

## ***Berberis thunbergii* Japanese barberry**

**Key Characteristics:** This woody shrub is compact with arching branches. Most commonly it is two or three feet high, but can grow to six feet in height. *Leaves:* spatula-shaped in clusters along the stem; a single spine below each cluster of leaves. *Stems:* woody slender, with straight single spines; yellow wood and inner bark. *Flowers:* yellow, ¼” wide, 6 petals in elongate racemes, contracted umbel-like clusters, or solitary. *Fruit:* berries ellipsoid, scarlet, ½ “ long.

**Seasonal Cycle:** In the early spring, it is one of the first plants to leaf out. Its leaves are pale green in the spring and summer. Japanese barberry blooms in May and produces yellow flowers. In the fall, the flowers form small, oblong red berries that are borne singly or in clusters from the stem. The fruits hang from the shrubs during the fall and into the winter. In October and winter, birds eat the red berries and disperse the seeds over long distances. In autumn, the leaves turn shades of orange, red, and crimson. The woody stems of this shrub persist through the winter. Reproduction may be primarily through seeds, although there are reports of resprouting from roots remaining in the ground.

**Habitat:** This plant can tolerate sun and shade with an affinity to sweeter and moister soils. It is still widely planted in commercial landscaping because the shrub is tolerant to drought and roadside conditions. Japanese barberry can invade backyards, roadsides, fields, and open woods. It can also grow in moist areas such as stream banks and seepage slopes.

**Recent Research:** Presentations at the New England Invasive Plant Summit in 2005 included the following:

- Japanese barberry *Berberis thunbergii* cultivars express variable reproductive traits and seedling phenotype.
- Root growth pattern of Japanese barberry *Berberis thunbergii* and a co-occurring native shrub.
- Environmental influences on germination and seedling growth of *Berberis thunbergii* and *Berberis thunbergii* ‘Atropurpurea’.
- Determining the contribution of cultivars to invasive populations of Japanese barberry *Berberis thunbergii* using AFLP genetic fingerprinting.

**Methods for Control or Removal:** For a single plant or a few plants, mechanical removal of the shrub is recommended because it is effective and minimally intrusive. The best time to remove this shrub is in early spring because it is one of the first plants to leaf out and can be distinguished easily from other shrubs. However, it can be hand-pulled year-round. If berries are present on the shrub, they should be bagged and disposed of in the trash. The use of a hoe, weed wrench, or mattock is suggested to uproot the entire bush and associated roots; gloves will help protect hands from the spines. Repeated cutting/mowing reduces spread but does not eradicate.

When this shrub grows in rock piles that are difficult to dig out or a dense infestation is present, treatment with herbicides such as Brush-B-Gon or Roundup is an option. Brush-B-Gon is an herbicide used to control broadleaf herbs and woody species. It is particularly effective in controlling woody species by adding to a cut stump or performing basal bark treatments. Roundup is a non-selective, systemic herbicide that can control most annual and perennial plants. It is also used to control Japanese barberry. Roundup contains the active ingredient, glyphosate and Brush-B-Gon contains the active ingredient, triclopyr. Because these herbicides are non-selective, they should be applied with great care in order not to harm native plants.

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References:

<http://tncweeds.ucdavis.edu/esadocs.html>

<http://invasives.uconn.edu/ipane/summit05/summit05home.htm>

New England Invasive Plant Summit

<http://www.invasives.org/eastern/biocontrol/>

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