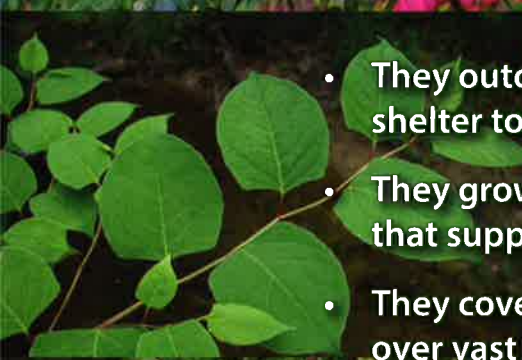
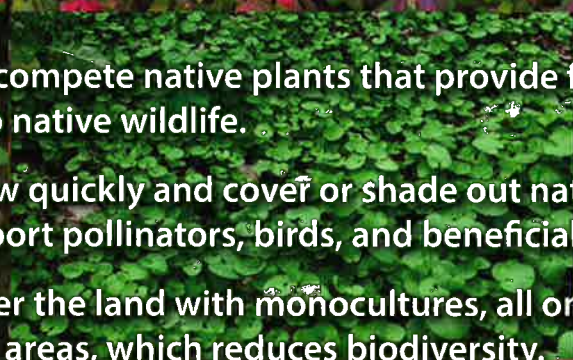





JOIN THE WAR ON INVASIVE WEEDS!

Invasive plants threaten to take over
our yards, parks, forests, and fields.

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- They outcompete native plants that provide food and shelter to native wildlife.
 - They grow quickly and cover or shade out native plants that support pollinators, birds, and beneficial insects.
 - They cover the land with monocultures, all one species over vast areas, which reduces biodiversity.
 - They can block streams and cause flooding, and are expensive and difficult to control once established.
 - Because most invaders come from distant lands, there are no indigenous insects or diseases to hinder their growth.



Inside:
Meet the 10 Most (un)Wanted
Learn how to identify and control them
Month-to-month control schedules
4 ways to win the war on invaders



THE 10 MOST (UN)WANTED

Be on the lookout for these 10 most problematic plant invaders in Northeast Ohio. If you have them or encourage them to fight the invaders. Report the location with the Early Detection system, or contact

GARLIC MUSTARD (*Alliaria petiolata*)



Garlic mustard grows in shady areas like forests, or along roadsides and fencerows. Its crushed leaves smell like garlic. A biennial, in its first year it produces a rosette of kidney shaped leaves near the ground, which stay green through the winter. The next year, stalks grow 2-4 feet tall, with sharply toothed triangular leaves and small white flowers. Fruits are long green capsules that turn brown and split to release seeds.

Control: Focus efforts on preventing plants from producing seeds. Pull second-year plants by hand, disposing in sealed bags. First-year plants and second-year plants that haven't yet flowered can be sprayed with herbicide. Treatment must be repeated for several years until the seedbank is depleted.

HYBRID CATTAIL (*Typha x. glauca*) and NARROW LEAVED CATTAIL (*Typha angustifolia*)



(this one's invasive)

These invasive cattails can get 10 feet tall, and grow in wetlands, along roadsides, and in ditches. To tell an invader from a native cattail, look at the place where the top and bottom halves of the inflorescence meet. If the two parts are separated on the stem, it's an invasive cattail. If there is no separation, it's a native broadleaf cattail.

Control: Foliar spray with herbicides approved for aquatic systems is an effective method, BUT surrounding vegetation will be harmed by overspray. Small infestations can be controlled by cutting each stalk above water level and applying herbicide to the cut. Manipulating water levels can disrupt airflow from shoots to roots. Burning and cutting don't work.



(this one's native)

REED CANARY GRASS (*Phalaris arundinacea*)



Reed Canary Grass is a large coarse grass that can be confused with many other grasses. It grows from 2 to 7 feet tall with hairless stems and rough tapered leaves. The best identifying characteristic is the translucent ligule (a thin outgrowth at the junction of leaf and stalk) with a smooth margin. Flowers appear in mid-June with dense clusters of green changing to purple, then beige. It grows mostly in moist organic soil in full sun, though it can also grow in dry upland soil in partial shade.

Control: Foliar spray with herbicides approved for aquatic systems is the most effective method. Hand pulling is only effective on isolated plants, and the entire root system must be dug out. Repeated mowing or cutting may weaken a population, reducing the amount of herbicide needed to kill it.

EURASIAN HONEYSUCKLE (*Lonicera* sp.)



Eurasian Honeysuckles are upright, deciduous shrubs that grow from 6 to 15 feet high and can be confused with native honeysuckles. Tubular flowers grow in pairs in early to late spring, and berries mature from late summer through fall.

The stems of older invasive honeysuckles are hollow and pithy. Native species' stems are solid.

Control: Selective herbicide application to foliage works when temperatures are above 65 degrees, and before seeds disperse in late summer/early fall. Well-established stands can be managed by cutting the stems to ground level and painting or spraying the stumps with herbicide.

GLOSSY BUCKTHORN (*Rhamnus frangula*)



Glossy Buckthorn is a woody shrub or small tree that can grow to 20 feet. Bark is grayish-brown with light speckles shaped like an equals sign. Small creamy greenish flowers come in early spring, with dark purple fruits ripening summer to fall. The inner bark is yellow. The shrubs grow in dense thickets, shading out native plants and reducing wildlife habitat.

Control: Small plants can be hand-pulled if the whole root can be removed. Cutting or mowing just creates resprouting. Selective herbicide is most effective, applied to foliage during the growing season or to cut stems in the dormant season. Killing a large buckthorn stimulates dormant seeds to sprout, so follow-up control is a must.

on your property, get rid of them! If you see them elsewhere, notify the property owner and the nearest park system naturalists to alert them to potential invasions.

COMMON REED (*Phragmites australis*)



Phragmites is a tall grass with bushy purple or golden flower heads on stiff, hollow stalks up to 10 feet tall. It grows in wetlands and along the edges of rivers, and almost any disturbed wet areas, including roadsides. It can quickly crowd out native plants, blocking their light. It spreads by rhizomes that spread along the surface, and by seed dispersal.

Control: Cutting, pulling, or mowing in late July, especially if cutting is below the water surface, is effective but must be repeated annually. Herbicide works best in late summer or early fall, after tassels get fuzzy, must be repeated annually, and care must be taken not to contaminate the water.

JAPANESE KNOTWEED (*Polygonum cuspidatum*)



Japanese Knotweed is an aggressive invader, growing in dense thickets over 10 feet high and often spreading when pieces of rhizome are washed downstream or carried in fill dirt or yard waste. Its hollow, bamboo-like stems are green with reddish nodes. Small, white, winged fruits follow tiny greenish-white flowers.

Control: Digging is only appropriate for small patches when all material below ground can be removed in plastic bags for proper disposal, never with yard waste to be recycled. Repeated cutting or mowing works well. Herbicide can be sprayed onto leaves, injected into stem or painted onto cut stems.

LESSER CELANDINE (*Ranunculus ficaria*)



Lesser Celandine, also called Fig Buttercup, spreads across the ground in light green mats in late winter, dying back by early summer. Yellow flowers have 8-12 petals. It is most common in moist forested floodplains but is also seen in drier uplands with sandy soils. It is easily confused with marsh marigold, whose flowers have only 5-9 petals and grow on 8" tall stalks. Caution should be taken not to eliminate the marsh marigold by mistake.

Control: Small areas can be dug up if you can remove all bulblets and tubers and dispose of properly where they cannot reproduce. For large infestations, systemic herbicides applied in early spring (March-April) before flowering are recommended so as not to kill beneficial species.

WINGED BURNING BUSH (*Euonymus alata*)



Burning Bush is widely sold as an ornamental shrub for its red autumn foliage and salt-tolerance, but it spreads quickly and shades out native plants.

Its green branches have prominent brown "wings", and its red-orange fruits appearing in summer turn purple in fall.

Control: Can be hand-pulled or dug out. Herbicides are effective on foliage, and, if cut, stumps should be painted with herbicide immediately after cutting.

TREATMENT - IT'S ABOUT TIMING!

JANUARY

All month: Garlic Mustard - spray rosettes
All month: Woody shrubs, trees - cut stump and treat; basal bark treatment on small trees, shrubs

FEBRUARY

All month: Garlic Mustard - spray rosettes
All month: Woody shrubs, trees - cut stump and treat; basal bark treatment on small trees, shrubs

MARCH

All month: Garlic Mustard - spray rosettes
Start mid-month: Lesser Celandine - treat

APRIL

All month: Garlic Mustard - spray rosettes through mid-month, hand pull through rest of month
All month: Lesser Celandine - treat

MAY

First few weeks: Lesser Celandine - treat
All month: Garlic Mustard - hand pull
All month: Reed Canary Grass - treat all month
Start mid-month: Woody invasives - foliar spray

JUNE

First week: Garlic Mustard - hand pull
All month: Reed Canary Grass - treat
All month: Cattails - foliar spray, cut stump or wick
All month: Woody invasives - foliar spray, cut stump, basal bark treatment
Start mid-month: Japanese Knotweed - treat

JULY

First two weeks: Reed Canary Grass - treat
All month: Japanese Knotweed - treat
All month: Cattails - foliar spray, cut stump or wick
All month: Woody invasives - foliar spray, cut stump, basal bark treatment

AUGUST

First two weeks: Phragmites - treat
All month: Japanese Knotweed - treat
All month: Cattails - foliar spray, cut stump or wick
All month: Woody invasives - foliar spray, cut stump, basal bark treatment

SEPTEMBER

First two weeks: Japanese Knotweed - treat
All month: Cattails - foliar spray, cut stump or wick
All month: Woody invasives - foliar spray, cut stump, basal bark treatment
All month: Phragmites - treat
Last two weeks: Reed Canary Grass - treat

OCTOBER

First two weeks: Cattails - treat
All month: Reed Canary Grass - treat
All month: Woody invasives - foliar spray, cut stump, basal bark treatment
All month: Phragmites - treat

NOVEMBER

All month: Reed Canary Grass - treat
All month: Woody invasives - foliar spray, cut stump, basal bark treatment
Last two weeks: Garlic Mustard - spray rosettes

DECEMBER

All month: Garlic Mustard - spray rosettes
All month: Woody invasives - foliar spray, cut stump, basal bark treatment

4 Steps to Winning the War

1 • PREVENT

Many invasive species are still sold at garden centers. Resist the urge to use them in your landscaping. Buy and plant natives instead.

If you do have invasive plants, keep them from spreading. If you dig them up or cut them down, dispose of all parts, especially roots, rhizomes, and seeds, in closed bags and don't include in recycled yard waste or compost.

2 • DETECT

Learn to identify invasive plants – not only the top ten – both terrestrial and aquatic invaders. Some invasives look a lot like native versions of the same plant. Learn how to tell the difference.

Be familiar with how to identify GPS site coordinates.

3 • REPORT

If you see invasive species, report what you see, and where you see it, to the EDDMapS system, to the property owner, or to the nearest natural resource organization. That could be a watershed group, a park system, a county extension service, or a municipal grounds department.

4 • CONTROL

Control can be mechanical, like cutting, mowing, or covering the plant to starve it of light.

Sometimes the most effective control method is to apply a systemic herbicide, and a surfactant to make the herbicide stick, to the foliage or to cut stumps or the bark of woody plants or trees.

Careful application, following all laws and label restrictions, is essential. For large infestations, it is best to leave control to certified application professionals.

Limit the application as much as possible to the specific plants you are controlling. In small areas, or where there are beneficial or native plants nearby, swabbing or painting the herbicide on the plant is better than spraying.

Use an aquatic-safe formulation if applying in a wetland or near water.

Learn more at crcwma.org

Early detection helps to limit the spread of invasives



EDDMapS is the Early Detection and Distribution Mapping System that makes it easy to identify and report locations of invasive species.

This allows a network of professionals to verify sightings, and natural resource managers to be notified to take appropriate management actions.

You can be an important part of the work to limit the spread of invasive plants.

Go to <https://www.eddmaps.org/midwest/> and register. You can access species information and photos of dozens of invasive plants.

Get the Great Lakes Early Detection Network EDDMapS app for your smartphone and report what you see when you see it!

Download the iPhone app from the App Store, or get the Android app on Google play.

Then, use the website and/or smartphone app to report sightings.



Crooked River Cooperative Weed Management Area

a regional partnership working to control invasive plants and support native plant communities in the Cuyahoga River watershed.



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