
Recognizing and Managing Invasive Plants: Asiatic Bittersweet

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Asiatic bittersweet (*Celastrus orbiculatus*; also called Oriental bittersweet) was introduced to the United States in the late 1800s for ornamental purposes: it was long planted as a decorative vine in landscapes, and it has also been used in crafts such as wreathmaking and floral design. It has become a difficult weed in many home landscapes, and has become widely established in the eastern U.S. and Canada, where it is a serious invasive plant in natural areas (see photo of bittersweet on Mackworth Island, Maine).

What does it look like?

This vine grows to 30' and longer. It climbs by twining its stem around supports such as trees. The stems have light brown bark covered with bumpy lenticels. The leaves, 3-5" long, are arranged alternately on the stems, and are oval to nearly round, with a pointed tip. The root surfaces are bright orange. This plant is dioecious; that is, male flowers and female flowers develop on separate plants. Only the female plants produce clusters of colorful yellow fruits that split open in fall to reveal orange-scarlet seeds (see photo of immature fruits that have not yet split open).

There is a native species of bittersweet, American bittersweet, but the two can easily be differentiated by comparing two features. First, the leaves of American bittersweet are narrower, more "oval" than "round." And second, the fruits of American bittersweet are located in clusters only at the tips of stems, while the



Photos by Lois Berg Stack

fruits of Asiatic bittersweet are located on side branches all along the vining main stem. This feature explains why Asiatic bittersweet was introduced, as it is more colorful when in fruit.

What kinds of sites does Asiatic bittersweet invade?

Asiatic bittersweet grows at the edges of forests, in open woodlands, and in fields and hedgerows. It grows most vigorously in full sun, but tolerates shade and invades forested areas. In those shaded sites, if a tree is cut or falls in a storm, the increased light often causes the existing small bittersweet seedlings to grow rapidly and climb up trees around the opening. Asiatic bittersweet readily invades sites with slightly acidic and moderately moist soils. It tolerates a wide range of temperatures, and is invasive from eastern Canada south to Georgia, west to Arkansas and north to Wisconsin.

How does it invade new sites?

Female Asiatic bittersweet vines produce large numbers of seeds. Although lab studies have shown that they do not remain viable much longer than one year, the seed bank in the soil is quickly replenished each year by annual crops of seed. Birds disperse seeds to new sites, often flying from an infested site to a wooded nesting area and dropping seed there. People are part of the picture, too, when they purchase wreaths or arrangements made from Asiatic bittersweet and discard those items in places where birds can eat the seeds and later disperse them.

Once established in a site, the plants often spread by root suckering. In landscape settings, for example, if Asiatic bittersweet is planted in a bed, and the bed is edged with a sharp tool, the severed roots beyond the bed often send up new shoots.

What impact does this plant have on native species?

Asiatic bittersweet is outcompeting its American counterpart in two ways. First, it is more competitive, and is displacing the American species. Second, it hybridizes (naturally) with its American counterpart.

When an opening in wooded sites allows this plant to grow rapidly, its shade restricts the growth of native understory shrubs and groundcovers. Bittersweet stems can, over time, restrict flow of sap in the trees which it entwines. As the vines increase in size and weight, the trees under them are more susceptible to damage from wind, snow and ice.

How can I control Asiatic bittersweet?

No single method controls this plant. By combining the following methods, you can manage it:

1. Do not purchase or plant this species. Scout your neighborhood; you might be able to organize a neighborhood management effort of prevention and management. Because birds carry seeds from one site to another, this is not a single-landowner problem; it's a community problem.
2. Learn to recognize the plant as a young seedling. Its stems are limber, and "reach" for something to climb on. When the stems are young, they are green. The roundish leaves with a pointed tip are easily to recognize. Small patches of young seedlings can be hand-pulled. By removing young vines before they reach maturity, you can prevent future seed crops. Watch for the seedlings as you weed your garden, especially in places where you know birds rest or nest.
3. Mowing or cutting back to the ground does not kill Asiatic bittersweet, because it readily produces shoots from the stumps. However, cutting the tops off female plants in early summer can at least prevent seeds from maturing. If you cut the base of vines that have vined up into trees for a long time, avoid pulling the vines down from the tree branches, as the branch bark will be damaged, leaving the tree more vulnerable to other

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problems.

4. Several herbicides are labeled to control this plant. E-mail lois.stack@maine.edu for specific recommendations.

If I remove this plant from my landscape, what can I plant in its place?

Many vines are available at garden centers and nurseries. Native American bittersweet (*Celastrus scandens*), native riverbank grape (*Vitis riparia*) and native trumpet honeysuckle (*Lonicera sempervirens*) are all sold by some nurseries. For possible vendors in Maine, check Bulletin #2502, [Native Plants: A Maine Source List](#). For smaller vines in more refined landscapes, consider clematis hybrids.

Where can I find more information about this plant?

Check our fact sheet [Asiatic Bittersweet](#) or call your local Extension for print copy.
