

Controlling Invasive Exotic Plant Species

It is important for you as a landowner to understand the importance of controlling exotic plant species on your property. You can help! Resource managers in federal and state agencies are working to control infestations on many public lands. However, they have no control on privately held property, even if it shares a boundary with public land. If an invasive species occurs on your property, there is a good chance it will spread uncontrollably, and infestations onto other private property or public lands are certain to occur.

The first step in control is to make a positive identification of these noxious invasive species. Use this brochure as a guide, as well as other listed resources. The second step is to determine the best control practices for your situation. With any of the following control methods, **the impact to surrounding native vegetation should be limited** as much as possible.

Depending on the species, controls include **mechanical** (hand-pulling or cutting/mowing), **fire** using a **CONTROLLED** professional burn, **biological** (introducing a natural predator or control), or **chemical**, which includes treatment with an approved herbicide. Often the most efficient and effective control involves a combination of methods. Patience is important; control usually takes several years unless the invasion is light.

Please use information from the following websites to determine the best management practices for dealing with invasive species on your property, and when in doubt, contact your local IDNR natural heritage biologist:

(618) 462-1181

Resources and References:

The Nature Conservancy,
Invasive Species Initiative:
tncweeds.ucdavis.edu

National Invasive Species
Council:
www.invasivespecies.gov

Midwest Invasive Plant
Network: www.mipn.org

The Center for Plant
Conservation:
www.centerforplantconservation.org/invasives

PCA Alien Plant Working Group:
www.nps.gov/plants/alien/factmain.htm

USDA Forest Service, USDA
APHIS, and other contributors:
www.invasive.org

Protect Your Waters:
www.protectyourwaters.net

Illinois Department of Natural
Resources: dnr.state.il.us

Invasive Plants:

What Are They?

During the past ten years, southwestern Illinois has seen a tremendous increase in the types and abundance of non-native/exotic plants invading our woodlands, natural areas, parks and neighborhoods. Invasive plants have been taken from their natural environment, either intentionally or unintentionally, and transported to regions that do not contain the same pests, diseases, and competition that would normally keep them in check. These species crowd out native plants, creating a domino effect that threatens the very existence of our woodlands, prairies, and wetlands.



The potential loss of these special habitats and the animals that depend on them will certainly have a negative impact on the recreational opportunities we value as a society. Whether you enjoy picking mushrooms, hunting, fishing, hiking, or bird watching, the negative impact caused by invasive exotic plant species should concern you. The damage caused to our natural surroundings will have an impact for many generations to come.



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Taking Back Our Natural Areas



A Guide for Southwestern Illinois Landowners: Identifying and Controlling Invasive Plants

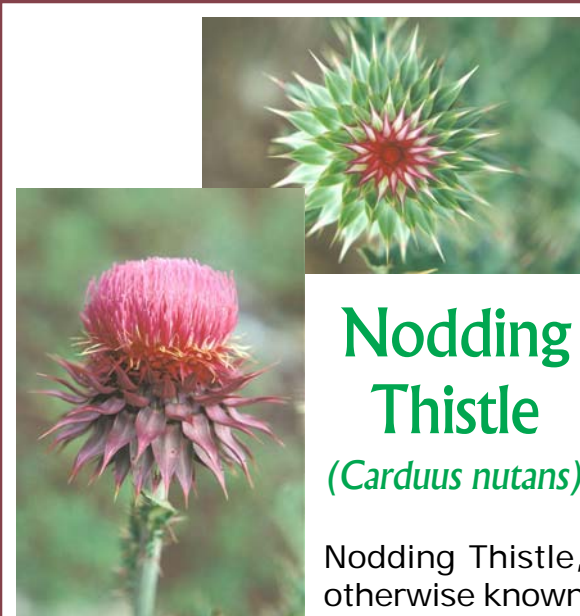
Southwestern Illinois RC&D, Inc.



Multiflora Rose

(*Rosa multiflora*)

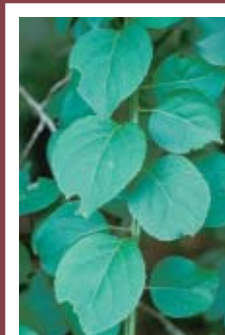
This deciduous shrub was imported for use as root stock on which to graft cultivated roses. It has also been used for erosion control, wildlife food and as fencing for livestock. It occurs in pastures and fencerows as well as places where soil has been disturbed. Height can reach 10-15 feet. Flowers are slightly pink or white and arranged in 3/8-1 1/2 inch bunches at the end of stems. It flowers from May to June. Multiflora Rose reproduces by seed and it is dispersed by wildlife. Seed can remain viable for up to 20 years. The most successful control methods for this species are mechanical, chemical, and repeated burning.



Nodding Thistle

(*Carduus nutans*)

Nodding Thistle, otherwise known as musk thistle, is a European native now widely established in the United States. It is often seen in disturbed soil along highways, railroad rights-of-way and in abandoned pastures and fields. It can invade open land, natural prairies and landscapes. Its purple flower heads are easily seen nodding at the tops of its spiny branches, which can reach heights up to 6 feet. A single plant can produce 11,000 seeds. The reflexed rose colored bracts below the flowerhead help distinguish it from native thistles. Control methods are mechanical (manual), biological, and chemical.



Oriental Bittersweet

(*Celastrus orbiculatus*)

This deciduous, woody vine from Japan, China and Korea is found in open areas and young forests. It has whitish-greenish flowers during May to June. The fruits have a yellowish outer skin covering a red, fleshy ball containing 3 to 6 seeds. Stems can reach 2-4 inches in diameter and up to 59 feet in length. The seeds are dispersed by birds, humans and small mammals. American bittersweet, which is not aggressive, is similar, but lacks the rough stems of Oriental Bittersweet. Mechanical (manual) and chemical control methods are the most successful.



Phragmites

(*Phragmites australis*)

This tall grass, otherwise known as common reed, grows up to 15 feet in height in very dense stands. These stands easily choke out native vegetation. Leaves are lanceolate often 8 to 16 inches long and 1/2 to 1 1/2 inches wide. Flowers appear in mid summer forming tufts of reddish silky hair. It is found most often in moist soils, and spread by seed carried on the wind. It occurs in all eastern states and is expanding its area to include the Midwest. The use of chemicals is the most successful method of control, although mechanical methods and burning have also been useful.

Reed Canary Grass

(*Phalaris arundinacea*)

This Eurasian grass, which can reach heights of 6 feet, infests wetlands and marshes. The species spreads by rhizomes and seeds. Dense clusters of flowers bloom from late spring through August. This species was widely planted to help control erosion off of farm lands. Special attention must be given for its control using licensed herbicide contractors because of the proximity to public and private water sources. Mechanical removal of small infestations can also be accomplished.



Tree-of-Heaven

(*Ailanthus altissima*)

Tree-of-Heaven is a deciduous tree that has taken root in both poor and rich soil in fields and woodlands. It is especially common in urban and disturbed habitats. Its bark is gray and smooth. These trees can grow 6 1/2 feet in one season. It reproduces by seed (300,000 seeds per tree) and by root suckers. The leaves are compound with over a dozen pointed leaflets. Do not let the sap get on your skin, it is highly toxic. Control methods include mechanical (manual), chemical, and potentially biological.

Photo Credits:

Stop Sign Jill M. Swearingen, National Park Service - Prescribed Burn Marty Kemper, IDNR - Autumn Olive Unknown - Burning Bush Unknown - Bush Honeysuckle (flowers) Unknown - (fruits) John Randall, TNC - Chinese Lespedeza (whole plant) Marty Kemper, IDNR - (zoom) James H. Miller, USDA Forest Service - Climbing Euonymus James H. Miller, USDA Forest Service - Crown Vetch Dan Tenaglia, missouriplants.com - Cut-leaved Teasel Marty Kemper, IDNR - Garlic Mustard (whole plant) Marty Kemper, IDNR - (flowers) Jody Shimp, IDNR - Japanese Honeysuckle Charles T. Bryson, USDA - Japanese Hops (whole plant & leaves) Chris Evans, River to River CMA - Johnson Grass (whole plant) Steve Dewey, Utah State University - (seed head) Rob Nelson - Kudzu (whole plant) Unknown - (leaf) Marty Kemper, IDNR - Multiflora Rose Unknown - Nodding Thistle John Randall, TNC - Oriental Bittersweet (leaves) John Randall, TNC - (fall foliage) IDNR - Phragmites Marty Kemper, IDNR - Reed Canary Grass (flowers) www.lindenhurstil.org/lakescom/plant_id.htm - (whole plant) Central New York Dairy and Field Crops Team - Tree-of-Heaven Barbara Tokarska-Guzik, University of Silesia, Poland

Upcoming Invaders:

Mimosa Tree
(*Albizia julibrissin*)

Golden Raintree
(*Koelreuteria paniculata*)

Periwinkle
(*Vinca major*)

Taking Back our Natural Areas - Identifying & Controlling Invasives in Southwestern Illinois

Autumn Olive (*Elaeagnus umbellata*)

This Asiatic shrub was intentionally planted for wildlife cover and food, to control erosion and to create windbreaks. It can reach heights of 20 feet. It is identified by the silvery scales on the lower surfaces of its leaves. Autumn Olive is found in open fields and forests and along roadsides. The fragrant flowers are tubular and cream to pale yellow. The 1/4 inch fruits are silvery with brown scales ripening to speckled red or yellow. Seeds are spread by birds and water. Methods of control include mechanical and chemical.



Burning Bush (*Euonymus alata*)

This shrub, also known as winged wahoo, is characterized by alternate, ovate simple leaves, and new growth is characterized by four corky wings. The flowers are small and yellow-green, and the fruits are relatively small and nearly purple. Flowers are produced from June through July. The fruits are readily eaten by birds, which disperse the seeds. Burning Bush is capable of growing in full sunlight or shade, and some woodlands in Illinois have thousands of individuals per acre in the understory. Burning Bush grows in scattered locations throughout Illinois. Methods of control include mechanical and chemical.



Bush Honeysuckle (*Lonicera maackii* and *L. morrowii*)

These Asian deciduous shrubs can reach 6'-20' high and nearly as wide. They are easily identified as the first shrubs to turn green in late winter and the last to die back in late fall. Flowers are white fading to yellow in early summer. Seeds are spread quickly by birds which eat the red fruits found at the leaf junctions in the fall. These species completely dominate the forest understory leaving an absence of native plants and animals. They are the most numerous invasives in southwestern Illinois. Control methods include mechanical, chemical, and repeated burning.



Chinese Lespedeza (*Lespedeza cuneata*)

An Asiatic introduced to control erosion on steep slopes, along roads and pond levees, Chinese Lespedeza (also known as *Sericea Lespedeza*) forms dense stands and rapidly spreads to prairies, gravel bars and open spaces. The seeds are viable for 20 years or more in the soil. It has a native "look-a-like" which is valuable, but much less common. Methods for control include chemical and mechanical.



Climbing Euonymous (*Euonymous fortunei*)

This woody vine, also known as wintercreeper, was introduced from Asia for use as ornamental groundcover. It is most often found in urban forests, carried there by birds who have eaten the fruits. The vine will climb neighboring trees and rocks. It forms a dense ground cover, eliminating all native spring wildflowers beneath it. A variety of chemical and mechanical methods are available for management.



Crown Vetch (*Securigera varia* - formerly *Coronilla varia*)

From Africa, Asia, and Europe, this legume has been planted for erosion control along highway rights-of-way. Flower color is somewhat variable, and can be pink, rose, or lilac. Flowers bloom in late May to August. Crown vetch grows best in sunny locations and reproduces by seed and underground rhizomes. Crown vetch is toxic to horses because of the presence of nitroglycosides. If consumed in large amounts, it can cause slow growth, paralysis, or even death. Methods for control of this species include mechanical and chemical - both spot and broadcast treatment.



Cut-leaved Teasel (*Dipsacus laciniatus*)

This invasive was brought to North America by early Europeans. The spiny seed heads were used in the textile industry to raise nap on cloth. It grows a basal rosette of leaves for one year before sending up a tall flowering stalk the following year and dying. It spreads rapidly along highway rights-of-way and spreads to open pastures and gravel bars. Dense stands of teasel choke out other vegetation, and its spiny stalks discourage wildlife habitat. Control methods for this species include mechanical (cutting and removal), burning, and chemical.



Garlic Mustard (*Alliaria petiolata*)

Garlic Mustard is a shade tolerant European native that invades upland and bottomland forests destroying other species on the forest floor. It usually blooms in April with numerous white flowers at the top of the stem and also at some leaf junctions. The stems can reach a height of 24-28 inches. Up to 3,000 seeds per plant are produced. Successful control methods include mechanical, chemical, and burning.



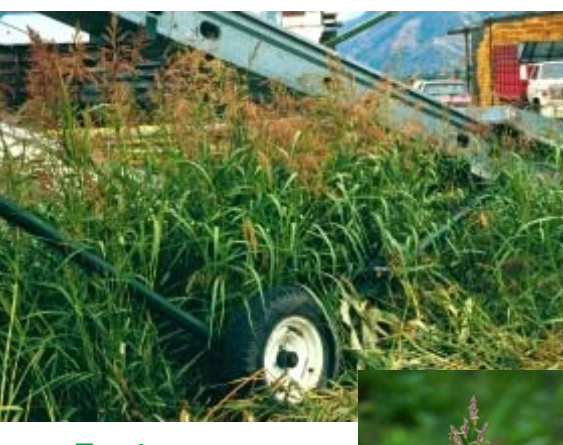
Japanese Honeysuckle (*Lonicera japonica*)

A climbing vine that can cover shrubs and low growing plants, Japanese Honeysuckle produces dense shade that prohibits any growth beneath it. Its flowers are white to yellow tubular pairs at the leaf junctions, and it is spread by birds eating the seed, by roots and aerial runners. It tolerates shade but grows more rapid in sunny locations. This vine colonizes forested and open spaces, roadsides, and disturbed soils. Methods of control for this species include mechanical (manual), chemical, and repeated burning.



Japanese Hops (*Humulus japonicus*)

This annual climbing vine grows rapidly, 8-9 ft per year, smothering other plants as it grows. Leaves are serrated, 5-lobed, 2-4 inches long, and causes dermatitis in some people after contact. The stems have downward-pointing prickles, making removal by hand difficult and painful. Its flowers are green with no petals and it blooms and sets seed in mid to late summer. Japanese Hops prefers moist soil, such as floodplain forests and river banks, but has also been found in dry soil. Control methods include mechanical and chemical.



Johnson Grass (*Sorghum halepense*)

This is a tall, coarse, perennial grass from the Mediterranean that aggressively forms solid clumps. Leaves are long (6 to 20 inches) with an almost white mid-vein. Seeds are reddish brown. Spread by seeds and rhizomes, Johnson Grass has migrated to warm-temperate regions around the globe. Infestations can be found in river bottoms, pastures, crop fields, rights-of-way, forest edges and river banks. Infestations in crop land can reduce soybean and corn yields dramatically. Control methods for this species are mechanical and chemical.



Kudzu (*Pueraria lobata*)

Kudzu is a woody vine native to Japan and China introduced in the United States years ago as a vegetation cover for erosion control. It grows rapidly, sometime a foot a day, and is widely known as the "vine which ate the south". It rapidly covers shrubs, trees, and buildings, as well as the forest floor, choking native vegetation in its shade. The leaves divide into 3 long, often lobed leaflets - somewhat like a giant clover. For the past few years, the IDNR has been seriously attacking this invasive exotic in an effort to protect our state from a takeover. Call your nearest IDNR regional natural heritage biologist for positive identification and treatment.

