THE VEGETATION OF DANE COUNTY
WISCONSIN IN 1835

ROBERT SCOTT ELLARSON

Dane County is located in south central Wisconsin in what is now the heart of the rich dairy farming region of the state. Due to its advantageous location and high quality soils, much of the total land area is now under plow or is cleared pasture land; consequently, very little of the original vegetative cover remains. It was with this in mind that work was started to ascertain as closely as possible the type and distribution of the vegetative cover before its disturbance by white settlement.

Aside from the purely historical interest of this information, a map showing the areal distribution of the native vegetation before settlement in this region is also of great interest to the plant ecologist because Dane County lies within the prairie-forest ecotone and contains two widely divergent topographical regions.

The floristic associations recognized and mapped in this report are based on a list of plant associations devised by Dr. N.C. Fassett and used by him in mapping other areas within the state of Wisconsin. A chromatic system of colors is used to indicate the various associations and their inter-relationships. Eight different associations were recognized in the mapping of Dane County. The following is a list of these associations and the color used to indicate each on the map:

1 Open Marsh Magenta
2 Low Prairie Blue & Dots
3 High Prairie Blue
4 Oak Opening Green
5 Oak Woods Green & Dots
6 Upland Hardwoods Yellow
7 Lowland Hardwoods Magenta & Dots
8 Swamp Conifers Black

The principal sources of information used in compiling the accompanying map (see Plate 1) were the survey notes made at the time of the original land survey in the years 1832–35. These notes are on
file in the office of the Commissioners of Public Lands in the State Capitol at Madison, and were made available through the courtesy of Mr. Tester H. Bakken.

The original survey was made by two separate survey crews. The firstsurveyed the exterior or township lines blocking off the land into townships six miles square. A list of the deputy surveyors and the exterior and interior township lines each was respectively responsible for, together with the dates of these surveys, is to be found in Appendix A.

The notes taken by the deputy surveyors during the course of this work vary both in amount and in quality of information. However, for the most part, sufficient information is incorporated to allow a clear picture of the country, as it then appeared, to be drawn. The only exception was found in the notes for the interior lines of townships 5 N., R. 6 E., and T. 5 N., R. 7 E., which were severely criticized in an addendum from the surveyor general’s office for containing little information and this of poor quality. It was not deemed advisable to attempt to plot any of these data; hence, the omission of these two townships from the map. The manner in which the information obtained from the survey notes was interpreted will be discussed later.

Since Dane County is divided into two distinct geological regions, differing not only in relief and drainage patterns but also in soil-parent material, it seems advisable to divide the discussion on the basis of these two areas.

I. THE VEGETATION OF THE GLACIATED REGIONS

This area lies mostly east of the Johnstown terminal moraine. However, there are areas lying to the west of the Johnstown moraine which must also be considered. (See Plate 2.) The first consists of a triangular tract of land partly in the southwest part of T. 5 N., R. 8 E., partly in the eastern portions of T. 5 N., R. 7 E., and in the south east ¼ of T. 6 N., R. 6 E., and extending into the north half of T. 8 N., R. 6 E. This region, while lying outside of the boundary formed by the Johnstown terminal moraine, is partially covered by glacial till of Illinoisiian and early Wisconsin origin. The second of these areas is located in the north ½ of T. 8 N., R. 6 E., and extends into T. 9 N., R. 6 E. This area was not actually covered by glacial ice but rather by a deep layer of outwash material deposited by the Wisconsin River at the time of the recession of the Wisconsin ice-sheet; consequently, it is more closely allied to the glaciated region than to the Driftless Area where the soils are primarily residual. There are still other areas
lying west of the Johnstown moraine and covered by outwash materials. These areas as shown in Plate 2 are confined largely to the bottom lands of streams leading away from the region of the Johnstown terminal moraine, and they too must be considered in the discussion of the glaciated region.
HIGH PRAIRIE

The principal type of prairie mapped in the glaciated area of Dane County is the upland or high prairie. The surveyors' records make no mention of specific plants found on these upland prairies except to say that they contained "prairie grasses" or sometimes "grasses and weeds." However, the treeless condition of these prairie areas is attested to by the fact that, instead of marking witness trees to indicate section and quarter-section corners, the surveyors were forced to build mounds of earth and sod to locate these points. The following is an excerpt from the notes of the interior lines:

40.00 Set quarter section post & raised a mound of earth & sod
4 feet square & 2 1/2 feet high
80.00 Set post & raised a mound of earth & sod corner to Sections
1. 2. 11 & 12 land hilly prairie & first rate Growth grass

The figures 40.00 and 80.00 indicate the number of chains¹ from the section corner at which the surveyor commenced.

Occasionally one of the men would write of the prairie as "short grass prairie," but no mention is made in the entire county of tall grass on the prairie. Hence, it may be logical to assume that the surveyors were noting the exceptional short-grass prairies; but, since prairie grasses are not listed by species, it is impossible to tell definitely if this were true.

An attempt was made by the surveyors to classify land on the basis of its agricultural value, and in this respect prairie was usually classed as first-rate land, except in the more rolling and stony sections where it was referred to as second rate.

When the map of the original vegetation is compared to the map showing the surficial glacial deposits of Dane County, (see Plate 2) it is found that the prairie in the glaciated portion of the county was confined almost entirely to the areas covered by ground moraines of the Green Bay glacier. There are, of course, small inclusions of drumlins and outwash in these prairies, but the only major exception was found in the northwest part of T. 5 N., R. 11 E., extending into T. 6 N., R. 11 E., and into T. 6 N., R. 10 E., where a prairie was located entirely on a recessional moraine of the Green Bay lobe.

Another interesting correlation can be made between prairie areas and topography. The prairies were confined to broad areas of level
to gently rolling land which were undissected by major streams or marshes. In view of this fact, the occurrence of prairie on the aforementioned recessional moraine is more readily understood, since the topography of this moraine is not characteristic of such deposits, but resembles the topography of a typical, gently rolling, ground moraine. The occurrence of high prairie on this particular type of topography was probably due largely to the influence of prairie fires. Since fire would encounter few natural barriers in these areas, such as steep hillsides, streams, and marshes, it could attain a maximum intensity and effectively eliminate or prevent the invasion of woody plant species, with the result that prairie was the only plant association capable of maintaining itself.

**Low Prairie**

The major difficulty encountered in mapping this association was caused by the apparent failure of surveyors, other than Orson Lyon (see list of surveyors in Appendix A), to note its occurrence. No plants are mentioned by Lyon in describing these areas (he simply states that they were low or wet prairie). We are faced with the alternative of either discrediting this classification of low prairie or assuming that the surveyor was actually describing the vegetative association we consider today to be low prairie. The latter assumption appears to be a logical one, since Lyon appears to have deliberately differentiated low prairie from open marsh which was prevalent in the same townships.

From the present-day relict areas of low prairie, especially in eastern Dane County, it would appear that the low-prairie association was of much more frequent occurrence than the survey records would indicate. Other evidence which seems to bear out the theory that low prairie was more widespread than is indicated is the fact that in several localities, notably in townships 9 N., R. 11 E., T. 5 N., R. 11, E., T. 5 N., R. 9 E., and T. 6 N., R. 9 E., high prairie and open marsh are shown lying adjacent with no definite boundaries shown to exist between the two by the surveyors. In view of what we know about these two plant associations, it is logical to assume that there were transitional zones of low prairie separating the two. However, for the sake of uniformity and lack of sufficient field evidence, only those areas actually described by the surveyors as low prairie are so indicated on the map.

**Open Marsh**

Open marsh was the principal type of lowland vegetation at the
time of the original land surveys. Little mention is made of the specific plants found growing in these marshes except in general terms, such as marsh grass, reeds, rushes, or flags, (see Appendix B) and, in most cases, no mention at all is made of vegetation, and the land is simply described as marsh. The following quotation from the surveyor’s notes is one of the most graphic descriptions of open marsh found in the notes of eastern Dane County:

40.00 Set post in Marsh for ¾ Sec. = Section Cor. = Corner
2 No bearing trees near
44.40' To a creek 80 links wide crs. = Course East
64.50 to a creek .50 crs. N.E. current dull
80.00 Set post in Marsh far cor. to Sections 14 15 22 & 23 bearing
(Bur Oak 12. N. 74. E. 3.74') This mile is flat marsh covered
with blue flag & reeds and high coarse grass and is not suscep-
tible of cultivation poor 3rd rate land.

(Note: Witness trees, used to locate the section corner, are not in the marsh but on high ground lying to the east of the marsh.)

Marshes form a characteristic pattern in eastern Dane County tending to run in more or less parallel lines bearing from northeast to southwest. This, of course, is due to their being formed in the lowlands created by glacial ice as it flowed in this same direction. In contrast, in the morainic regions, marshes tended to be more or less isolated as a result of their occurrence in glacial kettle holes.

In general, the marshes were usually classed as either second- or third-rate (as suitable for cultivation) land, by the surveyors, who probably arrived at this classification on the basis of the amount of water present in them. Notes were sometimes made regarding the value of the streams in the marshes for such uses as sources of water, mill-
dam sites, and transportation. The following are a few excerpts from the general notes which were included as summaries of some of the townships.

T 7 N — R 11 E
From the N.E. to the S.W. part of the twp there is a line or chain of marshes that lies so low & flat that cannot be drained so as to be of any use.—The streams are deep and muddy bot-tom current dull & sluggish. There are no springs except those that rise up in the marshes. This two (sic) might be classed as second rate.

T 5 N — R 10 E
A deep creek rises near the N.W. corner, meanders across diag-
onally leaves at the S.E. corner which with its tributaries forms a stream of some importance — but it is without sufficient fall for machinery its bottom is wide and marshy as will be seen by the map.

Referred to in this last excerpt is the sketch-map which was included in the survey notes for each township. These sketch-maps were of considerable value in furnishing the outlines of the marsh areas between the points of intersection with the town and section lines. There may be some areas in which errors occur in the general outline of the marshes since these lines were sketched in between section lines without the surveyors’ actually traversing the marsh; however, when the marshy areas of the vegetational map are compared to present-day maps showing marsh soils, a high correlation is found between the two. Consequently, errors in marsh boundaries are undoubtedly negligible. Another possible source of error is in the failure of the surveyors to note small areas of marsh or other vegetation that lie wholly within a section. From the map it may be noted that a number of small marshes are recorded directly on the township section lines, but few, if any, are recorded as lying entirely within a section. This is, of course, because the surveyors surveyed the section lines and not the interiors of the sections.

**OAK OPENING**

The oak opening was by far the most widespread and abundant plant association at the time of the original land surveys. The term oak opening, as used here, refers to a plant association in which the oaks, primarily bur and white, but often black, are the dominant members of the association. It differs from oak woods in that the trees are rather widely and evenly spaced so that sufficient sunlight reaches the ground to sustain an undergrowth composed primarily of prairie grasses and forbs, although hazel and oak underbrush are frequently mentioned also. Blue-green is used to designate oak opening on the map because it appears to be a transitional form between the high prairie (blue) and true oak woods (green).

It is necessary here to review briefly the surveying technique used by these men so that the interpretation of the survey notes can be better understood. The usual survey crew was composed of five or six men whose duties appear to be as follows: the deputy surveyor was the instrument man and chief of the party, one marker marked the witness trees, and two axe-men cleared the brush and probably cut down any trees which were found directly on the line. The notes
which were written by the deputy surveyor consisted of a running description of the town or section line in which was noted the land cover and the points on the line where changes occurred, such as from timber to prairie or from prairie to swamp. Also noted were the trees which were found directly on the line, their species, their diameter at breast height, and the exact point on the line where they appeared.

For each section and quarter section, except when in an open marsh or on open prairie, two or more witness trees were marked. The species of tree, its diameter, and its distance and compass bearing from the true corner were noted. Upon completion of each section line, a brief summary of the land and vegetation was given, and when timber occurred along the line the tree species were usually given along with the type of undergrowth.

In interpreting the surveyors’ notes, certain rather arbitrary distinctions sometimes had to be drawn to separate oak opening from true oak woods. In most cases however, the oak opening was fairly well defined. The following excerpt from the surveyors’ notes for the interior lines of T. 9 N., R. 8 E., is an example of a clear-cut description of oak opening.

North between sec = section 35 & 36
40.00 E. = Black Oak 12 ¼ sec. corner
67.78 Burr oak 7
80.00 Set oak post far corner to sections 25, 26, 35, & 36
Burr oak 10 N 56° E .71 = links
do. 10 S 50 N .85
Land rolling 2nd rate thinly timbered with black and Bur oak.

From the foregoing it may be seen that only two trees, both of them bur oaks, were encountered directly on the line, and at the section corner the witness trees, both bur oaks, were respectively 46 and 57 feet from the corner and standing in opposite directions from the corner, so that the distance between these trees was approximately 100 feet. The descriptive summary further confirms the impression of the open nature of the country by the surveyors’ use of the term “thinly timbered.”

Still another description of a well-defined oak opening is found in the interior notes of T. 5 N., R. 8 E.

North between section 4 & 5
40.00 Set ¼ sec. = section post.
Bearings (B.O. = Black Oak 14 in. N. 9° W .45 L = Links
(Do. 11 in. N. 62°30 E. 42 L
77.83 intersect town line 28 L = Links N of post
Set post corner of sec = section 4 & 5
B (B.O. 10 in. S. 53° E 14.00 L
(Do. 14 in. S. 62° N .63 L
Land S part rolling N level 2nd rate B. W. & J. black, white, and
jack Oak and hazel undergrowth brake Rosin and Rattlesnake
week Prairie grass etc.
(See Appendix B for scientific names of above-listed plants.)

On this particular section line no trees were encountered and the
witness trees ranged from 27 feet to 924 feet from the quarter section
and section corners. The point of particular interest in this description
lies in the notes regarding the timber and undergrowth. The timber
was apparently all oak, as is to be expected in an oak opening. The
mention of oak and hazel undergrowth plus brake (bracken fern),
which may be considered components of an oak woods is somewhat
confusing; but, upon reading further, we find that rosin and rattle-
snake weed and prairie grasses were also present. Since the latter
are good prairie indicators and common in oak opening we may
conclude that the plant association was oak opening rather than oak
woods.

From these two examples of well-defined descriptions of oak
opening, there are gradations which approach a point where it be-
comes difficult to determine whether oak opening or oak woods is
being described. When this point is reached, it is necessary to use
some arbitrary divisions upon which to decide whether any given
tract was oak woods or opening. Several factors must be taken into
consideration before any conclusions can be reached. First, the tree
species and size are considered. Trees such as ash, basswood, elm,
and black walnut are not found in oak openings. Hickory, cherry,
and aspen are occasionally found in oak opening, but are seldom over
eight or ten inches in diameter. The trees of the black oak group, i.e.
black, red, and jack oak, also follow this same pattern although in
some areas of oak opening the black oaks are almost as numerous as
white and burr though they seldom are of large size. In contrast to
this, in oak woods, many black oaks were found to be two feet or
more in diameter. The above conditions were undoubtedly brought
about by the selective nature of the fires which swept this region.
Fires tend to eliminate trees of the black oak group from all but the
unburned or seldom burned areas; whereas, white and bur oaks are
less severely damaged because of their higher fire resistance. The
presence of a relatively high percentage of black oaks in certain oak
openings can be explained on the basis of their ability to sprout from
roots after the tops have been fire-killed. White oak was not found
to be a satisfactory indicator of oak opening, while bur oak was most valuable in this respect. The latter was usually found in abundance in oak openings, but was mostly lacking or represented by only one or two individuals in oak woods, and was never mentioned by the surveyor as a component of the forest in summarizing the timber of oak woods.

Second, the undergrowth of the forest serves as an important clue in determining whether an area is oak woods or oak opening, and as previously stated, the presence of prairie plants is a good indication of oak opening.

Third, the number of trees found on a line is a good index to the relative density of the stand. While this in itself does not constitute conclusive evidence when linked with the other factors, it is possible to reconstruct a fairly accurate picture of the vegetation.

The following notes are an illustration of the type which offered problems in interpretation:

**T. 8 N., R. 12 E., 4th Mer. N.W. Tery. = territory North Between**

Sections 22 & 23
.96 Bur Oak 18 inches diameter
26.28 Red Oak 18 inches diameter
40.00 Set quarter Section Post
bearings (Bur Oak 16. S. 59. W. 44
(Black Oak 18. N. 22. E. 62
62.86 Bur Oak 18 inches diameter
80.00 Set post corner to Sections 14 15 22 & 23
bearings (Bur Oak 12. S. 37 W. 1.27
(Do. 11. S. 56 E. 3.64
Land level & 2nd rate. Timber White, Bur, Red & Black Oak & Hickory. Undergrowth Oak, grass & weeds

**Mon. June 9th 1834**

The presence of a large red and black oak, the occurrence of hickory, and the fact that three trees were present on the line would point toward this being oak woods. However, the large number of bur oaks listed, two on the line and three as witness trees, must result in its being classified as oak opening.

Further evidence which tends to substantiate the widespread occurrence of oak opening was found in a paper by L. S. Cheney and R. H. True on the flora of Madison and vicinity. The paper deals with the flora of the region lying adjacent to Lakes Mendota, Monona, Waubesa, and Kegonsa. They describe the vegetation of this region as follows:

The vegetation of the region under consideration varies some-
what with elevation and character of soil. The woods, confined chiefly to the uplands, are made up largely of oaks, with occasional limited areas characterized by maples, cottonwood, or White elm. Generally speaking, the low marshy meadow bordering on the lakes and streams yields chiefly grasses and sedges.

The following is a list of plants with notes about their abundance taken from the same paper.

Ceanothus americana
Throughout the region on high land.

*Lupinus perennis* — Common.

*Amorpha canescens* — Throughout the region on dry soil.

*Liatris scariosa* (= *Aspera*)
Along railroads and dry wild land; everywhere.

*Asclepias tuberosa*
Dry open woods — common.

*Euphorbia corollata*
Dry ground everywhere.

*Andropogon turcatus*
Common in the dry portions of all wild lands, in fields and along rail roads.

*Andropogon scoparius*
Growing with *A. turcatus*. Much less common.

This list, selected by the author as representative of the herbaceous species common to both oak opening and open prairie, plus the descriptive passage in which oaks are characterized as the dominant trees, points to a widespread occurrence of oak opening in this area. While this information is not contemporary with the surveyors' records, it is even more significant since it emphasizes the persistence of oak opening even after settlement, during which time, due to the cessation of fires, much additional tree growth is known to have taken place.

**OAK WOODS**

The oak woods association consisted of a forest made up primarily of white and black oak trees which differed from the trees of the oak opening in being more closely grown and taller. It also had an admixture of other trees such as aspen, hickory, cherry, white ash, black walnut, and occasionally basswood.

The understory differed quite markedly from the oak opening in that it was completely lacking in prairie plants. The surveyors referred to the undergrowth as hazel and brush oak, briers, and weeds (and, in this case, the weeds undoubtedly referred to the usual herbaceous vegetation present on the floor of the oak woods).
The following excerpt from the survey notes is a good example of the type of cover classed as oak woods:

T 7 N R 12 E 4th Mer NW Tery = territory North between Sections 10 & 11
3.69 White Oak 12 inches diameter
25.76 Aspen 20 inches diameter
40.00 Set post for 1/4 Section corner
   bearings (White Oak 8 S 78 W .15
   (B.O.=Black Oak 20 N 61 E 21
46.61 Aspen 18 inches diameter
60.57 White Oak 10 inches diam
68.00 Entered Swamp
80.00 Set post in swamp corner to Sections 2, 3, 10 & 11
   bearings (Tamarac 12 S 45 E 5.10
   (White Oak 18 S 24 E 7.45
Land level & 2nd rate
Timber Aspen Black Oak
White Oak & Tamarac undergrowth same.

The oak woods were confined exclusively to a small area of land on the eastern edge of the county in townships 7 N., R. 11 E., and T. 8 N., R. 11 E. The woods were found on a series of drumlins in this area which were separated from each other by low-lying marshes and tamarack bogs. It is of considerable significance to note here that, with only two exceptions, the only tamaracks recorded in the entire county were in the bogs adjoining these oak woods. This phenomena appears to be due primarily to the affect of fires and shall be discussed more fully later.

More evidence tending to substantiate the occurrence of oak woods in the tract just described was found in the field notes kept by Mr. John Hooper of Jefferson County during the years 1904-08, at which time he engaged in the collection of ginseng (Panax quinquefolium). One entry is listed for the “Big Woods” at Goose Lake, Dane County, which is located in the area shown as oak woods and tamarack on the map. The remaining six entries are recorded as Deerfield, Dane County. Deerfield Township is T. 7 N., R. 12 E. Since ginseng is a plant confined exclusively to deep woodland areas it is probably significant that the collecting was limited to the areas shown as woods on the map. It will be noted that oak woods is also shown on the small island in Hook Lake located in the southwest 1/4 of T. 6 N., R. 10 E. The island was not surveyed at the time of the first government survey by Leonard Smith, and at this time oak woods was found to be the vegetative cover of the island. Hence it is entirely
possible that oak woods was present in 1835 even though it was not mentioned in the original notes.

**MAPLE BASSWOOD**

Maple basswood forest appears to be the climax forest association in Dane County today; although, at the time of the land surveys, as today, this forest type was confined to three relatively small tracts, all of which were located on the northeast or east side of the Madison chain of lakes. The first of these was located on a point of land in section 19, T. 6 N., R. 11 E., which juts out from the northeast shore of Lake Kegonsa. Lorin Miller, the deputy surveyor responsible for the notes on this township, included a description of these woods in his summary of the township. This summary is presented here in its entirety because of the interesting observations and thoughts it contains.

T 6 N R 11 E 4 Mer. = meridian

Remarks

This Township tho divided by its share of Crooked Marshes may be ranked as Good 2nd rate land.

The Soil is generally a warm light sandy loam which will richly repay the cultivator.

It may be said to be well watered by the narrow marshes in which is running water in some places contracted into brooks but mostly Expanded on the marsh.

The Foot & Outlet of the First Lake on sec 19.30 etc. a beautiful sheet of pure water abounding in Excellent Fish & great variety of water fowl offer fine inducements to the sportsman.

The Catfish Cr. at a moderate expense in deepening the Channel may become (and undoubtedly will) navigable for stream boats from Rock River to this Lake a distance by its meanders, of about 20 miles.

A branch of the White Water Creek rises on Section 24 running N. leaves the town on Section 12.

The surface of the country is for the most part rolling Timber Bur, White, & Yel. Oak rather thinly—a fine old Sugar Grove is noticed on Sec. 20.

The evident remains of artificial Mounds, Embankments etc. furnish food for the speculation of the Curious.

LORIN MILLER March 4th, 1834

The second of these maple woods was located on a point of land on the eastern shore of Lake Waubesa, just north of the mouth of the Yahara River in sections 3 and 4 of T. 6 N., R. 10 E., and extending northward along the lake shore into section 33 of T. 7 N., R. 10 E. This tract, while being small in size, had a variety of tree species present, as listed by the surveyors, which leaves little doubt as to its
being a true maple-basswood association. The following tree species were listed as occurring along the line between sections 3 and 4: sugar-maple, black and white ash, hickory, elm, black walnut, butternut, hornbeam, and blue beech. The undergrowth was listed as “grass, vines, bittersweet, briers, etc.”

The largest and most extensive tract of maple-basswood forest was situated north of the Yahara River between Lakes Mendota and Monona, extending around the northeast shore of Lake Mendota to just beyond Governor's Island. The following is a quotation from the surveyors’ records regarding this forest:

In sec 1 there is a perpendicular bluff of rocks about 60 feet high. There is on N.W. part of Sec 1 a fine grove of sugar tree containing about 200 acres of ground.

From this description, it would seem that the maple-basswood forest was actually much more restricted than is shown by the map; however, the situation probably found by the surveyors was one in which there was a central core of mature maple-woods centering in the vicinity of the present village of Maple Bluff. Surrounding the mature maple-basswood forest were woods in various successional stages between oak woods and fully mature maple-basswoods. A further quotation from the surveyors’ notes from the section line between sections 34 and 35, T. 8 N., R. 9 E., tends to bring out the gradation between the mature central core and the outer edge of this forest. Here at the outer edge, the surveyors describe the timber as being black and white oak with sugar-tree undergrowth. Therefore it might be argued that the outer edges of this area should be classed as oak woods, but, since either basswood or sugar maple, or both, are mentioned on all of the lines within the area it has been decided to classify it as maple-basswood.

Another line of evidence which substantiated the evidence found in the surveyors’ records was found in Cheney and True’s report from which the following list of plants was extracted.

*Isopyrum biternatum*
  Lakes Waubesa and Kegonsa. Local.

*Dicentra canadensis*
  Two specimens found on Governor’s island
  N.E. shore Lake Mendota growing with D. Culcullaria. Rare.

*Cornus alternifolia*
  Observed in Fuller’s woods east of Madison. Rare.

*Asarum canadense*
  In low woodlands northeast of Lake Waubesa. Rare.

*Claytonia virginica*
In rich woods. Local.

*Erythronium albidum*

Rich woods about the Lakes.

*Trillium erectum*

In rich woods east of Lake Mendota. Not common.

These plants were selected by the author as being representative of the herbaceous flora of a typical mature maple-basswood association. All of the descriptions of range given for these plants emphasize its restricted nature, and for several species the range coincides exactly with those areas shown to be maple-basswood forest by the surveyors.

The peculiar distributional pattern of the maple-basswood forest leads to the conclusion that its confinement to these protected points of land was a result of fires which swept across the county, driven by the prevailing southwesterly winds. These fires would have eliminated or prevented the development of a climax forest except in locations protected on the southwest by bodies of water broad enough to stop flying embers.

**SWAMP HARDWOODS**

The swamp hardwoods of Dane County fall into three distinct categories although no attempt has been made to differentiate them in the mapping.

The first of these are the swamp hardwoods bordering the Wisconsin River in T. 8 N., R. 6 E. These are characterized by a relatively high percentage of red or river birch (*Betula nigra*) present in them. The following surveyor's note is a summary of the short section line between sections 29 and 30, T. 9 N., R. 6 E.: “Land level 2nd rate timber oak elm maple birch etc.” The maple referred to here is undoubtedly silver maple, since this species is at the present time plentiful in the river-bottom woodlands.

The second of the swamp hardwood types was classified by the surveyors as black-ash swamp and was found in only two places on the eastern shore of the Madison chain of lakes. The first is along the Yahara River where it leaves Lake Mendota in T. 7 N., R. 9 E., and the second is on the section line between sections 28 and 33 in T. 7 N., R. 10 E., where the following tree species are mentioned: oak, ash, maple, and willow, while in the former swamp the area is described simply as being black-ash swamp.

The third category of swamp hardwoods was small areas east of the Madison lakes primarily in the northern two tiers of townships characterized as willow swamps. Since no trees are recorded on the
line in any of these swamps, it is probably safe to conclude that they contained willow brush similar to the cover present in many of these areas today. Here again it may be pointed out that trees unable to withstand repeated fires are confined to the protected portions of lake shores or river banks, while swamp hardwoods (in this case willows) are maintained in the scrub or brush stage in the areas subjected to frequent burning.

**SWAMP CONIFERS**

The swamp conifers found at the time of the land surveys were all of one species, tamarack. These trees were recorded in only three localities in the entire county. Tamaracks are mentioned in the summary of the timber occurring along the section line between sections 27 and 28, T. 7 N., R. 10 E. However, no swamp conifers were plotted on this line because of lack of any evidence about their location in relation to the line.

The survey notes contain a reference to a small tamarack swamp lying about 40 chains south of the quarter-section corner of the east-west line between sections 7 and 18, T. 5 N., R. 12 E. The definite location of this small swamp allowed it to be plotted as shown on the map.

The most extensive tract of tamarack recorded in the county was situated in the eastern portions of T. 7 N., R. 12 E., and T. 8 N., R. 12 E. As previously mentioned, the occurrence of tamarack in the lowlands was associated with oak woods on the uplands. The question immediately arises as to why this situation should obtain in this particular area and no other. A partial answer to this question may be afforded by information gained by the author while employed as engineering aide by the U.S.D.A. Soil Conservation Service during the summer of 1943. At this time, a reconnaissance survey was made by the Soil Conservation Service to determine the feasibility of draining a portion of this area for agricultural purposes. The survey was started at Koshkonong Creek in section 15, T. 7 N., R. 12 E., and from there ran northward through sections 15, 10, 9, 4, and 3, and ended at the town line between townships 7 and 8 north. When this line was plotted, it was found that a relatively steep gradient existed for the first 3,000 feet; this flattened considerably for the next 12,000 feet, and was almost level for the last 5,000 feet. When this observation is compared with the vegetational map, it can be seen that the steepest portion of this lowland, the first 3,000 feet, was open marsh, whereas the remainder of flatter portions with poorer drainage was tamarack
swamp. It would appear that tamarack swamp occurred where surface drainage was sufficiently impeded to allow an area to remain wet throughout the year. This is probably not so important as a soil-moisture factor in promoting tree growth, as it is a factor in the prevention of fire from sweeping these areas regularly. While both of these factors are undoubtedly of importance, the latter would help to explain the presence of oak woods on the highlands between the tamarack swamps, since a lessening of the frequency of fires would allow the development of oak woods, while surrounding areas, frequently burned, would be maintained in the oak-opening stage. It might also be pointed out here that the occurrence of these oak woods can scarcely be attributed to a high water table influenced by the adjoining bogs, since the oak woods were all on steeply sloping glacial drumlins whose crests extend as much as 100 to 150 feet above the surrounding lowlands.

It will be noted that no definite lines of demarkation are shown between open marsh and tamarack bog. This is because the surveyors were indefinite in defining the boundaries existing between the two.

II. THE VEGETATION OF THE NON-GLACIATED REGION

The vegetation throughout the Driftless Area of Dane County forms a relatively simple pattern which conforms closely to the topography of the region. In general, the steep hillsides and narrow ridge tops were timbered, the broad ridge tops were prairie, and the bottom lands were either prairie or marsh, although in a few areas these too were timbered.

As previously noted, T. 5 N., R. 6 E., and T. 5 N., R. 7 E., have been omitted from the map due to lack of sufficient information in the field notes. Although it is possible to determine from the field notes that the predominant vegetative cover of these two townships was oak opening, the prairie and marsh areas were so poorly defined that mapping was impossible. However, this omission should not interfere seriously with the overall picture of the vegetation, because there is a close correlation between topography and vegetation, and a correspondingly close similarity of topography throughout the Driftless Area. In all, four different plant associations were mapped: oak opening, open marsh, high prairie, and low prairie. These associations will be taken up and discussed individually.

OAK OPENING

The oak opening was by far the most widespread and abundant plant association present in the unglaciated part of Dane County at
the time of the surveys. It differed from the oak opening of the gla-
ciated regions in that it appeared to have contained a somewhat
larger proportion of bur oak.

It is unfortunate that the surveyor responsible for most of the
townships within this area did not record any of the herbaceous species
of plants found as undergrowth in the oak opening. Even without
this information there can be little doubt as to the actual plant asso-
ciation, since throughout the field notes the descriptive phrases “thinly
timbered with oak” and “timber scattering” are repeated over and over
again. The following example from the field notes is typical of most
of the section lines in the oak opening of the Driftless Area:

East boundary of Twp = Township 7 N, R 6 E 4th Mer =
Meridian North on east side of Sec = Section 13
40.00 Set Oak post for ¼ Sec. = Section corner
Mark ¼ S 13
B = Black Oak 7 S 20 W .43 links
W = White Oak 18 N 6 W 1.31
Marked ¼ S 13
80.00 Set Oakpost corner to sections 12 and 13 Marked
R 6 E T 7 N 12 & 13
Burr Oak 16 S 47 W .89
Do 10 N 71 W 1.70
Land hilly and stony 3rd rate thinly timbered with oak
Oct 6th 1938

A description such as the foregoing eliminates any doubt about the
timber, and needs no corroboration by the addition of herbaceous
species to the description to enable it to be classed as oak opening.

Oak opening was found on practically all of the steep hilltops and
ridge tops, and according to the field notes, appears to have been
present in most of the narrower valley bottoms. A problem arises
when the vegetation map is compared to a present-day soils map
because all of the valley bottoms, regardless of their width, are shown
as having prairie soils. Owen, one of the first geologists to work in
Wisconsin, described the scenery of the Driftless Area in these terms:

We have clumps of trees, disposed with an effect that might
baffle the landscape gardener, now crowning the grassy height,
now dotting the green slope with partial and isolated shade.
From the hilltops the intervening valleys wear the aspect of
cultivated meadows and rich pasture grounds, irrigated by fre-
quent rivulets that wend their way through fields of wild hay
fringed with flourishing willows. Here and there occupying its
nook, on the bank of some stream, at some favorable spot, occurs
the solitary wigwam, with its scanty appurtenances. On the
summit levels spread the wide prairie, decked with flowers of
the gayest hue; its long undulating waves stretching away till
sky and meadow mingle in the distant horizon.\textsuperscript{8}
This vivid description tends to substantiate further the author’s
opinion that the valley bottoms were primarily prairie while the hill-
sides were covered with oak openings. It is quite possible that the sur-
veyors simply neglected to record prairie in the narrow valleys be-
cause the rest of the country was so thinly timbered that the contrast
between the two might not have seemed important enough to record.
It is significant that in most cases, where the valleys broaden out,
either prairie or marsh is recorded.

**HIGH PRAIRIE**

High prairie was found to occupy the broad, level ridges and the
level valley bottoms in the Driftless Area of the county. The only
major ridge prairie was that covering Military Ridge in T. 6 N., R.
6 E., and T. 6 N., R. 7 E. The prairie followed the level summit of
this ridge, ran down the crest to where the sides break abruptly, and
then gave way to oak opening. Nothing was said in the survey notes
about the nature of the prairie; it was simply referred to as prairie.
At one point in the northeast corner of T. 6 N., R. 6 E., the Military
Ridge prairie was continuous with a prairie which extended down into
the bottom land in the southern quarter of T. 7 N., R. 7 E. This was
the only place where ridge prairie and bottom land prairie were con-
tinuous; in all other places, there occurred between the two an in-
tervening band of oak opening.

The prairies of the bottom land were not differentiated from the
ridge prairie in any way by the surveyors, and since no plant species
were listed for either of the two, it is impossible to tell today if any
differences did exist.

**OPEN MARSH**

Open marsh in the Driftless Area was limited to lands immediately
adjacent to the streams in the valley bottoms, and was found primarily
in the narrower valleys. The discontinuous and isolated nature of
most of these marshes suggest that they may have been more or less
continuous along these streams, but due to variations in width, they
were recorded only at their widest points where section intersected
them. This is brought out in the following quotation from the sur-
vey notes:

- **Township 7 North Range 7 East North Between sections 8 & 9**
- **24.00 Enter Marsh**
- **40.00 Set Oak post for \(\frac{1}{4}\) sec. = section corner**
- **Burr Oak 6 S 87\(\frac{1}{2}\) N = North S .30**
- **No other near**
49.25 Stream 8 C. = Course N.E.
54.00 Same C. N.W.
63.00 Same C. N.E.
68.00 Leave Marsh
80.00 Set Oak post far Corner to Sections 4, 5, 8, 9.
B. = Black Oak 14 S 76 W .83
Burr Oak 10 N ½ E 1.41
Land level & marshy

The section line followed a valley bottom, crossing and recrossing a stream, and we find marsh recorded as continuous along the stream, whereas in T. 6 N., R. 7 E., and T. 6 N., R. 8 E., marshes are recorded primarily as small tracts on the section lines where these lines intersect the streams.

In townships 8 N., R. 6 and 7 E., two relatively large marshes were recorded in the wider valleys. It is difficult to determine the exact nature of these areas listed as marsh, as is shown by the following description:

Township 8 North Range 6 East North Between sections 23 & 24
20.00 Top of a high ridge E & N
40.00 Set Oak post for ¼ sec. = section corner
Burr Oak 10 S 66 E 48
W = White Oak 7 S 18 W 73
58.00 Entered Marsh
80.00 Set Oak Post for corner to sections 13 14 23 24
Raised a mound of sods 3 feet square & 3 feet high
Land third rate first half hilly & stony last half marsh

No plants are listed, but the surveyors built a mound of "sods" three feet square and three feet high which would strongly indicate that the area was actually low prairie, since it is hardly conceivable that such a mound would be built in an area wet enough to be considered marsh. This view is further strengthened by the fact that only one small tract of low prairie was recorded by the surveyors in the Driftless Area where it was presumably more common than this would indicate. However, since there is no conclusive evidence to prove that these marsh areas were actually low prairie they have been shown as open marsh on the map.

SUMMARY AND CONCLUSIONS

The principal sources of information used in compiling the map of the vegetation of Dane County as it appeared in 1835 were the survey notes taken at the time of the government land surveys during the years 1832–35.

Eight different plant associations, as inferred from the surveyors’
descriptions, were recognized in mapping the county.

Dane County contains two widely differing geological regions and a discussion of the vegetative cover can be conveniently divided on the basis of these two regions.

Three major factors, namely, topography, drainage, and fires, seem to have had the greatest influence on the distribution and pattern of vegetational types found in the county in 1835.

In those areas which had a flat to gently rolling topography, and were undissected by streams or marshes, fires were undoubtedly most severe, and these areas were found to be predominantly high prairie. Hillier areas and areas broken by marshes and streams were found to be oak opening, since fires would have been less severe in these locations. Lowlands were of three different types: open marsh or willow brush in those areas frequently burned; swamp hardwood in areas protected from fire by wide lakes or rivers; and tamarack bog in those areas with surface drainage so poor that fire was excluded. Climax forest (maple-basswood) was found only on points of land on the northeast shores of the Madison chain of lakes which received complete protection from fires sweeping up from the southwest.

Oak woods were found only on drumlins in the glaciated regions where they received at least partial fire protection from the tamarack bogs adjoining or surrounding them.

Low prairie was mapped in only a few localities within the county, yet relict areas of low prairie are so extensive today that it is quite possible that many areas of this association were overlooked by the surveyors.

BIBLIOGRAPHY


APPENDIX A

INTERIOR LINES

Twp 5 N'  R 6 E not used  J. W. Stephenson  1833
Twp 5 N  R 7 E  J. W. Stephenson  1833
W½ Twp 5 N  R 8 E  J. W. Stephenson  1833
E½ Twp 5 N  R 8 E  Orson Lyon  1835
    Twp 5 N  R 9 E  Lorin Miller  1833
    Twp 5 N  R 10 E  Lorin Miller  1833
    Twp 5 N  R 12 E  Lorin Miller  1833
* * * * *
    Twp 6 N  R 6 E  John Mullett  1833
    Twp 6 N  R 7 E  John Mullett  1833
    Twp 6 N  R 8 E  Lorin Miller  1833
    Twp 6 N  R 9 E  Lorin Miller  1833
    Twp 6 N  R 10 E  Lorin Miller  1833–34
    Twp 6 N  R 11 E  Lorin Miller  1834
    Twp 6 N  R 12 E  Lorin Miller  1833
* * * * *
    Twp 7 N  R 6 E  John Mullet  1833
    Twp 7 N  R 7 E  John Mullett  1833
    Twp 7 N  R 8 E  Orson Lyon  1834
    Twp 7 N  R 9 E  Orson Lyon  1834
    Twp 7 N  R 10 E  Orson Lyon  1834
    Twp 7 N  R 11 E  Orson Lyon  1834
    Twp 7 N  R 12 E  Orson Lyon  1834
* * * * *
INTERIOR LINES
    Twp 8 N  R 6 E  John Mullett  1833
    Twp 8 N  R 7 E  John Mullett  1833
    Twp 8 N  R 8 E  John Mullett  1833
    Twp 8 N  R 9 E  Orson Lyon  1834
    Twp 8 N  R 10 E  Orson Lyon  1834
    Twp 8 N  R 11 E  Orson Lyon  1834
    Twp 8 N  R 12 E  Orson Lyon  1834
* * * * *
    Twp 9 N  R 6 E  John Mullett  1833
    Twp 9 N  R 7 E  John Mullett  1833
    Twp 9 N  R 8 E  John Mullett  1833
    Twp 9 N  R 9 E  Orson Lyon  1834
    Twp 9 N  R 10 E  Orson Lyon  1834
    Twp 9 N  R 11 E  Orson Lyon  1834
    Twp 9 N  R 12 E  Orson Lyon  1834

EXTERIOR
East and West Lines
Between Twps 4 & 5 N  R 8 E  John Mullett  1832
Between Twps 4 & 5 N  R 7 E  John Mullett  1832
Between Twps 4 & 5 N  R 6 E  John Mullett  1832
Between Twps 4 & 5 N  R 9 E  Mullett and Brink  1833
Between Twps 4 & 5 N  R 12 E  Mullett and Brink  1833
Between Twps 4 & 5 N  R 11 E  Mullett and Brink  1833
Between Twps 4 & 5 N  R 10 E  Mullett and Brink  1833
** Ellarson — Vegetation of Dane County **

<table>
<thead>
<tr>
<th>Description</th>
<th>Coordinates</th>
<th>Ownership 1</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Twps 5 &amp; 6 N R 6 E</td>
<td>Mullett and Brink</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 5 &amp; 6 N R 7 E</td>
<td>Mullett and Brink</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 5 &amp; 6 N R 8 E</td>
<td>Mullett and Brink</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 5 &amp; 6 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 5 &amp; 6 N R 10 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 5 &amp; 6 N R 11 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 5 &amp; 6 N R 12 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 6 &amp; 7 N R 6 E</td>
<td>Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 6 &amp; 7 N R 7 E</td>
<td>Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>E1/2 Between Twps 6 &amp; 7 N R 8 E</td>
<td>Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>W1/2 Between Twps 6 &amp; 7 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 6 &amp; 7 N R 10 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 6 &amp; 7 N R 11 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 6 &amp; 7 N R 12 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 6 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 7 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 8 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 10 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 11 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 12 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 6 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 7 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 8 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>W1/2 Between Twps 8 &amp; 9 N R 9 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>E3/4 Between Twps 8 &amp; 9 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 10 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 11 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 12 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 7 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 8 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>W1/2 Between Twps 9 &amp; 10 N R 9 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>E1/2 Between Twps 9 &amp; 10 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 10 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 11 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 12 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
</tbody>
</table>

** EXTERIOR **

** East and West Lines **

<table>
<thead>
<tr>
<th>Description</th>
<th>Coordinates</th>
<th>Ownership 1</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Twps 7 &amp; 8 N R 6 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 7 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 8 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 10 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 11 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 7 &amp; 8 N R 12 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 6 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 7 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 8 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>W1/4 Between Twps 8 &amp; 9 N R 9 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>E3/4 Between Twps 8 &amp; 9 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 10 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 11 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 8 &amp; 9 N R 12 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 7 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 8 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>W1/2 Between Twps 9 &amp; 10 N R 9 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>E1/2 Between Twps 9 &amp; 10 N R 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 10 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 11 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Between Twps 9 &amp; 10 N R 12 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
</tbody>
</table>

** EXTERIOR **

** North and South Lines **

<table>
<thead>
<tr>
<th>Description</th>
<th>Coordinates</th>
<th>Ownership 1</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twp 5 N between R 7 &amp; 8 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Twp 5 N between R 6 &amp; 7 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Twp 5 N between R 5 &amp; 6 E</td>
<td>John Mullett</td>
<td>1832</td>
<td></td>
</tr>
<tr>
<td>Twp 5 N between R 8 &amp; 9 E</td>
<td>Mullett and Brink</td>
<td>1833</td>
<td></td>
</tr>
<tr>
<td>Twp</td>
<td>Section between R</td>
<td>Description</td>
<td>Surveyors</td>
</tr>
<tr>
<td>------</td>
<td>-------------------</td>
<td>---------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>5</td>
<td>9 &amp; 10 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>5</td>
<td>10 &amp; 11 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>5</td>
<td>11 &amp; 12 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>5</td>
<td>12 &amp; 13 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>6</td>
<td>5 &amp; 6 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>6</td>
<td>6 &amp; 7 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>6</td>
<td>7 &amp; 8 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>6</td>
<td>8 &amp; 9 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>6</td>
<td>9 &amp; 10 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>6</td>
<td>10 &amp; 11 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>6</td>
<td>11 &amp; 12 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>6</td>
<td>12 &amp; 13 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>7</td>
<td>5 &amp; 6 E</td>
<td></td>
<td>Mullett</td>
</tr>
<tr>
<td>7</td>
<td>6 &amp; 7 E</td>
<td></td>
<td>Mullett</td>
</tr>
<tr>
<td>7</td>
<td>7 &amp; 8 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>7</td>
<td>8 &amp; 9 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>7</td>
<td>9 &amp; 10 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>7</td>
<td>10 &amp; 11 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>7</td>
<td>11 &amp; 12 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
<tr>
<td>7</td>
<td>12 &amp; 13 E</td>
<td></td>
<td>Mullett and Brink</td>
</tr>
</tbody>
</table>

**EXTERIOR**

<table>
<thead>
<tr>
<th>Twp</th>
<th>Section between R</th>
<th>Description</th>
<th>Surveyors</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>5 &amp; 6 E</td>
<td></td>
<td>John Mullett</td>
<td>1832</td>
</tr>
<tr>
<td>8</td>
<td>6 &amp; 7 E</td>
<td></td>
<td>John Mullett</td>
<td>1832</td>
</tr>
<tr>
<td>8</td>
<td>7 &amp; 8 E</td>
<td></td>
<td>John Mullett</td>
<td>1832</td>
</tr>
<tr>
<td>8</td>
<td>8 &amp; 9 E</td>
<td></td>
<td>John Mullett</td>
<td>1832</td>
</tr>
<tr>
<td>8</td>
<td>9 &amp; 10 E</td>
<td></td>
<td>Mullett and Brink</td>
<td>1833</td>
</tr>
<tr>
<td>8</td>
<td>10 &amp; 11 E</td>
<td></td>
<td>Mullett and Brink</td>
<td>1833</td>
</tr>
<tr>
<td>8</td>
<td>11 &amp; 12 E</td>
<td></td>
<td>Mullett and Brink</td>
<td>1833</td>
</tr>
<tr>
<td>8</td>
<td>12 &amp; 13 E</td>
<td></td>
<td>Mullett and Brink</td>
<td>1833</td>
</tr>
<tr>
<td>9</td>
<td>6 &amp; 7 E</td>
<td></td>
<td>John Mullett</td>
<td>1832</td>
</tr>
<tr>
<td>9</td>
<td>7 &amp; 8 E</td>
<td></td>
<td>John Mullett</td>
<td>1832</td>
</tr>
<tr>
<td>9</td>
<td>8 &amp; 9 E</td>
<td></td>
<td>John Mullett</td>
<td>1832</td>
</tr>
<tr>
<td>9</td>
<td>9 &amp; 10 E</td>
<td></td>
<td>Mullett and Brink</td>
<td>1833</td>
</tr>
<tr>
<td>9</td>
<td>10 &amp; 11 E</td>
<td></td>
<td>Mullett and Brink</td>
<td>1833</td>
</tr>
<tr>
<td>9</td>
<td>11 &amp; 12 E</td>
<td></td>
<td>Mullett and Brink</td>
<td>1833</td>
</tr>
<tr>
<td>9</td>
<td>12 &amp; 13 E</td>
<td></td>
<td>Mullett and Brink</td>
<td>1833</td>
</tr>
</tbody>
</table>

**APPENDIX B**

A list of common plant names used by the surveyors and their scientific equivalent as interpreted by the author.

- **Ash** ......................................................... *Fraxinus nigra*
- **White Ash** .................................................. *Fraxinus americana*
- **Aspen** ...................................................... *Populus grandidentata*
- **Basswood** ................................................... *Tilia americana*
- **Birch** ...................................................... *Betula nigra*
Ellarson — Vegetation of Dane County

Bittersweet ............................................. Celastrus scandens?
Black walnut .............................................. Juglans nigra
Blue Beech .................................................. Carpinus caroliniana
Brake .......................................................... Pteris aquilina
Briers ...................................................... Rubus sp.
Butternut ..................................................... Juglans cinerea
Cherry ......................................................... Prunus serotina
Elm ................................................................ Ulmus americana
Flags ............................................................ Iris virginica?
Hazel ........................................................... Corylus americana
Hickory .......................................................... Carya ovata
Horn beam ..................................................... Ostrya virginiana
Marsh grass .................................................. ?
Maple .......................................................... Acer saccharinum?
Oak
  Black .................................................. Quercus velutina
  Bur ......................................................... Q. macrocarpa
  Jack ................................................... Q. ellipsoidalis?
  Red ......................................................... Q. rubra
  White ..................................................... Q. alba
  Yellow .................................................. Q. velutina
Prairie grass ................................................ Andropogon Gerardi (turgatus) A. scoparius and Sorghastrum nutans etc.

Rattlesnake weed ......................................... Eryngium yuccolium
Reeds .......................................................... Phragmites communis?
Rosin weed .................................................. Silphium sp.
Rushes ........................................................ ?
Sugar .......................................................... Acer Saccharum
Sugar maple .................................................. Acer Saccharum
Tamarack .................................................... Larix laricina
Willow ....................................................... Salix spp.

1 1 chain = 66 feet
1 link = 7.22 inches
100 links = 1 chain
80 chains = 1 mile

2 Indicating 44 chains and 40 links (about 2,928 feet) north of the corner.

3 Indicating a bur oak 12 inches diameter, breast height, distance 74 degrees east of north, distance from corner, 3 chains and 74 links (about 242 feet).


5 Ibid., 61—111.


8 Martin, Lawrence, Physical Geography of Wisconsin. 2nd edition, Madison, 42. 1932.