

INVASIVE PLANTS IN FORESTRY - MANAGEMENT GUIDE

Japanese Barberry (*Berberis thunbergii*)

Japanese barberry is a compact, spiny shrub that commonly grows from two to three feet tall (although it can grow up to six feet in height). Roots are shallow but tough. The smooth-edged leaves range from oval to spatulate in shape and are clustered in tight bunches close to the branches. The single spines bear small leaves in their axils. Yellow flowers bloom in May, are about one third of an inch wide, and are solitary or in small clusters of 2-4 blossoms. The bright-red fruits mature in mid-summer and hang from the bush during autumn and into winter. The berries are small, oblong, and found singly or in clusters. Several cultivars of this species are sold as ornamentals.



Photo by Janet Novak

Origin and Spread

Japanese barberry was introduced from Japan around 1875. It is commonly planted for ornamental reasons (its scarlet fruit and autumnal foliage in shades of orange, red, and crimson make it an attractive hedge), as well as for wildlife and erosion control. It easily naturalizes because its fruit is often eaten by birds, and they subsequently disperse the seed. Its range in North America extends from Nova Scotia south to North Carolina, and westward to Montana. There is a native, American barberry, but it does not occur in Wisconsin; those found here should be assumed to be Japanese.

Japanese barberry can be found invading oak woodlands and oak savannas; it is widespread but not yet abundant in Wisconsin woodlands south of the Tension Zone, and is present and spreading throughout the state. A related non-native species, *B. vulgaris*, was widely planted for similar purposes, but has been exterminated because it is the alternate host of black rust, a disease that affects wheat crops.

The plant regenerates by seed and creeping roots. Birds and rabbits are known to eat the seeds and distribute the species. Branches root freely when they touch the ground; thus allowing single plants to become quite large. Japanese barberry competes poorly with grasses and may succumb to drought conditions.



Photo by Eunice Padley, Devil's Lake State Park

Native Plant Alternatives for Landscaping

Common winterberry (*Ilex verticillata*), lowbush blueberry (*Vaccinium angustifolium*), American cranberry bush (*Viburnum opulus* var. *Americanum*), bladdernut ([Staphylea trifolia](#)), buttonbush ([Cephalanthus occidentalis](#)), dogwoods (*Cornus alternifolia*, *C. amomum*, *C. racemosa*, *C. stolonifera*), American elder ([Sambucus canadensis](#)), spicebush (*Lindera benzoin*), and witch hazel ([Hamamelis virginiana](#))

Controls for the Plant

Because site conditions vary, detailed information should be reviewed before deciding on control methods to use. See the websites listed below for more information.

Little is known about the control of Japanese barberry. What information is available has been gathered from the notes of natural resource managers.

Mechanical Control: Mechanical removal is recommended for early spring because barberry is one of the first shrubs to leaf out, thereby making identification easier. Cutting, pulling or digging are effective in areas where there are only a few plants. A hoe, weed wrench, or mattock should be used to uproot the bush and all connected roots. Thick gloves are recommended for protection from the shrub's spines. Japanese barberry may be relatively easy to control in fire-adapted communities. Fire is thought to kill these plants and prevent future establishment.



Chemical Control: Triclopyr has been used as a cut-stump treatment with success. Other herbicides labeled for brush control, such as glyphosate, can be effective. Care in application is essential because glyphosate is a non-selective herbicide that can kill native species as well. Herbicides are suggested only for plants that are difficult to remove mechanically.

When using herbicides, always read and follow the label instructions for mixing and application, and wear all recommended personal protective gear and clothing.

Before using herbicides, gather information on the best methods of control for the site, and consider weather conditions at time of application.

After treatment, monitoring will be necessary to remove new seed origin plants.

Forestry concerns about Japanese Barberry

Japanese barberry is not yet abundant in Wisconsin's forests and can still be controlled if land owners and managers are vigilant. This plant is widespread and abundant in the northeast United States, where it causes problems in forest management similar to those caused by buckthorn and multiflora rose. Dense thickets form, limiting light to the forest floor and impacting forest regeneration. The plant's thorns make it difficult to work and recreate in infested woodlands.

Websites for Additional Information

Wisconsin State Herbarium: Wisconsin Botanical Information System
<http://www.botany.wisc.edu/wisflora/scripts/detail.asp?SpCode=BERTHU>

The Nature Conservancy: Invasive Species Initiative
http://tncweeds.ucdavis.edu/esadocs/berb_spp.html

Note: There are many websites that offer invasive species control information. Please choose reputable sites, and contact Wisconsin DNR or UW-Extension staff if you have questions.

