

What is an invasive plant?

Invasive plants are usually non-native species that have been introduced intentionally or by accident and spread from human settings into natural areas with negative effects to our economy, environment or health. Free from the plant-eaters and parasites that

keep them in check in their native ranges, they reproduce rapidly and spread aggressively, taking over natural areas and altering biological communities. Invasive plants have been referred to as a form of biological pollution.

Why should you be concerned?

Invasive species are one of the top threats to our natural heritage, along with habitat loss and degradation. Invasive plants can displace native species, eliminate food and habitat for wildlife, alter natural fire regimes and nutrient cycling in soils, and inhibit native-plant regeneration. In the U.S. alone, invasive species cost over \$120 billion annually in damage and control, and the cost they inflict on our natural heritage is

immeasurable. Whether you are acting as a steward for your own property, a local park, or a far away natural area, invasive plants are likely to be a problem. In the face of such global threats to biodiversity as habitat destruction and climate change, we can each make a difference by preventing and controlling the spread of invasive species.

Learn how to identify invasive plants

For a start, unfold this brochure to the inside section, where you will learn how to identify 10 of the most prevalent and problematic invasive plants in our region and how to control them. You can also participate in plant walks, weed control workdays, and invasive species trainings offered by local groups.

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Spread the word, not the weed

Seeds of invasive plants are well adapted to spreading and easily “hitch-hike” to new environments. Weed seeds can be carried in soil trapped in shoe or tire treads, in the soil of transplanted plants, in hay or straw used to stop erosion or feed animals, or even on your pant legs. Please help prevent new invasions by cleaning soil from your shoes and the tires of vehicles that may be driven into natural areas.

Become an educated consumer


Don't purchase or transplant invasive plants. Ask plant sellers before you buy, to be sure the plant you want is not invasive, and ask for alternatives if it is. Take the “Recommended Landscape Alternatives to Invasive Plants” wallet guide from this brochure with you to your nurseries and show them some examples.

Other types of invasive organisms in the area

A variety of plants and animals has invaded our forests, fields and waters.

- Invasive aquatic plants like water chestnut and giant salvinia choke our lakes and ponds, interfering with boating and other recreation.
- Invasive animals like the snakehead fish and virile crayfish compete with and displace native species, harming the diversity and health of our rivers and streams.
- Invasive insects like the emerald ash borer, Japanese beetle and hemlock woolly adelgid kill millions of native trees each year.

**Recommended
Landscape Alternatives to
Invasive
Plants**
**of the Potomac River
Watershed and
Surrounding Region**



To download this brochure or the
“Recommended Landscape
Alternatives to Invasive Plants”
wallet guide, please visit
nature.org/maryland

What you can do... at home and in your parks

In your own backyard

Learn about the plants on your property. Do you have invasive plants? Do the invasive plants overwhelm the native plants? Consider removing invasive plants from your yard and garden, and replace them with non-invasive and native plants in your landscaped areas. Don't feel like you have to do it all at once; remove and replace invasive plants as your time and budget allow. Every little bit helps.

Volunteer your time

Local groups and park managers host year-round volunteer work parties, so consider lending a few hours to help protect and restore your favorite parks and natural areas. Removing invasive plants is a healthy form of outdoor exercise suitable for all ages, and it's rewarding work.

Where to find more information

Many states, counties and university extension services can help you gather more information, and regional non-profit groups offer excellent resources and post their volunteer opportunities. Visit these organizations online:

- The Nature Conservancy of MD/DC
www.nature.org/maryland/invasives
- National Park Service
www.nps.gov/plants/alien
- Mid-Atlantic Exotic Pest Plant Council
www.ma-eppc.org
- The Nature Conservancy's Global Invasive Species Team
tncweeds.ucdavis.edu
- Maryland Native Plant Society
www.mdflora.org
- Virginia Native Plant Society
www.vnps.org
- USDA Invasive Species Information Center
www.invasivespeciesinfo.gov
- Maryland DNR Invasive Species Resource Center
www.dnr.state.md.us/invasives
- Virginia DCR Natural Heritage
www.dcr.virginia.gov/natural_heritage/invspinfo.shtml
- West Virginia DNR Wildlife Resources
www.wvdnr.gov/Wildlife/InvasiveWV.shtml

This brochure produced through the dedication and cooperation of the following partners:



Terrestrial Invasive Plants

of the Potomac River Watershed

vine-mile-a-minute



Garlic Mustard

Alliaria petiolata



- Garlic mustard has a two-year life cycle, and one plant can produce more than 7,000 seeds before dying. The plants smother spring wildflowers and produce toxins to prevent the growth of native plants.
- The leaves and habit of 1st and 2nd year plants are different, but the scalloped-edge leaves, white four-petaled flowers in the 2nd year, and bent white taproot are easy to identify.
- To remove, pull gently to dislodge the root, preferably when the soil is moist. Discard flowering and seeding plants with your garbage.



English Ivy

Hedera helix

- This evergreen vine can kill large trees, or weigh them down to the point of collapse. On the ground, it can rapidly smother native vegetation, even the toughest weeds.
- English ivy leaves stay dark green year round, but as the ivy climbs trees, its leaves change shape and vines grow hairy. The vines produce blue-black berries in the fall.
- On trees, cut a section of vine near the base and pry from the tree to leave a gap. In gardens, pull or dig up all root fragments of groundcover.



Japanese Stiltgrass

Microstegium vimineum

- This annual grass shows up in the summer and rapidly forms a dense monoculture along roads, woods and streams, choking out groundcovers and tree seedlings. Each plant can form 1,000 seeds.
- Stiltgrass leaves are divided into unequal halves by a silvery line. The plant gets its name from the above-ground roots that hold it up, like stilts on a boardwalk.
- Its shallow roots make stiltgrass easy to pull up. Remove several times each summer to encourage new seeds to grow and thus exhaust the seed supply.



Exotic Wisteria

Wisteria floribunda, *W. sinensis*

- This twining vine can strangle and overtop tall trees, carpet forest floors, and alter the structure of a forest.
- Wisteria's crinkled leaves are composed of many small leaflets (compound), and the bark is gray and tightly stretched. Short-lived fragrant purple flowers emerge in early summer and yield long fuzzy seed pods.
- In natural areas, cut the vines at the ground and again at eye level. Untwine the cutaway section, and leave the remainder above to dry out and die.



Japanese Barberry

Berberis thunbergii

- This plant can form dense thickets and alters the pH, nitrogen and biological activity levels in the soil, preventing native forest species from growing.
- The Japanese barberry's spoon-shaped leaves have smooth edges, distinctive solitary spines by the buds and red berries that may persist through the winter.
- In natural areas, cut the plants close to the ground. In garden settings, pull or dig up plants, removing all root fragments to prevent regrowth.



Wineberry

Rubus phoenicolasius

- This bush can form dense thickets and displaces native plants that provide food and shelter for birds and mammals.
- Wineberry leaves are comprised of three leaflets—the middle one larger than the other two—and the underside of the leaves is white. Arching stems with red hairs and red thorns and red fruit in summer are distinctive.
- In natural areas, cut the plants close to the ground and cut rooting tips. In gardens, pull or dig up plants, removing all root fragments to prevent regrowth.



Japanese Honeysuckle

Lonicera japonica

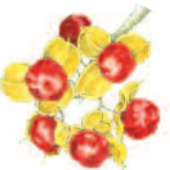
- This twining vine can strangle and overwhelm small trees, carpet forest floors and alter the structure of a forest.
- The evergreen leaves of Japanese honeysuckle grow opposite one another, and the bark shreds off in long brown and tan strips. Fragrant flowers emerge in the spring, and black berries may persist through the winter.
- In natural areas, cut the vines at the ground and again at eye level. Untwine the cutaway section, and leave the remainder above to dry out and die.



Oriental Bittersweet

Celastrus orbiculatus

- This twining vine can strangle and overtop tall trees, form dense thickets, and alter the structure of a forest.
- The glossy leaves have small teeth, and leaf tips are rounded, or may narrow to a point. Young vines have small white dots and very sharp buds. Older bark is rough and furrowed.
- In natural areas, cut the vines at the ground and again at eye level. Untwine the cutaway section, and leave the remainder above to dry out and die.



Bush Honeysuckle

Lonicera maackii, *L. morrowii*, *L. tartarica*

- This bush forms dense thickets, competes with native species for soil nutrients and casts dense shade from early spring to late fall, preventing the growth of species beneath.
- The bush honeysuckle's leaves grow opposite one another, and the bark looks like it has been scratched by a cat. Fragrant flowers emerge in the spring, and the multi-branched shrubs can reach 20 feet in height. Red berries persist through the fall into early winter.
- In natural areas, cut the plants close to the ground. In gardens, pull or dig up plants, removing all root fragments.



Multiflora Rose

Rosa multiflora

- This bush crowds out native vegetation, depletes soil nutrients, climbs trees, and displaces the native plants that provide food and shelter for birds and mammals.
- The toothed leaves of multiflora rose have bases that resemble eyelashes. Curved thorns, white flowers in early summer and red fruits in the fall are distinctive features.
- In natural areas, cut stems of the plants close to the ground and cut rooting tips. In gardens, pull or dig up plants, removing all root fragments.



vine: porcelainberry

Non-Invasive Shrubs

Amelanchier canadensis—Shadbush
Aronia arbutifolia—Red chokeberry
Calycanthus floridus—Carolina allspice
Camellia japonica—Japanese camellia
Clethra alnifolia—Sweet pepperbush
Cornus sericea—Red-osier dogwood
Corylus americana—Hazelnut
Daphne x burkwoodii—Burkwood daphne
Fothergilla gardenii—Dwarf fothergilla
Hamamelis spp.—Witch hazel
Hydrangea spp.—Hydrangea
Ilex glabra—Inkberry
Ilex verticillata—Common winterberry
Itea virginica—Virginia sweetspire
Physocarpus opulifolius—Ninebark
Prunus laurocerasus—Cherry laurel
Syringa meyeri—Meyer lilac
Vaccinium spp.—Blueberry
Viburnum dentatum—Arrowwood viburnum
Viburnum prunifolium—Blackhaw viburnum

Keep your garden invasives-free

Your garden is a place for beauty and enjoyment, and you can make a difference in protecting natural areas and wildlife habitat by choosing the right plants. Many non-invasive plants are available as alternatives for your use.

How to use this guide

Take this wallet guide with you to the nursery to help you make good choices. The lists should give you a start—but always be sure to ask if plants are known invaders, and avoid those that are or could be.



nature.org/maryland

Non-Invasive Trees

Asimina triloba—Paw Paw
Acer rubrum—Red maple
Amelanchier laevis—Serviceberry
Celtis occidentalis—Common hackberry
Cercis canadensis—Eastern redbud
Chamaecyparis spp.—Falsecypress
Chionanthus virginicus—Fringetree
Fagus sylvatica—American beech
Franklinia alatamaha—Franklinia
Halesia carolina—Carolina silverbell
Ilex opaca—American holly
Liquidambar styraciflua—Sweetgum
Magnolia grandiflora—Southern magnolia
Nyssa sylvatica—Black gum
Ostrya virginiana—Ironwood
Picea pungens—Colorado spruce
Platanus occidentalis—American sycamore
Quercus alba—White oak
Quercus palustris—Pin oak
Quercus phellos—Willow oak
Thuja occidentalis—Arborvitae

Recommended Landscape Alternatives to Invasive Plants of the Potomac River Watershed and Surrounding Region



wallet guide

Non-Invasive Vines

Aristolochia macrophylla—Dutchman's pipe
Bignonia capreolata—Crossvine
Campsis radicans—Trumpet creeper
Hydrangea anomala petiolaris—Climbing hydrangea
Lonicera sempervirens—Native honeysuckle
Parthenocissus quinquefolia—Virginia creeper
Wisteria frutescens—American wisteria

Non-Invasive Groundcovers

Aster ericoides—Heath aster
Athyrium filix-femina—Lady fern
Chrysogonum virginianum—Green-and-gold
Erica carnea—Spring heath
Juniperis horizontalis—Creeping juniper
Phlox stolonifera—Creeping phlox
Phlox subulata—Moss phlox
Rudbeckia fulgida 'Goldstrum'—Golden coneflower

Non-Invasive Perennials

Aster divaricatus—White wood aster
Baptisia australis—Blue false indigo
Coreopsis spp.—Tickseed
Echinacea purpurea—Eastern purple coneflower
Eupatorium spp.—Joe-pye weed
Heuchera spp.—Coralberry
Iris versicolor—Blue flag iris
Lobelia cardinalis—Cardinal flower
Monarda spp.—Beebalm
Rudbeckia hirta—Black-eyed Susan
Sedum 'Autumn Joy'—Stonecrop
Solidago spp.—Goldenrod
Tiarella spp.—Foamflower

Non-Invasive Grasses and Sedges

Calamagrostis x acutiflora 'Karl Foerster'—Feather reed grass
Carex albursina—White bear sedge
Carex pennsylvanica—Early sedge
Panicum virgatum—Switchgrass
Schizachyrium scoparium—Little bluestem

AVOID THESE INVADERS**Trees and Shrubs**

Acer platanoides—Norway maple
Acer pseudoplatanus—Sycamore maple
Ailanthus altissima—Tree of heaven
Bambusa—Exotic bamboo
Berberis thunbergii—Japanese barberry
Buddleia davidii—Butterfly bush
Eleagnus spp.—Autumn olive
Euonymus alatus—Burning bush
Ligustrum spp.—Privet
Lonicera spp.—Bush honeysuckle
Nandina domestica—Heavenly bamboo
Paulownia tomentosa—Empress tree
Phyllostachys aurea—Golden bamboo
Prunus subhirtella—Higan cherry
Pyrus calleryana—Callery pear
Quercus acutissima—Sawtooth oak
Spirea japonica—Japanese spirea
Ulmus parvifolia—Chinese elm
Viburnum dilatatum—Linden viburnum
Viburnum plicatum—Doublefile viburnum
Viburnum sieboldii—Siebold viburnum

AVOID THESE INVADERS**Grasses, Flowers, Vines, Groundcovers**

Akebia quinata—Five-leaved akebia
Celastrus orbiculatus—Bittersweet
Clematis terniflora—Sweet autumn clematis
Euonymus fortunei—Wintercreeper
Hedera helix—English ivy
Hemerocallis fulva—Common daylily
Iris pseudacorus—Yellow flag iris
Lonicera japonica—Japanese honeysuckle
Lythrum salicaria—Purple loosestrife
Miscanthus sinensis—Chinese silver grass
Pennisetum alopecuroides—Fountain grass
Ranunculus ficaria—Lesser celandine
Vinca spp.—Periwinkle
Wisteria sinensis/floribunda—Chinese/Japanese wisteria