



## OTHER WAYS TO HELP PREVENT INVASIVE SPECIES SPREAD:

- ✿ Avoid buying and planting invasive species in your yard.
- ✿ Rinse your tires, equipment, and hiking boots and check your animals to avoid transporting seeds between parks and neighborhoods in mud clumps.
- ✿ Spread awareness by telling your neighbors and friends about invasive species.
- ✿ Remove invasive plants when you find them in your yard.
- ✿ Avoid placing invasive species waste in compost piles, biodegradable bags, or lawn waste containers.

## FOR MORE INFORMATION EXPLORE:

**The River des Peres Watershed Coalition**  
<http://www.riverdesperes.org>

**Midwest Invasive Plant Network**  
<http://www.mipn.org>

**Plants Native to Missouri**  
<http://www.grownative.org/>  
<http://www.mobot.org/gardeninghelp/plantfinder>

Information for this brochure was originally compiled by Britta Teller. This brochure was created by Litzsinger Road Ecology Center (<http://www.litzsinger.org>), which is managed by Missouri Botanical Garden.

# Is an INVASIVE PLANT SPECIES



## in Your Backyard?

SPOT AND STOP THE TOP TEN  
INVASIVE PLANT SPECIES OF THE  
RIVER DES PERES WATERSHED

- ✿ Learn to identify the top invasive plants,
- ✿ investigate best practices for control or removal, and
- ✿ discover natives that are good alternatives.

## WHAT ARE INVASIVE PLANT SPECIES?

Invasive plant species are plants that are not native to your area, spread quickly, and become established in nearby areas. Not all nonnative species are invasive. Invasive plants cause environmental and economic harm and can often indirectly threaten human health.

## WHY ARE INVASIVE PLANT SPECIES BAD?

Invasive plants threaten native plant and animal species by competing for resources, space, and light. When native plants begin to disappear, the diversity and integrity of Missouri ecosystems are substantially lowered.

## HOW DO INVASIVE PLANTS GET HERE?

Invasive species are often introduced by people who unknowingly plant exotic plants in their yards because they seem beautiful or practical. Invasive plants tend to grow and mature quickly, have long flowering times, and are tolerant of disturbance.

## HOW DO INVASIVE PLANTS SPREAD?

While spreading methods vary by plant, some invaders can travel by attaching to a hiker's boot. Some are windblown, while others are spread by birds that eat their fruits. Many of the invasive species in this brochure threaten watersheds and can travel in floodwaters.



River des Peres. Photo by Oliver Hulland.

## SHRUBS AND SMALL TREES

### SOUTHERN ARROWWOOD

(*Viburnum dentatum*)



Photo by the Dow Gardens Archive, Dow Gardens, [www.forestryimages.com](http://www.forestryimages.com). UG55147071

### NORTHERN SPICEBUSH

(*Lindera benzoin*)



Photo by dogtooth77, <http://www.flickr.com/people/53817483@N00/>.

### NINEBARK

(*Physocarpus opulifolius*)



Photo by the Dow Gardens Archive, Dow Gardens, [www.forestryimages.com](http://www.forestryimages.com). UG55142089

### OZARK WITCH HAZEL

(*Hamamelis vernalis*)



Photo by Danielle Haake, Litzinger Road Ecology Center.

Ask your local nursery or visit <http://www.grownative.org/> to learn about these suggestions for native species that will beautify your yard:

## VINES AND GROUNDCOVER

**CANADIAN WILD GINGER**  
(*Asarum canadense*)



Photo by Jennifer Anderson @  
USDA-NRCS PLANTS Database.

**VIRGINIA CREEPER**  
(*Parthenocissus quinquefolia*)



Photo by John Cardina, The Ohio State University,  
[www.for.esrvmagae.com](http://www.for.esrvmagae.com/),  
1552156

**ROUND-LEAVED RAGWORT**  
(*Packera obovata*)



Photo by Litzsinger Road Ecology Center.

**WILD STONECROP**  
(*Sedum ternatum*)



Photo by Danielle Haake,  
Litzsinger Road Ecology Center.

The River des Peres is one of the most important rivers in the St. Louis Metropolitan Area. Today the River des Peres and its watershed, the basin that drains rainwater into the river, serve the St. Louis area as an extension of the stormwater system. The watershed is also home to many of the beautiful parks and recreational areas that the people of St. Louis enjoy.



## INVASIVE PLANTS IN THE RIVER DES PERES WATERSHED

The invasive plant species detailed here are particular threats to the natural areas of the River des Peres watershed because they spread quickly in floodwaters. Because they lack the natural controls that are found in their native ranges, invasives quickly spread, out-compete, and eventually replace native plants. The shallower root systems of many of the invasive plants result in increased erosion and unstable stream banks.

Invasive plants pose one of the greatest threats to the beauty and integrity of our local parks and recreational areas. You can help conserve our public lands by removing invasive plants when you find them and by preventing invasive plant spread.

## BUSH HONEYSUCKLE (*Lonicera maackii*)

Invasive ☹

Invasive ☹

## WINTERCREEPER (*Euonymus hederacea* formerly *Euonymus fortunei*)



5377505

**Leaves:** Leaves are opposite, round, and usually stay green in winter

**Flowers:** Flowers turn from white to yellow as they age; blooms early May and continues through autumn.

**Habit:** Multi-stemmed upright deciduous shrub that grows up to 30 feet tall.

**Why it is dangerous:** Bush honeysuckle can form a dense under-story thicket which can restrict native plant growth and kill young tree seedlings. Birds feed on the persistent fruits (which are unhealthy for the birds) and widely disseminate seeds across the landscape.

### Removal Recommendations:

Honeysuckle bushes may be removed with a saw or dug out. Herbicide is necessary for cut individuals and concentrated herbicide should be applied to the exposed ends of all cut stumps. Use herbicide according to the label and be sure to use stream-safe varieties along stream sides. Removal is recommended in summer and winter.

Top photo by Chris Evans, River to River CWMA, [www.forestryimages.com](http://www.forestryimages.com);

Bottom photo by Chuck Bargeron, University of Georgia, [www.forestryimages.com](http://www.forestryimages.com).



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Top photo by James H. Miller, USDA Forest Service, [www.forestryimages.com](http://www.forestryimages.com);

Bottom photo by Chris Evans, River to River CWMA, [www.forestryimages.com](http://www.forestryimages.com).

**Leaves:** Shiny, evergreen leaves.

**Flowers:** Green and inconspicuous; blooms April through May.

**Habit:** Perennial, usually a trailing ground cover, which grows to 6–9 inches tall and spreads by rooting stems as a sprawling, tangled, and bushy mat. When given the opportunity to climb, wintercreeper flowers and spreads long distances.

**Why it is dangerous:** When wintercreeper invades forested areas, it can quickly form an extensive, dense mat which kills important native species. Climbing vines flower and develop fruit and seeds which are spread by birds.

### Removal Recommendations:

Small infestations of wintercreeper can be pulled or dug out with a trowel. Plant material should not be composted or left in your yard. Herbicide may be necessary for larger infestations and should be used according to the label. Be sure to use stream-safe varieties along stream sides. Multiple applications may be necessary. Vines climbing trees should be cut and stumps should be painted with concentrated herbicide to prevent spread by seed.

## MUSK THISTLE (*Carduus nutans*)

Invasive ☹

Invasive ☹

## CROWN VETCH (*Securigera varia* formerly *Coronilla varia*)



**Leaves:** Leaves are long, triangular, and end in a sharp spine.

**Flowers:** Single, purple, disc-shaped heads bloom at the end of a stem; blooms May through October.

**Habit:** Herbaceous, biennial; adults grow up to 8 feet tall.

**Why it is dangerous:** Musk thistle grows in dense patches that kill native plants. Because of its spiny leaves, musk thistle is not readily grazed by herbivores.



**Removal Recommendations:** In small patches digging into the taproot before flowering time can kill the plant, but herbicide may be necessary. Small plants are most vulnerable to herbicide which should be used according to the directions on the label. Be sure to use stream-safe varieties along stream sides.



Top photo by James H. Miller, USDA Forest Service, [www.forestryimages.com](http://www.forestryimages.com).

Middle photo by Mary Ellen (Mel) Harte, [www.forestryimages.com](http://www.forestryimages.com).

Bottom photo by L.L. Berry, [www.forestryimages.com](http://www.forestryimages.com).

**Leaves:** Leaves are arranged in groups of 15 to 25 pairs of oval leaflets.

**Flowers:** Pinkish, clustered on long stalks; blooms May through August.

**Habit:** Perennial legume that reproduces by seeds and spreads vegetatively. Stems can be up to 6 feet long and rhizomes up to 10 feet.

**Why it is dangerous:** Crown vetch spreads rapidly and outcompetes important native plant species.

### Removal

#### Recommendations:

Late spring mowing for several years may kill existing plants and prevent spread. Handpulling or covering small patches with black plastic can be effective. Herbicide may be necessary for large infestations and should be used according to the label. Be sure to use stream-safe varieties along streams.



Top photo by Dave Powell, USDA Forest Service, [www.forestryimages.com](http://www.forestryimages.com).

Bottom photo by Dan Renaglia, MissouriPlants.com, [www.forestryimages.com](http://www.forestryimages.com).

## GARLIC MUSTARD (*Alliaria petiolata*)

Invasive 

Invasive 

## FIG BUTTERCUP OR LESSER CELANDINE (*Ranunculus ficaria*)



Photos by Chris Evans, River to River CWMA, [www.forestryimages.com](http://www.forestryimages.com).  
UCR2115068  
UCR11378076

**Leaves:** Leaves give off an odor of garlic when crushed.

**Flowers:** White with four petals; blooms in April through May.

**Habit:** Biennial; first-year plants appear as a rosette of green leaves close to the ground. Second-year plants flower on a central stalk that can reach 2 to 3½ feet in height. Adult plants produce thousands of seeds that commonly spread long fence lines, roadways, and stream banks.

**Why it is dangerous:** When garlic mustard invades forested areas it spreads quickly, exudes toxins into the soil, and kills important native species.

**Removal Recommendations:** Garlic mustard has a short taproot that can be easily removed by pulling. Pulled plant material should not be composted or left in your yard. All seed heads and flowers should carefully be bagged to minimize spread.

**Leaves:** Dark green, shiny, stalked leaves are kidney- or heart-shaped.

**Flowers:** Glossy yellow petals; blooms in March and April

**Habit:** Perennial, spreads primarily by bulbets and underground tubers. The tiny cream-colored bulbets are attached to leafstalks and are easily dislodged from the plant and transported by floodwater.

**Why it is dangerous:** Large infestations of lesser celandine appear as a green carpet as early as February and prevent native spring ephemeral wildflowers from growing.

**Removal Recommendations:** Small infestations of lesser celandine can be dug out using a hand trowel or small shovel. Effective removal of the plants from a site requires the removal of all plant parts, including underground tubers, as each tuber is capable of producing a new plant. For larger infestations, herbicide treatment may be necessary early in the season when spring ephemerals have not yet begun to grow. Be sure to use stream-safe varieties along stream sides.

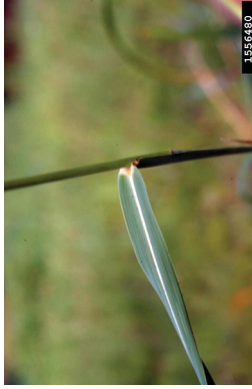


Top and middle photos by Leslie J. Mehrhoff, University of Connecticut, [www.forestryimages.com](http://www.forestryimages.com).  
UCR5274016

Bottom photo by Eddie Jones, Litzinger Road Ecology Center.

# JOHNSONGRASS (*Sorghum halepense*)

Invasive 



**Leaves:** Distinctive white midrib on each leaf.

**Flowers:** Blooms May through June

**Habit:** Perennial grass up to 8 feet tall with a large, purple or reddish flower head. Each plant has an extensive rhizome network underground.

**Why it is dangerous:** Johnsongrass directly shades other plants, uses available nutrients and moisture, and inhibits the growth of other plants by the production of allelotoxins.



Top and middle photos by Ohio State Weed Lab Archive, The Ohio State University, [www.forestryimages.com](http://www.forestryimages.com).

Bottom photo by Ted Bodner, Southern Weed Science Society, [www.forestryimages.com](http://www.forestryimages.com).

Invasive 

# JAPANESE HONEYSUCKLE (*Lonicera japonica*)



**Leaves:** Leaves are evergreen, oblong to oval in shape, and sometimes lobed. Leaves have short stalks, and occur in pairs along the stem.

**Flowers:** Flowers turn from white to yellow as they age; blooms early May and continues through autumn.

**Habit:** Perennial, woody vine. Seeds are spread by birds.



**Why it is dangerous:**

Because Japanese honeysuckle has few natural enemies, it spreads widely. Native shrubs and young trees can be killed by girdling when vines twist tightly around stems and trunks or because of competition for resources.

**Removal Recommendations:** Small infestations of Japanese honeysuckle can be removed by pulling. Herbicide may be necessary for larger stands and should be applied to the exposed ends of cut stems. Use herbicide according to the label and be sure to use stream-safe varieties along stream sides.



Top two photos by Ted Bodner, Southern Weed Science Society, [www.forestryimages.com](http://www.forestryimages.com).

Next photo by Chuck Bargerom, University of Georgia, [www.forestryimages.com](http://www.forestryimages.com).

Bottom photo by Chris Evans, River to River CWMA, [www.forestryimages.com](http://www.forestryimages.com).

## JAPANESE HOPS (*Humulus japonicus*)

Invasive ☹

Invasive ☹



**Leaves:** Hand-shaped leaves can be 2–5 inches in length.

**Flowers:** Greenish flowers; blooms August through September.

**Habit:** Annual, deciduous twining vine that may reach nearly 40 feet in length.

**Why it is dangerous:** Japanese hops is a rapidly-growing vine that can form dense stands and displace native plants.

**Removal Recommendations:** Pull plants before they set seed (they flower August–September). When pulling the plants, attempt to remove as much of the rootstock as possible and do not compost or leave plant material in your yard.



Top and middle photos by Chris Evans, River to River CWMA, [www.forestryimages.com](http://www.forestryimages.com).

Bottom photo by Leslie J. Mehrhoff, University of Connecticut, [www.forestryimages.com](http://www.forestryimages.com).

## JAPANESE KNOTWEED (*Polygonum cuspidatum*)

**Leaves:** Oval-shaped leaves, 4–6 inches long with an abrupt point.

**Flowers:** White-ish flowers in open, drooping panicles; blooms July through September.

**Habit:** perennial with spreading rhizomes and numerous reddish-brown, freely-branched stems. The plant can reach 4–8 feet in height and is often shrubby.

**Why it is dangerous:** Japanese knotweed spreads and grows quickly, killing or suppressing native species.

**Removal Recommendations:** Persistent cutting over several years can eliminate knotweed, especially in small, isolated patches. Do not compost or leave plant material

in your yard. Sometimes herbicide is necessary and should be used according to the directions on the label. Be sure to use stream-safe varieties along stream sides.



Top photo by David J. Moorhead, University of Georgia, [www.forestryimages.com](http://www.forestryimages.com).

Middle and bottom photos by Jan Samanek, State Phytosanitary Administration, [www.forestryimages.com](http://www.forestryimages.com).