

In your yard? Quite Possibly!

While nearly a thousand non-native plants have been introduced to New England over the centuries, only a few cause major problems. Some of these were recommended for bird food, wildlife habitat, soil stabilization and landscaping. Some species, like garlic mustard, may have arrived inadvertently, while others, like goutweed, may have been gifts from your gardening friends. Shrub honeysuckle, autumn olive, glossy buckthorn, burning bush and barberry are loved by birds who spread the seeds far from their source. Norway maple was once thought to be the "ideal" street tree, because of its tolerance for compaction, salt and dry conditions.

The plants listed above, and several others, have become invasive, crowding out some native species and altering the habitat for others. Worldwide, invasive species are second only to habitat destruction as a cause of extinction and the consequent loss of biological diversity. While this is a global problem, local action can be effective.

Characteristics which distinguish invasive non-native plants include heavy seed production and effective seed dispersal mechanisms (such as birds), rapid growth and aggressive competition against other plants. Many of the plants listed here can thrive even in undisturbed areas, and can tolerate a wide range of soil, moisture and light conditions. Because they are "new" on the landscape, they lack the complex mix of predators, diseases and other species that keep them in balance in their home territories. The harmful impacts of these plants may escape notice for many years; often the "lag time" is considerable, sometimes more than 100 years.

A casual inventory of woodlands or abandoned fields near your home will probably reveal a surprising number of landscape escapees. They are a real threat to the region's biodiversity and the health of natural communities. All the plants listed here have been observed in the Upper Valley (particularly the Connecticut River corridor), quietly pushing their way into the region's natural areas.

What can you do?

- Learn to identify these plants. For help, contact someone from the groups listed on the back of this brochure.
- Monitor the natural areas in your neighborhood.
- Help prevent new infestations by not planting them, or by removing plants when you first notice them. (Be sure to obtain the landowner's permission!)
- Volunteer to help out with restoration projects.
- Make certain that the plants in your yard aren't a part of the problem. Use plants which are known to be well behaved. Try native plants in your yard.
- Beware of cultivars of the listed invasive plants; many produce seeds which revert to original form.
- Encourage local nurseries not to sell invasives, and ask them to suggest substitute plants.

Control

- Avoid soil disturbance to prevent invasive plants from establishing; seed or cover disturbed areas promptly.
- Some young invasive plants are easy to pull, as roots are shallow.
- Cut plants in early summer when new growth starts. Cut new sprouts frequently, to weaken the root system. This approach takes time and requires diligence.
- If you have access to a weed wrench, you can remove small trees or shrubs up to 1.5" diameter, with a minimum of soil disturbance.
- Some trees, such as Norway maple, succumb to aggressive bark girdling.
- Seeds will persist for some time and may germinate over a several-year period, so effective eradication efforts need monitoring.

Herbicide use

NOTE: Herbicide use is illegal in or near wetlands, unless the applicator is licensed and has a state permit.

- Foliage sprouting from cut plants makes a compact target for limited use of herbicide spray.
- Freshly cut stems of woody plants can be painted immediately (use a foam brush) with full strength Roundup to prevent resprouting. This method is effective if used late in growing season. Apply with extreme care.

Other invasive plants...

Purple Loosestrife (*Lythrum salicaria*) See separate brochure available in many towns.

Common Reed (*Phragmites australis*)

Goutweed or Bishop's Weed (*Aegopodium podagraria*) Very common in gardens

Common Buckthorn (*Rhamnus cathartica*)

Winged Euonymus or Burning Bush (*Euonymus alatus*)

Multiflora Rose (*Rosa multiflora*)

Black Swallow-wort (*Vincetoxicum nigrum*)

Porcelain Berry (*Ampelopsis brevipedunculata*)

Plants to watch closely

Common Barberry (*Berberis vulgaris*)

Amur Maple (*Acer ginnala*)

Common Privet (*Ligustrum spp*)

More information

This brochure is printed by the Upper Valley Purple Loosestrife Coalition:

Conservation Commissions of Canaan, Claremont, Cornish, Enfield, Hanover, Hartford, Haverhill, Lebanon, Lyme, Norwich, Orford, Piermont, Plainfield, Weathersfield, and West Windsor

Canaan Bird and Garden Club

Garden Clubs of Hanover, Quechee

Hanover Conservation Council

Lake Mascoma Community Association

League of Women Voters of the Upper Valley

Planning Board of Springfield VT

The Nature Conservancy of New Hampshire

Website: www.valley.net/~invasiveplants

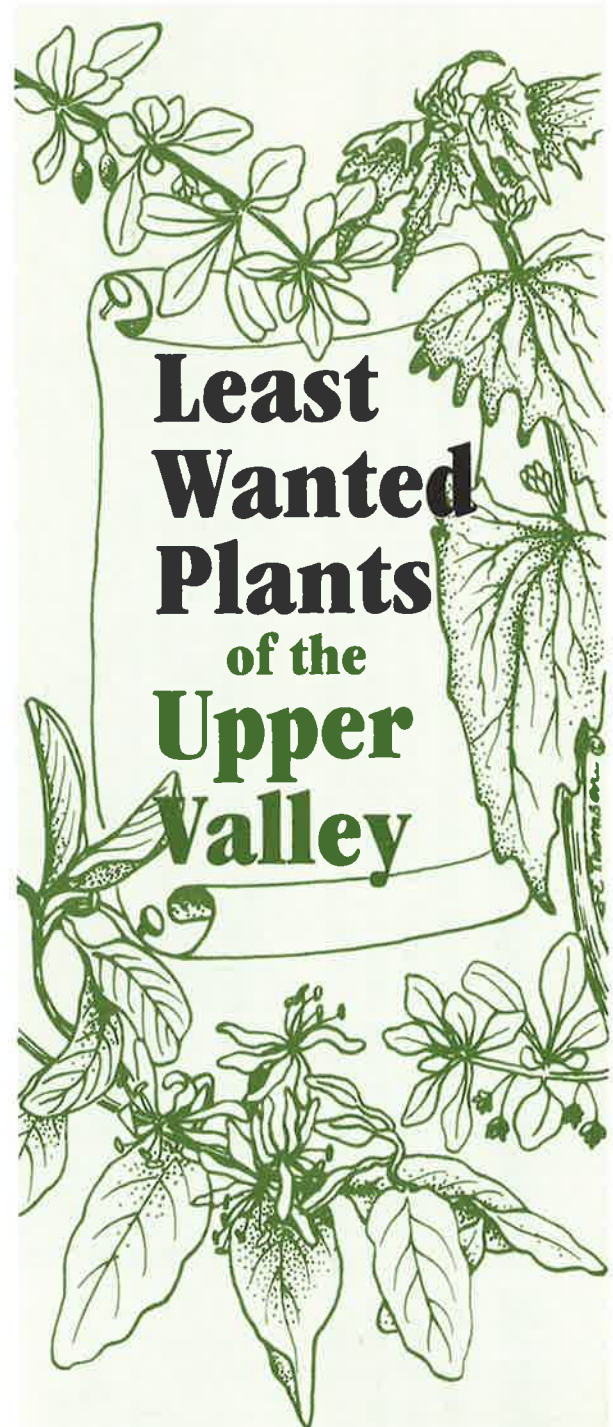
has photos of many of the plants listed here, links to other websites, background information, and news about state and local actions directed at control of these problem plants.

Email: purple@valley.net

You can sign up for an e-mail invasive plant newsletter.

Mail: Loosestrife, Box 726, Hanover, NH 03755.

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A GUIDE TO INVASIVE PLANTS

Think twice about the plants around you!

The eight upland plants illustrated are problematic here and now. Unfortunately, some are very popular in landscaping. The plants listed on the back of this brochure are also not recommended, as they are on the increase, and capable of causing severe problems. (Information about invasive aquatic plants is available in literature published by the states of New Hampshire and Vermont.)



Glossy Buckthorn (European Buckthorn) *Rhamnus frangula* or *Frangula alnus*

Small deciduous tree, reaching height of 23' **Leaves:** alternate, glossy above, slightly hairy below; 1-3" long, oblong, smooth (wavy) margins **Flowers:** yellowish-green, five petals, in clusters where leaf joins twig; bloom continuously during summer **Fruit:** berry is red when immature, black when ripe **Bark:** brown/green, smooth, raised white bumps; interior wood is bright orange **Habitat:** prefers wet areas, but thrives under many conditions. Tolerates shade **Notes:** cut stumps will resprout. Common in Connecticut River corridor—dominant in some places.



Shrub Honeysuckles

(Tatarian Honeysuckle) *Lonicera tatarica* smooth hairless leaves, pink or white flowers

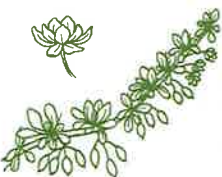
(Morrow Honeysuckle) *Lonicera morrowii* downy leaves, white flowers which turn yellow, and several other species

Upright, coarse deciduous shrubs; up to 16' high **Branches:** wide spreading; older branches are hollow (as distinguished from native honeysuckle shrubs) **Leaves:** opposite, simple, oval to oblong shape, 1-2.5" long **Flowers:** numerous, in pairs on slender stalks, tubular with deeply lobed petals **Fruit:** pairs of red, orange or yellow berries **Habitat:** abandoned fields and pastures; edges of forest and wetlands; prefers sun, but tolerates a variety of moisture and shade levels **Notes:** cut stumps will resprout. Do not confuse with native honeysuckles. Often planted in hedges.



Norway Maple *Acer platanoides*

Deciduous tree, reaching height of 40-50' (can reach 90'); mature tree has rounded crown and forms dense canopy **Leaves:** opposite, long stems; fan-lobed shape, palmately veined, with U-shaped notches; leaves appear earlier than other maples; turn yellow in fall and are very late to fall from tree; distinctive white sap oozes from broken leaves and stems **Flowers:** showy, large greenish-yellow clusters bloom before leaf-out **Bark:** mature tree has grayish-black, narrowly furrowed bark **Fruit:** winged maple "keys" are distinguished from seeds of native maples by the 180° angle formed by the two halves **Habitat:** shade tolerant; tolerates wide range of soil, moisture and pollution conditions **Notes:** tolerates soil compaction and road salt; shallow roots inhibit nearby plant growth; inhibits growth of other shade-tolerant trees such as sugar maple and beech.



Japanese Barberry *Berberis thunbergii*

Dense, woody, deciduous shrub, 2-3' high (can reach 6') **Leaves:** small, oval, untoothed; grow in clusters; leaves appear early in spring; red in fall **Flowers:** small, yellow; one to three on stems growing below leaf clusters **Bark:** single spine under each leaf cluster; inner wood and roots are bright yellow **Fruit:** bright oblong red berries, ripen in fall; distributed by birds **Habitat:** prefers sun, but can survive in dense shade; escapes in fields, field edge, open forest; tolerates a variety of soil types **Notes:** considered easy to remove; can form dense, impenetrable stands in forests; often planted in hedges; branch tips can root; rarely resprouts if cut.



Oriental Bittersweet *Celastrus orbiculatus*

Deciduous woody vine; twines around other plants, can climb to 60' **Leaves:** alternate, glossy, nearly round, bluntly toothed; turn yellow in fall **Flowers:** clusters of small, greenish-yellow 5-petaled flowers that form where leaf stems join the vine; male and female plants bloom in May and June **Bark:** old growth is rough and tan; new growth is green with small bumps **Fruit:** tough yellow fruit covers split open, revealing bright red berries; ripe by September; remain on vine through winter; distributed by birds **Habitat:** prefers open sites, such as roadsides, hedgerows, and thickets; shade tolerance has permitted spread into forested areas **Notes:** difficult to control, root suckers are common; don't confuse with less-common native American bittersweet (*Celastrus scandens*), a vine with elongated, pointed leaves, and with flowers and orange fruits at ends of branches.



Autumn Olive (Japanese Silverberry) *Elaeagnus umbellata*

Small deciduous tree, can reach height of 20' **Leaves:** alternate, untoothed, oval, 1-3" long; dark, dull, gray-green on top; pale underside covered with tiny silvery scales; edges often wavy **Flowers:** pale cream-colored tubular-shaped flowers grow in clusters from base of leaf stems, turn yellow with age; four petals; extremely fragrant **Bark:** twigs are silvery; sometimes with sharp thorns **Fruit:** oval berries are initially brown, turn red when ripe; dotted with silvery scale-like particles; distributed by birds **Habitat:** prefers sun; found in old fields, forest edges, roadsides; tolerates drought, wind and air pollution **Notes:** will re-sprout if cut; grows rapidly and can form dense thickets; shrub mound-shaped, often lopsided; has distinctive silver color at distance (particularly when in bloom, or wind is blowing); leaf out early; roots are nitrogen-fixing, so plant can grow in infertile habitats, and modify soil suitability for native species. Do not confuse with native willows (which lack berries).



Garlic Mustard *Alliaria petiolata*

Cool season biennial herb, 1-3' high **Leaves:** garlic odor when leaves are crushed; the leaves of first-year plants are rounded with teeth, growing in low rosette; second-year plants have alternate heart-shaped deeply toothed leaves **Flowers:** white, cross-shaped; in clusters at end of stalks on second-year plants; blooms in late spring and early summer **Fruit:** in long slender pods, average 800/plant; mature by mid-July to August **Habitat:** forest edge and roadsides; tolerates both deep shade and full sun **Notes:** sturdy white taproot has an unusual "hook" shape just under the ground; relatively easy to pull up; plants can reach a density of 20,000 seedlings/square meter. May be spread with hay bales or nursery stock.



Japanese Knotweed *Polygonum cuspidatum* or *Fallopia japonica*

Fast-growing perennial, 3-12' high, new shoots produced annually **Leaves:** wide, slightly oval, smooth edges, pointed tip and squarish base, 2-6" long **Stems:** stout, hollow, bamboo-like; dull green with red mottling; side shoots emerge from joints in stems at base of leaves **Flowers:** large clusters of tiny, pale greenish blossoms at tips of plant in late summer **Fruit:** mature soon after blossom; wind dispersed; plants from seed can flower in first year **Habitat:** sunny wetlands, marshes, roadside ditches; tolerates many soil types and a range of moisture conditions **Notes:** forms dense patches which are very difficult to control; spreads mainly by underground rhizomes, which reach up to 50'; broken bits of root or stalks can establish a new colony.