

Trees of the Huron River Watershed in a Changing Climate

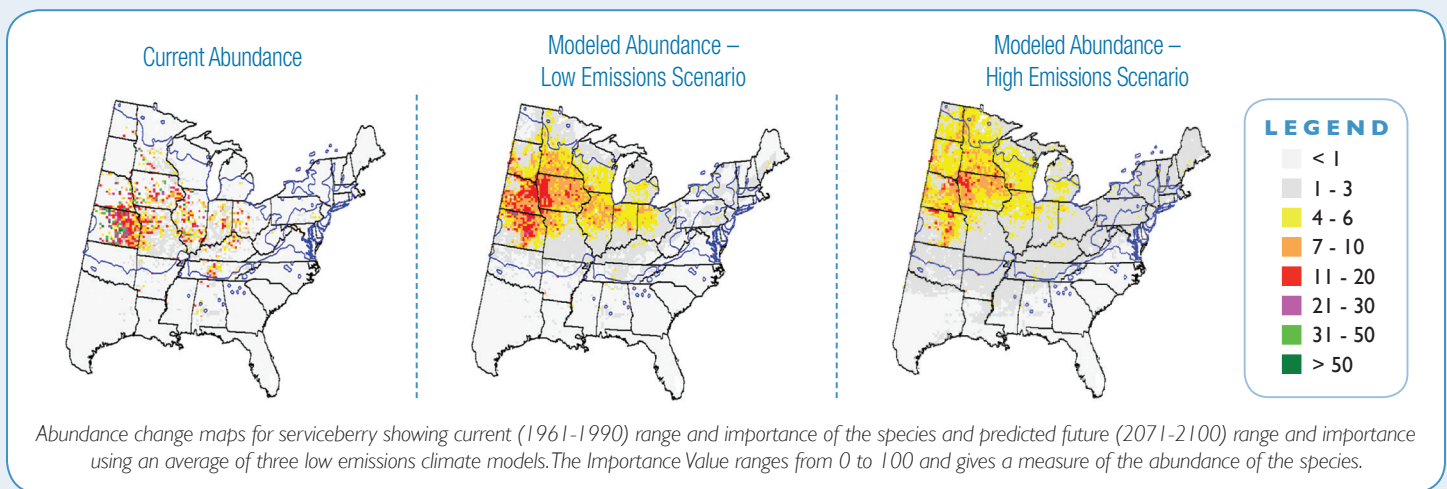
Hackberry *Celtis occidentalis*

Description

Hackberry is a short-lived, medium to large sized tree that occurs throughout Michigan. This is a popular street tree tolerant of a wide range of soil and moisture conditions. Hackberry is primarily found in bottomland habitats and limestone soils. The species is able to tolerate periodic flooding but prefers habitats that do not have permanently high water tables. Hackberry fruits are persistent through winter and are an important food source for wildlife.



Change Maps for Hackberry¹



Implications of Climate Change

Hackberry is one of the few species that climate change models predict a slight increase in abundance within Michigan's south-central Lower Peninsula. Hackberry is expected to increase in importance in the region as climate changes because of its tolerance of drought, high dispersal potential and ability to grow under a wide variety of soil, moisture and temperature conditions.

Natural Communities Associations²

Canopy associate in floodplain forests, southern hardwood swamps, and wet-mesic flatwoods.

Vulnerability of Natural Communities³

Wet to wet-mesic communities are vulnerable to the drier, warmer conditions predicted for this area and have low dispersal potential. While these communities may decline, the hackberry component may increase because of its drought tolerance. Floodplain forests are restricted to river channels and have limited migration potential and may also experience more frequent or larger flood events but it is not known how it will impact this community. Hackberry can tolerate periodic flooding, increasing the likelihood this species will persist in floodplain forests.

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.nrs.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.