

TERRY BONACE'S
DUNE PLANTS
FRIEND OR FOE?



BEVERLY SHORES

ENVIRONMENTAL RESTORATION GROUP
PROMOTING & PROTECTING ECOLOGICAL HARMONY

Japanese Barberry: A Prickly Problem

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It is easy to understand why Japanese barberry (*Berberis thunbergii*) was and still is widely planted in Beverly Shores. Its foliage runs the gamut of colors from purple to chartreuse, it has attractive red berries that persist in the winter, it is shade and drought tolerant, and its foliage is not eaten by even the hungriest deer. Initially European barberry (*Berberis vulgaris*) was planted by settlers who used it for hedgerows, its edible, Vitamin-C rich fruit, and the yellow dye obtained from the root and branches. (If you pull up a Japanese barberry, you will note the yellow sap in the roots and how it stains your gloves.) When it was discovered that European barberry was a host for black stem grain rust, a serious agricultural threat to grain, a campaign to eliminate European barberry began in 1918. Japanese barberry, on the other hand, was first introduced into the United States in 1875 and quickly became a popular ornamental.



Japanese Barberry
An Invader on West Ripplewater

Japanese barberry is invading our forest, aided by the edible berries and prickly branches. The berries are eaten by birds and small mammals who widely disperse the seeds. Large thickets of barberry can occur in the woods not only because of its shade tolerance and seed dispersal but also because deer selectively refuse to browse upon it, eating instead the neighboring plants.

Barberry thickets change the pH (the acidity or alkalinity) of the soil, making it basic (much less acidic than how it naturally occurs) and this in turn changes the composition of leaf litter, increases the density of earth worms and other organisms that eat the leaf litter. Without the protective leaf litter layer, soil erosion occurs in the area. Researchers have also noted higher densities of adult deer ticks and white-footed deer mice under barberry than under native shrubs. Deer mice, who host the deer tick larvae, have higher levels of larval tick infestation and more of these ticks grow into adult ticks infected with Lyme disease. When barberry is controlled, fewer mice with Lyme disease-carrying ticks are present and Lyme disease infection rates drop.



Japanese Barberry Gone Wild
Lake Shore County Road

Clearly there are many good reasons to get rid of Japanese barberry. Luckily it is easier to remove than many of our invasive non-natives. If the plant is not too abundant, manual removal works quite well, as long as all root fragments are removed. Heavy gloves will be needed because of the thorns. Otherwise, the plant can be treated with herbicides containing glyphosate (Roundup) and/or triclopyr. Look for these ingredients on the product label. Generally, products labeled to kill poison ivy and/or briar contain both of these ingredients. Handling herbicides, as in handling all pesticides, requires careful review and compliance with all label directions. The pesticide is most effective when applied in the late summer when fruit is present but in order to be most selective in your application, you can also apply in spring when other plants have not yet emerged. Luckily barberry is easy to recognize from its thorns and berries.

Native Alternative to Japanese Barberry

Because Japanese barberry is easy to grow, has pretty foliage, and is very deer resistant, it is widely planted in Beverly Shores. However, Japanese barberry has a tendency to escape and grow in dense stands, replacing our native plants. It has also been shown to harbor white-footed mice and Lyme disease carrying ticks. These factors make it desirable to seek attractive native alternatives.

Ninebark (*Physocarpus opulifolius*) is a good substitute. The cultivars "Diabolo" and "Summer Wine" have beautiful purplish foliage while "Coppertina" has a copper-orange colored foliage and "Dart's Gold" has yellow-chartreuse foliage. Ninebark is native to the Midwestern United States and Northwest Indiana and is hardy and relatively easy to grow. It also is the host plant for the tiny but beautiful spring azure butterfly and its dense growth form provides excellent bird shelter. Ninebark's peeling bark, revealing different shades of brown and red, from which its common name is derived, contributes winter interest. In spring ninebark has spirea-like clusters of pink to white flowers and later in summer it develops small dry bladder-like fruit that persists in the winter. Ninebark is resistant to deer browsing and will grow back quickly if browsed.

Coming from a largely tropical family of plants whose cousins include the tasty cashew and mango but also the skin rash inducing poison ivy and poison sumac (poison sumac is a very handsome plant and if it weren't for its toxic leaves, it would be on the top of many lists for ornamental native plants), is aromatic sumac. Aromatic sumac

resembles a smaller, denser, bushier, and glossy-leaved poison ivy whose leaves have a fresh citrus scent when crushed (and crush it freely without fear of a bad skin reaction). The leaves also turn a lovely orange and red in the autumn. Aromatic sumac has plants with both male and female flowers and plants having only one sex or the other so in order to be sure to get berries, you need to have several plants. Aromatic sumac spreads by root suckers and usually grows 1 to 2 feet tall but can spread to a width of 8 feet. You can find this sumac growing in the very sandy soil at the garden at Rebora Plaza and also in the dunes in the National Lakeshore and Indiana Dunes State Park. The plant has red, hairy berries in late summer that are attractive to birds while the foliage hosts the caterpillars of the red banded hairstreak butterfly. An additional advantage, as with most aromatic plants, is that aromatic sumac is very deer resistant.

Though the plant has a frightening name-chokeberry-these natives, either black chokeberry (*Aronia melanocarpa*) with black fruit, or red chokeberry (*Aronia prunifolia*) with red fruit, are easy to grow, produce pretty white flowers in the spring, attractive and edible fruit in the late summer, and beautiful red foliage in the autumn. The fruit may be an acquired taste, however, as the common name "choke" is supposed to refer to tart, bitter flavor of the berries and just shows you that if you add enough sugar almost anything can taste good. The berries are rich in vitamin-C and can be made into juice, jam and wine. The Chicago Botanic Garden recommends black chokeberry over red, as it is more attractive, spreads less aggressively, and is slightly smaller in stature. You will also find that black chokeberry is more commonly sold at nurseries. Chokeberry can grow in wet, partial shade or dry sand so it can tolerate the gamut of habitats found in Beverly Shores. It also provides cover and food for birds and wildlife. Chokeberries are considered deer resistant.

Maple-leaf viburnum (*Viburnum acerifolium*) also rather quaintly known as dockmackie or possumhaw, is a small shrub with somewhat maple-like three lobed leaves and a flat-topped cluster of white flowers in the spring. This viburnum is common in Northwest Indiana and can be easily seen in woods around Beverly Shores. Like other plants that grow commonly in our woods, it is quite tolerant of sandy, shady conditions. The flowers are followed by berries that change from red to purple in late summer and are eaten by birds and other wildlife. Like chokeberry, the fruit is edible but not necessarily delicious. Maple-leaf viburnum also has outstanding fall color; the leaves turn pink to purple in the

autumn, making them an attractive addition to your garden. Like other viburnums, maple-leaf viburnum is also a host plant to the spring azure butterfly and is resistant to deer browsing.

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