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Invasive Plant Species
Regulated by the Illinois Exotic Weed Act

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This University of Illinois Extension ***Technical Forestry Bulletin*** provides written descriptions, images, and distribution maps for each invasive plant species regulated by the Illinois Exotic Weed Act (www.ilga.gov).

Invasive plants are a primary threat to natural areas, native species, and ecosystem health in Illinois. Prevention is one of the most effective and cost efficient means of managing invasive plants. Regulations are one tool used to help prevention efforts. While several laws and administrative rules exist that regulate invasive plants in Illinois, the Illinois Exotic Weed Act (525 ILCS 10/) is the primary means of regulating the movement of invasive plant species that threaten terrestrial natural ecosystems in Illinois.

What are the Regulations?

This act is administered by the Illinois Department of Natural Resources (IDNR). It is illegal for anyone to buy, sell, distribute, or plant any parts of listed species without a permit. Permits may only be issued for research related to demonstrating that the plant is not an exotic weed; to it's control or eradication; and the use of exotic olive (autumn, thorny and Russian) berries in value added products that results in demonstrably sterile or unviable seeds post manufacture. Requests for permits may be made to IDNR's Office of Resource Conservation. One exception to the law is the commercial propagation of listed species intended for sale outside of the state of Illinois that are certified under the Insect Pest and Plant Disease Act.

This law does not regulate possession nor does it require existing plants to be removed. Upon petition the Director of IDNR, by rule, can exempt varieties or cultivar of any species listed in this Act that can be demonstrated by published or current research not to be invasive.

While the original act is several decades old and only listed three regulated species, it went through two major revisions. In 2003, seven additional species were added to the list. In 2015, an additional 16 species were added, raising the list of regulated exotic weed species to 26.

Illinois Exotic Weed List

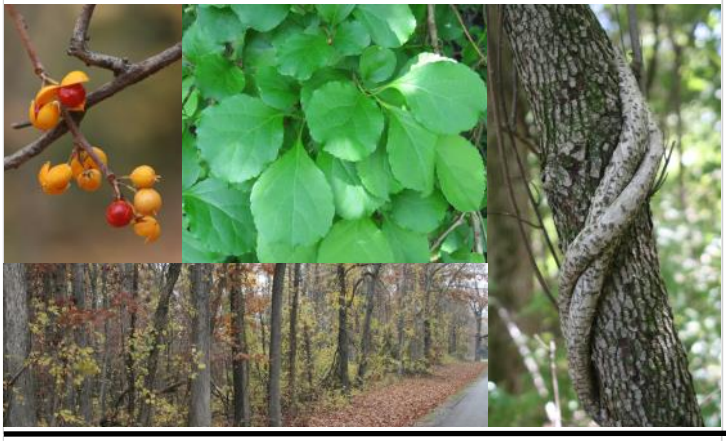
Oriental bittersweet	*Celastrus orbiculatus*
Poison hemlock	*Conium maculatum*
Teasel*	*Dipsacus* spp.
Russian olive	*Elaeagnus angustifolia*
Autumn olive	*Elaeagnus umbellata*
with thorny olive	*Elaeagnus pungens*
Japanese knotweed	*Fallopia japonica*
with giant knotweed	*Fallopia sachalinensis*
and Bohemian knotweed	*Fallopia xbohemica*
Lesser celandine	*Ficaria verna*
Glossy buckthorn	*Frangula alnus*
Giant hogweed	*Heracleum mantegazzianum*
Japanese honeysuckle	*Lonicera japonica*
Amur honeysuckle	*Lonicera maackii*
with spring honeysuckle	*Lonicera fragrantissima*
and Morrow's honeysuckle	*Lonicera morrowii*
and Tatarian honeysuckle	*Lonicera tatarica*
Purple loosestrife	*Lythrum salicaria*
Kudzu	*Pueraria montana*
Common buckthorn	*Rhamnus cathartica*
with saw-toothed buckthorn	*Rhamnus arguta*
and Dahurian buckthorn	*Rhamnus davurica*
and Japanese buckthorn	*Rhamnus japonica*
and Chinese buckthorn	*Rhamnus utilis*
Multiflora rose	*Rosa multiflora*
Saltcedar*	*Tamarix* spp.

* - Indicates all species within the listed genus are regulated

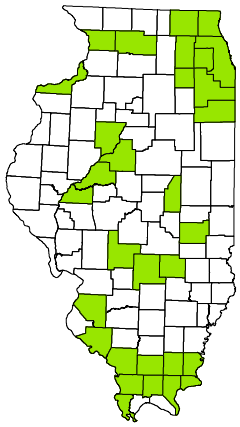
February 2016

Oriental bittersweet
Celastrus orbiculatus

This invasive vine occurs sporadically throughout Illinois. It prefers open woods, forest edges, and areas with recent disturbance. The vines can wrap tightly around trees, girdling the host tree. Bittersweet can also grow into the canopy and shade trees and shrubs. When damaged, bittersweet can aggressively sprout from its roots, often sending up hundreds of new shoots. This makes control very challenging. This vine also readily hybridizes with the rare American bittersweet (*Celastrus scandens)* and is a serious threat to this native species.



Identifying Characteristics

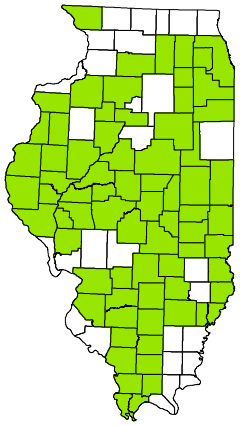


- Alternate, round leaves with blunt teeth. Younger vines may have leaves with long points, but they will still retain rounded shape
- Light gray bark, with diamond shaped lenticels on small vines, turning rough and flaky with age
- Vines lack tendrils, but climb by wrapping tightly around tree trunks, other vines, or any other structure.
- Whitish-yellow small flowers borne in leaf axils
- Female plants have abundant fruit with yellowish-orange covering that splits to reveal a scarlet berry
- American bittersweet looks similar but has more elongated leaves and larger fruit with orange coverings that are only borne at the end of the vines (terminal) as compared to Oriental bittersweet with smaller fruit with yellowish-orange covering in leaf axils, leading to it having much more fruit that American bittersweet

Poison hemlock
Conium maculatum

This herbaceous member of the carrot family has the distinction of being one of the most poisonous plants in the United States. Ingesting even a small amount of this plant can lead to death. Poison hemlock can form very dense patches, particularly in areas with disturbed soil. It prefers sites with full sun. It often is found along roadsides and railroad rights-of-way and in ditches and old fields. While poison hemlock is a threat to natural communities, it is also a concern to livestock producers as a contaminate in hay.

Identifying Characteristics

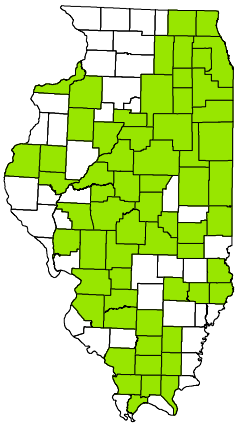


- Biennial forb, with first year plants being a large rosette. Second year plants form tall flowering stalks
- Usually 3-10 feet tall when flowering
- Compound leaves with finely dissected leaflets. Basal leaves larger than leaves on stem. Water hemlock, a native look-a-like, also has compound leaves but each leaflet is larger and not as dissected
- Thick, waxy smooth stems, with noticeable purple blotching
- Small, creamy white flowers, in small (2-5 inches in diameter) loose umbels. Usually many flowers occur on single plant
- Often forms thick patches. Older stands will have both first and second year plants mixed together

Teasel
***Dipsacus* spp.**

Teasel is a biennial herbaceous forb with first year plants being basal rosettes and second year plants forming flowering stalks. While all members of this genus are regulated in Illinois, two species are present in the state, cutleaf and common teasel. Both are similar in appearance, but differ in flower color and leaf margins. Teasel is an invader of openlands and can be found in rights-of-way, roadsides, ditches, prairies, and old fields. Teasel is still occasionally used in dried flower arrangements.

Identifying Characteristics

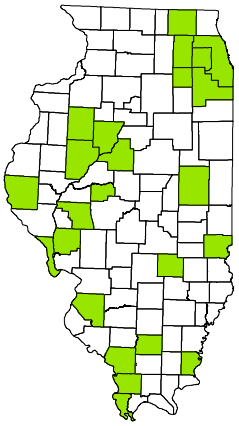


- Biennial forb with first year plants occurring as basal rosettes and second year plants having tall (3-8 feet) flowering stalks
- All parts of plants covered in prickles, even leaf veins
- Plants may have one to dozens of flowers
- Flowers occur as bands on spiny flower heads with large bracts from base of head. Flowers are either white (cutleaf) or purple (common) in color
- Flowers in mid-summer
- Leaves are long and linear, paired along the stem, and either entire (common) or deeply dissected (cutleaf)
- Dead stalks often persist well into next growing season and are easily recognized by unique flower head shape

Russian olive
Elaeagnus angustifolia

This invasive tree is one of the worst invaders of the western United States, but is only sporadically found in Illinois. Northeastern Illinois is where you are most likely to encounter it in the state. This species prefers open areas and is frequently found in roadsides, riparian areas, old fields, and other areas with full sunlight. There is some confusion because autumn olive is often called Russian olive in Illinois, but the two species are easy to distinguish.

Identifying Characteristics

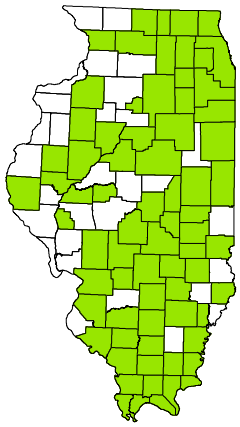


- Medium-sized tree, growing up to 35 feet tall
- Young twigs are silvery in color but bark darkens with age. Older trunks often very shaggy-looking with papery bark
- Leaves are simple and alternate with smooth edges. Leaves are linear in shape, being much longer than wide. Both the upper and lower surfaces of the leaves are covered in silver dots, giving the entire tree a silvery, gray-green appearance. The leaf shape and silver on both sides are the easiest characteristics to distinguish Russian olive from autumn olive
- Flowers are yellowish-silver in color with four petals. Flowering occurs in late spring to early summer
- Fruit are rust red berries that are usually densely covered in silvery scales

Autumn olive
Elaeagnus umbellata
with thorny olive, *E. pungens*

Autumn olive is an extremely common invader throughout much of Illinois, in large part to its previous promotion as wildlife food and cover. Thorny olive, also an invasive exotic species, is more common in the southern United States but has been found in far southern Illinois. It looks very similar to autumn olive and could easily be mistaken. The Exotic Weed Act does allow for permits to be requested to sell products made from the fruit of these species.

Identifying Characteristics

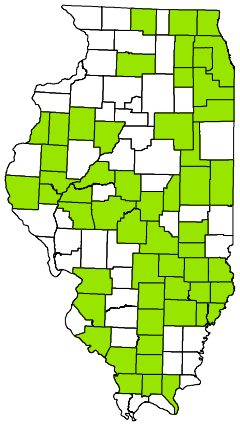


- Tall deciduous shrub or small tree, often retains leaves much longer into fall/winter than native shrubs
- Usually multi-stemmed. Trunks of older plants often fall to the ground and have new shoots growing around them
- Bark is light gray and smooth. Turning somewhat rough with age
- Young twigs often rough, light tan to reddish in color with silvery bumps
- Some Autumn olive plants have thorns, but this trait varies greatly
- Leaves are ovate, simple, alternate, and smooth along the edges. Bottom surface of leaves covered in silvery dots
- Flowers are white to yellowish in color with four petals, very fragrant and bloom in mid-spring
- Fruit ripen to a rusty red color, often with noticeable dots on fruit. Fruit can persist into winter
- Thorny olive looks similar but flowers in the fall, consistently has thorns, and branches tend to climb somewhat like a vine.

Japanese knotweed
Fallopia japonica
with giant knotweed, *F. sachalinensis*
and Bohemian knotweed, *F. xbohemica*

This group of species is taxonomically challenging. It was once thought that Japanese knotweed was more common in Illinois, but recent taxonomic work seems to indicate Bohemian knotweed is actually more abundant. All three of these species are serious invaders of openlands, riparian areas and forest edges. Spread is mostly through stem or root fragments and control is extremely difficult.

Identifying Characteristics



- Tall, multi-stemmed, 'shrub-like' herbaceous plant that dies back to ground in winter. Stems arise individually out of the ground instead of coming from one central growing point (more similar to blackberries than a typical shrub)
- Stems are waxy, variable in color from red to green to mottled, hollow with solid enlarged nodes. Standing stems persist often throughout winter
- Leaves are large (3 to 6 inches long) with pointed tips. Base variable but usually heart-shaped or flat. Leaves usually abundant, giving the plant a very dense look
- Flowers are small, creamed colored, and occur in loose sprays
- Fruit are small, triangular and winged
- All three species are very similar in appearance and taxonomically confusing

Lesser celandine (Fig buttercup)
***Ficaria verna* (syn. *Rananculus ficaria*)**

This is one of the earliest blooming plants in the spring, often mistaken for native woodland wildflowers, especially marsh marigold. Lesser celandine has occasionally been sold as an ornamental. Its early growth allows it to grow even in heavily shaded forests. Preferred habitats include bottomland forests, streamsides, ditches, and other areas with moist soils. Lesser celandine spreads primarily via tubers and bulblets washing downstream. It can form extremely dense stands, crowding out native wildflowers.

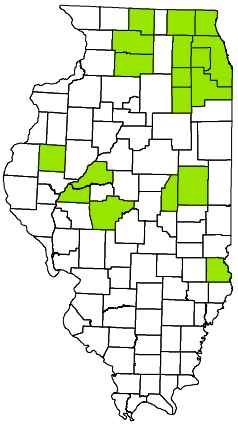
Identifying Characteristics

- Small spring ephemeral herbaceous plant (3-4 inches tall)
- Dark green, kidney-shaped leaves occur in basal rosettes
- Yellow flowers with 8-12 petals. Flowers are borne singly on long stalks Flowers bloom very early in spring, before most trees have leafed out
- After flowering, plants die back to the roots
- Produces thick, finger-like underground tubers and small, round aboveground bulblets, both capable of fragmenting and spreading the population
- May be mistaken for the native marsh marigold (*Caltha palustris*). Marsh marigold is larger (up to eight inch flowering stalk), have flowers with 5-9 petals (actually sepals), and does not produce bulblets or tubers

Glossy buckthorn
***Frangula alnus* (syn. *Rhamnus frangula*)**

This species is one of two non-native buckthorns that dominate woodlands in northeastern Illinois. Glossy buckthorn prefers sites with more moist soils and can be a devastating invader of bottomland forests, wetlands, marshes, riparian areas, wet meadows, pastures, forest edges, and other areas with moist soils. This species can form very dense thickets that alter not only the native plant community, but also ecosystem functions and soil properties.

Identifying Characteristics



- Large deciduous shrub (10 -20 feet in height)
- Often multi-stemmed and thicket-forming
- Light gray, smooth bark with white lenticels (dots), becoming darker and rougher with age
- Leaves are alternate, smooth along the margin (common buckthorn has slight serrations) with prominent, noticeable veins. Veins not as arching as common buckthorn
- Flowers are small, inconspicuous and yellow-green in color. Occur in clusters near leaf axils. Flowering occurs throughout summer
- Fruit are red-purple berries, turning darker with age. Fruit ripen in late summer through early fall

Giant hogweed
Heracleum mantegazianum

In addition to being a state Exotic Weed, giant hogweed is also designated as a Federal Noxious Weed, mainly due to the threat to human health. Contact with the sap of this plant, in the presence of sunlight, can lead to severe chemical burning called photodermatitis. While this plant has been found in three counties in Illinois, all known populations have been eradicated. Giant hogweed prefers partial shade, but can grow in full sun as well. It is often found in old fields, rights-of-way, ditches, open woods, homesites, and other sites with disturbed soils.

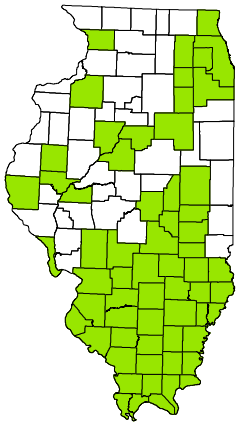
Identifying Characteristics

- Tall, herbaceous biennial or short-lived perennial
- First year plants basal rosettes with large (up to five feet across), lobed and deeply incised leaves
- Flowering plants send up tall (up to 15 feet) flowering stalk with one to several flower heads
- Flowering stalk thick (up to two inches), hollow, and hairy with purple blotching
- Flowers are small, creamy white, and occur in very large (up to two feet in diameter) umbels made up of 50-150 flower rays
- Seeds are flat, oval in shape with brown lines extending 3/4 length of seed and widens at the end
- Very similar to native cow parsnip (H. maximum) but cow parsnip lacks purple blotching, has small flower umbels (one foot in diameter) with fewer rays (15-30), smaller, less incised leaves, and heart-shaped seeds

Japanese honeysuckle
Lonicera japonica

This invasive vine is nearly ubiquitous in woodlands in the southern half of Illinois and it is becoming more common in the northern half of the state. Japanese honeysuckle can grow in a variety of light and moisture conditions and can be found in forests, fencerows, tree plantings, old fields, pastures, prairies, riparian areas and a host of other habitats. It is most damaging when invading young tree plantings or regenerating forests.

Identifying Characteristics

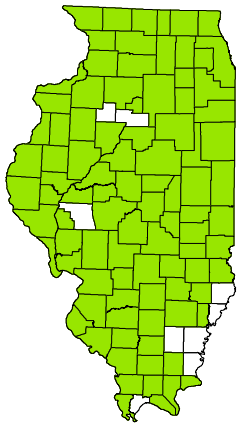


- Semi-evergreen, perennial woody vine
- Young stems thin, wiry and reddish. Older stems woody with light tan, flaky bark
- Vines lacks tendrils, climb via tightly wrapping
- Leaves opposite, dark green, and oval. Slight reddish pubescence on underside of leaves
- Leaves semi-evergreen
- Often some green leaves remain well into winter
- Flowers large, tubular, and very fragrant. Flowers are white, then turn yellow with age. Flower peaks in summer but flowering is possible throughout the entire year
- Fruit are black berries arising in leaf axils against the vine
- Can be mistaken for trumpet honeysuckle (L. sempervirens) but differ in flower and fruit color and hairiness of leaves. Trumpet honeysuckle has red flowers (with yellow centers), red berries, and leaves that are waxy and bluish-green

Amur honeysuckle
Lonicera maackii
with spring honeysuckle—*L. fragrantissima*
and Morrow's honeysuckle—*L. morrowii*
and Tatarian honeysuckle—*L. tatarica*

All four of these species are found in Illinois and are collectively called bush honeysuckle. Amur honeysuckle is the most abundant with Tatarian and Morrow's also easily found. While these species can be distinguished, their ecological impacts and habitat preferences are similar. The bush honeysuckles have the ability to invade even high quality, mature forests.

Identifying Characteristics

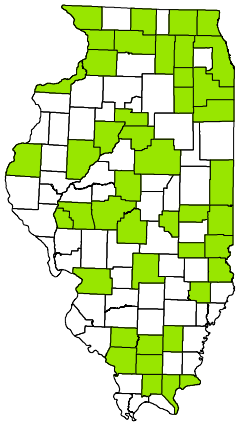


- Medium-sized (up to 15 feet), tardily deciduous, multi-stemmed shrub
- Branches often arch, giving the plant a rounded look
- Light tan, stringy bark. Young twigs with hollow pith
- Leaves opposite, dark green (Amur and spring honeysuckle) or blueish green (morrow's and Tatarian). Amur leaves distinctly pointed at tip. The other species have rounded leaves
- Flowers very fragrant, tubular, usually white to yellow in color (sometimes pinkish). Flowering occurs in early summer, except spring honeysuckle, which blooms in early spring
- Fruit are bright red berries (Amur honeysuckle) or red to orange (other species)
- Opposite branching and buds and arching nature make winter identification easy

Purple loosestrife
Lythrum salicaria

This species is widely recognized as one of the worst invasive plants in the Midwestern United States. It was used heavily in the past as an ornamental and as a nectar source for bees. Purple loosestrife can dominate wetland habitats, causing declines or loss of native wetland plants. In recent years, the release of biological control has aided in reducing its impact. A very similar species, European wand loosestrife (*L. virgatum*) is commonly sold as an ornamental, but is not regulated. The two species are difficult to distinguish.

Identifying Characteristics

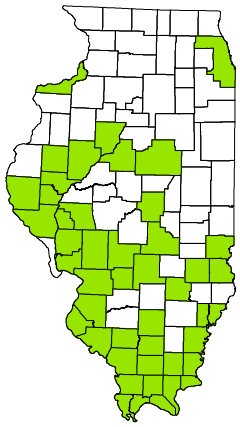


- Tall (up to ten feet) perennial herbaceous forb
- Single to multi-stemmed with stems having a downy pubescence
- Leaves opposite or in whorls of three, lance shaped, 2-4 inches long and sessile. The leaf base may be heart-shaped or clasping around the stem at the base
- Flowers are bright fuchsia with 5-7 (usually six) petals and occur in long terminal spikes. Flowering occurs in late summer to early fall
- Fruit are elongated capsules
- Purple loosestrife looks very similar to European wand loosestrife but can be distinguished by the shape of the leaf base not being heart-shaped or clasping, stems not hairy, and the overall smaller stature (up to four feet tall)

Kudzu
Pueraria montana

Known as the 'vine the ate the south', many people are surprised to find out that kudzu occurs in nearly half of the counties in Illinois. This aggressive vine actually does not spread much by seed. Instead, infestations usually result from old plantings or movement of roots in contaminated soil. Kudzu requires full sunlight to thrive but has the ability to grow high over trees to reach the light, eventually killing the host tree. Kudzu is hard to mistake for any other plant due to its sheer size and extreme hairiness.

Identifying Characteristics

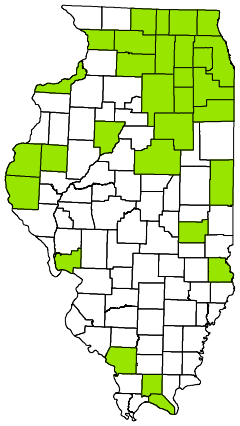


- High-climbing, deciduous woody vine. Capable of reaching lengths of over 100 feet
- Young vines stout with abundant reddish hairs
- Leaves large (up to seven inches long), alternate and compound with three leaflets. Leaflets often lobed
- Flowers purple with white or yellow, contain a very distinctive grape-scented fragrance and occur in short racemes. Flowering occurs mid-late summer
- Fruit are short (up to 3 inches long), flattened bean pods. Pods green, ripening to brown with stiff brown hairs
- After first frost in fall, leaves die back, often leaving a mat of dense, dead vegetation, making kudzu identifiable even in the winter

Common buckthorn
Rhamnus cathartica
with saw-toothed buckthorn—*R. arguta*
and Dahurian buckthorn—*R. davurica*
and Japanese buckthorn—*R. japonica*
and Chinese buckthorn—*R. utilis*

While five different species are listed in this group, only two have been found escaped in Illinois. Dahurian buckthorn is recorded as escaped in one county and common buckthorn is one of the most problematic invasive species in northern Illinois, growing in a variety of habitats.

Identifying Characteristics

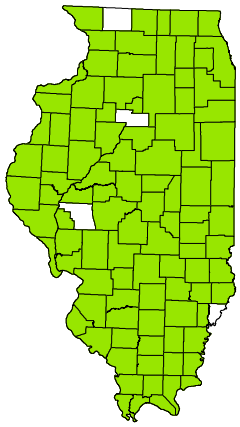


- Large shrub or small tree, growing to 25 feet in height
- Bark is dark gray, turning rough with age. Inner bark is bright orange in color
- Twigs usually tipped with a single sharp spine
- Leaves are sub-opposite to alternate, dark green, oval with rounded serrations along the margins. Veins arching, resembling dogwood venation
- Flowers inconspicuous, greenish-yellow, blooming in the spring
- Fruit are dark purple berries
- Dahurian buckthorn is shorter (up to eight feet) with stouter twigs and slightly longer leaves
- The other four species have not been found in Illinois and are not commonly found in the horticulture trade

Multiflora rose
Rosa multiflora

This thorny exotic shrub is perhaps the most widespread of the regulated Exotic Weeds in Illinois. Multiflora rose was heavily promoted by conservation agencies and farm organizations and planted throughout much of the United States for wildlife habitat and as a 'living fence' for livestock. Common in many woodlands and pastures in Illinois, multiflora rose can also grow in ditches, rights-of-way, fencerows, old fields, prairies, and other areas with adequate sunlight.

Identifying Characteristics

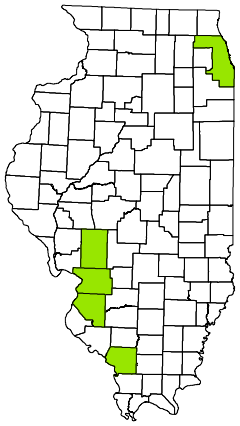


- Multi-stemmed shrub, but can also climb 'vine-like' up to 30 feet into trees
- Arching canes are rounded (by comparison, blackberries are ridged). Canes are smooth and green when young but turn rough and brown with age. Older stems have flaky brown bark
- Paired, curved prickles along the stem that 'pop' off easily when bent to the side
- Leaves with 5-9 serrated leaflets with base of petiole having a feathery fringe, helping to distinguish it from native roses (which typically have 3-5 leaflets and a solid fringe)
- Flowers are small, white, pink, or red flowers (usually white) that occur in clusters. Native roses have larger flowers, often occurring singly
- Fruit are small, red rose hips that occur in clusters

Saltcedar
***Tamarix* spp.**

Labelled as one of the worst invasive plants in the world and a huge problem in the western United States, saltcedar is a large concern for Illinois, though it has only been found in a few counties. One potential means of introduction is through barge traffic carrying the minute seeds in contaminated material. It prefers riparian areas, sand bars, and wastelands, but can grow is very poor soil. This group is very challenging taxonomically and has several species that are highly invasive, so this entire genus is regulated in Illinois.

Identifying Characteristics



- Large shrub or small deciduous tree
- Thin branches
- Bark reddish in color on young branches, becoming brownish-purple and rougher with age
- Foliage, small, scale-like and gray-green in color. Resemble eastern red cedar foliage
- Foliage turns yellowish or reddish in fall
- Flowers are small, white-pink and occur abundantly in clusters. Plants flower in summer and give the entire plant a pinkish hue and fluffy appearance
- Saltcedar is often described as looking like a red cedar that is 'sick' or stressed and growing in the wrong location

This document is a general guide to the regulated Exotic Weeds and not intended to serve a regulatory purpose. Check the Illinois General Assembly website (www.ilga.gov) for current regulations.

Pictures by the author except for the following pictures used with permission from www.bugwood.org.

Poison hemlock leaf—Pedro Tenorio-Lezama
Russian olive flowers—Joseph Berger
Russian olive fruit—Barry Rice
Lesser celandine infestation— John Randall
Lesser celandine vegetation and flowers — Les Mehrhoff
Giant hogweed stem—Rob Routledge
Giant hogweed leaf—Donna Ellis
Giant hogweed whole plant and cut stem—Les Mehrhoff
Kudzu leaf and fruit—Jim Miller
Saltcedar whole plant—Steve Dewey
Saltcedar branch, flowers, and fall colors—Les Mehrhoff

Distribution data downloaded from www.eddmaps.org.

Common and scientific names adhere to:

ITIS (Integrated Taxonomic Information System). 2016. Online Database (http://www.itis.gov, 1 January 2016). Smithsonian Institution, Washington, DC.

Websites related to current topic:

Invasive plant information and images
www.invasive.org/Illinois

Illinois Exotic Weed Act (525 ILCS 10/)
www.ilga.gov

The author would like to thank the following individuals for their technical reviews and comments:

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