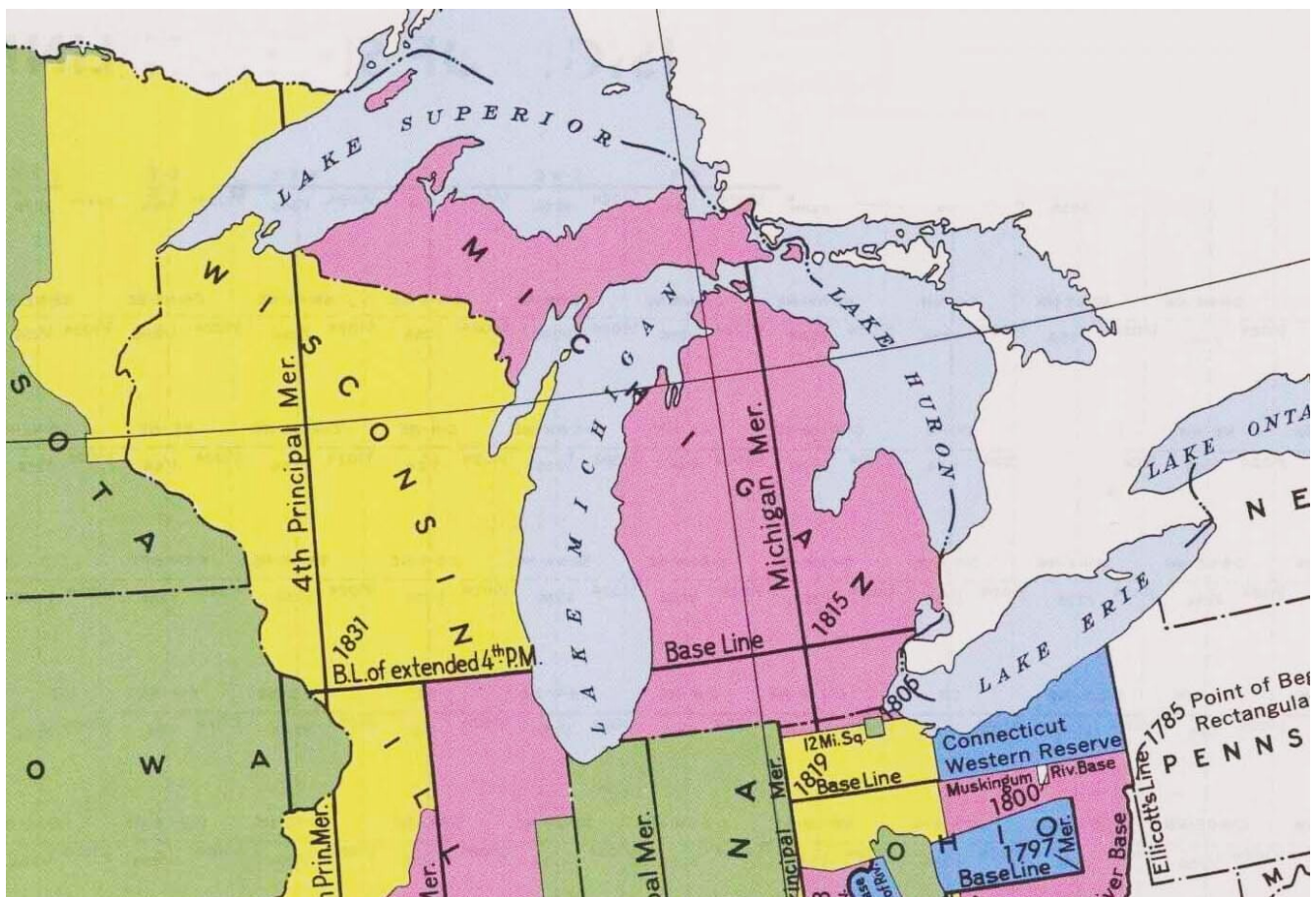


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Thumb Habitats
Michigan's Early Vegetation
General Land Office Surveys
by Bill Collins

Have you ever wanted to go back in time to see what Michigan looked like a few hundred years ago, before settlers began clearing the forest and farming the land? Thankfully, we can get a good idea based on the General Land Office surveys of the Northwest Territory in the early 1800s. Surveyors collected a surprising amount of detail about the land and vegetation, providing an amazing glimpse of Michigan's pre-European settlement landscape.

In 1784, at the urging of Thomas Jefferson, the Congress of the Confederation proposed that the 13 colonies relinquish their claims to most land west of the Appalachians, including the Northwest Territory, and cede these claims to the federal government. The largest cession was from Virginia in 1784, which included parts of the future Michigan. In 1787, the Congress passed the Northwest Ordinance, establishing a government for the Northwest Territory, the region which eventually became Ohio, Indiana, Illinois, Michigan, Wisconsin, and northeastern Minnesota. In 1795, the Congress directed that Native American rights in the Northwest Territory be eliminated by treaty. Upon control, the territory was to be surveyed according to the Northwest Ordinance of 1787 and the Land Ordinance of 1785 which established the Public Land Survey System, a method of dividing federal territory into 6-mile square townships, and townships into 36 1-mile square sections.



Map showing baseline and meridian in Michigan. Credit: The Center for Land Use Interpretation, <https://clui.org/>

Surveys were not planned in Michigan until after the Treaty of Detroit in 1807, and then were delayed by the War of 1812. The General Land Office was created in 1812 and in 1815, GLO surveyors began in Michigan, first by establishing a base line and meridian, from which all Michigan townships and sections were located. By 1820, crews finished surveying all of the land south of Flint and east of Jackson, and over the next five years completed the southern third of the Lower Peninsula. By 1840 most of the Lower Peninsula and the eastern Upper Peninsula were thought to be completed, but many errors and even faked work required surveyors to spend the next four years resurveying many of the lines. The entire Michigan survey was completed by 1856.

Instructions to Deputy Surveyors from the Surveyor General were detailed, requiring them to do much more than just survey lines:

"Your field notes are to form a full and perfect history of your operations in the field. You are to enter in their proper places in the field notes of your survey, a particular description and the exact location of the following objects: --

- 1. The length and variation or variations of every line you run.*
- 2. The name and diameter of all bearing trees, with the course and distance of the same from their respective corners.*
- 3. The name of the material from which you construct mounds, with the course and distance to the pits.*
- 4. The name, diameter and exact distance to all those trees which your lines intersect.*
- 5. At what distance you enter, and at what distance you leave every river, creek or other "bottom", prairie, swamp, marsh, grove or windfall, with the course of the same at both points of intersection.*
- 6. The surface, whether level, rolling, broken or hilly.*
- 7. The soil, whether first, second, or third rate.*
- 8. The several kinds of timber and undergrowth, naming the timber in the order of its prevalence.*
- 9. All rivers, creeks and smaller streams of water, with their actual or right angled widths, course, banks, current and bed, at the points where your lines cross.*
- 10. A description of all bottom lands--whether wet or dry, and if subject to inundation, state to what depth.*
- 11. All springs of water, and whether fresh, saline or mineral, with course and width of the stream flowing from them.*
- 12. All lakes and ponds, describing their banks and the depth and quality of their water.*
- 13. All coal banks, precipices, caves, sink holes, quarries and ledges with the character and quality of the same.*
- 14. All water-falls and mill sites.*
- 15. All towns and villages, houses, cabins, fields and sugar camps, factories, furnaces and other improvements.*
- 16. All metalliferous minerals or ores, and all diggings therefore, with particular descriptions of both, that may come to your knowledge, whether intersected by your lines or not.*
- 17. All roads and trails, with the courses they bear .*
- 18. All offsets or calculations by which you obtain the length of such parts of your lines as cannot be measured with the chain.*
- 19. The precise course and distance of all witness corners from the true corners which they represent."*

7 13 N R. 13 E

Birch 10 N 48 W 26 1/2
Land rather uneven 2nd. rate.
Sugar, Birch, Ash, Maple, Pine.
and Hemlock.

Start On East By. of Sec. 13

10.60 Cedar 10

18.00 Leave Swamp

21.17 Hemlock 18

30.56 do 10

40.00 Set 1/4 Sec Post

Hemlock 40 S 34 W 8 1/2

Birch 6 N 29 W 19

46.00 Enter Swamp

52.64 Cedar 16

61.37 Maple 12

76.90 Cedar 14

80.00 Set Post corner of Secs. 12 + 13

Pine 16 N 20 W 6

Cedar 10 S 27 W 38 1/2

Pine 18 N 76 W 20

Cedar 10 S 27 W 38 1/2

Land 3rd. rate. Birch, Maple, Pine,
Cedar + Hemlock.

Thick undergrowth of Cedar in Swamp.

Original survey notes for part of Section 13 in Argyle Township, Sanilac County.

The detailed notes taken by GLO surveyors are a precious link to Michigan's early landscape. Combined with soil maps, historical drainage, and knowledge of remnant plant communities, ecologists have been able to reconstruct and map the presettlement vegetation. What did the GLO surveyors see in the Thumb? That will be the subject of the next article.