

Invasive Plants in Pennsylvania

Oriental Bittersweet

Celastrus orbiculatus Thunb.



Photo: Jessica Sprajcar, DCNR

Background:

Also known as round-leaved and Asiatic bittersweet, this vine was introduced from China into the U.S. around 1860 as an ornamental.

Range:

Oriental bittersweet can be found throughout New England and the Mid-Atlantic states, down to Louisiana and up through the Midwest as far north as Wisconsin. It is not known to occur further west than that.

Description:

Oriental bittersweet is a deciduous, climbing, woody vine that can grow up to 60 feet in length. Vines can grow up to four inches in diameter. The alternate, elliptical leaves are light green in color, finely toothed and two to five inches in length. Fruits are round and yellow, splitting to reveal bright red berries through the fall and winter months.



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

Habitat:

Commonly found on old home sites, in fields and forest edges, and along roadsides and train tracks. While it prefers open, sunny sites it can tolerate shade.

Biology and Spread:

Birds and other wildlife readily consume the large number of berries, spreading seeds far and wide. Humans also spread the seed through the use of bittersweet vines and berries for craft projects. The plant also spreads vegetatively through rhizomes and root suckers.

Ecological Threat:

This vine is able to girdle and kill trees or break their branches off from the weight of the vines. When it grows into the canopy it can shade out natives. Oriental bittersweet has also been shown to hybridize with the American bittersweet, leading to a loss of genetic identity.

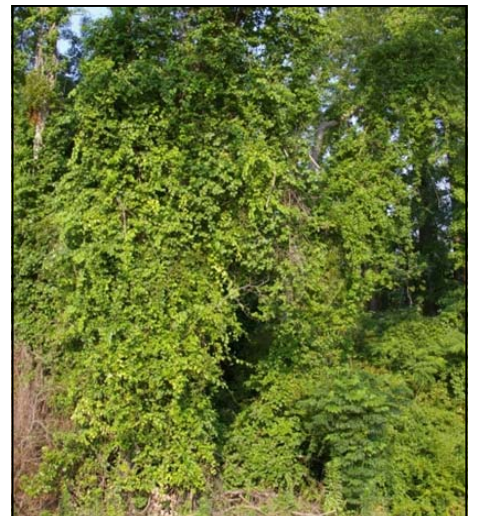


Photo: Nancy Loewenstein, Auburn U.,
www.invasive.org

How to Control this Species:

Manual and Mechanical

Because the seeds of bittersweet are so numerous and can remain viable in the soil for several years, all control efforts will require multiple years to be effective.

Small populations, especially of vines not high up in canopy, can be pulled by hand or dug out prior to fruiting. If fruits are present, all material should be bagged and disposed of.

Vines in trees can be cut close to the ground. The vines will re-sprout, however, unless herbicide is immediately applied to the cut stump.

Weekly mowing will prevent the vines from fruiting, but less frequent mowing will promote root sprouts.

Chemical

Because Oriental bittersweet looks so much like the native American bittersweet, be absolutely sure you have properly identified the species before doing any control work.

Systemic herbicides like glyphosate and triclopyr can successfully manage bittersweet. It is most effective when stems are cut or mowed and the herbicide is applied to the cut area immediately.

For cut stump applications, a two percent solution of glyphosate and water can be applied as long as the air temperature is above 40 degrees F. A 25 percent solution of triclopyr and water can be applied when the air temperature is above 60 degrees F.

For foliar application, a two percent solution of glyphosate or triclopyr and water, plus a 0.5 percent non-ionic surfactant, can be sprayed on the leaves when the air temperature is above 65 degrees F.

Look-A-Likes:

Oriental bittersweet closely resembles the native American bittersweet (*Celastrus scandens*), but American bittersweet has flowers and fruits at the ends of its branches, rather than in the axils of the leaves, like the Oriental variety.

References:

Center for Invasive Species and Ecosystem Health:

<http://www.invasive.org/browse/subinfo.cfm?sub=3012>

Invasive Exotic Plant Tutorial for Natural Lands Managers:

http://www.dcnr.state.pa.us/forestry/invasivetutorial/Oriental_bittersweet.htm

For More Information:

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



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