Common Buckthorn

Rhamnus cathartica

Buckthorn leaves.

Ecological Impact

- Casts dense shade which reduces the growth and survival of native shrubs and trees;
- Leafs out so early that even spring ephemerals are impacted;
- Changes soil characteristics making soil inhospitable to other plant life;
- Works as a laxative on birds which spreads seeds and stains outdoor furnishings.

Characteristics

Common buckthorn is a deciduous shrub or small tree that can reach 22 feet in height with a trunk up to 10 inches wide. Its bark is gray to brown and looks like that of plum or wild cherry. A spine often tips the twig of common buckthorn. Buckthorn's inner bark is yellow and the heartwood is pink to orange. Leaves are dark green, broadly oval, and may have pointed or rounded tips with toothed edges. A reliable indicator for identification is its green foliage late in autumn after native shrubs have lost their leaves.

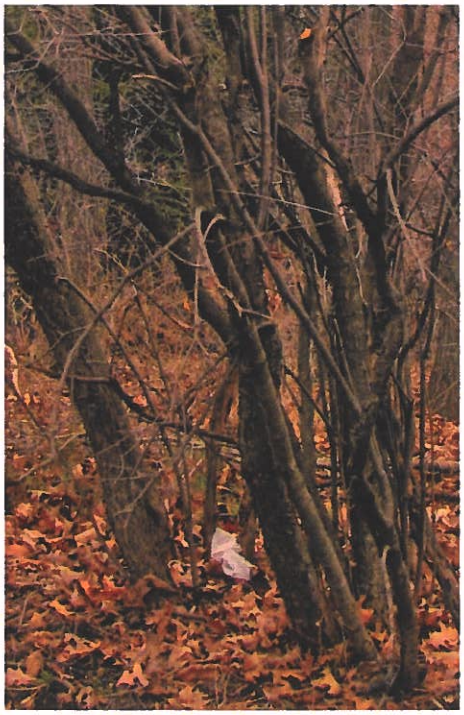
Buckthorn has a long growing season, leafing out before native plants have broken dormancy and retaining its leaves until late fall. Its foliage creates dense shade in which wildflowers, grasses, and shrubs are unable to thrive. Buckthorn's shade also prevents growth of young oaks and hickories.

Buckthorn choking trees in spring.

Prolific seed production also allows buckthorn to flourish. Female specimens produce numerous small, black, berry-like fruits most of which fall directly under the shrubs, creating an impenetrable mass of seedlings; other fruits are eaten by birds and carried far beyond the mother shrub. Because birds have difficulty digesting the fruits, they rapidly expel the seeds (note the species epithet, *cathartica*). Thus, the shrubs reproduce and spread rapidly.

Habitat

Common buckthorn prefers lightly shaded conditions. It invades open oak woods, deadfall openings in woodlands, and woodland edges. It can also be found in prairies and open fields. It tolerates many soil types. Buckthorn respects no boundaries. It is probably in your yard if you have some bushes and a little shade.



Mature and young buckthorn bark.

Buckthorn heartwood.

Similar Species

Invasive

- Glossy buckthorn (*Rhamnus frangula)* does not have a spine at twig tips, the leaf edges are not toothed, and the undersides of the leaves are hairy. Glossy buckthorn typically invades wetlands but also occurs in upland habitats. Both common and glossy buckthorn are capable of growing in full sun as well as heavily shaded areas.

Native

- Native plums and cherries have a similar bark.
- Black chokeberry, gray dogwood and many species of viburnum display similar characteristics.

Control Methods
for Common Buckthorn

Before you kill buckthorn, be certain that you have identified it correctly. The native species that are routinely mistaken for buckthorn are: American plum, black chokeberry, black cherry, hawthorn, nannyberry and gray dogwood.

Hand Pulling

Hand pull small plants and use a weed wrench to pull plants up to 1½ inches in diameter. Hand pulling removes the roots, preventing resprouting. Remove plants gently to prevent releasing buckthorn seeds stored in the soil.

Cutting

If your buckthorn is larger than 1½", saw or clip the stems near the ground. Unfortunately, buckthorn will resprout. You can repeatedly clip the new sprouts which will weaken the plant, but that is a long process. To prevent resprouting, paint cut stumps with glyphosate (Roundup®) immediately after cutting, being careful to avoid other plants as glyphosate kills all growing vegetation. The best time to attack the problem is in the fall when buckthorn is one of the few actively growing shrubs.

Herbicides

Herbicide treatments are least effective in the spring. Glyphosate and triclopyr are both effective against buckthorn.

Immediately after cutting, apply herbicide to the stumps with a bristle paint brush or single-use foam brush.

1. Glyphosate is the active ingredient in Roundup®, Rodeo® and others. 10 to 25% active ingredient is needed for stump applications.

2. Triclopyr is the active ingredient in Garlon® 3A, Garlon® 4, ORTHO® MAX™ Poison Ivy & Tough Brush Killer, Crossbow®, Pathfinder® II and others.

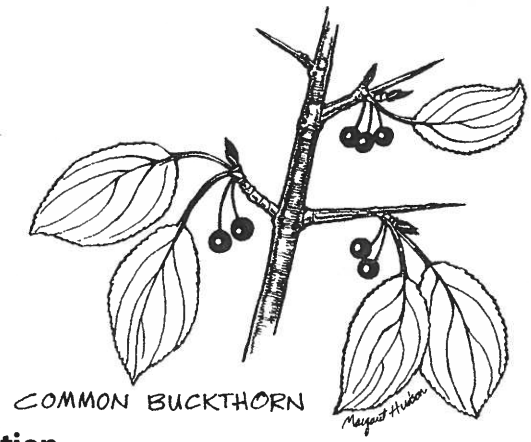
Follow all the usage directions and safety precautions on your herbicide's container.

Burning

First check to see if burning is allowed in your community. Burning buckthorn is usually not an option for homeowners.

Conduct burns as soon as leaf litter is dry. Buckthorn seedlings are vulnerable to fire due to their immature root structure. Fire will top kill a mature plant, but resprouting will occur.

It is difficult to burn a dense buckthorn stand as buckthorn shades out understory plants allowing minimal fuel build-up. Buckthorn leaves rarely provide fuel since they disintegrate too rapidly. In dense stands, buckthorn trees and saplings can be cut and dropped on site, creating fuel for future fires.



Education

Inform your family, friends and neighbors about buckthorn. Remember, birds feeding on your neighbors' buckthorn berries will drop seed in your yard too. Encourage your neighbors to remove their buckthorn and maybe even offer to help.

Suggested Replacements

Immediately upon removing buckthorn, be ready with replacement plants, or cover the bare soil with several sheets of newspaper and wood chips. Leaving bare soil encourages garlic mustard and other weeds to invade.

Many native trees and shrubs serve as great replacements for buckthorn, providing the same level of privacy along with other benefits. The plants listed below provide excellent nesting sites and cover for birds and small mammals and shade for us. Their flowers provide nectar for butterflies and other pollinators while birds eat their fruit.

Elderberry (*Sambucus canadensis*)
Black chokeberry (*Aronia melanocarpa*)
Blackhaw viburnum, (*Viburnum prunifolium)*
Serviceberry (*Amelanchier alnifolia*)

Sources

Fact Sheet: Common Buckthorn from Plant Conservation Alliance's Alien Plant Working Group at http://www.nps.gov/plants/alien/;
Chemical Control of Buckthorn by Janet Van Sloun Larson, Natural Resource Specialist, City of Minnetonka, MN; http://dnr.wi.gov/invasives/fact/buckthorn_com.htm.

Illustration by Margaret Hudson.
Photos by CFC Community Education committee.

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100% Recycled Paper May 2011

Common Reed

Phragmites australis

Common reed in North Barrington.

Ecological Impact

- Common reed has become a destructive weed, quickly displacing desirable plant species. Its high biomass blocks light to other plants and occupies all the growing space below ground so plant communities can turn into a *Phragmites* monoculture very quickly.
- Invasive stands of common reed eliminate diverse wetland plant communities and provide little food or shelter for wildlife.

Characteristics

Common reed is a tall perennial wetland grass ranging in height from 3 to 20 feet. Strong leathery horizontal shoots called rhizomes growing on or beneath the soil surface give rise to roots and tough vertical stalks. Cane-like stems, 1 inch in diameter, support broad sheath-type leaves that are .5 to 2 inches wide near the base tapering to points at the ends. Plants produce large, dense, feathery, grayish purple plumes 5 to 16 inches long in late June through September. The reeds turn tan in the fall and most leaves drop off, leaving only the plume-topped shoot. The root system is comprised of rhizomes that can reach to 6 feet deep with roots emerging at the nodes. Common reed reproduces by spreading rhizomes that form large colonies.

Habitat

Common reed thrives in sunny wetland habitats. It grows along drier borders and elevated areas of brackish and freshwater marshes and along riverbanks and lakeshores. The species is particularly prevalent in disturbed or polluted soils with alkaline and brackish waters but will tolerate highly acidic conditions. It can grow in water up to 6 feet deep and also in somewhat dry sites. It can be found along roadsides, ditches, open wetlands, riverbanks, lake shores, dredged areas, and disturbed or undisturbed plant communities.

Phragmites like a grassy forest.

Common reed seed heads.

Common reed with car for height comparison.

Common reed stems and leaves.

Similar Species

In this area, there is no other plant likely to be confused with *Phragmites* although similar plants do appear in other parts of the country. It has a very distinctive appearance, and seeing this tall, plumed plant in wet ditches or marshy places leaves little doubt as to its identity.

Control Methods
for Common Reed

Property owners wishing to deal with stands of *Phragmites australis* should contact a company that is licensed to perform this type of service.

If you have a very small amount of common reed, the following methods will help prevent it from spreading.

Manual

You can dig up very small populations if you are careful to remove all root material and surrounding soil. You can cut common reed and dig the rhizomes, but physical control is difficult because the plant can reestablish from seed or remaining rhizomes.

Frequent mowing is sometimes an effective control of common reed.

Chemical

Common reed can be effectively controlled using a general use herbicide such as glyphosate. Follow label and state requirements.

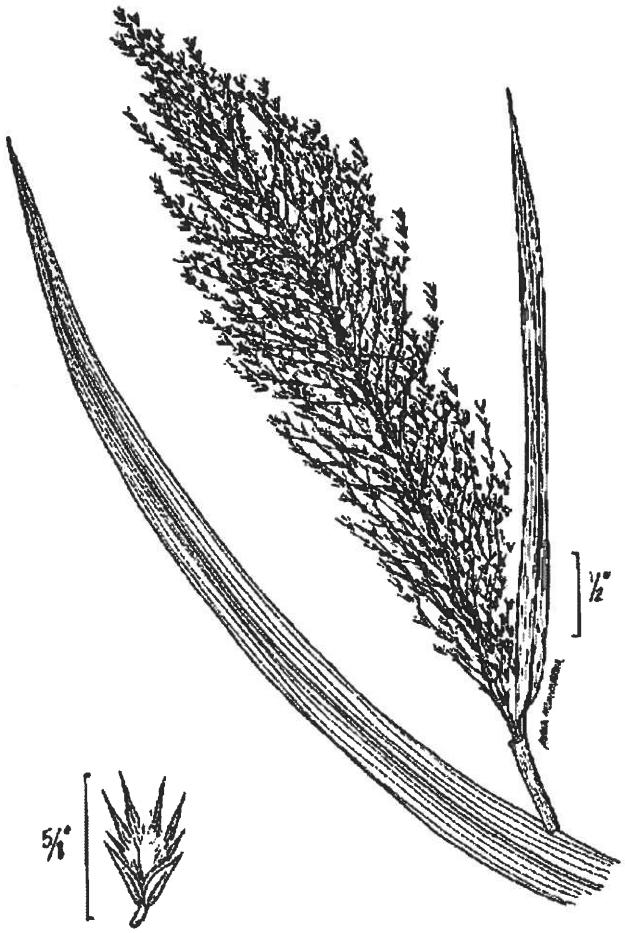
If your common reed is growing in a wet area, the herbicide must be one approved for use in areas of standing water. This is a job for a professional. The appropriate chemical treatment will be a challenge and may require a permit.

Suggested Replacements

Immediately upon removing a stand of common reed from dry sites, install replacement plants or cover the bare soil with several sheets of newspaper and wood chips. Leaving bare soil encourages other weeds to invade.

Most native grasses that grow happily in the habitat from which you are removing common reed will thrive in its place.

Invasive triple-threat: common reed, cattails and reed canary grass.



Phragmites australis. USDA PLANTS Database, USDA NRCS PLANTS Database, Bugwood.org

Sources

http://www.na.fs.fed.us/fhp/invasive_plants/weeds/common-reed.pdf#xml=http://www.na.fs.fed.us/cgi-bin/texis.exe/Webinator/search/xml.txt?query=phragmites&pr=default&prox=page&rorder=500&rprox=500&rdfreq=500&rwfreq=500&rlead=500&sufs=0&order=r&cq=&id=4a31c50533

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Invasive Species in the Barrington Area

Dame's Rocket

Hesperis matronalis

Dame's rocket flower and leaves.

Ecological Impact

- Dame's rocket quickly escapes cultivation because of its prolific seed set.
- Many people think that it is a native wildflower because dame's rocket is often sold in wildflower mixes. Dame's rocket eliminates native vegetation with its profuse plant density.

Characteristics

Dame's rocket is an erect, herbaceous biennial or perennial in the mustard family (*Brassocaceae*) growing 1.5 to 3 feet in height. The leaves are oblong, sharply toothed, and alternate. Leaves decrease in size as they ascend the stem. The pink, purple, or white four-petaled flowers form large loose, fragrant clusters that bloom from May to June. Long, narrow fruits produce many seeds which spread mechanically when the seed pods open. Ground-foraging birds eat and disperse the seeds as well.

Dame's rocket generally produces a basal rosette during the first year and flowers the following year. The plant blooms prolifically and produces large quantities of seed from May into July. Each plant may have several clusters of flowers at various stages of development, enabling the plant to produce both flowers and seeds at the same time.

The seed pods of dame's rocket strongly resemble the seed pods of Garlic Mustard—another plant in the mustard family that is invasive in the Barrington area.

Habitat

Dame's rocket grows in moist woodlands, woodland edges, roadsides, railroad rights-of-way, disturbed sites, waste ground, thickets, and open areas.

Four petals on dame's rocket.

Five petals on Phlox divaricata.

Five petals on marsh phlox. Phlox glaberrima.

Wild sweet William. Phlox maculata.

Dame's rocket flowers in their multiple colors.

Similar Species

Non-native

- Garden phlox (*Phlox paniculata*) has opposite leaves that are not toothed and flowers with five petals not four.

Native

- Woodland phlox (*Phlox divaricata*) blooms April-June. Flowers have five petals. Height is 12-20". Leaves are mostly opposite and oblong with a blunt end, 1-2" long. Thrives in woods and forests.
- Marsh phlox (*Phlox glaberrima*) is 1½–2½' tall with opposite leaves. Flowers are about ¾" across with 5 rounded petals. Prefers moist soil in light shade to full sun.
- Wild sweet William (*Phlox maculata*) is 1-3' tall with opposite leaves. Fragrant mostly lavender flowers are about ¾-1" across with 5 rounded overlapping petals.

Control Methods
for Dame's rocket

Locating and removing plants immediately before seed sets is the best way to prevent the spread of dame's rocket. Be sure to check the contents of wildflower seed mixes for this species, and do not purchase or plant mixes that carry it. As a general practice, avoid all "meadows-in-a-can."

Manual

Pulling or using a dandelion digger is most effective when the soil is moist. If you pull blooming plants, do not compost them as the seeds can still ripen and spread.

It is important to remove the whole root and not just to break off stalks at ground level. Roots left in the ground can sprout new plants the following year that may be even larger or more robust.

You can cut the flower heads off established plants after bloom so the plants do not set seed. Flower heads should be bagged for the landfill or burned where permissible. Do not allow the plants to dry before burning as seedpods may burst open and spread seeds when dry. Where there is sufficient leaf litter or other fuel, burning has been found to be an effective control method.

Chemical

Dame's rocket can be effectively controlled using any of several readily available general use herbicides such as glyphosate. Follow label and state requirements. To avoid damaging adjacent native vegetation, apply herbicide in late fall when native plants are dormant but the dame's rocket basal leaf rosettes are still green and vulnerable to sprays. Avoid getting the herbicide on other plants. Repeat control measures for a few years until seeds in the soil are depleted.

Education

Tell your family, friends and neighbors about dame's rocket. Many people mistakenly think of this plant as "wild phlox" and are unaware of its invasive potential. Leaving the plant to grow and disperse seed will create a bigger invasive problem in the years to come.

Suggested Replacements

Immediately upon removing a patch of dame's rocket, install replacement plants or cover the bare soil with several sheets of newspaper and wood chips. Leaving bare soil encourages garlic mustard and other weeds to invade.

Most native grasses and forbs that grow happily in the habitat from which you are removing dame's rocket will thrive in its place.

USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 2: 175.

Sources

http://www.na.fs.fed.us/fhp/invasive_plants/weeds/dames-rocket.pdf

http://pddc.wisc.edu/factsheets/Low%20Color%20PDF%20Format/Dames%20Rocket.pdf

http://dnr.wi.gov/invasives/fact/dames_rocket.htm

Photos by CFC Community Education committee. Multiple color dame's rocket photo from flickr Creative Commons.

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Garlic Mustard

(Alliaria petiolata)

Impacts on Forests

- ⊘ ***Out-competes many tree seedlings and other native vegetation.***
- ⊘ ***Adversely affects native insects and other wildlife.***

4-petaled flowers

Infested forest S. Janke - USFS

First-Year Plants

Garlic mustard is a biennial; it has a two-year life cycle. Seeds germinate in April. Seedlings are shown below. Note oak leaves for size comparison.

Leaves: Clusters of 3-8 rounded to kidney-shaped leaves develop at ground level during the first growing season.

They have scalloped edges, a wrinkled appearance, and remain green all winter.

First-year plant in autumn D. Eagan - WDNR

Second-Year Plants

Flowers: Small (1/4 inch), white, 4 petals, on the end of the main stem and side branches, blooms April through June. (see top of page)

Leaves: Heart-shaped to triangular, 1-3 inches wide, coarsely toothed on edges, alternate on the stem, give off a garlic odor when crushed.

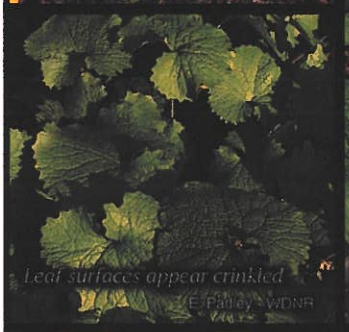
Height: Flowering stalks grow 1-4 feet tall.

Roots: Taproot is slender, white, and often has an S-shaped bend near the top.

Seeds: Capsules appear soon after flowering and quickly lengthen.

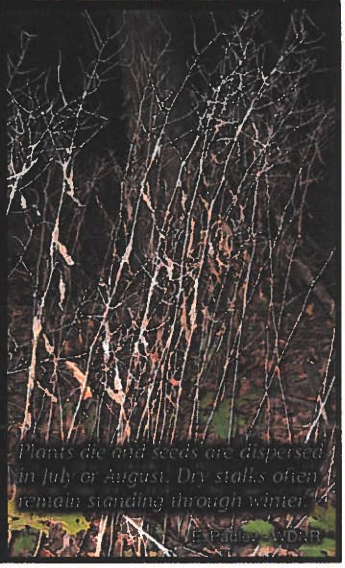
Seeds are small, produced in a row inside the capsule, and black when ripe. More than 100 seeds per plant.

Second-year flower stalk with seed capsules E. Padley - WDNR



Leaf surfaces appear crinkled E. Padley - WDNR

Second-year flower stalk E. Padley - WDNR



Plants die and seeds are dispersed in July or August. Dry stalks often remain standing through winter. E. Padley - WDNR

Similar Species

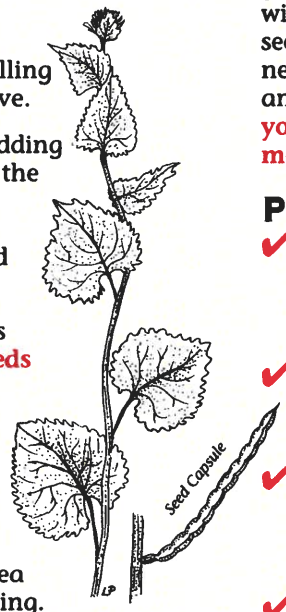
- ✔ **Violet** ***leaves resemble first-year plants, but flowers bloom low and have 5 petals, leaf surfaces are less crinkly. No taproot.***
- ✔ **Ground Ivy** ***(creeping Charlie) spreads along the ground as a vine and has purple flowers.***

Control Methods for Garlic Mustard

Control strategies must be applied for eight or more years until the garlic mustard seed bank is depleted. Methods may vary over time, depending on the extent of the invasion. Vulnerable areas, especially woodlands, should be monitored each spring to promptly detect new invasions and prevent re-occurrence. Mark areas where plants were found to aid in future monitoring.

Hand Pulling

For smaller infestations or where large groups of people are involved, hand pulling or digging garlic mustard can be effective.



- ✔ If plants are pulled or dug before budding begins, they may be scattered about the area to dry out, preferably off the ground. Do not put pulled plants in piles where roots may stay moist and development can continue.
- ✔ Once flowering has begun, all plants must be bagged. **Garlic mustard seeds can still ripen after plants are uprooted!** (using energy stored in stems and leaves.) Pulled plants may be put in plastic bags or large paper bags.
- ✔ Bagged plants should be disposed of by burning, burying deeply in an area that will not be disturbed, or landfilling. (Please, do not burn plastic bags.) Let garlic mustard collected in paper bags dry thoroughly before burning.
- ✔ Do not compost garlic mustard. Few compost piles produce enough heat to destroy all garlic mustard seeds.
- ✔ To send bagged plants to the landfill, label the bags as 'Invasive Plants – approved by DNR for landfilling'.

Cutting

Cutting plants a few inches above the soil surface **just after the flower stalks have elongated but before the flowers have opened** can be effective in preventing seed production and may kill garlic mustard plants. However, some plants may send out new flower stalks that require additional cutting. Monitor site regularly.

Herbicides

- ✔ **Extensive infestations** – if too large for manual methods – can be controlled by using a 1% or 2% solution of glyphosate (there are many brands). Apply to the foliage of individual plants and dense patches in fall and/or very early spring. **At these times most native plants are dormant, but garlic mustard is green and vulnerable.** Glyphosate is a nonselective herbicide that will kill or injure all green non-target plants. Use caution during application, and spray so that herbicide neither drips from the garlic mustard leaves or drifts onto adjacent desired vegetation.
- ✔ Use herbicides only when necessary. ***ALWAYS* read the entire herbicide label carefully, following all mixing and application instructions.** Wear recommended protective gear and clothing.

Weed Torch (for wet conditions)

Another method for spot-killing patches of newly germinated seedlings in spring is to "flame" them with a propane weed torch. Flames quickly kill tender seedlings, usually without permanently damaging nearby perennial plants. Use the weed torch cautiously, and only when conditions are wet. ***ALWAYS* contact your local fire control agency prior to using this method. Burning permits may be required.**

Preventing Further Spread

- ✔ Clean shoes, pockets, pants cuffs and equipment thoroughly after walking or working in infested areas. Garlic mustard seeds are tiny and are often carried off in clothing, shoes and mud.
- ✔ Survey your area for green garlic mustard plants. Plants can be spotted any time they are not covered by fallen leaves or snow.
- ✔ When you find an infestation, remove plants that are producing seed first, working from the least infested to the most infested area. Then remove other plants, again starting with the least infested areas.
- ✔ Monitor non-infested woodlands carefully and frequently. Removing one or two plants before they go to seed is much easier than removing hundreds or thousands later on.

Websites

HTTP://TNCWEEDS.UCDAVIS.EDU/ESADOCS/ALLIPETI.HTML
An extensive summary of information about garlic mustard. The Nature Conservancy also has information on many other invasive plants.

HTTP://DNR.WI.GOV/INVASIVES/FACT/GARLIC.HTM
A summary of garlic mustard information from the Wisconsin DNR, with links to other sites.

HTTP://WWW.BOTANY.WISC.EDU/WISFLORA
Photos and information on all Wisconsin plants.

Credits

This factsheet is based on the brochure: *Garlic Mustard – A Major Threat to Wisconsin's Woodlands*, by Paul Hartman and Sharon Morrisey, Univ. of Wisconsin-Extension, 2002. It was revised by Colin Kelly, David Eagan, Eunice Padley, Kelly Kearns, and Colleen Matula, WDNR, 2006.

Designed by L. Pohlod

PUB-FR-350-2006

Reed Canary Grass

Phalaris arundinacea

Reed canary grass infestation along Flint Creek in Lake Barrington.

Ecological Impact

- Tenaciously invades disturbed areas
- Produces a heavy layer of thatch which suppresses other vegetation
- Reduces diversity of native plants and insects
- Provides little shelter or food for wildlife

Characteristics

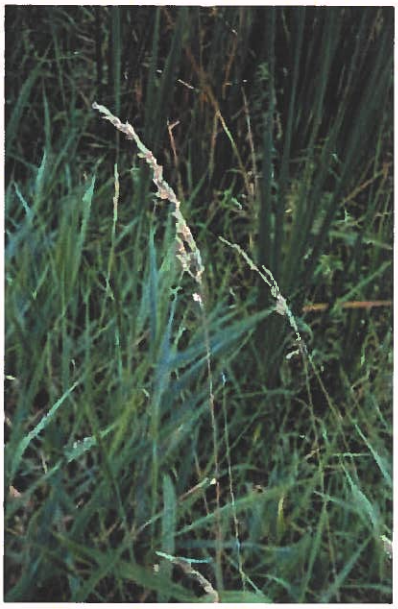
Reed canary grass is a perennial Eurasian grass originally planted for forage and erosion control. It grows from extensive rhizomes to form dense monocultures. The leaves are broad—as much as 0.4 inches—and are flat and rough. They are 3½" to 10" long. Plants can reach to over 6-feet tall. A cool season grass, reed canary is one of the first grasses to sprout in spring.

The plant produces leaves and flower stalks for 5 to 7 weeks after germination in early spring, then spreads laterally. Growth peaks in mid-June and declines in mid-August. A second growth spurt occurs in the fall. The shoots collapse in mid to late summer, forming a dense, impenetrable mat of stems and leaves. The seeds ripen in late June and shatter when ripe. Seeds may be dispersed from one wetland to another by waterways, animals, humans, or machines.

Habitat

Reed canary grass is found in dense stands along roadsides, in wetlands, ditches, stream and pond banks, moist fields, and wet meadows. It can grow on dry upland soil and in wooded areas, but it grows best on fertile, moist, organic soils in full sun, especially in disturbed wetlands.

Broad leaves and rhizome structure of reed canary grass.



Late-season seed head: tan, closed.

Large, thin, membranous ligules protrude from the nodes where the leaves are attached to the stem.

Similar Species

Non-native

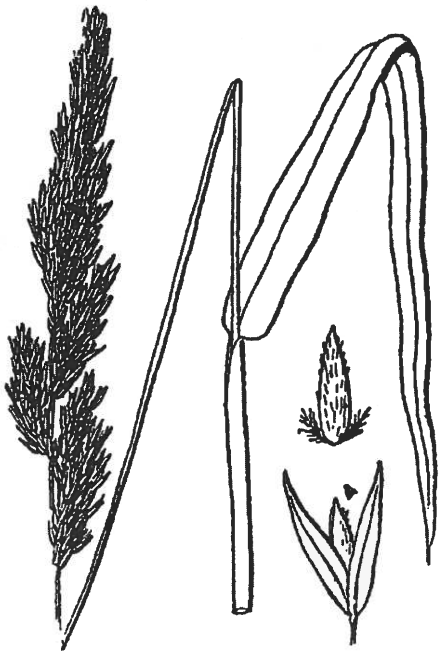
- Orchard grass (*Dactylis glomerata*) is an alien with narrow leaves (<0.1 to 3 inch) and a wider, less pointed seed head with short, stiff side branches at the bottom.

Native

- Blue joint grass (*Calamagrostis canadensis*) is a native that is shorter than reed canary grass and more draping rather than upright. It is not invasive.

Control Methods
for Reed Canary Grass

Reed canary grass reproduces primarily through spreading rhizomes. It is much easier to control small populations than to try to remove large, established infestations. Reed canary grass can also spread by seed. Any control method requires 5-10 years of monitoring and follow-up treatment to deplete the seed bank. Re-infestation is likely unless there is a population or seed bank of native species to provide competition. Use care to protect native species.



Phalaris arundinacea. USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 1: 170.

Large Populations

Prescribed burning in late spring should be followed by mowing or herbicide treatment to prevent seed production. It might be necessary to apply herbicide both in spring and in fall. Burning can enhance growth of reed canary grass if there are no native species present to provide competition. In wet conditions, first top kill reed canary grass with 1.5% active ingredient glyphosate, then burn.

Mowing in early/mid-June and in early October removes seed heads and exposes the ground to light to encourage growth of natives (if present).

Herbicide (glyphosate) applied in spring and fall (when other species are dormant) may be sprayed or wicked. In wet areas, be sure to use glyphosate which has been formulated for use near water. Use caution to protect native species. Cut back last year's dead leaves in spring to improve effectiveness of herbicide.

In the absence of native species or a native seedbank, remove severe infestations of reed canary grass 12-18" deep with a bulldozer. Reseed with native species.

Small Populations

In early stages of invasion, hand-pulling or digging may be successful. Remove new plants before they can reproduce vegetatively.

Cover small patches with black plastic for at least one growing season. Be sure rhizomes don't spread beyond the plastic. Remove plastic; then seed the area with appropriate native species.

In July and August, tie large clumps of reed canary grass; then cut stems and immediately spray with glyphosate. Follow up with burning or mowing. Monitor for resprouting.

Wetland Protection

Careful monitoring of wetlands, especially following disturbance, can prevent major infestations. Reduce infestation from seeds from surrounding slopes by using erosion control on hillsides or by using catch-basins. New plants are easiest to spot in spring. Protect native species when removing reed canary grass.

Sources

http://www.invasive.org
http://dnr.wi.gov/invasives/fact/reed_canary.htm
http://www.dnr.state.oh.us/Portals/3/invasive/pdf/invasivefact-sheet6.pdf
http://www.misin.msu.edu

Photos by CFC Community Education committee.

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Teasel, Common & Cut-leaved

Dipsacus fullonum, Dipsacus laciniatus

Cut-leaved teasel flower head.

Ecological Impact

- Lack of natural enemies allows teasel to proliferate. If left unchecked, teasel can quickly form large monocultures excluding all native vegetation.
- The teasel population has rapidly expanded in the last 30 years particularly along highway systems where dispersal is aided by mowing equipment.

Habitat

Teasel grows in open, sunny habitats in from wet to dry conditions. Optimal conditions seem to be mesic. In Illinois, teasel sometimes occurs in high quality prairies, savannas, seeps, and sedge meadows, though roadsides, railroad tracks, dumps and other heavily disturbed areas are the most common teasel habitat. Teasel is often found in large stands of tall plants of similar height.

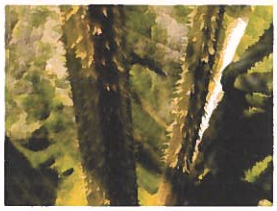
Characteristics

This biennial plant grows as a basal rosette for a minimum of one year and in its second season sends up a tall flowering stalk and dies after flowering. The period of time as a rosette varies depending on how long it takes the plant to acquire sufficient resources for it to flower.

Leaves in the rosette are somewhat ovoid in young plants and become large, oblong and hairy in older plants. Leaves of the cut-leaved teasel are deeply lobed. The cut-leaved teasel's leaves are joined at the stem so that they form a cup that will hold water. As a rosette, teasel develops a large tap root that may become more than two feet in length and an inch in diameter at the crown.

Leaf of young cut-leaved teasel plant.

Cut-leaved teasel normally has white flowers from July to September while common teasel produces purple blooms from June to October. Stiff, spiny, leaf-like structures called bracts curve up from the base of the flower head. A single teasel plant produces more than 2,000 seeds, which remain viable for several years. The seeds disperse in close proximity to the parent plant but can be transported longer distances by water or on mowing equipment.



Spiny teasel stems.

Previous season's teasel.

Field of teasel.

Similar Species

Invasive

- Bull thistle (*Cirsium vulgare*) has longer spines. The thistle flower is above the spiny base, while the teasel flowers come out of the honeycomb sections. Thistle leaves are alternate while teasel leaves are opposite.

Native

- Tall thistle (*Cirsium altissimum*)
- Pasture thistle (*Cirsium discolor*)

These native thistles also have alternate leaves. Native thistles aren't very prevalent.

Control Methods
for Teasel

Accurately identify cut-leaved and common teasel before attempting any control measures. If identification of the species is in doubt, confirm the plant's identity with a knowledgeable individual and/or by consulting appropriate books or websites.

Manual

For small populations, mechanical methods work quite well. Dig up young rosettes using a dandelion digger. As when digging dandelions, remove as much root as possible.

When the plants have sent up the flowering stalk, manual control is accomplished by:

1. Cutting off the flower head, being sure to do so at the proper time—when it is flowering but has not set seed.

Remove flower heads and dispose of them by bagging or burning. Flowers can release seed even after they are cut.

2. Then cutting the plant at or below the ground level.

3. Monitoring the area for plants that you may have missed. A later inspection should be performed to catch any root crowns that re-sprout.

Herbicides

The most cost-effective control method for heavily infested sites is the use of foliar herbicides. Broadleaf herbicides are preferred over nonselective herbicides to minimize effects on nontarget plants. The rosette should be treated during the growing season.

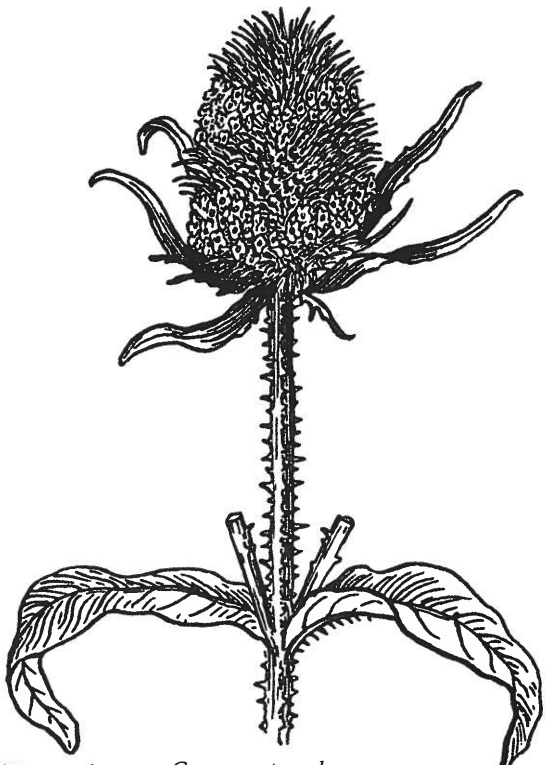
1. Spraying the plant when it is in the rosette stage should prevent it from developing seed heads. If rosettes are green into the fall, glyphosate can be applied then when danger to other plants is minimal or non-existent.

2. Check after a couple of weeks to see if the treatment has been successful. Re-apply if necessary.

3. Multi-year attention is necessary to control this plant.

Ineffective practices

Mowing and burning by themselves are not successful control strategies. Use them in conjunction with other approaches.



Common teasel.

Bull thistle, an invasive similar to teasel.

Sources

http://mdc.mo.gov/landwater-care/invasive-species-management/invasive-plant-management/common-and-cut-leaved-teasel-co

http://dnr.wi.gov/invasives/fact/teasel_com.htm

Photos by CFC Community Education committee.

Drawings: Teasel—Wikimedia Commons public domain. Bull thistle—USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 549.

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