Plants and animals that are introduced in places where they are not native. They become a nuisance because they spread quickly and cause harm to our environment, economy, or human health.

**ASIAN BUSH HONEYSUCKLE** *(Lonicera spp.)*

Asian bush honeysuckle is widespread through Indiana and is one of the biggest threats to Indiana forests. It is a fast-growing woody shrub, with fragrant flowers and bright red berries in the fall. The shrub is highly aggressive and invades the understories of our forests, preventing new trees from sprouting. This shrub forms dense stands and can lead to the destruction of our forests over time. The berries have little nutritional value to wildlife. Nonetheless, birds and other animals eat the berries which spread the seeds throughout Indiana.

*FOR MORE INFORMATION, VISIT: OURWATERWAYS.ORG/INVASIVES*
HOW DO I REMOVE ASIAN BUSH HONEYSUCKLE?

CUT-STUMP METHOD
Large Honeysuckle is difficult to manage and the preferred method of control is the “cut-stump” treatment method. This includes a combination of cutting down the plant and safely treating the stump with herbicide. Continue to monitor the plant for regrowth.

PULLING METHOD
Asian Bush Honeysuckle has relatively shallow roots, so small sapling shrubs can often be pulled up easily. These small, hand-pulled shrubs must be removed from the landscape because they can re-root if left in contact with the soil.

NATIVE PLANT ALTERNATIVES

NANNYBERRY
(Viburnum lentago)
Growth Type: Deciduous Shrub
Height: 14 to 16 feet
Spread: 6 to 12 feet
Bloom Time: May; small white flower
Fruit: Showy, edible
Light exposure: Full sun to part shade
Tolerates: Air Pollution

NINEBARK
(Physocarpus opulifolius)
Growth Type: Deciduous shrub
Height: 5 to 8 feet
Spread: 4 to 6 feet
Bloom Time: May to June; white or pink
Light exposure: Full sun to part shade
Attracts: Birds, Butterflies
Tolerates: Drought, erosion
BRADFORD PEAR TREES (Pyrus calleryana)

Bradford Pears are popular and commonly planted landscaping trees in Indianapolis, known for their white blossoms in the spring. It has adapted to be a fast growing and quickly reproducing tree that out-competes native plants and takes over prairies and roadsides. Bradford Pears provide little value to wildlife, and are eaten and spread by birds. The hybrid offspring of the trees often have thorns and are a general nuisance to homeowners and land managers alike.

FOR MORE INFORMATION, VISIT: OURWATERWAYS.ORG/INVASIVES
HOW DO I REMOVE BRADFORD PEAR TREES?

CUTTING METHOD
Depending on the age of the tree, you may need to hire a tree removal service. A fully grown Bradford Pear will typically cost $500 to $1000 for a professional removal. Younger trees can be cut (5 inches above ground), and have the root system dug out.

GIRDLE METHOD
Use a small hatchet and remove an entire ring of bark around the tree. Make the cut at least 1½ an inch deep. This will stop the flow nutrients to the rest of the three and slowly kill it.

NATIVE PLANT ALTERNATIVES

SERVICEBERRY
(Amelanchier laevis)

- Growth Type: Deciduous Tree
- Height: 15 to 40 feet
- Spread: 15 to 40 feet
- Bloom Time: April
- Fruit: Showy, Edible
- Light exposure: Full sun to part shade
- Attracts: Birds

FLOWERING DOGWOOD
(Cornus florida)

- Growth Type: Deciduous Tree
- Height: 15 to 30 feet
- Spread: 15 to 30 feet
- Bloom Time: April-May; showy white flower
- Light exposure: Full sun to part shade
- Attracts: Birds, Butterflies

HOW DO I REMOVE BRADFORD PEAR TREES?
BURNING BUSH (Euonymus alatus)

Burning bush is a popular and widely sold woody shrub, known for its bright red foliage in the fall. Unfortunately, the burning bush regularly escapes yards and invades the understory of our forests. Due to its leaves appearing early in the spring and staying on long into the fall, it out-competes native understory trees and shrubs. This bush offers little food or habitat to our native insects and birds.

HARMFUL INVASIVE SPECIES FOUND IN CENTRAL INDIANA

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FOR MORE INFORMATION, VISIT: OURWATERWAYS.ORG/INVASIVES
HOW DO I REMOVE BURNING BUSH?

CUTTING METHOD
For larger Burning Bush plants, cutting the bush with a saw or axe near the ground will be necessary. You may need to apply herbicide to the cut stump. When using herbicide, always read the label and wear protective eyewear, gloves, and clothing. Treat the plant early in the summer.

PULLING METHOD
Small seedlings and shrubs that can be removed by pulling plant and roots up by hand. Use a spade, weed wrench, or sharp shovel to remove the main root system to manage a small infestation.

NATIVE PLANT ALTERNATIVES

FRAGRANT SUMAC
(Rhus aromatica)
- Growth Type: Deciduous shrub
- Height: 2 to 6 feet
- Spread: 6 to 10 feet
- Bloom Time: April; showy yellow bloom
- Fruit: Showy
- Light exposure: Full sun to part shade
- Attracts: Birds, Butterflies

NINEBARK
(Physocarpus opulifolius)
- Growth Type: Deciduous shrub
- Height: 5 to 8 feet
- Spread: 4 to 6 feet
- Bloom Time: May to June; white or pink
- Light exposure: Full sun to part shade
- Attracts: Birds, Butterflies
- Tolerates: Drought, erosion
ENGLISH IVY (Hedera helix)

This is an evergreen vine with dark green waxy leaves. It is still commonly sold in nurseries and is used as groundcover in landscaping. This shade-loving vine is highly successful at escaping our yards and forming dense carpets across our forest floors that block the growth of almost all other plants. This vine can only produce fruit when climbing trees which causes significant damage to the trees in the process.
HOW DO I REMOVE ENGLISH IVY?

PULLING METHOD
In areas with many native plant species, hand removal will be the best method of removal. The best seasons for removing English Ivy are fall or winter when the vine can be easily identified and plants are not seeding or are dormant.

CUTTING METHOD
For larger infestations of English Ivy that has spread to trees, use a cutting method. Use a saw or clippers to cut the ivy around the base of the tree, this will cause all of the ivy on the tree to dry out, die, and fall off. Do not pull off vines for this may damage the tree.

NATIVE PLANT ALTERNATIVES

**VASEVINE**
*(Clematis viorna)*

- Growth Type: Vine
- Height: 10 to 12 feet
- Spread: 3 to 6 feet
- Bloom Time: June-August
- Light exposure: Full sun to part shade
- Attracts: Butterflies

**GROUNDNUT**
*(Apios americana)*

- Growth Type: Vine
- Height: 0 to 4 feet
- Spread: 0 to 1 feet
- Bloom Time: July to September; showy pink, red, or purple flower
- Light exposure: Part to full shade
- Attracts: Butterflies
GARLIC MUSTARD (Alliaria petiolata)

Garlic mustard has a two-year life cycle. In its first year, the plant appears as a low cluster of green leaves in a circular pattern. In its second year, the plant flowers and produces many seeds that invade our shaded backyards and woodlands where it out-competes the native vegetation that serves as important food sources for our native bees and other insects. The plant is highly successful at spreading and likes area where the ground has been disturbed so you might see this plant after you remove other invasive species.
HOW DO I REMOVE GARLIC MUSTARD?

PULLING METHOD
Garlic Mustard can be usually be pulled out. Grab the base of the plant, twist, and pull. Try to remove all of the main root system (maybe use a spade) and put any plants in a bag to stop seed dispersal. Garlic Mustard can continue to sprout for 2-5 years, so monitor for regrowth.

CUTTING/MOWING METHOD
If the Garlic Mustard infestation in your yard is too large to remove by hand, consider using the cutting/mowing method. Do this before the flowers have opened to stop the spread of seeds. Continue to monitor and cut the plant to stop regrowth.

NATIVE PLANT ALTERNATIVES

WILD GINGER
(Asarum canadense)

Growth Type: Herbaceous Perennial
Height: ½ to 1 feet
Spread: 1 to 1 ½ feet
Bloom Time: April-May; purplish brown
Light exposure: Part to full Shade
Tolerates: Heavy Shade

COLUMBINE
(Aquilegia canadensis)

Growth Type: Herbaceous Perennial
Height: 2 to 3 feet
Spread: 1 to 1.5 feet
Bloom Time: April-May; red and yellow
Light exposure: Full sun to part shade
Tolerates: Rabbit, deer, drought
Japanese barberry is widely planted for landscaping and hedges. This shrub is rapidly spread by birds that eat the berries thus dispersing the seeds. A perennial shrub, the small leaves vary in color from green to deep red with yellow, umbrella-shaped flowers and small, bright red, egg-shaped fruit. Barberry infestations present a health hazard by significantly increasing tick populations and tick-borne illnesses.

FOR MORE INFORMATION, VISIT: OURWATERWAYS.ORG/INVASIVES
HOW DO I REMOVE JAPANESE BARBERRY?

**CUTTING METHOD**
Using clippers, cut the plant close to the ground. Apply herbicide to the cut stems or use a shovel to remove the root ball. Use care when cutting and removing this plant as the needle-like spines will even go through leather gloves.

**PULLING METHOD**
Only the smallest plants should be pulled and then using care as the spines can penetrate leather gloves. It might be beneficial to loosen the soil around the plant first with a trowel or shovel before attempting to pull.

NATIVE PLANT ALTERNATIVES

**MAPLELEAF VIBURNUM**
(Viburnum acerifolium)

- Growth Type: Deciduous Shrub
- Height: **3 to 6 feet**
- Spread: **5 to 10 feet**
- Bloom Time: May
- Light exposure: Full sun
- Attracts: Birds, Butterflies

**CAROLINA ROSE**
(Rosa carolina)

- Growth Type: Deciduous shrub
- Height: **3 to 6 feet**
- Spread: **2 to 4 feet**
- Bloom Time: June
- Light exposure: Part to full shade
- Attracts: Birds, Butterflies
JAPANESE HONEYSUCKLE (Lonicera japonica)

This is a vining species of Asian honeysuckle. It can form dense blankets, typically growing on top of native vegetation. The dense mats that it forms easily chokes out our native plants. The vine has sweet smelling flowers, black/purple berries, and offers little value to our native ecosystems. The berries have little nutritional value, but are still consumed and dispersed by birds and other wildlife.
HOW DO I REMOVE JAPANESE HONEYSUCKLE?

PULLING METHOD
Japanese Honeysuckle can usually be pulled out. Grab the base of the plant, twist, and pull. Try to remove all of the main root system (maybe use a spade) and put any plants in a bag to stop seed dispersal.

CUTTING METHOD
For larger infestations of Honeysuckle that has spread to trees, use a cutting method. Use a saw or clippers to cut the honeysuckle around the base of the tree, this will cause all of the honeysuckle on the tree to dry out, die, and fall off.

NATIVE PLANT ALTERNATIVES

GRAPE HONEYSUCKLE
(Lonicera reticulata)
Growth Type: Woody vine
Height: 10 to 15 feet
Spread: 10 to 15 feet
Bloom Time: May; showy yellow flower
Light exposure: Part Shade
Attracts: Birds, Butterflies, Hummingbirds

CORAL HONEYSUCKLE
(Lonicera sempervirens)
Growth Type: Woody Vine
Height: 8 to 15 feet
Spread: 3 to 6 feet
Bloom Time: May to June; red/orange flower with yellow flower inside
Light exposure: Full Sun
Attracts: Butterflies, Hummingbirds
PURPLE WINTERCREEPER (Euonymus fortunei)

This is a non-native, creeping vine with dark green waxy leaves. This vine is highly successful in forming dense carpets across our forest floors that block the growth of almost all other plants. This vine can only produce fruits/seeds when climbing trees which causes significant damage to the trees in the process. This plant is still widely sold in nurseries and is still a common landscaping plant.

FOR MORE INFORMATION, VISIT: OURWATERWAYS.ORG/INVASIVES
HOW DO I REMOVE PURPLE WINTERCREEPER

PULLING METHOD
Purple Wintercreeper can be fairly easy to remove if it hasn’t started climbing. Late fall or early winter is the recommended time for removal. Bag plants to prevent seed dispersal.

CUTTING METHOD
Once the plant has begun climbing, cut the vines around the base of the tree or structure it is climbing using a saw or clippers. Treat the cut stump with herbicide. Leave the rest of the vine on the tree. Wait for the vine to dry out and fall off. Pulling off the vine may cause significant damage to the tree.

NATIVE PLANT ALTERNATIVES

WILD GINGER
(Asarum canadense)

Growth Type: Herbaceous Perennial
Height: 1/2 to 1 feet
Spread: 1 to 1 1/2 feet
Bloom Time: April-May; purplish brown
Light exposure: Part to full Shade
Tolerates: Heavy Shade

PENNSYLVANIA SEDGE
(Carex pensylvanica)

Growth Type: Rush or Sedge
Height: 1/2 to 1 feet
Spread: 1/2 to 1 feet
Bloom Time: May
Light exposure: Part to full shade
Tolerates: Heavy shade, wet soil
SWEET AUTUMN CLEMATIS (Clematis terniflora)

This invasive clematis is sold as an ornamental vine but escapes yards easily. It is commonly found on fences, woodland edges, and along rivers and streams. Blooms appear heavily in late summer with small, white, star-shaped flowers. Unfortunately, this plant produces a huge number of seeds and spreads easily. There is also a native Clematis, so be sure to properly identify the plant. Note the difference in leaf shape between this photo and the photo of Virgin’s Bower (see back).
HOW DO I REMOVE SWEET AUTUMN CLEMATIS?

CUTTING METHOD
Use pruners or clippers to cut the vine 5-10 inches from the ground. This plant may cause skin irritation for some, so wear gloves when handling. Treat with herbicide or remove root system. Continue to monitor the removal site for any regrowth.

PULLING METHOD
Sweet Autumn Clematis is fairly easy to remove depending on the size of the vine. Grab the base of the plant, twist, pull. Try to remove all of the main root system (maybe use a spade) and put any plants in a bag to stop seed dispersal.

NATIVE PLANT ALTERNATIVES

VIRGIN'S BOWER
(Clematis virginiana)

- Growth Type: Vine
- Height: 12 to 20 feet
- Spread: 3 to 6 feet
- Bloom Time: August-October
- Light exposure: Full Sun to Part shade

VIRGINIA CREEPER
(Parthenocissus quinquefolia)

- Growth Type: Deciduous shrub
- Height: 30 to 50 feet
- Spread: 5 to 10 feet
- Bloom Time: May to August
- Light exposure: Full sun to part shade
- Attracts: Birds
- Tolerates: Drought, shade, erosion
White mulberry is a common invasive tree in urban areas. It has waxy leaves shaped like mittens, ghosts, and footballs. The bark is yellowish orange. This tree forms edible fruit and is often popular to people and birds. The tree can be found in fence rows, growing against other trees, and is extremely widespread in Central Indiana. The tree will re-sprout readily when cut and requires herbicide to be properly managed.
HOW DO I REMOVE WHITE MULBERRY?

CUT-STUMP METHOD
Cut the tree 5 to 10 inches from the ground. Treat with herbicide or remove the root system. Depending on the age of the tree, you may need to hire a tree removal service. A full grown White Mulberry can cost up to $1000 for professional removal.

GIRDLING METHOD
One of the simplest methods to kill a full grown White Mulberry Tree is to girdle it. Using a small hatchet, remove a strip of bark from all the way around the tree. Make sure that the cut is at least 1.5” deep. This will slowly kill the tree by cutting off nutrients to it.

NATIVE PLANT ALTERNATIVES

REDBUD
(Cercis canadensis)
Growth Type: Tree
Height: 20 to 30 feet
Spread: 25 to 30 feet
Bloom Time: April; pink showy flower
Light exposure: Full Sun to part shade
Attracts: Butterflies

HAWTTHON
(Crataegus viridus)
Growth Type: Tree
Height: 25 to 35 feet
Spread: 25 to 35 feet
Bloom Time: May; showy white flower
Light exposure: Full sun to part shade
Attracts: Birds, Butterflies
Tolerates: Drought