

Trees of the Huron River Watershed in a Changing Climate

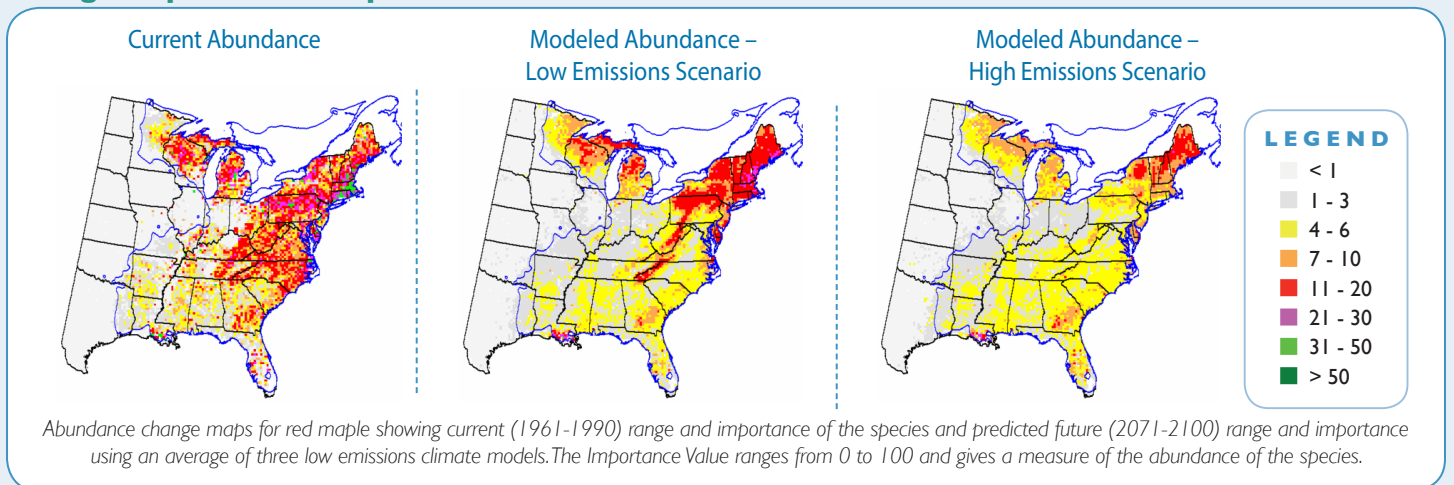
Red Maple *Acer rubrum*

Description

Red maple is one of the most widely distributed tree species in the Eastern US and is found in many types of forests and savannas in Michigan. It occurs on a broad range of sites. While historically it was primarily a wetland tree species, it is considered an aggressive colonizer of upland sites, responding well to disturbance. It has markedly increased in its range and abundance since the time of European settlement. It is moderately shade tolerant, sensitive to fire and moderately long-lived.



Change Maps for Red Maple¹



Implications of Climate Change

Red maple is expected to realize a slight reduction in abundance and a subtle movement north, but much less dramatic when compared to sugar maple. Red maple may prove to be one of the more resilient native tree species to climate change. It is likely to continue to expand into upland ecosystems because of a general lack of fire in once fire maintained ecosystems. It has become a weedy native and threatens several natural communities through invasion and shading. Red maple may be a good candidate as a planting alternative to sugar maple or silver maple.

Natural Communities Associations²

Canopy dominant in southern hardwood swamps, floodplain

forests and wet-mesic flatwoods. Canopy associate in rich tamarack swamp, rich conifer swamp, hardwood-conifer swamp, and dry-mesic southern forest.

Vulnerability of Natural Communities³

Several of the natural communities in which red maple occurs rely on wet soils. Significant shifts in these communities are expected under climate change. However, red maple thrives in drier environments. Therefore, we may see increases in this species as wetland communities dry. Dry-mesic southern forests may thrive and expand as the climate changes and red maple's tolerance may help it persist in this community.

¹Prasad, A. M., L. R. Iverson., S. Matthews., M. Peters. 2007-ongoing. A Climate Change Atlas for 134 Forest Tree Species of the Eastern United States [database]. <http://www.nrs.fs.fed.us/atlas/tree>, Northern Research.

²Michigan Natural Features Inventory. www.mnfi.anr.msu.edu/communities

³Lee, Y., M. A. Kost, J. G. Cohen, and E. H. Schools. 2012. Climate Change Vulnerability Assessment and Adaptation Strategies for Natural Communities in Michigan, Focusing on the Coastal Zone. Michigan Natural Features Inventory Report No. 2012-18, Lansing, MI.