
**VEGETATION MANAGEMENT
GUIDELINE: Round-leaved
Bittersweet (*Celastrus orbiculatus*
Thunb.)**

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Round-leaved bittersweet (*Celastrus orbiculatus* Thunb.) is an aggressive, perennial, woody vine that climbs on rocks and trees and sometimes covers the ground and vegetation. It spreads vegetatively by underground roots that form new stems. This vine spreads rapidly into openings and undisturbed woodland and reproduces prolifically by seed. It is shade tolerant, and seedlings may survive suppressed for some time before being released by disturbance.

Round-leaved bittersweet mainly is associated with old homesites where it has escaped from cultivation into surrounding natural communities. It occurs in a variety of forest types, including undisturbed mesic and dry-mesic forest. It also is found in disturbed open areas such as roadsides. It is capable of eliminating native groundcover species in mesic and dry-mesic woods. In the southern United States, it climbs up to 18 m in trees and reaches 10 cm in diameter. This vine constricts trees and shrubs and eventually kills them by shading. It is a serious potential threat because it spreads rapidly, invades mesic woods, and replaces spring ephemerals.

To control round-leaved bittersweet in nat-

ural areas, individual vines should be pulled up by the roots and removed from the area by hand, where practical. If hand removal is not feasible (e.g., large populations), vines should be cut by hand and cut stems spot-treated with 100% Roundup (a formulation of glyphosphate) just after the last killing frost. A squirt bottle may be used to spot-treat the cut stumps, or herbicide can be wiped on each stump with a sponge applicator. Treatment should be prior to emergence of spring ephemerals and should not be during the growing season when native species are likely to be affected. Care should be taken to avoid contacting nontarget plants when applying herbicide, because Roundup is nonselective. By law, herbicides may be applied on public properties only according to label instructions and by licensed herbicide applicators or operators.

For large populations on severely degraded sites, foliar spraying with Crossbow (a mixture of 2,4-D and triclopyr), using backpack sprayers, will reduce the population. Crossbow should be mixed according to label instructions for foliar application. As with Roundup, care should be taken to avoid contacting nontarget plants with herbicides. Do not spray so heavily that herbicide drips off the target plant. The chemicals should be applied while backing away from the treated area to avoid walking through the wet herbicide. Crossbow is effective when applied in mid- to late October.

To maintain control, round-leaved bittersweet should be totally eradicated from the natural area and surrounding vicinity where possible. Invading individuals should be pulled immediately and removed upon discovery.

REFERENCES

- Schwegman, J.E. 1988. Exotic invaders. Outdoor Highlights (mid-March): 6-11.