Invasive Plants in Pennsylvania Japanese Hops

Humulus japonica



Photo: Chris Evans, River to River CWMA, www.invasive.org

Background:

This vine is native to China, Japan, Korea and Taiwan. It was brought to the U.S. in the mid-to-late 1800s as an ornamental and as a medicinal plant. This is <u>not</u> the type of hops used for beer making.

Range:

Japanese hops is found in scattered counties throughout New England, the Mid-Atlantic and Midwest states, and as far south as Alabama.

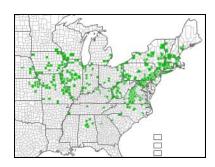


Image courtesy of EDDMapS

Description:

Japanese hops is an annual, climbing or trailing vine that can grow up to 35 feet in length in one growing season. Leaves are opposite along the vine and have an average of five lobes with toothed margins and a rough surface. The stem is covered with prickles (see photo below). Female flowers appear in mid summer as cone-shaped clusters that hang down (called hops), while male flowers are upright and stemlike.



Photo: Chris Evans, River to River CWMA, www.invasive.org



Habitat:

Disturbed habitats like scoured river banks, roadsides and rights-of-way are prime habitat, although it will also colonize forest edges and fields. It prefers moist soil and full sun. It will grow in sandy, loamy or clay soils.

Biology and Spread:

This vine spread vegetatively by its fast growth rate and through abundant small seeds that can be spread by rivers and streams. The seed bank lasts approximately three years.

Ecological Threat:

Japanese hops can form dense patches that outcompete and smother native vegetation.



Photo: Leslie Mehrhoff, U. of Connecticut, www.invasive.org

How to Control this Species:

Manual and Mechanical

The plants may be pulled in late spring and early summer, before they flower and set seed, typically prior to August. Be sure to wear gloves as protection from the hooked hairs that may cause blistering of the skin. When pulling, remove as much of the roots as possible, as the plant may resprout. Bag and discard all plant material.

Repeated cutting or mowing close to the ground may also be used, however its effectiveness is limited as vines quickly re-grow from cut stems.

Chemical

A pre-emergent herbicide, which kills weed seeds as they germinate, may be used on Japanese hops. This will reduce the impact to other vegetation.

Combining a pre-emergent with later application of a glyphosate herbicide may provide longer-lasting control. The herbicide should be applied to the leaves, ideally when the rootstock is accumulating energy reserves (July through September).

Look-A-Likes:

Common hop (*Humulus lupulus*) has five varieties, three of which are native to the U.S. (vars. *lupuloides, neomexicanus* and *pubescens*). The other two are native to Europe (var. *lupulus*) and eastern Asia (var. *cordifolius*), respectively. Common hop leaves have either no lobes or three lobes, as opposed to Japanese hops' five or more lobes.

Japanese hops may also resemble the native bur cucumber (*Sicyos angulatus*), but that plant lacks prickles, has tendrils and the lobes are less pronounced.



Photo: Charlie McDonald, US Forest Service, www.fs.fed.us



Photo: Theodore Webster, USDA, www.forestryimages.org

References:

Center for Invasive Species and Ecosystem Health: http://www.invasive.org/browse/subinfo.cfm?sub=10091

Invasive Exotic Plant Tutorial for Natural Lands Managers: http://www.dcnr.state.pa.us/forestry/invasivetutorial/japanese_hops.htm

USDA Forest Service Weed of the Week: http://www.na.fs.fed.us/fhp/
invasive_plants/weeds/japanese-hop.pdf

Plant Conservation Alliance's Least Wanted List:

http://www.nps.gov/plants/alien/fact/huja1.htm



Photo: Leslie Mehrhoff, U. of Connecticut, www.invasive.org