



Southeast Exotic Pest Plant Council Invasive Plant Manual

Common Name: Japanese Barberry

Scientific Name: *Berberis thunbergii* DC.

Japanese barberry poses a significant threat to natural areas due to its popularity as a landscape shrub, ability to tolerate full shade, and the dispersal of its prolific seeds by birds. It belongs to the Berberidaceae (Barberry) family, which is represented by one genus in our area.

Height: This multi-branched dense shrub grows to 2.5 m (8.2 ft). Seedlings may grow 2-4 ft in one season.

Leaves: The semi-evergreen leaves are alternate, or grow in alternate clusters. They are entire, and 1-3 cm (0.4-1.2 in) long. Leaves are bright green to burgundy, and wedge-shaped at the base.

Stems: Twigs are brown, three-ridged downward from the node, with simple thorns. Inner bark and wood are yellow.

Flowers: Flowers are solitary or in umbel-like clusters, corolla yellow, 8-10 mm (0.3-0.4 in) broad. Blooms March-April.

Fruits: Berries are red, ellipsoid to globular, 8-10 mm (0.3-0.4 in) long, and often present through winter. Fruit matures May-September.

Life History

Japanese barberry reproduces from prolific seeds, rhizomes, or layering. Seeds have a germination rate as high as 90%, and are distributed by birds including ruffed grouse, bobwhite, pheasant, and wild turkey. Because barberry is shade tolerant, an extensive population can become established in a short time under a closed forest canopy. Severe drought or extreme winters have little effect on overall mortality or seed production. Deer avoid barberry while often browsing surrounding vegetation, which may effectively increase barberry's competitive advantage.



Photo by Jil M. Swearingen

Origin and Distribution

Barberry was introduced to the United States in 1864 as an ornamental. It is prevalent in the northeastern states, but can be found from Nova Scotia and Michigan to North Carolina, Missouri,

and throughout Tennessee. It continues to be a popular landscape plant with several varieties sold to the public.

Similar Species

Japanese barberry resembles American barberry (*Berberis canadensis* P. Mill.), which grows in dry woods or bluffs. Distinguishing features are the sharply toothed leaves and three pronged spines of American barberry. In most habitats, Japanese barberry is easily recognizable because of its distinctive coloration.

Habitat

Barberry tolerates a variety of habitats from damp lowlands to dry roadsides and waste places. Populations do not expand rapidly into oak-dominant forests or on extreme north-facing slopes. Because it is widely dispersed by the nursery industry, barberry has the potential to impact most natural area ecosystems throughout Tennessee.

Management Recommendations

Mechanical Controls

Hand Pull: This method of control is effective for small populations of Japanese barberry, since plants pull up easily in most forested habitats. Hand-pulling is an extremely effective method of reducing population and seed productivity; this can be done during most of the year. Barberry is especially easy to see in the winter and early spring before deciduous plants leaf out. If plants have fruit present, they should be bagged and disposed of to prevent seed dispersal. Care should be taken to minimize soil disturbance.

Mowing/Cutting: This method is appropriate for initial small populations or environmentally sensitive areas where herbicides cannot be used. Repeated mowing or cutting will control the spread of Japanese barberry but will not eradicate it. Stems should be cut at least once per growing season as close to ground level as possible. Hand-cutting of established clumps is difficult and time consuming due to the long arching stems and prolific thorns.

Herbicidal Controls

Foliar Spray Method: This method should be considered for large thickets of barberry where risk to non-target species is minimal. Air temperature should be above 65°F to ensure absorption of herbicides.

Glyphosate: Apply a 2% solution of glyphosate and water plus a 0.5% non-ionic surfactant to thoroughly wet all leaves. Use a low pressure and coarse spray pattern to reduce spray drift damage to non-target species. Glyphosate is a non-selective systemic herbicide that may kill non-target partially-sprayed plants.

Triclopyr: Apply a 2% solution of triclopyr and water plus a 0.5% non-ionic surfactant to thoroughly wet all leaves. Use a low pressure and coarse spray pattern to reduce spray drift damage to non-target species. Triclopyr is a selective herbicide for broadleaf species. In areas where desirable grasses are growing under or around Japanese barberry, triclopyr can be used without non-target damage.

Cut Stump Method: This control method should be considered when treating individual bushes or where the presence of desirable species precludes foliar application. Stump treatments can be used as long as the ground is not frozen.

Glyphosate: Horizontally cut barberry stems at or near ground level. Immediately apply a 25% solution of glyphosate and water to the cut stump, covering the outer 20% of the stump.

Triclopyr: Horizontally cut barberry stems at or near ground level. Immediately apply a 25% solution of triclopyr and water to the cut stump, covering the outer 20% of the stump.

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