

The Lakeshore Guardian, 2009 October
Thumb Habitats
Michigan's Early Vegetation – Part 2
The Thumb Wilderness
by Bill Collins

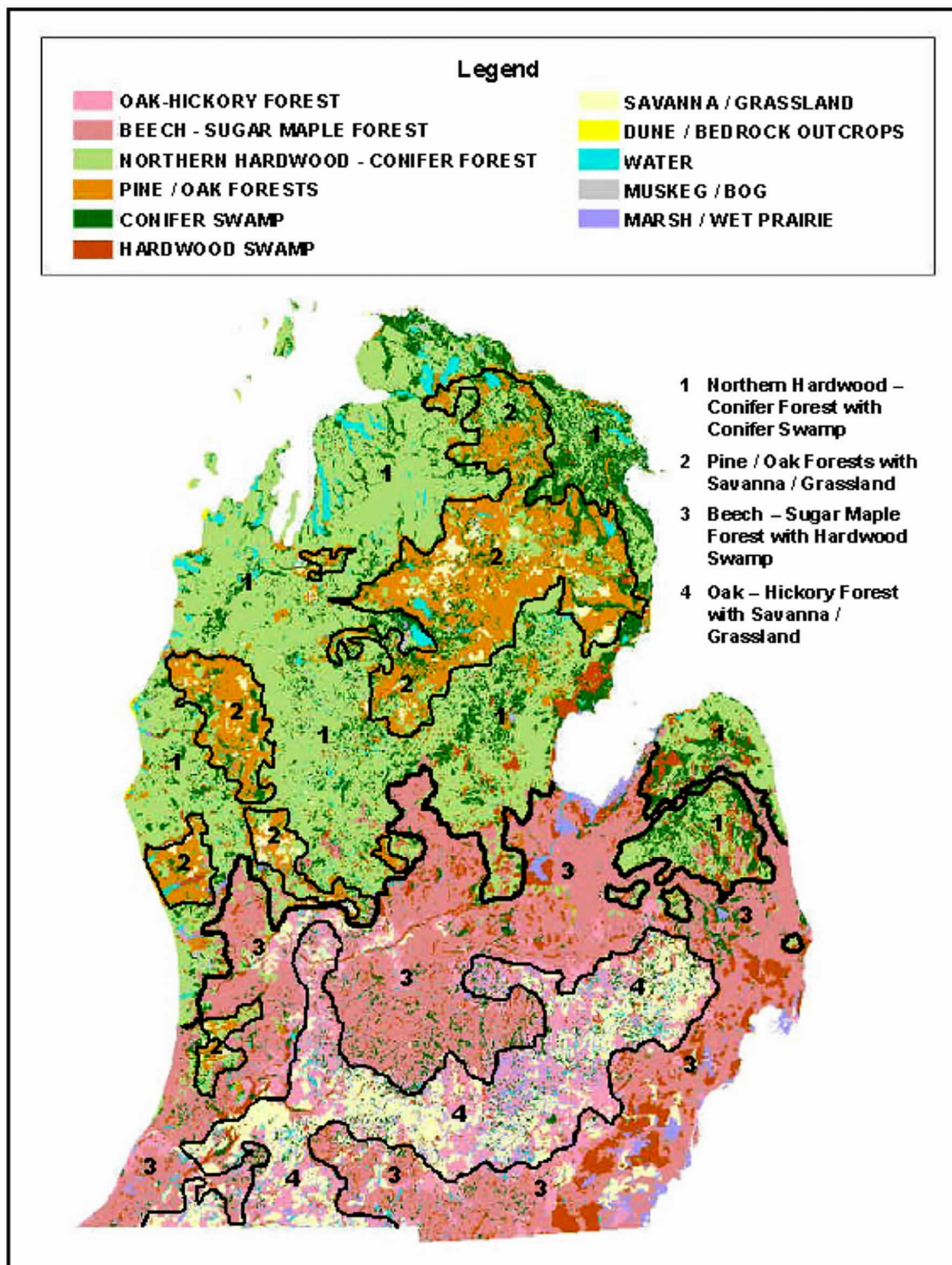
The General Land Office surveys of Michigan, conducted from 1815 through 1856, provide a glimpse of the primeval wilderness before it was intensively exploited by American and European settlers. Among many landscape features, GLO surveyors recorded the species and size of at least two “witness” trees at every section and quarter section corner, major trees along section lines, dominant timber, and forest undergrowth. This amounted to a sampling grid of at least ½ mile intervals across the entire State. Because Michigan was largely forested, the trees are good indicators of the general vegetation.

Like the rest of Michigan, the Thumb was mostly one big forest wilderness, part of a vast woodland realm stretching across North America, transitioning from sub-tropical Florida, to southern pines, to central hardwoods, to northern hardwoods of the Great Lakes basin and New England, to boreal forest of Canada and Alaska, and back down through the western mountain ranges, separated only in northern Mexico from the tropical forest of Central and South America. Roughly 94% of the Thumb was forested. The non-forested 6% consisted of rivers, a few lakes, bogs, marsh, wet prairie, shrub swamp, sand dunes, grassland, and savanna, a sparse woodland.

By far, the most extensive vegetation was Beech - Sugar Maple forest, a broadleaf deciduous woodland covering about 43% of the landscape, mainly on the glacial lake plain, the old lake bottom extending up to 15 miles inland from Lake Huron, and on glacial ridges and higher hilly land through the interior of the Thumb. As the name implies, American Beech and Sugar Maple were dominant. Beeches are known for their large, smooth, gray trunks, resembling freshly cured concrete, and long popular for carving lovers' names and other messages. Sugar Maple is obviously known for maple syrup production. These trees towered in the forest canopy along with Eastern Hemlock, American Elm, Eastern White Pine, and Yellow Birch. American Elm was a major canopy tree until it was reduced to a short-lived understory tree by dutch elm disease in the mid 1900s. A wetter version of this forest on the clay lake plain was dominated by Eastern Hemlock and covered about 8% of the landscape, largely in Tuscola and Sanilac Counties. Together, these two woodland types covered about half of the Thumb.

Surviving remnants of Beech – Sugar Maple forest are some of the most species-rich and diverse habitats in Michigan. In slightly wetter areas, blow-downs of large trees are more frequent, uprooting soil and forming a series of shallow pits and low tip-up mounds that further increase plant diversity by providing a greater range of soil moisture for a wide array of woodland wildflowers. Likely, the forest floor across much of the glacial lake plain was a rolling complex of pits and mounds. Combined with fallen trees and limbs, it was probably tough walking.

About half of Huron County and the northeastern part of Sanilac County, roughly 10% of the Thumb, was covered by hemlock – white pine forest, reflecting the slightly cooler and shorter growing season to the north and coarser soils that favored conifers. Hemlock was exploited largely for the tannin of its bark for leather production and white pine was the staple of Michigan's logging era of the late 1800s.



Map of lower Michigan showing general floristic zones before Euro-American settlement.

Beech – Sugar Maple forest covered most of the hilly uplands in the middle of the Thumb, while wet depressions between the hills and down on the lake plain contained mixed conifer swamp and mixed hardwood swamp. Together, these swamps covered about 21% of the Thumb. Conifer swamps were dominated by Northern White-Cedar, Tamarack, and Balsam Fir, with some broadleaf trees like Paper Birch and Quaking Aspen. Tamarack is one of the few conifer trees in North America to drop its needles in the fall. Hardwood swamps were dominated by broadleaf trees like Black Ash, Red Maple, and Yellow Birch with some conifers. Relatively pure stands of Black Ash swamp covered nearly 3% of the Thumb, especially in Huron County.

Oak – hickory forest covered less than 3% of the Thumb, mostly drier soils in Lapeer and Macomb Counties, along with fire-prone Black Oak barren, mixed oak forest, mixed oak savanna, and grassland, each under 2%. Other communities under 2% included aspen – birch forest, cedar swamp, muskeg / bog, oak-pine barren, sand dune, shrub swamp / emergent marsh, wet prairie, White Pine – mixed hardwood forest, and White Pine – Red Pine forest.

For more information, visit the Michigan Natural Features Inventory web site at: web4.msue.msu.edu/mnfi. Go to the “Data Resources” tab, and then down to “Vegetation circa 1800 Maps”. Maps are listed by county and available as .pdf files. Thanks to Dennis Albert of MNFI for reviewing this article and his valuable work in producing the presettlement vegetation maps and other references such as “The Atlas of Early Michigan's Forests, Grasslands, and Wetlands - An Interpretation of the 1816-1856 General Land Office Surveys”, Michigan State University Press, 2008 (see “Publications and Reports” tab of the MNFI web site or msupress.msu.edu).

2026 Update: The MNFI web site address is now: <https://mnfi.anr.msu.edu/>