River to River
Cooperative Weed Management Area

Invasive Plants of Southern Illinois

by
Tiffany Osborne and Brad Steffen

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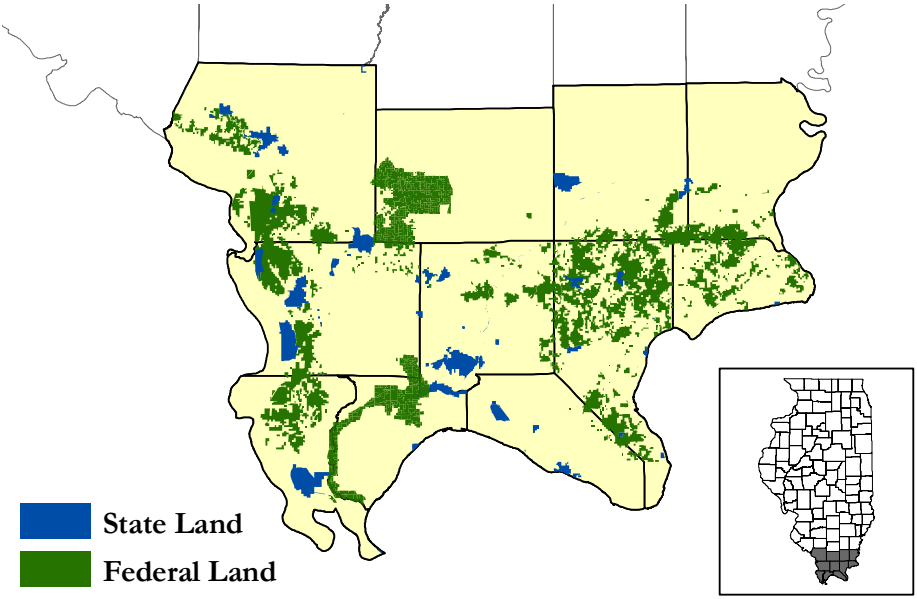

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www.rtrcwma.org

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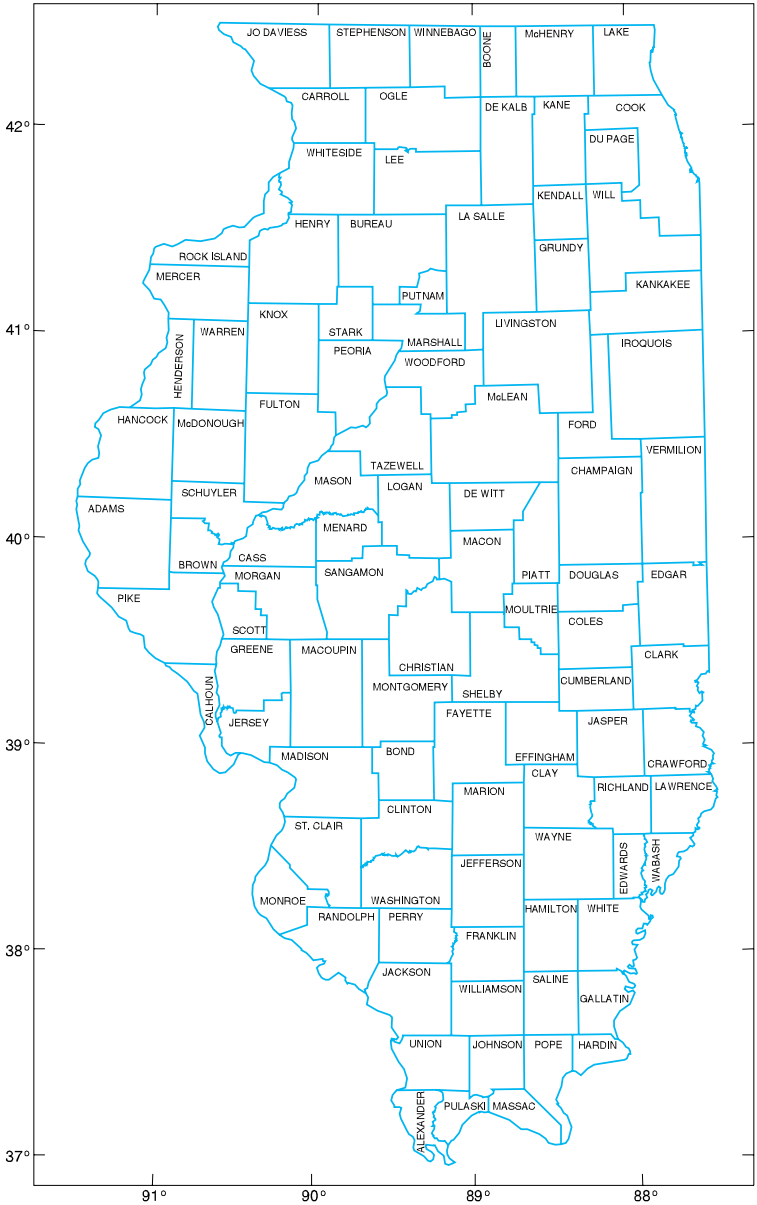
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Introduction

Invasive plant species pose a tremendous threat to natural resources throughout the United States. Invasive species can choke out acres of native vegetation and greatly reduce wildlife habitat. Invasive plant species threaten every aspect of ecosystem health and productivity on public and private lands, threaten biological diversity by causing population declines of native species, and alter key ecosystem processes like hydrology, nitrogen fixation, and fire regimes.

In Southern Illinois, the River to River Cooperative Weed Management Area (CWMA), a partnership of state and federal agencies, organizations, and universities, was formed to address terrestrial and aquatic invasive species. Projects currently being undertaken by the CWMA include an educational campaign aimed at reaching anyone that has the potential to cause or prevent the spread of invasive plants in southern Illinois, providing financial and technical assistance for controlling invasive plants on private and public lands, early detection and rapid response of new invasive threats, and invasive plant distribution mapping.

Preventing, managing, and controlling these invasive species is necessary to keep them in check. Physical, biological, and chemical methods are used to control and eradicate exotic invasive plant species. Physical control methods involve hand-pulling, pruning, cutting, mowing and burning. Biological control involves introducing a native or nonnative species to control the exotic. Chemical control is the use of safe and approved herbicides to target a specific species while trying to avoid non-target species. Methods of control are site specific and it is best to consult professionals before action is taken.

Actions of humans can help control problems associated with exotic invasives. Public education can help prevent future introductions while containing present outbreaks. The aesthetic beauty of the Shawnee National Forest, State Parks, and National Wildlife Refuges attracts visitors to Southern Illinois. This area is highly prized for its recreational and outdoor value. Ecotourism brings in revenue for local communities and businesses. Appropriately managing ecosystems of southern Illinois will preserve this resource for future generations.

In response to this growing threat, the River to River Cooperative Weed Management Area has produced this manual to the common invasive plants of Southern Illinois. The intent of this manual is to help citizens of Southern Illinois be able to recognize and identify some of the common invasive species likely to be encountered. While many invasive species occur in Southern Illinois, this manual highlights 24 invasive plants from forested, open, and aquatic habitats.

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Amur Honeysuckle
Lonicera maackii

Common Name: Amur honeysuckle, bush honeysuckle

Description: Upright deciduous shrub growing up to 15 feet in height. Shrubs often multi-stemmed.

Reproduction: Seeds spread by wildlife.

Leaves: Opposite, simple ovate leaves that are pointed at tip, green above and paler below with hairs along the veins.

Stems: Hollow pith with striated tan bark.

Flowers: Very fragrant white changing to yellow flowers emerging in pairs and blooming late spring.

Fruits/Seeds: Small round red berries appear in summer and persisting into winter.

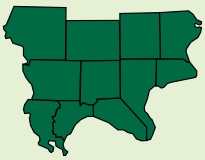
Habitat: Wide habitat tolerance. Generally an edge species, preferring dry or dry-mesic forests and open fields, but can also invade shaded or moist forests.

Comments: Spreading rapidly throughout region. Has potential to cause major damage to Southern Illinois forests. Due to shallow root system as a young plant, removal is easy if caught early.

Chris Evans

Chris Evans

Troy Evans



Autumn Olive
Elaeagnus umbellata

Common Name: Autumn olive, silverberry

Description: Deciduous shrub growing from 3-20 feet. Easily recognized by the silvery underside of leaves.

Reproduction: Seed. Sprouting can occur from stumps and roots.

Leaves: Alternate, and oblong leaves that are dark green above and silvery beneath.

Stems: Silvery to gold stems often with thorn-like sharp branches and whitish lenticels.

Flowers: Fragrant yellowish-white tube shaped flowers, bloom May-June.

Fruits/Seeds: Reddish-pink speckled drupe.

Habitat: Open forests, grasslands, old fields and other disturbed areas.

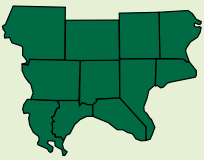
Comments: Very widespread in Southern Illinois. Pioneer species, roots have ability to fix nitrogen. Forms dense stands and out competes native plant species.

Chris Evans

Chris Evans

Tiffany Osborne

Chris Evans



Chinese Yam
Dioscorea oppositifolia

Common Name: Chinese yam, cinnamon vine

Description: Herbaceous, perennial climbing vine.

Reproduction: Aerial bulbils.

Leaves: Alternate near plant base, changing to opposite further along vine. Leaves heart-shaped, with junction of petiole and blade reddish-purple. In late summer, bulbils (aerial tubers, resembling small potatoes) appear at leaf nodes.

Stems: Thin and wiry, twists counterclockwise at an angle.

Flowers: Appear in June-July, cinnamon fragrance, yellowish-white in color.

Fruits/Seeds: Not known to occur in United States.

Habitat: Riparian habitat, forest edges, open spaces, and rights-of-way.

Comments: Fast growing (up to an inch per day in peak growth times). Can quickly dominate and climb over other vegetation, restricting light and potentially girdling young trees and shrubs.

Jody Shimp

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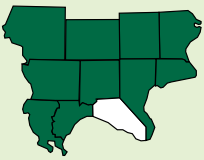


Common Reed
Phragmites australis

Common names: Phragmites, common reed

Description: Tall, perennial grass that often grows in very dense clumps in moist soils.

Reproduction: Seeds, plant fragments, and runners.

Leaves: Long (up to 2 feet), wide (over 2 inches) leaves that are hairless and somewhat waxy feeling.

Stems: Stout hollow stems that can be very tall (up to 15-20 feet).

Flowers: Large, dense flower heads (up to 15 inches long), often with a purple tinge. Flowers from mid-summer into fall.

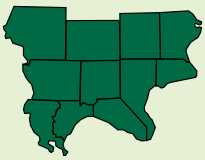
Fruits/Seeds: Abundant small seeds.

Habitat: Prefers open areas with moist soils. Will invade ditches, shorelines, streamsides, wetlands, drainages, and shallow ponds.

Comments: Very abundant plant in Southern Illinois. Once established, it can be very difficult to eradicate.

Jim Miller

Jim Miller



Crown Vetch
Securigera varia

Common Name: Crown vetch

Description: Pea family, low growing herbaceous perennial.

Reproduction: Rhizomes and seeds

Leaves: Alternate, pinnately compound.

Stems: Leaves and flower stalks arise from green, stem.

Flowers: Umbellate white, pink and purple flowers, blooming May-August.

Fruits/Seeds: Produce slender pods that contain seeds.

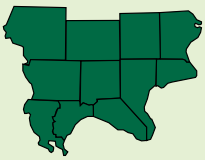
Habitat: Pastures, roadside rights-of-ways, slopes. Can invade prairies, glades, and other open areas.

Comments: Often planted for erosion control in sunny areas. Toxic to horses.

Tiffany Osborne

Tiffany Osborne

Jody Shimp



Curlyleaf Pondweed
Potamogeton crispus

Common Name: Curlyleaf pondweed, curly pondweed, crisp pondweed

Description: Submerged perennial, flower stalks emerges above water.

Reproduction: Winter buds (turions) and seeds.

Leaves: Alternate, oblong, translucent, stiff and crinkled, finely toothed.

Stems: Somewhat flattened and branched.

Flowers: Small clusters along leaf axils with four petal-like lobes.

Fruits/Seeds: Seed-like achene

Habitat: Slow-moving or streams, ponds, and lakes.

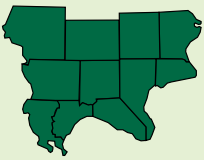
Comments: Inhibits growth of native plants by growing quickly early in the season. Rapid die-back in mid-summer has contributed to oxygen depletion and fish kills. A major threat to slow-moving and shallow water systems.

Chris Evans

Tiffany Osborne

Chris Evans

Chris Evans



Eurasian watermilfoil
Myriophyllum spicatum

Common Name: Eurasian watermilfoil, spike watermilfoil

Description: Submerged, herbaceous, aquatic perennial with a feathery appearance. Grows to approximately 3-15 feet in length.

Reproduction: Rhizome, axillary buds, fragmented stems, and seed.

Leaves: Bright green in whorls of 3 or 4, each with 12-16 pairs of thin, fine leaflets.

Stems: Long, flexible underwater stems, branch near surface.

Flowers: Tiny pink or yellow flowers on red spikes.

Fruits/Seeds: Four seeds in a segmented, hard capsule.

Habitat: Highly adaptable in various environmental conditions. Commonly found in slow moving to stagnant water, ponds and lakes.

Comments: Frequently forms dense mats inhibiting native plant growth due to loss of light penetration. Decomposing mats of vegetation lower dissolved oxygen levels. Infestations can decrease numbers of native plants and fish habitat.

Tiffany Osborne

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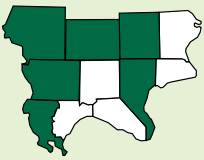
Chris Evans



Garlic Mustard
Alliaria petiolata

Common Name: Garlic mustard, Jack-in-the-bush, hedge garlic

Description: Biennial herbaceous plant. Cool season and shade tolerant, smells like garlic when crushed. First year characterized by green basal rosette, the following spring produces flowering stems at 2-4 feet in height.

Reproduction: Seed.

Leaves: First year leaves kidney shaped. Leaves on flowering plants, alternate, triangular, strongly toothed. Leaves smell strongly of garlic when crushed.

Stems: Rootstock may contain one to several slightly ridged, light-green stems.

Flowers: Clusters of small, white flowers with four petals that bloom April-May.

Fruits/Seeds: Long, thin seed pods (siliques) that contain numerous small, hard, black seeds. Seeds spread by humans, animals and water and can be viable in soil for up to 7 years.

Habitat: Forests and forest edges. Wide habitat tolerances, can invade a variety of light and moisture conditions.

Comments: Widespread and very problematic species. Begins growth while most other species are dormant, displacing many native understory species. Has allelopathic properties that aid in competition.

Jody Shimp

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Chris Evans

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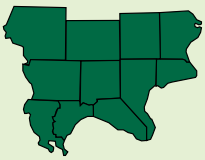


Japanese honeysuckle
Lonicera japonica

Common Name: Japanese honeysuckle, vine honeysuckle

Description: Semi-evergreen, woody trailing or climbing vine.

Reproduction: Seed, stem cuttings, rhizomes, and aboveground runners.

Leaves: Opposite, broadly ovate shaped 1.5-3 inches long usually entire, but sometimes with lobes or blunt teeth. Underside of leaf appears greenish white and surface of leaf may be smooth or hairy.

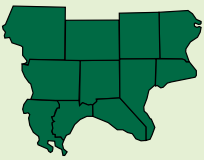
Stems: Reddish brown and hairy. Bark becomes light tan and stringy with age.

Flowers: Very fragrant, whitish-pink or yellow, tubular flowers occurring in pairs along the stem. Blooms from spring through fall.

Fruits/Seeds: Spherical green fruits ripen to glossy black. Fruits contain 2-3 oblong dark brown seeds.

Habitat: Very widespread in a variety of habitats. Commonly found along forest edges, fence rows, disturbed areas, open woodlands, and fields.

Comments: Widespread species that is often planted in wildlife food plots or used as an ornamental. Infestations can cause problems in open habitats, new tree plantings, and clifflines.



Jody Shimp

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Chris Evans

Japanese Hops
Humulus japonicas

Common Name: Japanese hops

Description: Annual climbing or trialing vine.

Reproduction: Seeds.

Leaves: Palmately lobed and rough textured. Twin bracts at base of leaf petioles are a diagnostic characteristic.

Stems: Stems covered with small downward-turned prickles.

Flowers: Inconspicuous greenish flowers without petals appear June-October.

Fruits/Seeds: Single-seeded dry fruit.

Habitat: Stream banks, forest edges, abandoned fields, roadsides, pastures, non-crop areas.

Comments: Can form dense stands that out compete and displace native vegetation. In particular infestations are a threat to sand-bar habitat along streams.

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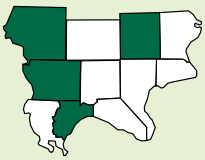

Japanese knotweed
Polygonum cuspidatum

Common Name: Japanese knotweed, Mexican bamboo, Fleeceflower.

Description: Shrubby, herbaceous perennial growing 10 feet or more.

Reproduction: Creeping rhizomes or shoot fragments.

Leaves: Broadly ovate and pointed at tip.

Stems: Hollow, stout and cone-like. Joints of stem are surrounded by a membranous sheath.

Flowers: Minuscule greenish-white flowers blooming August-September. Flowers grow in clusters from leaf axils.

Fruits/Seeds: Small winged fruit with triangular seeds.

Habitat: Most commonly found in edge habitats, roadsides, ditches. Prefers disturbed areas with high-light.

Comments: Potential problem species. Infestations are extremely persistent and hard to eradicate and can reduce plant diversity and wildlife habitat. Plants commonly spread through fragments being spread via flooding or mowing equipment.

Chris Evans

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Jody Shimp

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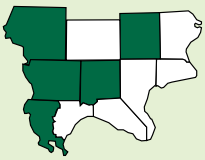


Japanese stiltgrass
Microstegium vimineum

Common Name: Japanese stiltgrass, Nepalese browntop, Chinese packing grass, Eualia

Description: Annual, sprawling grass that forms dense mats which crowd out native vegetation.

Reproduction: Seed.

Leaves: Asymmetrical, lance-shaped pale-green leaves, 1-3 inches long with silvery midrib and ciliate leaf collars.

Stems: Thin and branching. Plants can stand erect or lie nearly flat. Stems touching the ground may root at nodes.

Flowers: Small hairy spikelets which flower in late summer.

Fruits/Seeds: Small ellipsoid grain produced shortly after flowering. Single plant produces 100-1000 seeds, which remain viable 3-5 years.

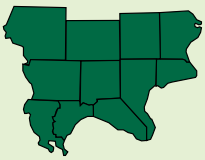
Habitat: Streamsides, trails, roadsides, damp meadows, and forested floodplains. Prefers moist soil conditions and can thrive in deep shade to full sunlight.

Comments: Very widespread and problematic species. Easily spread unintentionally by hikers, ATVs, and forestry equipment. Thorough cleaning of boots, tires, or soil-contacting pieces of equipment can help reduce spread.

Jody Shimp

Chris Evans

Tiffany Osborne



Johnsongrass
Sorghum halepense

Common names: Johnson grass

Description: Tall, rhizomatus perennial grass that invades open areas.

Reproduction: Seed and rhizomes.

Leaves: Long (2 ft.), lanceolate leaves arranged alternately with distinctive, white midribs.

Stems: Stout, hairless and somewhat upward branching.

Flowers: Loose, spreading, purplish panicle.

Fruits/Seeds: Small grain, produced abundantly.

Habitat: Roadsides, ditches, meadows, field borders, pastures, and other open areas.

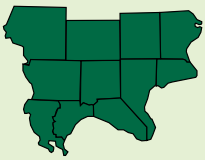
Comments: Widespread common invasive plant. Major impacts to agriculture, but can be a problem in open natural areas.

Chris Evans

Chris Evans

Jim Miller

Chris Evans



Kudzu
Pueraria montana

Common Name: Kudzu, porch vine

Description: Perennial, climbing vine with potential to grow to 100 feet. Easily recognizable by aggressive growth form that can overtop and smother all other vegetation.

Reproduction: Rooting of runners at nodes, root fragments. Potential spread by seed.

Leaves: Large, trifoliate leaves with hairy undersides.

Stems: Brownish, woody at base. Stems spread out in all directions, with new plants rooting at stem nodes.

Flowers: Fragrant, reddish-purple, pea-like flowers. Present in southern range from late July to early September.

Fruits/Seeds: Hairy bean-like pod produces 3-10 seeds.

Habitat: Roadsides, old fields, forest edges and gaps.

Comments: Originally introduced for erosion control, as forage for cattle, and as an ornamental. Most infestations start from intentional plantings. Very difficult to eradicate and can completely dominate an area once established.

Jody Shimp

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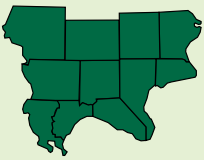

Multiflora rose
Rosa multiflora

Common Name: Multiflora rose, rambling rose, multiflowered rose

Description: Perennial, thorny shrub with arching branches.

Reproduction: Seed and stem sprouts.

Leaves: Alternate, pinnately compound leaves divided into 5-11 sharply toothed leaflets. Feathery stipules are present at the base of each leaf stalk.

Stems: Reddish to green canes with stiff curved thorns. Canes will root and sprout when in contact with ground.

Flowers: Clusters of fragrant white, red or pinkish one-inch flowers.

Fruits/Seeds: Red hips endure throughout winter. Rose hips are readily eaten by birds, which can facilitate their spread.

Habitat: Pastures, old fields, forest edges, open woodlands, roadsides, and other disturbed areas.

Comments: Widespread species. Intentionally introduced and used as a "living fence" for pastures. Forms dense thickets impenetrable by humans and wildlife.

Chris Evans

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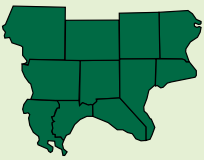
Jody Shimp



Musk Thistle
Carduus nutans

Common Name: Musk thistle, nodding thistle

Description: Biennial herbaceous plant up to 6-8 feet tall.

Reproduction: Seed.

Leaves: Green, alternate, lanceolate leaves that are deeply lobed. Spines occur along margins of each lobe.

Stems: Spiny, branched.

Flowers: Red-purple disk-shaped flower-head composed of tiny individual flowers. Plants bloom in late spring or early summer. Plants are easily recognizable by large, stiff, spiny bracts at base of flower-head. Flower-heads drop or 'nod' with seed set.

Fruits/Seeds: Yellowish-brown, small achene.

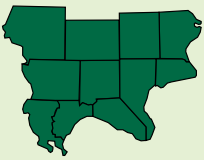
Habitat: Roadsides, rights-of-way, pastures, prairies, and grasslands.

Comments: Aggressive weed of pastures.

Tiffany Osborne

Chris Evans

Tiffany Osborne



Oriental Bittersweet
Celastus orbiculatus

Common Name: Oriental bittersweet, Asian bittersweet, Asiatic bittersweet, round-leaved bittersweet

Description: Deciduous, climbing woody vine.

Reproduction: Seed and root suckering.

Leaves: Alternate, elliptical leaves with finely toothed margins. Leaves turn a distinctive yellow color in fall.

Stems: Olive drab with many raised lenticels. Stems are very flexible and difficult to break.

Flowers: Axillary, clustered yellow-green flowers with 5 petals.

Fruits/Seeds: Green fruit ripen into orange berries that split to reveal scarlet arals, each containing two seeds.

Habitat: Forest edges, roadsides, open woodlands, streamsides, old fields.

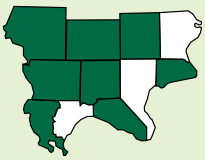
Comments: Very problematic species, can quickly dominate edge habitats. Seeds widely dispersed by birds. Has the ability to hybridize with the native American bittersweet.

Chris Evans

Jody Shimp

Jody Shimp

Chris Evans



Princesstree

Paulownia tomentosa

Common Name: Princesstree, royal empress tree, Paulownia

Description: Medium-sized deciduous tree 30-60 feet in height.

Reproduction: Seeds and root sprouts.

Leaves: Large, opposite, slightly fuzzy and heart-shaped.

Stems: Grayish brown rough bark. Dark brown stems flattened at nodes.

Flowers: Fragrant, large, lavender flowers that occur in showy clusters.

Fruits/Seeds: Oval capsule, somewhat resembling a pecan, with four compartments holding thousands of winged seeds. Capsules often remain on the tree into winter.

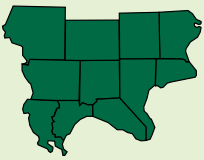
Habitat: Riparian areas, clifflines, recently burned woods. Can thrive in very poor soils.

Comments: Prolific seed producer capable of long-distance dispersal.

Jody Shimp

Jody Shimp

Chris Evans



Purple loosestrife
Lythrum salicaria

Common Name: Purple loosestrife

Description: Erect perennial, wetland herbaceous plant, growing 4 to10 feet in height.

Reproduction: Rootstocks, root fragments, seeds.

Leaves: Pubescent, smooth edged, lance-shaped. Leaves can be either opposite or whorled.

Stems: Squared, semi-woody stems with 5-6 sides.

Flowers: Bright purple flowers with 5-7 (usually six) petals occur in tall spikes throughout the summer.

Fruits/Seeds: Small seeds abundantly produced. Require moist soil to germinate.

Habitat: Riverbanks, wetlands, lake shores, and other moist, open areas.

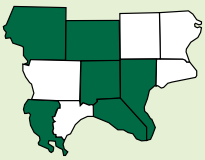
Comments: Potential problem species. Approximately 2 million seeds are produced each year on a single plant. Inhibits native vegetation growth and reduces food quality for wildlife.

Tiffany Osborne

Chris Evans

Troy Evans

Chris Evans



Reed Canarygrass
Phalaris arundinacea

Common names: Reed canary grass

Description: Cool season, perennial grass that can dominate wetlands.

Reproduction: Seeds and rhizomes.

Leaves: Leaf blades are flat, 1-4 ft. long, up to 3/4 in. wide, glabrous and taper gradually.

Stems: Thin, wiry hairless stems. Ligule is long and membranous.

Flowers: Flowers are located on spreading heads and can be purple, green, or brown in color. Flowering occurs from late spring to mid-summer.

Fruits/Seeds: Small grain, produced abundantly.

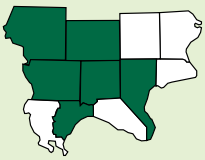
Habitat: Invades open areas with moist soils. Areas typically invaded include wet pastures, pond edges, open wet woodlands, ditches, wetlands, and streamsides.

Comments: This plant has been used somewhat for forage, but is very aggressive and can quickly dominate any open, wet area.

Chris Evans

Chris Evans

Chris Evans



Sawtooth oak
Quercus acutissima

Common Name: Sawtooth oak

Description: Large deciduous tree, 50 feet in height with rounded pyramidal shape.

Reproduction: Seed.

Leaves: Glossy, simple, alternate, strongly toothed along margin.

Stems: Young plants have striated bark, and older plants have dark and furrowed bark.

Flowers: Small, appearing in spring.

Fruits/Seeds: Large, oval acorns with cap covering half of nut. Scales on cap reflexed with long and fleshy protrusions around base of cap.

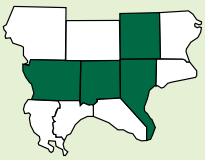
Habitat: Forests and woodlands.

Comments: Planted widely for wildlife because trees mature quickly and produce abundant acorns. Potential threat to displace native oak species.

Tiffany Osborne

Tiffany Osborne

Chuck Bargeron



Sericea Lespedeza

Lespedeza cuneata

Common names: Sericea lespedeza, Chinese lespedeza, Chinese bush clover

Description: Semi-woody, deciduous, perennial shrub growing from 3-5 feet tall.

Reproduction: Seeds and root fragments.

Leaves: Trifoliate, with small linear leaflets.

Stems: Thin, semi-woody often with many short branches towards the top of the shrub.

Flowers: Small, whitish flowers with purple throats found in clusters of 2 to 4. Flowering occurs in mid-summer to fall.

Fruits/Seeds: Small hard seeds occurring in single-seed pods. Seeds are very long-lived and can remain viable for over 30 years in the soil.

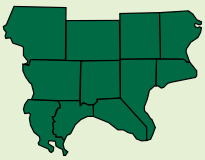
Habitat: Roadsides, prairies, open woodlands, pastures, and other open disturbed habitats.

Comments: Widely planted for erosion control and reclamation. Plants are encouraged by fire and infestations are very difficult to eradicate once established.

Chris Evans

Chris Evans

Chris Evans



Teasel
Dipsacus sp.

Common names: Cutleaf and common teasel

Description: Two species, both are tall, prickly biennial or short-lived perennial plants.

Reproduction: Seed.

Leaves: First-year plants basal rosette, flowering plants have leaves along the stem. Leaves are entire (common) or dissected (cutleaf). Midrib or leaves very prickly.

Stems: Stout stems with abundant spines.

Flowers: Densely cover conical flower head. Flowers are purple (common) or white (cutleaf) and often occur in a band around the flower head. Long spiny bracts are found below flower head.

Fruits/Seeds: Abundant, small seeds that can be easily transported by wind or birds.

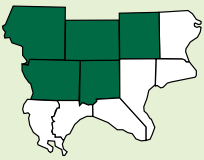
Habitat: Sunny, open areas such as pastures roadsides, prairies, and meadows.

Comments: Very widespread problem along roadways in Southern Illinois.

Chris Evans

Chris Evans

Chris Evans



Tree of Heaven
Ailanthus altissima

Common Name: Tree of Heaven, stinking sumac, Chinese sumac

Description: Deciduous tree, rapidly growing up to 6-80 feet. Plant parts smell strongly (some people think the smell resembles rotten peanut butter) when broken or crushed.

Reproduction: Seed, sprouts, roots fragments and runners. Clonal grower, often forming large patches.

Leaves: Pinnately compound. 1-4 feet in length. 10-41 lanceolate, asymmetric leafelets with one of more glands beneath lobed bases.

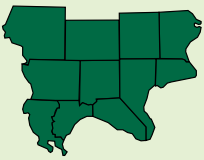
Stems: Trunk is smooth with pale gray bark. Twigs are reddish-tan to chestnut-brown with heart-shaped leaf scars. Pith is spongy.

Flowers: Male and female flowers occur on different plants. Flowers occur in spreading clusters near tip of branches. Blooms in late spring.

Fruits/Seeds: Female plants produce samaras late summer to early fall. Fruits form dense pink clusters that turn brown and often last through winter.

Habitat: Common in urban forests and disturbed sites. Can be found in forest edges, canopy gaps, clifflines, and other areas with high-light conditions. Can tolerate very poor soil conditions.

Comments: Chemical production by plant kills of prevents other species from growing nearby. Dense clonal patches are difficult to eradicate once established.



Chris Evans

Tiffany Osborne

Tiffany Osborne

Chris Evans

Glossary

Achene A small, dry, hard, one-celled, one-seeded fruit that stays closed at maturity

Allelopathy Production of a chemical that inhibits or stalls growth of other species

Biennial A plant that needs two seasons of growth to produce flowers and fruit. It produces leaves the first year and blossoms, bears fruit, goes to seed and dies the next.

Bract A modified leaf at the base of a flower or flower cluster. It may resemble a normal leaf, be reduced and scale-like in appearance, or large and brilliantly colored.

Bulbils A little or secondary bulb; specifically, a small aerial bulb or bud with fleshy scales, growing in the axils of leaves, as in tiger lily, or taking the place of flower buds, as in the common onion.

Deciduous Losing its leaves annually at the end of the growing season; semi-deciduous plants lose only some leaves.

Evergreen Keeping its leaves all year long although losing some of the older leaves regularly throughout the year. Semi-evergreen plants only lose some leaves or lose older leaves only when new ones develop.

Leaf scars A mark left on the stem where a leaf has been lost or removed.

Herbaceous A non-woody plant in which the upper parts die back to the rootstock at the end of the growing season.

Lenticels A lens-shaped body of cells, formed on the outside of a woody plant stem, which serves in the exchange of gases between the stem and outer air.

Palmate Having four or more lobes, leaflets, or nerves radiating from a single point, as in the leaves of buckeyes (*Aesculus* spp.)

Perennial plants living for at least three seasons

Petiole The stalk of a leaf

Pinnate Resembling a feather in structure with the parts arranged on both sides of an axis; a compound leaf in which the leaflets grow in a row on each side of the midrib.

Rhizomes Thickened, branching, creeping storage stems. Although most rhizomes grow laterally just along or slightly below the soil's surface, some grow several inches deep. Roots grow from the underside of the rhizome, and during the growing season, new plants sprout from buds along the top.

Rosette A group of leaves radiating from about the same point, often at ground level at the base of a very short stem, or at the tip of longer stems.

Samaras A dry, usually one-seeded fruit provided with a wing, as in the ash, elm, or birch. Also called key and key fruit.

Stipule One of a pair of usually leaf-like lateral appendages found at the base of the petiole of many leaves.

Stolons A horizontally spreading or arching stem that runs along the ground or just below the surface, which roots at its tip to produce a new plant.

Trifoliate Having three leaves

*All definitions adapted from the Dictionary of Botanical Words from botany.com

Resources

Websites:

http://www.rtrcwma.org

http://www.inhs.uiuc.edu/chf/outreach/VMG/VMG.html

http://www.inhs.illinois.edu/

http://www.invasive.org

http://www.invasivespeciesinfo.gov

http://plants.usda.gov

http://www.mipn.org

http://www.naeppc.org

http://tncinvasives.ucdavis.edu/

http://www.fs.fed.us/invasivespecies/

http://www.fws.gov/invasives/

Field Guides:

Huebner, Cynthia D., Cassandra Olsen, and Heather C. Smith. 2005. Invasive Plants Field and reference Guide: An Ecological Perspective of Plant Invaders of Forests and Woodlands. United States Department of Agriculture

Miller, James H. 2003. Nonnative Invasive Plants of Southern Forests: A Field Guide for Identification and Control. General Technical Report SRS-62. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station.

Mohlenbrock, Robert H. 1986. Guide to the Vascular Flora of Illinois. Southern Illinois University Press. Carbondale and Edwardsville, IL.

Images used in this publication from Jim Miller, Troy Evans, and Chuck Bargeron are courtesy of the University of Georgia's Center for Invasive Species and Ecosystem Health (www.bugwood.org).

NOTES

NOTES

NOTES

RIVER TO RIVER
Cooperative Weed Management Area
8588 Route 148, Marion, IL 62959 • (618) 998-5920 • rivertoriver@gmail.com • www.rtrcwma.org

September 22, 2011

To: Jody Shimp
Illinois Department of Natural Resources
Illinois DNR – Natural Heritage
Regional Administrator

RE: Final report for Shawnee RC&D WPF grant #12-012W

Jody,

Please find the enclosed final report for the WPF agreement #12-012W "Printing and Identification of Invasive Plant Identification Booklet". Reimbursements should be sent payable to the Shawnee RC&D at Rte 1 Box 256, Simpson IL 62985. Please let me know if you need anything else.

Thanks,

Chris

Christopher Evans, Coordinator
River to River Cooperative Weed Management Area
8588 Route 148
Marion, IL 62959
Office: (618) 998-5920
Cell: (618) 364-7261
rivertoriver@gmail.com
www.rtrcwma.org

Printing and Dissemination of Invasive Plant Identification Booklet

Project Final Report (#12-012W)

Submitted to IDNR by Christopher Evans, River to River CWMA Coordinator

September 22, 2011

Printing and Dissemination of Invasive Plant Identification Booklet

Project Outcomes

This project resulted in the reprinting of 2,000 copies of the popular booklet "Invasive Plants of Southern Illinois" produced by the River to River CWMA (see copy of booklet enclosed). While the grant originally estimated being able to print 1,000 copies (estimation based upon quote previously given from printing agency), we were able to get the extra 1,000 copies because of a drop in set-up fees and time needed by the printer since we printed the original booklet with them as well.

Reimbursement Requested: $1980.00

Project Accomplishments

This project has accomplished the printing of 2,000 copies of the booklet and the dissemination of booklets to all NRCS county offices within the CWMA area (11 counties total), the Crab Orchard NWR visitor's center, the Henry Barkhausen Wetlands Center, southern Illinois chapter of the Sierra Club, Jasper County NRCS office, and Illinois Forest Resource Center. In addition, booklets were given out at a Illinois Forest Association meeting in Jasper County and to a group of students from an Southern Illinois University Ecology course. Plans are underway to given additional booklets to attendees at both the Illinois Forest Association and the Illinois Native Plant Society annual meetings.

Articles released to local papers made citizens aware of these booklets and provided contact information for the CWMA if the wanted to received copies, resulting in 4 additional copies given out by the CWMA.

Copies of this booklet will continue to be disseminated throughout southern Illinois.

Project Funds

Project funds were requested to purchase and outfit the trailer as well as place signage on the outsides. Below is a summary of the funds expended as part of this project (receipts attached):

Funding Category	Company	Amount
Printing costs	Image Graphics, Inc.	$1,840.00
Admin fees	Shawnee RC&D	$140.00
	Total Project Cost	**$1980.00**

Project Summary

The project accomplished the objectives, even printing an additional 1000 copies and the booklets have already been widely distributed and will continue to be so in the future.

Field guide highlights invasive plants

The River to River Cooperative Weed Management Area, CWMA, in partnership with the Shawnee Resource Conservation & Development Area, RC&D, recently received an award from the Illinois Wildlife Preservation Fund to publish the "Invasive Plants of Southern Illinois" field guide.

The field guide gives color pictures and descriptions of 24 invasive plants commonly found in Southern Illinois.

The booklets will be available free of charge to anyone who is interested in learning how to identify invasive species that can be harmful to the public and private lands.

Invasive plants are problems because they can displace native species, reduce wildlife habitat, and reduce productivity of the land.

Some invasive species, such as multiflora rose, autumn olive, and bush honeysuckle, can often form very dense patches that can be difficult to even walk through.

The River to River CWMA is a partnership involving 12 federal and state agencies, organizations and universities.

The partnership addresses the threat of invasive plants in Southern Illinois.

Contact Chris Evans, CWMA coordinator, at rivertoriver@gmail.com or 618-998-5920 to learn how to obtain a copy of this booklet.

Page 2 • Monday's Pub. • August 8, 2011

ILLINOIS DEPARTMENT OF NATURAL RESOURCES
FY11 WILDLIFE PRESERVATION FUND GRANT PROGRAM

PAYMENT REQUEST CERTIFICATION

Grantee Information

Grantee Name: Shawnee Resource Conservation & Development Area, Inc.
Rt 1 Box 256
Simpson, IL 62985

Grant Agreement #: 12-012W

Amount of Reimbursement Requested: $ 1,980.00

I certify that the goods or services specified on this request for payment were for the use of this agency and that the expenditure for such goods or services was authorized and lawfully incurred, that such goods or services meet all the required standards set forth in the grant agreement to which this request for payment relates, and that the amount shown below on this request is correct and approved for payment.

By: Cathy A. Poshard (Signature) Date: 9/19/11

Name: Cathy A. Poshard Title: Program Manager

Grantee F.E.I.N. / TIN: 37-1368038

Attach copies of vendor billings, proof of payment, and other necessary documentation and send the Request for Payment Certification to:

Jody Shimp
Illinois Department of Natural Resources
11731 State Highway 37
Benton, IL 62812

Telephone #: (618)435-8138
E-Mail Address: Jody.Shimp@Illinois.gov

For DNR Use Only

Approved for Payment: Jody P Shimp
Signature

Name: JODY SHIMP

Date: 9/29/2011

Shawnee Resource Conservation & Development Area, Inc.
RR 1, Box 256
Simpson, IL 62985

INVOICE

Bill To:

Jody Shimp
Illinois Department of Natural Resources
11731 State Highway 37
Benton, IL 62812

Grant Agreement: 12-012W

Period Covered by Request: July 15, 2011 through December 31,2012

Itemized Invoice

Items	**Costs**
Image Graphics, Inc,	$1,840.00
Administration Fee	$ 140.00
Total:	**$1,980.00**

Total Reimbursement Request **$1,980.00**

Please remit to:

Shawnee Resource Conservation and Development Area, Inc.
RR1, Box 256
Simpson, IL 62985

If you have any questions concerning this invoice, please contact Shawnee RC&D at, 618-771-2854.

"I certify that all expenditures reported (or payments requested) are for appropriate purposes and in accordance with the Agreement set forth in the application and award documents."

Pattie A. Rosland 9/19/11

Signature and Title *Date*

IMAGE GRAPHICS INC.
2701 Wayne Sullivan Drive
Paducah, KY 42003

270-442-6163 · 1-800-445-6163
Fax 270-442-5810

Invoice

Date	Invoice #
9/1/2011	3379

Bill To	Ship To
RIVER TO RIVER COOPERATIVE 8588 ROUTE 148 MARION, IL 62959	

Terms	P.O. Number	Job Number
		9622 WEED MANA...

Quantity	Description	Amount
2,000	WEED MANAGEMENT	1,840.00
	Sales Tax	0.00

SHAWNEE RESOURCE CONSERVATION 05-07
RIVER TO RIVER CWMA
502 COMFORT DR. STE. E
MARION, IL 62959

2190

70-0320/0812

Date Sept. 9, 2011

PAY to the order of Image Graphics $ 1840.00

eighteen hundred forty 00/100 Dollars

The Bank of Marion
A REAL COMMUNITY BANK
Marion, IL 62959

For Weed Mgmt Booklets

Glenn Lutz Phyllis A. Nocce

⑆081203208⑆ ⑈705 100 4⑈ 2190

THANKS FOR YOUR BUSINESS
ALL CLAIMS MUST BE MADE IN WRITING WITHIN (5) DAYS

Total $1,840.00