Village of Shorewood

Guide to Noxious Weeds
&
Invasive Species

June 2016

Introduction

Our properties are among our most cherished possessions. Did you know that our properties are being invaded by Noxious Weeds and Invasive Species? Complete eradication of these pests may not be possible, but controlling their spread most certainly is.

What are Noxious Weeds and Invasive Species?

Non-native invasive species are organisms that have been introduced by humans either purposely or by accident and that have become serious environmental pests. One reason for their success as pests is that they are typically introduced without the array of associated natural controls (herbivores, parasites, pathogens, predators) that occur in their native range. In addition to the great loss of biodiversity, habitat degradation and other ecological consequences, invasive species cause huge economic damages valued in billions of dollars annually and some pose a human health threat.

Invasive alien plants threaten native species and habitats by competing for critical and often limited resources like sunlight, water, nutrients, soil and space. They succeed through vigorous growth, prolific reproductive capabilities and by causing changes that favor their growth and spread. Invasive plant species displace and alter native plant communities, impede forest regeneration and natural succession, change soil chemistry, alter hydrologic conditions, alter fire regimes, cause genetic changes in native plant relatives through hybridization and some serve as agents for the transmission of harmful plant pathogens. (quoted from Invasive Plant Atlas of the United States, http://www.invasiveplantatlas.org)

Below is a copy of the Village of Shorewood's Code Section. Provided in the code section is a list of the 10 common Noxious Weeds and Invasive Species found in our area This list is one step in the effort to combat invasive species, preserve our natural landscapes and the native plants, animals, and other creatures that inhabit them.

§ 220-1 Responsibilities of owner or occupant.

A. The owner, occupant and agent or person in charge of any lot, place or parcel of land within this Village shall cut and/or remove any unhealthful, unsightly or unsafe growths of grass, shrubs or other vegetation located on said lot, place or parcel of land or on any sidewalk, parkway or other public ways upon which said premises abut as required in order to maintain said premises in a healthful and sightly condition and to prevent such growths from obstructing the view of any pedestrian, motorist or cyclist.

B. In addition, every owner, occupant and agent or person in charge of any lot, place or parcel of land within this Village shall destroy all noxious weeds located on said lot, place or parcel of land or in any sidewalk, parkway, or public way upon which said premises abut. Noxious weeds shall include prohibited invasive species listed in the Wisconsin Department of Natural Resources Chapter NR 40. The most common noxious weeds include, but shall not be limited to:
[Amended 10-20-2008 by Ord. No. 1945; 9-19-2011 by Ord. No. 1992]

(1) Leafy spurge.
(2) Canadian thistle,
(3) Field bindweed, commonly known as "Creeping Jenny"
(4) Beggar ticks.
(5) Burdock.
(6) Nightshade.
(7) Common ragweed.
(8) Giant ragweed.
(9) Poison ivy.
(10) Garlic mustard.

What is the Invasive Species Rule – NR 40?

The invasive species rule (Wis. Adm. Code ch. NR 40) went into effect on September 1, 2009 and makes it illegal to possess, transport, transfer, or introduce certain invasive species in Wisconsin without a permit. The rule affects everyone in Wisconsin and everyone is responsible to comply with these regulations. What you need to do as an individual, business, or organization may vary depending on your type of work and activities. The primary goal is to slow the spread of Noxious Weeds and Invasive species. The complete list of 128 regulated species and the details of the rule are shown using this link; http://dnr.wi.gov/topic/invasives/classification.html.

Taking Action

Some of the simple things you can do to help;

- become familiar with the listed plants
- clean and rinse off the tools and shoes used for gardening
- be careful when transporting soils
- dispose of seeds in the trash
- respond aggressively to rid your land of Noxious Weeds and Invasive Species
- spread the word.

For help in identifying potential Noxious Weeds or Invasive Species on your property or others, you can search the listed references given below that were used in the creation of this document, or contact the Village of Shorewood's Planning and Development Department at **(414)-847-2640** which is open Monday through Friday from 8:00 a.m. to 4:30 p.m. In working together, we can make a difference and control the spread of these uninvited guests.

References

http://dnr.wi.gov/topic/invasives/classification.html
http://www.invasiveplantatlas.org
http://dnr.wi.gov/topic/invasives/documents/NR40GuideGardeners.pdf
http://www.villageofshorewood.org/1
http://www.na.fs.fed.us/fhp/invasive_plants

Leafy Spurge *Euphorbia esula* L.

Common Names: leafy spurge, wolf's milk

Native Origin: Caucasus region of western Asia; it is believed to have entered North America as a seed impurity in 1827.

Description: Leafy spurge is an erect, branching, perennial herb in the Spurge family (*Euphorbiaceae*) growing 2 to 3½ feet tall, with smooth stems and showy yellow flower bracts. Stems frequently occur in clusters from a vertical root that can extend many feet underground. Milky white, sticky sap seeps from plant when cut. The leaves are small, oval to lance-shaped, somewhat frosted and slightly wavy along the margin. The flowers are very small and are borne in greenish yellow structures surrounded by yellow bracts. Gray-brown oblong seeds are produced in three-celled capsules. Seed capsules open explosively, dispersing seed up to 15 feet from the parent plant and may be carried further by water and wildlife. The complex root system forms tough woody networks can reach 15 or more feet into the ground, and may have numerous buds. Leafy spurge also spreads by seed and vegetatively at a rate of several feet per year.

Habitat: Leafy spurge tolerates moist to dry soil conditions but is most aggressive under dry conditions where competition from native plants is reduced. It is capable of invading disturbed sites, including prairies, savannas, pastures, abandoned fields and roadside areas.

Distribution: This species is reported from states shaded on Plants Database map. It is reported invasive in CA, CO, CT, IA, ID, MI, MN, MT, NC, ND, NE, NJ, OR, SD, UT, VA, WA, WI, and WY.

Ecological Impacts: Leafy spurge displaces native vegetation in prairie habitats and fields through shading and by usurping available water and nutrients and through plant toxins that prevent the growth of other plants underneath it. Leafy spurge is an aggressive invader that can completely overtake large areas of open land.

Control and Management:

- **Manual**- Manual eradication is difficult because of its persistent nature and ability to regenerate from small pieces of root. Hand-pulling, digging, and tilling succeed only if the entire root system is removed.
- **Chemical**- It can be effectively controlled using any of several readily available general use herbicides such as glyphosate; apply in June, when the flowers and seeds are developing, or in early to mid-September, when the plants are moving nutrients downward into the roots. Follow label and state requirements. Prescribed burning, in conjunction with herbicides, may also be effective.
- **Biological control-** The U.S. Department of Agriculture has shown success using six natural enemies of leafy spurge imported from Europe. These include a stem and root - boring beetle (*Oberea erythrocephala*), four root-mining flea beetles (*Aphthona* spp.) and a shoot-tip gall midge (*Spurgia esulae*). Large scale field-rearing and release programs are carried out cooperatively by federal and State officials in many northern states. The results are not as immediate as when herbicides are used but, if pesticide use is kept to a minimum, large numbers of these agents build up within a few years and have shown impressive results.

References: www.forestimages.org, http://plants.usda.gov, www.nps.gov/plants/alien, www.nappo.org/PRA-sheets/Euphorbiaesula.pdf, Czarapata, Elizabeth J. Invasive Plants of the Upper Midwest, an Illustrated Guide to their Identification and Control, 2005, p. 61-64

Produced by the USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 02-23-06
Invasive Plants website: http://www.na.fs.fed.us/fhp/invasive_plants

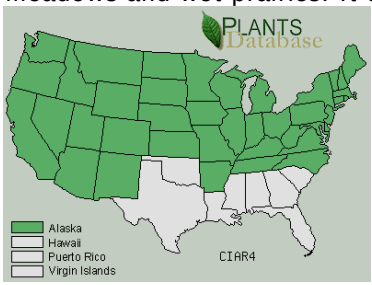
Canadian Thistle *Cirsium arvense* (L.) Scop.

Common Names: Canadian thistle, creeping thistle and Californian thistle

Native Origin: Eurasia

Description: Canada thistle is an herbaceous perennial in the aster family (asteraceae) with erect stems 1½-4 feet tall, prickly leaves and an extensive creeping rootstock. Stems are branched, often slightly hairy, and ridged. Leaves are simple, lance-shaped, irregularly lobed with spiny, toothed margins and are borne singly and alternately along the stem. Fragrant, rose-purple to lavender, or sometimes white flower heads appear from June through October, and occur in rounded, umbrella-shaped clusters. Small light brown seeds break off easily, fall near parent plant, and are wind dispersed. One plant can produce 1,500 to 5,000 seeds that are capable of germinating eight to ten days after flowers open. Fibrous tap roots may extend 6 feet deep. Horizontal roots stemming from the tap roots produce new shoots. Canadian thistle reproduces mainly vegetatively but also from seed.

Habitat: It grows in barrens, glades, meadows, prairies, fields, pastures, and waste places. It does best in disturbed upland areas but also invades wet areas with fluctuating water levels such as stream bank sedge meadows and wet prairies. It can be found in clay to gravely soils.



Distribution: This species is reported from states shaded on Plants Database map. It is reported invasive in AK, AZ, CO, CT, DE, IA, ID, IN, MD, MI, MN, MO, MT, ND, NJ, OH, OR, PA, RI, SD, TN, VA, WA, WI, WV, and WY.

Ecological Impacts: Natural communities that are threatened by Canada thistle include non-forested plant communities such as prairies, barrens, savannas, glades, sand dunes, fields and meadows that have been impacted by disturbance. This highly invasive thistle prevents the coexistence of other plant species through shading, competition for soil resources and possibly through the release of chemical toxins poisonous to other plants.

Control and Management:
Note-Canadian thistle is distinguished from all other thistles by 1) creeping horizontal lateral roots; 2) dense clonal growth; and 3) small dioecious (male and female flowers on separate plants) flower heads.

- **Manual**- Repeated mowing or selective cutting close to the ground can reduce infestations with three or four years. Cutting should be done at least 3 times per year. Note: mowing after flowering will only spread seed; clean mower if used in areas with plants in seed. Early spring burns may discourage however, may also encourage see germination. Due to its perennial nature, entire plants must be killed in order to prevent re-growth from rootstock.

- **Chemical**- It can be effectively controlled using any of several readily available general use herbicides such as glyphosate. Follow label and state requirements.

- **Biocontrol**: At least 7 insect species have been released for Canada thistle control in North America.

References: http://www.nps.gov, http/plants.usda.gov, www.invasive.org, Czarapeta, Elizabeth J., Invasive Plants of the Upper Midwest: An Illustrated Guide to their Identification and Control, 2005. p. 55-57, http://tncweeds.ucdavis.edu/esadocs/documnts/cirsarv.html, Invasive Plants of Asian Origin Established in the United States and their Natural Enemies, USDA FS FHTET 2004-05, p. 51-54

Produced by the USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 01-24-06
Invasive Plants website: http://www.na.fs.fed.us/fhp/invasive_plants

Marsh Thistle *Cirsium palustre* (L.) Scop.

Common Names: marsh thistle, swamp thistle, marsh plume thistle, European swamp thistle, European marsh thistle

Native Origin: Europe

Description: Marsh thistle is an erect herbaceous biennial in the Aster family (Asteraceae) that can grow 4 to 5 feet in height. The stem is winged and spiny, with sparse to fairly dense whitish hairs. Much of the plant is covered in long, sticky hairs. Leaves in first-year rosettes are spiny, long, deeply lobed and hairy on the underside. On flowering plants, leaves are 6 to 8 inches long near the base and shorter toward the top. Flowering stems are erect, thick, and somewhat reddish in color, branched at the top and bristling with spiny wings aligned with the stem. Clusters of (12 or more) spiny purple flower heads bloom in June and July and by late summer produce tiny, hard, elongated seeds attached to feathery thistle-down. Seeds are dispersed by wind.

Spiny rosette- circle of leaves close ground

Habitat: It grows in abandoned fields, agricultural fields, coastal beach or dunes, coastal grassland, forest habitats, floodplains, wetlands, open disturbed areas, pastures, roadsides, wet ditches, vacant lots, wet meadows and yards. It does best in moist acidic soils and is somewhat shade tolerant.

Distribution: In the United States it has been reported in New Hampshire, Massachusetts, New York, Michigan and Wisconsin.

Ecological Impacts: Once introduced, this plant can aggressively colonize natural areas, decrease biodiversity and compromise the ecological integrity of an area.

Control and Management:

- **Manual**- Repeated mowing or selective cutting close to the ground can reduce an infestation within three or four years. Hand-pull or dig rosettes. Cut and destroy flower heads while in the unopened bud stage.
- **Chemical-** Control using herbicides: Clopyralid or metsulfuron-methyl may be used as foliage sprays or glyphosate can also be used during the stage when plants are 6 to 10 inches tall, during the bud to flowering stage, or when applied to rosettes in the fall. If plants are near open water, use only herbicides approved for such use. Follow label directions and state requirements.
- **Biocontrol-** The best way of control may be through the long term use of biocontrol. Field trials are ongoing in Canada using the Rhinocyllus conicus weevil**.**

Wetland infestation

References: www.uwgb.edu/biodiversity/herbarium/invasive_species/cirpal01.htm,
http://webapps.lib.uconn.edu/ipane/browsing.cfm?descriptionid=47
http://plants.usda.gov, http://wisplants.uwsp.edu/scripts/links.asp?spCode=CIRPAL,
www.dnr.state.wi.us/invasives/fact/thistle_EMarsh.htm
www.glifwc.org/invasives, http://invasives.eeb.uconn.edu/ipane/ipanespecies/current_inv.htm
http://invasives.eeb.uconn.edu/ipane/ipanespecies/current_inv.htm
www.for.gov.bc.ca/hfd/library/FIA/2004/FIA-04-05-0053.pdf

Produced by the USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 10-14-05
Invasive Plants website: http://www.na.fs.fed.us/fhp/invasive_plants

Scotch Thistle *Onopordum acanthium* L

Common Names: cotton thistle, Scotch thistle, Scots cottonthistle, heraldic thistle, woolly thistle

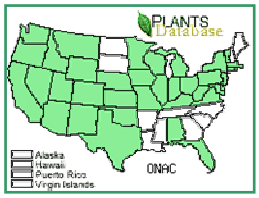
Native Origin: Europe and eastern Asia

Description: An herbaceous biennial (or sometimes annual) in the Aster family (Asteraceae) that grows 6 to 8 feet in height. The plant is coarse, many-spined, highly branched, and grey-green in appearance. The leaves are oblong and prickly being toothed or slightly lobed along the margins. In the first year, leaves form a rosette. During the second year, cottony leaves are large (1 foot), and hairy with triangular lobes. Mid vein is prominent and is covered with fine dense hairs on both sides. Leaves are spiny-edged and form "wings" around the stalk. The dark pink to lavender flower heads measure 1-2 inches in diameter. The whorl of bracts beneath the flower is tipped with flat, pale, orange-colored spines. Flowers stand alone on branch tips and bloom July-October. The seeds of this plant are 4-5 mm (0.2 in.) in length, smooth, slender, and plumed. Stout taproots anchor the plant. It is distinguished from all other thistles by the very dense, white woolly covering on stems and leaves.

First year leaf rosette

Habitat: It occurs in localities such as waste places, dry pastures, fields, rangeland, fence lines, along railroads, highways and around old buildings, usually in gravelly soils where it has escaped from cultivation. It is also found along rivers, streams, canals, or other waterways. The plant thrives in light, well drained, sandy or stony soils. In Connecticut, the species occurs on naturally disturbed gravelly coastal shoreline in the company of several other non-natives.

Distribution: In the United States, the plant is found in most states-from Vermont to Virginia, Alabama and Florida and west to California. Note shaded states on the map.



Ecological Impacts: This plant escaped gardens and/or landscaped areas to become a major weed. It can form dense stands, reduce productivity and compete with native plants for resources. Each plant can produce over 20,000 lightweight seeds that are dispersed by wind, water, or by becoming attached to livestock. It can form a physical barrier to grazing animals.

Control and Management: A dense canopy of competitive, perennial grasses may be the most effective practice for preventing establishment.

- **Mechanical**- Small infestations should be physically removed- dig out by hand or cut a few inches below the soil surface. Mowing by early flowering will reduce seed production, but may require repeated treatment because populations typically exhibit a wide range of developmental stages among individual plants. Slashing should be done prior to flowering since seed may mature in the seed heads after cutting. Plants should not be mowed following seed set, as this increases chances for dispersal.
- **Chemical**- Buried seed may persist for up to twenty years, and re-infestation is likely without yearly management; therefore several years of re-treatment may be necessary. Use Dicamba and 2,4-D herbicides.
- **Biological Control**- A thistle crown weevil (Trichosirocalus horridus) that feeds on musk, bull, plumeless, Italian, and Canada thistles will also feed on Scotch thistle.

References: http://plants.usda.gov, http://extension.usu.edu/weedweb/ident/Scotch_id.htm, Field Guide to Noxious and Other Selected Weeds- www.agf.gov.bc.ca/cropprot/weedguid/scotchth.htm, Invasive Plant Atlas of New England- http://webapps.lib.uconn.edu/ipane/browsing.cfm?descriptionid=81, www.ovma.on.ca/Weeds/scotch.htm, www.cdfa.ca.gov/phpps/ipc/weedinfo/onopordum.htm, www.issg.org/database/species/ecology.asp?si=295&fr=1&sts

Produced by the USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 08-27-05
Invasive Plants website: http://www.na.fs.fed.us/fhp/invasive_plants

Field Bindweed *Convolvulus arvensis* L.

Common Names: field bindweed, wild morning glory, European bindweed, creeping jenny, creeping Charlie, small flowered morning glory, perennial morning glory, field morning glory, devil's guts, orchard morning-glory, possession vine, corn bind

Native Origin: Field bindweed is native to Europe, North Africa, and temperate Asia.

Description: Field bindweed is a perennial vine (0.4 – 2 inches in height) arising from deep, persistent, spreading roots. It has slender, trailing to somewhat twining, branched stems, 8 to 79 inches long, sometimes forming tangled mats. Simple leaves are variable, 0.4 to 4 inches long and 0.1 to 2.4 inches wide. Peduncles arise from leaf axils and bear 1 to 3 white or pink flowers from June to August. Fruits that appear June to September contain 1 to 4 dark brown or black sub ovate seeds. Taproots with a large numbers of annual lateral roots (2 to 10 feet long) develop throughout its length, and penetrate the soil in all directions. It spreads by rhizomes and seeds.

Habitat: It is found in a wide range of habitats: orchards, vineyards, roadsides, stream banks, lake shores, ditches and croplands. This species prefers strong sunlight and moderate-to-low moisture. It does not grow in wet soils.

Distribution: It is a serious weed problem throughout the continental United States

Ecological Impacts: Field bindweed intertwines and topples native species. It competes with other species for sunlight, moisture and nutrients. It poses threats to restoration efforts and riparian corridors by choking out grasses and forbs. It can decrease habitat biodiversity. It is one of the most serious weeds of agricultural fields in temperate regions of the world.

Toxicity: Mildly toxic to grazing animals

Control and Management: Field bindweed is difficult to eradicate because the seeds remain viable in soil for up to 20 years. One plant can produce up to 500 seeds. The deep, extensive root system stores carbohydrates and proteins and allows it to sprout repeatedly from fragments and rhizomes following removal of aboveground growth.

- **Manual**- Discing, tilling or hand pulling
- **Chemical**- Apply herbicide 2,4-D or glyphosate (Roundup); applications that trans-locate to roots, before seeds set
- **Other approaches**: Research suggests that shading will help control this species; mulching using paper, straw, wood chips, or black plastic can be effective in certain areas

Natural Enemies: Eight fungi and ten arthropods have been found on members of the genus *Convlvulus.*

References: www.fs.fed.us/database/feis/plants/forb/conarv/all.html,
www.plantatlas.usf.edu/images.asp?plantID=1755,
http://plants.usda.gov/cgi_bin/topics.cgi?earl=noxious.cgi
Invasive Plants of Asia Origin Established in the US and their Natural Enemies p. 58-59
WSSA-1,000 Weeds of North America: An Identification Guide
ELEMENT STEWARDSHIP ABSTRACT- http://tncweeds.ucdavis.edu/esadocs/documnts/convarv.rtf
Federal Noxious Weed Disseminules in the US -
www.lucidcentral.org/keys/FNW/FNW%20seeds/html/fact%20sheets/Convolvulus%20arvensis.htm

Produced by the USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 02-08-06
Invasive Plants website: http://www.na.fs.fed.us/fhp/invasive_plants

Bearded Beggarticks

Bidens aristosa (Michx.) Britt.

Common Names: Bearded beggarticks, swamp marigold, tickseed sunflower, long-bracted beggar-ticks

Native Origin: a naturalized invasive plant of the United States

Description: An upright annual or short-lived perennial in the aster family (Asteraceae) growing to a height of 1-5 feet and having slender, leafy, branched stems bearing several golden yellow, daisy-like flower heads. Leaves are approximately 6 inches long, opposite, pinnately divided, and segments toothed. Flowers head are 1-2 inches wide blooming August-October. Seed-like fruits are flat, ovoid, usually with 2 barbed spines.

Habitat: Wet meadows, roadside ditches, abandoned fields, low ground, open bottomlands, stream banks, and other damp areas such as ditches.

Distribution: This species is reported from states shaded on Plants Database map.

Ecological Impacts: The prickly fruit are known as beggars'-ticks with 2-pronged "stickers" that cling to clothing in autumn. This species spreads to displace native plant species.

Control and Management:

- **Manual**- Mow to prevent encroachment.
- **Chemical**- It can be effectively controlled using any of several readily available general use herbicides such as glyphosate, dicaba, or picloram. Follow label and state requirements.
- **Biocontrol**:

Reference: http://plants.usda.gov, http://www.enature.com/fieldguide, www.invasive.org, Mid Atlantic Plant Council List, www.forestryimages.org www.hear.org/gcw/html/autogend/species/2709.HTM

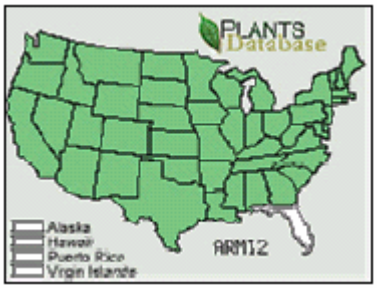
Common Burdock *Arctium minus* Bernh.

Common Names: bardane, beggar's button, common burdock, lesser burdock. wild burdock. wild rhubarb

Native Origin: Europe

Description: Common burdock is a biennial in the Aster family (*Asteraceae)*. In the first year of growth the plant forms a rosette. The second year the plant is erect. The stout, grooved, rough stem has multiple branches, and grows to 2-6 feet tall. The large heart-shaped leaves are alternate, dark green, smooth above, whitish green, and woolly-hairy beneath. The flowers are pink, lavender, purple or white in numerous heads, ¾ inch across. The head is enclosed in a prickly bur composed of numerous smooth or woolly bracts tipped with hooked spines, flowering July to October. One plant typically produces 15,000 seeds. It reproduces by seeds. Large thick taproots branch out in all directions.

Habitat: It grows along roadsides, ditch banks, stream banks, old fields, waste places, and neglected areas. It can be found in full or partial shade.



Distribution: This species is reported from states shaded on Plants Database map. It is reported invasive in CO, ID, IL, KY, MD, MI, OH, OR, PA, SC, TN, VA, WA, WI, WV, and WY.

Ecological Impacts: Indirectly affects the development of economically important plants by hosting powdery mildew and root rot. Reduces the value of sheep's wool due to the seed heads entangling in it and significantly damage the quality of the wool. It is responsible for tainting milk products if grazed in large quantities.

Control and Management:

- **Manual**- Top growth removal through mowing or cutting is effective. Pulling or digging out the plant at flowering. Remove seed heads before seed set. Pulling may be difficult due to large taproot.
- **Chemical**- It can be effectively controlled using any of several readily available general use herbicides such as glyphosate or clopyralid. Follow label and state requirements.

References:
www.ct-botanical-society.org, www.cwma.org/burdock.html, www.nps.gov, www.forestimages.org, www.aspenpitkin.com/misc/weeds/common_burdock.htm, http://plants.usda.gov, Czarapata, Elizabeth J. Invasive Plants of the Upper Midwest, An Illustrated Guide to their Identification and Control, 2005, p. 100

Photo: Mollivan Jon, Flickr ccl

Nightshade *(Solanum dulcamara)*

Photo: tdietmut, Flickr ccl

We have two varieties of nightshade in Nova Scotia. This, the most common variety, has many different names, including European bittersweet, bitter nightshade, bittersweet nightshade, blue nightshade, fellenwort and woody nightshade.

The berries are red and quite attractive. The other type in Nova Scotia (Solanum nigrum) is pretty much the same looking plant except it has black berries as opposed to red, and white flowers instead of purple.

Nightshade is native to Europe and Asia, but is now naturalized almost world wide, where it is an invasive weed.

It can grow in woodlands to scrubland, hedges and marshes. Nightshade is a semi-woody perennial vine, which scrambles over other plants, and is capable of reaching a height of 12 feet, although 3-5 feet is far more common. The leaves are arrowhead-shaped, and often lobed at the base.

Nightshade flowers bloom in loose groups. They are star-shaped with five purple petals and yellow stamens and style. The resulting fruit is an oval red berry that serve as food for many birds. In fact, it is an important food source for some European thrushes. I have found from personal experience the little fruits actually smell a little like tomatoes, not unpleasant at all.

It's interesting information about being food for birds, because the information on human consumption is sharply divided.

Even more interesting is that three members of the Solanum family are cultivated as extremely important food crops for humans. What are they? The tomato, potato and eggplant.

The berries do look very edible, which makes them a risk for ingestion by children. Photo: Arthur Chapman, Flickr ccl

I found the following post online, from no other source than our own Canadian Biodiversity Information Facility:

General poisoning notes:
Climbing nightshade (Solanum dulcamara) is a naturalized woody vine that is found along fencerows, among shrubbery, and at wood edges across most of southern Canada. The plant, especially in its green immature fruits, contains steroidal alkaloids, which have caused poisoning in cattle and sheep. Humans may have been poisoned after ingesting immature berries. Recent experiments show that the mature red berries contain only a small amount of toxin and have little chance of harming children (Alexander et al. 1948, Cooper and Johnson 1984, Hornfeldt and Collins 1989).

So I guess it's the immature berries that are to be avoided more than the mature. Good info to know, or is it???

Photo: ekenitr, Flickr ccl

{Poisoning] symptoms resemble those caused by ingestion of green potatoes: abdominal distress, headaches, and weakness, among more serious indications.

Most toxic are the leaves and unripened (green) berries.

Poison Location
All parts are toxic, especially seeds, fruit, and leaves.

Poison Type
Indole alkaloids in jimsonweed; and solanine, another toxic alkaloid, in green potatoes and nightshades.

Although fatal human poisonings are rare, there have been several cases. The active poison is believed to be solanine. Solanine is a glycoalkaloid and is the exact same compound that makes green-tinged potatoes inedible.

Common Ragweed

Ambrosia artemisiifolia

Aster family (Asteraceae)

Description: This plant is a summer annual up to 3' tall that branches frequently. The hairy stems are green to light pinkish red. The leaves are up to 6" long and 4" across, and are opposite or alternate along the stems. They are deeply pinnatifid, broadly lanceolate (in outline), and usually much wider at the base than the tip. Mature leaves are relatively hairless, but small emergent leaves often have hairs on their undersides. Many of the upper stems terminate in one or more cylindrical spikes of flowers about 1-4" long. Near the base of the central flowering spike, one or two small spikes may develop that are only half as long. The small flowers are initially green, but later turn yellowish green or brown as they mature and develop into achenes. Each flower is about 1/8" long, the males producing a fine yellow pollen that is easily carried by the wind. This pollen is usually released during late summer or early fall. Numerous seeds are produced, which can remain viable for 5 years or more. The extensive root system is fibrous.

Giant Ragweed is similar, can reach 15' tall.

Cultivation: The preference is full sun and average to slightly dry conditions. This plant is rather indifferent to soil type, and will thrive in soil containing high amounts of clay, gravel, or sand – in fact, it prefers sterile soil because of the reduced competition from other plants. Resistance to drought is very good, although some of the lower leaves may wither away. Common Ragweed is often persistent and aggressive because the seeds can remain viable in the soil for several years. This common plant will introduce itself into a wildflower garden or native habitat, whether it is wanted or not.

Range & Habitat: The native Common Ragweed is very common and widespread, occurring in every county of Illinois (see Distribution Map). It can be found in disturbed areas of upland prairies, particularly along the margins near developed areas. Other habitats include weedy meadows, cropland, abandoned fields, vacant lots, fence rows, roadsides, gravelly areas along railroads, gardens and lawns, construction sites, and waste areas. This plant thrives in a variety of disturbed sunny sites, especially where the topsoil has been exposed. It has allelopathic properties that can inhibit the growth and development of neighboring plants.

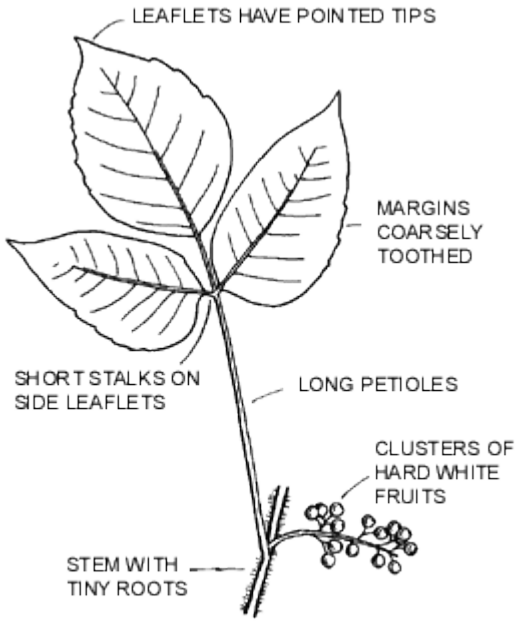
Photographic Location: The photographs were taken in a waste area along a gravel road near Champaign, Illinois.

Comments: Common Ragweed is a major cause of hay fever during the late summer and early autumn. Aside from this unfortunate characteristic, it has considerable ecological value to various birds, moths, and other insects, therefore it isn't necessarily desirable to destroy this plant on sight. Compared to other ragweeds (*Ambrosia spp.*) that occur in Illinois, Common Ragweed has more deeply pinnatifid leaves.

Here is your basic chart of things you CAN count on with poison ivy. If you know that nothing with thorns or 5 leaves in a group can be poison ivy, you're getting there.

You should learn to recognize Eastern and Western Poison Ivy, in all seasons and growth forms:

It is common to find poison ivy as a forest ground-cover, here mixed in with ferns. Poison ivy can deal with both wet and dry locations.



COMPOUND LEAF WITH THREE LEAFLETS (TRIFOLIATE)

Western Poison Ivy

Poison ivy is **number one** on our list of plants to avoid, because it contains a resin that can induce a very unpleasant skin rash if you touch it. Most plants have some sort of chemical defense system that helps protect them against predators, and the chemicals produced by poison ivy and its relatives are particularly effective. The resin contains a mixture of compounds that can bind to skin proteins upon direct contact. These complexes are then recognized by the human immune system (T-cells), resulting in a hypersensitivity reaction. The reaction, characterized by skin eruptions that itch and burn, can develop 12 hours to 5 days after exposure. Most people do not experience skin rashes the first time they touch poison ivy, but subsequent contact can trigger the reaction. Other lucky people do not seem to be susceptible, even after repeated exposures.

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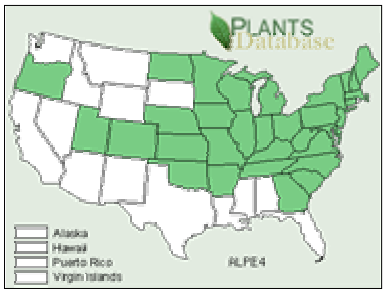
Garlic Mustard *Alliaria petiolata* [Bieb] Cavara & Grande

Native Origin: Europe

Description: Garlic mustard is a cool season biennial herb in the mustard family (Brassicaceae) with stalked, triangular to heart-shaped, coarsely toothed leaves that give off an odor of garlic when crushed. First-year plants appear as a rosette of green leaves close to the ground. Rosettes remain green through the winter and develop into mature flowering plants the following spring. Flowering plants of garlic mustard reach from 2 to 3-1/2 feet in height and produce buttonlike clusters of small white flowers, each with four petals in the shape of a cross. Beginning in May (in the mid-Atlantic Coast Plain region), seeds are produced in erect, slender pods and become shiny black when mature. By late June, when most garlic mustard plants have died, they can be recognized only by the erect stalks of dry, pale brown seedpods that remain, and may hold viable seed, through the summer.

Habitat: Garlic mustard frequently occurs in moist, shaded soil of river floodplains, forests, and roadsides, edges of woods and trails edges and forest openings. Disturbed areas are most susceptible to rapid invasion and dominance. Though invasive under a wide range of light and soil conditions, garlic mustard is associated with calcareous soils and does not tolerate high acidity. Growing season inundation may limit invasion of garlic mustard to some extent.



Distribution: Garlic mustard is located from eastern Canada, south to Virginia and as far west as Kansas and Nebraska. See shaded areas on the distribution map.

Ecological Impacts: Garlic mustard poses a severe threat to native plants and animals in forest communities. Once introduced to an area, garlic mustard out-competes native plants by aggressively monopolizing light, moisture, nutrients, soil and space.

Control and Management:

Mechanical- Hand removal of entire root system of plant is practical for light infestations. For larger infestations cut stems at ground level or within several inches of the ground, to prevent seed production.
Chemical- Herbicide (e.g., Roundup) may be applied for very heavy infestations. Fire can be used but can encourage germination of stored seeds and promote growth of emerging garlic mustard seedlings.
Biocontrol- Five weevils and one flea beetle feed on garlic mustard

References: http://plants.usda.gov, www.nps.gov/plants/alien/fact/alpe1.htm
Biological Control of Invasive Plants in the Eastern United States p. 365-369

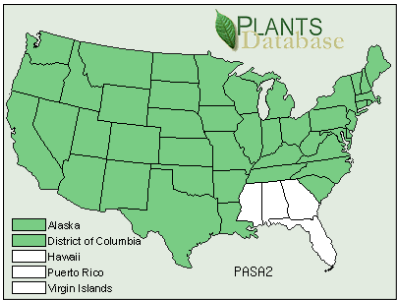
Wild Parsnip *Pastinaca sativa* L.

Common Names: parsnip, wild parsnip

Native Origin: Eurasia

Description: An erect herbaceous plant in the carrot family (*Apiaceae*) growing 4 or more feet in height. Seedlings emerge from February through April, form rosettes and grow vegetatively for one or more years before they form an aerial shoot (bolt) and flower. Rosettes bear upright leaves averaging 6 inches in height. Leaves are pinnately compound and leaflets are oval to oblong, hairless with saw-toothed edges and arranged in pairs along stalk. Hundreds of small yellow flowers are produced on each plant and bloom from June to mid-July. Large yellow seeds are round, flat and slightly ribbed. Plants die after producing seeds. Seeds can remain viable in the soil for four years. The root system is made up of a long thick yellow to white taproot.

Habitat: It is located in a wide range of growing conditions including dry to wet prairies, oak openings and calcareous fens (rare wetland community watered by mineral-rich, alkaline groundwater or seeps). It is commonly found along roadsides, pastures, and in abandoned fields.



Distribution: This species is reported from states shaded on Plants Database map. It is reported invasive in MI, OH, PA, TN, VA, and WI.

Ecological Impacts: Wild parsnip invades and modifies open disturbed habitats. Once an infestation begins, it can spread across an area to form dense stands.

Caution: This plant contains chemicals in the leaves, stems, flowers and fruits that can cause intense, localized burning, rash, and/or blistering when coming in contact with the skin. Contacting with the sap may increase the skin's sensitivity to sunlight. The resulting dermatitis is more like a burn than a rash and is sometimes referred to as false or artificial sunburn.

Control and Management: Wear gloves, long sleeves, and long pants for protection when working to control this plant.

- **Manual**- Parsnip is among the first plants to emerge and may be easily detected and dug out. For large populations, a power bush cutter can be used to cut plants at the base of the stem before flowering, however, plants may resprout. Burning does not harm plants, they simply resprout.
- **Chemical**- It can be effectively controlled using any of several readily available general use herbicides such as glyphosate or triclopyr to spot treat basal rosettes. Follow label and state requirements.
- **Natural Enemies:** The parsnip webworm damages some individual plants severely, but is not known to devastate whole patches.

References: www.forestimages.org, http://plants.usda.gov, www.nps.gov/plants/alien, www.botany.wisc.edu/wisflora/scripts/detail.asp?SpCode=PASSAT, www.uwgb.edu/biodiversity/herbarium/invasive_species/passat01.htm, http://tncweeds.ucdavis.edu/esadocs/documnts/pastsat.html, Czarapata, Elizabeth J. Invasive Plants of the Upper Midwest, An Illustrated Guide to their Identification and Control, 2005 p. 70-72, www.oardc.ohio-state.edu/weedguide/singlerecordframe2.asp?id=540, www.pnas.org/cgi/content/full/102/43/15529

Produced by the USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 08-28-06
Invasive Plants website: http://www.na.fs.fed.us/fhp/invasive_plants