

Trees of the Huron River Watershed in a Changing Climate

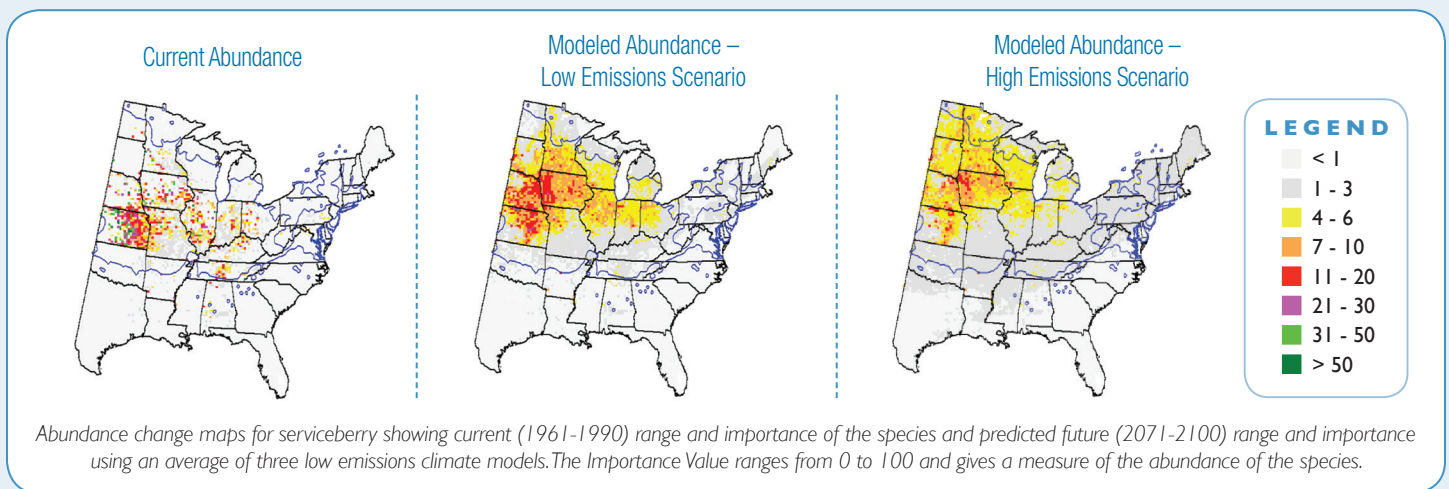
Eastern Redbud *Cercis canadensis*

Description

Eastern redbud is a small, short-lived tree found in low densities throughout southeast Michigan. Its actual range is far greater than its natural range as it is planted extensively as an ornamental tree for its habitat tolerance and its striking appearance in spring. Redbuds prefer moist, well-drained soils and tolerate nutrient deficiencies giving them an edge against wild associated trees. Its flowers are important to native pollinators and are a significant source of nectar for honey production.



Change Maps for Eastern Redbud¹



Implications of Climate Change

The eastern redbud grows under a variety of soil moisture conditions within most forest types in the Eastern US. It is not particularly vulnerable to disturbance or pests. This species will likely benefit from the increased growing season but could also suffer from drier soil conditions. Overall, climate change model results predict an increase in both range and abundance throughout the upper and lower peninsula of Michigan. It will continue to be used as a common street tree throughout the state.

Natural Communities Associations²

Understory tree in floodplain forests.

Vulnerability of Natural Communities³

Floodplain forests are restricted to river channels and therefore have limited migration potential. Forests may experience more frequent or larger flood events but it is not known whether this will positively or negatively impact this community. If drier, warmer summers result in lower groundwater tables and baseflows, this moisture-dependent community and associated flora could be negatively impacted. However, because the eastern redbud can tolerate a variety of conditions, this species will be able to compete with more dominant species for resources.

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.nrmsu.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.