



Produced by the Alliance for the Chesapeake Bay with support from the Chesapeake Bay Program  
February 2002

# Understanding Invasive Plants

## A Background Guide to Identifying Invasive Plants and Using Native Plants in the Home Landscape

**I**nvasives are by nature, persistent, troublesome, noxious pests that survive and thrive despite the odds.



*Purple Loosestrife*

### Prolific Invasives in the Chesapeake Bay Watershed

- ▲ Purple Loosestrife
- ▲ Mile-a-Minute Weed
- ▲ Japanese Knotweed
- ▲ Norway Maple
- ▲ Multiflora Rose
- ▲ Garlic Mustard
- ▲ Asiatic Bittersweet
- ▲ Tree-of-Heaven
- ▲ Kudzu
- ▲ Japanese Honeysuckle



*Norway Maple*

### What is an Invasive?

Invasive or exotic plants are defined as non-native to the area they occupy, lacking in natural predators and diseases that would otherwise control their growth. They tend to appear in disturbed ground and out-compete native species for available resources. They displace naturally occurring vegetation thus upsetting nature's balance and diversity. Invasive plants are undesirable because they are difficult to control, dominate large areas, easily escape from cultivation and destroy native plants that create local habitat for animal species.

Other names for these aggressive plant pests are exotic plants, alien, introduced, non-indigenous or non-native. While a few native species can become invasive, the majority were brought from Europe or Asia. Unchecked and freed of natural predators and disease existing in their native lands, they have the ability to overtake and transform entire ecosystems. Humans are the primary agents for the accidental or deliberate introduction of non-native plants.

Beneficial plants are those that require minimal maintenance because they are well adapted to local climate and soil. Native plants are always beneficial and are defined as a tree, plant, shrub, vine or ground cover that was present in an area before human inhabitants altered the landscape.

Not all non-natives are invasive but the ones that are have the ability to invade and take over native plant communities, forming monocultures and eradicating beneficial native plants through rapid growth habits. Natural areas need balance and diversity to thrive. The impact of invasive or non-native plants has become a challenging problem for preserving and restoring Chesapeake Bay watershed habitat.

### Why Are Invasives a Problem?

Invasive plants thrive on bare soil or recently disturbed ground. They are noxious environmental weed pests that spread and mature quickly producing numerous seeds that sprout easily. They thrive in many conditions, including high nutrient conditions. These non-native plants can be flowers, vines, grasses, shrubs or trees.

Homeowners may choose non-native plants for their landscaping without being aware of the problems non-natives cause when the plants escape into natural areas. Kudzu was originally imported for erosion control. Other non-natives were introduced for medicinal use, wildlife food, horticulture and forage crops.

Some cultivars of loosestrife can cross-pollinate with the invasive form and produce viable seed. More than 18 states have banned the sale of purple loosestrife. Invasives, such as loosestrife, mile-a-minute weed, garlic mustard and kudzu displace native plants and degrade wildlife habitat. Even when grown in home gardens as ornamentals, invasives can easily escape cultivation due to their aggressive nature to spread by root or ability to produce high quality seed. Many of the weed pest plants faced by homeowners today are escapees from gardens of the past.

## How You Can Help

- ▲ Learn about how to recognize what invasive species are common in your area.
- ▲ Avoid using known invasive plants.
- ▲ Minimize landscape disturbances and replant bare spots with native plants.
- ▲ Protect healthy native plant communities.
- ▲ Inspect your property, to keep invasives in check.
- ▲ Limit use of fertilizers.
- ▲ Eradicate invasives before they go to seed.
- ▲ Plant native plants in your yard.
- ▲ Encourage local nurseries to stock native species.

## Resources

*Maryland Native Plant Society*  
[www.mdflora.org](http://www.mdflora.org)

*The Nature Conservancy Wildland Invasive Species Program*  
[www.tncweeds.ucdavis.edu](http://www.tncweeds.ucdavis.edu)

*Weeds Gone Wild, Alien Invaders of Natural Areas*  
[www.nps.gov/plants/alien](http://www.nps.gov/plants/alien)

*Virginia Native Plant Society*  
[www.vnps.org](http://www.vnps.org)

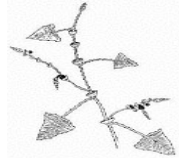
*Fact sheets on VA invasives*  
[www.dnr.state.va.us/dnh/invproj](http://www.dnr.state.va.us/dnh/invproj)

*US Fish and Wildlife Service*  
[www.fws.gov/r5cbfo/bslinks.htm](http://www.fws.gov/r5cbfo/bslinks.htm)

*Center for Biological Informatics*  
[www.invasivespecies.gov/](http://www.invasivespecies.gov/)

Plant diversity is important in a habitat to support a variety of animal species. Monocultures of single species over large expanses cannot sustain this kind of variety. Though they may seem attractive to the eye and not aggressive upon initial introduction into a backyard garden, invasive plants can spread quickly over time. Purple loosestrife with its beautiful flower and long flowering season made it very popular in landscaping. Introduced from Europe in the early 1800's, it has invaded and overtaken wetlands in each one of the continental U.S. states except Florida. A single mature plant can produce 2 million seeds; eradication is almost impossible once the plant is established in large colonies.

*Mile-a-Minute Vine*



*Japanese Knotweed*



## Management of Invasives

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Eradication of non-native species is a costly, daunting task. Most are difficult to control when established and require mowing, hand pulling, cutting, or digging. Some invasive plants are so prolific that only chemical control can effectively stop them. Large populations may need to be controlled by spot applications of herbicide. It is best to control these species before they begin to dominate an area.

Some of the most troublesome weeds are woody seedlings and vines. Mulches and preemergent herbicides are often ineffective on these species, and mulched beds often create an ideal environment for the establishment of many types of woody weeds. Hand weeding is often difficult and ineffective due to extensive root systems.

Walking the property and scouting the landscape several times a year will familiarize the landowner with its biodiversity and make spotting an invasion early. Quick response with a shovel, cutting or hand pulling may be enough for eradication. But constant vigilance is required once an invader has been located.

Invasives are by nature, persistent, troublesome, noxious pests that survive and thrive despite the odds. Where one invasive is removed, if the ground is left bare and not replanted, it may come right back. Replanting or filling in the empty spot with a native plant along with regular invasive scouting of the area will insure that native seed will be produced and a desirable plant population will be renewed.

Learning to differentiate and recognize local invasive trees and plants is a critical step in abetting their spread and aiding in their removal. Resources listed on the final page are just a few of the online sites that offer identification guides and photographs of non-natives within the Chesapeake Bay region.

## ***What are Native and Beneficial Plants?***

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Beneficial plants are plants that require minimal maintenance, such as trimming, watering, fertilizing, or treating for pests, because they are well adapted to local climate and soil types. Beneficial plants begin with native, or indigenous species. Many horticultural varieties and imported plants are also deemed beneficial if they have few maintenance requirements and are not invasive. In the Bay region, the primary habitats where native plants can be found include ancient forests, second-growth forests, wetlands, freshwater hardwood swamps, dunes, open meadows, mountain slopes and grasslands.

## ***How Do Native and Beneficial Plants Help the Bay?***

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As rain falls and snow melts, water carries nutrients and chemicals from our yards to storm drains, groundwater, streams and rivers with a final destination of the Chesapeake Bay. Because beneficial plants require little or no fertilizer and pesticides, their use reduces pollutants carried by rainwater. By planting beneficial plants at home, we can make a meaningful contribution to the restoration of local waterways and the Chesapeake Bay.

Beneficial plants also improve wildlife habitat. Since many beneficial plants are also native plants, local birds, mammals and other wildlife have come to depend upon them for fruits, nuts and seeds. These plant communities also provide breeding and nesting sites and have become especially important in the Bay watershed, where each day more natural areas are destroyed to make room for development.

## ***Why Should I Use Native Plants in my Home Landscape?***

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Making a long-term plan to introduce beneficial species in your landscape will benefit the natural world, decrease landscaping tasks and improve both habitat and water quality in the areas surrounding your home. Choosing native, perennial plants over annuals will save plant dollars over the long term while improving home value and supporting the further efforts of native plant nurseries. While annuals offer seasonal texture and color change, they must be replanted each year. Perennials can provide a similar mix of color and shape but need only be planted once. Many native perennials spread quickly. Once established, they shade out most weeds and require minimal water or maintenance. By using native plants, a home gardener will conserve water, save money and establish a diverse landscape beneficial to wildlife.

## ***What You Can Do***

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- ▲ Use native plants indigenous to your region for home and garden landscaping. The majority of invasive plants in the Chesapeake Bay watershed are not native to North America. Planting regional natives makes sense because indigenous species continue to lose ground to land development and to non-native plants used horticulturally.
- ▲ Use plants native to North America. Less than 3% of woody invasives were introduced from parts of North America.