

Asian bittersweet

(*Celastrus orbiculatus*)

Homeowners Fact Sheet

Tips for identifying, controlling, and monitoring Asian bittersweet on your property

Background

Asian bittersweet (*Celastrus orbiculatus*) is a fast-growing deciduous vine that is native to Asia. It was first introduced to the United States in 1736 for ornamental use and has been documented in northeast Illinois since 1958. Asian bittersweet threatens most upland community types: forests, woodlands, savannas, and prairies, well-drained floodplains, riparian corridors, beaches, and wetlands. It is able to grow in open and shaded areas.

Why Should You Care?

Asian bittersweet uses native trees and shrubs for support. As it climbs its branches may eventually overtop or outshade the supporting plant and plants below. Native shrubs and trees can be killed by girdling and by uprooting as a result of excessive weight of the vines. In addition, Asian bittersweet will sprawl over open sites with shorter vegetation shading out native plants that are important to native animals for food and shelter. In some cases, birds will eat the fruits and deposit seeds over long distances.



Asian bittersweet vine
(Photo taken by D. Maurer)



Asian bittersweet vine is an invasive ornamental used in floral arrangements and decorative wreaths. (Photo taken by D. Maurer)

Identification

- Perennial, woody, climbing vine that loses its leaves in autumn.
- Leaves are alternate, dark green, and serrated.
- May grow up to 66 feet long and 4 inches wide.
- Plants produce small, greenish flowers from May to June and fruits in autumn. Flowers and fruits grow all along each branch.
- Fruits are round and change in color from green to bright red with a yellow capsule as they mature. Seeds are surrounded by a bright red fleshy coating, which splits open to expose the seed.
- Can also spread through its root system
- Native look-alike: Native bittersweet (*Celastrus scandens*) has flowers and fruits at the end of its branches only. In some cases native and invasive bittersweet may hybridize making identification difficult.

Some Suggested Control Methods

Mechanical Small infestations can be hand-pulled but take care to remove the entire plant including all the root portions because Asian bittersweet can spread from root parts. If fruits are present, the vines should be bagged in plastic trash bags and disposed of in a landfill. Always wear gloves and long sleeves to protect your skin from poison ivy and barbed or spined plants.

Chemical This method is most effective if the stems are first cut by hand or mowed and herbicide (triclopyr or glyphosate) is applied immediately to cut stem tissue. Herbicide applications can be made any time of year as long as temperatures are above 55 or 60 degrees Fahrenheit for several days, rain is not expected for at least 24 hours, and there is little or no wind during application. Fall and winter applications will avoid or minimize impacts to native plants and animals. Make sure to not use herbicide on or near water.

Another option is to use a string trimmer or hand saw to remove some of the bark in a band a few feet from the ground at comfortable height. To the exposed stems, apply a 20% solution of triclopyr ester (2.5 quarts per 3-gallon mix) in commercially available basal oil with a penetrant (check with herbicide distributor) to vine stems. As much as possible, avoid application of herbicide to the bark of the host tree.

In the case of large patches of only Asian bittersweet herbicide can be applied directly to leaves. It may be necessary to precede foliar applications with stump treatments to reduce the risk of damaging non-target species. Apply a 2% solution (8 oz per 3 gal. mix) triclopyr ester or triclopyr amine mixed in water with a non-ionic surfactant to the leaves. If the 2% rate is not effective try an increased rate of 3-5%. Thoroughly wet the foliage but not to the point of runoff. The ideal time to spray is after much of the native vegetation has become dormant (October-November) to avoid affecting non-target species. Ambient air temperature should be above 65°F. With all methods repeated treatments are likely to be needed. Follow-up monitoring should be conducted to ensure effective control.

Follow-up

As Asian bittersweet is removed from the site fill that space with native or non-invasive plants by seeding or planting. Several attractive native vines are available that provide nectar, seed and host plant material for butterflies, hummingbirds, and other wildlife. These include American bittersweet (*Celastrus scandens*) which is native to the eastern U.S. and should only be planted in areas where Oriental bittersweet is not well established or has been successfully controlled, to prevent hybridization with the native species. Other good alternatives include trumpet honeysuckle (*Lonicera sempervirens*), trumpet creeper (*Campsis radicans*), passionflower vine (*Passiflora lutea*), Dutchman's pipe (*Aristolochia macrophylla*), and native wisteria (*Wisteria frutescens*).

Precautions

- In areas where spring wildflowers or other native plants occur, application of herbicides should be conducted prior to their blooming, delayed until late summer or autumn, after the last killing frost occurs, or carefully targeted.
- Herbicidal contact with desirable plants should always be avoided. If native grasses are intermingled with the bitter-sweet, triclopyr should be used because it is selective for broad-leaved plants and will not harm grasses.
- Because triclopyr amine is a water-soluble salt that can cause severe eye damage, it is imperative that you wear protective goggles to protect yourself from splashes. Triclopyr ester is soluble in oil or water, is highly volatile and can be extremely toxic to fish and aquatic invertebrates. It should not be used in or near water sources or wetlands and should only be applied under cool, dry, and low wind conditions.
- Put cut vines with fruits attached in plastic bags and place in garbage.
- If using herbicide, be sure to follow all label instructions
- Monitor treated area!

Equipment & Supplies You May Need

Loppers, machete, or chain saw

Weed wacker and/or mower

Herbicide (glyphosate)

Rubber gloves and appropriate eye protection

Long pants, long sleeved shirt, closed-toe shoes

Spray bottle

Liquid dye (food coloring or Rit dye works)

Patience, persistence, and commitment (this will take several years)

Additional Resources

This brochure borrowed heavily from the **Invasive Plants in Mid-Atlantic Natural Areas** <http://www.nps.gov/plants/alien/pubs/midatlantic/>

Midwest Invasive Plant Network Control Database

<http://mipncontroldatabase.wisc.edu/>

Northeast Illinois Invasive Plant Partnership www.niipp.net

