Invasive Plants in Pennsylvania

Cork-trees

Phellodendron japonicum Maxim., *P. amurense* Rupr. and *P. lavallei* Dode.

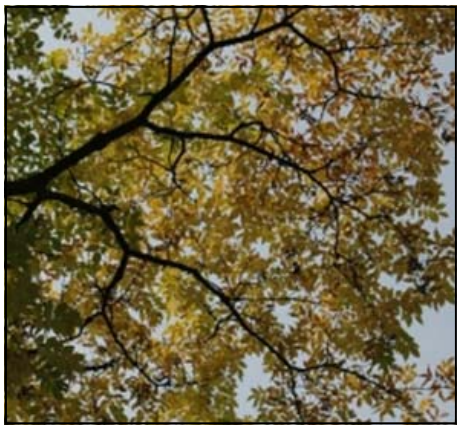

Photo: Chris Evans, River to River CWMA, www.invasive.org

Background:

These trees are native to eastern Asia and were introduced into the U.S. in the mid-1800s for landscaping purposes. By 1933, the NY Botanical Garden reported it as naturalized. These trees are still commonly planted in the landscape.

Range:

These species have very limited ranges in natural areas of the U.S. Just a few counties within Pennsylvania and the southern New England states show records of all. Amur corktree is a little more far-ranging, with a few scattered records in Ohio, IL and WI.

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Description:

These perennial trees can grow up to 45 feet tall. The bark is thick and corky, hence their name. Leaves are opposite and compound, with many elliptical-shaped leaflets.

Small green flowers appear in June. Female trees produce clusters of fleshy, green berries (turning black as they age) with five seeds each that remain on the trees into late fall or even winter.

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

Habitat:

These trees prefer full sun but will grow as an understory tree. They like rich soils but can grow in clay to light sandy soils. They are adaptable and drought tolerant.

Biology and Spread:

Particularly in areas with moist soil, these trees will produce large amounts of seed that may be spread by birds and probably by stormwater runoff.

Ecological Threat:

Cork-trees are beginning to show invasive tendencies in urban, suburban and natural areas of New York and Pennsylvania. Ann Rhoads of Morris Arboretum states that *P. lavallei* is being especially problematic in eastern Pennsylvania.

Photo: Patrick Breen, Oregon State University, www.invasive.org

How to Control this Species:

Prevention

Limit habitat disturbance because these trees easily invade disturbed habitats. Don't plant this tree; there are other good native alternatives.

Manual

Young seedling may be pulled by hand, especially when soil is wet. Cutting of trees alone is not recommended as the tree will re-sprout vigorously.

Chemical

The most effective method is to cut down or girdle the tree, then apply a systemic herbicide like triclopyr or glyphosate. Herbicide application can be done at any time of year, as long as temperature is above 60 degrees F for 24 to 48 hours and it is not expected to rain for at least 24 hours. Fall or winter herbicide applications will avoid impacts to other vegetation. Repeated treatments are likely to be necessary.

Native Alternatives:

There are a variety of native trees that can grow well in suburban and urban areas, including red maple (*Acer rubrum*), hackberry (*Celtis occidentalis*) and black gum (*Nyssa sylvatica*).

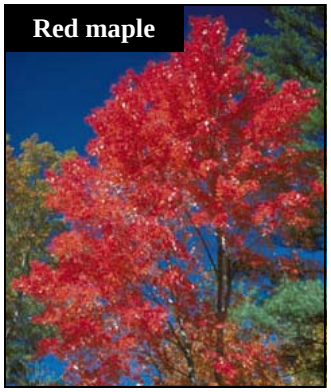

Photo: Robert Anderson, USDA FS, wwwforstryimages.org

Look-A-Likes:

Ann Rhoads at Morris Arboretum says that all *Phellodendron* are hard to identify at the species level. The nursery industry has created a number of male-only cultivars like 'His Majesty' and 'Macho' but these have been shown to cross pollinate with female *P. amurense* trees.

Photo: Patrick Breen, Oregon State U., www.invasive.org

References:

Invasive Exotic Plant Pest Tutorial for Land Managers: http://www.dcnr.state.pa.us/forestry/invasivetutorial/cork_trees.htm

Center for Invasive Species and Ecosystem Health: http://www.invasive.org/browse/subinfo.cfm?sub=11569

PCA Alien Plant Working Group Weed of the Week: http://www.nps.gov/plants/alien/fact/pham1.htm

For More Information:

To learn more about invasive plants in Pennsylvania and the northeast, here are some useful resources:

Plant Invaders of Mid-Atlantic Natural Areas, National Park Service: http://www.nps.gov/plants/alien/pubs/midatlantic/midatlantic.pdf

Invasive Plants Field and Reference Guide, U.S. Forest Service: http://na.fs.fed.us/pubs/misc/ip/ip_field_guide.pdf