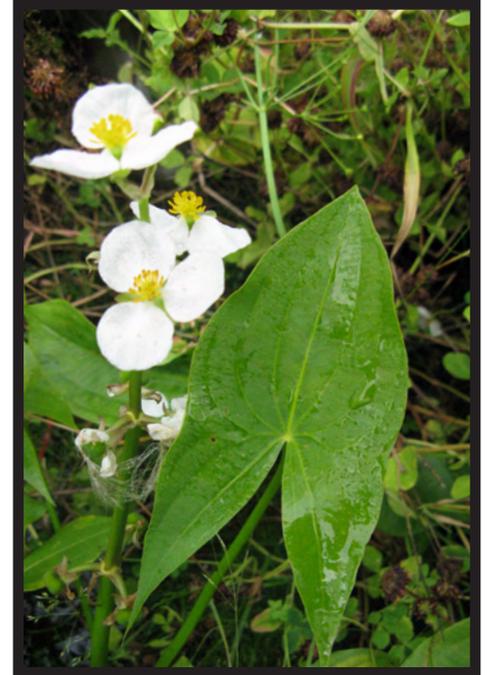
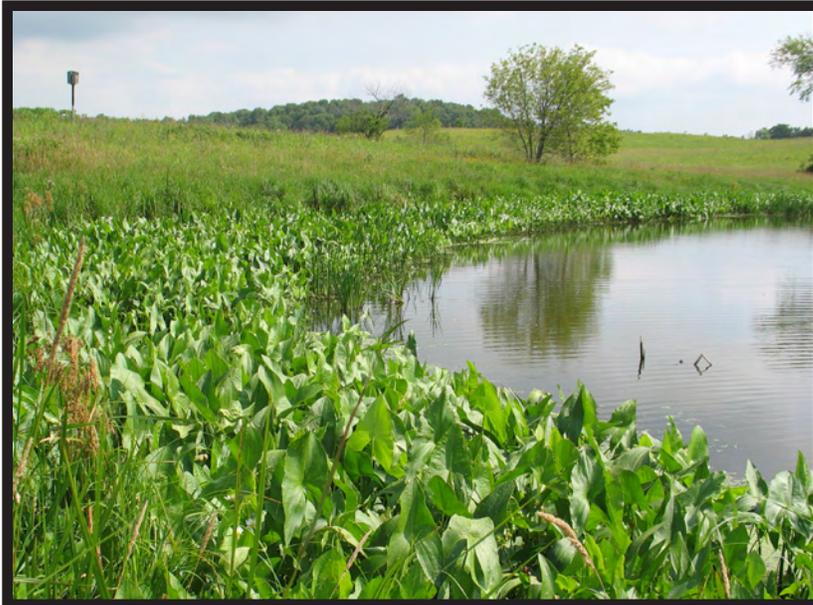


Minnesota Wetland Restoration Plant ID Guide



Developed by the MN Board of Water and Soil Resources
in cooperation with
the MN USDA Natural Resources Conservation Service



About this Guide

This field guide was prepared by the Minnesota Board of Water & Soil Resources through a contribution agreement with the Minnesota USDA Natural Resources Conservation Service. Our goal was to produce a plant identification guide for natural resource professionals involved in the assessment and monitoring of wetlands in Minnesota.

This guide was developed by Karli Swenson, Carol Strojny, Zack Carlton, Caitlin Kersten, Bryan Pynn, and Dan Shaw. Photographs, unless otherwise noted, were supplied by the Board of Water & Soil Resources.

Additional species will be added to future versions of this guidebook, with an emphasis on species commonly encountered in wetland restoration projects.

Started in 2008

Pages added in 2009 and 2010

Use of This Guide

The notes included below describe the title bars and how their values were derived. See next page for a sample layout of the pages within this guide.

1 Common Name, Scientific Name:
A common name is listed first, and the scientific name is listed below the common name. Common synonyms for either name will be mentioned in the "Comments" section. The scientific names used are those recognized by the USDA PLANTS database.

Source: USDA, NRCS. 2008. The PLANTS Database (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

2 Minnesota C-value:
The Minnesota Coefficient of Conservatism (C-value) is a numerical score (0-10) that reflects both fidelity to natural habitats and tolerance to disturbance. Species that are often found in disturbed habitats, with little fidelity to natural habitats are assigned a '0', whereas species only found in undisturbed natural habitats are assigned a 10. C-values have been assigned to wetland species in Minnesota, and can be used as a tool to evaluate habitat condition. In this guide, non-native species are assigned a '0'.

Source: Milburn, S. A., M. Bourdaghs, and J. J. Husveth. 2007. Floristic Quality Assessment for Minnesota Wetlands. Minnesota Pollution Control Agency, St. Paul, MN.

3 Wetland Indicator Status (Region 3- North Central):
OBL = Obligate Wetland: Occurs almost always (estimated probability 99%) under natural conditions in wetlands.
FACW = Facultative Wetland: Usually occurs in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
FAC = Facultative: Equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).
FACU = Facultative Upland: Usually occurs in non-wetlands (estimated probability 67%-99%), but occasionally found on wetlands (estimated probability 1%-33%).
UPL = Obligate Upland: May occur in wetlands in another region, but occurs almost always (estimated probability 99%) under natural conditions in non-wetlands in region 3.
NI = No indicator: Insufficient information was available to determine status.

4 Native, Non-native, or Invasive Status:
Lists whether the species is a native to Minnesota, according to Cholewa (2007). The origins of some species are under disagreement - such as reed canary grass and narrow-leaf cattail. However, there is general agreement that there are non-native varieties within these species that are more commonly found, and that these varieties are aggressive invaders. Invasive species status is based on ranking from the Minnesota Invasive Species Advisory Council (MISAC) and NatureServe's impact rankings.

Sources:

Cholewa, A.F. 2007. Annotated Checklist of the Flora of Minnesota.

www.bellmuseum.org/plants/checklist.pdf

NatureServe: www.natureserve.org/explorer/

MISAC: www.mda.state.mn.us/plants/pestmanagement/misac/default.htm

1 Common Name
Scientific Name

2 Minnesota C-Value: #
3 Wetland Indicator Status: OBL
4 Native/non-native; invasive status



Leaves: Leaf description. Includes ligule, petiole, margins, venation, texture, and color descriptions.

Stems: Stem height, texture, and bark characteristics (if woody).

Flowers and fruit: Flower, spike, and spikelet descriptions. If helpful, includes identifying characteristics of fruit and/or seeds.

Plant communities: Names of wetland communities or simple descriptors (i.e. old fields, disturbed soils)

Comments: Other common names or previous classifications. General comments that may identify similar species, unique growth habits, or need for control of an invasive species.



Alfalfa

Medicago sativa

Minnesota C-Value: 0

Wetland Indicator Status: UPL

Non-native



Leaves: Alternate branching with 3 leaflets, toothed toward the tip and tapered at the base. 10-45 mm long, 3-10 mm wide, paler green on the lower side. Middle leaflet turns upward. Stipules lanceolate.

Stems: 2-3 ft tall, 5-25 erect slender stems per plant arising from a woody crown. Usually hairless. Deep tap root can reach up to 30 ft.

Flowers and fruit: Purple or violet flowers are 5-parted and 6-13 mm long. Fruit is a finely hairy coiled pod that contains yellow or brown ovoid seeds.

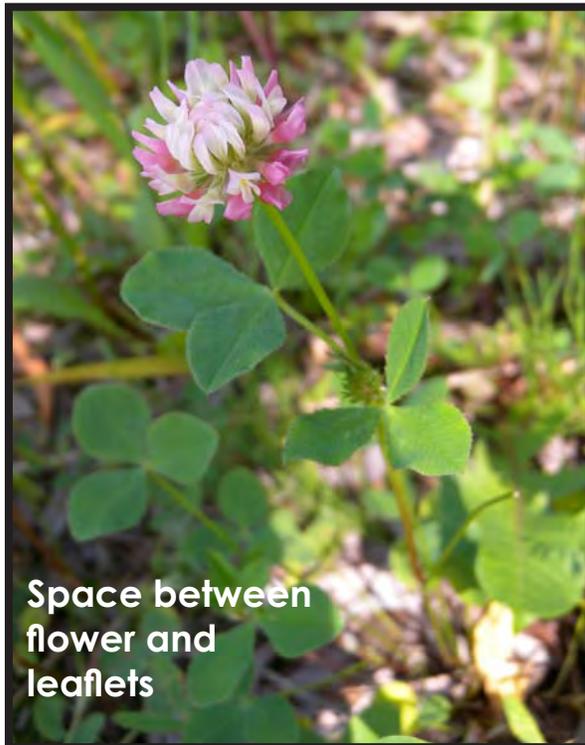
Plant communities: Disturbed sites. Intolerant of wet, poorly drained conditions.

Comments: Introduced, non-native perennial legume, grown and harvested for hay. The wedge-shaped base and point at tip of leaflets differentiate this plant from other legumes with 3 leaflets (clovers).

Alsike clover

Trifolium hybridum

Minnesota C-Value: 0
Wetland Indicator Status: FAC-
Non-native



Leaves: 3 leaflets with finely-toothed margins. Alternate branching, with long stems. Stipules lanceolate.

Stems: Erect stems 10-24 in. high. Tend to be hairless.

Flowers and fruit: Pinkish flowers on long stalks, turning whiter towards the bases of the petals. Flowers brown with age. Round flower head.

Plant communities: Disturbed areas. Common to farm fields and roadsides.

Comments: Introduced non-native perennial legume. Similar to red (*T. pratense*) and white (*T. repens*) clovers except: no white V-pattern on leaflets, less hairy than red clover, taller and more erect than white clover. Finely toothed margins along broader leaflets distinguishes alsike clover from alfalfa (*Medicago sativa*).



Annual ragweed

Ambrosia artemisiifolia

Minnesota C-Value: not assigned
Wetland Indicator Status: FACU
Native



Leaves: Lower leaves opposite, upper usually alternate, narrowly and deeply lobed in irregular patterns. Downy to smooth texture.

Stems: 2-5 ft tall; typically knee-high. Downy hairs on stem.

Flowers and fruit: Small, green flowers growing in 1-6 inch racemes. Male and female flowers are in separate heads on the same plant.

Plant communities: Ditches, roadsides, old fields, disturbed areas.

Comments: Also known as common ragweed, this native annual weed is a primary cause of hay fever. In some counties it is considered a noxious weed. Pollen easily becomes airborne when a strong wind blows or when walking through a dense colony. Often forms large clumps, fairly unique with its delicate, deeply lobed leaves and multiple green-flowered racemes. Western ragweed (*A. psilostachya*) looks similar, but has less divided leaves and is typically taller.



Blue vervain

Verbena hastata

Minnesota C-Value: 6
Wetland Indicator Status: FACW+
Native



Leaves: Opposite, lanceolate, coarse toothed, up to 7 in. long.

Stems: 4 sided, branched, rough and hairy, often purple-tinged, up to 5 ft tall.

Flowers and fruit: 6-7 mm long purple-blue flowers at the end of long terminal spikelets, many spikelets per head, branching.

Plant communities: Wet meadows, wet prairies, depressions, shorelines.

Comments: Native perennial. Easy to distinguish from other *Verbena* while in flower, owing to the multiple, branching flower spikes per plant. White vervain, *Verbena urticifolia* (FAC+) has a green hairy stem and leaves abruptly narrowed at the base.



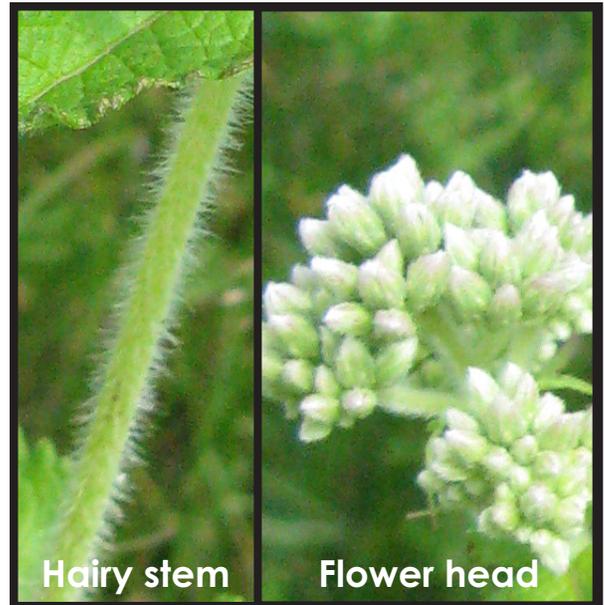
Boneset

Eupatorium perfoliatum

Minnesota C-Value: 4

Wetland Indicator Status: FACW+

Native



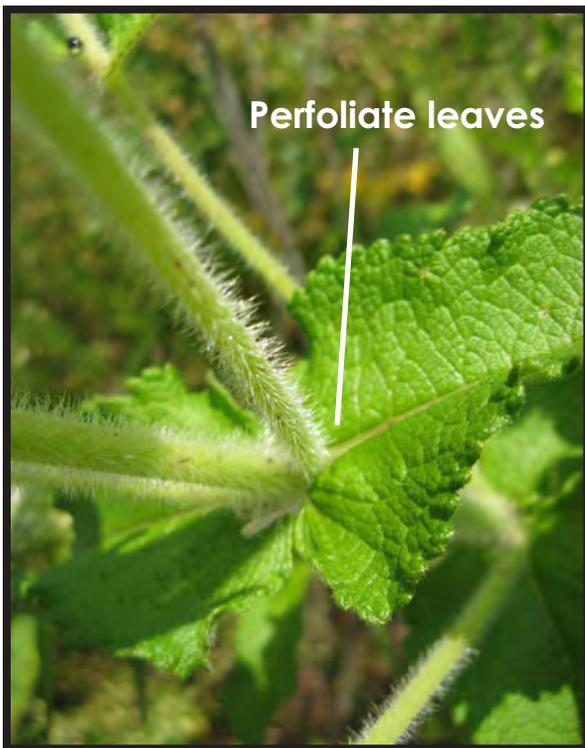
Leaves: Opposite, perfoliate, toothed, with a pointed tip. Lower leaves are broadest at the base.

Stems: Square-angled stem with long, spreading hairs.

Flowers and fruit: Small white flowers on a round head. Multiple flower heads per plant clustered in a flat-topped inflorescence. Flower stems hairy.

Plant communities: Shores, meadows, prairies, and other areas with wet to moderate moisture.

Comments: Perennial. Easy to identify due to its extremely hairy, angular stem and its perfoliate leaves.



Broad-leaf arrowhead

Sagittaria latifolia

Minnesota C-Value: 3

Wetland Indicator Status: OBL
Native



Leaves: Highly variable in length and width. Parallel veination meeting in middle of leaf. Arrowhead shaped.

Stems: No true stem since leaves arranged in rosettes. Flower stem has spongy quality.

Flowers and fruit: 3 white petals. Male flowers have 25-50 yellow stamens and female flowers have a ball of green sepals.

Plant communities: Shallow water, marshes, shorelines, pools in bogs, mud flats.

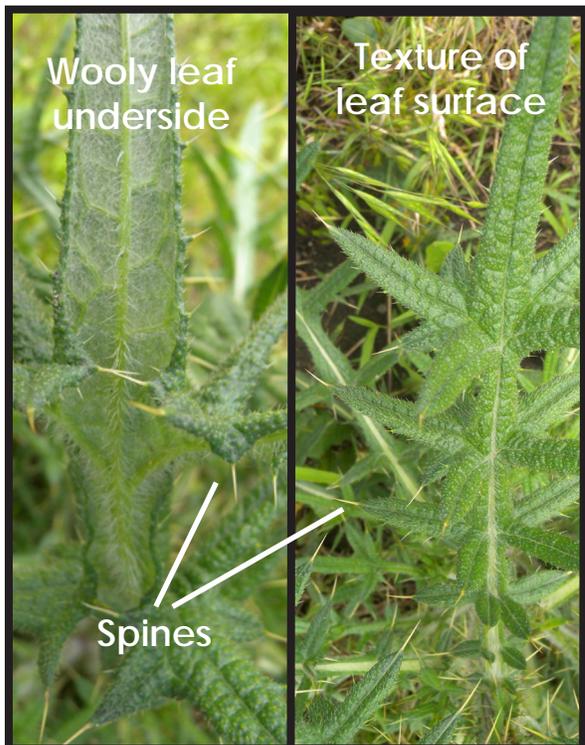
Comments: Perennial. Since leaves are highly variable, the more narrow-leaved versions of the plant may have the appearance of *Sagittaria cuneata*. In fall, species may be distinguished by their seeds. Six species of *Sagittaria* occur in Minnesota.



Bull Thistle

Cirsium vulgare

Minnesota C-Value: 0
Wetland Indicator Status: FACU-
Non-native



Leaves: 8 - 15 cm long, alternate, lance shaped. Deeply lobed, with each lobe ending in a stiff spine. Rough and hairy on upper surface with soft whitish hairs underneath.

Stems: 2-6 ft tall with upright branches. Leaf sheath extends down stem as spiny wings. Stems are sparsely hairy.

Flowers and fruit: Pinkish purple flower heads, up to 4 cm wide. Clustered or solitary at the end of branches. Surrounded by spiny bracts. In bloom July through September.

Plant communities: Uplands, pastures, roadsides, and other disturbed areas.

Comments: Biennial. Prohibited noxious weed in Minnesota. Generally found as single or scattered plants.

Canada anemone
Anemone canadensis

Minnesota C-Value: 3
Wetland Indicator Status: FACW
Native



Leaves: Deeply lobed basal leaves with 3-7 lobes. Stem leaves whorled. Coarsely toothed, net-veined, slightly hairy.

Stems: 1-2 ft tall upright stem.

Flowers and fruit: White flowers 1 - 1.5 in. across with 4-5 petal-like sepals. Numerous stamens and pistils. Single flower located at the tip of each long stalk. Fuzzy seeds clustered in a round head.

Plant communities: Along roads and railways, meadows, prairies, shorelines, disturbed areas.

Comments: Perennial rhizomatous plant forming patches. blooms from May through August, but flowers are short-lived.



Canada goldenrod

Solidago canadensis

Minnesota C-Value: 1
Wetland Indicator Status: FACU
Native



Leaves: 3 veined above the base, narrow, lance shaped and sharply toothed.

Stems: Erect stem 1-7 ft tall. Hairy towards the top of the stem, but usually smooth towards base. Stem is reddish in color.

Flowers and fruit: Large, nearly pyramidal panicles with numerous small yellow flowers that have 10-17 rays each. Produces numerous windborne seeds in August.

Plant communities: Wet meadow fringes, prairies. Also found in ditches and disturbed woodland edges.

Comments: Early colonizer of prairies and wet meadow fringes. Looks similar to giant goldenrod (*S. gigantea*), but giant goldenrod lacks hairs on the stem.



Canada thistle

Cirsium arvense

Minnesota C-Value: 0
Wetland Indicator Status: FACU
Non-native Invasive



Leaves: Deeply divided, sessile, prickly edges

Stems: Grooved, smooth to slightly hairy, slightly branching at top. 3-5 ft tall.

Flowers and fruit: 2 cm across, pink or white. Seed is 2 mm long, light brown, with a tuft of loosely attached fibers at tip. Flower heads tend to be spineless.

Plant communities: Any disturbed area, especially upland fields and shores with fluctuating water levels.

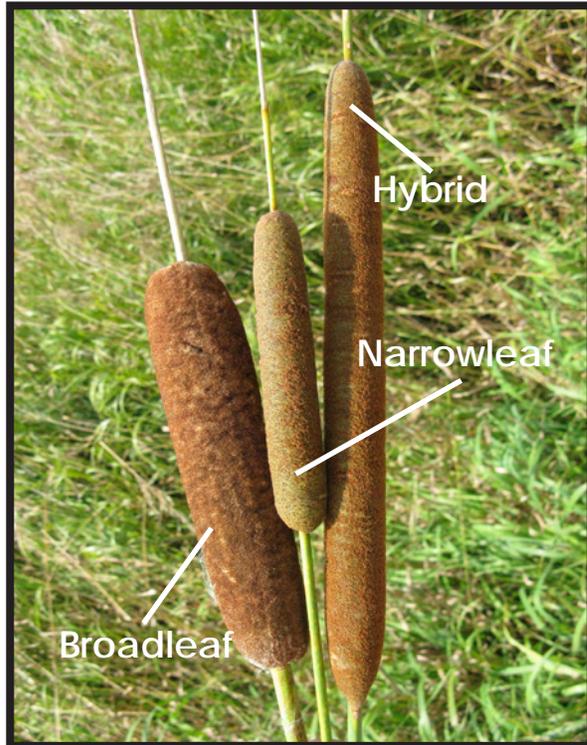
Comments: Highly invasive perennial. A prohibited noxious weed in Minnesota. Forms large clonal colonies via underground root systems, and spreads easily to disturbed areas via wind-blown seeds. Most other thistles are biennials, with spiny bracts on the flower heads.



Cattail Comparison

Broadleaf vs. Narrowleaf vs. Hybrid cattail

Typha latifolia vs. *Typha angustifolia* vs. *Typha x glauca*

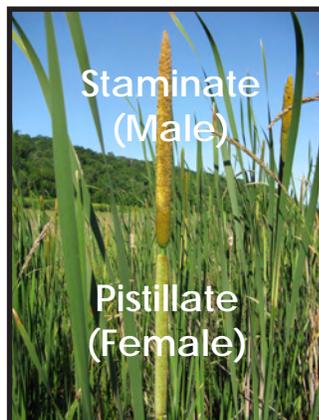


Mature Leaves:

- *Broadleaf: 14-23 mm wide, shorter than flower spike.
- *Narrowleaf: 4-10 mm wide, taller than flower spike.
- *Hybrid: Variable width and height, usually between broadleaf and narrowleaf in width.

Stems:

- *Broadleaf: 1-3 m, stout in form
- *Narrowleaf: 1-3 m, weak in form
- *Hybrid: 2-3 m, stout in form



Flowers and fruit:

- *Broadleaf: male and female portions of spike typically together; spike < 6 in.
- *Narrowleaf: male and female portions of spike separated by 2-4 cm gap; spike < 6 in.
- *Hybrid: male and female portions of spike typically separated by 2-4 cm gap; spike 6 in or longer.

Plant communities: Broadleaf cattail is the native cattail that will often cross with narrowleaf cattail to form the hybrid, *Typha x glauca*. Both narrowleaf and hybrid cattails are superior competitors to broadleaf cattail, with the ability to dominate not only healthy wetlands, but also ditches and urban stormwater basins. Narrowleaf and hybrid cattails form dense, single-species stands, while the broadleaf cattail colonies are less dense.

Common cocklebur

Xanthium strumarium

Minnesota C-Value: 0
Wetland Indicator Status: FAC
Native



Leaves: Alternate, ovate to nearly round, some 3-5 lobed, margins with blunt teeth, petioles 3-10 cm long.

Stems: Rough and often brown spotted, 7 in. - 5 ft long.

Flowers and fruit: Small, male flowers on short, terminal branches. Female flowers clustered in axils. Produces a brown, spiny bur that attaches easily to passers-by.

Plant communities: Shores, streambanks, wet meadows, disturbed fields and edges. Colonizes mudflats.

Comments: Annual weed considered noxious in some counties. Previously classified as *Xanthium pensylvanicum*. The long-petioled, very large leaves make this plant fairly easy to identify when it is not in flower or when burs are absent.

Common milkweed

Asclepias syriaca

Minnesota C-Value: not assigned
Wetland Indicator Status: UPL
Native



Leaves: Opposite, short-stalked, oblong to oval, rigid and leathery quality with downy hairs underneath. Emit milky sap when pulled from stem.

Stems: Erect. 3-6 ft tall. Stem is downy. Milky sap present when broken.

Flowers and fruit: Small purple-pink hooded flowers 3-4 mm. Many per umbel, which is often drooping from a stem 3-10 cm long. Fruits are large (8-13 cm) pods with soft spines, that open in early autumn. The pod shells tend to persist on dead stems throughout winter.

Plant communities: Wet meadows and prairies, woodland edges, disturbed soils.

Comments: Perennial native reproducing by seeds and rhizomes. Other milkweed species with similar vegetative features differ in flower structure and color. Swamp milkweed (*A. incarnata*), a wetland obligate, has a less-milky sap, lance-shaped narrow-tipped leaves, and smooth leaves.



Seed pod

Coontail

Ceratophyllum demersum

Minnesota C-Value: 2
Wetland Indicator Status: OBL
Native



Leaves whorled



Leaves forked

Leaves: Whorls of 5-12 evergreen leaves, stiff and forked. Threadlike divisions occur in the leaves with teeth on one side. Leaves denser towards tip.

Stems: Submergent plant that lacks true roots, but modified leaves may sometimes anchor the plant. Stems pinkish to yellow-green.

Flowers and fruit: A unisexual plant, with most reproduction occurring through fragmentation of the stem. Fruit is a small nutlet.

Plant communities: Shallow open water, marshes, ponds, lakes, ditches, backwaters.

Comments: Submergent perennial also known as common hornwort. Forms dense stands underwater. Similar submergent plants have alternate branching (*Utricularia* sp.) or whorled branching with pinate compound leaves (*Myriophyllum* sp.).

Curly dock

Rumex crispus

Minnesota C-Value: 0
Wetland Indicator Status: FAC+
Non-native



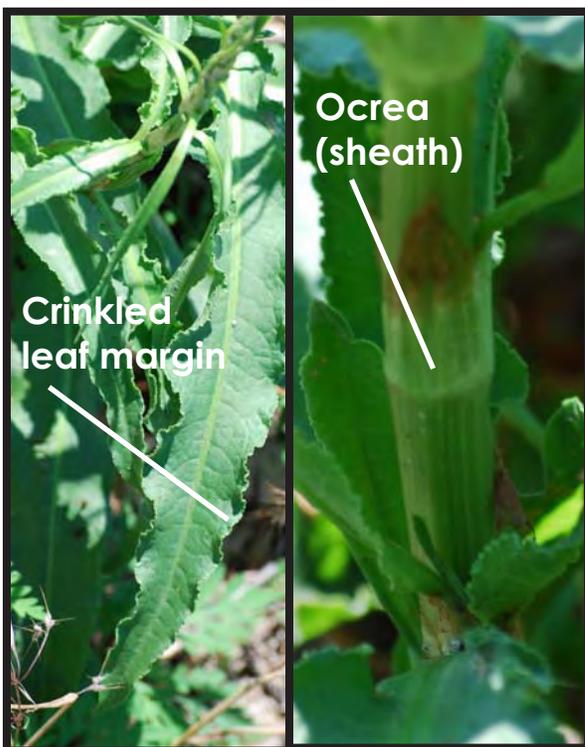
Leaves: Basal leaves large, 10-30 cm long and 1-5 cm wide on long petioles. Stem leaves are smaller, alternately branching, rounded at the base with shorter petioles. Leaf margins are curly and crinkled. Smooth ocrea to 1.5 cm long.

Stems: Up to 5 ft tall, smooth, ribbed, upright, becoming red with age. Non-branching below inflorescence.

Flowers and fruit: Large branched panicle with flower stalks drooping at the tips. Flower 5-10 mm long. Fruit is a brown, dried achene with heart-shaped wings, 2-3 mm long.

Plant communities: Wet meadows, shores, ditches, old fields, and other wet and disturbed areas.

Comments: Introduced perennial from Eurasia. Other *Rumex* species in the state differ in leaf shape, stem branching, or fruit structure. Common early in restorations, becoming less common over time.



Field Horsetail

Equisetum arvense

Minnesota C-Value: 1
Wetland Indicator Status: FAC
Native



Leaves: Reduced to scales which are united into a sheath at each node. The top of the sheath is divided into dark-colored teeth 1-2 mm long.

Stems: Sterile stems are green, hollow, 10-60 cm tall and 2-5 mm wide. Shallow ridges make the stem rough to the touch. Upright to spreading branches in dense whorls near the top of the stem. Fertile stems (spore producing) are flesh-colored, shorter than sterile stems and have larger sheaths.

Flowers and fruit: Blunt-tipped cones on long stalks at the end of the stem. Cones are 0.5-3 cm long and contain spores rather than seeds.

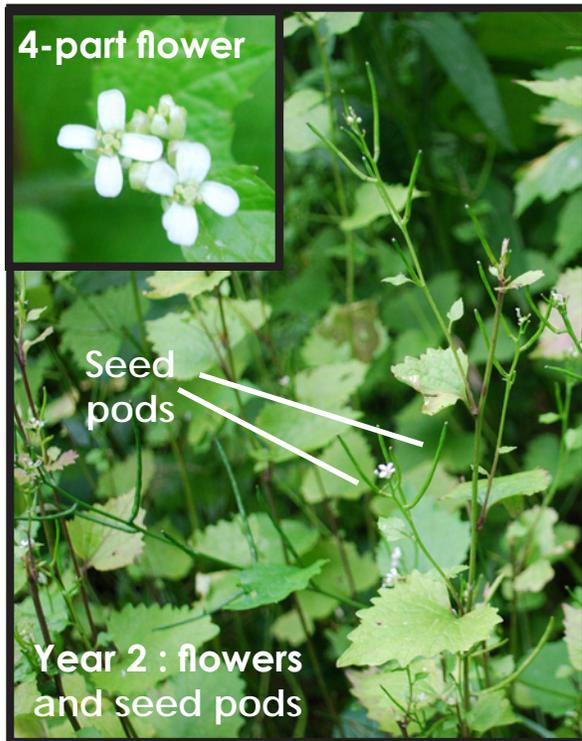
Plant communities: Stream banks, wet meadows, moist woods, ditches, roadsides, disturbed areas.

Comments: Perennial. Rhizome producing. Fertile stems emerge earlier in spring and wither after spores are mature. The sterile stem then emerges from the rhizome.

Garlic Mustard

Alliaria petiolata

Minnesota C-Value: 0
Wetland Indicator Status: FAC
Non-Native, Invasive



Leaves: Round to triangular, scalloped-edged, dark green. First year leaves are in rosettes of 3-several leaves. Second year plants have alternate leaves.

Stems: Single stem, 30 cm - 1 m tall in its second year.

Flowers and fruit: Numerous small white flowers with four separate petals. Seeds are in slender capsules, 2 - 5 cm long. Only plant of this height blooming white in wooded environments in May.

Plant communities: Garlic mustard colonizes all woodlands types, upland and wetlands.

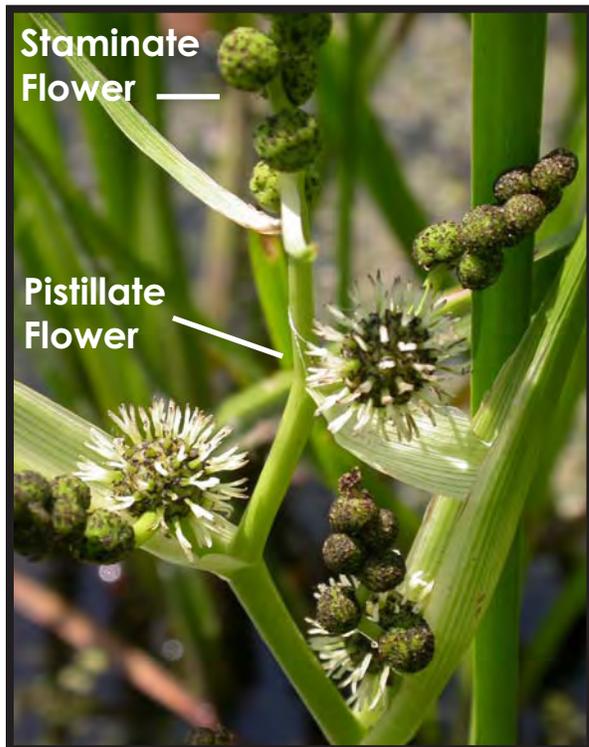
Comments: Biennial. Highly invasive, producing allelopathic compounds that inhibit seed germination of other species. Leaves and stems smell like onion or garlic when crushed.



Giant bur-reed

Sparganium eurycarpum

Minnesota C-Value: 5
Wetland Indicator Status: OBL
Native



Leaves: Leaves erect, bright green, 6-12 mm wide, about 1 m tall, strong keel creating a flattened triangular cross-section of leaf.

Stems: Leaf stems stout, branched.

Flowers and fruit: Bur-like appearance for lower pistillate (female) heads that are 2-2.5 cm wide, flowers with 2 stigmas. Upper flowers are staminate (male) and smaller. Flower stalk zig-zags. Flowers May to August.

Plant communities: Marsh, sedge meadow, lake edge, streams, shorelines.

Comments: Perennial often growing with cattails or river bulrush. Prior to flowering the bright green and triangular cross-section leaf distinguishes this plant from the duller, flatter cattail leaves. 8 species of *Sparganium* occur in Minnesota. *S. eurycarpum* is the most common. Other species are shorter than 1 m, and flowers only have 1 stigma.



Giant goldenrod

Solidago gigantea

Minnesota C-Value: 3
Wetland Indicator Status: FACW
Native



Leaves: 3 veined above the base, lance shaped and serrated.

Stems: Erect stem, 1-7 ft tall. Smooth and somewhat waxy, giving the reddish stem a bluish hue.

Flowers and fruit: Large with numerous small yellow flowers that have 10-17 rays each. Flowers up to 1/4 in. across.

Plant communities: Wet meadows, marsh fringes, woodland edges and prairies.

Comments: Perennial, also known as late goldenrod. Looks similar to Canada goldenrod (*S. canadensis*). Canada goldenrod has hair on the stem, especially near the top, while giant goldenrod is smooth stemmed. Canada goldenrod is more common in uplands.



Giant ragweed

Ambrosia trifida

Minnesota C-Value: 0
Wetland Indicator Status: FAC+
Native



Leaves: Lower leaves opposite, turning alternate at top. 2-10 in. across with rounded base, 3-5 lobed, serrated.

Stems: Rough and hairy with several branches. Up to 15 ft tall.

Flowers and fruit: Terminal spike with numerous, small, greenish flowers. Spikes can reach 1 ft in length. 5-15 bracts surround the flower head.

Plant communities: Alluvial soils, fields, ditches, low woods; may colonize mud flats and wet meadows.

Comments: Annual weed, also known as 'great ragweed.' Considered noxious in some counties. Fairly easy to identify in the field. Very few herbaceous plants in Minnesota attain heights over 8 ft tall with 3-lobed leaves.

Golden alexanders

Zizia aurea

Minnesota C-Value: 6

Wetland Indicator Status: FAC+

Native



Evenly toothed leaflets



Ridges on stem

Leaves: Stalked, alternate, compound leaves, divided into 3 parts. Each of these parts is further divided into 3 leaflets. Each leaflet is up to 3 in. long and just over 1 inch wide, with evenly toothed edges.

Stems: Smooth branching stems 1-3 ft. tall with ridges.

Flowers and fruit: Compound umbel with many small flower heads. Each yellow flower is < 3 mm wide with 5 tiny petals and 5 protruding yellow stamens. Dry fruit splits into 2 seeds.

Plant communities: Moist meadows and prairies, wet thickets, sedge meadows, streambanks, woodlands.

Comments: Perennial that turns red in fall. Flower is similar in appearance to wild parsnip. The two plants can be distinguished by their leaves. Wild parsnip has pinnately-compound leaves with 8-15 leaflets without evenly -toothed edges.

Goldenrod comparison

Solidago gigantea (Giant goldenrod) vs
Solidago canadensis (Canada goldenrod)



Leaves: Both 3 veined above the base, lance shaped and serrated. Giant goldenrod leaves are generally wider and longer than Canada goldenrod.

Stems: Canada goldenrod has hair on the upper third of the stem while Giant goldenrod is smooth and waxy.

Flowers and fruit: Canada goldenrod has smaller flowers, with a pyramidal panicle. Giant goldenrod has larger flowers with a more sparsely packed panicle.

Plant communities: Both can be found in the same communities, although Giant goldenrod can tolerate more moist conditions than Canada goldenrod.

Grass-leaved goldenrod

Euthamia graminifolia

Minnesota C-Value: 4
Wetland Indicator Status: FACW-
Native



Leaves: Alternate, linear to narrowly lance-shaped. 3-15 cm long and 3-10 mm wide. 3-nerved (sometimes 5) with many indistinct glandular dots. Margins can range from entire to rough. Petioles are absent or very short.

Stems: Erect stems with upward branching. 1-3 ft tall. Can be smooth or hairy.

Flowers and fruit: Small yellow flower heads form loose flat-topped clusters that branch from the tops of stems. 15-25 rays per flower.

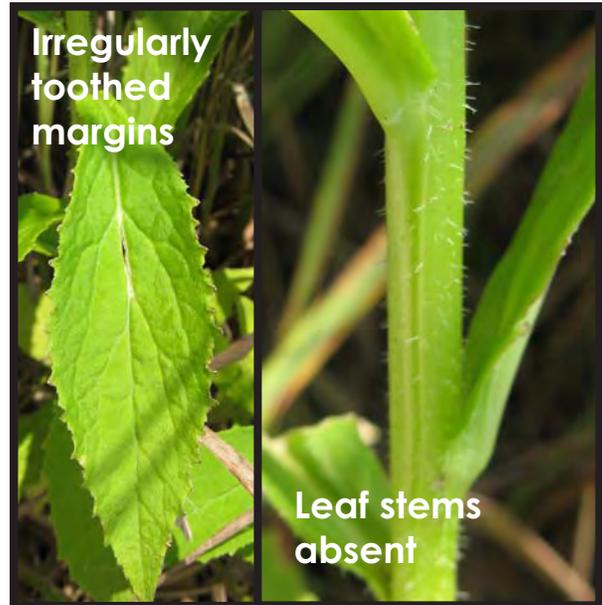
Plant communities: Prairies and sedge meadows, edges of marshes, bogs, fens, woodlands, shrub carrs, and fence rows.

Comments: Perennial, spreading aggressively by rhizomes. Also sometimes called common flat-topped goldenrod. True *Solidago* goldenrods have wider toothed leaves that lack glandular dots.

Great blue lobelia

Lobelia siphilitica

Minnesota C-Value: 5
Wetland Indicator Status: FACW+
Native



Leaves: Alternate, oblong or oval, stalkless leaves becoming smaller toward the top of the stem. 6-12 cm long and 1-3 cm wide. Margins are irregularly toothed.

Stems: Stout and erect, 1-4 ft tall. May be slightly hairy.

Flowers and fruit: Dark blue, tubular flowers are divided into an upper lip of 2 lobes and a lower lip of 3 lobes. Flowers arranged in crowded raceme. Fruit is a cup-shaped capsule.

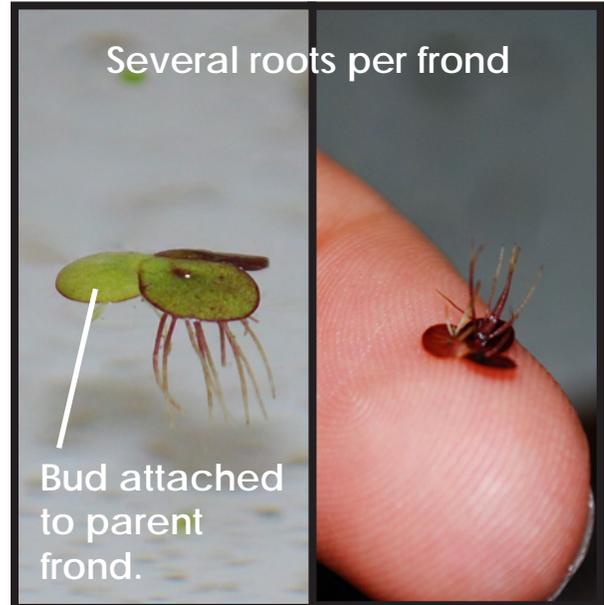
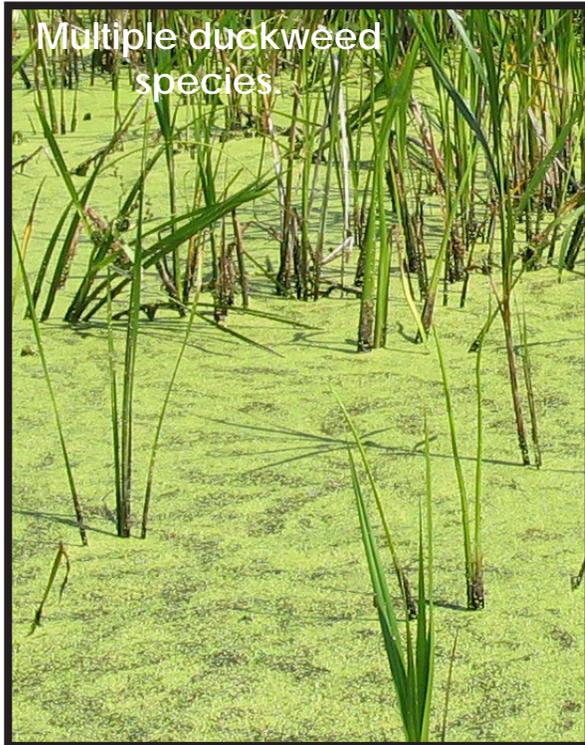
Plant communities: Swamps, thickets, floodplain forests, streambanks, calcareous fens, wet meadows.

Comments: Perennial, tends to be taller and have wider leaves (> 1 cm) than other varieties of *Lobelias*. Cardinal flower (*L. cardinalis*) looks similar vegetatively, but has bright red flowers and is more closely associated with woodlands and streams.

Greater Duckweed

Spirodela polyrrhiza

Minnesota C-Value: 5
Wetland Indicator Status: OBL
Native



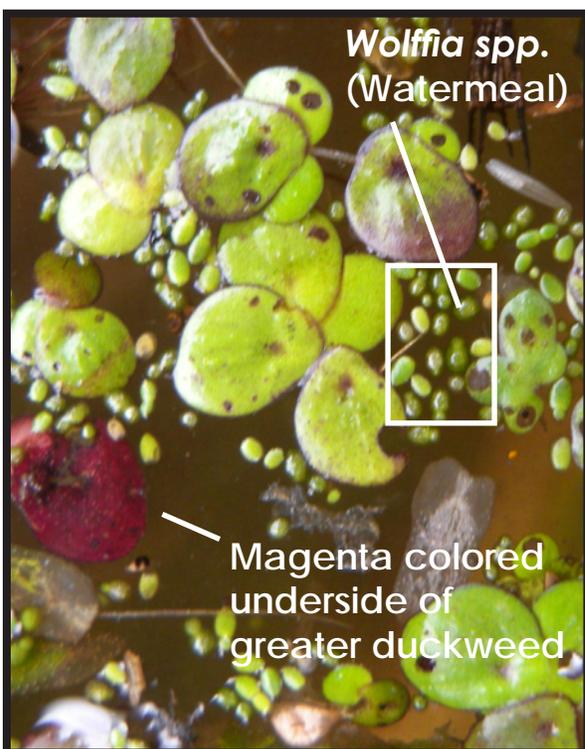
Leaves: Irregular oval shaped frond 3-10 mm long and 2.5-8 mm wide. 5-15 nerves radiate from narrower end. Underside of leaf is magenta.

Stems: No stems. 5-12 roots dangle below the water line from each frond.

Flowers and fruit: Reproduces through budding. New fronds often remain attached to the parent, creating clusters with multiple leaf lobes.

Plant communities: Found floating on the surface of quiet standing water, often in thick mats with other duckweed species.

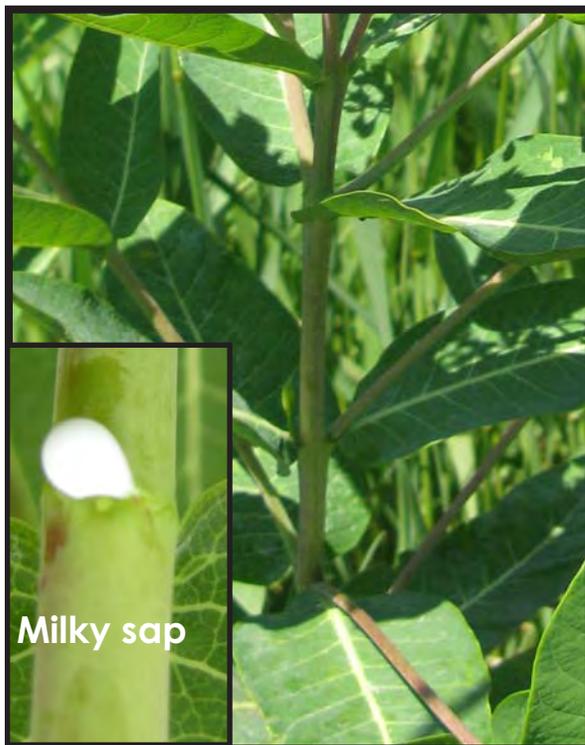
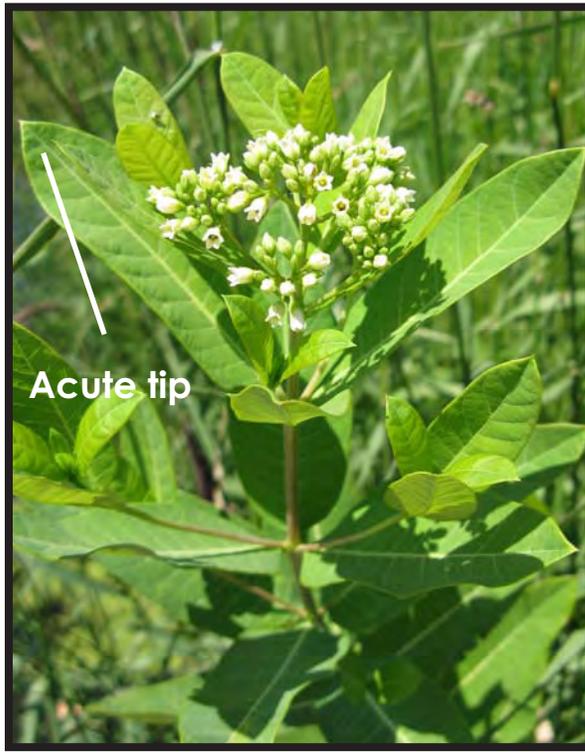
Comments: Can be distinguished from other duckweeds by its relatively large size, irregular frond shape, multiple roots, and magenta underside.



Hemp dogbane

Apocynum cannabinum

Minnesota C-Value: 3
Wetland Indicator Status: FAC+
Native



Leaves: Opposite, egg-shaped to lance-shaped, 5-11 cm long. Usually sharply pointed at tip (acute), smooth margin. Sessile or short stalked. Variable hairiness.

Stems: 2-5 ft tall. Stems erect, single from base, branching above. Often with reddish hue. Milky sap.

Flowers and fruit: Pale green-white flowers in branching clusters. Some clusters from leaf axils. Flowers have 5 petals and are slightly spreading outward.

Plant communities: Woodland edge, fields, ditches, prairies, thickets, disturbed sites.

Comments: Perennial, also known as Indian Hemp. Clasping Dogbane (*A. sibiricum*) has been reclassified as *A. cannabinum*. Spreading dogbane (*A. androsaemifolium*) has more branching and is a woodland species.

Common Ironweed

Vernonia fasciculata

Minnesota C-Value: 5

Wetland Indicator Status: FACW

Native



Dense flower cluster

Leaves: Alternate, sharply toothed, narrow lance-shaped leaves. 5-15 cm long and 1-4 cm wide. Hairless, with a prominent central vein.

Stems: 2-6 ft tall, erect, round, hairless. Often reddish to purple in color. The flower head branches may be covered in short hairs.

Flowers and fruit: Violet-purple flower heads up to 8 mm wide. Flower heads are arranged in a 4-10 cm wide flat, dense cluster.

Plant communities: Low prairies, meadows, pastures, streambanks, and other areas with full sun in wet to moderate conditions.

Comments: Perennial. Also known as prairie or bunched ironweed. The only other ironweed in MN, *V. baldwinii*, is less common, found in the upland, and has dense short hairs on the stems and leaves.



Sharply toothed leaves

Stalkless to short-stalked leaves

Jerusalem artichoke

Helianthus tuberosus

Minnesota C-Value: 2
Wetland Indicator Status: FAC
Native



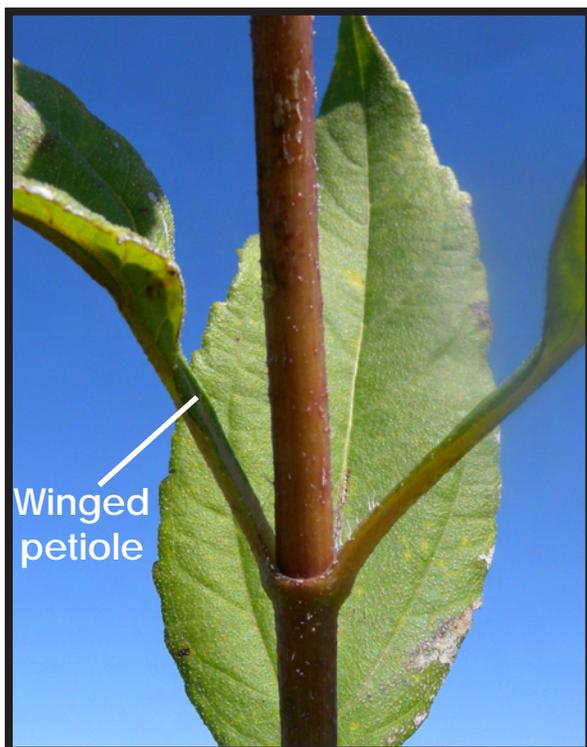
Leaves: Lower leaves opposite, upper leaves alternate. Ovate to lanceolate, toothed, 3 prominent veins, up to 3x longer than wide. Taper to winged petiole. Rough texture.

Stems: 1.5 - 3 m tall. Hairless or with short hairs. Edible tubers are produced at the base of the stem just below the soil. They are segmented and knobby, 2.5 to 10 cm long.

Flowers and fruit: Terminal heads 4 - 7 cm wide with 10-20 yellow ray flowers around yellow disk flowers. Long-pointed dark green or blackish bracts.

Plant communities: Moist thickets and roadsides. Along forest edges. Not tolerant of shade.

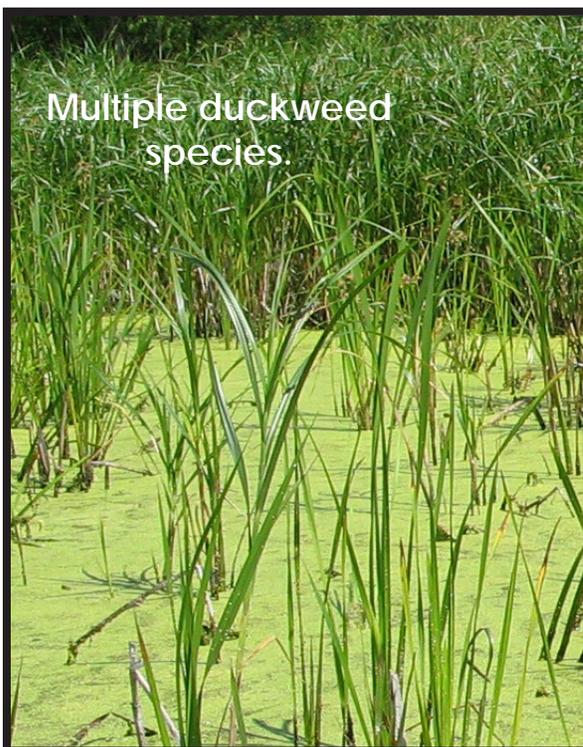
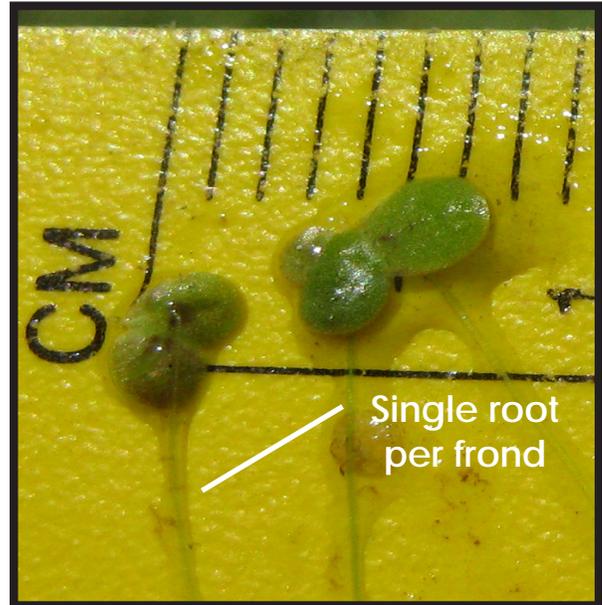
Comments: Perennial. Considered a weed in agricultural fields. Tubers can be used as a source of food. The original range is difficult to determine because it was cultivated by Native Americans. Hybridizes.



Lesser Duckweed

Lemna minor

Minnesota C-Value: 5
Wetland Indicator Status: OBL
Native



Leaves: Round to oval shaped fronds 2-6 mm long and 1.5-4 mm wide. Fronds may float individually or in masses. Each frond has 3-5 faint nerves. Green on both its upper and lower surfaces.

Stems: No stems. Only 1 root per frond.

Flowers and fruit: Reproduction by budding is common. Typically creates colonies of 2-8 attached fronds.

Plant communities: Often found with other duckweed species in quiet open water. Not dependent on depth, sediment, or water clarity.

Comments: The small round shape of the frond and its single dangling root are key identifiers for this species.

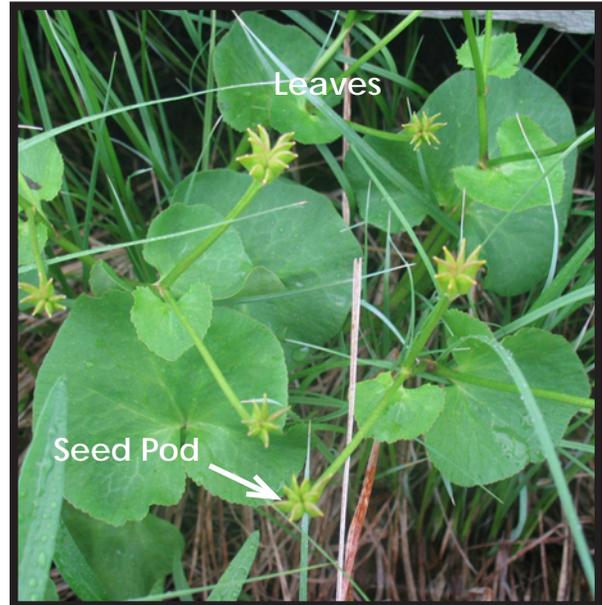
Marsh Marigold

Caltha palustris

Minnesota C-Value: 6

Wetland Indicator Status: OBL

Native



Leaves: Heart or kidney shaped leaves with round, toothed, or smooth edges. Usually with 2 lobes at the base. Basal leaves have long stalks. Upper leaves alternate, with shorter stalks. Leaves are 3 - 20 cm in diameter.

Stems: 1-2 ft long hollow stems.

Flowers and fruit: 2 - 4 cm wide flowers are golden yellow. 5-9 petal-like sepals and 4 or more pistils surrounded by stamens. Flowers are single at the ends of stalks. Blooms April through May. Fruit is a 1-1.5 cm long follicle with a pronounced beak.

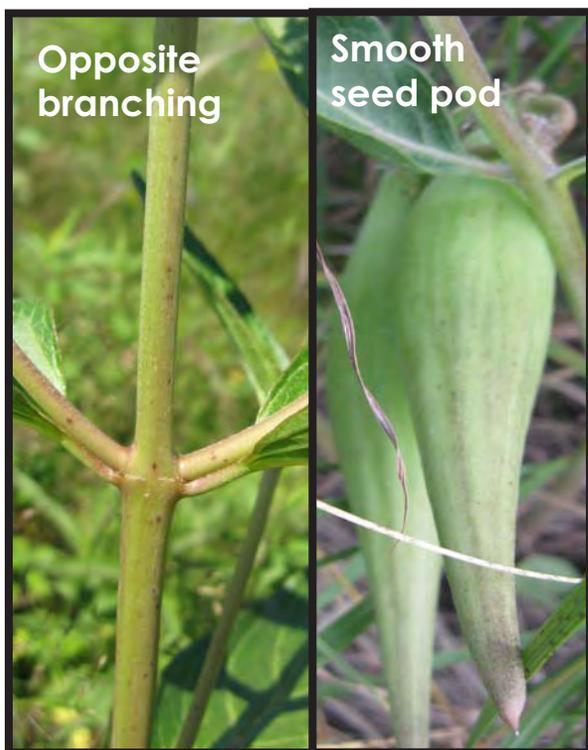
Plant communities: Wet meadows, wooded swamps, marshes, and along stream banks.

Comments: Marsh Marigold is one of the first wildflowers that bloom in the springtime. Also called "Cowslip"

Marsh milkweed

Asclepias incarnata

Minnesota C-Value: 4
Wetland Indicator Status: OBL
Native



Leaves: Opposite, lance-shaped or oblong leaves, usually smooth. Base of leaf abruptly rounds inward and is on a short stalk < 1.5 cm.

Stems: Up to 5 ft tall. Stiff, rounded, and may have short appressed hairs. Contains milky sap that can be seen when the stem is broken. Often branches towards the top.

Flowers and fruit: Rich pink 5-parted flowers are clustered in several flat-topped umbels. Flowers are 2-3 mm wide. Fruit is a long, narrow pod filled with windborne seeds.

Plant communities: Wet meadows, sedge meadows, shallow marshes, lakeshores, and ditches.

Comments: Perennial. Showy (*A. speciosa*, FAC) and common (*A. syriaca*, UPL) milkweeds have wider leaves that have a downy underside.

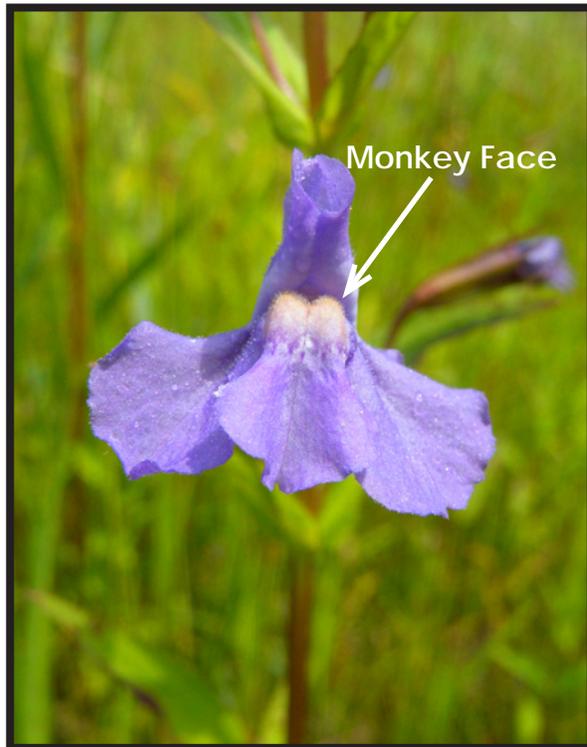
Monkey Flower

Mimulus ringens

Minnesota C-Value: 5

Wetland Indicator Status: OBL

Native



Leaves: Opposite and oblong to lance shaped, 4-12 cm long and up to 1 cm wide. Serrate leaf margins. Stalkless.

Stems: 1 - 2.5 ft tall and square. Stems may be winged.

Flowers and fruit: Single flowers (2-3 cm) out of upper leaf axils. Slender stalks 1-5 cm long. Blue-violet petals with a yellow center that is partially closed. Upper lip stands upward, and lower lip has arch. Fruit is a capsule.

Plant communities: Stream banks, marshes, floodplain forests, muddy shorelines, ditches.

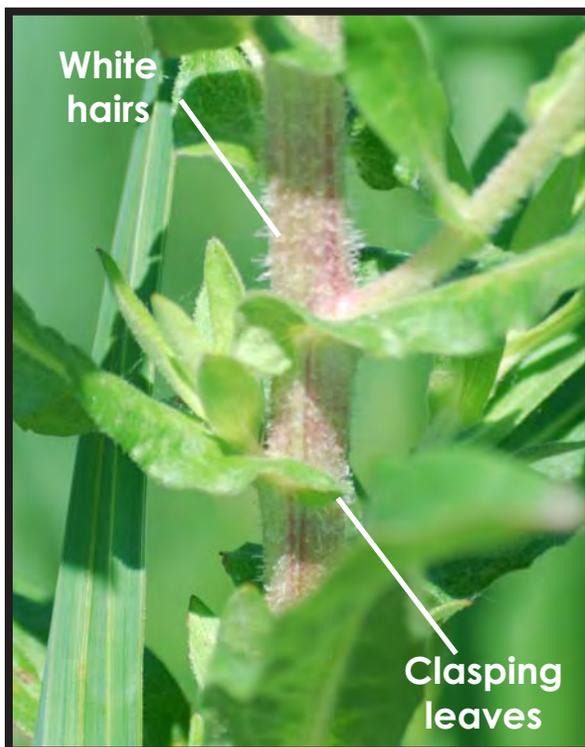
Comments: Perennial. Flower is commonly thought to look like a monkey's face, hence the common name.



New England aster

Symphyotrichum novae-angliae

Minnesota C-Value: 3
Wetland Indicator Status: FACW
Native



Leaves: Alternate, clasping, lance-shaped, entire. Leaves 3-7 cm long and 1-2.5 cm wide. Variable levels of hair.

Stems: 1-6 ft tall, often covered with white glandular hairs that can be seen with a magnifying lens.

Flowers and fruit: Clusters of flower heads 1.5-3 cm wide with 45-100 rosy-purple ray flowers and yellow-orange disc flowers. Nutlets densely covered with silky hairs.

Plant communities: Moist woods, forests, wet meadows and prairies, streambanks.

Comments: Perennial. Formerly classified as *Aster novae-angliae*. Although variable in color of flower and size of plant, clasping entire leaves and rosy-purple flowers are identifying characteristics.

Nodding beggartick

Bidens cernua

Minnesota C-Value: 3

Wetland Indicator Status: OBL

Native



Leaves: 2-7 in. long and 1/2-2 in. wide. Opposite, serrated, and lanceolate in shape. Stalkless. Rough to the touch.

Stems: 2-4 ft tall. Usually hairy, but sometimes smooth.

Flowers and fruit: Flowers 1-3 inch diameter, centers conspicuously globe-shaped. 6-8 yellow rays with 4-8 uneven, green bracts beneath. Flowers usually nodding in form. Seeds are oblong, roughly 5 mm long with 4 awns and downward pointing barbs.

Plant communities: Shorelines, wet meadows, shallow marshes, disturbed soils.

Comments: Annual. Looks similar to other yellow-rayed *Bidens*. This one can be distinguished by its nodding flowers, its simple and undivided leaves, and its convex-shaped seed with 4 awns.

Northern water plantain

Alisma triviale

Minnesota C-Value: 4
Wetland Indicator Status: OBL
Native



Purple tinged stem



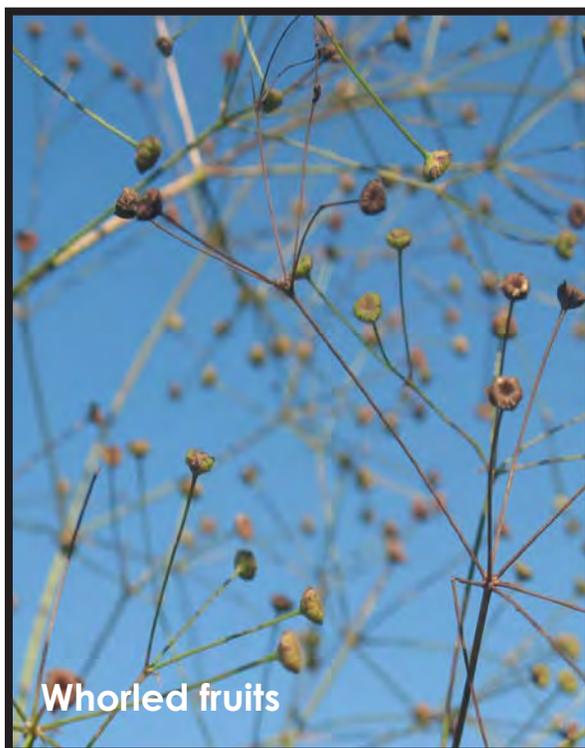
Leaves: All leaves basal in a rosette. Broad, oval shaped, long-stalked leaves rounded or tapered at tip, veins parallel. Submergent leaves narrow. Can reach 30 cm long.

Stems: Stout, hollow, often purple tinged and longer than leaves.

Flowers and fruit: Flowers born on stems longer than leaves. Flower 7-13 mm wide, 3 sepals and 3 white/pink petals. Fruit very small, flat sided nutlets in a whorl.

Plant communities: Shallow marshes, sedge meadows, deep marshes, lake edges.

Comments: Perennial plant. Two other species commonly found in MN, *A. gramineum* (flower stalks rarely longer than leaves) and *A. subcordatum* (flowers smaller (3-3.5 mm across) than *A. triviale*).



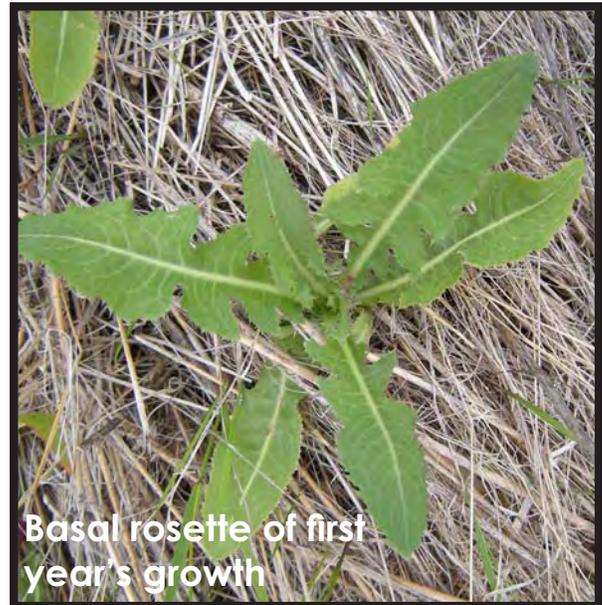
Whorled fruits

Perennial sow-thistle

Sonchus arvensis

Minnesota C-Value: 0

Wetland Indicator Status: FAC-
Non-native



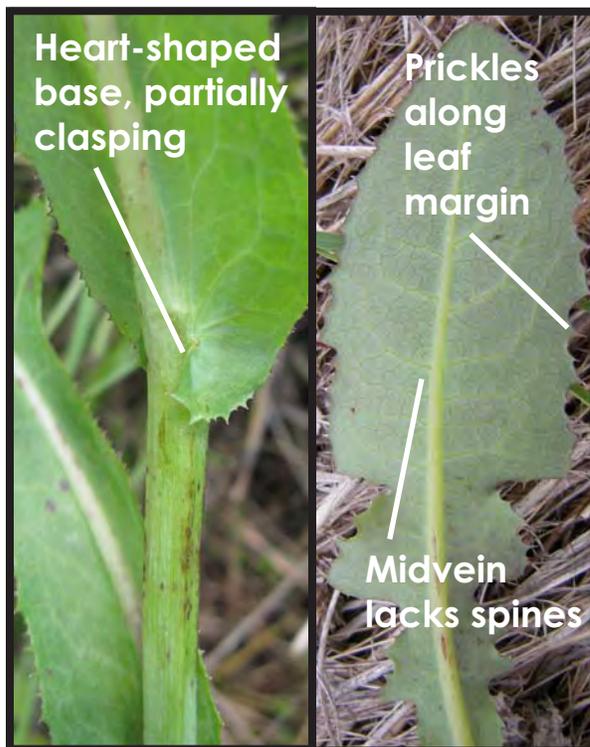
Leaves: Alternate. Smooth surface with teeth on leaf edges. Can reach 30 cm. Pinnately-shallow lobed leaves; teeth end in small prickles. Upper leaves may lack lobes.

Stems: 16-60 in. tall erect stem containing milky juice. Stems are hairless below the inflorescence. Branching occurs only near the top of the plant.

Flowers and fruit: Flower head is 1-2 in. wide. Yellow ray flowers. Multiple heads form open, branched clusters. Wrinkled, dry seeds with 5 ribs on each side. Tufted with silky white hairs for wind dispersal.

Plant communities: Disturbed sites such as cultivated fields, pastures, woodlands, roadsides, and gardens.

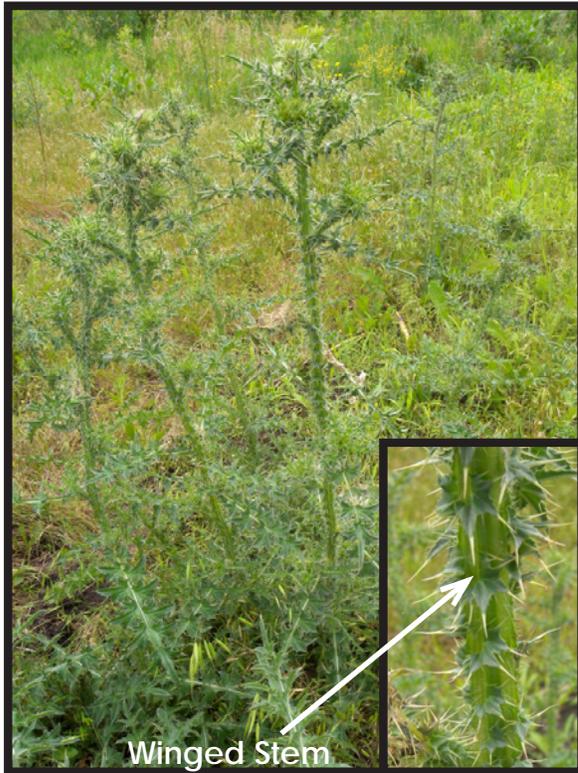
Comments: Introduced perennial weed. Prohibited noxious weed in Minnesota. Similar to prickly lettuce (*Lactuca scariola*) which has spines along each leaf midvein (underside). Other *Sonchus* species are more prickly (*S. asper*) or deeply lobed (*S. oleraceus*).



Plumeless thistle

Carduus acanthoides

Minnesota C-Value: 0
Wetland Indicator Status: N/A
Non-Native



Leaves: Mature plants have deeply lobed spiny lanceolate leaves 12-25 cm long. Bases of leaves extend down along the stem as prickly wings. First year rosette has dark green leaves with a light midrib. Often has white margins. Fuzzy underside midrib.

Stems: 1-4 ft tall erect and branching stem with spiny wings. Taproot stout and fleshy. Stalks are long and winged.

Flowers and fruit: 1-2 in wide erect solitary or clusters of 2 to 5 flowers. Spiny bracts at the base. Seeds are capped by a ring of bristles.

Plant communities: Dry over-grazed areas, fields, pastures, woodlands, roadsides, ditches, and stream banks.

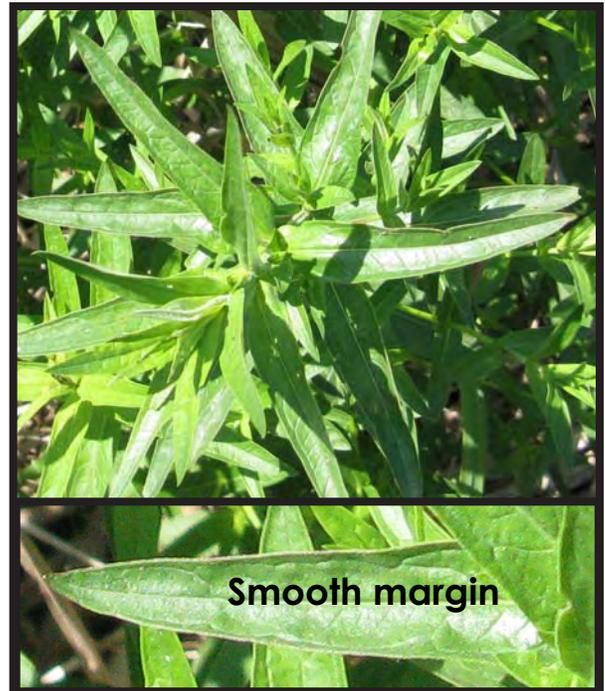
Comments: Prohibited noxious weed in Minnesota. Biennial. Similar to *C. nutans* which lacks winged stem and has drooping flower heads.



Purple loosestrife

Lythrum salicaria

Minnesota C-Value: 0
Wetland Indicator Status: OBL
Non-native Invasive



Leaves: Opposite or in whorls of 3. Sometimes clasping, usually hairy, lanceolate, margins entire. 3-5 times longer than wide.

Stems: Square stems, hairy or smooth, can be 'woody'; 4-6 ft tall. Old stems remain over winter.

Flowers and fruit: 6-petaled purple-red flowers on spikes 3-12 in. long. Flowers often wrinkled; many flowers in flower head.

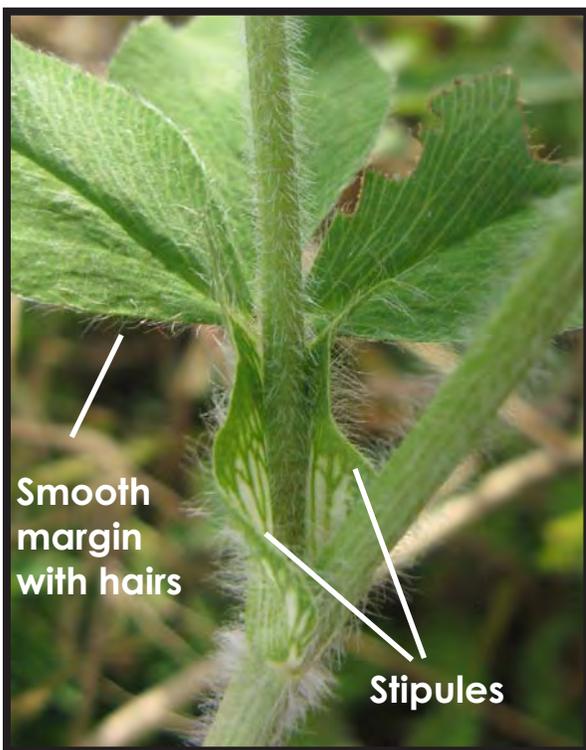
Plant communities: Shallow marshes, wet meadows, lakeshores, streamsides.

Comments: Perennial. Prohibited noxious weed in Minnesota. Has the capacity to out-compete most marsh vegetation. Highly prolific seed producer, so management is encouraged before flowers go to seed. Bio-controls available. The native, less robust loosestrife (*L. alatum*) has fewer, lighter colored flowers in the flower head.

Red clover

Trifolium pratense

Minnesota C-Value: 0
Wetland Indicator Status: FACU+
Non-native



Leaves: Divided into three blunt, oval leaflets usually with a blotched white V pattern. Each leaflet is 1-5 cm long. Large green and white stipule at the leaf base. Alternate branching. Lower leaves on long hairy stalks. Upper leaves short-stalked to stalkless.

Stems: Erect, sometimes sprawling, typically hairy stem 6-24 in. tall.

Flowers and fruit: Magenta or purple flowers in stalkless rounded heads 1 inch in diameter. Sessile leaflets typically directly below the flower head.

Plant communities: Fields, meadows, lawns, roadsides, disturbed prairies.

Comments: Non-native perennial legume introduced from Europe as a hay and pasture crop. Can be ecologically invasive. Known for variability in hairiness of foliage and of flower color.

Sawtooth sunflower

Helianthus grosseserratus

Minnesota C-Value: 3
Wetland Indicator Status: FACW-
Native



Leaves: Alternate leaves 10-20 cm long and 2-5 cm wide occur on the middle to upper stem. Lower leaves opposite. Leaves are sharply toothed, lanceolate, and rough on both sides. Leaf undersides may have short hairs and are often supported by winged leaf stalks, 1-4 cm long.

Stems: 2-10 ft high. Hairless and smooth below the inflorescence. Blue-green to purple.

Flowers and fruit: Yellow with large rays 2.5-4 cm long and a central disk 3-8 cm wide. 10-20 ray flowers.

Plant communities: Wet to wet mesic prairies, inland fresh meadows, disturbed streambanks.

Comments: One of two native perennial sunflowers found in Minnesota that has alternate leaves. The other, giant sunflower (*H. giganteus*), has reddish, rough stems with sparse hairs, shorter leaf stalks, and wider, rougher leaves.



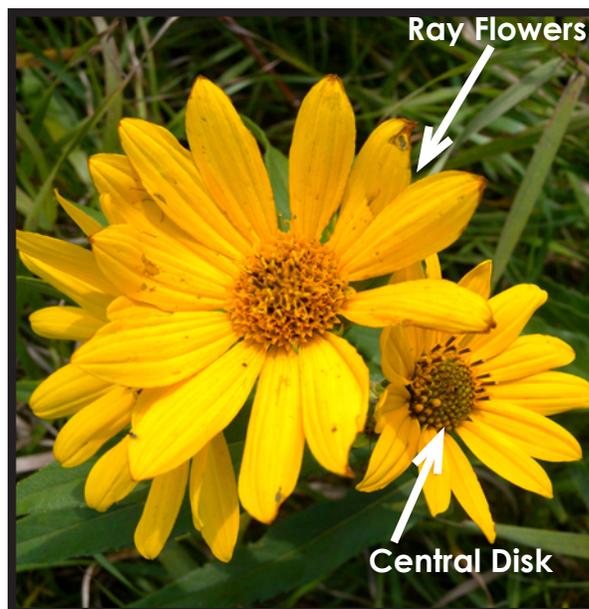
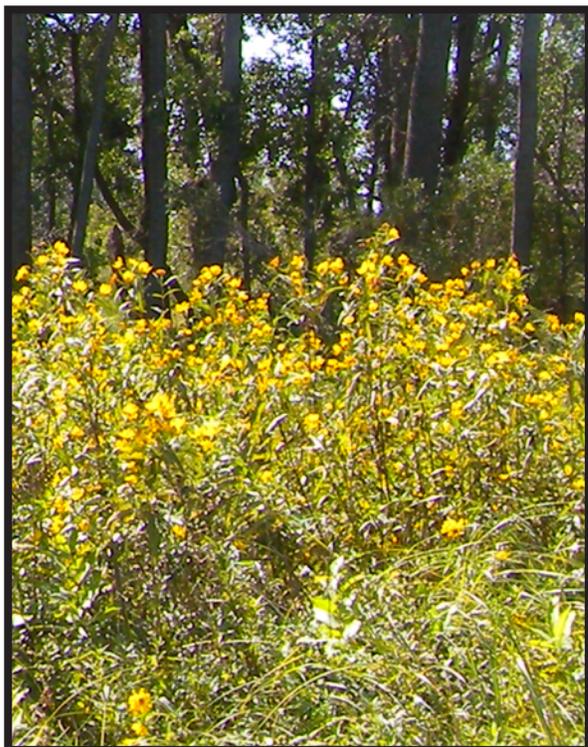
Sharply
toothed
leaf

Leaf stalk,
short hairs

Sawtooth Sunflower

Helianthus grosseserratus

Minnesota C-Value: 3
Wetland Indicator Status: FACW-
Native



Leaves: 10-20 cm long and 2-5 cm wide. Opposite on lower part of stem, alternate on upper portion. Sharply toothed and lanceolate. Slightly rough on both sides. Short white hairs below. Winged leaf stalks with 1-4 cm long stems.

Stems: 3 - 12 ft tall. Usually hairless below the flower head. Color ranges from purple to blue-green.

Flowers and fruit: Yellow with 10 to 20 large ray flowers 2.5-4 cm long and a central disc, shorter than the length of the ray flowers. Fruit is a smooth achene 3-4 mm long.

Plant communities: Wet meadows and wet-mesic prairies, disturbed stream banks.

Comments: One of two native perennial sunflowers found in Minnesota that have alternate leaves. The other is the Giant Sunflower, (*H. giganteus*) which lacks short white hairs on leaf underside. It has shorter leaf stalks and hair on stems.

Sneezeweed

Helenium autumnale

Minnesota C-Value: 4
Wetland Indicator Status: FACW+
Native



Leaves: Alternate, flat, lance-shaped to elliptic. 1.25-6 in. long and 1.5 in. wide. Toothed and tapered at both ends.

Stems: Typically 30-150 cm high, can reach up to 5 ft. Distinct winged stem.

Flowers and fruit: Yellow flower heads with "squared off" ray florets 9-22 mm long with 3 lobes on each ray. The central disk is 9-20 mm across, distinctly spheroid in shape. Each flower head is on an individual stalk.

Plant communities: Wet to wet-mesic prairies, inland fresh meadows, streambanks, lakeshores.

Comments: Key identification characteristics include a winged stem and bent-back ray flowers with 3 teeth. Poisonous to livestock but usually not eaten.

Spotted joe pye weed

Eupatoriadelphus maculatus

Minnesota C-Value: 4
Wetland Indicator Status: OBL
Native



Whorled leaf arrangement

Leaves: 4-5 whorled leaves. Coarsely toothed, narrowed to a short stalk. May have rough texture.

Stems: Up to 7 ft tall, sturdy and erect. Usually spotted, sometimes purplish.

Flowers and fruit: 9-16 pinkish disk-flowers arranged in bunches, forming a large, flat-topped, branched cluster. Lacks ray flowers.

Plant communities: Wet and sedge meadows, wet prairies, fens, marshes, wet woods, moist shorelines.

Comments: Perennial, previously classified as *Eupatorium maculatum*. One of only a handful of wetland species with whorled leaves, making it relatively easy to identify.



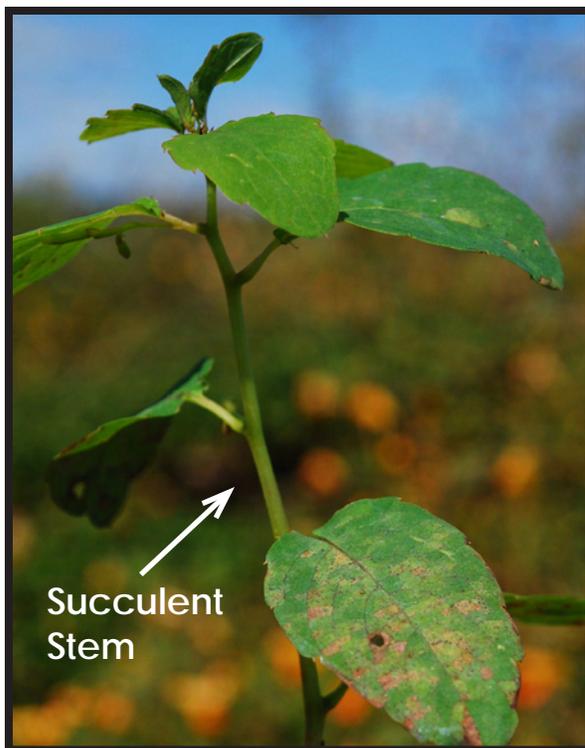
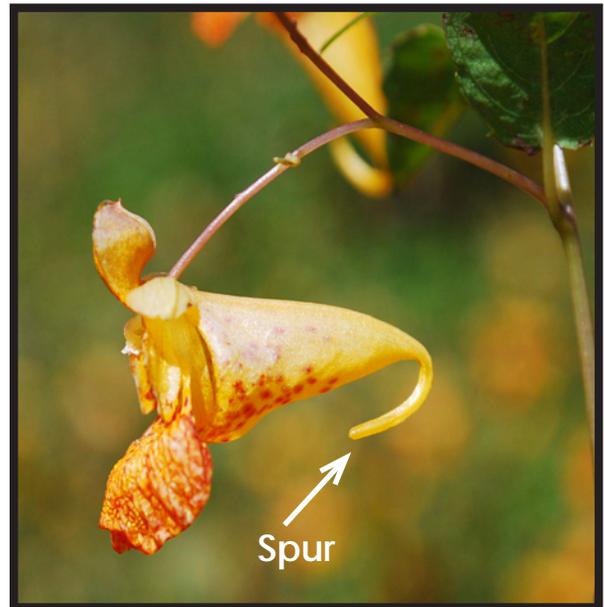
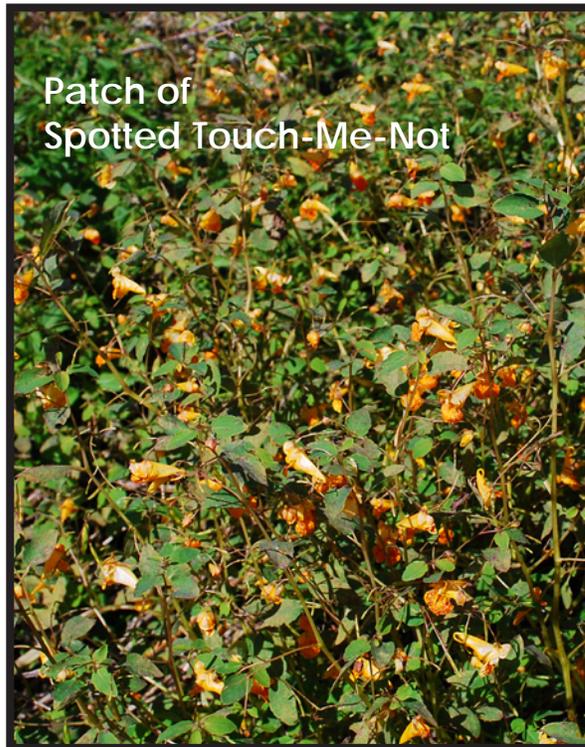
Pink or purple disk-flowers

Spotted Stem

Spotted Touch-Me-Not

Impatiens capensis

Minnesota C-Value: 2
Wetland Indicator Status: FACW
Native



Leaves: Alternate, oval, shallowly toothed leaves 3 - 10 cm long. Petioles are up to 5 cm long.

Stems: Smooth succulent stems 1.5 to 4.5 feet tall. Branching occurs on the upper portions of the stem

Flowers and fruit: Orange-yellow conical flowers. The mouth of the flower is half as wide as the flower is long. Typically 2 cm long. Spur at base of cone is 1 cm long and curves forward. The seeds are 2 cm capsules that pop open when touched during capsule maturity.

Plant communities: Floodplain forests, shrubb-carrs, wet meadows, wooded swamps, streambanks, and springs.

Comments: Annual, also known as Jewel Weed. The juice from the stem is said to alleviate rashes due to poison ivy or stinging nettle when rubbed on the skin.

Stinging nettle

Urtica dioica

Minnesota C-Value: 1

Wetland Indicator Status: FAC+

Native



Leaves: Opposite, with stinging hairs, ovate-lance shaped, coarsely toothed. Stipules are also lance shaped. Short stalked.

Stems: 2.5-7.5 feet tall. Unbranched with stinging hairs. Ribbed and hollow.

Flowers and fruit: Small, green, branching flower clusters emerging from axils of leaves.

Plant communities: Moist woods, thickets, ditches, streambanks.

Comments: Very distinct plant that usually grows in large colonies. Sometimes confused with Wood nettle (*Laportea canadensis*) which also has stinging hairs, but has alternate, wider leaves. False nettle (*Boehmeria cylindrica*) looks like stinging nettle, but with long-stalked leaves and no stinging hairs.

Sweet Flag

Acorus americanus

Minnesota C-Value: 7
Wetland Indicator Status: OBL
Native



Leaves: 50-150 cm long by 1-2 cm wide long linear leaves. Margins smooth. Distinct ridge along back of the leaf. Sweet scent when crushed.

Stems: Plant is 2-6 ft. tall. Erect leaves sprout from a stout rhizome at the base of the plant.

Flowers and fruit: 5-10 cm long and 1-2 cm wide, cylindric, yellow-green spadix that protrudes from a leaf-like tapered stalk. Individual flowers have 6 papery tepals and 6 stamens. Fruit is a 1-3 seeded berry with a dry outside and jellylike inside.

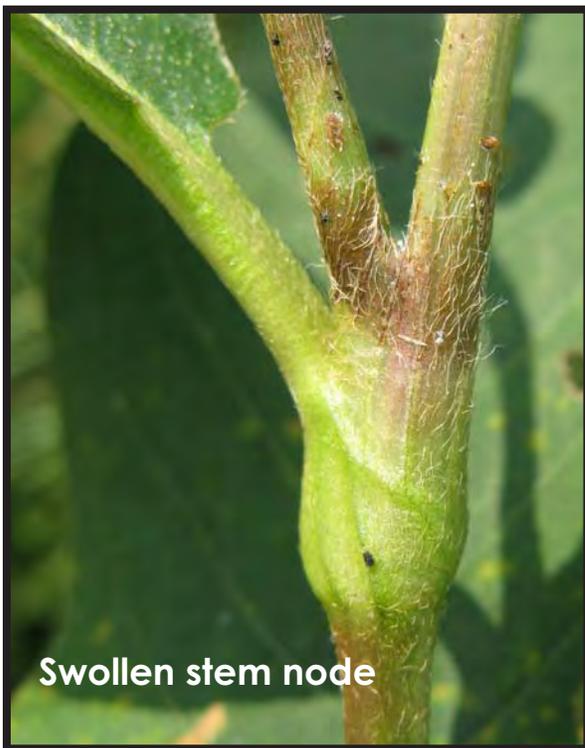
Plant communities: Found in wetlands often amongst cattails and along stream banks. Prefers rich organic soils.

Comments: Sweet flag is similar in appearance to iris but can be distinguished by its spicy-sweet scent and cone-shaped spadix.

Water smartweed

Polygonum amphibium

Minnesota C-Value: 4
Wetland Indicator Status: OBL
Native



Leaves: Leaves alternate with terrestrial or floating forms. Submerged or floating leaves are smooth, blunt, and short pointed. Terrestrial leaves are longer, hairy, and leatherlike.

Stems: Variable in height and form, up to 1 meter in height.

Flowers and fruit: 1, sometimes 2 terminal spikes, 1-4 in. long, pink to red in color. 5 stamens and 5-lobed sepals.

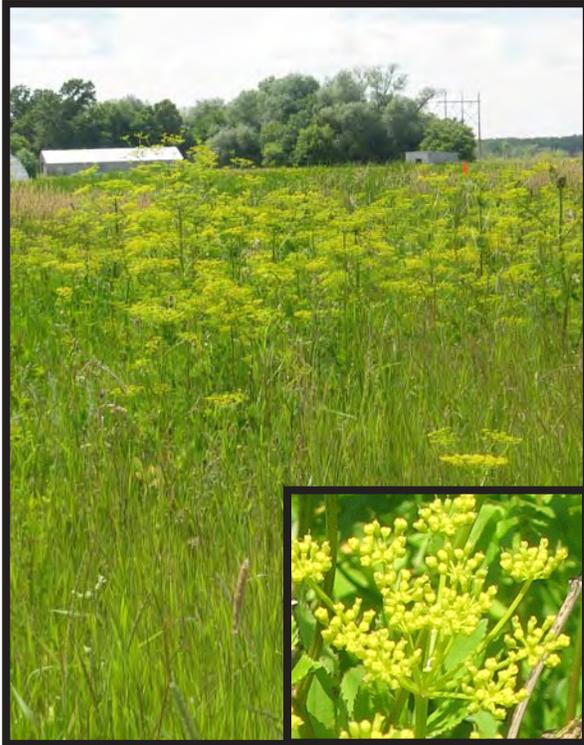
Plant communities: Ponds, seasonally flooded basins, marshes, wet soils.

Comments: Perennial with rhizomes. A distinctive node where the leaf meets the stem is a key characteristic of Smartweed. Other *Polygonum* spp. have multiple flower spikes from the leaf axils and at the end of the stem.

Wild parsnip

Pastinaca sativa

Minnesota C-Value: 0
Wetland Indicator Status: NI
Non-native Invasive



Basal
rosette



Furrowed
stem

Leaves: Pinnately-compound alternate leaves 3-10 in. long with 5-15 lobed and stalkless leaflets. Leaflets broad and 2-4 in. long. Lower leaves long-stalked, upper leaves short-stalked. Basal rosette 1st year.

Stems: Stout erect stem 2-5 ft tall. Stems are hollow, grooved, and angular.

Flowers and fruit: Many small yellow 5-petaled flowers form flat umbel-shaped clusters 2-6 in. wide. Fruit is small, flat, round, slightly ribbed, and straw-colored.

Plant communities: Roadsides and waste places, prairies and savannas.

Comments: Invasive from Europe. Contact with the sap can cause a sun-induced rash (Phytophotodermatitis). The native Golden alexander (*Zizia aurea*) may appear similar, but has finely-toothed leaflets with winged leaflet stems.

Yarrow

Achillea millefolium

Minnesota C-Value: 1
Wetland Indicator Status: FACU
Native



Flat topped umbels



Finely divided leaves

Leaves: Alternate lance-shaped leaves up to 15 cm. Narrow and finely divided, with a fern-like appearance. Upper leaves stalkless. Pleasant aroma when crushed.

Stems: 1-3 ft tall. Gray-green. Usually hairy.

Flowers and fruit: Dense flat-topped clusters of white flowers. Individual flower head has 4-6 toothed ray flowers around white disc flowers.

Plant communities: Planted in grasslands, found in old fields, disturbed sites.

Comments: Perennial, can become aggressive. Attractive to bees, butterflies, and ladybugs. Has been used as a medicinal plant to stop external bleeding. The *A. millefolium* complex includes native and introduced plants and their hybrids.

Yellow (& white) sweet-clover

Melilotus officinalis

Minnesota C-Value: 0
Wetland Indicator Status: FACU
Non-native Invasive



Leaves: 3 leaflets with scalloped edges. Middle leaflet is distinctly stalked.

Stems: Many upright branching stems. Can grow to 6 ft tall.

Flowers and fruit: Yellow or white, 5-parted flowers on long-stalked racemes. Blooms all summer long.

Plant communities: Prefers dry, disturbed sites. Usually in upland buffers. Can invade wet meadows during dry years.

Comments: Previously classified as *M. officinalis* or *M. lutea*. Annual or biennial with taproots. Both the yellow and the white flowered version of this plant are invasive. Unique towering and branching growth form for a clover species.



American sloughgrass

Beckmannia syzigachne

Minnesota C-Value: 4
Wetland Indicator Status: OBL
Native



Leaves: Up to 12 in. long and 3-10 mm wide, rough to touch along margins. Ligule 5-8 mm; auricles absent.

Stems: 2 ft-4 ft tall. Stems smooth with overlapping sheaths and a distinct ligule.

Flowers and fruit: Flower head 5-10 in. long, lined with many small flattened spikelets that are arranged in 2 tightly packed linear rows. Spikelets are round to ovate in shape. Branches in flower head overlap. Spikes straw-colored when mature.

Plant communities: Shorelines, streambanks, wet meadows, disturbed fields and ditches.

Comments: Annual grass. Very easy to distinguish from other water-loving grasses, given its uniquely structured spikelets and broader leaves. Reed canary grass leaves are narrower than American sloughgrass and its seeds are not in two distinct rows.

Barnyard grass

Echinochloa crus-galli

Minnesota C-Value: 0
Wetland Indicator Status: FACW
Non-native



Leaves: Long, flat leaves, 1-2 cm wide. Smooth compressed sheath, ligule absent. Margins slightly hairy.

Stems: 2.5-4.5 ft tall. Sometimes branching with purplish hue at the base.

Flowers and fruit: The panicle, 8-25 cm in length, has densely flowered spreading branches. Spikelets 3-4 mm long on 2-5 cm long branches, commonly green or reddish-purple with bristles on outer scales; length of awns on spikelets variable.

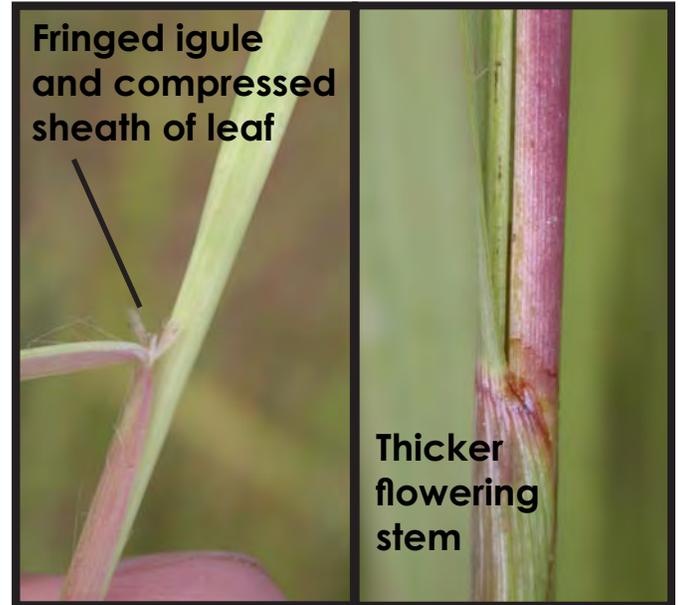
Plant communities: Wet meadows, seasonally flooded basins, and disturbed sites.

Comments: Also known as wild millet, this grass is a non-native annual from Europe. Often germinates on mudflats following a draw-down. *Echinochloa muricata* (a wetland obligate) is a native annual grass similar in appearance and habitat, but has differences in flower that are best distinguished with the use of a hand lens.

Big bluestem

Andropogon gerardii

Minnesota C-Value: 4
Wetland Indicator Status: FAC-
Native



Leaves: 5-10 mm wide, 6-24 in. long. Ligules short and membranous with a fringe of hairs on the margin that continue a short distance up the leaf blade. Leaves often red tinged towards the tip.

Stems: Stout, 3-9 ft tall. Purplish blue color late in season. Sparse hairs.

Flowers and fruit: Signature 'turkey foot' appearance from a cluster of 2-6 racemes of spikelets. Spikelets appressed to slightly spreading along racemes that are up to 6 in. long. Distinct bluish purple tint. Each spikelet has an awn that is 8-15 mm long.

Plant communities: Wet to dry prairies, sandy plains, old fields, roadsides.

Comments: Big bluestem is a native, perennial warm season species common in tall grass prairies, wet prairies, and wet meadows.

Canada bluejoint

Calamagrostis canadensis

Minnesota C-Value: 4
Wetland Indicator Status: OBL
Native



Leaves: Thin leaves 2-4 mm wide, hairless sheath, dry papery ligule similar to reed canary grass.

Stems: Slender, erect, unbranched, up to 5 ft. Purple-blue toward base and frequently has purple joints.

Flowers and fruit: Single flowers in spikelets (2-6 mm long), many spikelets on slender stalks. Tufts of hair at base of flowers.

Plant communities: Sedge meadow, wet to wet-mesic prairie, wet meadows, shallow marsh, shrub carr.

Comments: Perennial grass. Has the appearance of many other grasses, especially at a distance. Key characteristics are purplish-blue stem nodes, dense, blue tinged leaves, and tufts of hair at the base of each floret. Reed canary grass has wider leaves, is bright green, and lacks hairs at the base of each flower.



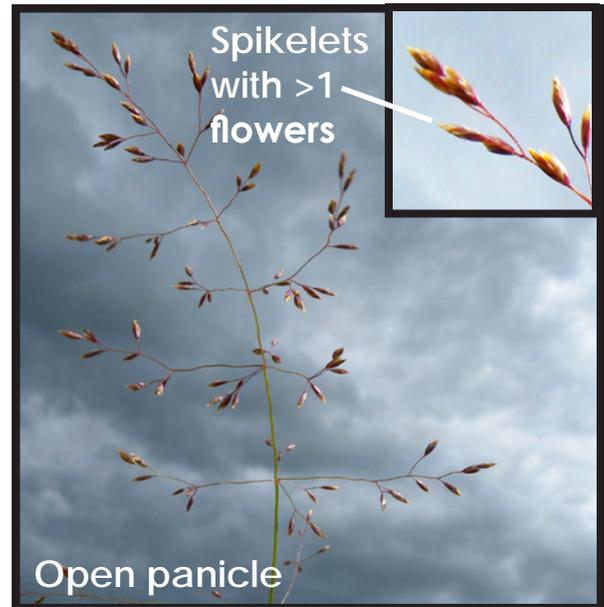
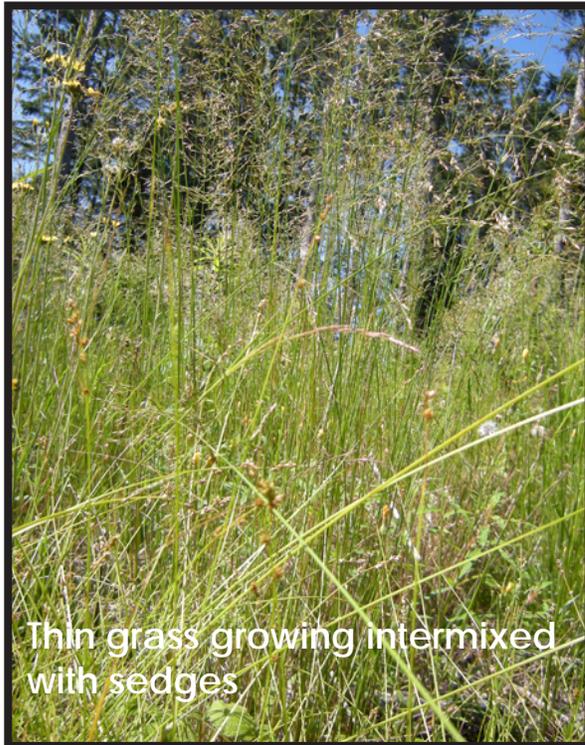
Fowl Bluegrass

Poa palustris

Minnesota C-Value: 5

Wetland Indicator Status: FACW+

Native



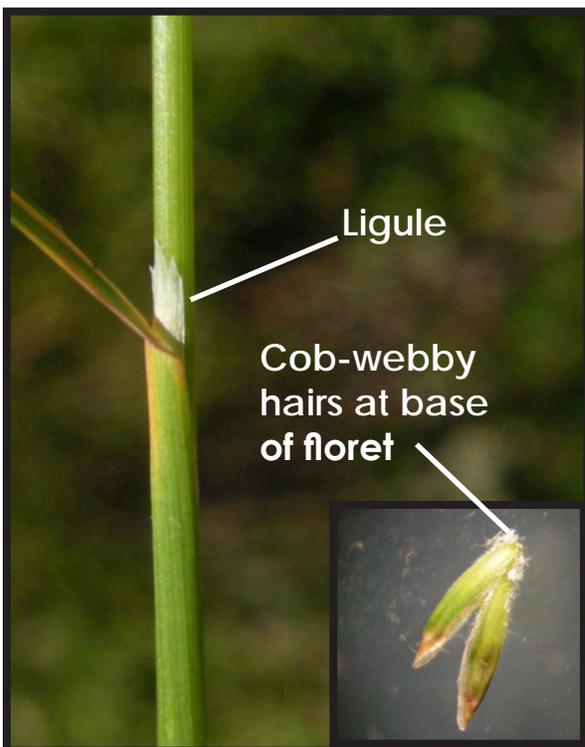
Leaves: 7-15 cm long and 1-4 mm wide. Flat, upright to spreading. Leaves have a boat-shaped tip. Ligule reaches 2-5 mm long and is longer than wide.

Stems: 1.5-4.5 ft tall and smooth. Stems may recline at the base and root from lower nodes.

Flowers and fruit: Loosely spreading panicle, 10 - 30 cm long. Narrow when it first emerges from the sheath. Spikelets are 2-5 mm long and 1-2 mm wide. Each spikelet contains 2-4 flowers.

Plant communities: Wet meadows, marshes, streambanks, ditches, low prairies, moist woods.

Comments: Perennial grass. Can be distinguished from Kentucky bluegrass by its lack of rhizomes, open panicle, and conspicuous ligules.



Foxtail barley

Hordeum jubatum

Minnesota C-Value: 0
Wetland Indicator Status: FAC+
Native



Leaves: Greyish-green, flat, 2-5 in. long, 2-5 mm wide, soft hairs on margin. Ligule < 1 mm long. Lacks auricles.

Stems: Erect, up to 1m tall. Bluish-green, often with swollen nodes.

Flowers and fruit: Erect to nodding panicle, 2-5 in. long, with long, wispy purplish-green awns. Single flowered spikelets.

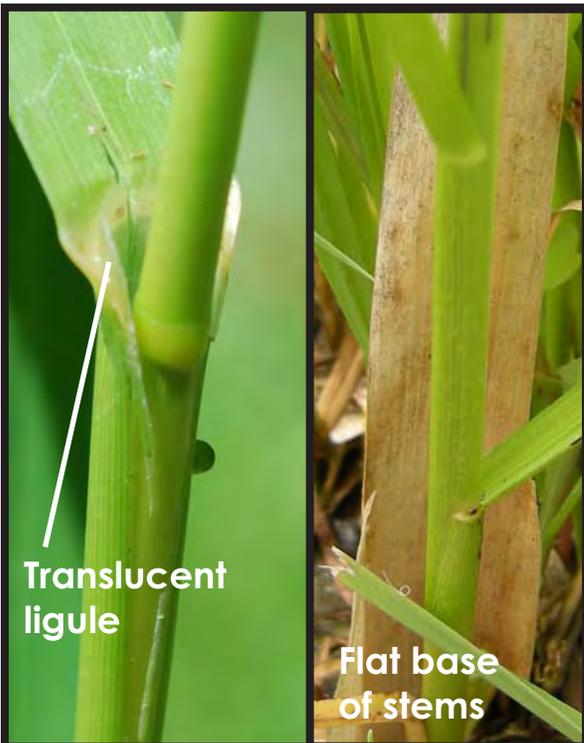
Plant communities: Disturbed areas, wet meadows, ditches, shores, can tolerate brackish conditions.

Comments: Perennial grass, quick to colonize disturbed areas. Also called 'squirrel-tail grass.'

Giant manna grass

Glyceria grandis

Minnesota C-Value: 6
Wetland Indicator Status: OBL
Native



Leaves: Flat, smooth, 25-43 cm long, 8-12 mm wide. Lemmas are distinctly 7 ribbed and are usually purple. Translucent ligule, 3-6 mm long. Sheath compressed and keeled.

Stems: 0.5 - 1.5 m tall, 8-12 mm wide. Erect, flattened at base.

Flowers and fruit: Large open branching panicle 20-40 cm long, 12-20 cm wide. Spikelets somewhat laterally compressed. Oval to elliptic in side view. Each spikelet contains 5-9 flowers. Spikelets 2-2.5 mm wide and 4-7 mm long.

Plant communities: Shallow and deep marshes, wet meadows, bogs, shallow water.

Comments: Perennial grass, also known as reed or tall manna grass. Distinguished from other *Glyceria* spp. by its greater height, ribbed lemmas and size of spikelet. The stems and leaves are also typically wider.

Giant reed grass

Phragmites australis

Minnesota C-Value: 1
Wetland Indicator Status: FACW+
Native



Leaves: Flat, elongate, smooth, up to 2 1/2 in. wide and 8-16 in. long. Leaves are sheathed at base around the stem. White fringed ligule to 1 mm.

Stems: Very stout and tall, becoming reddish near the base. Has dark, distinct joints. Height ranges from 8-16 ft tall.

Flowers and fruit: Large panicles up to 16 in. long. Feathery at maturity due to silky hairs on spikelets. Spikelets 10-17 mm long, with 3-8 flowers.

Plant communities: Sedge and wet meadows, fens, swamps, bogs, stream beds, shallow marshes. Can grow in mudflats or in up to 6 feet of water.

Comments: Aggressive perennial spreading by stolons, rhizomes, and seed to produce clonal colonies. Subspecies *americanus* is native, while subspecies *australis* is native to Europe and is even more aggressive. Non-native subspecies have a denser inflorescence, darker green-grey leaf color, and less red coloration on stems.

Giant reed grass

Phragmites australis

Minnesota C-Value: 0
Wetland Indicator Status: FACW+
Non-native, Invasive



Leaves: Dark green-gray color. Up to 50 cm long and 1-5 cm wide. Flat with sharp-pointed tip and rough margin. Sheath open at top. Short <1mm ligule.

Stems: 5-15 ft tall. Erect thick and hollow stem with a rough texture and tan color. Grows from rhizomes.

Flowers and fruit: Dense purple panicle, 30-50 cm tall, turning brown later in the season. 3-7 flowers per spikelet.

Plant communities: Freshwater and brackish marshes, ditches, wet and sedge meadows, calcareous fens, coniferous bogs, lake margins.

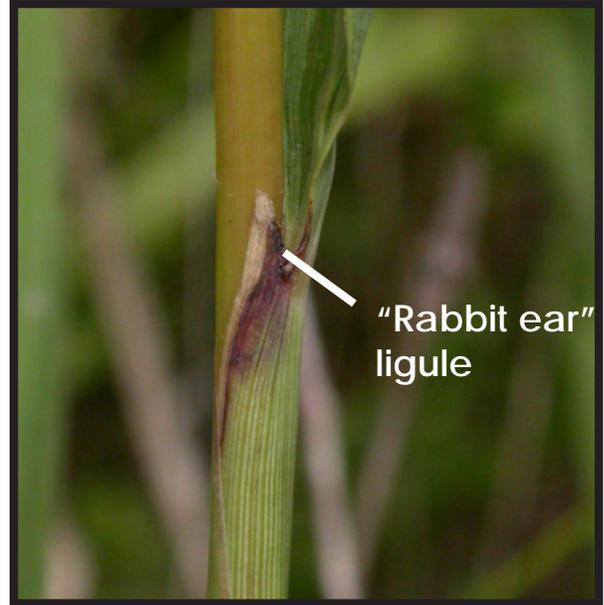
Comments: Aggressive perennial spreading primarily by rhizomes to produce dense stands that crowd out native species. Subspecies *australis* is native to Europe, while subspecies *americanus* is native, and less aggressive. Although there are morphological differences, genetic testing is the most definitive method to determine native status.



Indian Grass

Sorghastrum nutans

Minnesota C-Value: 5
Wetland Indicator Status: FACU+
Native



Leaves: 60 cm long and 1 cm wide, narrowing at the base. Strongly keeled midrib. Distinctive ligule at the base of the leaf blade, shaped like rabbit ears.

Stems: 3 - 8 ft tall and unbranched, with slightly swollen nodes.

Flowers and fruit: Golden-brown spikelets are fuzzy and awned. Panicle is tall and narrow, up to 14 inches long. Blooms late summer to early fall.

Plant communities: Tall grass prairies, wet-mesic to dry-mesic prairies. Can handle occasional flooding and repeated burning.

Comments: Perennial. Can be confused with big bluestem before it flowers. Indian grass can be distinguished by its hairless leaf that tapers at the base, and rabbit ear auricles.



Kentucky bluegrass

Poa pratensis

Minnesota C-Value: 0

Wetland Indicator Status: FAC-
Non-native



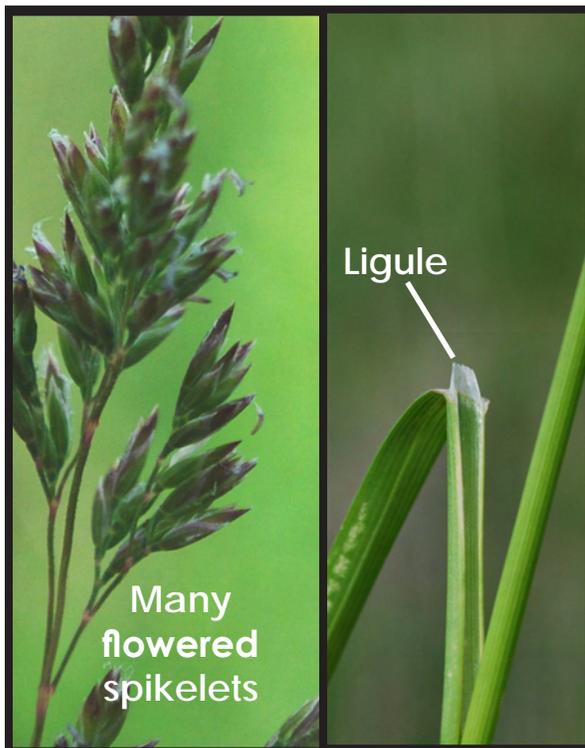
Leaves: 1-15 cm long and 2-5 mm wide. Blade ends in a boat-shaped tip. Ligules are shorter than they are wide, less than 2 mm long.

Stems: 1-3 ft. Stems erect, smooth, nearly round to slightly flattened.

Flowers and fruit: 15 cm long pyramid-shaped panicle. Spikelets are flattened with 2-5 flowers. Green to purplish in color. Florets have cottony hairs at their base.

Plant communities: Wet meadows, prairies, urban areas, pastures. Thrives in all but the wettest of locations.

Comments: Perennial, non-native cultivar. One of the most common species in the upland/wetland transition zone in Minnesota and Wisconsin. Ligule is shorter and flatter in *P. pratensis*.



Orchard grass

Dactylis glomerata

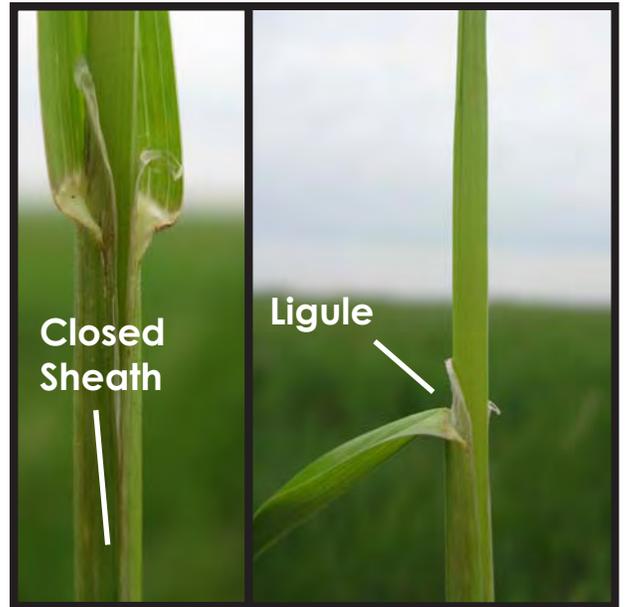
Minnesota C-Value: 0
Wetland Indicator Status: FACU
Non-native



Pyramidal panicle during pollination



Closed panicle prior to pollination



Leaves: 3-8 mm wide and 4-6 in. long. Sheaths are closed toward the base with fused margins. Conspicuous white midvein. Ligule is 3-8 mm long.

Stems: Erect, bluish-green in color. Basal branching. 1.5 - 4 ft tall.

Flowers and fruit: Dense clusters of spikelets, 5-23 cm long and 1-8 cm wide, clustered at the tips of branches. Narrow panicle when young becoming pyramidal at pollination. Spikelets 3-flowered, strongly flattened on short stalks.

Plant communities: Meadows, lawns, along roadsides.

Comments: Cool season clumped perennial introduced as a forage crop. Source of hayfever in summer. Distinguished by clusters of spikelets and blue-green color.

Prairie cordgrass
Spartina pectinata

Minnesota C-Value: 5
Wetland Indicator Status: FACW+
Native



Leaves: Short ligule 1-3 mm with dense white hairs. Flat long and shiny leaves, in-rolled when dry and forms tight 'cords'. Very rough margins (finely toothed).

Stems: Plant may be 2 m tall with stout erect stems.

Flowers and fruit: Panicle with 10-30 short-stalked spikes that are 1-5 in. long. Spikes are comb-like, as the spikelets all hang to one side.

Plant communities: Dominant in wet prairies, wet meadows, also on shorelines, marshes and in ditches.

Comments: Perennial grass, sometimes called 'slough grass'. Distinct 1-sided flower head makes it easily distinguishable from other species. Sharp-edged leaves may be confused with rice cutgrass (*Leersia oryzoides*) earlier in the growing season, but rice cutgrass leaves are much thinner and wider, and the stem has hairy joints.

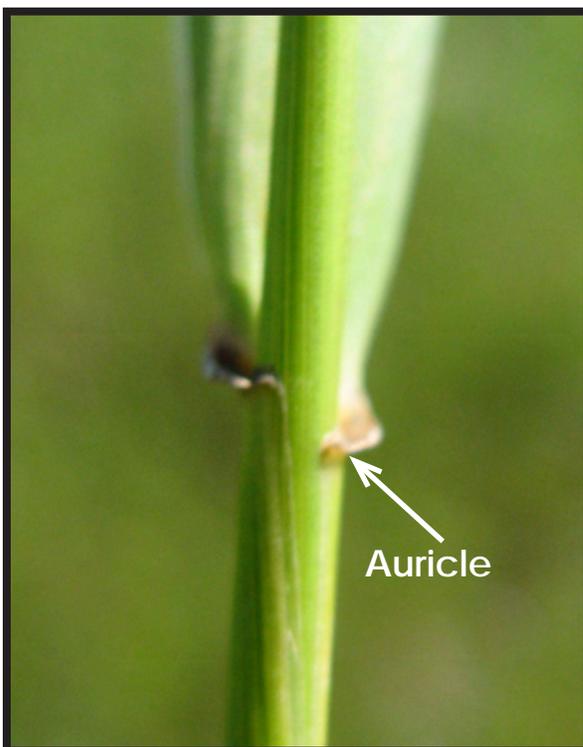
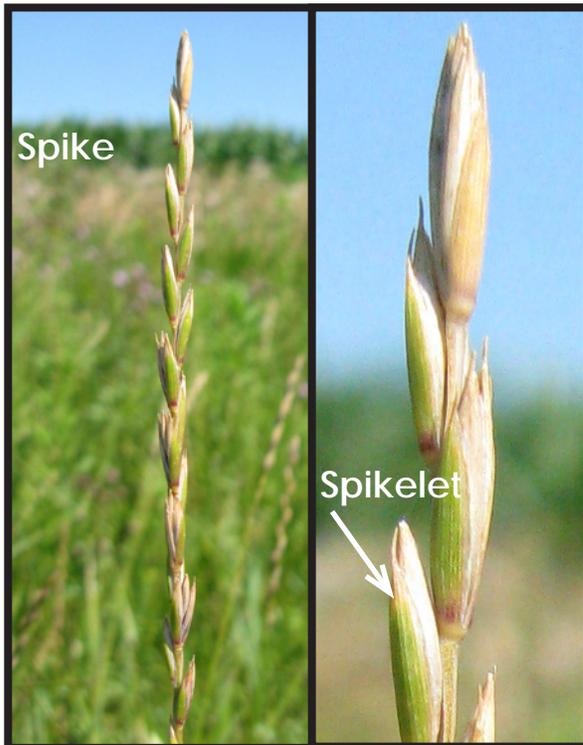
Quack Grass

Elymus repens

Minnesota C-Value: 0

Wetland Indicator Status: FACU

Non-Native



Leaves: 6 - 12 mm wide. Flat and pointed with slender auricles. Lower leaf surface smooth, upper surface rough. Leaves distributed evenly along the stem, may be slightly concentrated toward base. Ligule less than 1 mm.

Stems: Erect stems that can reach 3 ft. Spreads from creeping rhizomes. Lower sheaths are usually fuzzy.

Flowers and fruit: Spikelets are arranged in two long rows with 3-6 florets per spikelet. Spikelets distinctly overlapping. Awnless to short awns.

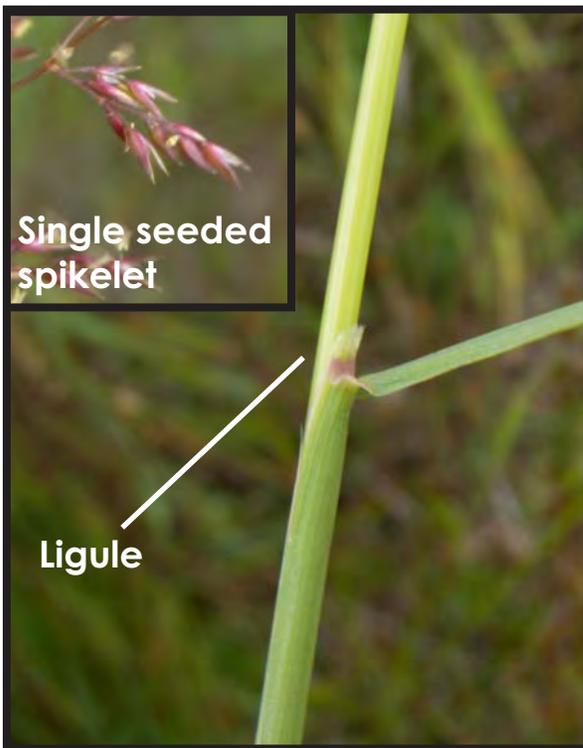
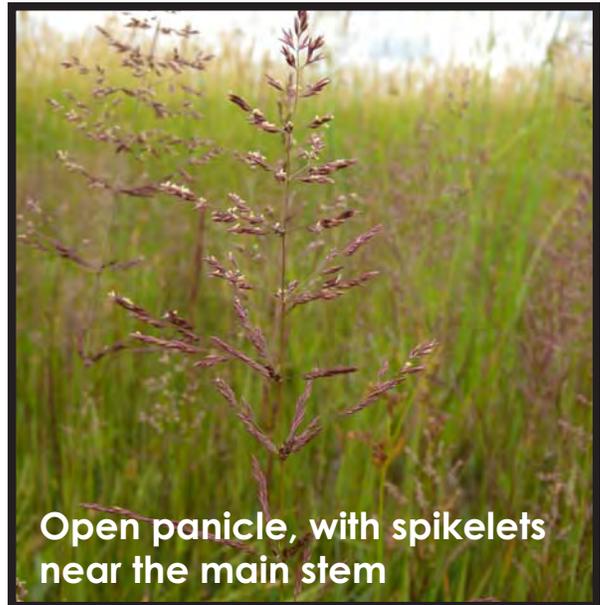
Plant communities: Disturbed areas, grasslands and open woodlands.

Comments: Perennial. Invasive species from Eurasia that does well in moist, disturbed areas and is tolerant of drought and salt. Spikelets overlap the bases of the next two spikelets, whereas slender wheatgrass spikelets only overlap one other spikelet.

Redtop

Agrostis gigantea

Minnesota C-Value: 0
Wetland Indicator Status: FACW
Non-native



Leaves: Long, 3-7 mm wide. Rough to the touch. Ligule 2.6-6 mm tall.

Stems: Smooth and straight. May be curved at the base. Up to 2 ft tall.

Flowers and fruit: Widely spreading open panicle 10-20 cm long. Seeds on thread-like branches generally have a maroon tint, may be more green in the shade. Single flowered spikelet.

Plant communities: Wet meadows, wet prairies, stream edges, ditches.

Comments: Perennial from Europe, mostly naturalized in the United States. May be confused with fowl bluegrass (*Poa palustris*) which has a similar ligule and panicle. Fowl bluegrass has a 2-4 flowered spikelet, fewer spikelets grouped along the main flower stem, and a tuft of cobweb-like hairs at the base of each floret. Leaves of fowl bluegrass are narrower and greener.

Reed canary grass
Phalaris arundinacea

Minnesota C-Value: 0
Wetland Indicator Status: FACW+
Non-native Invasive



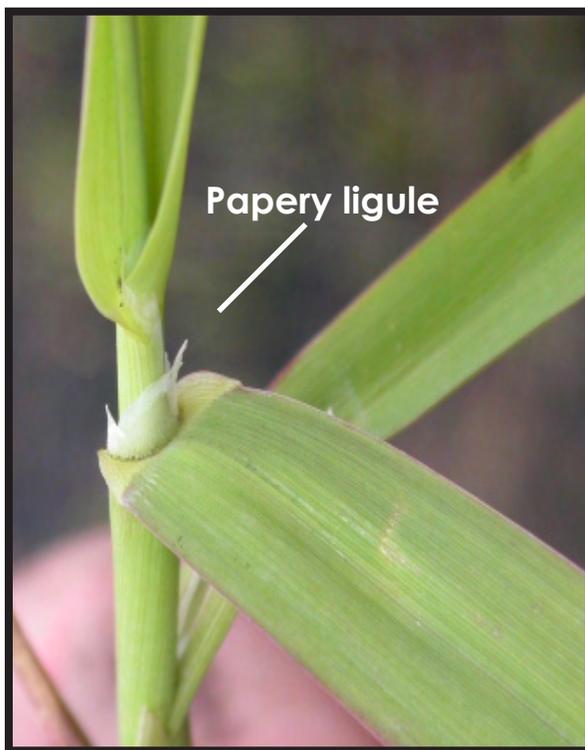
Leaves: Flat, to 1 in. wide and to 10 in. long, tapering to end. Clear papery ligule at base of leaf. Auricles absent.

Stems: Erect, smooth, up to 6 ft tall.

Flowers and fruit: Numerous 1 flowered spikelets. Panicle opens during flowering, then closes to become spike-like. Dense flower heads.

Plant communities: Wet meadows, marshes, streams, ditches, disturbed areas, native prairie.

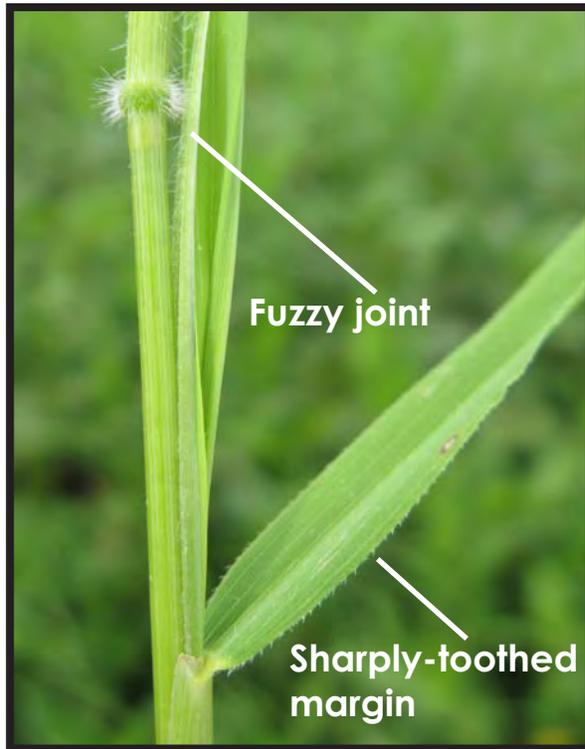
Comments: Perennial cool season grass. Valued for forage, but also a very aggressive invader spreading by rhizome and seed. Forms dense, monotypic colonies and is difficult to eradicate. Flower panicle resembles Canada bluejoint (*Calamagrostis canadensis*), but lacks tufts of hairs in spikelets. Native less aggressive varieties of *Phalaris arundinacea* may exist in Minnesota, but most populations are non-native varieties.



Rice cutgrass

Leersia oryzoides

Minnesota C-Value: 3
Wetland Indicator Status: OBL
Native



Leaves: Narrow to 3 cm wide. Very rough to touch, small sharply-toothed leaf margins. Sheaths rough.

Stems: Round, weak and slender. Fuzzy ring around joints.

Flowers and fruit: 8 in. open panicle, spikelets on branch ends with stiff hairs, 1 flower per spikelet, flowers greenish white.

Plant communities: Marsh fringes, wet meadows, ditches.

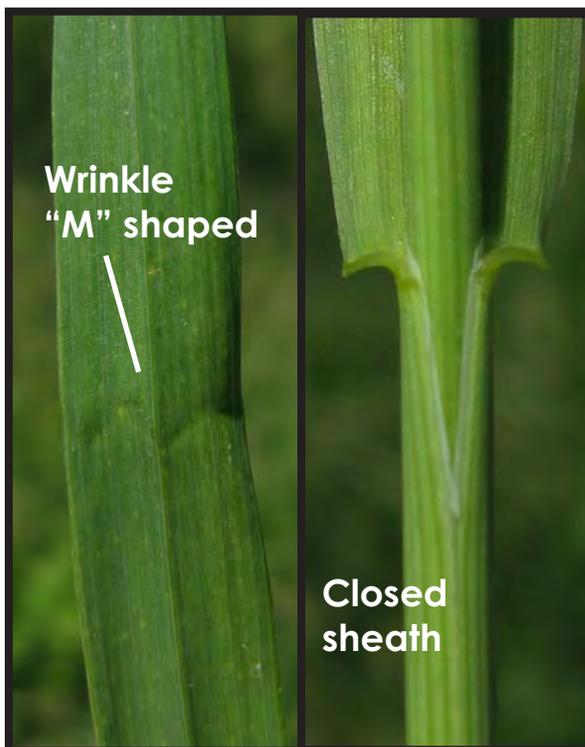
Comments: Perennial grass that may root at nodes. Leaf edges will cut skin and catch on clothes. Similar to Prairie cordgrass (*Spartina pectinata*) which also has toothed leaf edges; however, cordgrass leaves are coarser and stems lack fuzzy nodes. White grass (*Leersia virginica*) is similar in overall appearance, but is more delicate, not as rough, has flattened stems, and grows in shaded areas.



Smooth brome

Bromus inermis

Minnesota C-Value: 0
Wetland Indicator Status: UPL
Non-native Invasive



Leaves: Broad, typically hairless leaves. Leaf has distinct 'M' shaped cross-wrinkle about 1/2 to 2/3 way up the leaf. Ligule < 1 mm; auricles absent.

Stems: Erect stems, up to 3 ft in height. Leaves have closed sheath around the stem, with stiff arches breaking away from the sheath and forming the base of the leaf.

Flowers and fruit: Open panicle to 8 in. long with nodding spikelets. Branchlets whorled off central stalk of panicle. Spikelet 15 - 30 mm long, 3 mm wide.

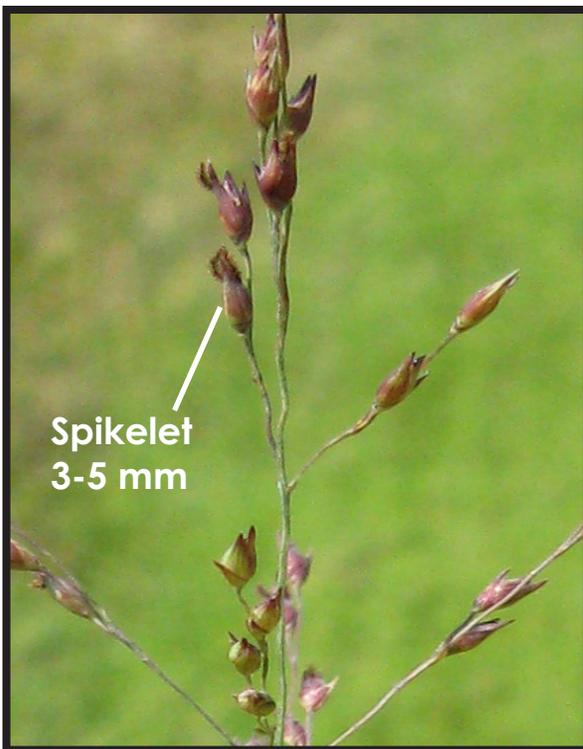
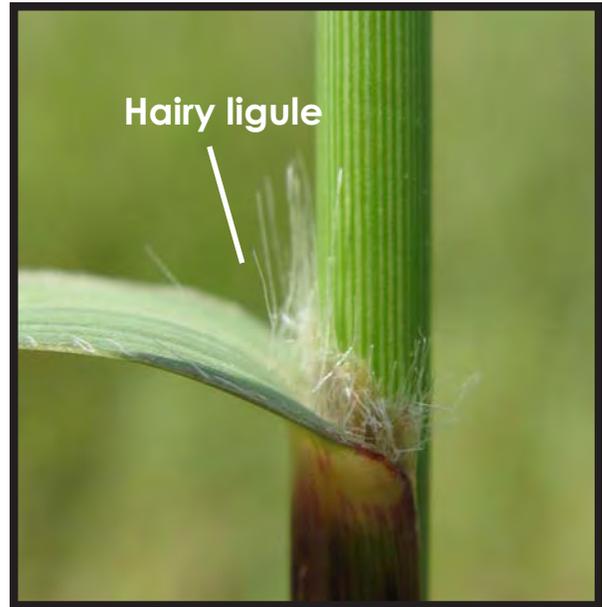
Plant communities: Uplands, disturbed soil, old fields, roadsides, wet meadows.

Comments: Perennial cool season grass. Easily identified by pendulous heads and the 'M' or 'W' shaped cross-wrinkle in the leaves. Other grasses may have a cross-wrinkle, but typically not as distinct. Valued as a forage crop, yet invasive to native restorations.

Switchgrass

Panicum virgatum

Minnesota C-Value: 2
Wetland Indicator Status: FAC+
Native



Leaves: Leaves 1-3 ft long with prominent midrib. Long hairs at ligule and leaf base.

Stems: 4-7 ft tall, erect, hairless.

Flowers and fruit: Purple tinged spikelets, 3-5 mm long. Flowers born singly at ends of branches in large, wide open panicle. Panicle often reaches 15-20 inches in length.

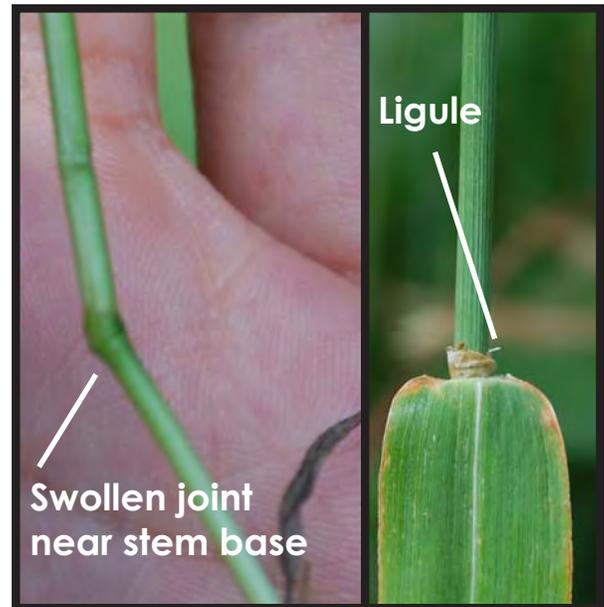
Plant communities: Uplands, wet meadows, wet prairies, and wet, sandy soils.

Comments: Warm season perennial. Earlier in the growing season, switchgrass can resemble many other grasses. A distinguishing characteristic is the tufts of hair that surround the ligule and run a short distance up the leaf base.

Timothy

Phleum pratense

Minnesota C-Value: 0
Wetland Indicator Status: FACU
Non-native



Leaves: Up to 50 cm long and 4-8 mm wide. Flat, wide leaf with a rough edge. Dark green-gray. Open sheath. White papery ligule 2-4 mm tall. Auricles occasionally present.

Stems: 2-3 ft stem is erect, stiff, hairless, round, and unbranched. Lower 1-2 joints often swollen.

Flowers and fruit: Spike 5-10 cm long and 5-8 mm wide; crowded, flattened, single-flowered spikelets - each 3-4 mm long, with horn-like awns (U-shaped). Especially fuzzy appearance when in flower.

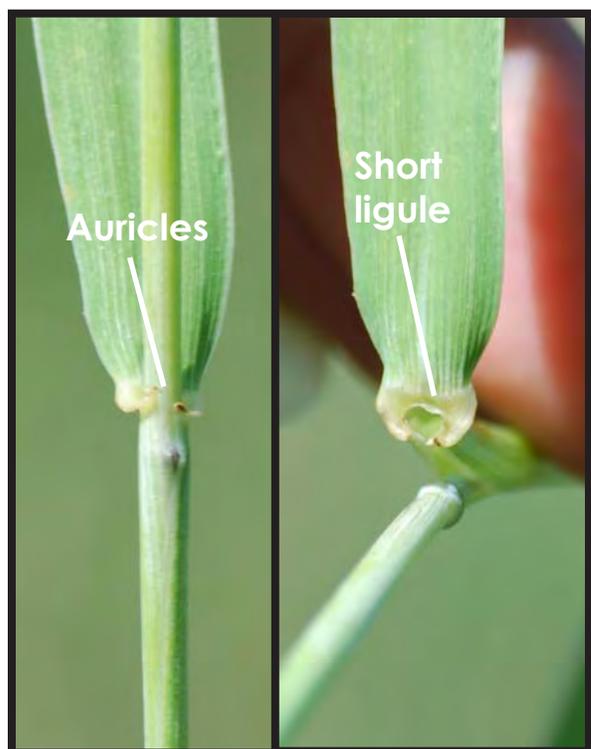
Plant communities: Old fields and pastures, moist bottomlands, disturbed areas.

Comments: Cool-season perennial introduced for forage. Bulbous nodes at base of stem and seed head are key identifying characteristics.

Virginia wild rye

Elymus virginicus

Minnesota C-Value: 4
Wetland Indicator Status: FACW-
Native



Leaves: 5-15 mm wide, both sides rough to touch. Sheaths mostly open, sometimes purplish at base. Auricles typically present, clawlike. Ligules short (0.5 mm) membranous, truncate to rounded.

Stems: Up to 5 ft. Light green, smooth, and erect.

Flowers and fruit: Spike 2-6 in. long. Densely covered with stiff ascending spikelets. Awns straight, up to 1 cm long.

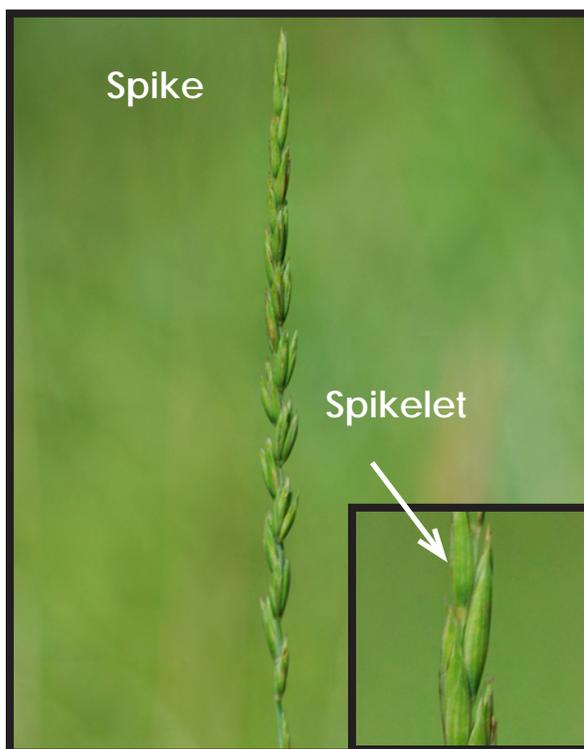
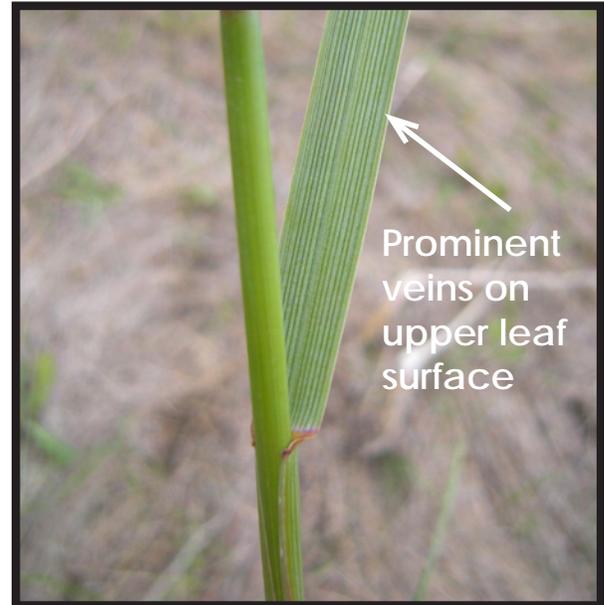
Plant communities: Variable, including streambanks, floodplains, marsh edges, fields, and disturbed sites.

Comments: Perennial cool-season bunchgrass. Distinguished by its stiff, erect spikes and straight awns. Used as a cover crop in seed mixes for wetlands. Its FAC- relative, Canada wild rye (*E. canadensis*) has wider leaf blades, larger drooping spikes, and awns that spread outward when mature.

Western Wheatgrass

Pascopyrum smithii

Minnesota C-Value: 3
Wetland Indicator Status: FACU+
Native



Leaves: 5 - 25 cm long and up to 6 mm wide. Blue-green leaves are rough on the upper surface and margin. With prominent veins. Short ligule < 0.5 mm. Blades attach to stem at 45 degree angles.

Stems: 1- 3 ft stems are single or in small clusters. Sheaths smooth, sometimes purplish. Claw-like auricles < 1 mm. Slender rhizomes.

Flowers and fruit: 5 - 15 cm long, stiff, erect spike. May be smooth or have short hairs. Spikelets are overlapping to crowded. 2-12 florets per spikelet. Awned or unawned.

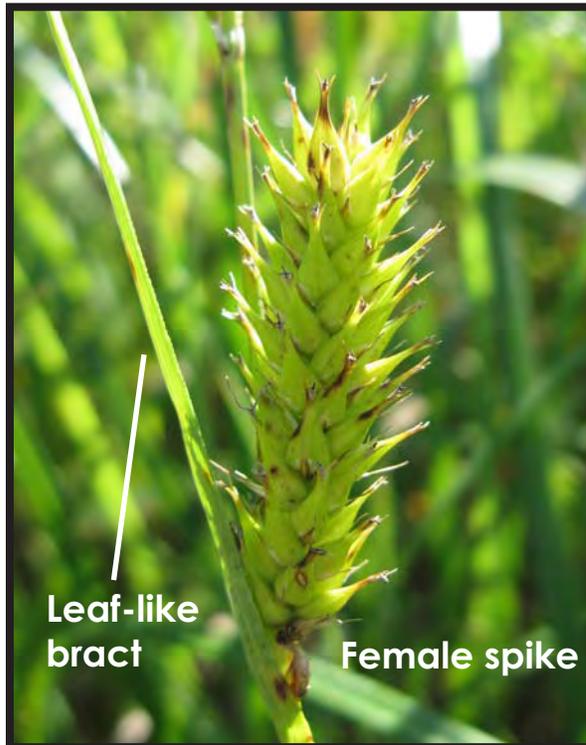
Plant communities: Does well in sandy or clay soils. Common on moist to dry soils and upland prairie.

Comments: Perennial cool season grass. Commonly used in erosion control projects due to its widely spreading rhizomes. Status as a native species to Minnesota is unresolved.

Slough sedge

Carex atherodes

Minnesota C-Value: 5
Wetland Indicator Status: OBL
Native



Leaves: Leaves 4-10 mm wide. Typically densely fuzzy sheaths. Leaf sheaths may lack hair if in standing water. Lower sheaths reddish, and shred into narrow fibers.

Stems: Stems have a red base. Stout and triangular, growing to 4 ft tall.

Flowers and fruit: 2-6 male spikes sitting above 2-4 female spikes, erect or nodding. Female spikes have a leaf-like bract that is longer than the stem. Female scales are thin, awn-tipped, translucent to brown in color and shorter than perigynia.

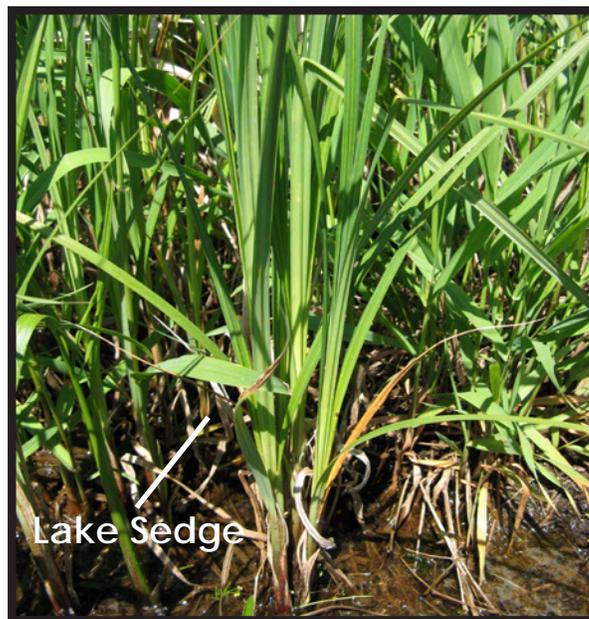
Plant communities: Shallow water, marshes, shrub-carr, swales, wet meadows, shorelines.

Comments: Perennial, may form dense colonies. Early in the season, may look similar to Lake sedge (*Carex lacustris*), which lacks a fuzzy sheath.

Lake sedge

Carex lacustris

Minnesota C-Value: 5
Wetland Indicator Status: OBL
Native



Leaves: Leaves as long as flower stem (1-1.25 m). Coarse, strongly M-shaped in cross-section, 8-20 mm wide, blue-green in color, lower leaves disintegrate into ladder-like network of fibers. Sheaths smooth.

Stems: Rough to the touch. Triangular with dark red, rhizomatous base.

Flowers and fruit: Upper spikes male, lower female (2-4 male and 2-4 female spikes). Male spikes are short-lived. Female scales awned and tapered at tip, thin, translucent to brown in color, and shorter than perigynia.

Plant communities: marshes, shrub-carrs, sedge meadows, lake edges.

Comments: Perennial, may form dense colonies. Has similar habitat and appearance to slough sedge (*C. atherodes*) - but slough sedge typically has hairy sheaths.

Stalk-grained sedge

Carex stipata

Minnesota C-Value: 3
Wetland Indicator Status: OBL
Native



Leaves: 4-10 mm wide. Cross-wrinkled thin sheath.

Stems: Sharply triangular and winged, somewhat spongy.

Flowers and fruit: Stay yellowish-green at maturity. Spikes have both male and female flowers, male above and female below. Bracts often bristle-like and longer than the spike. Female scales not awn tipped. Perigynia strongly nerved on both sides, base somewhat spongy.

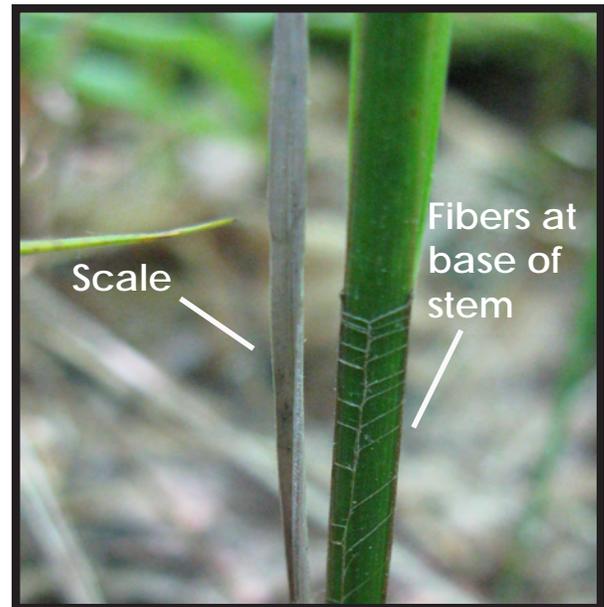
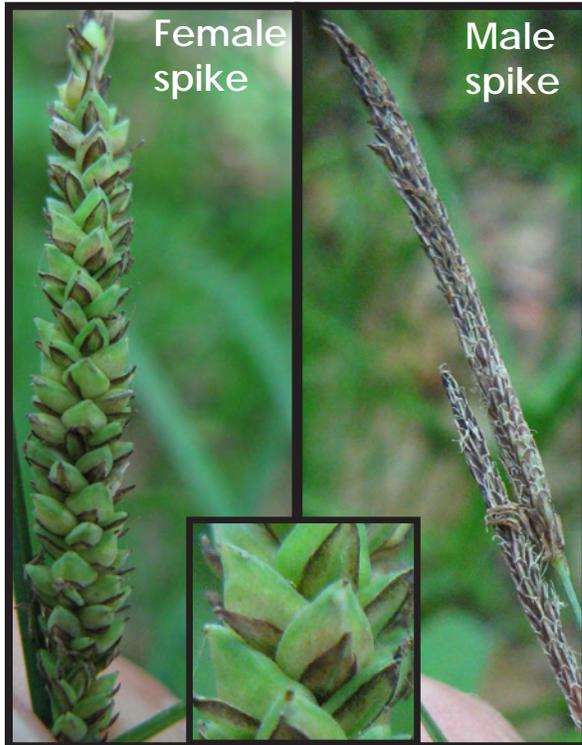
Plant communities: Wet woods, wet meadows/prairies, roadside ditches.

Comments: Perennial sedge, also known as awl-fruited sedge. Very similar to Fox sedge (*C. vulpinoidea*). Stem of *C. vulpinoidea* is not winged, and female scales have awns.

Tussock sedge

Carex stricta

Minnesota C-Value: 5
Wetland Indicator Status: OBL
Native



Leaves: 2-6 mm wide. The lowest leaves reduced to brown scales. Lower sheaths have ladder-like strands up the base.

Stems: Triangular stems, rough to the touch, to 1-m in height.

Flowers and fruit: 1-3 narrow male spikes above the fruited female spikes (2-5 spikes). Female scales pointed or rounded at the tips, shorter than the perigynia, perigynia veinless.

Plant communities: Sedge meadows, shallow marshes, fens, shores, streambanks, ditches.

Comments: Perennial sedge also referred to as upright sedge or hummock sedge. Forms large tussocks over time 8 in. or more in height. Non-tussock forming sedges that may appear similar include *C. emoryi* (veins on perigynia), *C. aquatilis* (no brown leaf blade at base), *C. haydenii* (scale longer than perigynia).

Fox sedge

Carex vulpinoidea

Minnesota C-Value: 3
Wetland Indicator Status: OBL
Native



Leaves: 2-5 mm wide, papery cross-wrinkled sheath which is mottled with dots.

Stems: Sharply triangular, firm towards the inflorescence.

Flowers and fruit: Spikelets green, turning brown at maturity. 3-10 cm long. Spikes have male flowers above, and female flowers below. Bracts often bristle-like, extending beyond the spike. Female scales have awns as long or longer than the perigynia.

Plant communities: Sedge meadows, wet meadows, marshes, lakeshores, streambanks, roadside ditches.

Comments: Perennial sedge, also known as brown fox sedge. Common early colonizer. Very similar to Stalk-grained sedge (*C. stipata*), but *C. stipata* has a winged stem, which is somewhat spongy and easily crushed. Female scales of *C. stipata* are not awned.



Yellow nut sedge

Cyperus esculentus

Minnesota C-Value: 0
Wetland Indicator Status: FACW
Non-native



Leaves: Light green with prominent midveins. Mostly basal and as long as the stems. Up to 1.5 ft long and 5-8 mm wide. Bracts usually longer than the spikes. Sheaths are whitish green.

Stems: Erect triangular stems 0.5-2.5 ft tall. Smooth and waxy. Forms round, ridged white tubers underground that turn brown or black in color.

Flowers and fruit: Golden cluster of loose cylindrical spikes at the tip of each stem. Each spike is 2-3 in. long and 1-1.5 in. wide and comprised of small linear spikelets that are perpendicular to the stem. Scales 2-3 mm long, slightly keeled. Achene 3-angled.

Plant communities: Sandy or muddy shores of streambanks, marshes, ditches, wet fallow fields.

Comments: Non-native perennial. Other *Cyperus* species lack tubers and differ in length of scale (longer or shorter) and shape (awn-tipped or curved).

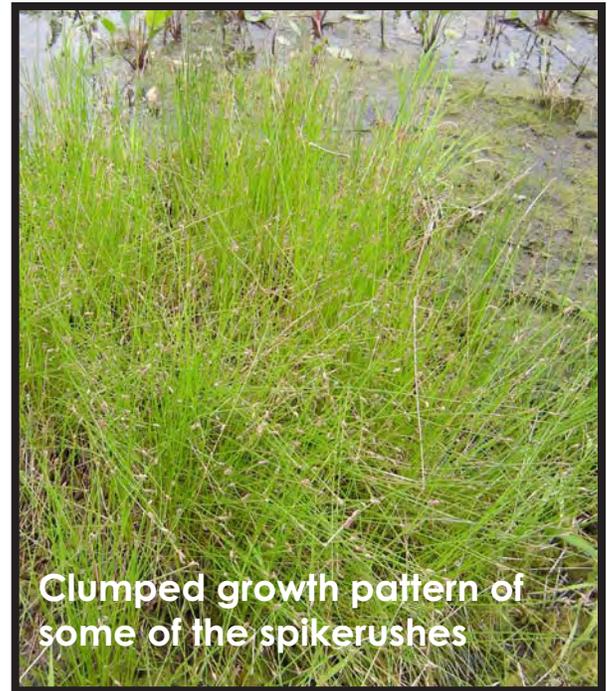
Spike rushes

Eleocharis spp.

Minnesota C-Value: 3-10

Wetland Indicator Status: FACW-OBL

Native



Leaves: Leaves are reduced to sheaths at the base of the stems.

Stems: Soft stems up to 50 cm high and 0.5-5 mm thick. Round, flattened, or angled.

Flowers and fruit: Single flower head (spikelet) at tip of stem, 4-30 mm long. Scales spirally arranged, contains many flowers. Fruit is an achene with a tubercle, best viewed with a magnifying lens.

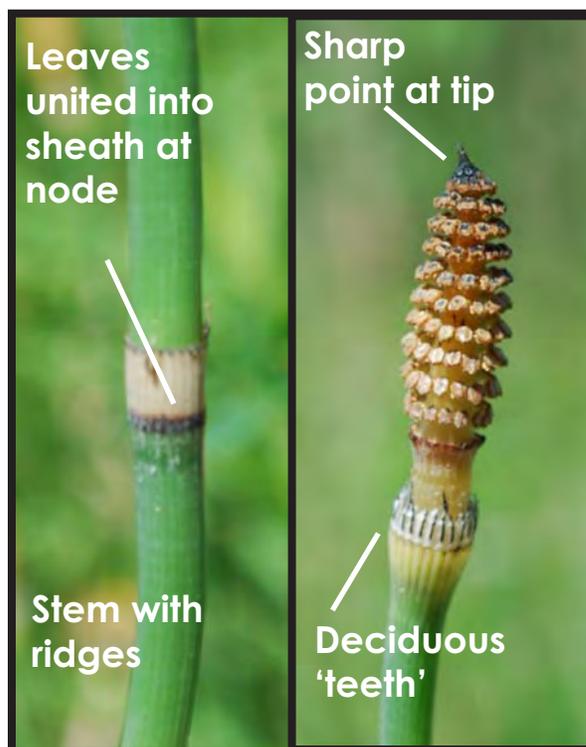
Plant communities: Mudflats, shorelines, ditches, marshes. Commonly found in disturbed saturated soils of farmed, restored, and created wetlands.

Comments: 16 species in Minnesota. Most are perennial from rhizomes, a few are annuals. Although some species can be identified by vegetative characteristics, many require close examination of the achene to identify.

Scouring rush

Equisetum hyemale

Minnesota C-Value: 2
Wetland Indicator Status: FACW-
Native



Leaves: Reduced to a sheath at each node. Sheaths are 5-15 mm long with a dark band at the tip and usually at the base. The top of the sheath is divided into dark-colored teeth 2-4 mm long, that may be deciduous.

Stems: Green, typically unbranched, hollow, and upright. Central cavity large, at least three-quarters the size of stem diameter. Can reach 3 ft tall and 4-14 mm wide. Surface is covered in 14-50 rounded, rough ridges. Fertile and sterile stems are alike.

Flowers and fruit: Sharp-pointed cones are stalkless or short-stalked at stem tips. 1-2.5 cm long.

Plant communities: Seeps, wet to moist meadows, shores, streambanks, ditches, roadsides, along railroads.

Comments: Perennial. Can be distinguished from other *Equisetum* species by its sharp-tipped cones and lack of branching. Used by early settlers to scour pots and pans.

River bulrush

Schoenoplectus fluviatilis

Minnesota C-Value: 4

Wetland Indicator Status: OBL

Native



Flower head



Triangular stem

Leaves: 6-15 mm wide, M-shaped cross section.

Stems: Sharply triangular, smooth, sturdy and leafy, up to 6 ft tall.

Flowers and fruit: 10-20 brown, nodding spikelets in flower head. 1 flower per scale, several scales in a spikelet, spikelets 1-3 cm long. Leaf-like bracts surpass inflorescence.

Plant communities: Deep and shallow marshes, river banks, lake shores.

Comments: Native perennial often forming dense colonies. Also classified as *Scirpus fluviatilis*. Looks similar to green bulrush (*S. atrovirens*) when not in flower, except river bulrush stems stay sharply triangular all the way up the stem until leaves break away. Green bulrush stems become rounded after the first few leaves nod away from stem.

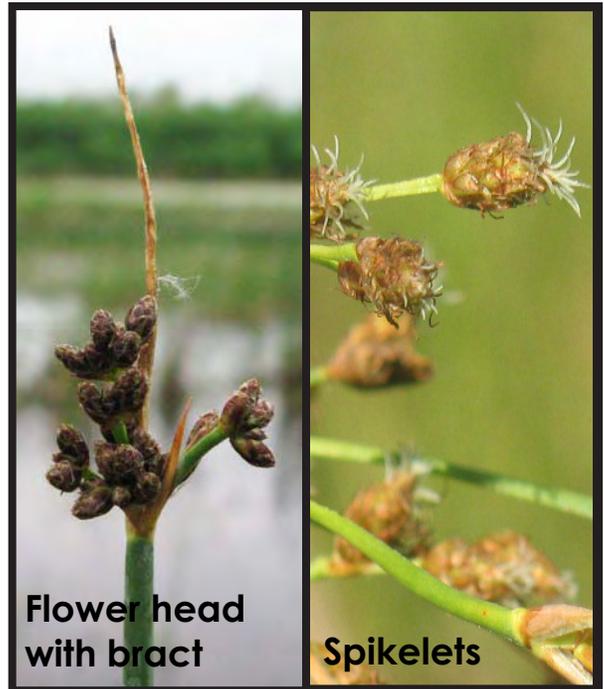
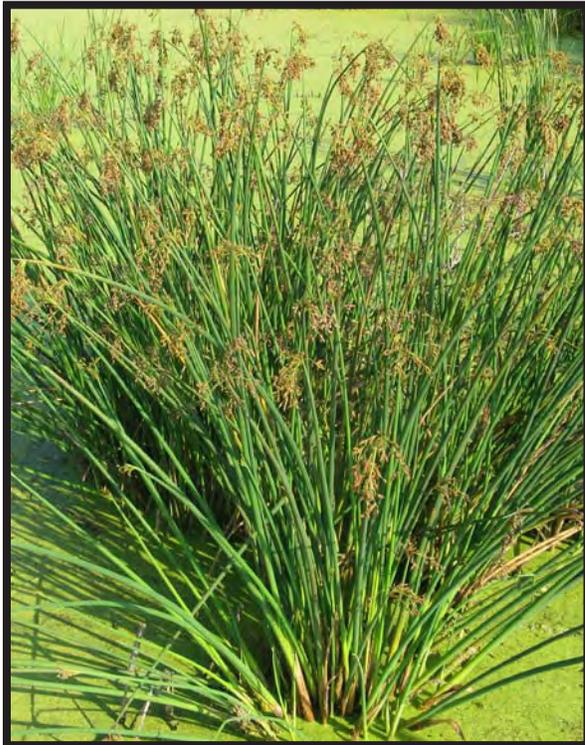
Softstem bulrush

Schoenoplectus tabernaemontani

Minnesota C-Value: 4

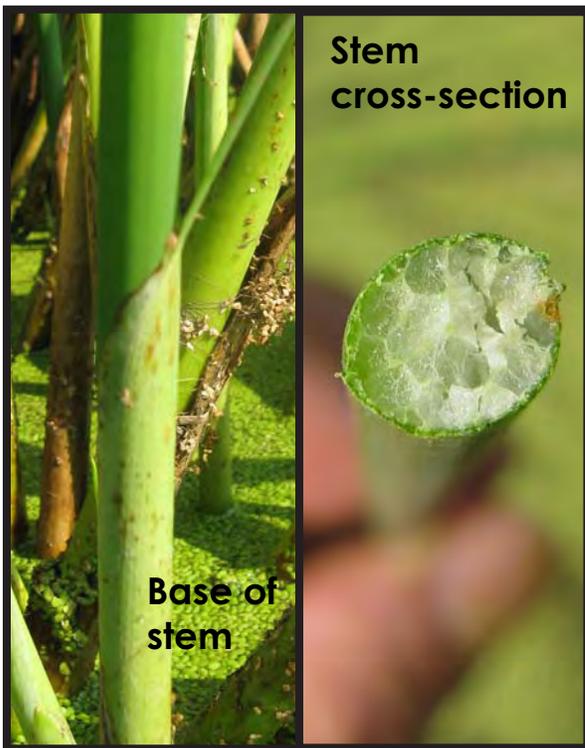
Wetland Indicator Status: OBL

Native



Flower head with bract

Spikelets



Stem cross-section

Base of stem

Leaves: 4-5 leaves reduced to sheaths at bottom of stem.

Stems: Stem 3 ft-6 ft tall, cylindrical, bluish-green with a bract that extends beyond the spikelets at top of stem. Stem crushes between fingers easily. Stem cross section shows large open air-spaces, making the stem soft.

Flowers and fruit: Drooping spikelets with several flowers per spikelet. Spikelets up to 1/2 in. at top of head. Flowers covered in reddish brown scales.

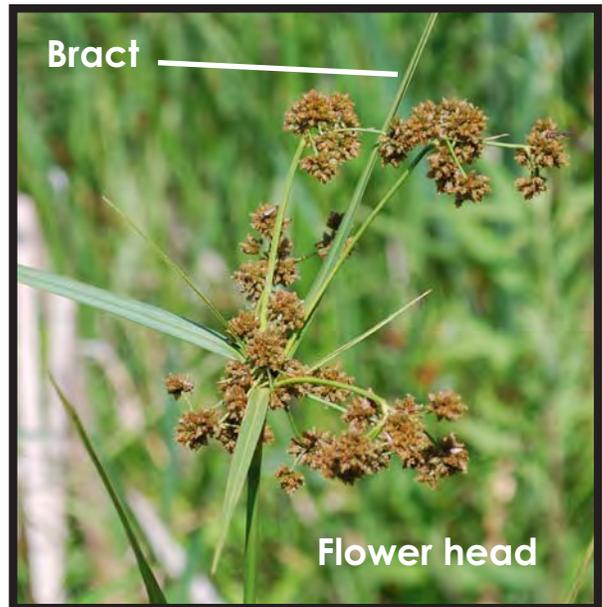
Plant communities: Shallow and deep marshes, wet prairies, ponds, lakes, rivers. Tolerates standing water.

Comments: Looks similar to hardstem bulrush (*Schoenoplectus acutus*), but softstem bulrush has more airspace in the stem, making it easier to crush between the fingers. Hardstem bulrush is darker green with many small air chambers, resulting in a sturdier stem.

Green bulrush

Scirpus atrovirens

Minnesota C-Value: 4
Wetland Indicator Status: OBL
Native



Leaves: Leaves 1-2 cm wide with a distinct M-shaped cross-section. Sheaths are brown or green with cross veins (septa). Modified leaves (bracts) at the base of the inflorescence are longer than the flower head.

Stems: 0.5-1.5 m tall. Roundly triangular towards the base.

Flowers and fruit: Spikelets 2-8 mm long, 1-3 mm wide, crowded into dense spherical heads. Flower heads are on stems, variable in length, up to 12 cm long extending in many directions. Scales dark brown with pale midribs. Perianth bristles present, same height or shorter than achene.

Plant communities: Wet & sedge meadows, shrub-carrs, streambanks.

Comments: Perennial. Variable in coloration. Cross veins in blades and sheaths more prominent in this species. Other relatives have more black pigmentation in scales of flower head. Woolgrass (*S. cyperinus*) easily differentiated by V-shaped leaves.

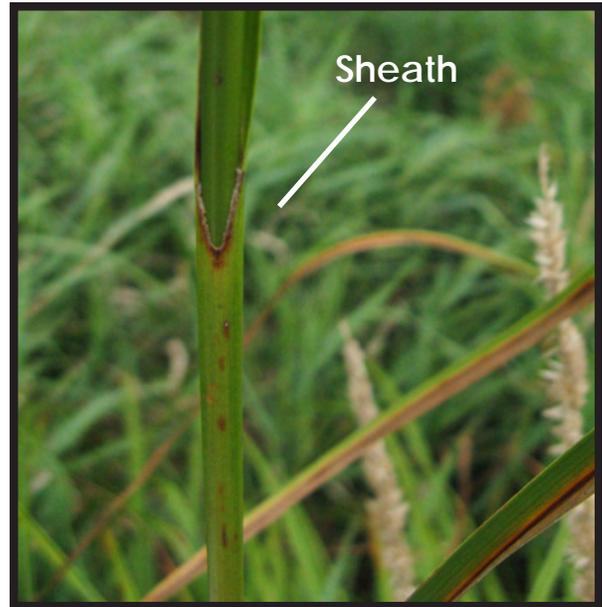
Woolgrass

Scirpus cyperinus

Minnesota C-Value: 3
Wetland Indicator Status: OBL
Native



Flower head



Leaves: Mostly crowded at base of plant, smooth and flat, <13 mm wide. Leaves have rough margins and a reddish brown base.

Stems: 3-angled to nearly rounded, erect, smooth, and leafy. Grows up to 2 meters tall.

Flowers and fruit: Spikelets numerous, grouped into large, spreading branched heads. Spikelets 3-8 mm long. Three or more bracts found beneath the inflorescence. Spikelets 'wooly' when mature because of elongated bristles. Nodding in appearance.

Plant communities: Wet meadows, shallow marshes, fens, wet woods, lake edges, ditches, bog margins.

Comments: Perennial bulrush. Flower heads of woolgrass are more open than green bulrush (*S. atrovirens*), which also has a more triangular stem.



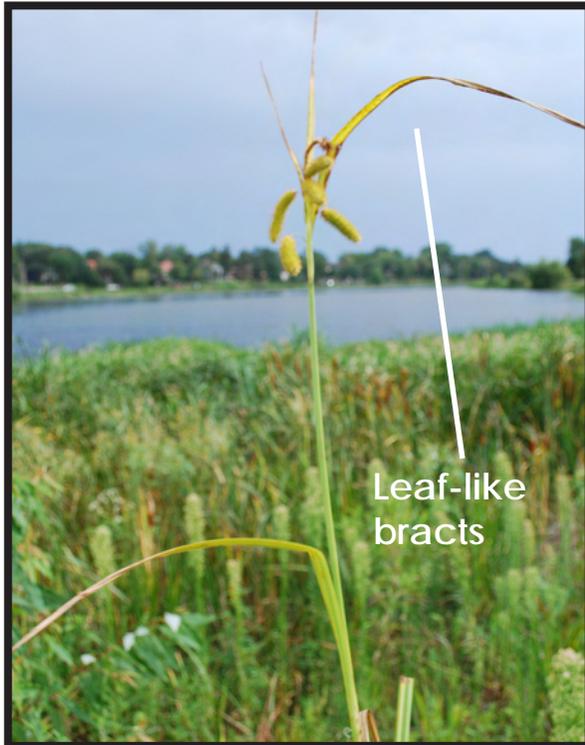
Bottlebrush Sedge

Carex comosa

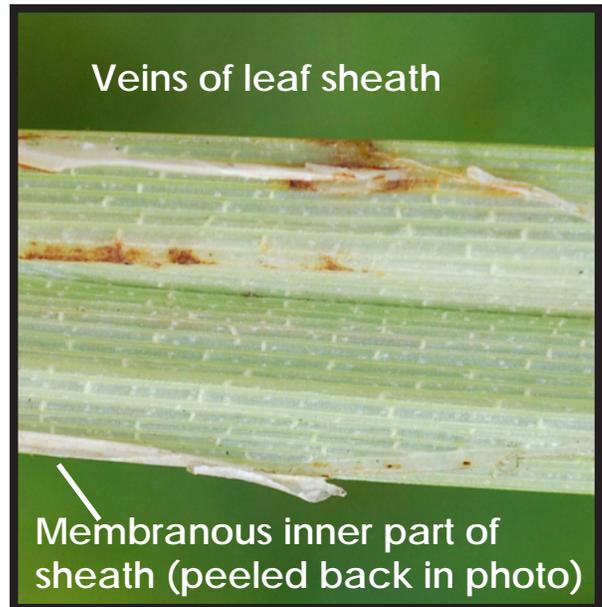
Minnesota C-Value: 4

Wetland Indicator Status: OBL

Native

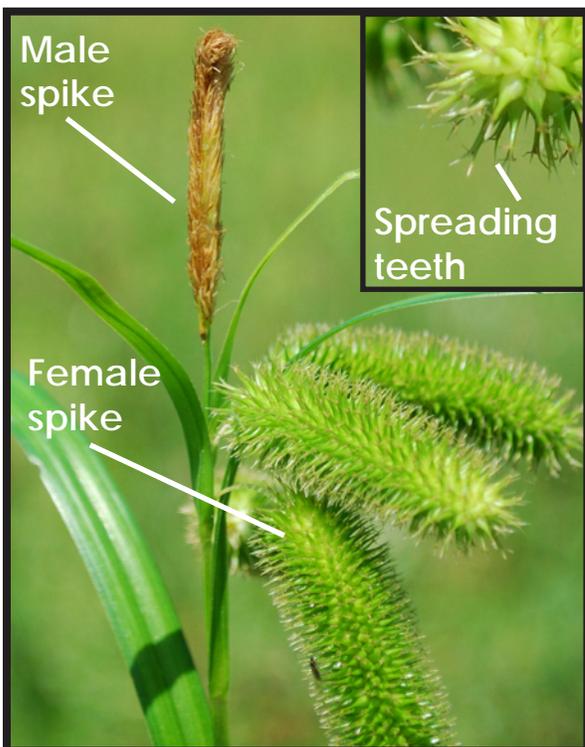


Leaf-like bracts



Veins of leaf sheath

Membranous inner part of sheath (peeled back in photo)



Male spike

Spreading teeth

Female spike

Leaves: 6-15 mm wide, M-shaped in cross section with rough margins. Sheaths distinctly veined, inner part membranous (translucent). The ligule is longer than it is wide.

Stems: Sharply triangular. 0.5-1.5 m tall.

Flowers and fruit: Terminal spikelet male, female spikelets 3-7 cm long and 1.2-2 cm wide, drooping at maturity. Perigynium is 5-7 mm long, strongly ribbed with widely spreading beak teeth that are 1-2 mm long. Leaflike bracts extend well beyond the flower head.

Plant communities: Shallow marshes, bogs, shorelines, streambanks.

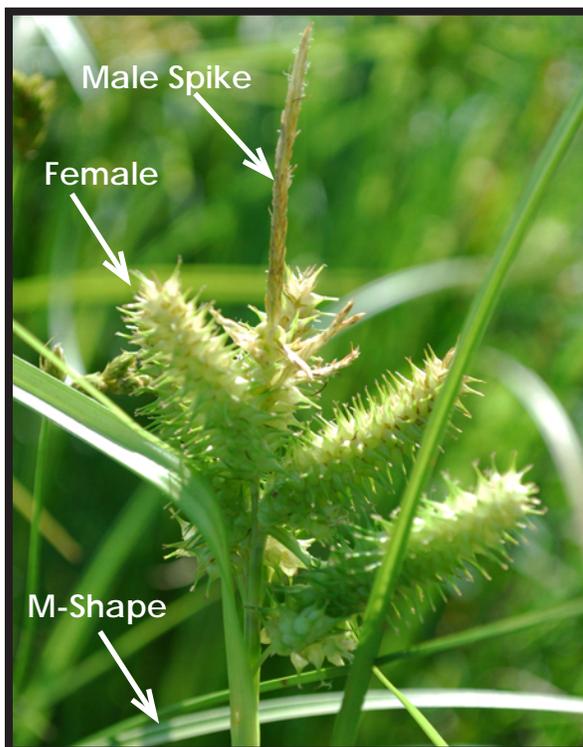
Comments: Perennial. Similar to porcupine sedge (*C. hystericina*), which has reddish basal leaf sheaths, and perigynia beak teeth that are straighter and shorter than Bottlebrush sedge.

Porcupine Sedge

Carex hystericina

Minnesota C-Value: 4
Wetland Indicator Status: OBL

Native



Leaves: 3-9 mm wide M-shaped leaves. Sheaths range from white, thin and translucent in the front to green, yellow, or red on the back. Lower sheaths break into threadlike fibers.

Stems: 1-3 ft tall triangular stems generally taller than the leaves. May be upright or leaning.

Flowers and fruit: Bracts of the lowest spike longer than the inflorescence. Terminal spike is staminate (male), lower spikes pistillate (female). Pistillate spikelets are 1.5 - 4 cm long on slender stalks that often droop. Perigynia are 5 - 7 mm long with a beak having short straight teeth 0.7 mm long.

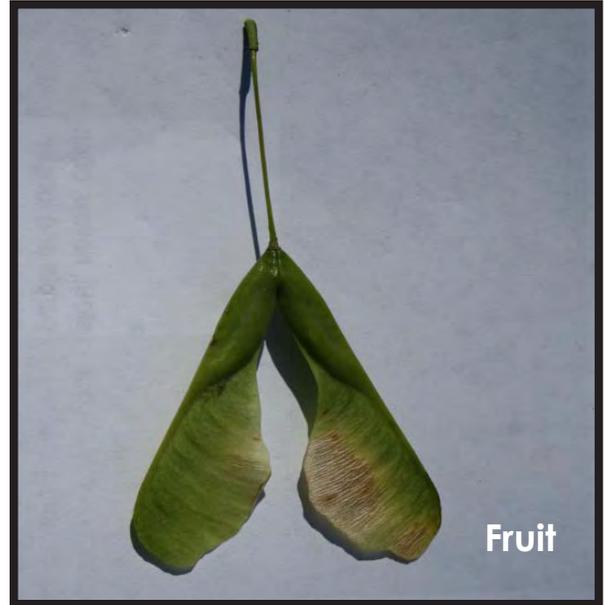
Plant communities: Found in marshes, wet meadows, and ditches.

Comments: Similar to bottlebrush sedge (*Carex comosa*). Spikelets of *C. hystericina* have a rougher appearance with coarser spikes, and the teeth on peringynia are straight (not spreading.)

Boxelder

Acer negundo

Minnesota C-Value: 1
Wetland Indicator Status: FACW-
Native



Leaves: Opposite branching. 5 leaflets (sometimes 7). Less prosperous trees may have 3 leaflets. Form of leaves can be highly variable, depending on tree health and leaf location on the tree itself.

Stems: Can grow 50-75 ft tall with a 2-4 ft trunk diameter. Bark variable with age.

Flowers and fruit: Fruit is a winged samara 3-4.5 cm in length.

Plant communities: Aggressive native species, commonly found along streams and floodplains, and frequently in disturbed areas.

Comments: Young saplings that exhibit only 3 leaflets can sometimes be confused for poison ivy (*Toxicodendron radicans*). Poison ivy will often have a glossy sheen and its leaves will be alternate.



Bark pictured: oldest (left) to youngest (right).

Common buckthorn

Rhamnus cathartica

Minnesota C-Value: 0
Wetland Indicator Status: FACU
Non-native Invasive



Spine at end
of twig

Leaves: Opposite leaves, sometimes alternate. Lateral venation (veins run parallel to leaf edge as they run towards the tip of the leaf). Fine and rounded serration at leaf edges.

Stems: 12-20 ft in height. Twigs end in sharp spines, often accompanied by a pair of buds that have a "deer hoof" appearance. Trunks have conspicuous lenticels.

Flowers and fruit: Female plants produce dark berries, usually with 4 seeds per berry.

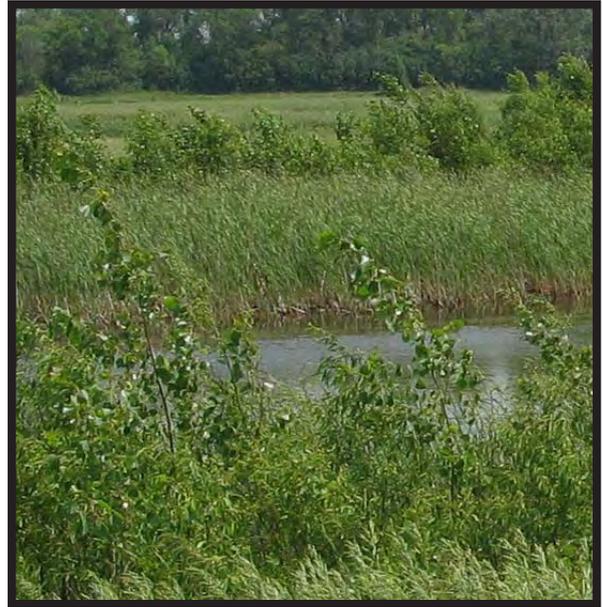
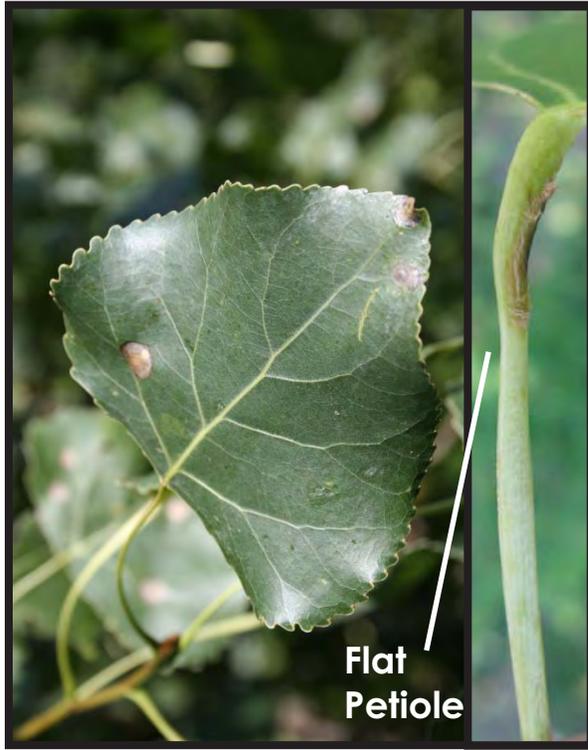
Plant communities: Aggressive invasive species found in disturbed sites nearly everywhere, except where there is standing water.

Comments: Glossy buckthorn and choke cherry may appear similar. Glossy buckthorn has smooth leaf margins and different leaf venation. Cherry leaves have glands at the base of each leaf. Buckthorn is also the first to leaf-out in spring and last to drop its leaves in the fall, making late season identification easier.

Eastern cottonwood

Populus deltoides

Minnesota C-Value: 1
Wetland Indicator Status: FAC+
Native



Leaves: Shiny green, triangular shaped leaf with curved, coarse teeth. Petioles flattened with 2-3 glands usually present at tip of petiole under leaf base. Leaf buds sticky in the spring.

Flowers and fruit: Flower is a catkin with numerous pods that open to release a windborn, fluffy white seed.

Stems: 60 ft- 80 ft tall. Trunk can be more than 6 ft in diameter; forked and spreading to an open crown. Bark is deeply furrowed.

Plant communities: Early colonizer of floodplains, streambanks, wetland edges and uplands.

Comments: Similar to many other poplars, but only the Eastern cottonwood has glands on the ends of the leafstalks.



Glossy buckthorn

Frangula alnus

Minnesota C-Value: 0
Wetland Indicator Status: FAC+
Non-native Invasive



Leaves: Mostly alternate. Leaf edges wavy, but lacking distinct teeth. Glossy sheen to both sides. Leaf comes to an acute point at the tip.

Stems: Can reach 20 ft or more in height. Bark is gray to light brown with light colored lenticels. Can be single or multi-stemmed.

Flowers and fruit: Female plants produce bunches of reddish berries that turn black as they mature. Flowers greenish-white with 5 petals.

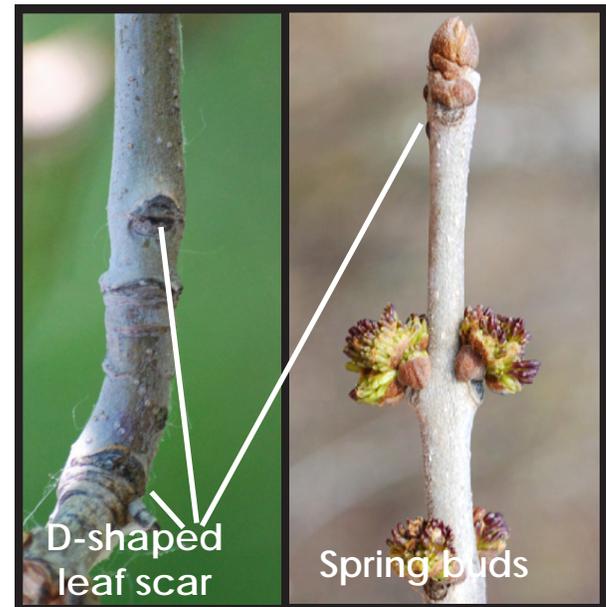
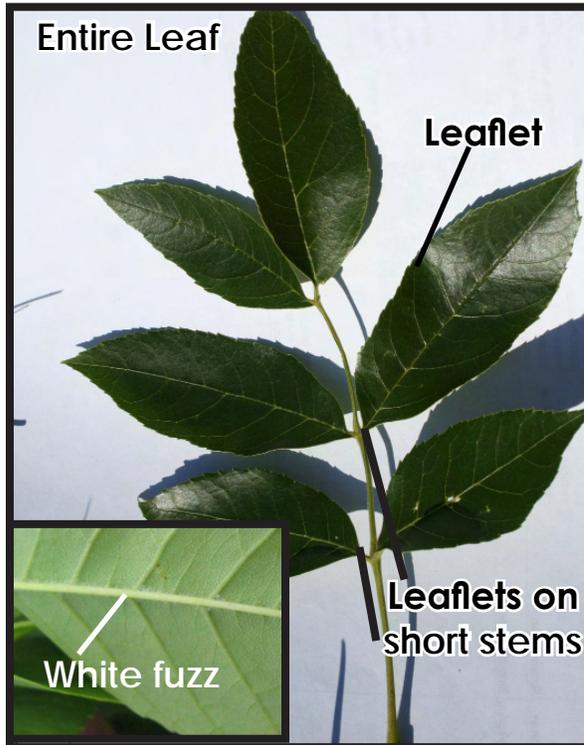
Plant communities: Aggressive species found in wetter, nutrient poor or disturbed sites such as bogs, swamps, fens, etc. Also can colonize upland wooded areas.

Comments: Previously classified as *Rhamnus frangula*. Common buckthorn and choke cherry look similar to this species. Choke cherry trees have glands at the base of each leaf. Common buckthorn has serrated leaf margins and has a terminal thorn at the end of each twig.

Green ash

Fraxinus pennsylvanica

Minnesota C-Value: 2
Wetland Indicator Status: FACW
Native



Furrowed Bark

Leaves: Opposite and compound with 5-9 leaflets. Very short (1 - 4 mm) leaflet stalks that are slightly winged. Upper surface smooth and dark green, lower surface pale with white fuzz along the midvein. D-shaped leaf scars.

Stems: 60-70 ft. tall and 2-3 ft. diameter. Diamond shaped furrows and flat topped ridges in the bark.

Flowers and fruit: Male and female flowers on separate trees. Flowers are in branched clusters, green or purplish. Samaras lance shaped, wing does not extend to base of seed.

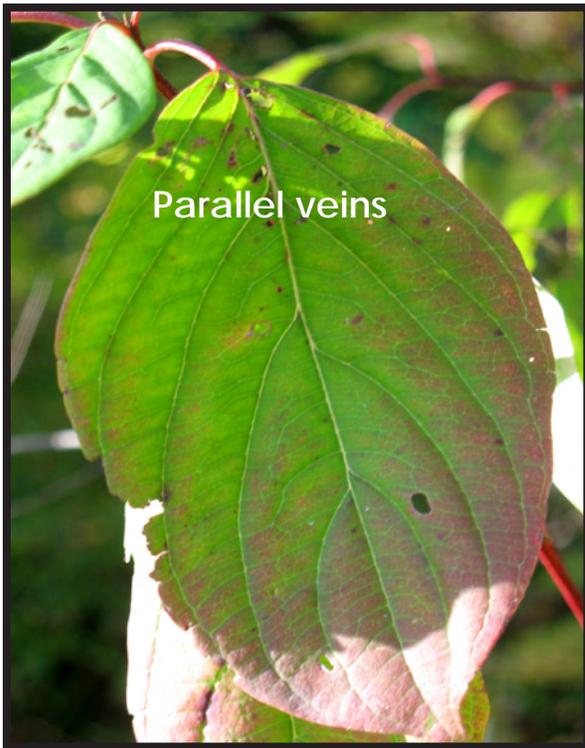
Plant communities: Floodplains, ponds, and lowlands.

Comments: Similar to white ash, except the leaflets for green ash are green on both sides and have very short winged stalks (nearly sessile). D-shaped leaf scars, short stalked leaflets, and flat winged samaras distinguish green ash from black ash.

Redosier dogwood

Cornus sericea

Minnesota C-Value: 3
Wetland Indicator Status: FACW
Native



Leaves: Opposite, mostly ovate, but sometimes lanceolate. 5-12 cm long with 5-7 lateral veins that run parallel to the edge of the leaf.

Stems: 1-3 m in height, multi-stemmed. Deep reddish hue to branches, especially new growth. Hairless. White pith.

Flowers and fruit: Dense flat cluster of white flowers in a cyme. White berries develop in fall.

Plant communities: Shrub-carrs, wet meadows, shallow marshes, lake edges, calcareous fens.

Comments: Previously classified as *Cornus stolonifera*. The only dogwood in Minnesota to exhibit such red coloration in the twigs. Gray dogwood (*C. racemosa*) has grayish twigs. Silky dogwood (*C. amomum*) has purplish twigs and dark blue berries. Pagoda dogwood (*C. alternifolia*) has alternate branching.

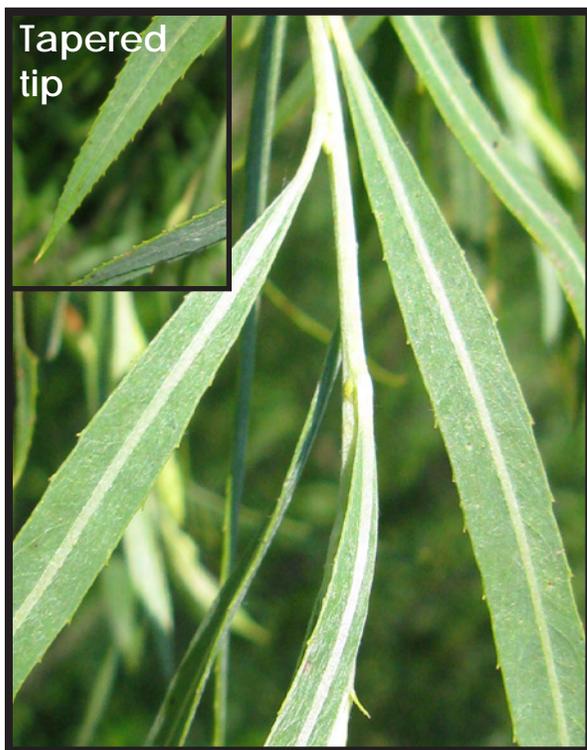
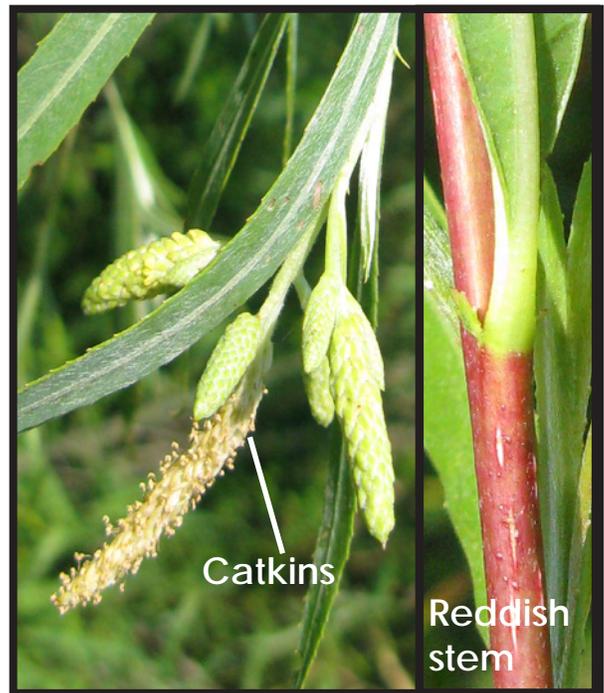
Sandbar willow

Salix interior

Minnesota C-Value: 2

Wetland Indicator Status: OBL

Native



Leaves: Alternate, simple, with far-spaced small teeth. Leaves 10 times longer than wide.

Stems: Shrub growing 2-5 m high. New growth of twigs and branches is red-orange in color.

Flowers and fruit: Many elongated spikes (catkins), male and females on separate trees.

Plant communities: Shrub-carrs, floodplains, shallow marshes, wet meadows.

Comments: Previously classified as *Salix exigua*. Very common willow of Minnesota wetlands. Aggressively forms massive clonal stands and is an early colonizer of disturbed sites. Distinguished by its shrub-like form, red-orange twigs, lack of stipules, and long leaves with irregular serration.