

Exotic Invasive Vines

BLUE MOUNTAIN—
KITATINNY RIDGE
CONSERVATION
PROJECT

What is an exotic invasive vine?

An exotic invasive vine is a plant species not native to the region that reproduces rapidly and aggressively spreads across a landscape via runners or rhizomes. They produce large numbers of seeds that survive to germinate and employ a variety of seed dispersal mechanisms (including wind, water, wildlife and people). Invasive vines have few natural predators (herbivores) or controls (disease). As a result, within a short period of time they can spread rapidly across a landscape, often outcompeting native plants for available resources and choking out less aggressive native plants.

How are invasive vines introduced to an area?

Many invasive vine species (including Oriental bittersweet, Japanese honeysuckle, and English Ivy) were introduced to our area as ornamental landscaping and groundcover plants. Once established in an area and left unchecked they can quickly get out of control through rapid reproduction and expand far beyond their point of origin.

DID YOU KNOW?

Pennsylvania is home to nearly 9% of the global population of Wood Thrushes during the nesting season. Invasive vines threaten the diverse forest understory needed by Wood Thrushes for nesting and foraging.



Why are invasive vines a problem in forests and other natural areas?

Due to their aggressive nature, invasive vines take over natural areas at a rapid rate, covering large areas of habitat. They displace native plant species, including rare and endangered ones, by crowding or shading-out other plants. In addition, invasive vines often eliminate native plants that normally provide substrates and resources for native insects and pollinators, which in turn are food sources for numerous birds. Vines can kill off native trees either by “choking” them or becoming so heavy that the tree can no longer support its own weight.

The end result is a monoculture of plant material that provides little to no wildlife or habitat value, especially for bird species like thrushes and warblers that nest and forage in the lower canopy or on the forest floor. The overall impact is a reduction in biological diversity and the disappearance of many native insects, reptiles and amphibians, small mammals, birds, and plants.

Invasive Vines (cont'd)

RESOURCES FOR MORE INFORMATION

Penn State College of Agricultural Sciences Cooperative Extension
<http://extension.psu.edu/weeds/extension-info/invasive-plants#non-native-vines>

Plant Invaders of Mid-Atlantic natural Areas
National Park Service and U.S Fish and Wildlife Service
<http://www.nps.gov/plants/alien/pubs/midatlantic/toc.htm>

The University of Georgia Center for Invasive Species and Ecosystem Health
<http://www.invasive.org>

Plant Conservation Alliance Bureau of Land Management
<http://www.nps.gov/plants/index.htm>

Pennsylvania DCNR
<http://www.dcnr.state.pa.us/forestry/invasivetutorial/List.htm>



What vine species are considered to be invasive in Pennsylvania and what impact do they have on the ecology of natural areas?

There are many invasive species present in Pennsylvania; see some of the resources to the left for complete listings. Two of the most wide-spread and damaging vines in our area are Oriental bittersweet and Japanese honeysuckle.



Oriental bittersweet (*Celastrus orbiculatus*) is a vigorous invasive vine that threatens native vegetation from the ground to tree canopy. It is commonly found along forest edges and will readily advance if left untreated. As it grows, it forms thick masses of vegetation that envelop native plants, shrubs, small trees and shade out native plants. Over time, the vines block sunlight from reaching the plants underneath, eventually causing them to die. Shrubs and trees can also be killed by girdling or by uprooting due to the excessive weight of the vines. Oriental bittersweet is displacing native American bittersweet (*Celastrus scandens*) through competition and hybridization.



Japanese honeysuckle (*Lonicera japonica*) is probably the most-recognized and well-established ornamental vine in the eastern and central United States. Like Oriental bittersweet it grows fast, twining around any vertical support it can find from plants and shrubs to fence posts. In open areas it can form huge tangles of vegetation that literally smother other vegetation. It can also kill larger shrubs and small trees through girdling.

What can I do to control or prevent the spread invasive vines?

Become familiar with native vines found in your area and select only native vines and plants when landscaping around your home and property. There are several means to control or eliminate invasive vines that are established in an area.

Most vines can be treated with a “cut and paint” approach. Cut the vine twice—once at eye level and again at ground level. This will prevent any re-sprouts from using the existing vine as a “ramp” to quickly re-take the tree. To prevent re-sprouts, you must “paint” the ground-level stump by coating it with concentrated glyphosate (e.g. RoundUp) or triclopyr. This technique is most effective in fall, when vines are drawing energy into their root systems. Some additional considerations for the species mentioned above:

Oriental bittersweet

- Do not dispose of live or dead seed-containing material. If disposing of vines when fruits are present, vines should be bagged and disposed of in a landfill, or left in the bags and allowed to bake in the sun long enough to kill the seeds.
- Where hand labor is practical, vines can be pulled out by the roots and removed from the site, preferably before fruiting.

Japanese honeysuckle

- Small infestations can be controlled by hand removal of vines.
- Large infestations require mowing twice or more per year or treatment with systemic herbicides like those containing glyphosate or triclopyr.

Are there native alternatives to use once invasives are removed from a site?

Yes, there are a number of native vine species that can be planted once the invasives have been eradicated, including Native bittersweet (*Celastrus scandens*), Trumpet creeper (*Campsis radicans*), Trumpet honeysuckle (*Lonicera sempervirens*), Pipevine (*Aristolochia macrophylla*), and Passionflower (*Passiflora incarnate*).