

# Fighting Invasive Plants in Ohio

For more information, contact:



**Ohio Department of Natural Resources  
Division of Natural Areas & Preserves**

2045 Morse Road, Bldg. F-1  
Columbus, OH 43229-6693  
(614) 265-6453  
[www.ohiodnr.com/dnap](http://www.ohiodnr.com/dnap)

*The Nature  
Conservancy* 

6375 Riverside Drive  
Dublin, OH 43017  
(614) 717-2770  
[www.nature.org](http://www.nature.org)

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## Ohio's Most Invasive Plants

This brochure describes 10 of the most invasive non-native plant species in Ohio with information about their appearance, habitat, possible controls, and native species which can be used as alternatives in garden or wildlife plantings.

# What are Invasive Plants?

Of the approximately 2,300 species of plants known to occur in the wild in Ohio, about 78 percent are native or they occurred in Ohio before the time of substantial European settlement, about 1750. The other 22 percent, more than 500 species, are not native to Ohio, having been introduced from other states or countries.

Non-native plants have been introduced for erosion control, horticulture, forage crops, medicinal use, and wildlife foods as well as by accident. Most of these species never stray far from where they are introduced (gardens, urban areas, agricultural fields), yet some become very invasive and displace native plants in woodlands, wetlands, prairies, and other natural areas.

Many plants considered non-native, alien, or exotic are popular, aesthetically pleasing species. It is important to look beyond these traits – consider how these plants “act” in the landscape. Sometimes we plant invasive non-native plants for landscaping or wildlife habitat without realizing the problems they may cause when they escape into natural areas.

Without natural controls, invasive non-native plants are able to spread quickly. In some Ohio wetlands, large plots of a single invasive plant species have crowded out areas that were once filled with a wide variety of important native plants. In Ohio’s woods, native spring wildflowers are quickly replaced by garlic mustard and invasive bush honeysuckle species. A diverse, healthy ecosystem is important for clean air and water, soil stability, buffer, and food and shelter for wildlife.

This brochure describes 10 of the most invasive non-native plant species in Ohio with information about their appearance, habitat, possible controls, and native species which can be used as alternatives in garden or wildlife plantings. Managing these invasive species can be challenging; be sure to obtain more detailed information before using controls, such as herbicides.



# Autumn-olive

*Elaeagnus umbellata*

## DESCRIPTION

Autumn-olive is a fast-growing shrub or small tree reaching up to 20 feet tall. Its leaves are small and oval, dark green on the upper surface and silvery below. Small coppery dots occur on stems and leaves. This shrub has light yellow, aromatic flowers and produces large quantities of small, round red fruits that are readily eaten and spread by birds.

## HABITAT

Autumn-olive can survive in very poor soils because of its nitrogen-fixing root nodules. It grows in disturbed areas, roadsides, pastures, and fields throughout Ohio.

## MANAGEMENT

Stems may be cut and treated with systemic herbicide. Resprouting will occur, so follow-up control is necessary. A combination of hand-pulling, digging, and herbicide treatments is usually necessary.

## NATIVE ALTERNATIVES

Black haw (*Viburnum prunifolium*), dogwoods (*Cornus racemosa*, *C. amomum*), paw-paw (*Asimina triloba*), and spicebush (*Lindera benzoin*)



## WHAT YOU CAN DO TO HELP

Be careful not to gather and transport unidentified seeds which may spread invasive plants.



# Bush Honeysuckles

*Lonicera maackii*, *L. tatarica*,  
*L. morrowii*, Amur, Tatarian,  
Morrow honeysuckle

## DESCRIPTION

These upright shrubs can grow 6-15 feet in height. Each have dark green, egg-shaped leaves. The tubular flowers are white on the Amur and the Morrow (changing to yellow with age), and pink on the Tatarian honeysuckle. Berries range from red to orange, occasionally yellow, and are eaten and dispersed by birds.

## HABITAT

The bush honeysuckles inhabit abandoned fields, roadsides, woodlands, and edges of marshes. Morrow is currently a problem in northern Ohio, Amur is found mostly in southwest Ohio, and Tatarian is widespread in Ohio.

## MANAGEMENT

The best control method is to cut and treat stumps with systemic herbicide. Sprouts from cut stems may be treated with a foliar application of systemic herbicide. Young shrubs are easy to pull or dig up. Be aware there is a native bush honeysuckle (*Diervilla lonicera*) in Ohio.

## NATIVE ALTERNATIVES

Nine-bark (*Physocarpus opulifolius*), dogwoods (*Cornus racemosa*, *C. amomum*), northern arrowwood (*Viburnum dentatum*), winterberry (*Ilex verticillata*), chokeberry (*Aronia prunifolia*, *A. melanocarpa*), and spicebush (*Lindera benzoin*)



## WHAT YOU CAN DO TO HELP

Avoid disturbance to natural areas, including clearing of native plants and dumping of yard wastes.



# Buckthorns

*Rhamnus frangula*  
Glossy (or Shining)

*R. cathartica*  
European (or Common)  
buckthorn

## DESCRIPTION

Buckthorns are tall shrubs or small trees that grow up to 20 feet tall. The smooth, gray to brown bark is distinctively spotted. Glossy buckthorn has shiny leaves with smooth edges. It has solitary red to purple berry-like fruits. European buckthorn has black fruits and dull green smooth leaves. Both species are abundant seed producers.

## HABITAT

Glossy buckthorn usually occurs in wetlands, such as fens or bogs. European buckthorn generally occurs in a range of upland habitats, such as forests, woodland edges, fencerows, prairies, and old fields. It is not uncommon to see both species sharing the same habitat. Buckthorns are most prevalent in central and northern Ohio.

## MANAGEMENT

Cutting and treating stumps or spraying foliage with a systemic herbicide is the best method of control. Buckthorns are very difficult to control due to vigorous resprouting and a large seedbank.



## NATIVE ALTERNATIVES

Winterberry (*Ilex verticillata*), dogwoods (*Cornus racemosa*, *C. amomum*), white cedar (*Thuja occidentalis*), and Carolina buckthorn (*Rhamnus caroliniana*)

## WHAT YOU CAN DO TO HELP

Plant native or non-invasive plants in your yard and garden.



# Common Reed Grass

*Phragmites australis*

## DESCRIPTION

Common reed, or Phragmites, is a grass that reaches up to 15 feet in height. The leaves are smooth, stiff and wide with coarse hollow stems. The big, plume-like flower head is grayish-purple when in fruit. It can form huge colonies and usually spreads by sprouting new shoots through underground stems (*rhizomes*).

## HABITAT

Common reed grass grows in open wetland habitats and ditches. It occurs in still water areas of marshes, lake shores, riverbanks, and disturbed or polluted soils, often creating pure stands. It is possible that both native and non-native strains occur. Generally, invasive populations are non-native but it may be difficult to tell the two apart.

## MANAGEMENT

Long-term management is necessary for control of this persistent plant. Cutting and treating stems with systemic herbicides is generally the most effective method. Grass-specific herbicides are recommended in areas where native plants occur.

## NATIVE ALTERNATIVES

Indian grass (*Sorghastrum nutans*), big bluestem (*Andropogon gerardii*), prairie cord grass (*Spartina pectinata*), and Canada bluejoint (*Calamagrostis canadensis*)



## WHAT YOU CAN DO TO HELP

Read the label! Be careful when planting seed mixes. Non-native invasive species may be in the mix.



# Garlic Mustard

*Alliaria petiolata*

## DESCRIPTION

Garlic mustard is a biennial herb; it grows as a rosette of leaves in the first year and overwinters in this form. Its lifecycle ends in the second year when it flowers and sets fruits. First-year rosettes consist of kidney-shaped, garlic-smelling leaves; the second-year plant can grow multiple stems up to 4 feet tall with triangular, sharply-toothed leaves. The small, four-petaled flowers are white and grow in clusters at the top of the stem. Garlic mustard produces large quantities of seeds which can remain viable for seven years or more.

## HABITAT

This woodland plant prefers some shade but is occasionally found in full sun. It invades upland and floodplain forests, savannas, yards, streams, trails, and roadsides throughout Ohio.

## MANAGEMENT

Repeated prescribed burns in oak forests may be effective. Light infestations of garlic mustard can be hand-pulled before or at flowering time. Plants should be removed from the site after pulling as the seeds may continue to mature. Systemic herbicides can be applied to the rosettes in early spring or late fall.

## NATIVE ALTERNATIVES

White baneberry (*Actaea pachypoda*), columbine (*Aquilegia canadensis*), blue phlox (*Phlox divaricata*), and black cohosh (*Cimicifuga racemosa*)



## WHAT YOU CAN DO TO HELP

Remove invasive plants from your property.

# Japanese Honeysuckle

*Lonicera japonica*

## DESCRIPTION

Japanese honeysuckle is a woody semi-evergreen vine with opposite, oval leaves. The flowers grow in pairs, are white to yellow, and very fragrant. Fruits, also in pairs, are purple to black berries. This vine climbs and drapes over native vegetation, forming dense patches.

## HABITAT

Japanese honeysuckle thrives in disturbed habitats, such as roadsides, trails, fencerows, abandoned fields, and forest edges. Disturbances, such as logging, road building, floods, and windstorms, create an opportunity for this vine to invade native plant communities.

## MANAGEMENT

Burning in combination with systemic herbicide application may be an effective control method. Herbicides can be applied to the leaves when native plants are dormant. Be aware there are native climbing honeysuckles in Ohio, such as wild honeysuckle (*Lonicera dioica*).

## NATIVE ALTERNATIVES

Virginia creeper (*Parthenocissus quinquefolia*), wild honeysuckle (*Lonicera dioica*), and virgin's bower (*Clematis virginiana*)



## WHAT YOU CAN DO TO HELP

Spread the word about the threats of invasive plants in Ohio and the benefits provided by native plant communities.



# Japanese Knotweed

*Polygonum cuspidatum*

## DESCRIPTION

This shrub-like herb grows up to 10 feet tall. Stems are smooth and the pointed leaves vary from broadly oval to almost triangular. Flowers are greenish-white and very small. The seeds are dispersed by wind. Once established, the plants spread by a system of underground stems reaching 60 feet.

## HABITAT

Japanese knotweed can grow in a wide variety of habitats. It is found in open areas, such as roadsides, streambanks, and woodland edges. It spreads quickly and forms dense thickets.

## MANAGEMENT

Knotweed is very difficult to control. Leaves may be sprayed or stems cut and treated with systemic herbicide.

## NATIVE ALTERNATIVES

Northern arrowwood (*Viburnum dentatum*), black haw (*Viburnum prunifolium*), dogwoods (*Cornus racemosa*, *C. amomum*), and chokeberry (*Aronia prunifolia*, *A. melanocarpa*)



## WHAT YOU CAN DO TO HELP

Familiarize yourself with the invasive plants in your area.



# Multiflora Rose

*Rosa multiflora*

## DESCRIPTION

Multiflora rose is a dense spreading shrub with widely arching canes and stiff, curved thorns. This shrub grows up to 15 feet tall with alternate, compound leaves of 7-9 oval leaflets. Multiflora rose has numerous white flowers that produce clusters of small, red fruits. The fruits (called hips) are eaten by birds and mammals which help disperse the seeds. An individual plant can produce up to 500,000 seeds per year.

## HABITAT

Multiflora rose was formerly planted as a “living fence” to control livestock, stabilize soil, and create barriers for roadways. It also has been planted as a wildlife cover and food source. This rose occurs in a wide range of habitats throughout Ohio, but prefers sunny areas with well-drained soils.

## MANAGEMENT

A long-term management program of mowing or cutting and treating stems with systemic herbicide several times during the growing season is recommended. Digging or hand-pulling small shrubs also may be effective.

## NATIVE ALTERNATIVES

Pasture rose (*Rosa carolina*), swamp rose (*Rosa palustris*), steeple bush (*Spiraea tomentosa*), meadowsweet (*Spiraea alba*), and prairie rose (*Rosa setigera*)



## WHAT YOU CAN DO TO HELP

Volunteer with your local land managing agency (parks, nature preserves, etc.).



# Purple Loosestrife

*Lythrum salicaria*

## DESCRIPTION

This popular garden flower grows 3-7 feet tall and has a dense bushy growth of one to 50 stems. Long spikes of flowers are purple to magenta, and linear-shaped leaves grow opposite along the square stems. Purple loosestrife spreads aggressively by underground stems (*rhizomes*) and can produce as much as a million seeds per plant. *Lythrum virgatum*, a popular horticultural variety, was initially thought to be unable to produce seeds. Research has shown that it can cross-pollinate with *Lythrum salicaria* and produce viable seeds of invasive loosestrife.

## HABITAT

Purple loosestrife grows in a variety of wetland habitats including marshes, river banks, ditches, wet meadows, and edges of water bodies. Loosestrife can invade both natural and disturbed wetlands, replacing native vegetation with nearly pure stands of loosestrife.



## MANAGEMENT

Small stands of purple loosestrife can be controlled by hand-pulling, digging, or applying systemic herbicides to the foliage. Herbicides may be used to control large populations. Biological controls using beetles and weevils are being used by some agencies in Ohio and other states.

## NATIVE ALTERNATIVES

Spiked blazing-star (*Liatris spicata*), blue lobelia (*Lobelia siphilitica*), cardinal flower (*Lobelia cardinalis*), rose mallow (*Hibiscus moscheutos*), and blue flag iris (*Iris versicolor*)



## WHAT YOU CAN DO TO HELP

Encourage nurseries to avoid invasive non-native plants and stock alternative native or non-invasive plant species.



# Reed Canary Grass

*Phalaris arundinacea*

## DESCRIPTION

This large, coarse grass reaches 2-5 feet tall. The hairless stems gradually taper to flat and rough leaf blades 3-10 inches long. The flowers occur in dense clusters and are green to purple, changing to beige and becoming more open over time. The plant spreads aggressively both by seed and by forming a thick system of underground stems (*rhizomes*).

## HABITAT

This grass occurs in wetlands, such as marshes, wet prairies, meadows, fens, stream banks, and seasonally wet areas throughout Ohio. Reed canary grass has been planted widely for forage and erosion control. It is possible that both native and non-native strains occur together, but introduced strains are thought to be more invasive. It may be difficult to tell the two apart.



## MANAGEMENT

A combination of burning or mowing with systemic herbicides is the best method of control; grass-specific herbicides applied with wick applicators are recommended in areas where native plants occur.

## NATIVE ALTERNATIVES

Prairie cord grass (*Spartina pectinata*), Canada bluejoint (*Calamagrostis canadensis*), and Indian grass (*Sorghastrum nutans*)



## WHAT YOU CAN DO TO HELP

Start early! Early detection and control makes eradication efforts much easier.