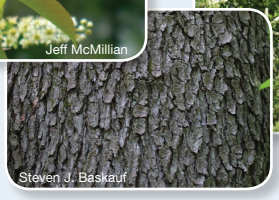
Climate Resilient Communities

Huron River Watershed Council

Trees of the Huron River Watershed in a Changing Climate

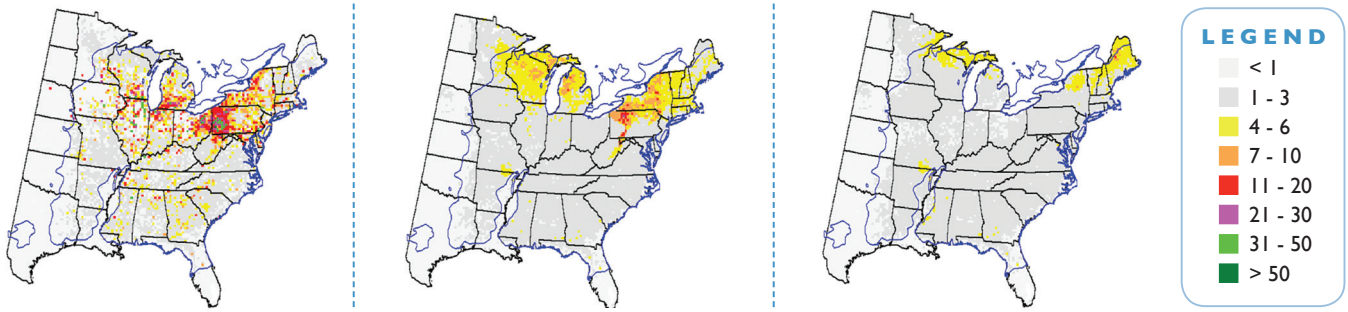
Black Cherry *Prunus serotina*



Description

Black cherry is a common understory species in southeast Michigan, occurring in many forest types. It is a pioneer species, colonizing old fields and forest openings through fast, opportunistic growth and can grow under a variety of soil and weather conditions. It is the only native cherry that has any commercial value being best suited for furniture wood or veneer. Like other cherries, it is very important to wildlife as a source of food.

Change Maps for Black Cherry[1]



Abundance change maps for serviceberry showing current (1961-1990) range and importance of the species and predicted future (2071-2100) range and importance using an average of three low emissions climate models. The Importance Value ranges from 0 to 100 and gives a measure of the abundance of the species.

Implications of Climate Change

Climate change models indicate black cherry will persist in southeast Michigan but is expected to decline in importance. This opportunistic species is well adapted to colonizing new habitats. However, black cherry is intolerant of several types of disturbance that are likely to become more common including flooding, insect damage, fire and disease. Black cherry is vulnerable to wind, snow and ice damage and therefore may be a less desirable street tree if seasonal transitions include more precipitation falling as wet snow and ice.

Natural Communities Associations[2]

Canopy associate in oak barrens, dry southern forest, and dry-mesic southern forest

Vulnerability of Natural Communities[3]

While warmer, drier conditions may improve conditions for oak barrens, this system is highly fragmented in southeast Michigan and dispersal potential is low. Dry and dry-mesic southern forests are expected to have low vulnerability to climate change and are expected to do well in response to longer growing seasons and increased temperatures. These habitats are more common to the area and have better opportunities for dispersal.

[1] Prasad, 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.

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

[3] Lee, 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.