



Tall Grass Prairie Wildflower **Indicator Booklet**

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Booklet Overview

This booklet is best used in the Tall Grass Prairie in the month of August, when the species included within it are in bloom. Species full bloom period can be found underneath their species name on their corresponding page.

Booklet organization

- Species are first organized by flower colour (yellow, white, purple/pink, foliage most prominent) and then alphabetized within their corresponding colour group.
- Each page has the common name of the species in the top left, followed by the scientific name in brackets and scientific family.
- **Bolded** features are important distinguishing features for a given species.
- *Italicized* terms are those defined in the glossary.

Acknowledgements

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Shared Legacy is a cooperative working group led by the Rural Municipality of Stuartburn and The Nature Conservancy of Canada along with partners Sunrise Corner Economic Development and Province of Manitoba. The primary focus of the partnership is to alleviate threats for species at risk and improve their habitat through effective communication and coordination between the partners and targeted outreach. This book was created for the Tall Grass Prairie Stewardship Credit Pilot Program; an initiative that acknowledges the important role that locals play in maintaining and protecting the rare habitats and species within the tall-grass prairie region and further support them in their efforts.



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Glossary

Flowers

Flower shapes

Regular – Radially symmetrical. Cut a flower at any angle (like a pie) and both halves are mirror images of each other (e.g., Black-eyed Susan).

Irregular – Bilaterally symmetrical. Only symmetrical on one plane because some petals/sepals have a different size or shape (e.g., violet).

Flower structure

Anther – The pollen container at the tip of a stamens (Fig. 1).

Bract – A small leaf or scale found at the base of a flower or flower cluster.

Ovary – The thickened (often globe-shaped) part of the pistil that contains the egg cells. Located above or below the petals, it matures into fruit after pollination.

Pistil – Female part of a flower, composed of stigma and style (Fig. 1). Typically found at the very center of a flower. Flowers may have one or more pistils.

Sepal – Modified leaves that form the outer whorl of a flower. (Fig. 1). They enclose and protect the maturing bud.

Stamen – The male reproductive organ of a flower that is made up of an anther at the end of a filament (Fig. 1). Stamens are found immediately exterior to the pistil(s). Flowers may have one or more stamens.

Stigma – The structure at the tip of a pistil that receives pollen (Fig. 1). A stigma may have two or more lobes.

Tepals – Sepals and petals that look alike.

Flower clusters

Disk – The central portion of a flower cluster in the Asteraceae family that is made up of many disk flowers.

Disk flowers – One of two flower types in the Asteraceae family. These small flowers have petals in a tube shape that surround pistils and stamens. Many species have a central cluster of disk flowers that are surrounded by ray flowers. This booklet will refer to the central cluster of disk flowers as a disk. Compare with ray flowers.

Erect – Upright and vertical.

Ray flowers – One of two flower types in the Asteraceae family. These flowers appear as strap-like petals around the central disk. Viewed closely, stamens and pistils can be seen at the base of each flower. This booklet will refer to the ray flowers as petals. Compare with disk flowers.

Stalk – A catch-all term for the supporting stem of an organ. May refer to a flower stalk, leaf stalk or main stem.

Terminal – Flower cluster positioned at the stem tip.

Umbel – A flower cluster with one attachment point for all flower stalks. Flowers are often at the same height, creating a flat top to the cluster (Fig. 2).

Umbellet – Small umbels that make up a larger compound umbel.

Leaves

Leaf divisions

Compound leaf – One of two leaf types. Compound leaves are separated into two or more smaller leaf-shaped structures (leaflets). Leaflets may also be divided, making the compound leaf divided ≥ 2 times. Compare with simple leaves.*

Pinnately compound – Leaflets arranged on either side of a common axis (the mid-vein); “of a feather” (Fig. 3).

Palmately compound – Leaflets radiate from a common point, like a hand with fingers spread (Fig. 3).

Leaflet – Leaf-like structures that make up a compound leaf.

Simple leaf – One of two leaf types. A leaf that is not divided into leaflets but may be deeply lobed. Compare with compound leaves.*

Terminal leaflet – Leaflet positioned at the leaf tip.

* **Note:** All leaves have a bud at the base of their leaf stalk (in the axil), leaflets do not. You can use this feature to differentiate between simple leaves from compound leaves and stems. (Fig. 4). Also, a compound leaf will lay flat (in one plane), a branch will have leaves sticking out in different directions (planes).

Leaf position on stem

Alternate leaves – One leaf per node. Leaves appear randomly placed on the stem.

Basal leaves – Leaves attached to the lowest part of the stem, originating from where the stem meets the ground.

Basal rosette – Several leaves attached in a circle at the base of a plant. Leaves radiate from a central point in the ground.

Erect – Upright and vertical.

Opposite leaves – Two leaves per node, found on opposite sides of the stem. Leaves arranged in pairs; each pair often rotated 90 degrees to the ones next to it.

Stalk – A catch-all term for the supporting stem of an organ. May refer to a flower stalk, leaf stalk or main stem.

Whorled – Three to eight leaves (or flowers) per node, attached in a circle around the stem.

Leaf shape

Elliptical – In the shape of a narrow oval (an ellipse); widest in the middle and equally narrower at the two ends (Fig. 5).

Lance – In the shape of a lance; longer than wide with the widest point below the middle of the leaf (Fig. 5).

Linear – Long and narrow (Fig. 5).

Continued

Oblong – Shape that is in between an elongated oval and rectangle (Fig. 5).

Spatulate – In the shape of a spatula; rounded tip with the widest point towards the leaf tip and gradually tapering to the leaf base (Fig. 5).

Leaf edges

Entire – Simple leaves with smooth edges (Fig. 6). Teeth and lobes are absent.

Lobed – Leaf with small, rounded divisions along the edge (Fig. 6).

Toothed – Leaf with jagged edges. (Fig. 6). Teeth may be pointed or rounded.

Leaf structure

Vein – Small capillaries that transport water and nutrients to and from a leaf. Some veins may be more noticeable than others (e.g., middle (“mid”) vein).

Stems

Ascending – Growing upward or turned up.

Axil – The upper angle where a leaf or branch meets the stem.

Erect – Upright and vertical.

Node – Place on the stem where the buds, leaves and branching stems originate.

Rhizome – An underground, root-like stem.

Stalk – A catch-all term for the supporting stem of an organ. May refer to a flower stalk, leaf stalk or main stem.

Figures

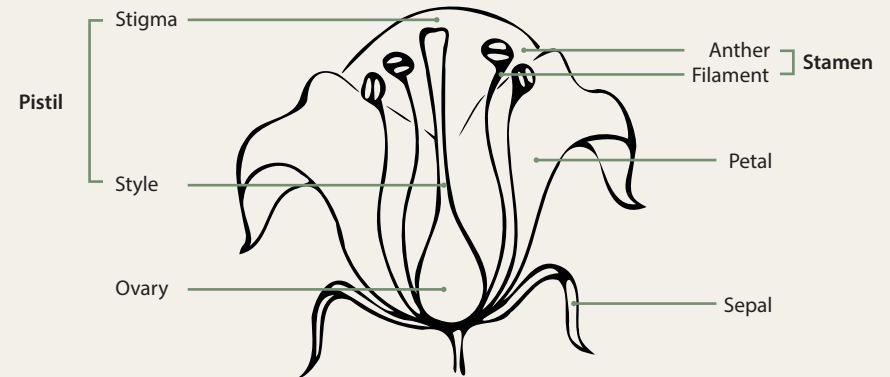


Figure 1. Labelled diagram of a flower cut in half to show the different floral parts. Although each part may vary in number (e.g., one species may have 4 stamens/flower whereas another species may have over 100 stamens/flower), they are always found in the same location. From exterior to interior, there are sepals, petals, stamens and then pistils as the most interior structure.

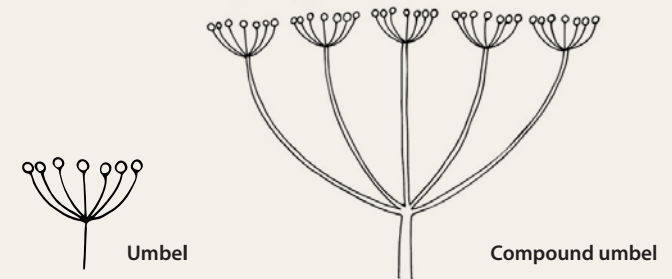


Figure 2. Simplified drawing of an umbel and compound umbel. Lines represent flower stalks and circles represent flowers.

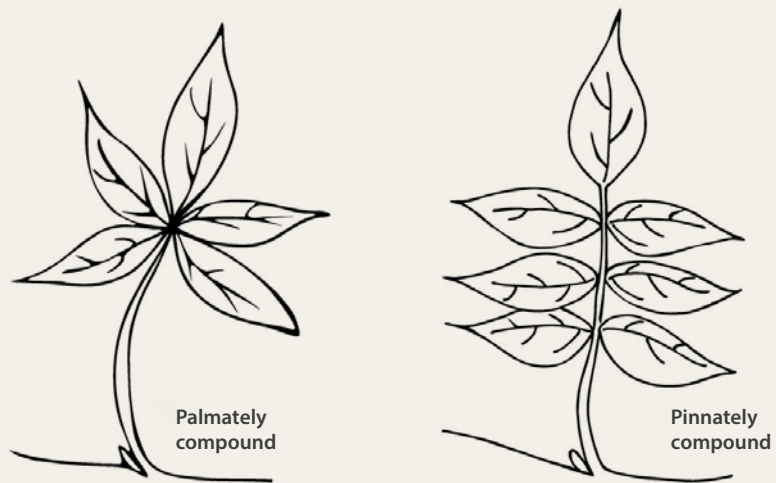


Figure 3. Simplified drawings of palmately and pinnately compound leaves.

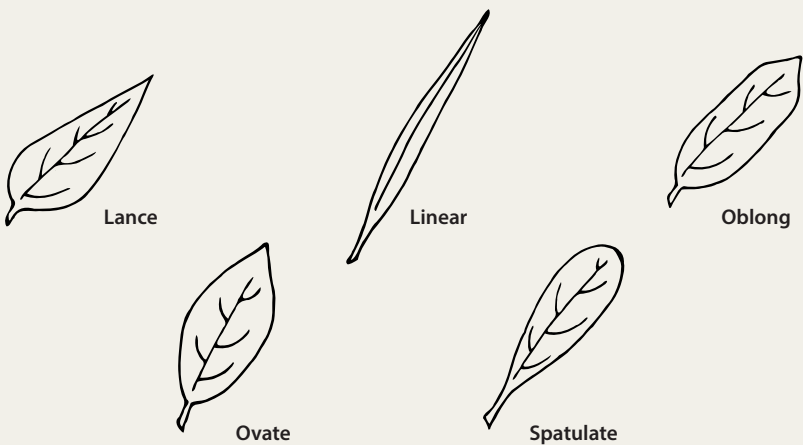


Figure 5. Simplified drawings of the different types of leaf shapes defined and used in this booklet.

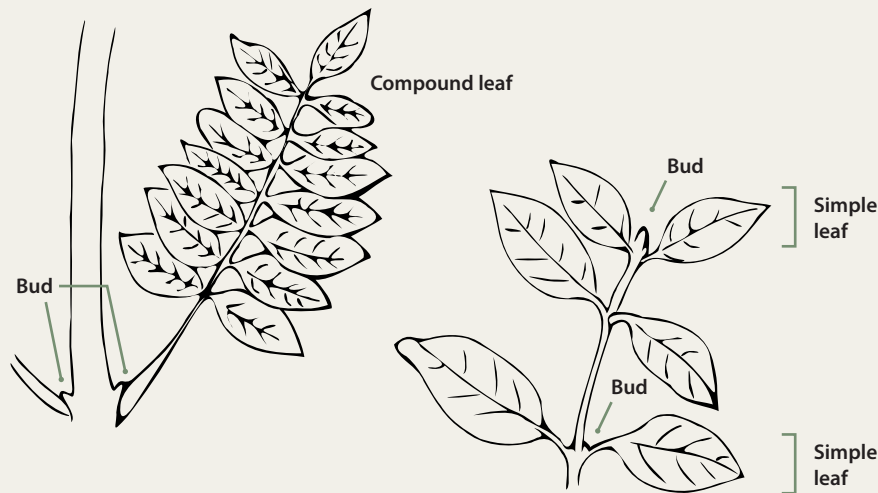


Figure 4. Simplified drawing of a compound leaf vs. a branch with simple leaves (with an opposite leaf arrangement).



Figure 6. Simplified drawings of the different types of leaf edges defined and used in this booklet.

Black-Eyed Susan (*Rudbeckia hirta*)

Asteraceae

Plant height	1 to 2 feet
Bloom season	June to October
Habitat	Sun; upland fields, prairies, open woods, roadsides, disturbed soils

Flowers

- >7 yellow-orange petals; dark brown-purplish *disk* that may be slightly cone-shaped
- 2 to 3 inch diameter
- Single *terminal* flower with petals usually pointing slightly downward

Leaves

- *Alternate*; *simple*; *entire* or with few shallow teeth
- Green; variable in shape and size; stalks of leaves shorten *ascending* the stem
- Normally 2 to 7 inches long, 2 inches wide
- **Densely hairy, pillowy soft**

Stems

- Green with burgundy speckles
- Unbranched
- **Covered in long, stiff, white hairs**

Nectar source for the Poweshiek skipperling, which is listed as endangered by the Committee on the Status of Endangered Wildlife in Canada, endangered under the Manitoba Endangered Species Act, and globally imperiled by NatureServe. Flowers act as a “platform” flower that is used by a wide variety of insects, including butterflies, stick worms, beetles, bees, flies, ambush bugs and crab spiders.



Canada Goldenrod (*Solidago canadensis*)

Asteraceae

Plant height 1 to 3 feet
Bloom season July to October
Habitat Sun; moist fields, roadsides, open woods, wetland edges

Similar species Giant Goldenrod (p. 14), which is typically a taller plant with smooth leaves and a red stem

Flowers

- >7 yellow petals; small yellow *disk*
- $\frac{1}{8}$ inch diameter
- Flower cluster shape is variable, pyramid-shaped to spreading and drooping clusters, sometimes more compact and club-shaped on smaller plants; 100 to 1300+ small, *stalked* flowers

Leaves

- *Alternate*, without *basal rosette*; *simple*; sharp *toothed*, except near base
- Pinwheel arrangement from above
- *Stalkless*, *3-veined*, broadest near middle, tapering to a sharp point at tip
- 1 to 4 inches long, $\frac{1}{4}$ to 1 inches wide
- Generally **rough textured**, occasionally smooth

Stems

- *Erect* and rigid; stem is densely leafy
- **Lightly hairy**, at least above the middle
- Long, creeping *rhizomes*; **often forming dense colonies**



Giant Goldenrod (*Solidago gigantea*)

Asteraceae

Plant height 2 to 5 feet
Bloom season August to October
Habitat Sun; average to moist soil; open meadows, fields, woodland edges, roadsides, marshes, swamps, along streams and rivers

Similar species Canada Goldenrod (p. 12), which is typically a shorter plant with rough leaves and a green stem.

Flowers

- >7 yellow petals; small yellow *disk*
- ¼ inch diameter
- 40 to 1200+ small, *stalked* flowers; cluster shape is variable but usually pyramidal with arching branches, sometimes more erect

Leaves

- *Alternate*, without *basal rosette*; *simple*; serrated with sharp teeth and a smooth base, uppermost leaves may be *entire*
- *Stalkless*, 3-veined
- Broadest near the middle, tapering to a sharp point at the tip
- 2½ to 5 inches long, ½ to 1¾ inches wide
- **Smooth, may be hairy along *veins***

Stems

- Often **reddish**, may contain **whitish wax** that rubs off
- Colonial from long *rhizomes*
- *Erect* and rigid
- **Hairless except in the flower clusters**



Grass-leaved Goldenrod (*Euthamia graminifolia*)

Asteraceae

Plant height	1 to 2 feet
Bloom season	August to October
Habitat	Sun; moist, wet, sandy to gravelly soil; meadows, ditches, fens, shores

Flowers

- Yellow flowers; **no obvious separation between petals and disk**
- $\leq \frac{1}{8}$ inch diameter;
- Slightly round to flat topped clusters; 20 to 35 flowers/cluster; flowers typically *stalkless*

Leaves

- *Alternate*, without *basal rosette*; *simple*; *entire*
- 1 ½ to 4 inches long, ⅛ to ½ inch wide
- **Lance-shaped to linear**, 15 to 20 times as long as wide; *stalkless*; **pointed at tip**
- Surface of leaf is smooth; **3-veined**, larger leaves **5-veined**

Stems

- Unbranched in lower plant, few to many leafy branches in upper plant, creating a bushy top
- Smooth with thin rows of fine, white hairs



Gray Goldenrod (*Solidago nemoralis*)

Asteraceae

Plant height 12 to 20 inches
Bloom season July to September
Habitat Part shade to sun; average to dry sandy to gravelly soil; prairies, roadsides, railroads, open woods, outcrops, dunes

Similar species Missouri Goldenrod (p. 26), which has reddish stems and smooth leaves and stem. Flower clusters are variable shapes.

Flowers

- > 7 yellow petals; small yellow *disk*
- ¼ inch diameter
- Dense, plume-shaped flower clusters up to 7 inches long, **often arching near tip**; flowers with short *stalks* covered in short, white hairs

Leaves

- *Basal* and *alternate*; *simple*; *entire* or with few small teeth
- 4 inches long and ½ inch wide
- Variable in shape, from long and narrow to nearly spatulate; generally wider towards the tip and gradually taper at the base, rounded to pointed tip
- **Often have small *leaflets* in leaf *axil***
- **Rough texture**

Stems

- **Grey to green** from dense short hairs, lower stem may be reddish
- *Erect* and unbranched
- **Rough texture**; short, white hairs throughout



Hairy Golden Aster (*Chrysopsis villosa*)

Asteraceae

Plant height	8 to 20 inches
Bloom season	July to October
Habitat	Sun; dry sandy soil; fields, waste areas, roadsides

Flowers

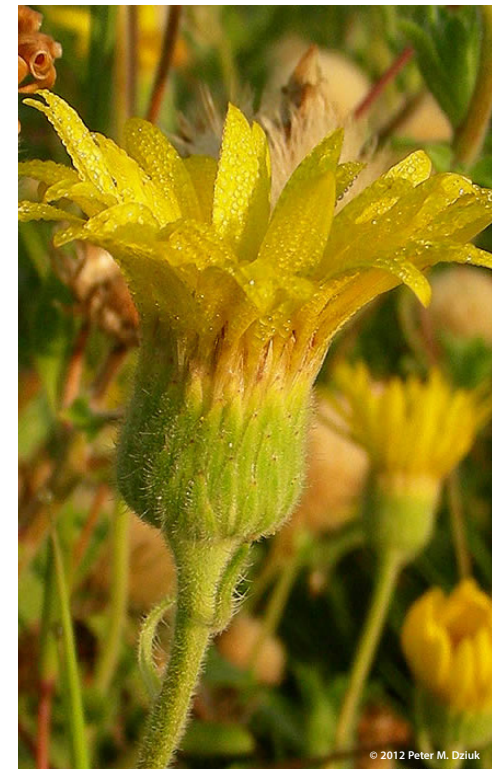
- > 7 yellow petals, yellow disk
- $\frac{3}{4}$ to 1½ inches diameter
- 1 to numerous *stalked* flowers at tips of branches
- 4 to 6 layers of *bracts*; lance to triangular; green, often with a purplish tip

Leaves

- *Alternate*; *simple*; *entire*
- **Green to grey-green due to a dense covering of long hairs**
- *Oblong* with a pointed to blunt tip, tapering at base; *stalkless*
- 1 inch long, $\frac{1}{4}$ inch wide
- **Sparsely to densely covered with long, white hairs**

Stems

- Green to reddish-brown
- Clustered; *erect* or *ascending*
- Typically branched
- **Sparsely to densely covered in long hairs**



Heart-leaved Alexanders (*Zizia aptera*)

Apiaceae

Plant height	1 to 2 feet
Bloom season	May to July
Habitat	Part shade, sun; moist to dry prairies, thickets, open woods, shorelines

Compare to: Golden Alexander (*Zizia aurea*) and Wild Parsnip (*Pastinaca sativa*). All species contain yellow compound umbels; however, Golden Alexander leaves are all compound, divided 2 to 3 times (including lower leaves) and in groups of threes and Wild Parsnip contains pinnately compound leaves with 5 to 15 leaflets.

Flowers

- Tiny bright yellow flowers in **compound umbels**
- Compound umbels are 1 ½ to 2 ½ inches diameter; typically flat; two to several/ plant, each made up of 7 to 16 umbellets; umbellets contain up to 20 flowers
- Petals folded inward; the central flower in *umbellets* has a short *stalk* or no *stalk*, all other flowers are *stalked*

Leaves

- *Basal* and *alternate*; **basal** and **lower leaves** are *simple*, upper leaves are *compound*; finely *toothed* edges
- **Green** with a **spot of purple** where leaf meets *stalk*; **basal** and **lower leaves** are **heart-shaped**, upper leaves have three *lance-shaped leaflets*
- **Distinct fine vein pattern**, especially obvious on leaf underside
- Slightly glossy; smooth to sparsely haired

Stems

- Single or multiple stems from the base
- Smooth to sparsely haired

Host plants for the black swallowtail caterpillar



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Maximilian's Sunflower (*Helianthus maximiliani*)

Asteraceae

Plant height	2 to 7 feet
Bloom season	July to October
Habitat	Sun; average to dry sandy soil

Flowers

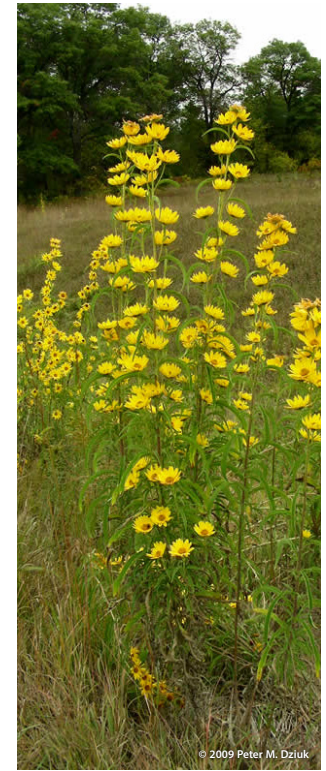
- >7 yellow petals; yellow disk
- 2 to 3 inches diameter
- Loose, **column shaped clusters** at top of plants
- A few layers of *bracts*; long, narrow and spreading; covered in short hairs

Leaves

- Mostly *alternate*, lower leaves *opposite*; *simple*; *entire* or with small teeth
- Greyish green; ***lance-linear***; **arched and folded lengthwise**
- 7 to 15 inches long, narrow
- Rough, like a cat's tongue

Stems

- Green to purple
- Roughly hairy, especially near top
- Grow from short *rhizomes*



Missouri Goldenrod (*Solidago missouriensis*)

Asteraceae

- Plant height** 6 to 20 inches
Bloom season July to September
Habitat Sun; dry sandy to gravelly soil; prairies, savannas, dunes, roadsides, railroads, bluffs
- Similar species** Gray Goldenrod (p. 18), which has grey to green stems and rough leaves and stem. Flower clusters are often arching near the tip.

Flowers

- >7 yellow petals; small yellow disk
- $\frac{1}{8}$ inch diameter

Leaves

- *Basal* and *alternate*; *simple*; *entire* to finely toothed; *basal* leaves may be withered by flowering time
- Green; lower leaves are *stalked*, *lance-spatulate*; upper leaves are smaller, mostly *stalkless* and *lance-linear*
- 1 to 4 inches long, $\frac{3}{4}$ inch wide
- **Often have small leaflets at leaf axil**
- **Smooth**, edges with fringe of short hair; **3-veined**, lower leaves 5-veined

Stems

- **Often red, especially at base**
- Few to many stems (40+) in a group; non-flowering plants are common (only *basal* leaves present)
- *Erect*; unbranched
- **Smooth**, or with short hairs in flower clusters or on lower stem



Nuttall's Sunflower (*Helianthus nuttallii*)

Asteraceae

Plant height	3 to 8 feet
Bloom season	August to September
Habitat	Sun; moist to wet prairies, sedge meadows, and swales

Flowers

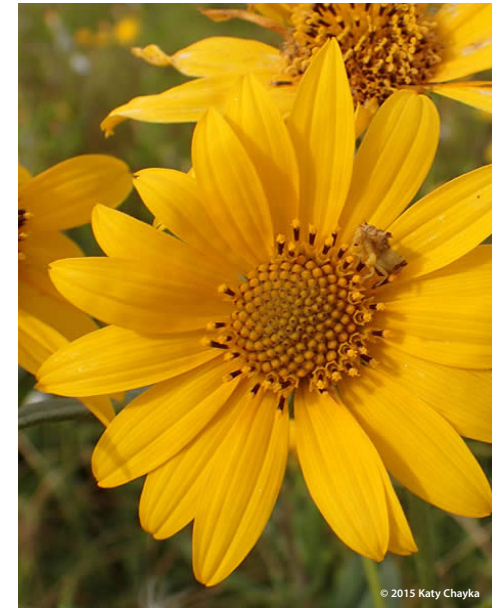
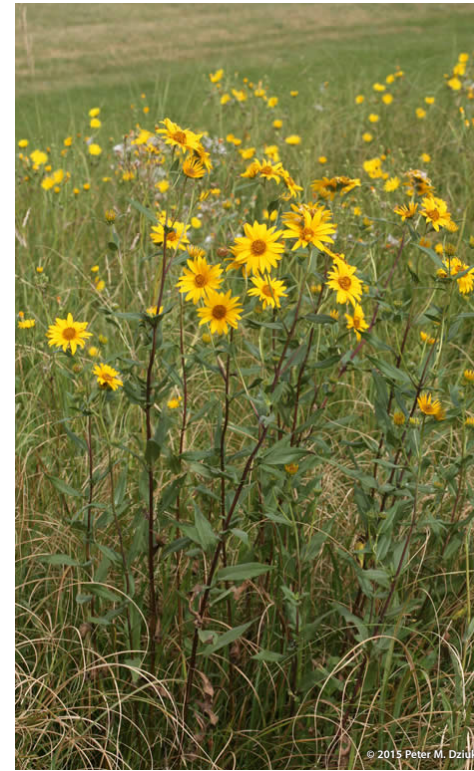
- >7 yellow petals; yellow disk
- 2 to 3 inch diameter
- **1 to 6 flowers at plant top**
- 2 to 3 layers of *bracts*; narrowly triangular and pointed

Leaves

- **Opposite**, may be *alternate* on upper stem; *simple*; *entire* or shallowly *toothed*
- Oval-lance shaped
- 2 to 6 inches long, 1.5 inches wide
- Rough on both sides, like a cat's tongue

Stems

- Green to yellowish, sometimes purple
- Grow from short *rhizomes*; erect
- Upper plant may be branched
- Hairless to covered sparsely with short hairs



Prairie Loosestrife (*Lysimachia quadriflora*)

Primulaceae

Plant height	1 to 2 feet
Bloom season	July to August
Habitat	Sun; wetlands, moist open prairie

Flowers

- 5 yellow petals; may have faint reddish brown streaks; rounded petals with a pointed tip, ragged/ruffled edges; 5 rusty red *stamens*, 5 lance shaped green sepals
- 1 inch flowers on stalks $\frac{3}{4}$ to 1 inch long
- 1 to 4 flowers in whorls on stems in the upper portion of plant; **flowers face downwards**

Leaves

- *Opposite and whorled; simple; entire*
- *Linear*; tapered at tip and base
- 1 $\frac{1}{4}$ to 3 $\frac{1}{2}$ inches long, less than $\frac{1}{4}$ inch wide; **leaves in whorls are of mixed lengths**
- Prominent mid-vein; edges curl under

Stem

- Unbranched to few short branches in upper stem
- Smooth and *erect*



Riddell's Goldenrod (*Solidago riddellii*)

Asteraceae

Plant height	2 to 3.3 feet
Bloom season	August to September
Habitat	Sun; wet prairie, meadows, fens

Flowers

- > 7 yellow petals, small yellow *disk*
- $\geq \frac{1}{4}$ inch wide
- Rounded, flat cluster; multiple terminal *stalked* clusters

Leaves

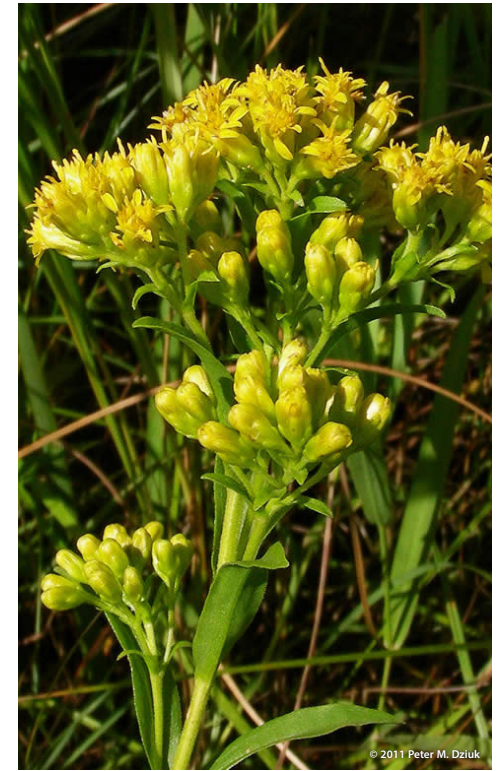
- *Basal* and *alternate*; *simple*; entire with wavy edges; *basal* leaves typically wither away before flowering
- Yellow green; *basal* leaves are *lance*-like; leaves become progressively smaller, more *lance-linear*, smooth surfaced, and *stalkless* ascending the stem
- **Stem leaves arched and folded lengthwise; leaves are stalkless and clasping (wrap around stem)**
- *Basal* leaves up to 8 inches long, $\frac{1}{2}$ inch wide; uppermost leaves 2 to 4 inches long
- Leathery texture, hairless

Stems

- Yellow green
- Unbranched, mostly *erect*
- Mostly hairless, may contain hairs near flower cluster

SARA Designation: Special Concern

MB ESA Designation: Threatened



Shrubby Cinquefoil (*Dasiphora fruticosa*)

Rosaceae

Plant height	1 to 3 feet
Bloom season	July to September
Habitat	Sun; moist thickets, wet to dry prairie, swamps, fens, rocky shores

Flowers

- 5 bright yellow petals, usually overlapping
- $\frac{3}{4}$ inch to just over 1 inch diameter
- One to several flowers in *terminal* clusters

Leaves

- *Alternate; pinnately compound*, with 3 to 7 closely crowded *leaflets* in a spreading arrangement; smooth edges
- Entire leaf is 1 inch long and wide

Stems

- Woody stems are greyish brown with shredding bark
- Young branches are red to purplish brown with fine hairs throughout



Stiff Goldenrod (*Solidago rigida*)

Asteraceae

Plant height	1 to 2 feet
Bloom season	August to October
Habitat	Sun; average to dry fields, prairies, roadsides

Flowers

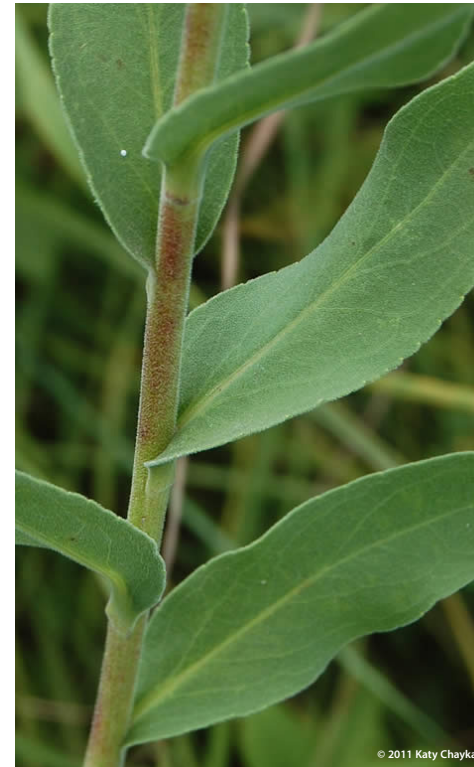
- 6 to ≥ 7 yellow petals; yellow *disk*
- $< \frac{1}{2}$ inch diameter
- Flat clusters; 2 to 5 inches wide

Leaves

- *Basal* and *alternate*; *simple*; *entire*, may have wavy edges
- Grey-green; *elliptical-oval*, upper leaves may have wavy edges; lower leaves abruptly taper at base, **upper leaves clasp stem**
- Lower leaves 3 to 8 inches long, up to 2 inches wide; upper leaves 2 inches long
- **Moderately stiff; dense short hairs give rough, sometimes fuzzy texture**

Stems

- Yellow green, often blushed with red
- Single to many from base
- Unbranched or branched at top
- Strong, thick stem with rough fine hairs



Stiff Sunflower (*Helianthus pauciflorus*)

Asteraceae

Plant height	2 to 3 feet
Bloom season	August to September
Habitat	Sun; average to dry prairies, roadsides, along railroads

Flowers

- >7 yellow petals; **purple-brown disk** (sometimes yellow)
- 2 to 3½ inch diameter
- **1 to several flowers per plant at the end of long, erect stalks**
- *Bracts* are short, wide, and flattened
- When the weather is dry, the petals fold up lengthwise or become twisted

Leaves

- *Opposite* and large on lower stem, small and *alternate* above the middle; *simple*; shallow and wide teeth
- Dull grey-green to olive; **lance-shaped**, small leaves may be more oval
- 2 to 4 inches long, ¾ to 2¼ inches wide
- **Rough on both sides**, short hairs along edges; 3 distinct *veins*

Stems

- Green, turning reddish-brown with age
- Grow from *rhizomes*, forming colonies
- Unbranched
- Bristled throughout



Tufted Loosestrife (*Lysimachia thyrsiflora*)

Primulaceae

Plant height	12 to 20 inches
Bloom season	May to July
Habitat	Part shade, sun; bogs, swamps, wet fields

Flowers

- Narrow yellow petals, 6 per flower; 6 yellow *stamens*, longer than petals and an orange ovary in center
- Round clusters of flowers, 1 ½ inches long, flowers are ⅓ inch diameter
- Few to many flower clusters per stem from middle leaf *axils*, no flowers at top of plant

Leaves

- *Opposite; simple; entire*
- *Stalkless; lance-linear*, becoming very short and small in lower parts of plant
- 5 inches long, ¾ inch wide
- May have fine hairs along middle *vein* and lower surface

Stems

- Green to reddish
- Single
- Unbranched
- Smooth at base, hairy towards top



Heath Aster (*Symphyotrichum ericoides*)

Asteraceae

Plant height	1 to 3 feet
Bloom season	August to October
Habitat	Part shade, sun; dry to moist, sandy, or rocky soil ; wet to dry prairie, savanna, dunes, roadsides, railroads, woodland edges, outcrops

Flowers

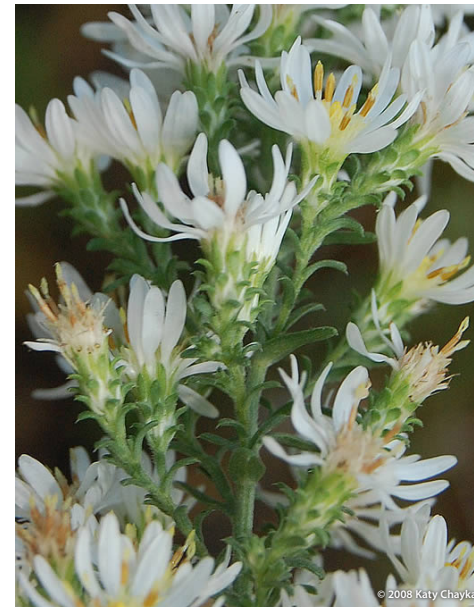
- > 7 white petals; yellow *disk*
- ½ to ¾ inch diameter
- Few to many flowers, **tightly packed into cylindrical flower clusters**

Leaves

- *Alternate*, and *basal*; *simple*; *entire*
- **Mostly linear (may be needle-like)**; smaller leaves often clustered in between larger leaves; leaves near flowers are short and crowded; *basal* leaves are more *spatulate* and wither away by flowering time
- 1 inch long, less than ¼ inch wide;
- Hairless to sparsely haired; *stalkless*

Stems

- Green, turn brown and woody with age
- Single to multiple from base
- Unbranched in lower plant, heavily branched in upper part
- Hairy, especially flower *stalks* and in upper part of plant



Long-headed Thimbleweed (*Anemone cylindrica*)

Ranunculaceae

Plant height 8 to 20 inches
Bloom season July to August
Habitat Part shade, sun; dry; prairies, roadsides, forest edges

Flower

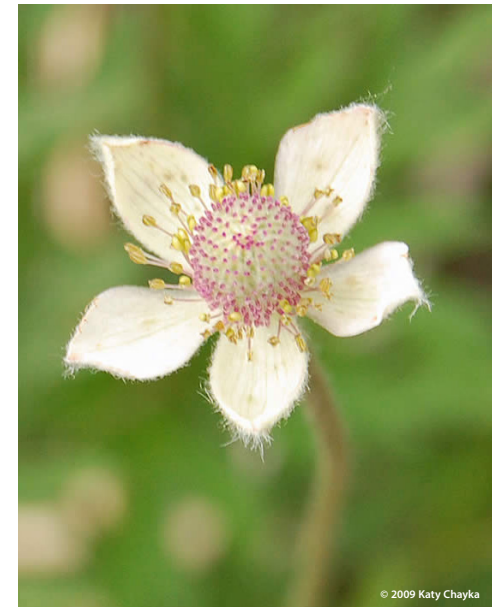
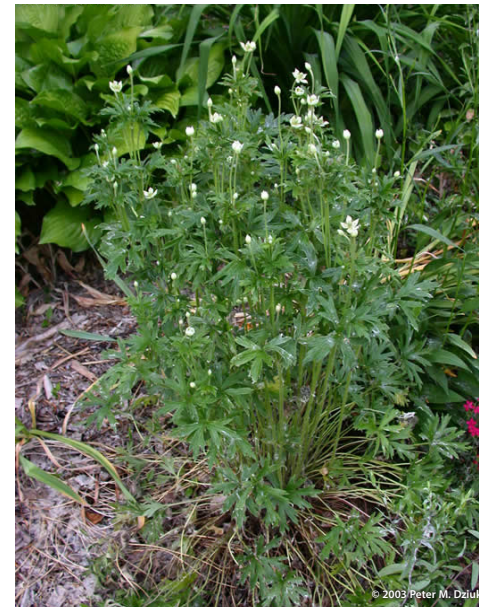
- 5 greenish white sepals surrounding a large, cone-like center; sepals hairy; $\frac{3}{4}$ inch across
- 2 to 8 *terminal, long-stalked* flowers arising from a whorl of leaves

Leaves

- *Basal and whorled; palmately compound*, each *leaflet* has 3 to 5 deep lobes, lobes have 2 to 5 large teeth
- One whorl of 3 to 10 leaves about midway up the stem, all leaves of similar shape and in groups of 3
- *Leaflets* up to 4 inches long
- Hairy throughout

Stem

- Often in clusters; *erect*
- Hairy throughout



Northern Bedstraw (*Galium boreale*)

Rubiaceae

Plant height	8 to 20 inches
Bloom season	June to August
Habitat	Part shade, sun; moist to dry open woods, edges of forest, fields, prairies

Flowers

- 4 white petals with a pointed tip
- Flowers $\frac{1}{8}$ to $\frac{1}{4}$ inch wide
- **Many-flowered**, loose to dense branching *terminal* clusters

Leaves

- In whorls of 4; *simple*; *entire*
- $\frac{3}{4}$ to 2 inches long, $\frac{1}{4}$ inch wide
- 3 parallel *veins*

Stems

- Green
- Usually single
- Branching in upper part of plant
- Hairless, slender, **square**



Panicked Aster (*Symphyotrichum lanceolatum*)

Asteraceae

Plant height	1 to 5 feet
Bloom season	August to October
Habitat	Part shade, sun; average to moist soil; shores, woodland edges, meadows, fens, ditches

Flowers

- > 7 petals per flower of variable colour (often pale blue or pink); yellow *disk*, turns reddish with age
- ½ to ¾ inch diameter
- Branching flower *stalks* occur towards top of stem; **typically, more than 20 flowers per branch and 100 flowers per plant**

Leaves

- *Alternate* and *stalkless*; *simple*; *entire* or with a few widely spaced teeth
- **Lance-linear**, pointed at tip
- 1 to 4 inches long, ¾ inch wide
- Smooth

Stem

- Green, may be reddish along linear shallow grooves
- Grow from *rhizomes* and forms colonies
- **Smooth**, may have lines of short hairs in upper stem and flowering branches



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Prairie Dogbane (*Apocynum cannabinum*)

Apocynaceae

Plant height	1 to 3 feet
Bloom season	July to August
Habitat	Part shade to sun; wet prairie ditches, along roads, moist deciduous woods

Flowers

- Greenish white bell-shaped flowers in *terminal* clusters
- $\leq \frac{1}{4}$ inch or smaller

Leaves

- **Opposite; simple; entire**
- Green with white to cream-coloured *veins*; oval shaped with pointed tip, rounded or narrowed base. Turns bright yellow in late summer/early fall.
- ≤ 4 inches long, 2 $\frac{1}{2}$ inches wide
- *Ascending*; short leaf *stalk*, lower leaves may be *stalkless*
- May feel waxy, milky sap

Stems

- **Red at maturity**
- Typically hairless, may feel waxy
- Releases milky sap when broken



Rough Bugleweed (*Lycopus asper*)

Lamiaceae

Plant height 6 to 24 inches
Bloom season July to September
Habitat Part shade, sun; moist soil; wet meadows, ditches, marsh edges

Similar species Wild Mint (p. 84), which has light pink to lavender flowers and a strong mint smell. Leaves of Rough Bugleweed slightly angle upwards, whereas Wild Mint leaves do not.

Flower

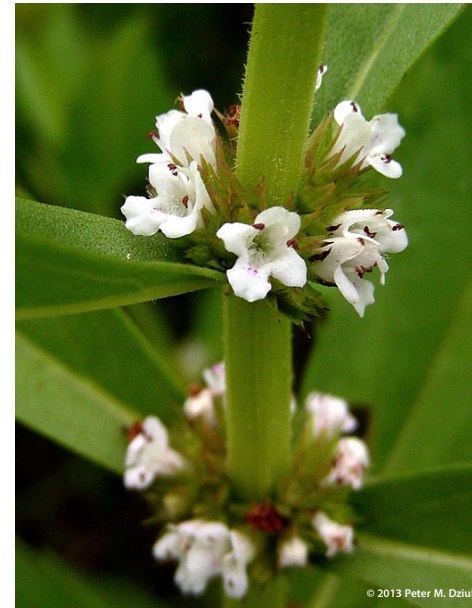
- **Whorled clusters of tiny white flowers around leaf axils**
- 4 fused petals, may be speckled pink inside
- $\frac{1}{8}$ to $\frac{1}{6}$ inch across; **irregular, tubular**

Leaves

- **Opposite; simple; roughly toothed**, angled upward
- **Lance-oblong**, 1 to 3 inches long, up to 1 inch wide
- **Short-stalked leaf pairs arranged at 90-degree angles to those above and below**
- Various hairy
- Distinct, but not strong, **resinous-lemony scent when crushed**

Stem

- **Square stems**; variously hairy, can become smooth with age



Spotted Water Hemlock (*Cicuta maculata*)

Apiaceae

- Plant height** 3 to 6 feet
Bloom season July to September
Habitat Part shade, sun; wet fields, moist thickets, wet ditches, fens, swamps, shores
- Similar species** Water Parsnip (*Sium suave*), which has once-divided leaves and veins that end in *tooth* tips.

Flowers

- **Terminal dome-shaped compound umbels**, ≤ 6 inches diameter
- 5 white petals, notched at the tip; flowers with greenish white center
- ⅛ inch diameter
- One to several *umbels*/plant; each *umbel* has > 10 *umbellets* with 12 to 15 flowers

Leaves

- **Alternate; pinnately compound, divided twice; ≥ three leaflets per leaf; jagged teeth**
- *Leaflets* 2-4 inches long, 1 ¼ inches wide
- *Leaflets* are *lance-linear*, often fold upwards from central *vein*
- **Lateral veins of leaflets end in the notch of the teeth instead of the tip of the tooth**

Stem

- Green or purple, may have purple streaks or spots
- Many branches
- Hairless



Tall Cinquefoil (*Drymocallis arguta*)

Rosaceae

Plant height	1 to 3 feet
Bloom season	June to August
Habitat	Part shade, sun; average to dry prairies, forest edges; rocky to sandy soil

Flowers

- 5 well-spaced, creamy white petals with rounded tips; 5 pointed green sepals appear between them; center is deep yellow
- ½ to ¾ inch diameter
- Clustered at top
- Typically, only a few flowers bloom at a given time

Leaves

- Basal and alternate; pinnately compound; often double toothed (each tooth contains 2 shallower teeth)
- Green; 7-11 leaflets on basal leaves, 3-5 on stem leaves
- Basal leaves 4-8 inches long, lower leaflets smaller than upper ones
- Densely haired, soft stems

Stem

- Grey-green
- Usually single from base
- Erect, usually unbranched except for flower clusters
- Slightly sticky, densely haired



Tall Meadow Rue (*Thalictrum dasycarpum*)

Ranunculaceae

Plant height	2 to 5 feet
Bloom season	July
Habitat type	Part shade, sun; moist soil; forest edges, thickets, meadows, fens, wet ditches, shores

Flowers

- 4 to 6 greenish-white sepals, petals are absent; $\frac{1}{3}$ inch long
- Male and female flowers are on separate plants; female flowers have **10 white pistils that look like petals**; male flowers have **12 greenish hanging stamens with pale yellow anthers**
- Flowers are in loose branching clusters

Leaves

- *Alternate and basal; compound, divided 3 to 5 times; leaflets longer than wide with 2 or 3 pointed lobes*
- Blue green
- *Leaflets approximately 1 inch long; terminal leaflet has longest stalk; lower leaves have longer stalks, upper leaves have very short stalks*
- Hairy on underside

Stem

- Purplish
- Single
- Upper stalk branched
- Mostly hairless



Upland White Goldenrod (*Solidago ptarmicoides*)

Asteraceae

Plant height	1 to 2 feet
Bloom season	July to September
Habitat	Part shade, sun; average to dry sandy or rocky soil; prairies, open woods, bluffs, rocky outcrops

Flowers

- 10 to 20 white petals; pale-yellow to cream disk
- ½ inch diameter
- 3 to 60 flowers on 1 inch stalks; open, flat flower clusters at top of plant

Leaves

- *Alternate; simple; entire*, may have few noticeable teeth towards the tip
- *Lance-linear*, lower leaves are stalked and may be more lance-oval
- Up to 7 ½ inches long, upper leaves get progressively smaller and stalkless, becoming scale-like within flower clusters
- Smooth to rough textured

Stems

- *Erect* and rigid, mostly unbranched except within flower clusters
- Upper stem typically rough textured, lower stem may be smooth



White Camas (*Zigadenus elegans*)

Melanthiaceae

Plant height	6 to 36 inches
Bloom season	June to July
Habitat	Sun; rich medium to moist prairies and meadows

Flowers

- 6 cream to greenish white tepals, each with a green heart-shaped nectar gland at the base; pistils split in 3; 6 arching *stamens* with yellow *anthers*
- ½ inch diameter

Leaves

- Mostly *basal*; grass-like
- Whitish green from waxy coating; folded lengthwise and keeled
- 4 to 12 inches long, ¼ to ½ inch wide; stem leaves shorter; clasping to almost clasping the stem
- Smooth, waxy; parallel *veins*

Stems

- Whitish green from waxy coating
- Single and *erect*
- Unbranched except in the inflorescence
- Smooth



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Blue Flag (*Iris versicolor*)

Iridaceae

Plant height	12 to 32 inches
Bloom season	May to June
Habitat	Part shade, sun; wet meadows and woods, marshes, shores

Flowers

- Blue-violet; 3 large petal-like sepals with a white and yellow base and purple veins; petals are smaller than sepals; pistils are petal-like, about as long as the petals; stamens are hidden in-between pistils and sepals
- 3 to 4 inch in diameter; large sepals drooping; smaller petals are *erect* or drooping
- One to a few flowers per stalk

Leaves

- Up to three sword-like leaves arising from a flattened base; *simple*; *entire*
- Green, may be purplish red at base; *linear*; *erect* or arching
- 1 inch wide, 12 to 30 inches long
- Smooth surface; *linear*, parallel veins

Stems

- Green
- *Erect*, 1 to 2 flowering stems from base
- Smooth, waxy



Dotted Blazing Star (*Liatris punctata*)

Asteraceae

Plant height 6 to 18 inches
Bloom season August to September
Habitat Sun; dry, sandy prairies

Similar species Meadow Blazing Star (p. 72), which has flowers arranged into 1 to numerous stalked flower clusters.

Flower

- **Pink to purple petals with a long thread-like pistil; star shaped flowers**
- Small clusters of 3 to 8 flowers form a larger, tightly packed, cylindrical cluster up to 8 inches long; clusters bloom top to bottom
- *Bracts* are green to purple

Leaves

- *Alternate and basal; simple; entire*
- 1-nerved; covered in white dots of resin; narrow and grass like and densely packed around stem; tend to point upwards, but may spiral at the base
- Up to 3 inches long, ¼ inch wide
- Have short white hairs around edges

Stem

- Green to red
- Normally in bunches
- Unbranched
- Hairless



Harebell (*Campanula rotundifolia*)

Campanulaceae

Plant height	6 to 20 inches
Bloom season	June to October
Habitat	Part shade, sun; rocky slopes, open woods, average to dry meadows

Flower

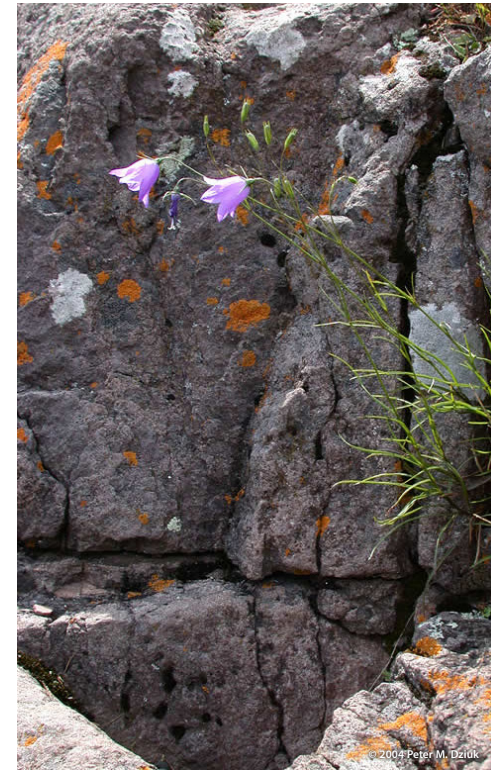
- Pale blue to violet bell-shaped flowers with 5 pointed and flaring lobes
- Approximately $\frac{3}{4}$ inch long
- One to several on slightly arched flower stalks at top of the stem
- Hairless stalks
- Long pistil has a 3-lobed stigma

Leaves

- Basal and alternate; simple; entire, basal leaves may have large teeth
- Basal leaves are round to heart-shaped and up to 1 inch long with have long stalks; basal leaves disappear as stalks develop
- Stem leaves are linear and up to 3 inches long, stalkless
- Leaves become narrower ascending the stem

Stem

- Multiple stems from base
- Slender, unbranched (except for the flowers)
- Typically, hairless



Leadplant (*Amorpha canescens*)

Fabaceae

Plant height	1 to 3 feet
Bloom season	July to August
Habitat	Sun; dry prairies, sandy open woods, sand and gravel ridges

Flowers

- Purple petals; yellow-orange *anthers*; *stamens* extend beyond petals
- Flowers are ¼ inch long
- Upper petal creates tube around *stamens* and flattens after pollination
- Flowers densely clustered in long spikes 1 to 6 inches long

Leaves

- *Alternate*; compound; smooth edges
- Grey-green from dense white hairs, giving it a woolly appearance
- 2 to 4 inches long with 21 to 31 oval *leaflets* ¾ inch long

Stems

- Main stem woody and brown, branching stems are grey green from fine white hairs
- Branching



Meadow Blazing Star (*Liatris ligulistylis*)

Asteraceae

Plant height 12 to 40 inches
Bloom season August to September
Habitat Sun; moist to average soil; prairies, meadows, streambanks, clearings, roadsides, ditches

Similar species Dotted Blazing Star (p. 66), which has flowers organized into small clusters of 3-8 flowers without stalks.

Flowers

- **Star shaped flowers** organized into 1 to 40 (typically 3 to 10) **stalked flower clusters**; **flower clusters contain 30 to 100 flowers**; each flower contains a **long pinkish purple, thread-like pistil**
- $\frac{3}{4}$ to 1 inch diameter
- 4 to 5 layers of *bracts*, round to spatula-shaped with a round tip, purple or tinged with purple

Leaves

- *Alternate and basal; simple; entire*
- Green; lower leaves are *oblong-elliptic to oblong-spatulate*; *basal* and lower leaves wither by flowering time
- 32 to 6 inches long, 1 inch wide, progressively smaller *ascending stem, bract-like* size in upper stem
- Covered in short white hairs

Stems

- Often deep red
- Single and unbranched
- Sparsely to densely covered with short hairs



Prairie Wild Onion (*Allium stellatum*)

Amaryllidaceae

Plant height	8 to 12 inches
Bloom season	July to August
Habitat	Sun; medium moisture to dry fields, prairies, rocky areas

The entire plant has an onion aroma when crushed. Contains bulbs up to an inch across and about an inch below the surface. Flowers are just as flavourful as the bulb.

Flower

- 6 pale pink to purple, occasionally white, tepals; yellow ovary at center; long *stamens* with yellow *anthers*
- ¼ inch diameter
- Round *terminal umbel*, 1.5 to 2 inches across, subtended by 2 to 3 bracts

Leaves

- *Basal*; narrow and grass-like
- Up to as long as the plant is tall
- Smooth

Stem

- Unbranched
- Hairless



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Purple Prairie Clover (*Dalea purpurea*)

Fabaceae

Plant height	12 to 20 inches
Bloom season	Late June to August
Habitat	Sun; moist to dry fields, prairies, rocky areas

Flower

- 5 purple petals; orange-yellow *anthers*
- Cylindrical, dense flower clusters; ½ to 2 ½ inches long at top of stem
- Flowers bloom from bottom to top; flower head is woolly and dull grey before and after flowering

Leaves

- *Alternate; pinnately compound; smooth edges*
- 3 to 7 *linear leaflets per leaf*
- 1 to 2 inches long, *leaflets* less than ⅛ inch wide
- May be densely packed near base of stem and sparser on upper part of stem
- **Parsley or citrus scent when crushed**

Stem

- Multiple stems emerging from base of plant
- Unbranched, slightly ridged stems
- Hairless



Smooth Blue Aster (*Symphyotrichum laeve*)

Asteraceae

Plant height	1 to 3 feet
Bloom season	July to October
Habitat	Sun; dry; fields, prairies, open woods

Flowers

- >7 light to medium blue purple petals; yellow *disk* that turns reddish with age
- 1 inch diameter
- Branched clusters that are often *ascending* at the top of the plant containing few to many flowers

Leaves

- *Alternate; simple; entire* or with shallow teeth
- Lower stem leaves are spatula shaped to *lance-oblong* with winged petioles, upper stem leaves are **egg-shaped to lance-linear**
- Up to 4 inches long, 1 ½ inches wide
- **Smooth and almost waxy, lobes at the base are clasping**

Stems

- Green to reddish
- *Erect* stems with stiff, *ascending* flowering branches
- Smooth



Swamp Milkweed (*Asclepias incarnata*)

Apocynaceae

Plant height	3 to 4 feet
Bloom season	July
Habitat	Sun; wet fields, swamps, ditches, shores

Flowers

- Domed clusters of pink flowers
- Each flower has 5, deep pink reflexed petals below a lighter pink, 5-parted, star shaped crown with a cream-coloured center
- ¼ inch diameter
- Several convex clusters per plant; many flowers per cluster
- Strongly sweet scent, like cherry vanilla

Leaves

- *Opposite; simple; entire*
- Greenish purple; ***lance-linear to lance-elliptical***
- 6 inches long, 1 ½ inches wide
- Smooth

Stems

- Greenish purple
- Branching in upper ⅓ of plant
- Mostly hairless, may have fine hairs in upper plant



Water Smartweed (*Polygonum amphibium*)

Polygonaceae

Plant height	1 to 3 feet
Bloom season	June to September
Habitat	Part shade, sun; moist soil; ditches, shallow and slow-moving waters, shores, marshes

This species is named “amphibium” because plants growing in deep water (aquatic) look quite different than those growing in shallow to no water (terrestrial). Plants may look like “hybrids” in transition areas.

Flowers

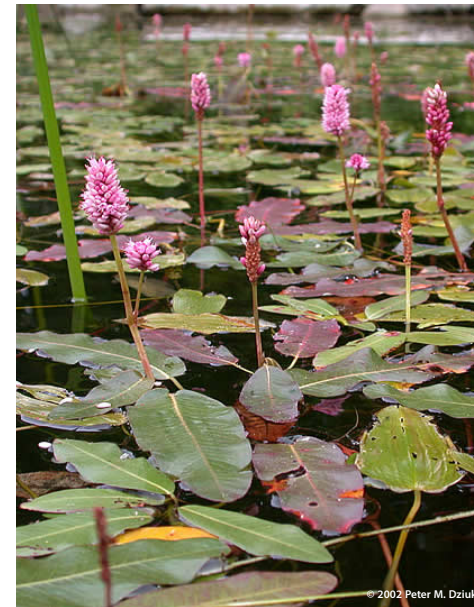
- 5 pink tepals fused at base; white *stamens* have pink *anthers*
- 1 to 2 dense clusters per stem
- Clusters are thimble-shaped (~1 inch) in terrestrial plants and cylindrical (up to 2 inches) in aquatic plants

Leaves

- *Alternate; simple*; entirely green, variable shapes
- 6 inches long, 2 inches wide
- Terrestrial plants are covered in long, dense, pillowy hairs, giving them a lighter green appearance; **leafy collar encircles stem at leaf bases** and is flush with stem. *Stalkless*
- Aquatic plants appear smooth but have a covering of hairs lying flat against the leaf (more obvious when they reflect sunlight); long stalked

Stems

- Green
- *Rhizomes* create dense colonies
- Branched or unbranched; *erect* or *sprawling*
- Densely hairy in terrestrial plants; smooth in aquatic plants and slightly ribbed



Wild Mint (*Mentha arvensis*)

Lamiaceae

- Plant height** 6 to 24 inches
Bloom season July to August
Habitat Part shade, sun; moist soil; thickets, wet meadows, marsh edges, shores
- Similar species** Rough Bugleweed (p. 52), which has white flowers, leaves angled upward and lacks the strong minty smell.

Flowers

- **Whorled clusters of pink to lavender or white flowers around leaf axils**
- ⅛ inch long; **irregular**; **4 white to violet stamens** protrude well beyond the petals
- Blooms from lower plant to top

Leaves:

- *Opposite*; *simple*; serrated edges
- Green; *lance-elliptical*
- 2 ½ inches long, 1 inch wide
- Finely haired on lower surface
- **Short-stalked leaf pairs arranged at 90-degree angles to those above and below**
- **Strong mint scent when crushed**

Stems

- Green to red
- Single from base; *ascending to erect*
- May be branched
- **Square**; hairy throughout or just along edges



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Bog Birch (*Betula pumila*)

Betulaceae

Plant height	41 to 8 feet (rarely 9 to 10 ft)
Bloom season	April to May
Habitat	Sun to part shade; moist soil; open bogs, fens, peatlands, swamps, wet prairies and meadows, wet poplar woods

Flowers

- Flowers in catkins (cylindrical clusters with no petals or sepals)
- Blunt, stiff *bracts* are main structures visible; *stamens* and *pistils* protrude beyond *bracts*
- Many catkins *alternate* along twigs
- Catkins erect, *ascending* or *pendent*

Leaves

- *Alternate*; *simple*; round to sharp teeth
- Dark green upper surface, light green lower surface; **round-spatulate**
- $\frac{3}{4}$ to $1\frac{1}{2}$ inch long, $\frac{1}{2}$ to 1 inch wide
- Hairless to sparsely haired; surface may be dotted with glands

Stems

- Brown to reddish brown woody stems, older stems may be greyish; **woody stems have pale, raised pores**, younger stems are hairy
- Stems in bunches
- Short lateral branches with 2 to 3 leaves



Pasture Sage (*Artemisia frigida*)

Asteraceae

Plant height 4 to 16 inches
Bloom season July to September
Habitat Sun; dry prairie

Similar species Prairie Sage (p. 90), which has entire leaves that are elliptical to lance linear.

Flowers

- Small yellow flowers; hanging downwards (bracts often most visible)
- $\frac{1}{8}$ inch diameter; indistinct shape with a short *stalk*
- Abundant flowers in *erect* clusters
- Silvery green *bracts* with fine silky hairs

Leaves

- Alternate; simple; divided 2 to 3 times into linear segments, **deep leaf divisions make plant appear feathery**
- **Silvery green to blue green from dense, silky hairs**; upper leaves *stalkless*, lower leaves *short-stalked*
- $\frac{1}{2}$ to 1 $\frac{1}{2}$ inches long
- *Sage aroma when handled*

Stems

- Silvery green to blue green from dense, silky hairs
- Multiple stems from base
- Upper plant usually with many branches
- Lower stem becomes stiff and woody with age, upper branches are slender and *erect*



Prairie Sage (*Artemisia ludoviciana*)

Asteraceae

Plant height 1 to 2 feet
Bloom season July to October
Habitat Sun; average to dry; open prairies, roadsides

Similar species Pasture Sage (p. 88), which has leaves divided 2 to 3 times into linear segments. Deep leaf divisions make plant appear feathery.

Flowers

- Numerous dusty yellow flowers crowded in *terminal* leaf axils
- ⅛ inch diameter, arising from leaf axils

Leaves

- *Alternate; simple; entire*, lower leaves often have *lobed* tips
- **Silvery green to whitish from dense, somewhat wooly, hairs, elliptical to lance-linear; stalkless**
- Up to 3 inches long, ½ inch wide
- *Sage aroma when crushed*

Stems

- Grey-green from dense, matted hairs
- Grow from *rhizomes*, sometimes forming dense colonies
- Unbranched to many branches



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Sources

The Manitoba Museum. 2014. Prairie Pollination. Accessed August 16, 2023 at: www.prairiepollination.ca

Chayka, K., & Dziuk, P. 2006-2024. Minnesota Wildflowers. Accessed. August 16, 2023 at: www.minnesotawildflowers.info

Flora of North America Editorial Committee. 1993-2024. Flora of North America North of Mexico [Online]. 25+ vols. New York and Oxford. Accessed August 16, 2023 at: beta.floranorthamerica.org

iNaturalist. 2008-2024. Accessed August 16, 2023 at: inaturalist.ca

Scoggan, H.J. 1957. Flora of Manitoba. National Museum of Canada Bulletin No. 140.

Budd, A. C., Looman, J., & Best, K. F. 1987. Budd's Flora of the Canadian prairie provinces. Research Branch, Agriculture Canada.

Vance, F. R., Jowsey, J.R., & McLean, J. S. 1984. Wildflowers across the Prairies. Western Producer Prairie Books.

Lee, Glen. 1998-2024. Saskatchewan Wildflowers. Accessed August 16, 2023 at: www.saskwildflower.ca/native-plant-photos.html

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