



Alternatives to Invasive Landscape Plants

Burning bush (*Euonymus alatus*), Japanese barberry (*Berberis thunbergii*) and Norway maple (*Acer platanoides*) were added to New Hampshire's Prohibited Invasive Species List, effective January 1, 2007. These and all other plants on the list (attached) are prohibited from sale, transport, distribution, propagation or transplantation in New Hampshire. Removal of pre-existing landscape plants is not required by the regulation.



Burning Bush (*Euonymus alatus*)

The state's invasive species committee maintains an additional list, called the restricted or "watch" list, which includes plants of potential concern but which are not currently prohibited. For information on the law and criteria regarding invasive species in New Hampshire, please see the N.H. Division of Plant Industry's webpage, http://agriculture.nh.gov/divisions/plant_industry/index.htm.

UNH Cooperative Extension worked with green industry groups to develop the following lists of suggested alternatives for consumers and landscapers. The lists are not comprehensive but include several adaptable plant choices which are readily available at nurseries and have performed well in New Hampshire landscapes. While recognizing that no single plant can substitute directly to perform all the functional and aesthetic qualities of the invasive plant of concern, the list provides suggestions suitable for a range of site conditions and landscape functions.

Alternatives for **Burning Bush*** (*Euonymus alatus*)

Burning bush is a popular component of the landscape, having been widely used for its brilliant fall color. Its adaptable nature and stress tolerance allow it to thrive in shade or sun and throughout a wide range of soil conditions. It has a dense, wide-mounded or spreading form up to 20' wide and 20' high at maturity. The ridged bark is an identifying characteristic. Its prolific seeds are eaten and spread by birds and other wildlife. Consider the following alternatives when selecting large shrubs for fall color.

[American cranberrybush viburnum](#) (*Viburnum trilobum*) This native plant is hardy throughout the state. Coarse in texture and form, it is adaptable to most well-drained soils, and likes full sun or partial shade. While the fall color is not outstanding compared to burning bush, it has multi-seasonal interest with large white flower clusters in spring, clusters of cranberry-like fruit in summer through fall, and subdued burgundy fall foliage. Songbirds returning to the area in late winter/early spring greatly appreciate the fruits. Cultivars such as 'Alfredo' and 'Redwing' have been selected for superior fall color. Mature size

*All blue font in this electronic document can be clicked on to see a picture of the plant described in the text.

varies according to cultivar, but plants may grow 8'-10' tall and wide. A word of caution, however; the viburnum leaf beetle, a new invasive insect, does find this species an attractive host and can defoliate the plants.

Highbush blueberry (*Vaccinium corymbosum*) Grown primarily for the edible berries, highbush blueberry also makes an excellent landscape plant in the right conditions; i.e., acidic soils in full sun to partial shade. A shallow-rooted species, it should be mulched. Native, hardy to zone 3, and slow in growth, the plants develop an upright, spreading form, up to 12' tall and 6'-8' wide. Two dual-use varieties for New Hampshire are 'Spartan', with brilliant red fall foliage, and 'Bluejay', with orange fall foliage. This is one of the best plants for wildlife, providing nectar for insects, larval food for butterflies, and fruit for a wide array of mammals.

Redvein enkianthus (*Enkianthus campanulatus*) Fall color varies, ranging from true gold to bright red, but all are very attractive. In addition, lovely clusters of pink to white bell-shaped flowers appear in spring. Another slow-grower, this plant has an upright, open habit when young and fills out as it matures, reaching 6'-8' tall and wide. It requires acid, moist soil for best growth, is suitable for full to partial sun, and is hardy to zone 4 or 5.

Fothergilla (*Fothergilla gardenii* or *Fothergilla major*) Fothergilla is an underused plant, with great fall foliage in shades of yellow, orange and red, all on the same plant. It also has fragrant, white bottlebrush flowers in spring, and a dense rounded form with medium texture. *F. gardenii* (2'-4' high and wide) is a smaller version of *F. major*, which can grow 6'-10' and form colonies from suckers. Like *Enkianthus*, it needs acid, moist soil, full to partial sun, and is hardy to zone 4 or 5.

Red chokeberry (*Aronia arbutifolia*) Native to New England, red chokeberry is an attractive, slow-growing plant, 6'-10' high and 3'-5' wide, forming colonies through suckers. It is adaptable to most soil conditions in sun to partial shade. It has attractive red berry-like fruit (not considered edible by humans, but serving as a late winter food source for birds) and red to purplish fall foliage. 'Brilliantissima' is a cultivar selected for superior red fall color; 'Autumn Magic' is a nice selection of the closely related black chokeberry (*Aronia melanocarpa*). They are both hardy to zone 3 or 4.

Alternatives for Japanese barberry (*Berberis thunbergii*)

Japanese barberry is a durable, dense mounded, low-maintenance plant, most popular for its red or purple-leaved cultivars which add color to the shrub border. Potential alternatives include some plants that provide the red color but not the compact form, and others that provide the desired form but not the red color. Unfortunately, it's hard to find both in one plant.

Weigela (*Weigela florida*) New purple-leaved cultivars of this plant, such as the low-mounding 'Midnight Wine' and the larger 'Wine and Roses' can provide a nice splash of color in the border and have prolific pink flowers as well. These tend to be spreading, dense, rounded shrubs which can be cut back during the winter to keep them small. Best in full sun and adaptable to many soils, weigela is generally hardy to zone 4 or even 3 with the selection of the proper cultivar.

Slender deutzia (*Deutzia gracilis*) Another good match for the low, broad mounding form of Japanese barberry, but lacking a purple-leaved form. Suitable for zones 5 and 6, the plant is tough and adaptable, and very ornamental when in bloom in the spring. 'Nikko' is a graceful low shrub with abundant white flowers in spring and attractive burgundy fall color.

Common ninebark (*Physocarpus opulifolius*) Hardy to zone 3, this durable and adaptable shrub is an upright grower, coarse in texture. We include it here because of the recent introduction of some purple-leaved cultivars – ‘Diabolo’ which grows to 8’-10’ and ‘Summer Wine’, which has a finer texture and more compact form, 5’-6’ high. For a coppery-orange color, select ‘Coppertina’ (6’-8’ high). All have white flowers in mid-summer and attractive peeling bark although it’s hard to see because of the dense growth. Cut them back in winter to keep plants more compact. A good plant for bird shelter, it also serves as the host for spring azure butterfly larvae.

Shrub roses (*Rosa* species and hybrids) Hardy shrub roses can substitute for the dense, mounding form of barberry, but the flowers make roses a focal point in the landscape. All except redleaf rose, *Rosa glauca*, have green leaves. Proper selection and placement is critical if you want to minimize maintenance, since the thousands of species and varieties on the market vary widely in size and form.

Do not buy roses grafted onto *Rosa multiflora* rootstock, as multiflora rose is a prohibited invasive in New Hampshire. Many roses are subject to Japanese beetles and diseases such as black spot and powdery mildew, and many are not winter hardy. A few tried and true varieties for New Hampshire are ‘Sea Foam’, ‘The Fairy’, ‘Harrison’s Yellow’ and ‘Glory of Edzell’. The newer ‘Knockout’ roses seem to do well here so far. Rose hips make good winter food for birds and mammals, and the dense thorny branches provide excellent nesting cover for songbirds.

Other shrubs to consider using in place of burning bush or barberry include **summersweet** (*Clethra alnifolia*), Southern bush-honeysuckle (*Diervilla sessilifolia*), Virginia sweetspire (*Itea virginica*), mapleleaf viburnum (*Viburnum acerifolium*), spreading cotoneaster (*Cotoneaster divaricatus*), **Northern bayberry** (*Myrica pennsylvanica*), cutleaf stephanandra (*Stephanandra incisa*), and ‘Gro-low’ fragrant sumac (*Rhus aromatica* ‘Gro-low’). Many **spireas** can be used, although in some other states they are considered potentially invasive as well. In some cases, perennials such as purple-leaved *Heuchera* or *Alternanthera* may provide the desired effect. For more information on selecting perennials and shrubs, refer to The Cooperative Extension Resources page at: <http://extension.unh.edu/resources/>

Alternatives for Norway maple (*Acer platanoides*)

Norway maple, introduced from Europe in 1756, became one of the most frequently planted and occurring street trees in the eastern and north central regions of the country. Its popularity can be explained by its rapid early growth rate, site adaptability, ease of transplanting, and tolerance of urban conditions including exposure to road salt. The cultivar ‘Crimson King’ has attractive maroon-red leaves all summer and became a favorite shade tree for home and commercial landscapes.

When selecting an alternative for this large-growing, attractive shade tree, consider the conditions at the intended planting site. While there is no shortage of desirable tree species to choose from, most are not as widely adaptable and tolerant as Norway maple.

Some salt tolerant shade trees, listed from largest to smallest mature size

Red maple (*Acer rubrum*) has red spring color when in bloom, turning green as the foliage appears. Although red maple is native throughout much of the east, cold hardiness of seedlings or grafted varieties is not always consistent and it is important to purchase plants from northern sources. Red maple will tolerate wet soils and a moderate amount of salt, unlike sugar maple. 75’ tall by 60’ wide at maturity.

Northern red oak (*Quercus rubra*) is sometimes difficult to establish and slow to start growing, but

makes a nice green shade tree for lawn areas. Acorns may be an annoyance to some people, but the squirrels love them. 75' tall by 60' wide.

Ginkgo (*Ginkgo biloba*) is slow-growing but very long lived once established and has a nice, clear yellow fall color. It is salt, heat and drought tolerant, making it a good urban tree if given adequate room to grow. Female trees are undesirable because they have malodorous fruit. 75' tall by 40' wide.

Japanese tree lilac (*Syringa reticulata*) is a good choice for a smaller tree; normally 30' x 20' at maturity, smaller cultivars are available. It has lilac-type white blossoms in mid-summer (but lacks a desirable fragrance) and attractive cherry-like bark. 'Ivory Silk' is a popular cultivar selected for compact form and prolific bloom. (Note: Can become weedy in some areas.)

Some red-leafed trees

European beech (*Fagus sylvatica*) Nothing is more beautiful than the purple-leaved 'Riversii' European beech, one of the few large shade trees with purple leaves. This tree becomes enormous over time, however, so should not be used as a street tree or in other areas with limited growth potential. The nuts provide excellent wildlife food. 60' tall by 45' wide.

Flowering crabapple or plum (*Malus* species and hybrids; *Prunus cerasifera*): For those who must have a purple-leaved tree, a few cultivars of flowering crabapple, plum and cherry fit this order. However, these are all much smaller than Norway maple. Choose disease-resistant, zone-hardy cultivars and prepare to tolerate insect pests such as Eastern tent caterpillar. Cherry and plum are often subject to winter injury, as well as diseases such as black-knot, and may be short-lived, especially north of zone 5. Both *Malus* and *Prunus* species provide fruit and cover for birds and other animals, and serve as hosts to many butterfly species in the larval stage.

Some crabapple varieties that have purple leaves and good disease resistance include 'Purple Prince' and 'Thunderchild'. 'Pink Princess' and 'Pink Spires' have purplish-green foliage and moderate to good resistance. 15'-20' tall by 12'-25' wide, depending on variety. Zone 4.

Flowering plum (*Prunus cerasifera*) varieties with purple leaves include 'Atropurpurea', 'Newport', 'Mount Saint Helens', and 'Thundercloud'. The latter is restricted to zone 5 or warmer, while the others are suitable for zone 4. Mature sizes vary; 15'-30' high and 15'-25' wide.

For more information on selecting shade trees for urban or landscape situations, refer to *Selecting Trees for Urban Landscape Ecosystems*, published by the N.H. Department of Resources and Economic Development, Division of Forests and Lands, Concord, N.H.

*By Catherine Neal, UNH Extension Specialist, Landscape Horticulture
cathy.neal@unh.edu*

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New Hampshire Prohibited Invasive Species List

Scientific name	Common name
<i>Acer platanoides</i>	Norway maple
<i>Ailanthus altissima</i>	Tree of heaven
<i>Alliaria petiolata</i>	Garlic mustard
<i>Berberis thunbergii</i>	Japanese barberry
<i>Berberis vulgaris</i>	European barberry
<i>Celastrus orbiculatus</i>	Oriental bittersweet
<i>Centaurea biebersteinii</i>	Spotted knapweed
<i>Cynanchum nigrum</i>	Black swallow-wort
<i>Cynanchum rossicum</i>	Pale swallow-wort
<i>Elaeagnus umbellata</i>	Autumn olive
<i>Euonymus alatus</i>	Burning bush
<i>Heracleum mantegazzianum</i>	Giant hogweed
<i>Hesperis matronalis</i>	Dame's rocket
<i>Iris pseudacorus</i>	Water-flag iris
<i>Lepidium latifolium</i>	Perennial pepperweed
<i>Ligustrum obtusifolium</i>	Blunt-leaved privet
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Lonicera morrowii</i>	Morrow's honeysuckle
<i>Lonicera tatarica</i>	Tatarian honeysuckle
<i>Lonicera x bella</i>	Showy bush honeysuckle
<i>Microstegium vimineum</i>	Japanese stilt grass
<i>Polygonum cuspidatum</i>	Japanese knotweed
<i>Polygonum perfoliatum</i>	Mile-a-minute vine
<i>Reynoutria x bohemica</i>	Bohemia knotweed
<i>Rhamnus cathartica</i>	Common buckthorn
<i>Rhamnus frangula</i>	Glossy buckthorn
<i>Rosa multiflora</i>	Multiflora rose

Source: http://agriculture.nh.gov/divisions/plant_industry/documents/list.pdf, 20 Oct 2009.

Note: The above list does not include plants prohibited under Certified Administrative Rule Env-Wq 1303.02 Prohibited Exotic Aquatic Weeds. For this list, refer to:
<http://des.nh.gov/organization/commissioner/legal/rules/documents/env-wq1300.pdf>

New Hampshire Restricted Invasive Species (Watch) List

Scientific name	Common name
<i>Aegopodium podagraria</i>	goutweed
<i>Ampelopsis brevipedunculata</i>	Porcelain-Berry
<i>Carduus nutans</i>	musk thistle
<i>Centaurea diffusa</i>	diffuse knapweed
<i>Centaurea solstitialis</i>	yellow starthistle
<i>Cirsium arvense</i>	Canada Thistle
<i>Coronilla varia</i>	Crown Vetch
<i>Elaeagnus angustifolia</i>	Russian Olive
<i>Euonymus fortunei</i>	wintercreeper
<i>Euphorbia esula</i>	leafy spurge
<i>Glechoma hederacea</i>	gill-over-the-ground
<i>Glyceria maxima</i>	Sweet Reedgrass
<i>Humulus japonicus</i>	Japanese hops
<i>Lespedeza bicolor</i>	bicolor lespedeza
<i>Ligustrum vulgare</i>	Common Privet
<i>Lonicera maackii</i>	Amur Honeysuckle
<i>Lysimachia nummularia</i>	Moneywort
<i>Miscanthus sinensis</i>	Anderss Eulalia
<i>Phalaris arundinacea</i>	Reed Canary Grass
<i>Populus alba</i>	White Poplar
<i>Pueraria lobata</i>	Kudzu
<i>Robinia pseudoacacia</i>	Black Locust
<i>Securiga varia</i>	crown vetch
<i>Ulmus pumila</i>	Siberian Elm

Source: http://agriculture.nh.gov/divisions/plant_industry/documents/watch.pdf, 20 Oct 2009.