

## Background about Tree Species in the Eastern United States

**Paper Birch.** These cold-tolerant trees were a valuable natural resource for Native Americans. Birch bark is paper thin but strong; it could be used to make baskets, canoes, and even the roofs of houses. Along with the red leaves of oaks and maples, the bright yellow birch leaves help make autumn in Michigan a colorful vacation attraction for tourists from cities like Chicago and Toledo. Unfortunately, birch trees do not grow well in hot and dry weather, and they burn easily in forest fires.

**Slash Pine.** These tall, fast-growing trees are good for lumber. Slash pines were even more valuable in the past, however. People could “slash” holes in living trees and collect the sap. The pine resin made a sticky gum that could seal cracks between boards and make boats or buildings waterproof. Today, this sap can still be used to make chemicals. Slash pines do well in the hot, humid conditions of the Southeastern states, but they might grow farther north if the climate gets warmer.

**White Pine.** These tall, straight trees were the most valuable natural resource in Michigan in the late 1800s. Millions of pine boards were shipped to cities like Chicago. Profits from logging built many mansions in cities like Muskegon and Saginaw. Unfortunately, many logging companies took only the straight logs and left the branches and needles, which often dried out and caught fire. With no source of pine seeds, the forest grew back with other species that are less valuable.

**Red Oak.** These broadleaved trees have strong wood, which is used for furniture, floors, and house trim. Red oaks need richer soil than pines. This is a problem for the trees, because farmers removed many oak trees in order to make fields for farming

on the rich soil. Red oak seeds are heavy acorns, which squirrels like to bury for future use as food during the winter. Unfortunately, heavy acorns have limited ability to invade into empty places (or to spread into new areas when the climate changes).

**Cottonwood.** These large, spreading trees have soft, weak wood (that’s the reason for their common name!) The wood is not very good for construction, furniture, or even firewood. Cottonwood seeds can blow far in the wind. Cottonwoods can also survive dry conditions better than most other trees. As a result, they are very common in dry states like Kansas and Nebraska. Cottonwoods may become more abundant in many parts of Michigan if the weather gets warmer and/or drier.

**Sugar Maple.** These spreading trees have bright-red leaves in fall. Along with yellow-leaved birch trees and golden-leaved beech trees, maples help make autumn in Michigan a colorful destination for tourists from cities like Chicago and Toledo. Sugar maple wood is very valuable for furniture. People also make syrup and candy from the sap. Maple seeds are fairly heavy, but they have wings that allow a strong wind to carry the seeds several hundred feet away from the parent trees.

**American Elm.** These tall, graceful trees grow well in humid river valleys. Their shape and long lifespan made elms highly desirable for planting along city streets. Then, in 1928, a deadly disease arrived in a shipment of elm wood. The disease began in Asia and is spread by a beetle from Europe. Soon, the Dutch Elm Disease killed millions of elms. Researchers are trying to develop varieties that can resist the disease, but new varieties may also prefer different environmental conditions.