

Oriental Bittersweet



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Oriental bittersweet (*Celastrus orbiculatus* Thunb.) is an attractive but very invasive deciduous, twining, and climbing woody vine to 60 feet (20 m) with drooping branches in tree crowns, forming thicket and arbor infestations. It has alternate elliptic-to-rounded leaves 1.2- to 5-inches (3 to 12 cm) long. Female plants have axillary dangling clusters of inconspicuous yellowish flowers that yield spherical fruit capsules, green maturing to yellow, that split to reveal three-parted showy scarlet fleshy-covered seeds, which remain through winter at most leaf axils. Colonizes by prolific vine growth that root at nodes and seedlings from prolific seed spread mainly by birds, possibly other animals and humans collecting and discarding decorative fruit-bearing vines. Seeds are highly viable, germinate even under dense shade, and after germination, grow rapidly when exposed to light. Most seed will germinate but only remain viable for 1 year in the soil. Resembles American bittersweet (*C. scandens* L.), which has only terminal white flower clusters that yield orange fruit capsules; leaves usually twice as large but absent among the flowers and fruit. Hybridization occurs between the two species.

Management strategies:

- Do not plant. Remove prior plantings, and control sprouts and seedlings. Bag and dispose of plants and fruit in a dumpster or burn.
- Treat when new plants are young to prevent seed formation.
- Pull, cut, and treat when fruit are not present.
- Minimize disturbance within miles of where this plant occurs, and anticipate wider occupation when plants are present before disturbance.
- Repeated cutting to groundline commonly recommended for control, while root sprouts might worsen some infestations.
- Manually pull new seedlings and tree wrench large vines when soil is moist, ensuring removal of all roots. Outlying large vines that remain after treatments will resprout, even under a forest canopy.
- Burning treatments are suspected of having minimal topkill effect due to scant litter.
- Readily eaten by goats while seed spread is possible.

Recommended control procedures:

- Thoroughly wet all leaves with one of the following herbicides in water with a surfactant (July to October): Garlon 4, Garlon 3A, or a glyphosate herbicide as a 3-percent solution (12 ounces per 3-gallon mix).
- For stems too tall for foliar sprays, to control vines less than 1-inch diameter, apply Garlon 4 as a 20-percent solution (5 pints per 3-gallon mix) in a labeled basal oil product, vegetable oil, kerosene, or diesel fuel (where permitted); or apply undiluted Pathfinder II as a basal spray to the lower 2 feet of stems. Or cut large stems and immediately treat the cut surfaces with one of the following herbicides in water with a surfactant: Garlon 4 or a glyphosate herbicide as a 25-percent solution (32 ounces per 1-gallon mix). ORTHO Brush-B-Gon, Enforcer Brush Killer, and Vine-X are effective for treating cut-stumps and readily available in retail garden stores (safe to surrounding plants). Winter applications are effective.
- For large vines, make stem injections using Arsenal AC[®], Garlon 3A, or a glyphosate herbicide using dilutions and cut-spacings specified on the herbicide label (anytime except March and April). The EZ-Ject tree injector assists in reaching through entanglements to treat, and the glyphosate shells have been found effective in winter.

* Nontarget plants may be killed or injured by root uptake.