




BRANDYWINE CONSERVANCY INVASIVE SPECIES PROTOCOLS

Oriental Bittersweet (*Celastrus orbiculatus*)

<p>What It Is</p> 	<ul style="list-style-type: none"> • Perennial woody vine • Leaves are simple, alternately arranged on the stem, are round and glossy, and have fine-toothed margins • Plants are dioecious (separate male and female plants) with female plants fruiting and producing clusters of small greenish flowers • Fruits and seeds consist of yellow three-valved globular capsules that split open and reveal three red-orange fleshy fruits each containing one or two seeds • Reproduces primarily, and prolifically, by seeds, often dispersed by birds • Germinates in late spring • Can spread by root suckering as well • Often used in floral arrangements because of the attractive fruit • Roots are bright orange in color • Still widely planted and maintained as an ornamental vine, further promoting its spread
<p>Where It Is Found</p>	<ul style="list-style-type: none"> • Present in Pennsylvania and a number of other states • Found in woodlands, fields, and hedgerows, and along woodland edges and coastal areas • Tolerant of shade but prefers open, sunny sites • Often found in locations suffering from land disturbance
<p>Where It Is From</p>	<ul style="list-style-type: none"> • Native to Eastern Asia, Korea, China and Japan • Introduced to the United States in the 1860's as an ornamental plant • Often associated with historical home sites where it was planted and later escaped
<p>Why It Is a Problem</p>	<ul style="list-style-type: none"> • Vigorously growing vine that excessively shades and suffocates other vegetation • Displaces native species American bittersweet (<i>Celastrus scandens</i>) • Due to the vine's weight on other plants, trees and shrubs can be damaged
<p>How to Eradicate It</p>	<ul style="list-style-type: none"> • Cutting and herbicide treatment in combination is most effective <ul style="list-style-type: none"> ○ Apply glyphosate (e.g. Roundup, Rodeo herbicides) or triclopyr treatment (e.g. Turflon herbicide) to newly cut or mowed stems ○ If intermingled with native grasses, Turflon is preferred due to its being selective of affecting broad-leaved plants and not harming grasses ○ Use a paint brush or a plastic spray bottle to apply herbicide and minimize contact with desirable plants ○ Multiple treatments are generally required • For large populations, consider foliar spray method (spray plants with herbicide) <ul style="list-style-type: none"> ○ If Roundup is used, be aware this is a non-selective herbicide and care should be taken to avoid contacting non-targeted species ○ Ideal time to spray is during dormant season (October-November) • For smaller vines, hand-pull entire plant, including all root portions • For dense low patches, cut the entire patch to the ground early in the growing season, and one month later apply 1-2% solution of Turflon to cut patch using a backpack sprayer • For climbing vines, cut each vine about 2 inches above the ground and again about 4 feet up and immediately apply a 25% solution of Roundup or Turflon mixed with water to the cut surface of the stem (not the root) <ul style="list-style-type: none"> ○ Rooted portions will remain alive and should be pulled
<p>What Not To Do</p>	<ul style="list-style-type: none"> • Avoid eradicating plants when fruits are present as seeds may spread • Bag and dispose of plants, fruits and seeds properly

References

- U.S. Dept. of the Interior, National Park Service, Plant Conservation Alliance (www.nps.gov/plants/)
- U.S. Dept. of Agriculture, National Agricultural Library (www.invasivespeciesinfo.gov)
- The Nature Conservancy (www.tnc.org)
- Pennsylvania Dept. of Conservation of Natural Resources (www.dcnr.state.pa.us)