ranunculus sceleratus
Eupatorium urticaefolium
Asclepias incarnata
Vernonia altissima
Verbascum thapsus
Cinna arundenacea

Trees

Platanus occidentalis
Populus deltoides
Fraxinus quadrangulata
Juglans nigra
Fraxinus americana
Crataegus sp
Hicoria cordiformis
Tilia americana
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Plant Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robinia pseudo-acacia</td>
<td>Aesculus glabra</td>
</tr>
<tr>
<td>Cleditsia triacanthus</td>
<td>Asimina triloba</td>
</tr>
<tr>
<td>Ulmus fulva</td>
<td>Celtis occidentalis</td>
</tr>
<tr>
<td>Prunus serotina</td>
<td>Quercus alba</td>
</tr>
<tr>
<td>Acer Saccharum</td>
<td>&quot; rubrum</td>
</tr>
<tr>
<td>&quot; saccharinum</td>
<td>&quot; velutina</td>
</tr>
<tr>
<td>Carpinus caroliniensis</td>
<td>On Dry Bank near Bridge</td>
</tr>
<tr>
<td>Acerates viridiflora</td>
<td></td>
</tr>
<tr>
<td>Asclepias verticillata</td>
<td></td>
</tr>
<tr>
<td>Ruellia ciliosa</td>
<td></td>
</tr>
</tbody>
</table>
Stage Pond

Stage Pond is located in Walnut township about two miles south-east of Ashville. Undoubtedly of glacial origin, it is a so-called "sink hole." Numerous legends have sprung up around it such as the complete disappearance of a team of runaway mules, hitched to a mowing machine and driven by a colored driver. Its area at present is about 50 acres. Formerly it was more than twice as large, but partial drainage has brought it to its present size. Until it is comparatively dry during the summer months, except for a spot of three or four acres.

This marsh contains several plants worth of notice. One of them, the Giant River Bulrush (*Scirpus fluviatilis*), has formed a pure stand of several acres along the northwest side. It attains a height of seven to eight feet and form an impenetrable mass. (See photograph)

Another form that is outstanding is a species of *Hibiscus*. While the writer has been assured by several authorities that it is *Hibiscus moscheutos*, it certainly varies in color more than, say, the *Hibiscus moscheutos* at Buckeye Lake. The latter is in fact Swamp Rose Mallow. The one at Stage Pond varies in color of petal from light cream (almost white) to the deepest rose. But no matter what the color of the petal the blossom still possesses the "crimson eye." It completely surrounds the pond down to the high water mark of winter and spring and extends back forty or fifty feet in some places. At the western end it was found growing in a corn field. Like most of the genus it lends itself to cultivation.

A large number of the species listed below were taken from a wet meadow located on the north side of the Pond. The greater number of these species belong in a swamp or at least a moist habitat.
Lists of Plants in and Around Stage Pond

Scirpus fluviatilis
  " astrovirens
  " validus

Hibiscus sp
Lippia lanceolata
Alisma plantago-aquatica
Sium circutaefolia

Persicaria persicaria
  " hydropiperiodes
  " muhlenbergii

Eupatorium perfoliatum
Asclepias incarnata
Verbena urticifolia
  " hastata

Carex Frankii
Potentilla monspeliensis
Sagittaria latifolia

Mimulus ringens
Aster punicus
Bidens comosa
Impatiens biflora

"mentha arvensis
  " spicata
Pilea pumila
Typha latifolia
Cicuta gronovii
Eleocharis obtusa
Ambrosia trifida
Abutilon abutilon
Sparganium androcladum
Cornus asperifolia (?)
Salix nigra
  " amygdaloides

Populus deltoides
Nymphaea adivna
Ranunculus sceleratus
Lemna minor
Iris versicolor
Ilyopus americanus
Penthorum sedoides
Teucrium canadense

Lythrum alatum
Stage Pond

From the West

From the North
Stage Pond

Hibiscus moscheutos
Marsh at Intersection of Jackson Pike and the Pennsylvania Railroad

Just west of Circleville and west of the Scioto river there is a large marsh. It is probably half as large as Stage Pond, east of the river. The vegetation was not much different from that of Stage Pond. One exception was notable. Instead of Hibiscus moscheutos, which occurs so abundantly at Stage Pond, here was Hibiscus militaris. Likewise instead of Cornus asperifolia, Cornus stolonifera was found. Scirpus fluviatilis was found in both places.

Of the forest remnants found around this marsh and even down into the edge of it, oak seemed to predominate. In fact there was little else. Five oaks were found, namely: Quercus alba, Q. rubrum, Q. velutina, and Q. imbricaria, Q. muhlenbergii.
Summary

The primary aim of this thesis is to list and map, as accurately as possible, the original vegetation of Pickaway county, Ohio. This includes the types found in forests, prairies and marshes.

West of the Scioto river, between Darby creek and the Scioto river, the Oak-Hickory association predominated. Along the streams and intermingled in places with the Oak-Hickory, were Swamp forest types. West and south of Darby creek and likewise west and south of Deer creek the Oak-Hickory was still predominant, but instead of the intermingled Swamp Forest were found a great many prairie patches, ranging in size from several to several hundred acres. Almost invariably, on the edge of these prairie areas were to be found Bur Oak-Post Oak forests.

The primary influence in the development of the above-mentioned formations, no doubt, was the glacier. This historical factor so affected the drainage, either through gravel deposits or depressions formed, that wet prairies or dry prairies resulted. Drainage afforded by Darby creek and the Scioto accounts for the dominant Oak-Hickory association between these two streams. There are no prairies between Darby creek and the Scioto. Oak-Maple was to be found in places along Deer creek, but in the southwestern part of the county again were found the prairies and Bur Oak forests, as well as Oak-Hickory.

Prairies were found both east and west of the Scioto. Those west of the river were wet prairies, while those east were mostly of the dry type, due to the fact that they were near the river and underlaid with gravel. The Pickaway Plains is probably the largest dry prairie in the State east of the Scioto.

Due to the more uneven surface, most of the marshes were east of the river, only one of any extent being found west. They were mostly of the Button Bush (Cephalanthus occidentalis) type.
of the Button Bush (Cephalanthus occidentalis) type.

Directly east of the Scioto, a belt of Swamp Forest extended through the county from north to south. In the northern part of the county, along Walnut creek, there was quite a good deal of Oak-Maple. In the northeast and extending as far south as Washington township, appeared the Beech-Maple forests. In the extreme southeast, where the land is very rough, there were mixed mesophytic forests.

This paper contains about fifty pages of typewritten matter, a distribution map in colors, a key map of survey numbers, arranged so that the trees or prairies of any survey in the western part of the county may be located, a photographed map of the Pickaway Plains from Howe, and four pages of photographs taken by the writer.
The "Twin Elms" at Bloomfield
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