

Asclepias exaltata

poke milkweed

Other common names include: tall milkweed

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X				

Plant Characteristics:Duration: PerennialType: HerbSize: 2-6' tallLeaf: Opposite; up to 3-8" long and 1-3" wide; hairless and toothless, can be rather wide, but narrow at both ends, especially at the apex. Upper leaf surfaces are medium to dark green, lower leaf surfaces are pale to medium green. Petioles are ½-2" long and light green.Stem: Light green to purplish green, round, and hairless. Stem and leaves contain a milky latex.Flower: Stem terminates in one or more clusters of flowers spanning about 2-4" across. Each flower is about ¼" across and ½" long, consisting of 5 upright whitish-pink hoods and 5 reflexed green or pale purple petals.Seed collection**: All October [2]**What it can be confused with:**

Poke milkweed is easily distinguished from other milkweeds (*Asclepias* spp.) by its erect umbels of unusually bicolored flowers and tall habit. Only the swamp and common milkweeds are as tall, and their flowers are more unicolored. Inflorescence is composed of fewer individual flowers compared to other similar looking *Asclepias* spp. It can hybridize with common milkweed in some areas, producing plants that are difficult to distinguish. Poke milkweed's name refers to the resemblance its leaves have to pokeweed. [3]

Known Pollinators:

Bumble bees, other native bees, honey bees, butterflies – including monarchs and great spangle fritillaries. [3]

Larval Host: Monarch butterflies and unexpected and delicate cynthia moths. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

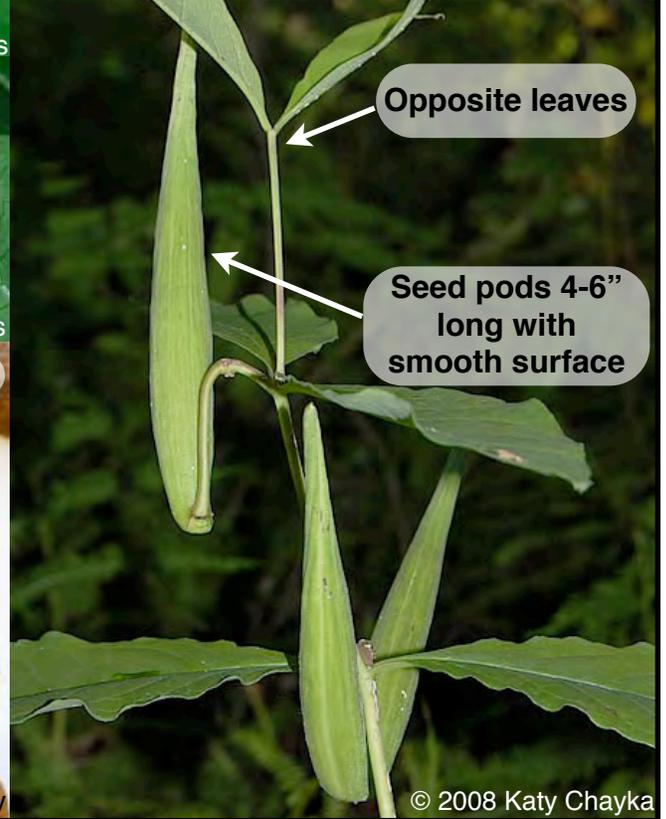
[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 29.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] http://www.illinoiswildflowers.info/woodland/plants/pk_milkweed.html

Asclepias exaltata

poke milkweed

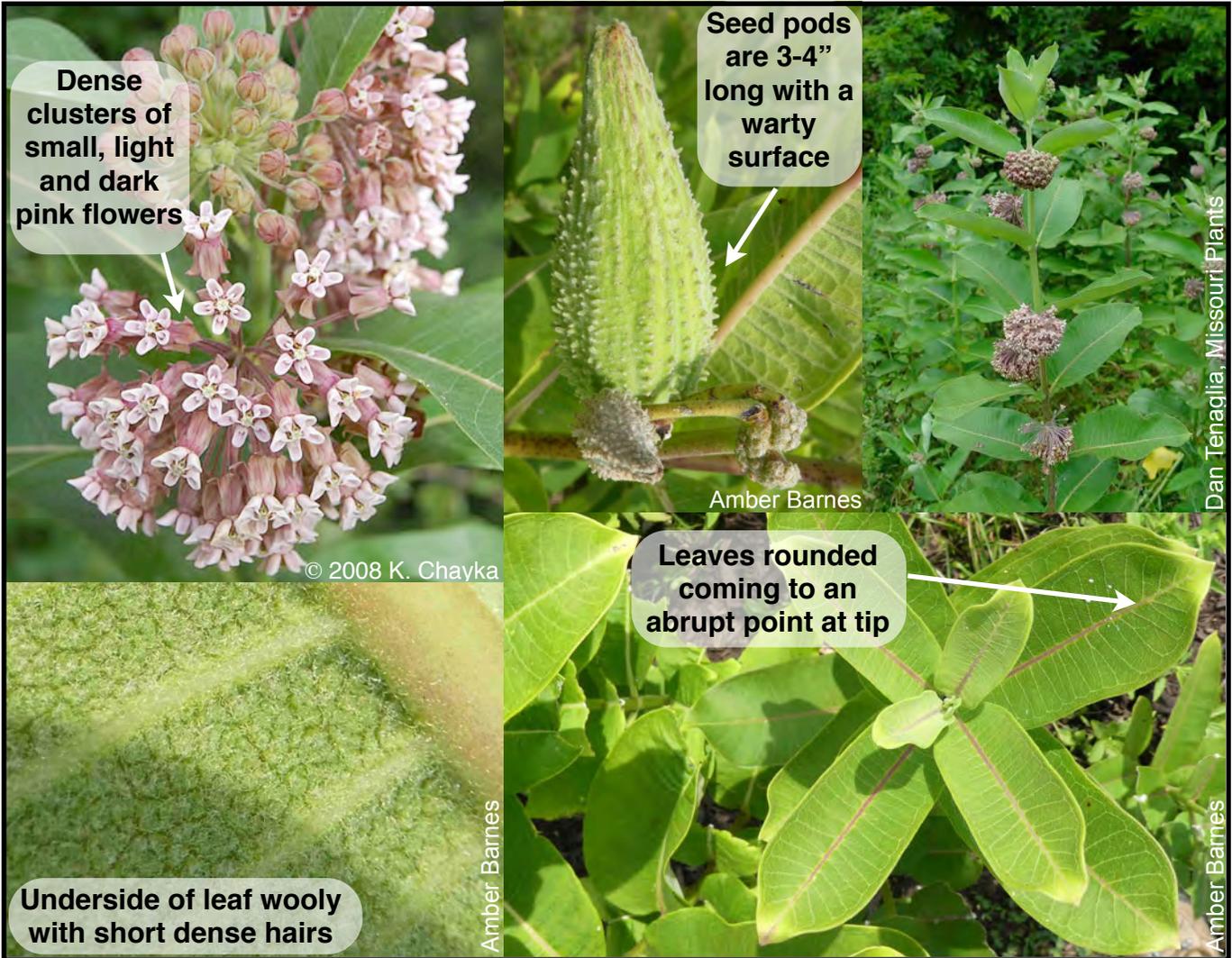


Asclepias exaltata

poke milkweed

POKE MILKWEED COULD BE CONFUSED WITH:

Asclepias syriaca - common milkweed



Underside of leaf wooly with short dense hairs

Dense clusters of small, light and dark pink flowers

Seed pods are 3-4" long with a warty surface

Leaves rounded coming to an abrupt point at tip

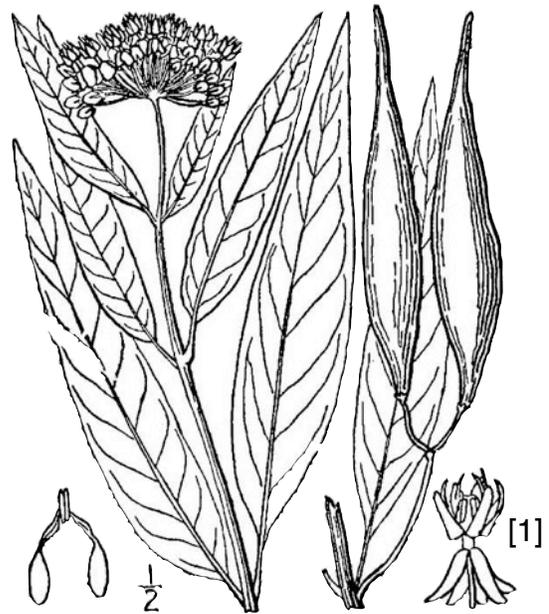


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Asclepias incarnata

swamp milkweed

Other common names include: rose milkweed

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 2-5' tallLeaf: Opposite; up to 6" long and 1½" wide, but typically about 3" long and ½" wide; hairless and toothless, tapering to a point at the tip on a short petiole. Upper leaf surfaces are medium to dark green, although they can become yellowish green or pale green in response to bright sunlight and hot dry conditions.Stem: Mostly hairless but may have lines of fine hairs in the upper plant.Flower: Upper stems terminate in pink clusters of flowers spanning about 2-3½" across. Each flower is about ¼" across, consisting of 5 upright whitish hoods and 5 surrounding pink petals that droop downward in the manner of most milkweeds.Seed collection**: Late September [2]**What it can be confused with:**

Swamp milkweed is easily distinguished from other milkweeds (*Asclepias* spp.) by its erect umbels of pink flowers, tall branching habit, and relatively narrow leaves. Other milkweeds with pink flowers, such as *Asclepias syriaca* (common milkweed) and *Asclepias sullivantii* (prairie milkweed), are shorter and less branched plants with wider leaves. Sometimes stray plants of swamp milkweed occur in drier areas; these specimens are usually much shorter and little branched, but their leaves remain narrow in shape. [3]

Known Pollinators:

Hummingbirds, honey bees, native bees, flies, wasps, butterflies, and skippers. [3,4]

Larval Host: Monarch and queen butterflies. [4]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 26

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html> [3] http://www.illinoiswildflowers.info/wetland/plants/sw_milkweed.htm

[4] http://www.wildflower.org/plants/result.php?id_plant=ASIN

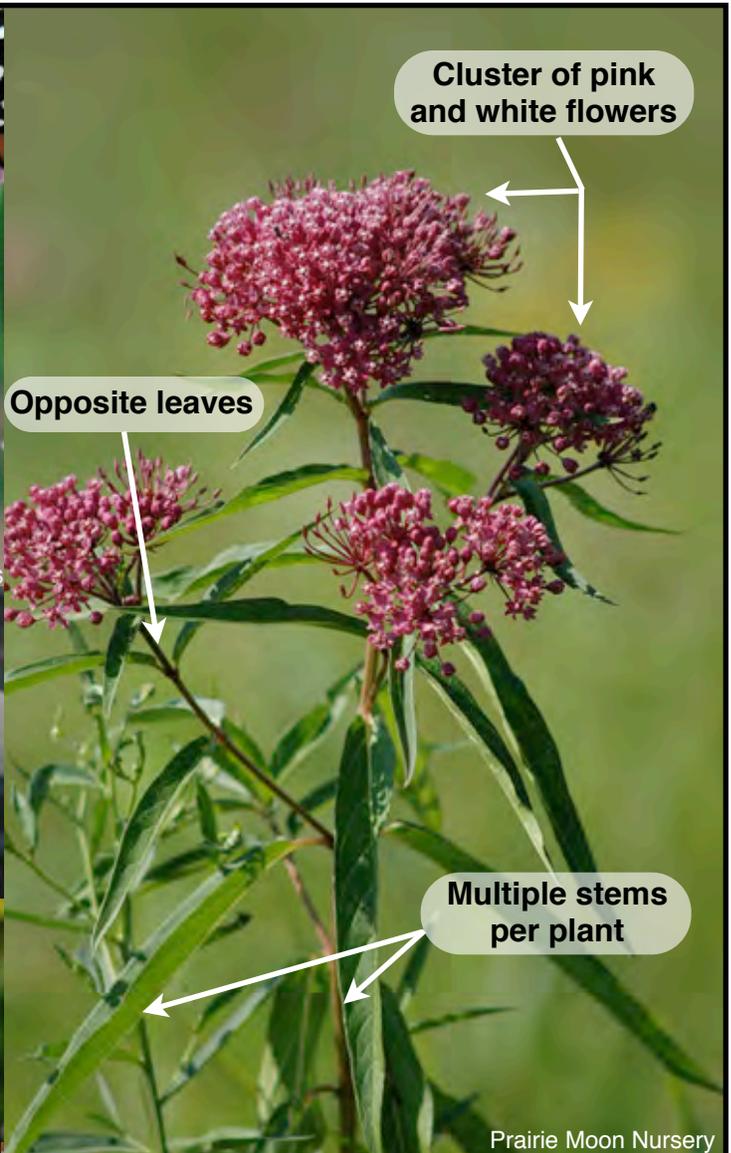
Asclepias incarnata

swamp milkweed



Small pink and white flowers

Amber Barnes



Cluster of pink and white flowers

Opposite leaves

Multiple stems per plant

Prairie Moon Nursery



Long, toothless, hairless, slender leaves

John Hilty, Illinois Wildflowers



Mature seed pods

3-4" long, narrow, tear-shaped seed pod with a smooth surface

Doug Goldman, hosted by the USDA-NRCS PLANTS Database



Cleaned Seeds

Prairie Moon Nursery

Asclepias incarnata

swamp milkweed

SWAMP MILKWEED COULD BE CONFUSED WITH:

Asclepias sulivantii - prairie milkweed

Dan Tenaglia, Missouri Plants

Dan Tenaglia, Missouri Plants

Prairie Moon Nursery

Wider, fleshy, hairless leaves, which are often angled upward.

Larger flowers, with fewer flowers per cluster.

Seed pods are wider, with a smooth to bluntly warty surface.

One main stem per plant.

Asclepias syriaca - common milkweed

Dan Tenaglia, Missouri Plants

Prairie Moon Nursery

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Wider leaves with a pubescent underside.

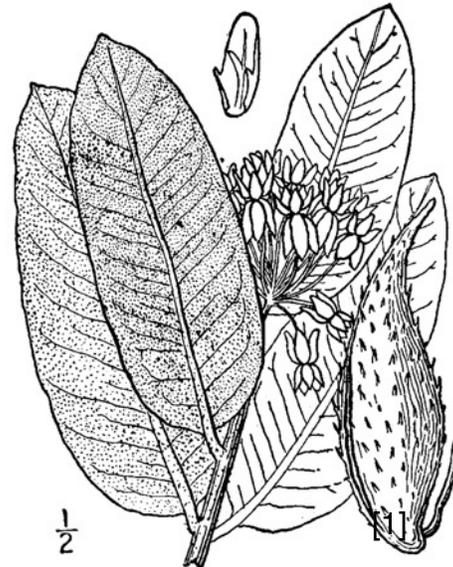
One main stem per plant.

Seed pods are wider with a distinctly warty surface.

Asclepias syriaca

common milkweed

Other common names include: silkweed and milkplant

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X				

Plant Characteristics:Duration: PerennialType: ForbSize: 3-5' tallLeaf: Opposite; up to 8" long and 3.5" wide; oblong with smooth margins, the upper leaf surface is pale-medium to dark green and hairless above, lower leaf surface is densely covered with woolly hairs that are very short; prominent central vein; if damaged, milky sap is released.Stem: Central stem is stout, pale green, unbranching (except sometimes at the tip near the flowers) and usually covered in small, short hairs.Flower: Umbels of flowers, each about 2½-4" across, emerge from the axils of the upper leaves. These flowers are fragrant and range in color from faded light pink to reddish purple. Each flower is about ¼" across, consisting of 5 reflexed petals and 5 raised hoods with curved horns. The hoods are more light-colored than the petals. The pedicels (flower stem) of the flowers are light green to pale red and hairy.Seed collection**: Late September - October**What it can be confused with:**

Common milkweed can be distinguished from other milkweeds by its warty seedpods – other *Asclepias* spp. within the ecoregion have seedpods which are smooth, or nearly so. The leaves of swamp milkweed are more narrowly lanceolate than those of common milkweed. Prairie milkweed is similar in having one main stem and large leaves, but it is hairless, unlike the common milkweed which has small hairs on the stems and undersides of the leaves. [2]

Known Pollinators:

Honey bees, native bees, flies, wasps, butterflies, moths, and skippers. [2,3]

Larval Host: Monarch and milkweed tiger moth. [2,3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 30.

[2] http://www.illinoiswildflowers.info/weeds/plants/cm_milkweed.htm [3] https://www.wildflower.org/plants/result.php?id_plant=ASSY

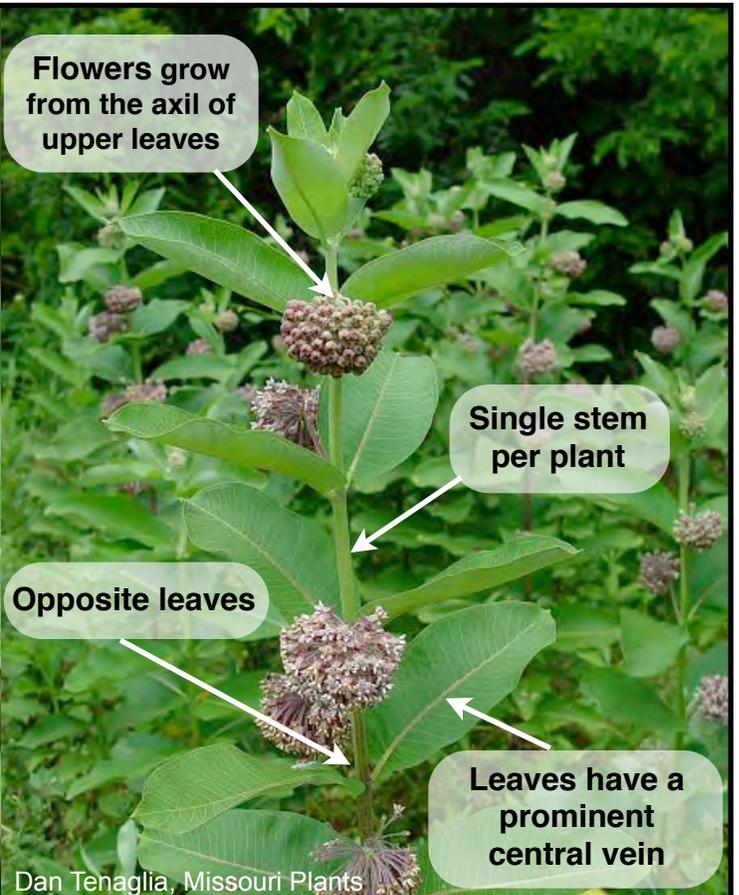
Asclepias syriaca

common milkweed



Small, light and dark pink flowers

Flowers grow from the axil of upper leaves

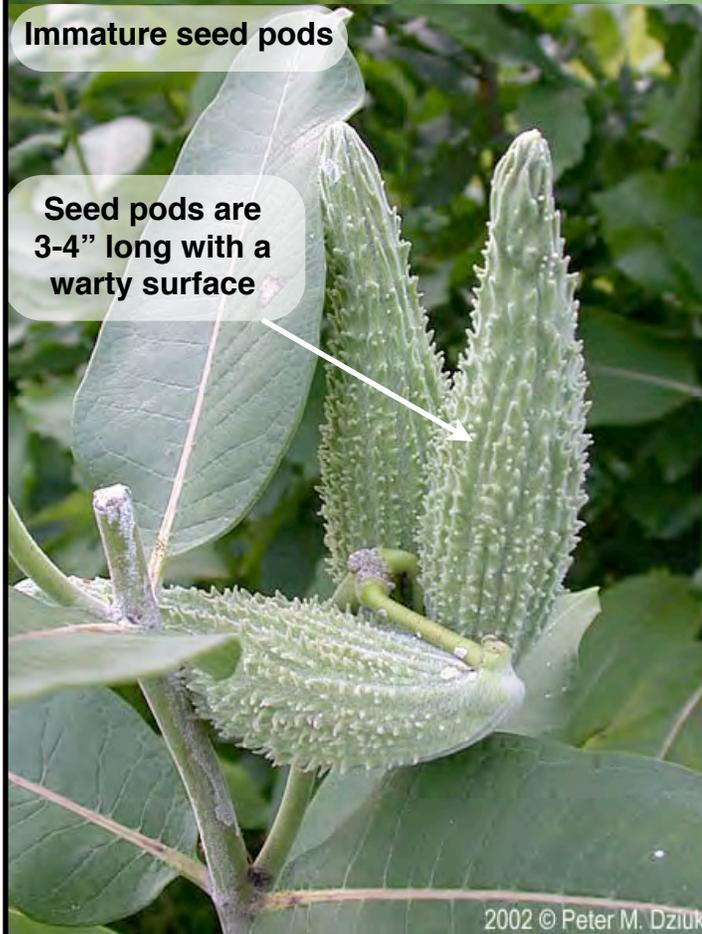


Single stem per plant

Opposite leaves

Leaves have a prominent central vein

Dan Tenaglia, Missouri Plants



Immature seed pods

Seed pods are 3-4" long with a warty surface

Stems and leaf bottoms are covered in small hairs



John Hilty, Illinois Wildflowers



Cleaned Seeds

Prairie Moon Nursery

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Asclepias syriaca

common milkweed

COMMON MILKWEED COULD BE CONFUSED WITH:

Asclepias sulivantii - prairie milkweed



Asclepias sulivantii - prairie milkweed

Similar in having one main stem per plant.

Fleshy, hairless leaves, which are often angled upward.

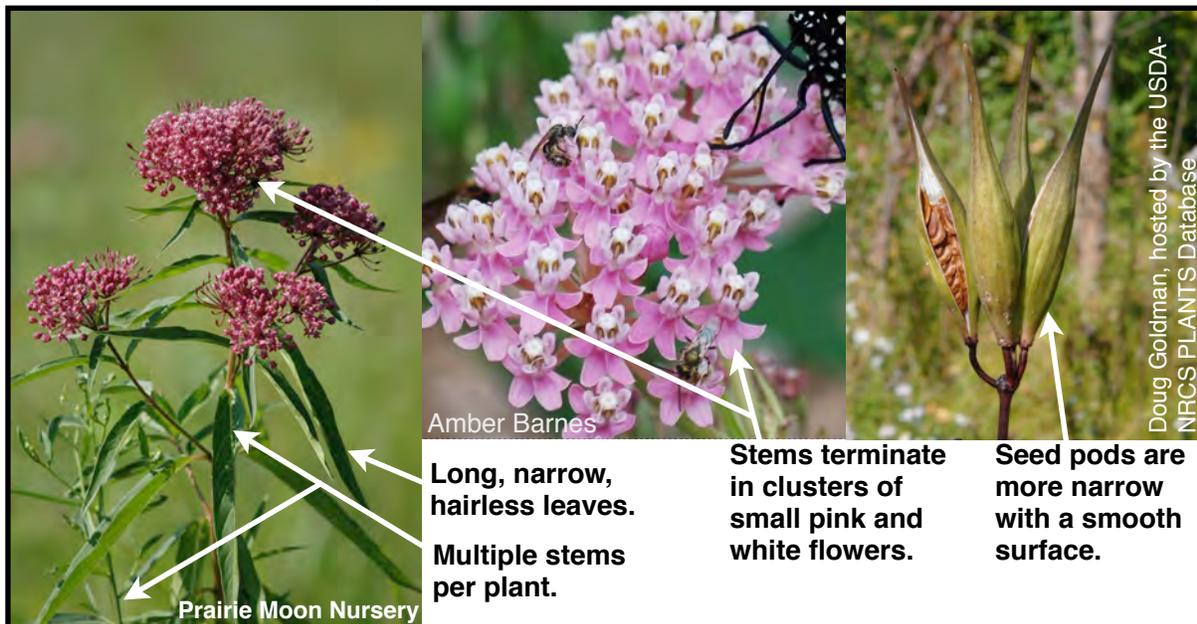
Larger flowers, with fewer flowers per cluster.

Seed pods are similar in size, but are clearly distinguishable by the smooth to bluntly warty surface.

Dan Tenaglia, Missouri Plants

Prairie Moon Nursery

Asclepias incarnata - swamp milkweed



Asclepias incarnata - swamp milkweed

Long, narrow, hairless leaves.

Multiple stems per plant.

Stems terminate in clusters of small pink and white flowers.

Seed pods are more narrow with a smooth surface.

Prairie Moon Nursery

Amber Barnes

Doug Goldman, hosted by the USDA-NRCS PLANTS Database



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Asclepias tuberosa

butterfly milkweed

Other common names include: butterfly weed, orange milkweed, pleurisy root, chigger flower

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 1-2½' tallLeaf: Mostly alternate-sometimes opposite; 2½-3½" long and ½-¾" wide; toothless, narrow to slightly oblong, finely hairy especially along the veins on the underside. Upper leaf surfaces are medium to dark green, while the lower leaf surfaces are light to light-medium green and covered in short hairs. Leaves are sessile or have short petioles (leaf stem).Stem: One or multiple stems, unbranched below, becoming branched near the flower. Light green to reddish purple, round, and densely hairy. Foliage does not have milky latex.Flower: Upper stems terminate in flat orange clusters of 8-25 flowers spanning about 1-2½" across. Each flower consists of 5 upright orange hoods and 5 downward-curved petals which flare out beneath, in the manner of most milkweeds.Seed collection**: Late September-Late October [2]**What it can be confused with:**

Butterfly milkweed, one of the showiest milkweeds, is easy to identify by the long-lasting orange flowers. Unlike other milkweeds, it has alternate leaves and lacks milky latex. Erect seed pods are also easily identifiable; with a smooth and pubescent surface that starts as light green, but later turn a reddish-brown. [3]

Known Pollinators:

Butterflies, bumble bees, other native bees, honey bees, wasps, and hummingbirds. [3,4]

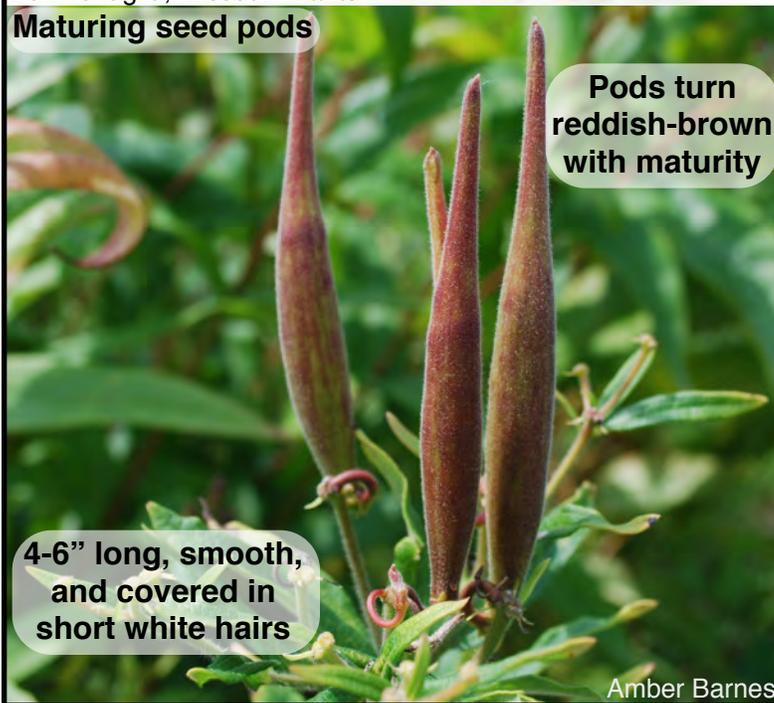
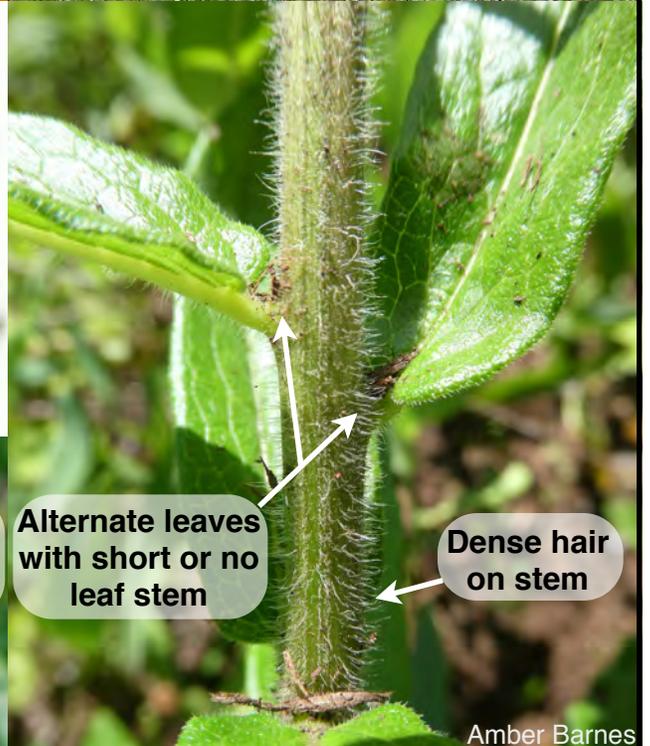
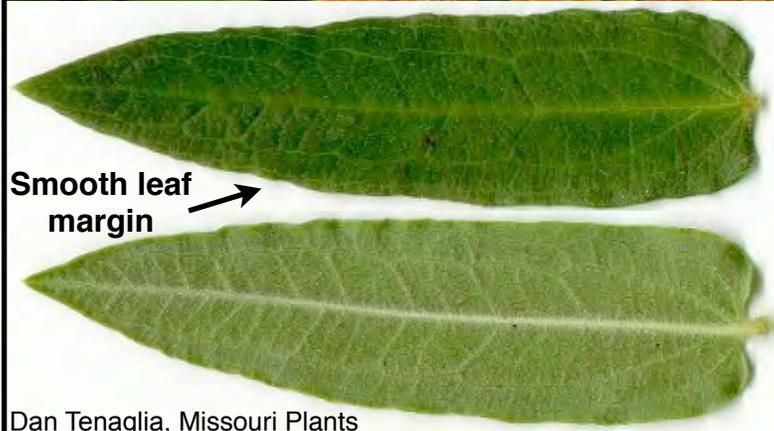
Larval Host: Monarch, grey hairstreak, and queen butterflies; unexpected cynthia and preceding moths. [3, 4]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 25.[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html> [3] https://www.illinoiswildflowers.info/prairie/plantx/btf_milkweedx.htm[4] https://www.wildflower.org/plants/result.php?id_plant=ASTU

Asclepias tuberosa

butterfly milkweed



Asclepias tuberosa

butterfly milkweed

BUTTERFLY WEED COULD BE CONFUSED WITH:

Asclepias incarnata - swamp milkweed



Amber Barnes

Doug Goldman, hosted by the USDA-NRCS PLANTS Database

Prairie Moon Nursery

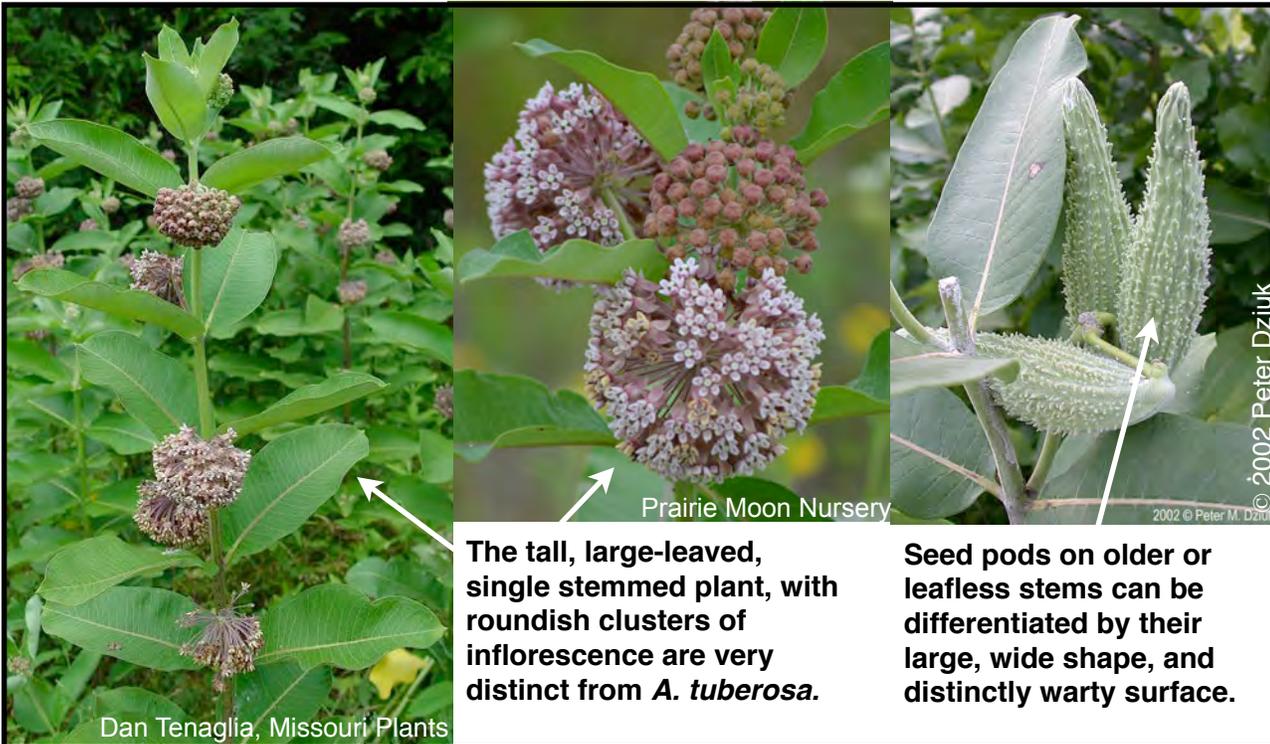
Long, narrow, opposite, hairless leaves.

Multiple (mostly hairless) stems per plant.

Taller stems terminate in clusters of small pink and white flowers.

3-4" long, narrow, tear-shaped seed pod with a smooth surface.

Asclepias syriaca - common milkweed



Prairie Moon Nursery

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Dan Tenaglia, Missouri Plants

The tall, large-leaved, single stemmed plant, with roundish clusters of inflorescence are very distinct from *A. tuberosa*.

Seed pods on older or leafless stems can be differentiated by their large, wide shape, and distinctly warty surface.

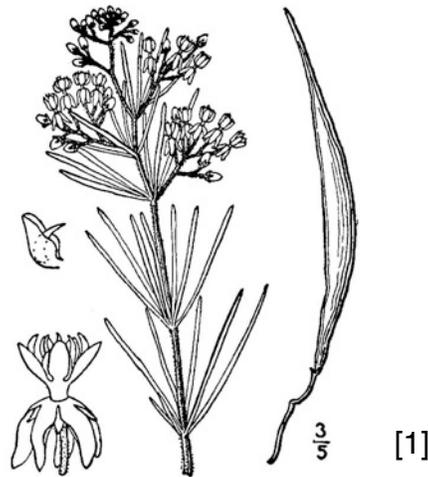


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Asclepias verticillata

whorled milkweed

Other common names include: eastern whorled milkweed

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: .5-2' tall

Leaf: Whorls of 4-6 leaves surround the central stem, long and thin: 2-3" long, 1/16-1/8" across, smooth leaf edges, and some leaves droop downward. The upper leaf surface is yellowish-medium green and nearly hairless with narrow grooves along the middle. The lower leaf surface is whitish green with small hairs.

Stem: Yellowish green to medium green, sparsely branched along the upper half of the central stem.

Flower: White. 1-4 flower heads grow from the middle to upper leaf axils. Flowerheads span 3/4-1 1/2" across and consist of 7-20 small whitish green flowers.

Seed collection**: Mid-Late September - Early October [2]

What it can be confused with:

This small milkweed blooms later into the year than most milkweed species (*Asclepias* spp.). Whorled milkweed superficially resembles the common field horsetail (*Equisetum arvense*) because of its thin whorled leaves. It can be distinguished from this horsetail by the milky latex of its foliage and the later development of its flowers and seed pods. Field horsetail is a spore-bearing plant that lacks true flowers. Whorled milkweed is readily distinguished from other milkweed species by its more narrow leaves (only 1/16-1/8" across). Narrow-leaved milkweed (*Asclepias stenophylla*) is an exception, because its linear leaves are almost as narrow. However, this latter species has leaves that are alternate to nearly opposite along its stems, rather than whorled. [3]

Note: While considered common in all other PW states, *Asclepias verticillata* **should not be collected in Pennsylvania** due to potential change in legal status.

Known Pollinators:

Honey bees, native bees, flies, wasps, butterflies, moths, and beetles. [3]

Larval Host: Monarch

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[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 32.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] http://www.illinoiswildflowers.info/prairie/plantx/wh_milkweedx.htm

Asclepias verticillata

whorled milkweed



Cleaned seeds



Steve Hurst, hosted by the USDA-NRCS PLANTS Database

Flowers



Mature seed pod



Asclepias verticillata

whorled milkweed

WHORLED MILKWEED COULD BE CONFUSED WITH:

Equisetum arvense - field horsetail

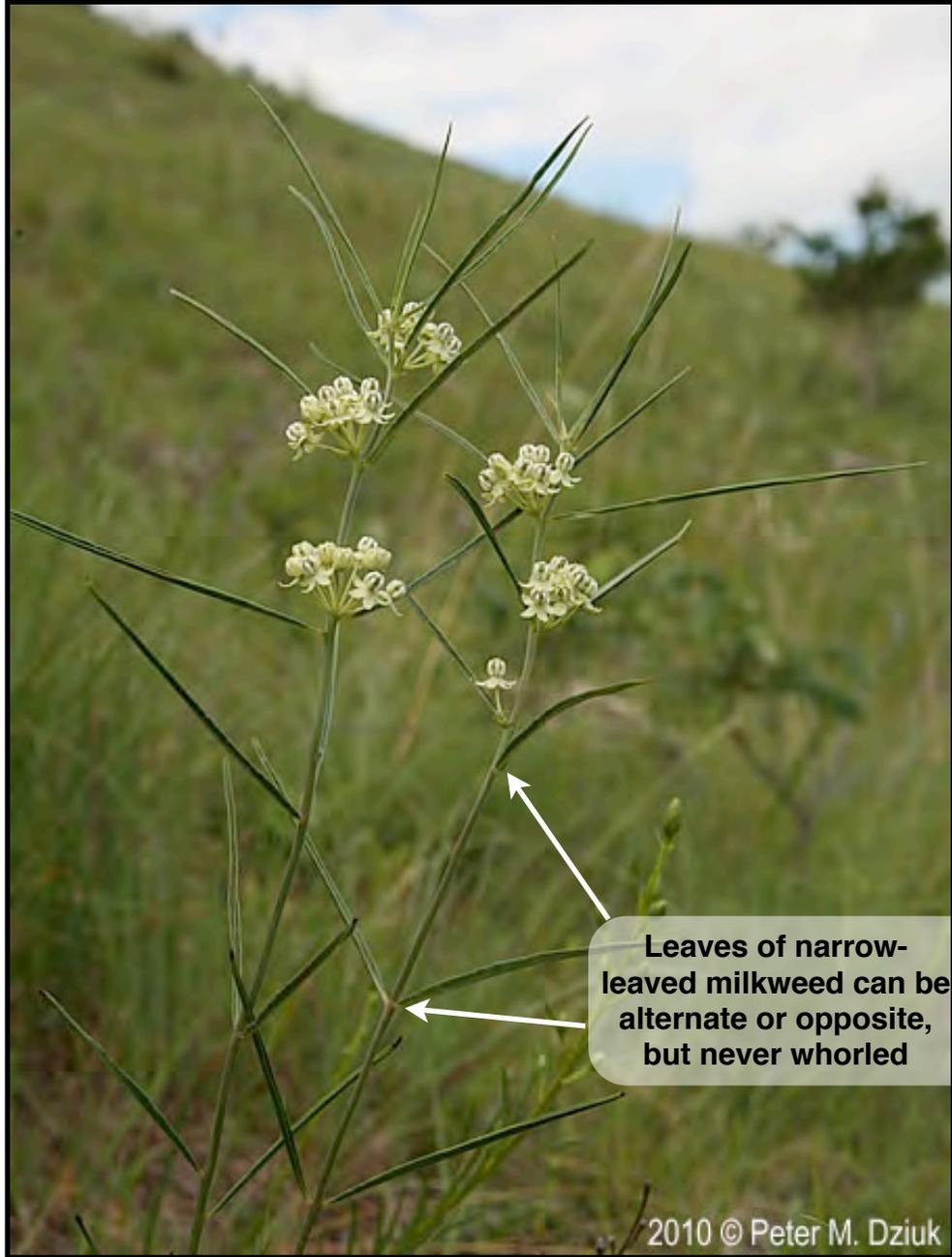


Asclepias verticillata

whorled milkweed

WHORLED MILKWEED COULD BE CONFUSED WITH:

Asclepias stenophylla - narrow-leaved milkweed



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

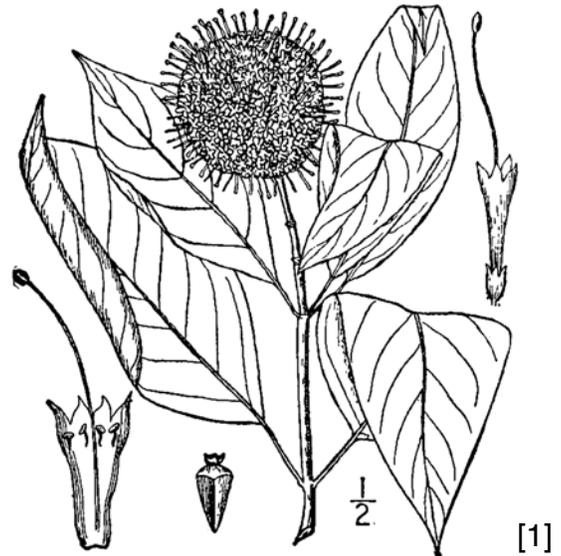
Cephalanthus occidentalis

buttonbush

Other common names include: common buttonbush, button willow



Courtesy Carolyn Fannon, Lady Bird Johnson Wildflower Center

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X				

Plant Characteristics:Duration: PerennialType: ShrubSize: 6-12' tallLeaf: Opposite, sometimes whorled; up to 6" long and 2½" wide; hairless and toothless, narrows at both ends on a slender petiole. Glossy and dark green, without significant fall color.Stem: Branches frequently and has a bushy appearance. Lower branches become woody and brown, while new growth is green or red.Flower: Upper branches may terminate in 1-3 spherical flower heads, spanning 1-1½" across, that occur on a branching, flowering stalk; the stalk may occur from leaf axils. Each flower consists of 4 small spreading whitish petals and a single white style that projects beyond the petals. Flower heads are replaced by red, spherical seed heads that turn brown.Seed collection**: September - October**What it can be confused with:**

Buttonbush is easily identified in the field by its unique flower heads. Though the occasional 3 whorled leaves and uncommon hairy branches and leaves may cause confusion. [3]

Known Pollinators:

Bumble bees, other native bees, honey bees, wasps, flies, butterflies, skippers, and hummingbirds. [2,3]

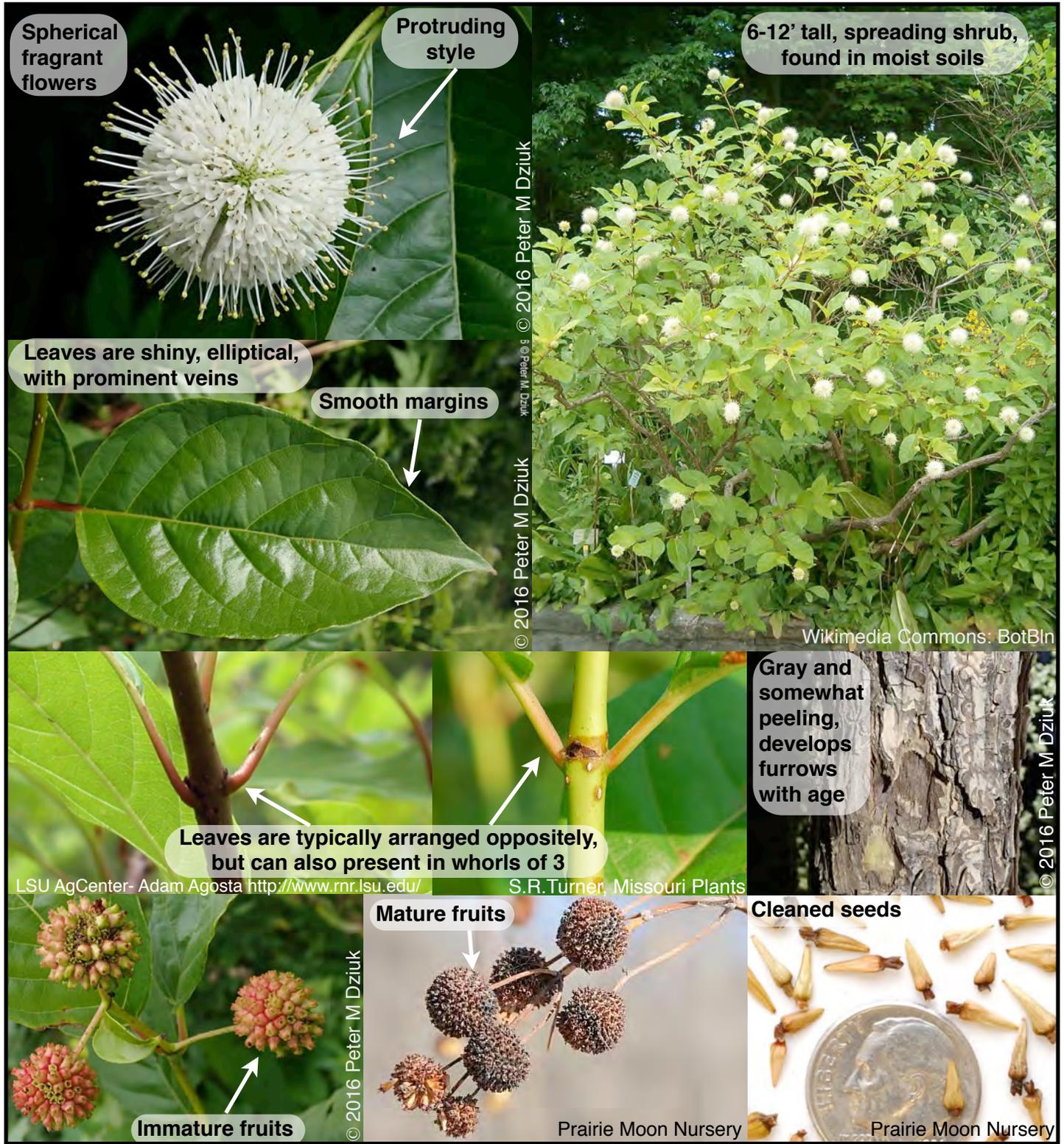
Larval Host: Buttonbush leafminer and buttonbush sphinx moths. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 255.[2] https://www.wildflower.org/plants/result.php?id_plant=CEOC2[3] <https://www.illinoiswildflowers.info/trees/plants/buttonbush.htm>

Cephalanthus occidentalis

buttonbush

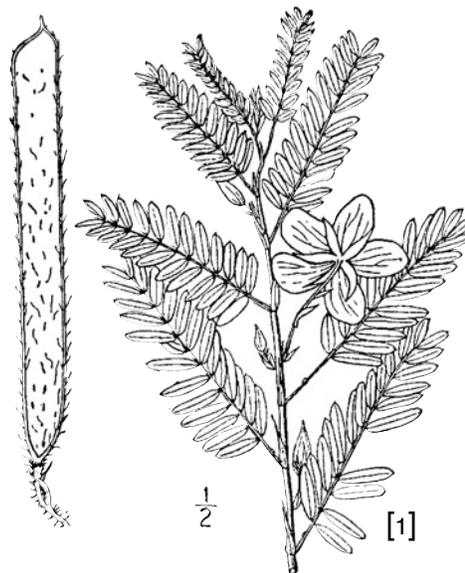


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Chamaecrista fasciculata

partridge pea

Other common names include: showy partridge pea, sleepingplant, or sensitive plant

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: AnnualType: HerbSize: 1-3' tallLeaf: Alternate, pinnately compound. Medium to dark green. Petioles with nectaries. Each compound leaf has up to 20 leaflets, which are hairless, oblong, and roughly 2/3" long and 1/3" wide.Stem: Shorter plants are erect while larger plants tend to sprawl. Stems are slender and hairless, and are light green at first but become reddish brown.Flower: Flowers are bright yellow and irregular, appearing on 1/3" flower stalks along major stems near leaf axils. Flowers are 1" wide with 5 rounded petals and approximately 10 ruddy stamens. No scent. [3]Seed collection**: Early September [2].**What it can be confused with:**

Sometimes confused with *Chamaecrista nictitans* (sensitive partridge pea) which can be distinguished by its flowers (which are smaller in size - about 1/3" across, have 5 stamens, and appear on 1/10" flower stalks), as well as its leaves, which are sensitive to the touch and will fold when contacted. [5]

Known Pollinators:

Honey bees, native bees, flies, wasps, ants, butterflies. [4, 5]

Larval Hosts:

Several species of sulfur butterflies feed on the foliage. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 2: 337.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

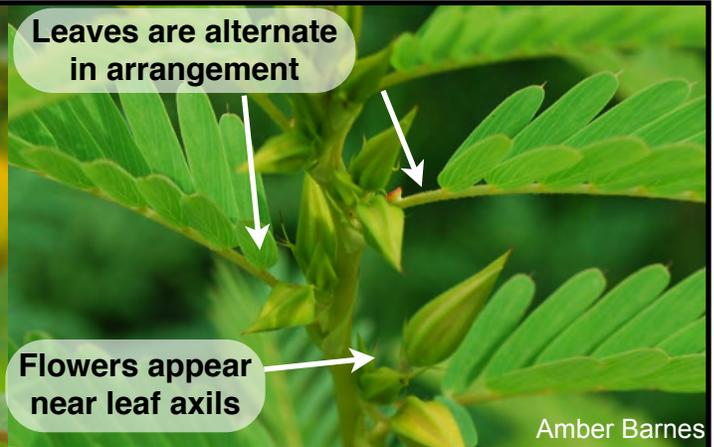
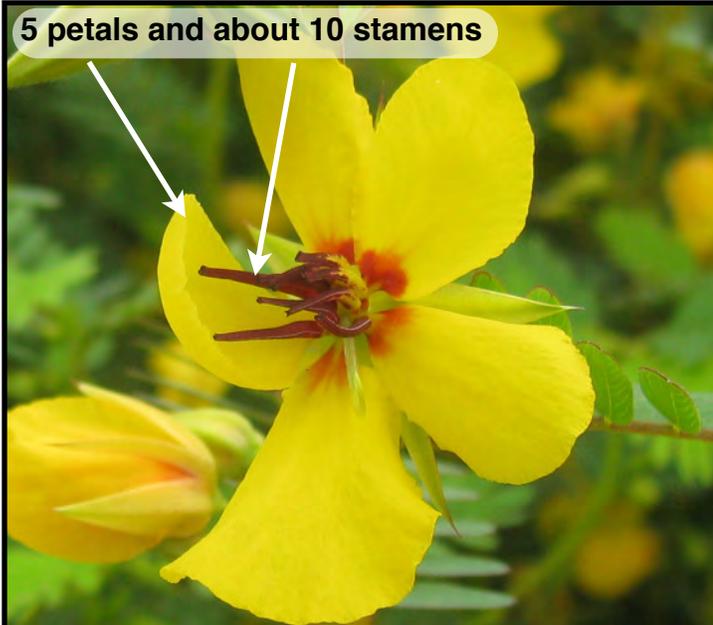
[3] http://www.illinoiswildflowers.info/prairie/plantx/part_peax.htm

[4] http://www.wildflower.org/plants/result.php?id_plant=CHFA2

[5] <https://gobotany.newenglandwild.org/species/chamaecrista/fasciculata/>

Chamaecrista fasciculata

partridge pea

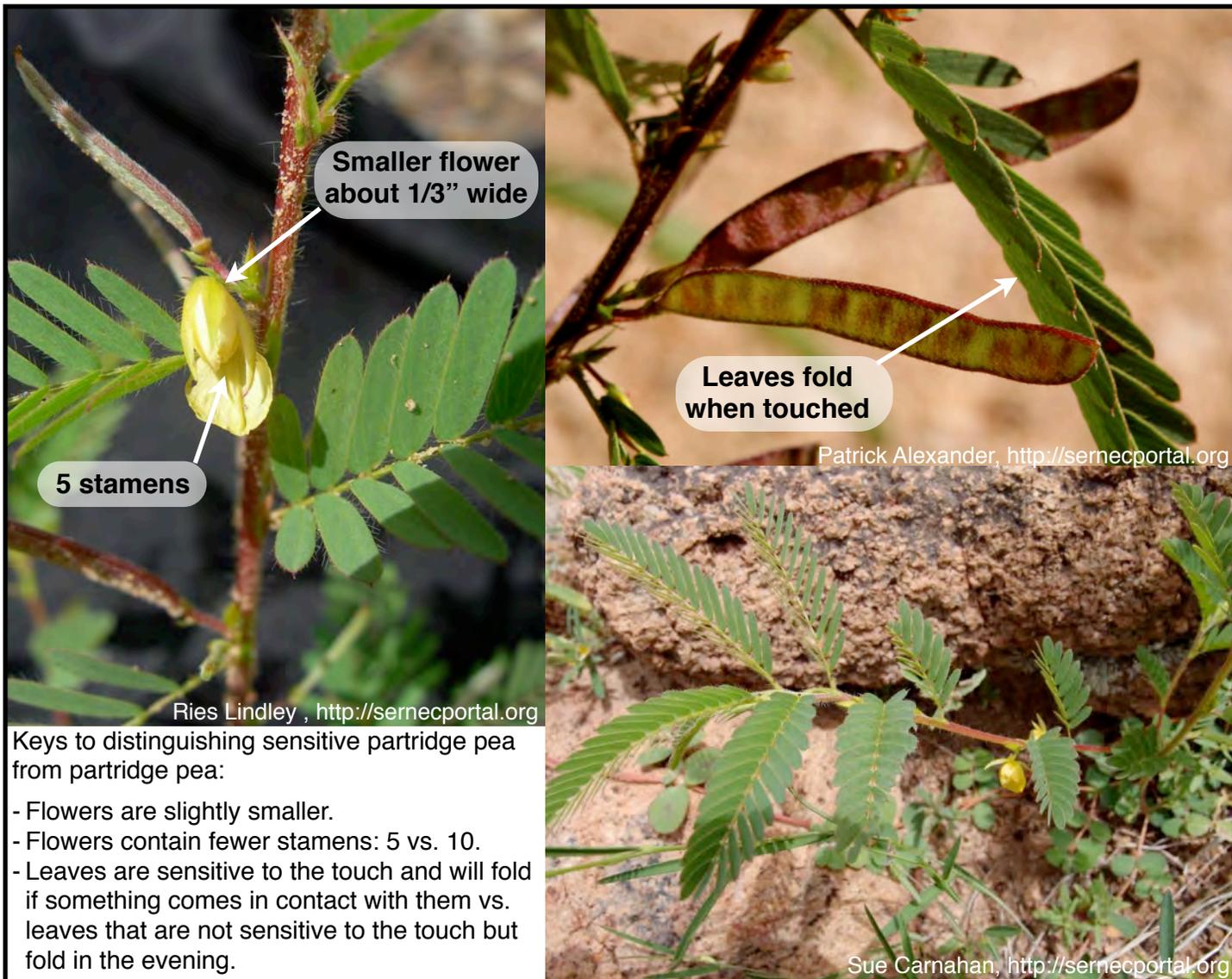


Chamaecrista fasciculata

partridge pea

PARTRIDGE PEA COULD BE CONFUSED WITH:

Chamaecrista nictitans - sensitive partridge pea



Keys to distinguishing sensitive partridge pea from partridge pea:

- Flowers are slightly smaller.
- Flowers contain fewer stamens: 5 vs. 10.
- Leaves are sensitive to the touch and will fold if something comes in contact with them vs. leaves that are not sensitive to the touch but fold in the evening.



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

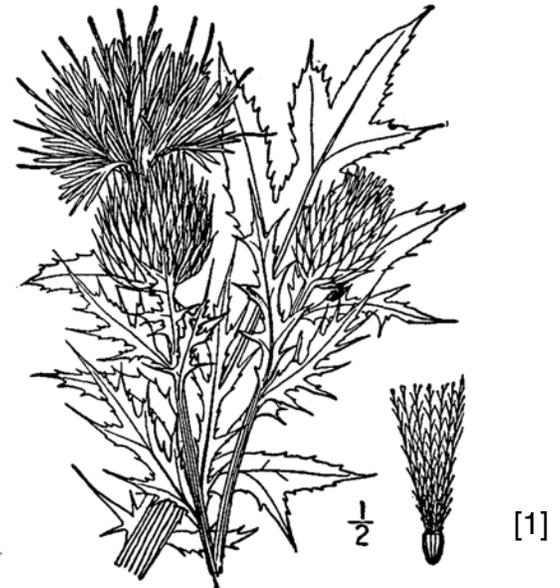
Cirsium discolor

field thistle

Other common names include: pasture thistle



Dan Tenaglia, Missouri Plants

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X	X		

Plant Characteristics:Duration: BiennialType: HerbSize: 2-8' tallLeaf: Alternate; up to 9" long and 3" wide; spiny and pinnately lobed. Upper leaf surfaces green, and the undersides are powdery white with fine hairs.Stem: Light green with white hairs, no spines; forming occasional lateral branches that remain erect.Flower: Upper stems terminate in single, light pink to lavender or occasionally white flower heads spanning about 2" across. Each flower head is made up of disc florets and scale-like overlapping bracts, each bract having a single, slender golden spine.Seed collection**: Late September [2]**What it can be confused with:**

Field thistle can be distinguished from non-native bull thistle (*Cirsium vulgare*) by the white undersides of its leaves. Bull thistles have thick, coarse spines instead of slender, golden spines, and its leaf undersides are green. Field thistle is also not as aggressive as bull thistle. While the flowers of field thistle are similar to tall thistle (*Cirsium altissimum*), also a native, it can be easily differentiated by its deeply pinnately lobed leaves. [3]

Known Pollinators:

Bumble bees, other native bees, flies, sphinx moths, hummingbirds, and butterflies. [3,4]

Larval Host: Painted lady butterflies and several moths. [3,4]

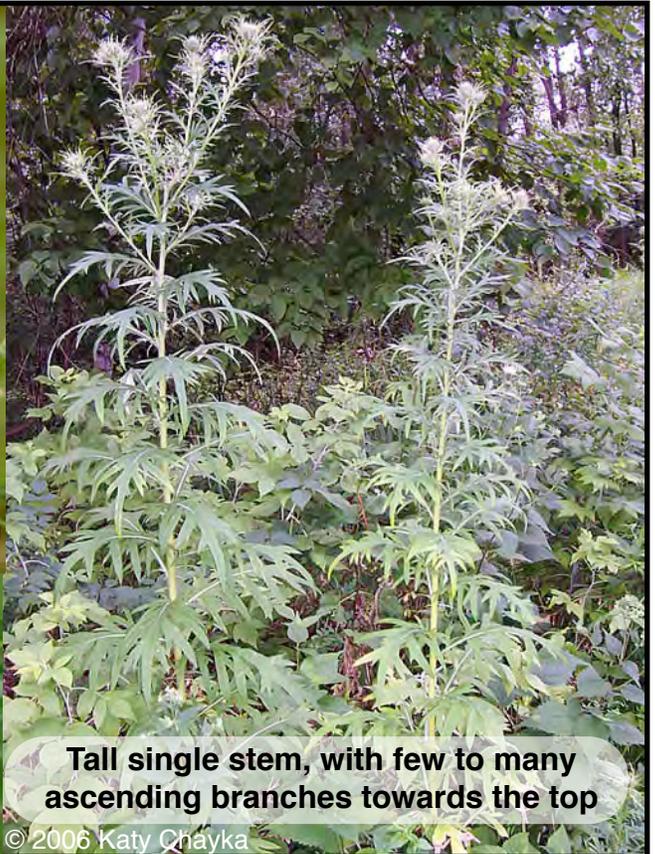
** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 549.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html> [3] https://www.illinoiswildflowers.info/prairie/plantx/ps_thistlex.htm

[4] https://www.wildflower.org/plants/result.php?id_plant=CIDI

Cirsium discolor field thistle



Cirsium discolor

field thistle

FIELD THISTLE COULD BE CONFUSED WITH:

Cirsium vulgare - bull thistle



Key features that distinguish *Cirsium vulgare*:

- Floral bracts curl outward and narrow into sharp points.
- Stems and leaves are covered in hairs and thick spines.
- Underside of the leaf is green and some leaf bases extend down the stem to produce spiny wings.

Cirsium altissimum - tall thistle



Key features that distinguish *Cirsium altissimum*:

- Flowers are very similar and leaf bottoms are covered in dense white hairs like field thistle. Use characteristics below to differentiate *C. altissimum* from *C. discolor*.
- Upper leaves (and some lower) are not lobed and have more of a serrated leaf margin.
- Tend to grow taller than field thistle (up to 10' tall).

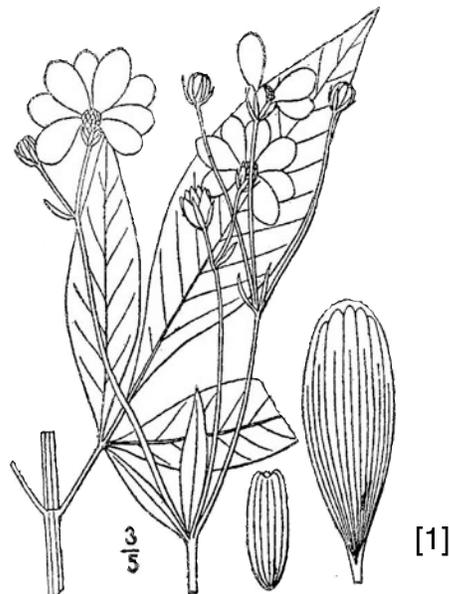


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Coreopsis tripteris

tall coreopsis

Other common names include: tall tickseed and Atlantic coreopsis



Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X	X		

Plant Characteristics:

Duration: Perennial

Type: Herb

Size: 3 - 8' tall

Leaf: Opposite, may occur alternately along uppermost stems; up to 5" long and $\frac{3}{4}$ " wide; compound leaf with 3 or 5 leaflets, smooth leaf margins with small hairs; lateral leaflets are sessile (no leaf stem), while terminal leaflets have petioles (leaf stem). Upper leaf surfaces are medium green, and hairless; lower leaf surfaces are light green, slightly pubescent. Petioles are up to 1½" long.

Stem: Light green, hairless, and sometimes glaucous (a whitish film that rubs off).

Flower: Upper stems terminate in solitary clusters of flowerheads up to 1½-2" wide. Flowering stalks may develop from axils of upper leaves. Each flower consists of 8 ray florets (outer petals) surrounding a head of disk florets. Ray flowers are yellow; Disk florets are 4-5 lobed (petaled), and dark purple to maroon.

Seed collection**: Late September - Mid October

What it can be confused with:

Tall coreopsis' greater height, later bloom period, and flowerheads with dark purple or maroon centers make it readily distinguishable from other *Coreopsis* spp. Most *Coreopsis* spp. flowerheads have yellow centers. Its height can sometimes cause it to be confused with sunflowers (*Helianthus* spp.). Sunflowers, however, have simple leaves as opposed to the tall coreopsis' odd-pinnate leaves. [2]

Known Pollinators:

Bumblebees, native bees, wasps, flies, butterflies, skippers, and the goldenrod soldier beetle. [2,3]

Larval Host: Dimorphic gray wave moth, wavy-lined emerald moth, and common tan wave moth. [2]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

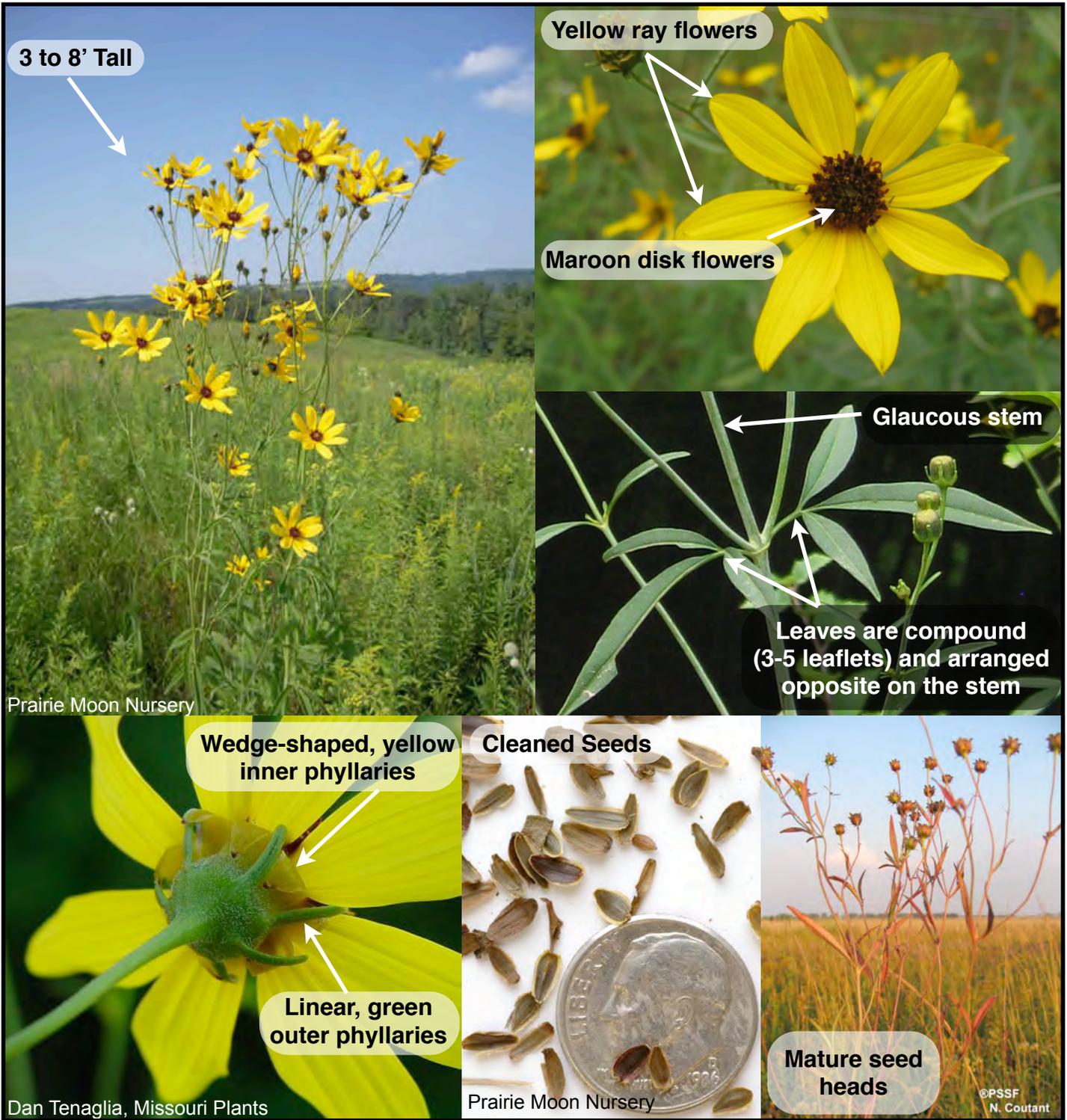
[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 491.

[2] http://www.illinoiswildflowers.info/prairie/plantx/tl_coreopsisx.htm

[3] http://www.wildflower.org/plants/result.php?id_plant=COTR4

Coreopsis tripteris

tall coreopsis



Coreopsis tripteris

tall coreopsis

TALL COREOPSIS COULD BE CONFUSED WITH:

Helianthus spp. - sunflowers



The phyllaries can also be helpful, as sunflowers often have many rows of overlapping green phyllaries.



The best feature to differentiate between tall coreopsis and sunflower species is their leaves: Sunflowers have simple (non-compound leaves).



Coreopsis palmata - prairie coreopsis



The disk flowers of prairie coreopsis (and many other coreopsis species) are yellow, opposed to the deep purple-maroon disk flowers of the tall coreopsis.



Prairie coreopsis is much shorter (1-2.5' tall) and the leaves are lobed rather than compound.



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Echinacea purpurea

purple coneflower

Other common names include: eastern purple coneflower



Amber Barnes



[1]

Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 2-4' tallLeaf: Mostly alternate, sometimes opposite; up to 6" long and 3" wide, becoming smaller higher on the stems; toothed with small hairs, broader at the base and tapering at the apex. Upper leaf surfaces are olive or dark green. Petioles are short and slightly winged. On occasion, the leaves may have a smooth margin (no teeth).Stem: Light green, occasionally branching with small purple streaks and scattered white hairs.Flower: Upper stems terminate in individual daisy-like flowerheads spanning about 2½-4" across on flowering stalks, up to 8" long. Each flowerhead consists of 10-20 ray florets surrounding a large central cone of disk florets. Rays are purple, drooping downward with age, and typically ¼ to ¾" wide; disks flowers are small and yellowish or reddish brown. [2,3]Seed collection**: Mid September - Late October**What it can be confused with:**Purple coneflower is easily identified by its large, showy flowers. It can be distinguished from pale purple coneflower (*Echinacea pallida*) by its broader leaves & ray flowers, bushier habit, and later blooming period. [3]**Note:** While considered common in all other PW states, *Echinacea purpurea* should not be collected in Pennsylvania due to potential change in legal status.**Known Pollinators:**

Bumble bees, other native bees, honey bees, butterflies, and skippers. [3]

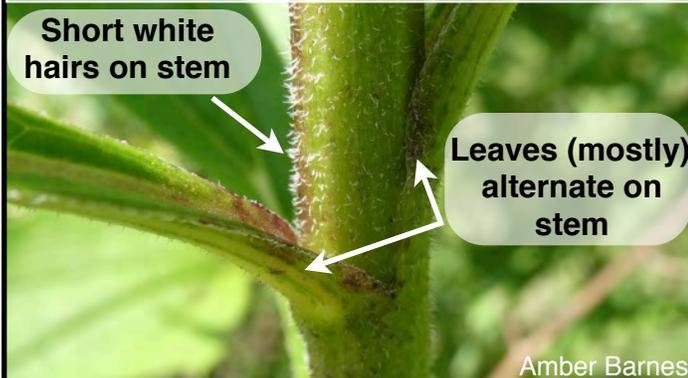
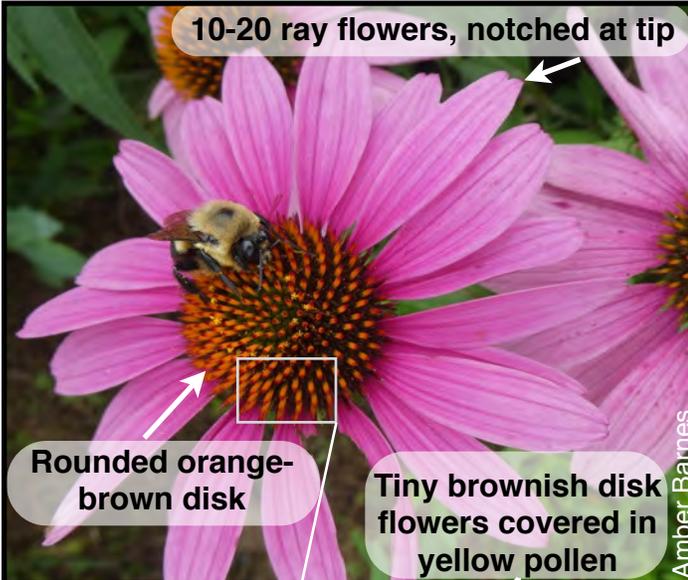
Larval Host: Silvery checkerspot butterflies and blackberry looper, common eupithecia, wavy-lined emerald, and sunflower moths. [3]

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[1] USDA-NRCS PLANTS Database /Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 475.[2] <https://www.minnesotawildflowers.info/flower/eastern-purple-coneflower>[3] http://www.illinoiswildflowers.info/prairie/plantx/pale_coneflowerx.htm

Echinacea purpurea

purple coneflower

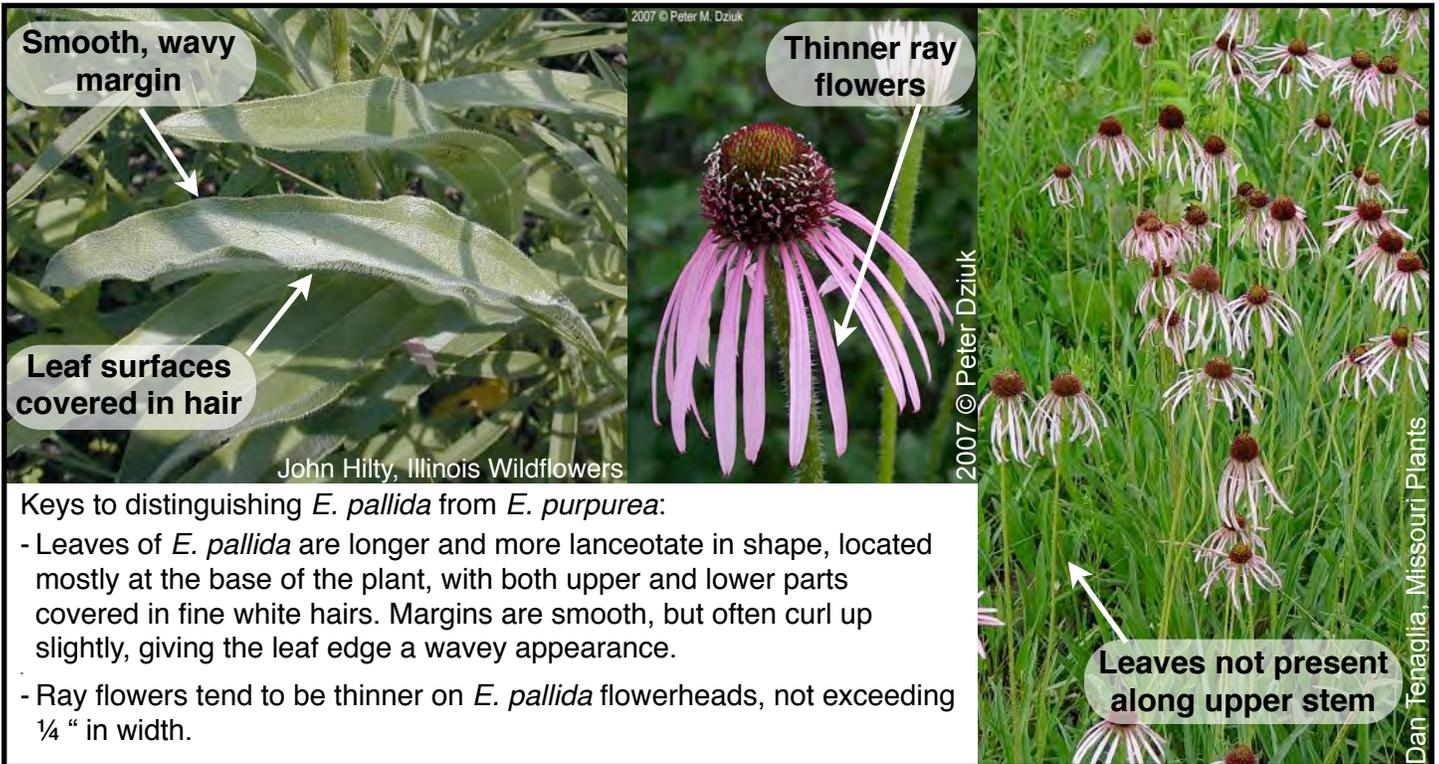


Echinacea purpurea

purple coneflower

PURPLE CONEFLOWER COULD BE CONFUSED WITH:

Echinacea pallida - pale purple coneflower



Keys to distinguishing *E. pallida* from *E. purpurea*:

- Leaves of *E. pallida* are longer and more lanceolate in shape, located mostly at the base of the plant, with both upper and lower parts covered in fine white hairs. Margins are smooth, but often curl up slightly, giving the leaf edge a wavy appearance.
- Ray flowers tend to be thinner on *E. pallida* flowerheads, not exceeding ¼ " in width.

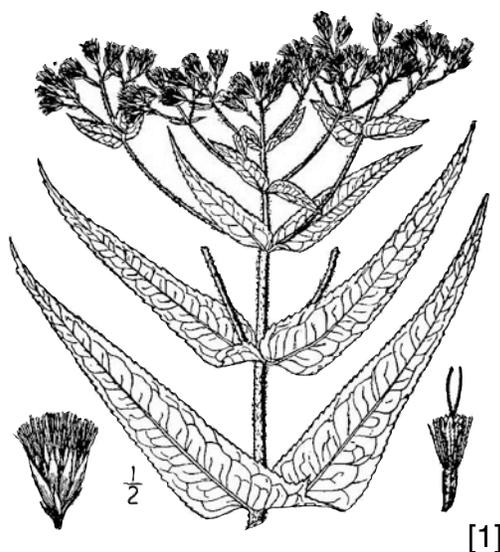


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Eupatorium perfoliatum

common boneset

Other common names include: boneset

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 2-4' tallLeaf: Opposite, serrate, pubescent, light or yellowish green, up to 8" long and 2" across, the leaf bases surround the central stem and merge together.Stem: Covered in long, white hairs.Flower: White, upper stems terminate in clusters of white flower heads, spanning about 2-8" across, each flowerhead is about 1/6" across and consists of about 15 disk florets with no ray florets (outer petals).Seed collection**: Early September - Early October [2]**What it can be confused with:**

Common boneset tolerates flooded conditions better than many other boneset species. It can be distinguished from these other species by the perfoliate leaves that surround the central stem. The other species have opposite leaves that are sessile (no leaf stem) or have distinct petioles (leaf stem). All of these species have spreading clusters of white flowers with a similar appearance. [3]

Known Pollinators:

Bees, flies, wasps, butterflies, and beetles. [3,4]

Larval Host: Many species of moth feed on various parts of the plant. [3]

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[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 361.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] http://www.illinoiswildflowers.info/prairie/plantx/cm_boneset.htm

[4] https://www.wildflower.org/plants/result.php?id_plant=EUPE3

Eupatorium perfoliatum

common boneset



Dan Tenaglia, Missouri Plants

Dan Tenaglia, Missouri Plants

Stems are covered in long, white hairs



Dan Tenaglia, Missouri Plants

Leaves are opposite and perfoliate, making stem appear to grow through one big leaf



Dan Tenaglia, Missouri Plants

Seeds are wind dispersed



The Native Plant Nursery



Composite flower heads are made up of many white disk flowers with no ray flowers (outer petals)

Eupatorium perfoliatum

common boneset

COMMON BONESET COULD BE CONFUSED WITH:

Brickellia eupatorioides - false boneset

Flowers and seeds of false boneset look similar to common boneset, but the leaves are clearly different in structure and arrangement



Leaves are not perfoliate, but sessile (attaching directly to stem with no petiole) and alternate along the stem



Stem has fine, small hairs

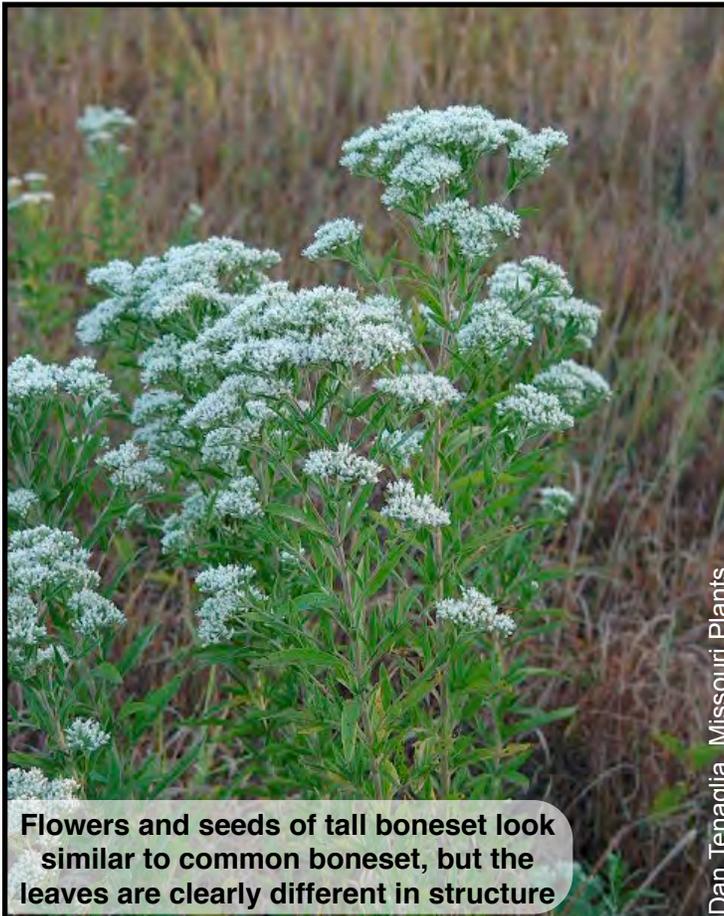
John Hilty, Illinois Wildflowers

Eupatorium perfoliatum

common boneset

COMMON BONESET COULD BE CONFUSED WITH:

Eupatorium altissimum - tall boneset



Flowers and seeds of tall boneset look similar to common boneset, but the leaves are clearly different in structure



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Euthamia graminifolia

grass-leaved goldenrod

Other common names include: flat-top goldenrod



[1]

Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 2-3½' tallLeaf: Alternate; up to 4" long and 1/8 to 1/2" wide; toothless, long and narrow. White hairs are sometimes found around the central vein on the lower leaf surface and near the leaf base. Larger leaves have 3 conspicuous veins and sometimes 2 additional obscure veins.Stem: Slender with lines of fine white hairs. Stems are unbranched on the lower portion, but can have few to many leafy stems in the upper part of the plant, giving it a bushier appearance at the top.Flower: Upper stems terminate in yellow clusters of 20-35 composite flowers. Each flower is about 1/8" across, consisting of 20-35 florets. The clusters are usually flat-headed, but can be rounder in appearance.Seed collection**: Mid October [2]**What it can be confused with:**

Grass-leaved goldenrod is easily distinguished from other goldenrods by its flat-top, smaller flowers, and narrower leaves. Plains grass-leaved goldenrod (*Euthamia gymnospermoides*) also has narrow leaves, but it only has 1 conspicuous vein in even the largest leaves. In addition, its stems are hairless, and it only has 14-20 florets. Grass-leaved goldenrod is usually less branching and prefers more soggy habitats. [3, 4]

Known Pollinators:

Native bees, flies, wasps, butterflies, moths, and beetles. [3]

Larval Host: Some moths. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 398.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] https://www.illinoiswildflowers.info/prairie/plantx/gr_goldenrod.htm

[4] <https://www.minnesotawildflowers.info/flower/grass-leaved-goldenrod>

Euthamia graminifolia

grass-leaved goldenrod

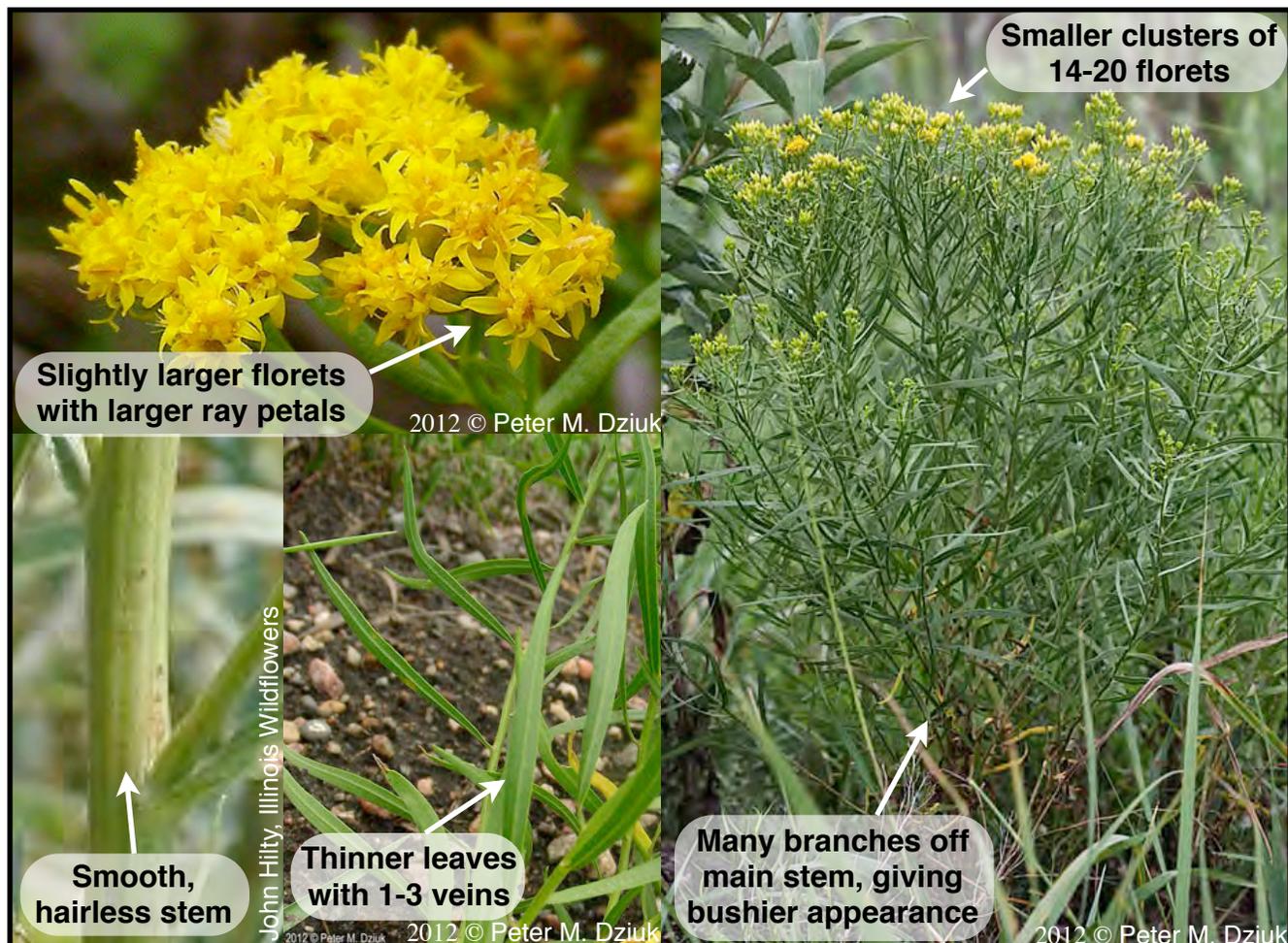


Euthamia graminifolia

grass-leaved goldenrod

GRASS-LEAVED GOLDENROD COULD BE CONFUSED WITH:

Euthamia gymnospermoides - plains grass-leaved goldenrod



Key features that distinguish *Euthamia gymnospermoides*:

- Flowers: Slightly larger flowers arranged in smaller clusters. 14-20 florets per flowerhead (less than the 20-25 found on *E. graminifolia*) with larger ray petals.
- Leaves are thinner (1/10 to 2/10" wide) with one prominent midvein, which on larger leaves can have 1-2 obscure veins. The leaves of *E. graminifolia* are wider (1/8 to 1/2" wide) with 3-5 veins.
- Stems are hairless and have many branches, giving a bushier appearance.



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Eutrochium purpureum

sweet joe pye weed

Other common names include: purple joe-pye weed, sweet-scented joe-pye weed

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 3-7' tallLeaf: Whorled along the stem, with 3-5 leaves per whorl, though usually 4; about 6" long and 3½" wide; toothed on a short stalk, broader in the middle and toward the base and tapering to a point at the apex. Upper leaf surfaces are dull green, lower surfaces are pale green and variously hairy. May smell like vanilla.Stem: Light green and slightly swollen and purple around leaf whorls. Mostly hairless, though top flowering branches may be finely pubescent. Stems are solid.Flower: Central stem terminates in a dome-shaped inflorescence of one or more panicles of compound flowers. Each flower consists of 5-8 whitish-pink to purplish-pink, tubular disk florets with 5 teeth along their upper rims. Each flower has a series of overlapping, pale pink bracts at the base. Each floret has a strongly exerted white divided style.Seed collection**: Mid-Late September [2]**What it can be confused with:**Sweet joe pye weed is found in more shady and dry habitats than other joe pye species (*Eutrochium* spp.). Spotted joe-pye weed (*Eutrochium maculatum*) has purple-spotted stems or purple stems with dark hairs and 4-5 leaves per whorl, and hollow-stemmed joe pye weed (*Eutrochium fistulosum*) has hollow stems and 4-7 leaves per whorl, unlike the solid, predominantly green stems and 3-4 leaved whorls of sweet joe pye weed. [4]**Known Pollinators:**

Bumble bees, other native bees, butterflies, skippers, and moths. [4]

Larval Host: European borer, common plume, red groundling, three-lined flower, common pug, and ruby tiger moths. [3,4]

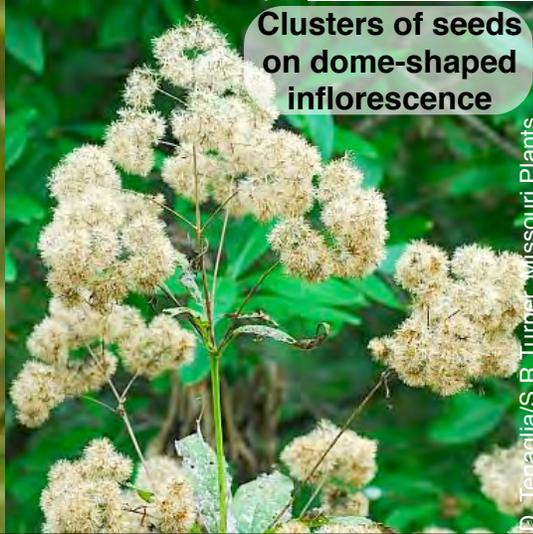
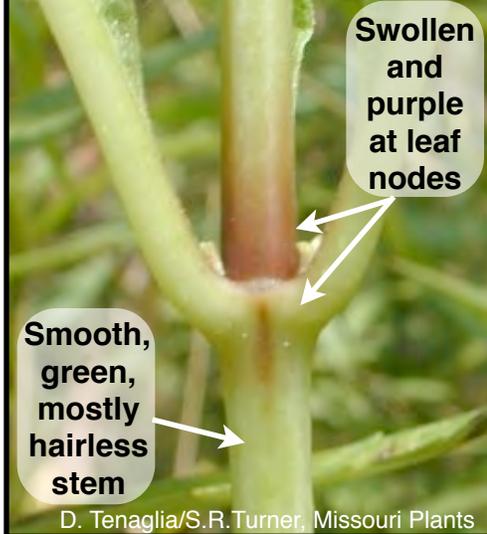
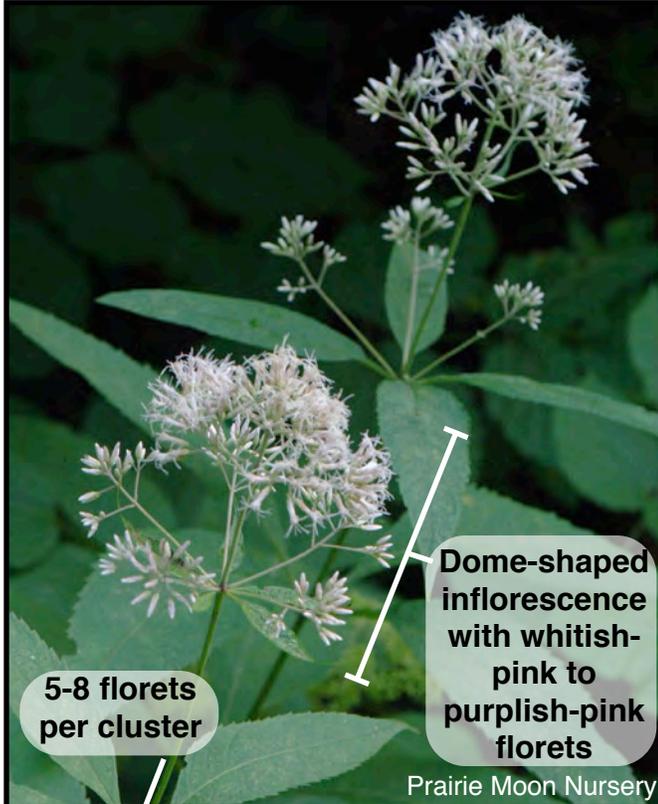
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[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 357.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>[3] https://www.wildflower.org/plants/result.php?id_plant=EUPU21[4] https://www.illinoiswildflowers.info/savanna/plants/sw_joepye.htm

Eutrochium purpureum

sweet joe pye weed

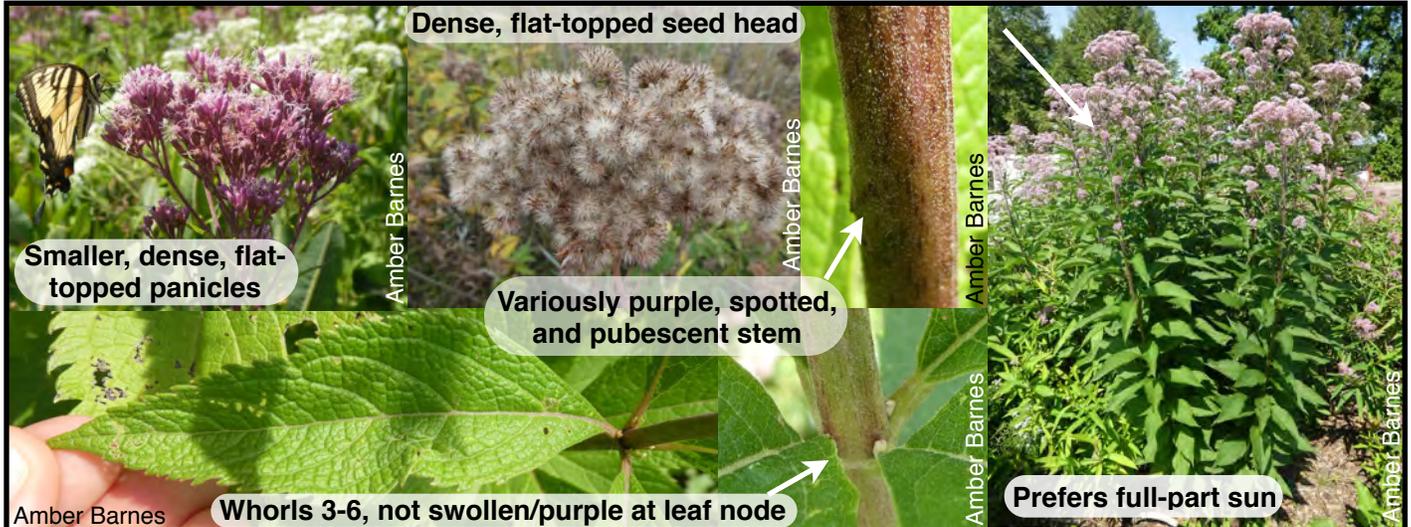


Eutrochium purpureum

sweet joe pye weed

SWEET JOE PYE WEED COULD BE CONFUSED WITH:

Eutrochium maculatum - spotted joe pye weed



Amber Barnes

Whorls 3-6, not swollen/purple at leaf node

Prefers full-part sun

Key features that distinguish *Eutrochium maculatum*:

- Flat-headed panicles of flowerheads that tend to be more vibrant shade of pink/purple and have 8-20 disk florets. Panicles are typically 3-6" wide.
- Stem is purple or has purple spots, is often pubescent, and has a solid core upon cross-section.
- Leaves are whorled in groups of 3-6, but usually 4-5.
- Preference for full or partial sun and moist soils and tends to be shorter than *E. purpureum*.

Eutrochium fistulosa - hollow-stemmed joe pye weed



Key features that distinguish *Eutrochium fistulosa*:

- Leaves are arranged in whorls of 4-7, but usually 5-6, on petioles up to 1/2" long.
- Stems vary from solid purple to purplish-green, are hairless, typically glaucous (have a white waxy film that easily rubs off), and are hollow.
- Large dome-shaped flower panicles up to 1-1.5' wide with 5-7 disk florets.
- Prefers full or partial sun and wet to moist soils and ranges from 3-9' tall.



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Geranium maculatum

wild geranium

Other common names include: spotted geranium, cranesbill



[1]

Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			X	X	X	X					

Plant Characteristics:Duration: PerennialType: HerbSize: 1-2½' tallLeaf: Opposite; cluster of basal leaves and lower opposite leaves are similar; up to 5" long and 5" wide, with 5 palmate lobes; some secondary lobes and coarse teeth. Upper leaves are smaller in size, with only 3 lobes. Upper leaf surfaces are medium green with fine hairs. Petioles are long, light green, and hairy.Stem: Stems develop directly from the creeping rootstock; light green to reddish brown, hairy.Flower: Clusters of 2-5 pale purplish-pink flowers grow on flowering stalks. Stalks are much like the stems; up to 6" long. Each flower is about 1-1¼" across, consisting of 5 rounded petals, 5 green sepals, 10 stamens with yellow anthers, and a single pistil.Seed collection**: Mid-Late June [2]**What it can be confused with:**

Wild geranium has large flowers, making it showier than most other native geraniums, such as the Carolina cranesbill (*Geranium carolinianum*). Wild geranium can also be differentiated from long-stalked geranium (*Geranium sanguineum*), a European species, because the flowers of long-stalked geranium have notched petals and its leaves are smaller. Early in the season, *G. maculatum* leaves could initially be mistaken for those of Canada anemone (*Anemone canadensis*) or a black snakeroot (*Sanicula* spp.), but upon closer inspection are easily differentiated, and the flowers and seeds of wild geranium are also very distinct from these spp. [3,5]

Known Pollinators:

Bumble bees, other native bees, flies, butterflies, and skippers. [3,4]

Larval Host: Bridled arches, geranium budworm, tobacco budworm, and omnivorous leafroller moths [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 2: 427.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

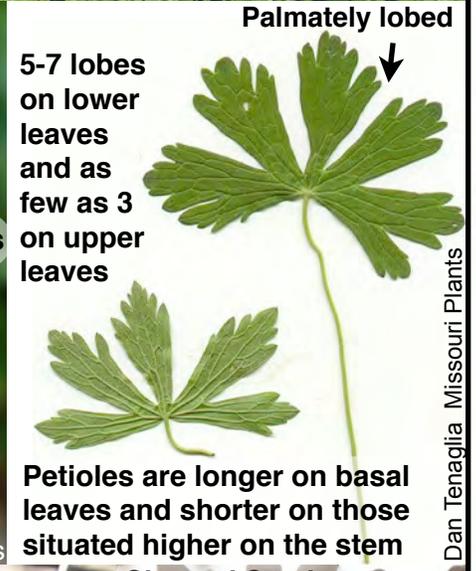
[3] https://www.illinoiswildflowers.info/woodland/plants/wild_geranium.htm

[4] https://www.wildflower.org/plants/result.php?id_plant=GEMA

[5] <https://www.minnesotawildflowers.info/flower/wild-geranium>

Geranium maculatum

wild geranium

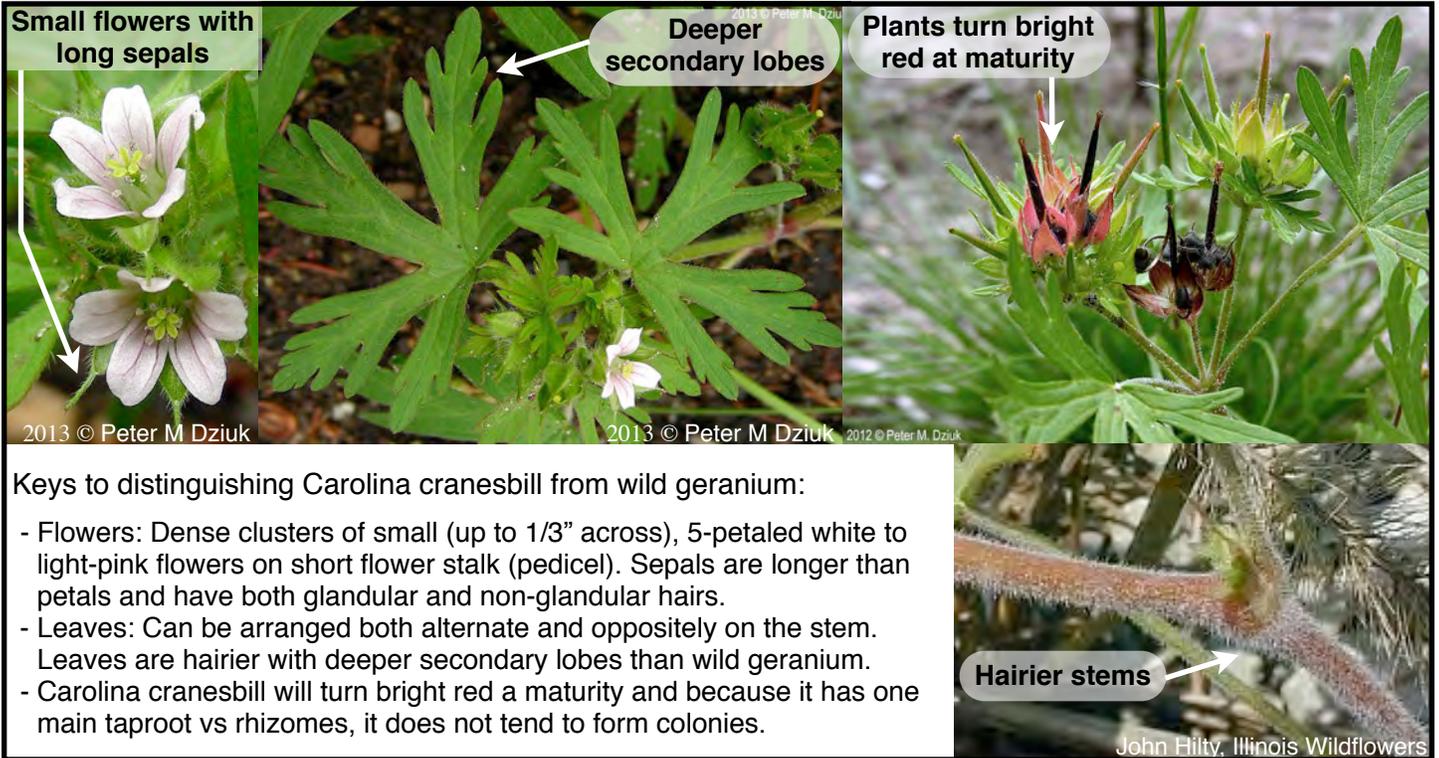


Geranium maculatum

wild geranium

WILD GERANIUM COULD BE CONFUSED WITH:

Geranium carolinianum - Carolina cranesbill



Geranium sanguineum - long-stalked geranium (introduced spp.)



Keys to distinguishing long-stalked geranium from wild geranium:

- Flowers: 1.2-1.6" wide showy bright magenta (occasionally white) flowers, with shallowly notched petal tips.
- Leaves: Not much larger than the flowers - considerably smaller than that of wild geranium.

Geranium maculatum

wild geranium

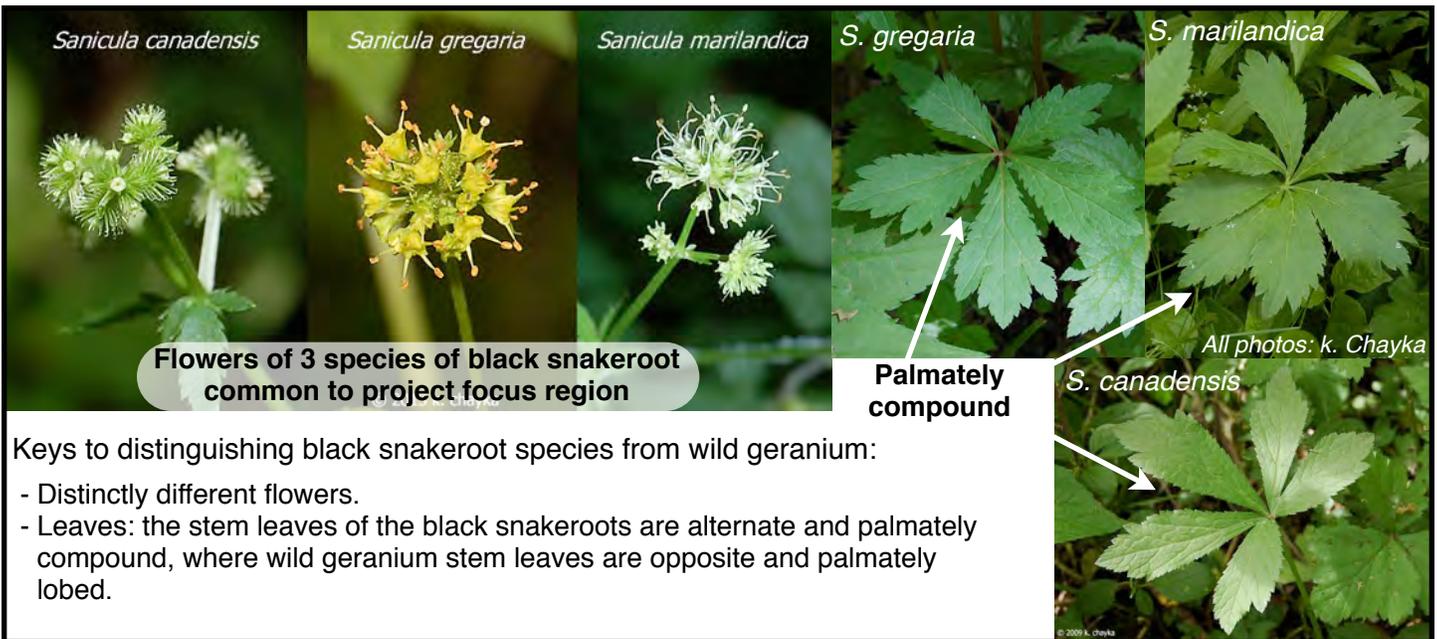
Anemone canadensis - Canada anemone



Keys to distinguishing Canada anemone from wild geranium:

- Flowers: 5-petaled white flowers with a dense ring of yellow-tipped stamens surrounding a green center.
- Leaves: Canada anemone leaves are more sharply toothed/pointed and arranged as a whorl of 3 sessile, mostly 3-lobed, leaves on the upper stem at the base of the flower stalk.
- Seed and seed head are clearly distinct from that of wild geranium.

Sanicula spp. - black snakeroots



Keys to distinguishing black snakeroot species from wild geranium:

- Distinctly different flowers.
- Leaves: the stem leaves of the black snakeroots are alternate and palmately compound, where wild geranium stem leaves are opposite and palmately lobed.



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Heliopsis helianthoides

oxeye sunflower

Other common names include: smooth oxeye, common oxeye, sunflower heliopsis, & false sunflower

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 3-5' tallLeaf: Opposite, toothed, 2½-5" long and 1-3½" across, medium to dark green, pubescent.Stem: Light green to reddish green, variably pubescent or hairy, and terete to slightly angular.Flower: Yellow, 1½-3" across, 8-20 ray florets surround numerous disk florets.Seed collection**: Late September - October**What it can be confused with:**

Heliopsis helianthoides is not considered a true sunflower (*Helianthus* spp.) because both the ray and disk florets of its flowerheads can produce seeds. In contrast, only the disk florets of true sunflowers can produce seeds. Both of these species are relatively large and robust plants that produce showy flowerheads with yellow rays, and they prefer habitats that are at least partly sunny. Oxeye sunflower resembles many sunflower species, particularly those that are found in and around woodlands. In addition to the difference in the fertility of their florets, oxeye sunflower can be distinguished by its more erect flowerheads, by the rather stout and blunt-tipped phyllaries (sepal-like bracts) on its flowerheads, and by the arrangement of its outer phyllaries in a single series. In contrast, most sunflower species have flowerheads that nod sideways, their phyllaries are either more slender (linear-lanceolate in shape) or they are triangular with acute tips, and they have several overlapping series of outer phyllaries. [2]

Known Pollinators:

Hummingbirds, honey bees, native bees, flies, wasps, butterflies, and beetles. [2,3]

Larval Host: Rigid sunflower borer moth and tischeriid moth. [2]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

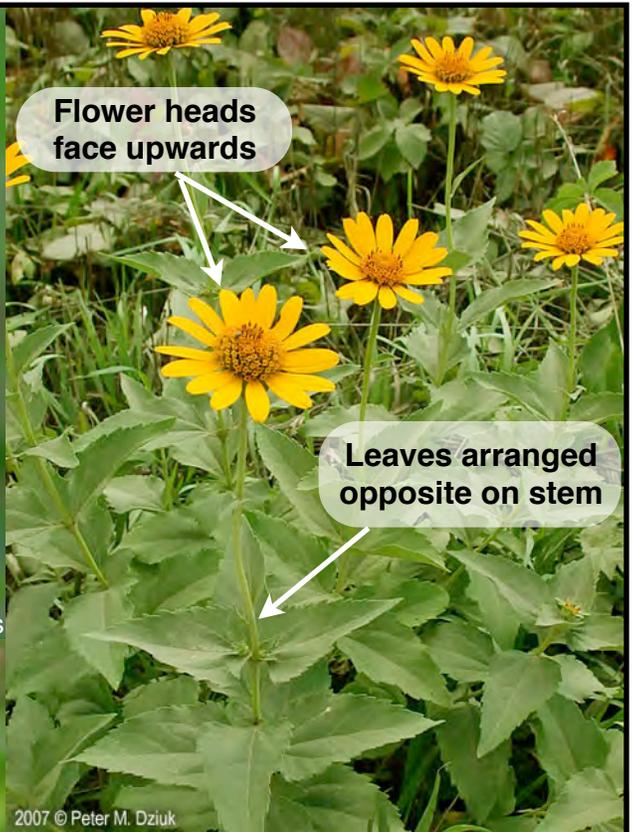
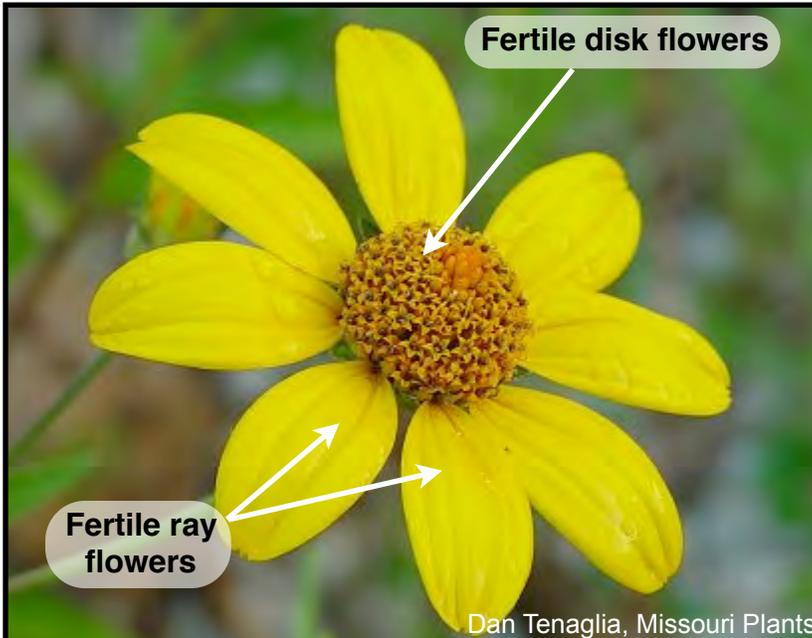
[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 467.

[2] http://www.illinoiswildflowers.info/prairie/plantx/fs_sunflowerx.htm

[3] https://www.wildflower.org/plants/result.php?id_plant=HEHE5

Heliopsis helianthoides

oxeye sunflower



Heliopsis helianthoides

oxeye sunflower

OXEYE SUNFLOWER COULD BE CONFUSED WITH:

Helianthus grosseserratus - sawtooth sunflower



Dan Tenaglia, Missouri Plants



Dan Tenaglia, Missouri Plants



Dan Tenaglia, Missouri Plants

- Glaucous stem.
- Long, slender, multilayered phyllaries (bracts).
- Longer, thinner, coarsely toothed leaves.
- Flower heads tend to nod to the side.



Dan Tenaglia, Missouri Plants

Helianthus hirsutus - hairy sunflower



Dan Tenaglia, Missouri Plants

- Stem is green to reddish purple with small hairs.
- Lanceolate, multilayered phyllaries (bracts).
- Lanceolate, lightly toothed leaves.
- Flower heads tend to nod to the side



Dan Tenaglia, Missouri Plants



John Hilty, Illinois Wildflowers

Heliopsis helianthoides

oxeye sunflower

OXEYE SUNFLOWER COULD BE CONFUSED WITH:

Helianthus tuberosus - Jerusalem artichoke



- The stem is green or reddish and covered with stiff hairs, giving it a rough feel.
- Wider, wedge-shaped, multilayered phyllaries (bracts).
- Leaf edges are serrated to nearly toothless.
- Attachment is opposite but may be alternate near the top of the plant.
- Flower heads tend to nod to the side.



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Liatris aspera

tall blazing star

Other common names include: rough blazing star, tall gayfeather, tall liatris, rough gayfeather, rough liatris, button snakeroot



[1]

Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X	X		

Plant Characteristics:

Duration: Perennial

Type: Herb

Size: 2-5' tall

Leaf: Alternate, but may appear whorled because they are crowded together; towards the base, they are up to 12" long and 1" wide, becoming shorter and narrower up the stem; toothless and slightly hairy, very narrow. Leaf surfaces are dull green or bluish-green with a prominent central vein.

Stem: Unbranching; green or dark red, having short, stiff hairs.

Flower: Central stem terminates in an erect spike of pink or purplish-pink flowers; about ½-1½' in length.

Flowers grow in buttons about 1" across, with 25-40 disk flowers, each consisting of 5 lobes that spread out from the corolla tube and a long, curly, exerted style. No scent. Flowers begin to bloom at the top of the stalk downward as the season progresses.

Seed collection**: Mid September-Early October [2]

What it can be confused with:

Tall blazing star prefers drier growing locations than other blazing stars and blooms later in the year. It can also be distinguished from other blazing stars by the large size of its buttons of flowers. Floral bracts are also a key characteristic for differentiating various *Liatris* spp. *Liatris aspera* has rounded bracts; the edges fold inward and are jagged. The bract color is green or tinged with purple. [3,5]

Note: While considered common in all other PW states, *Liatris aspera* **should not be collected in Pennsylvania**

Known Pollinators:

Bumble bees, other native bees, honey bees, butterflies, skippers, and bee flies. [3,4]

Larval Host: Glorious flower moths. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] http://www.efloras.org/object_page.aspx?object_id=57573&flora_id=1

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

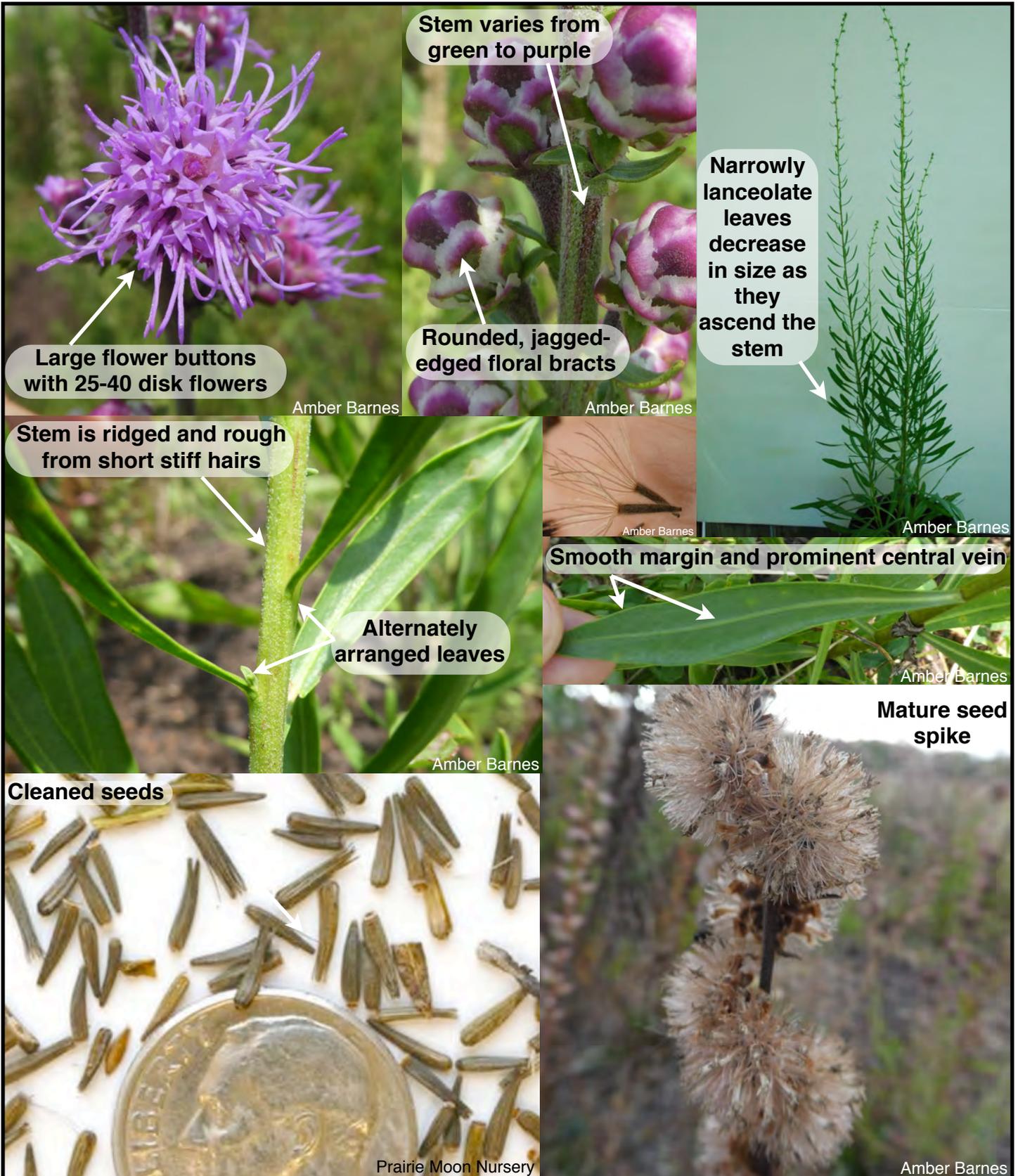
[3] https://www.illinoiswildflowers.info/prairie/plantx/rgh_blazingstarx.htm

[4] https://www.wildflower.org/plants/result.php?id_plant=LIAS

[5] <https://www.minnesotawildflowers.info/flower/rough-blazing-star>

Liatris aspera

tall blazing star



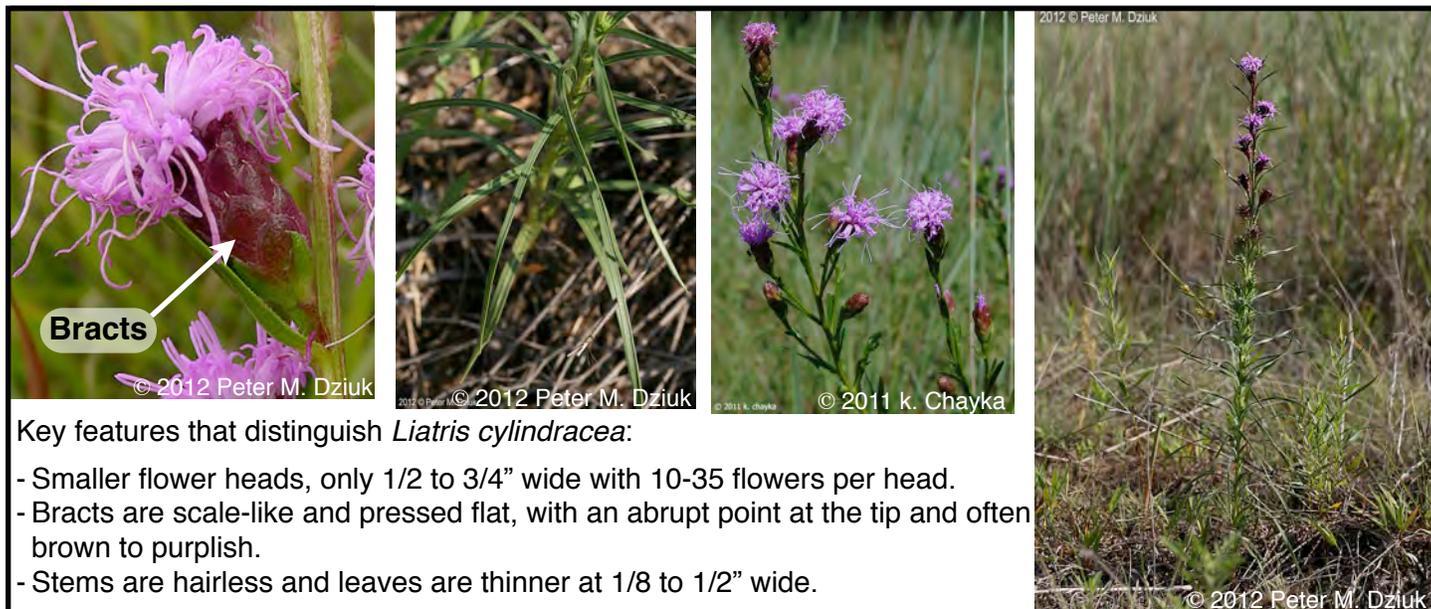
Liatrix aspera

tall blazing star

TALL BLAZING STAR COULD BE CONFUSED WITH:

Liatrix spicata - dense blazing star (see separate plant profile for key features)

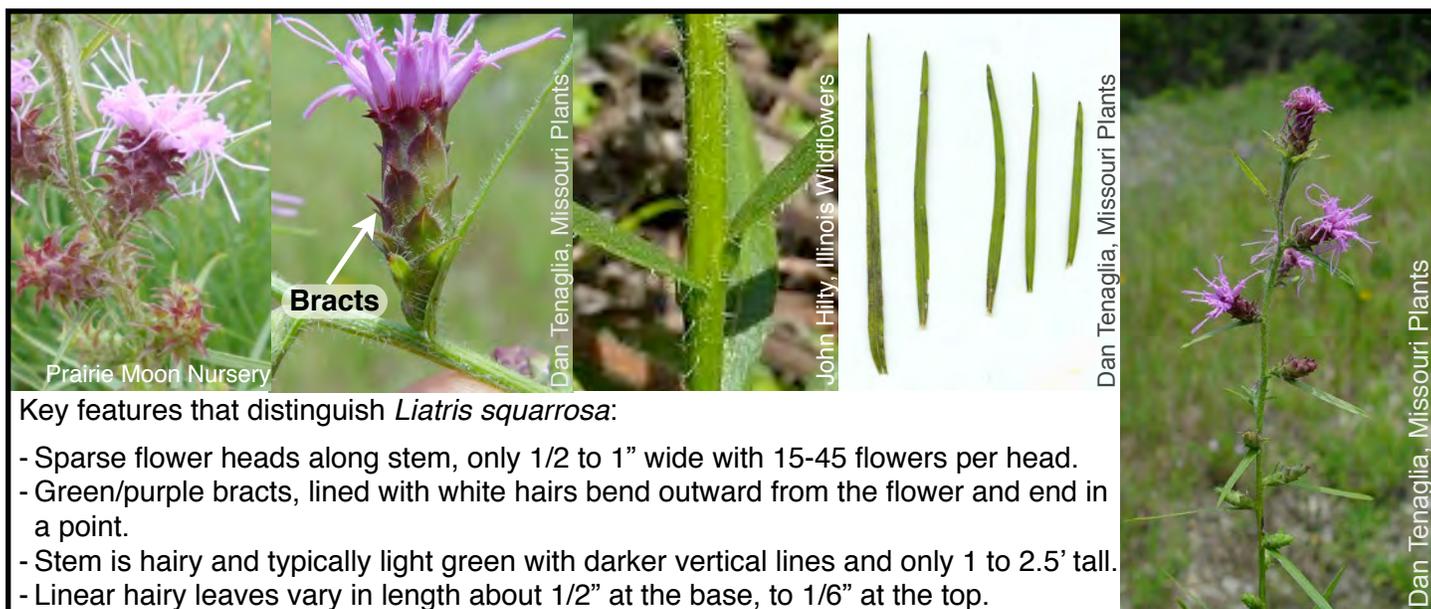
Liatrix cylindracea - cylindric blazing star



Key features that distinguish *Liatrix cylindracea*:

- Smaller flower heads, only 1/2 to 3/4" wide with 10-35 flowers per head.
- Bracts are scale-like and pressed flat, with an abrupt point at the tip and often brown to purplish.
- Stems are hairless and leaves are thinner at 1/8 to 1/2" wide.

Liatrix squarrosa - scaly blazing star



Key features that distinguish *Liatrix squarrosa*:

- Sparse flower heads along stem, only 1/2 to 1" wide with 15-45 flowers per head.
- Green/purple bracts, lined with white hairs bend outward from the flower and end in a point.
- Stem is hairy and typically light green with darker vertical lines and only 1 to 2.5' tall.
- Linear hairy leaves vary in length about 1/2" at the base, to 1/6" at the top.

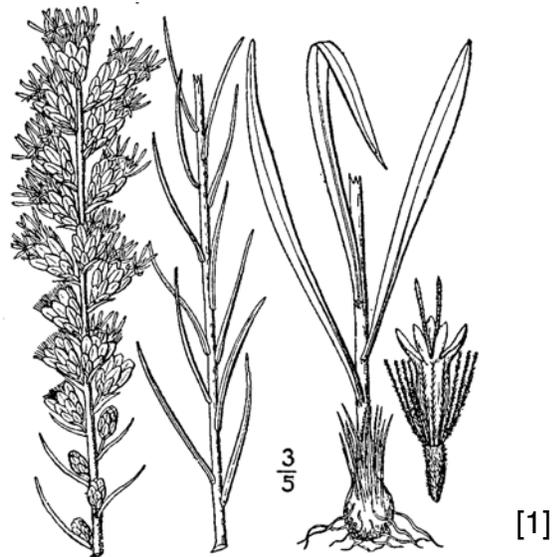


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Liatris spicata

dense blazing star

Other common names include: marsh blazingstar, dense gayfeather, dense liatris, marsh gayfeather, marsh liatris

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 2-5' tallLeaf: Alternate; up to 10" long and 1/3" wide, becoming smaller up the stem, appearing whorled because of their dense distribution; hairless to sparsely hairy and toothless, narrow, having a distinct central vein. Both upper and lower leaf surfaces are light to medium green.Stem: Light green to purplish green, round or slightly ridged, and hairless to sparsely hairy.Flower: Central stem terminates in a pink to purplish-pink spike of flowers, about 4-18" in length. Each flower is about 1/3" across, consisting of 4-10 disk florets and no ray florets. The corolla of each floret is divided in 5 lobes and has a strongly exerted, white to light pink, divided style. Green to purple, overlapping, oval shaped bracts are appressed at the base of each flowerhead.Seed collection**: Mid October [2]**What it can be confused with:**

Dense blazing star is distinctive from other blazing stars because others are typically shorter in height or have larger flower heads with more disk florets per flower. It also prefers wetter habitats than most others. Prairie blazing star (*Liatris pycnostachya*) most closely resembles dense blazing star, but its bracts are strongly recurved instead of appressed together. [3]

Known Pollinators:

Bumble bees, other native bees, butterflies, skippers, and hummingbirds. [3,4]

Larval Host: *Liatris* flower and *Liatris* borer moths. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

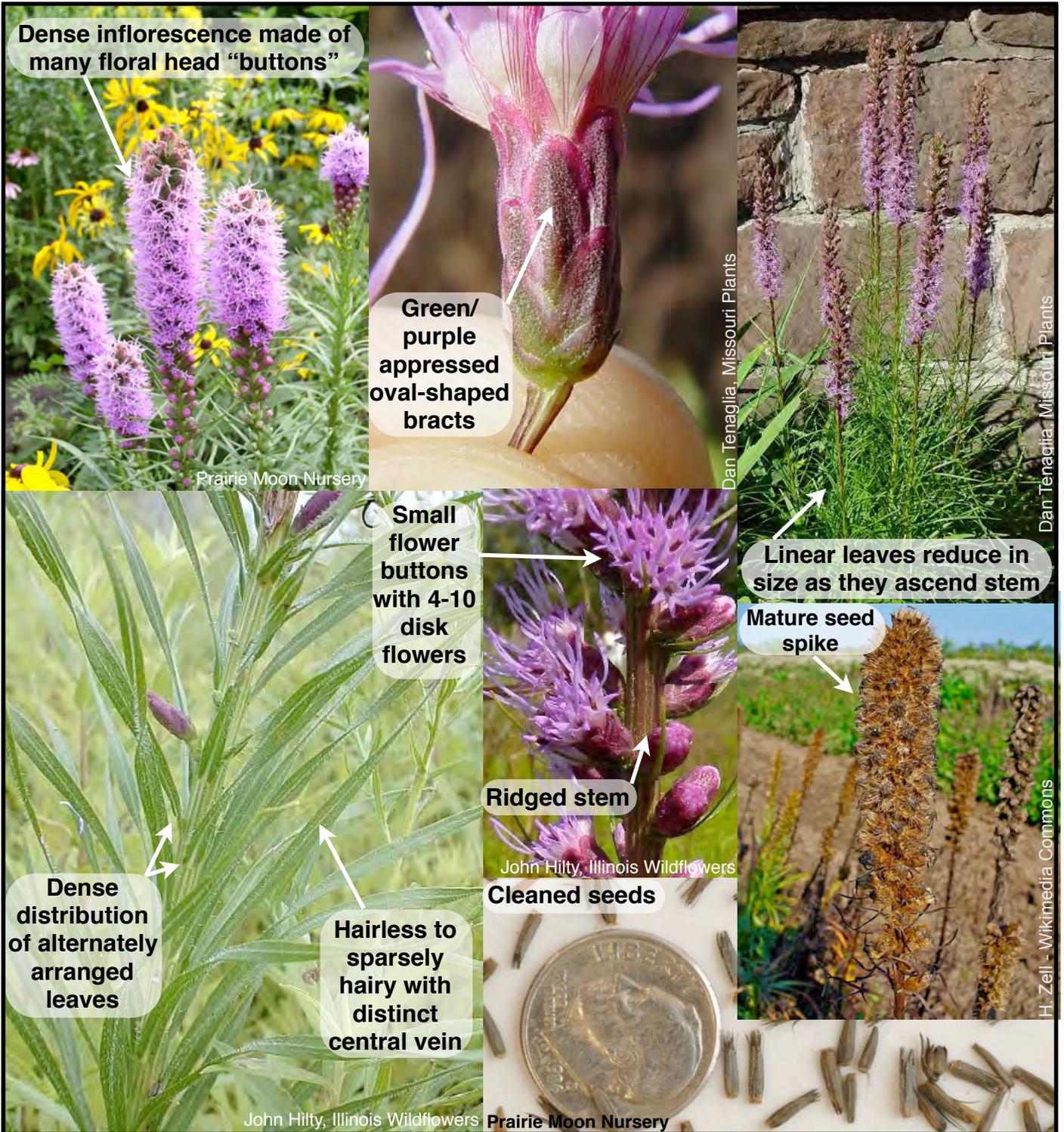
[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 367.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html> [3] https://www.illinoiswildflowers.info/wetland/plants/msh_blazingstar.htm

[4] https://www.wildflower.org/plants/result.php?id_plant=LISP

Liatris spicata

dense blazing star



Liatrix spicata

dense blazing star

DENSE BLAZING STAR COULD BE CONFUSED WITH:

Liatrix aspera - tall blazing star (see separate plant profile for key features)

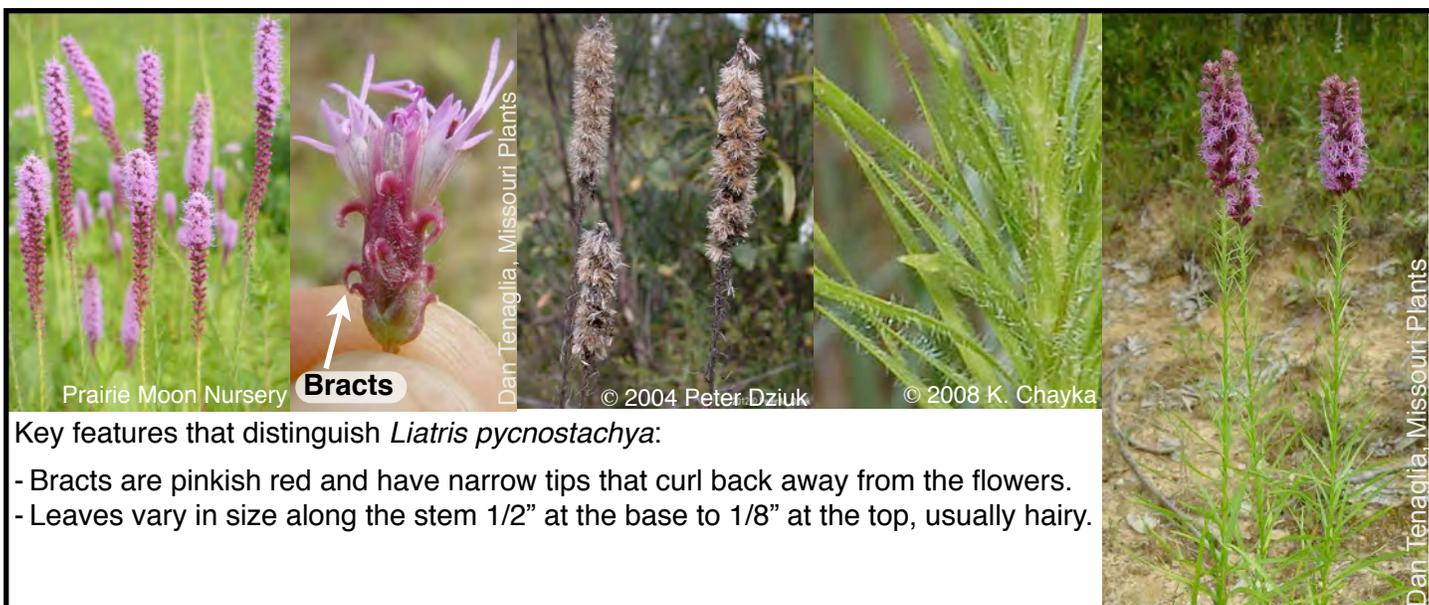
Liatrix cylindracea - cylindric blazing star



Key features that distinguish *Liatrix cylindracea*:

- Larger flower heads, 1/2 to 3/4" wide with 10-35 flowers per head.
- Bracts are scale-like and pressed flat, with an abrupt point at the tip and often brown to purplish.
- Stems are hairless and leaves are thin at 1/8 to 1/2" wide.

Liatrix pycnostachya - prairie blazing star



Key features that distinguish *Liatrix pycnostachya*:

- Bracts are pinkish red and have narrow tips that curl back away from the flowers.
- Leaves vary in size along the stem 1/2" at the base to 1/8" at the top, usually hairy.

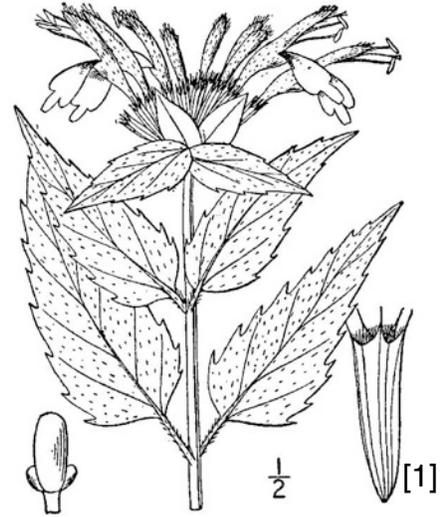


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Monarda fistulosa

wild bergamot

Other common names include: beebalm, horsemint, and mint-leaf bea-balm

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 2-5' tallLeaf: Opposite, toothed, up to 4" long and 2" across, vary in color from light green to dark green-sometimes with yellow or red tints.Stem: The light green stems are square-shaped and hairless.Flower: Lilac or pink, flower heads are 1-3" across, each flower is about 1" long, with an irregular shape.Seed Collection**: Mid September - October**What it can be confused with:**

Wild bergamot can be distinguished from other *Monarda* spp. by the color of its flowers – the petals of its flowers are solid pink or lavender. Other species have flowers with red, purple, or white petals, or they have dark purple dots on the lower lips of their petals. [2]

Known Pollinators:

Bees, hummingbirds, butterflies, and moths. [3]

Larval Hosts:*Sphinx eremitus* (hermit sphinx moth) and *Agriopodes teratophora* (gray marvel moth) feed on the foliage. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

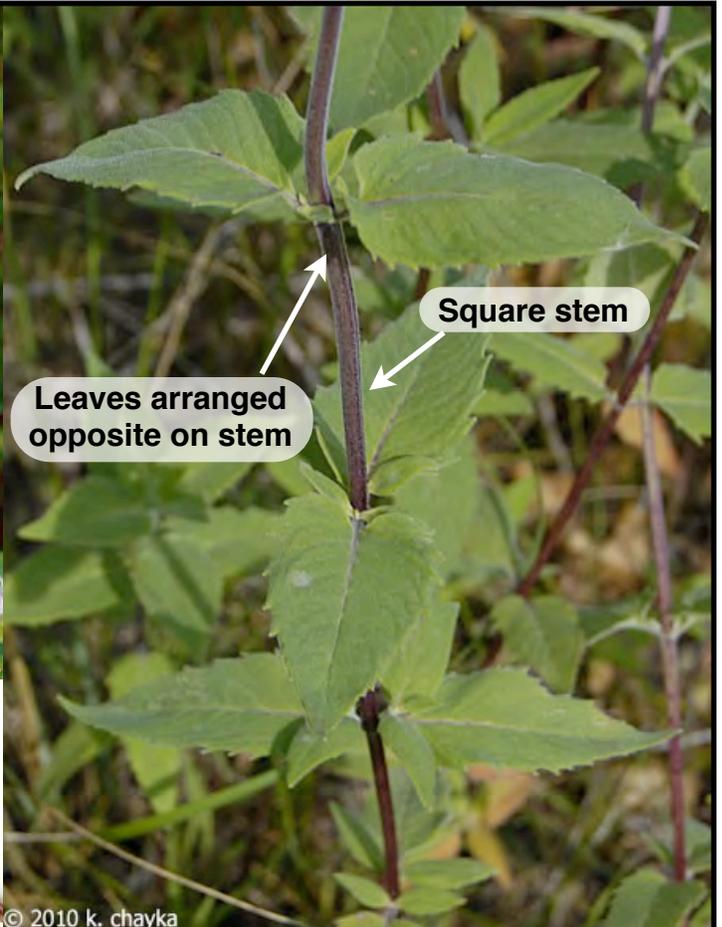
[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 132.

[2] http://www.illinoiswildflowers.info/prairie/plantx/wld_bergamotx.htm

[3] https://www.wildflower.org/plants/result.php?id_plant=MOFI

Monarda fistulosa

wild bergamot



Monarda fistulosa

wild bergamot

WILD BERGAMOT COULD BE CONFUSED WITH:

Monarda bradburiana - eastern beebalm

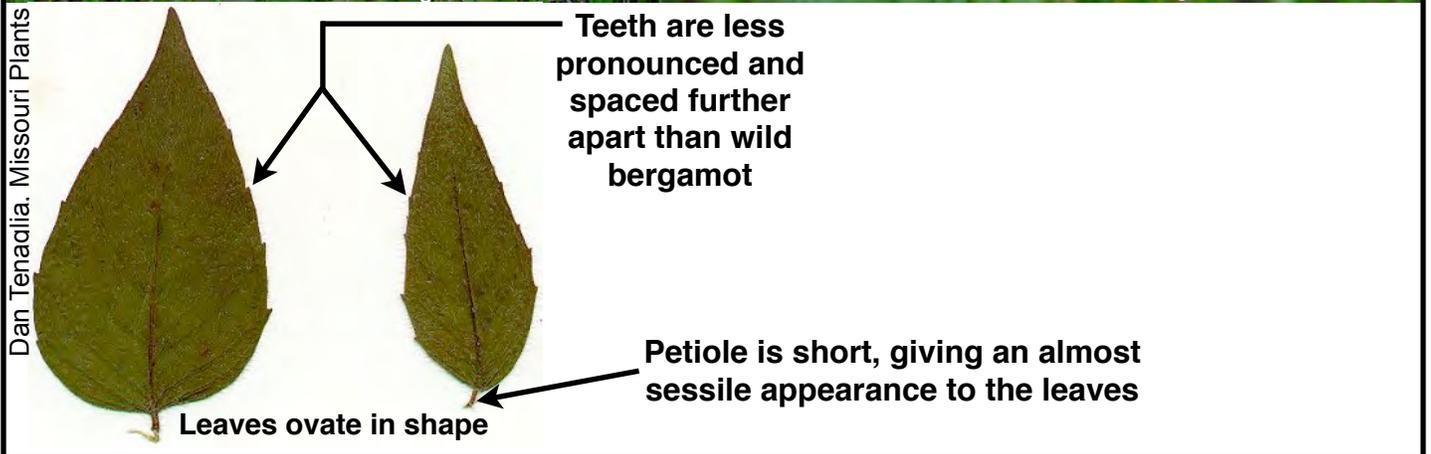


Dan Tenaglia, Missouri Plants



Spots on petals

Dan Tenaglia, Missouri Plants



Dan Tenaglia, Missouri Plants

Teeth are less pronounced and spaced further apart than wild bergamot

Petiole is short, giving an almost sessile appearance to the leaves

Leaves ovate in shape



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

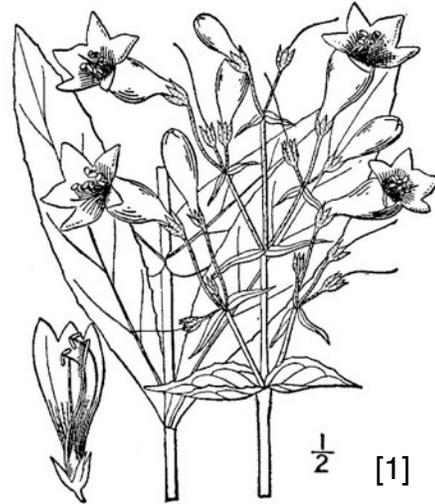
Penstemon digitalis

foxglove beardtongue

Other common names include: foxglove penstemon, Mississippi penstemon/beardtongue, smooth white penstemon/beardtongue, and talus slope penstemon/beardtongue



2014 © Peter Dziuk



Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				X	X	X					

Plant Characteristics:

Duration: Perennial

Type: Herb

Size: 3' tall

Leaf: Rosettes of basal leaves; 6" long and 2 1/2" wide; smooth margins; medium green with reddish tints. Stalk leaves opposite; up to 6" long and 2 1/2" wide; edges with tiny teeth and surface shiny.

Stem: Light green, hairless

Flower: Upper stems terminate in panicles (branching cluster) of white flowers. Each flower is tubular and about 1" long, consisting of a white corolla (petals) with a lower lip of 3 lobes and an upper lip of 2 lobes. Occasionally thin, violet lines within the corolla; outer surface is hairy. The flower, calyx and flower stalks are all densely covered in short, sticky, glandular hairs.

Seed collection**: September

What it can be confused with:

Foxglove beardtongue is distinguishable from other penstemons (*Penstemon* spp.) by its hairless leaves and stems, primarily white corolla, tiny hairs on anthers, and absence of ridges inside the corolla. [3]

Known Pollinators:

Honeybees, bumblebees, native bees, butterflies, Sphinx moths, and hummingbirds. [3]

Larval Host: Chalcedony midget moth and baltimore butterfly. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 184.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] http://www.illinoiswildflowers.info/prairie/plantx/fx_penstemonx.htm

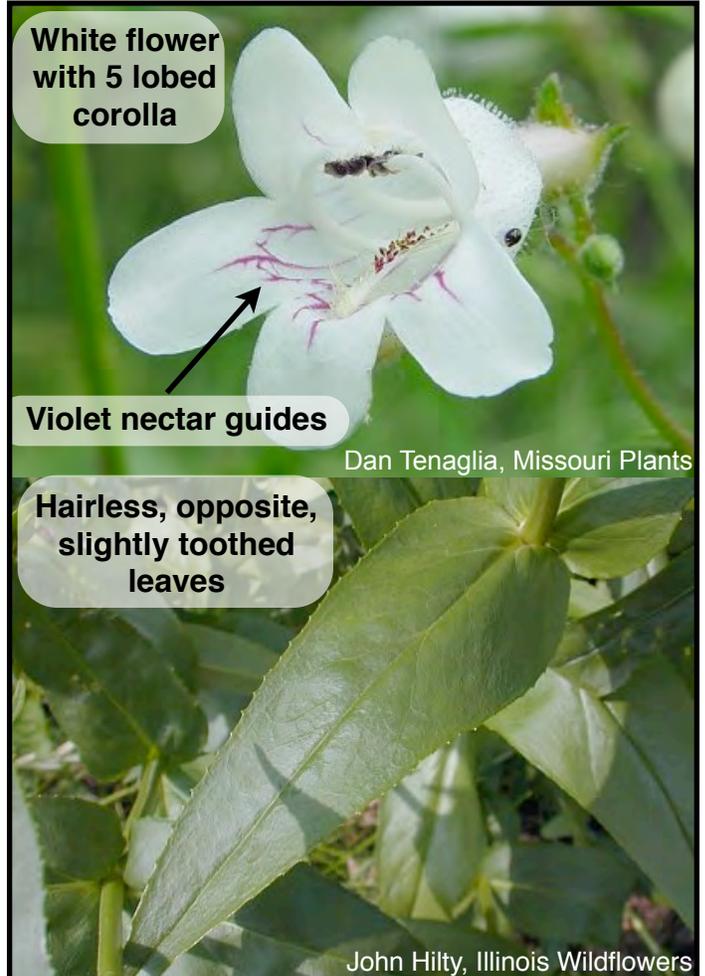
[4] http://www.wildflower.org/plants/result.php?id_plant=PED

Penstemon digitalis

foxglove beardtongue



John Hilty, Illinois Wildflowers



White flower with 5 lobed corolla

Violet nectar guides

Dan Tenaglia, Missouri Plants

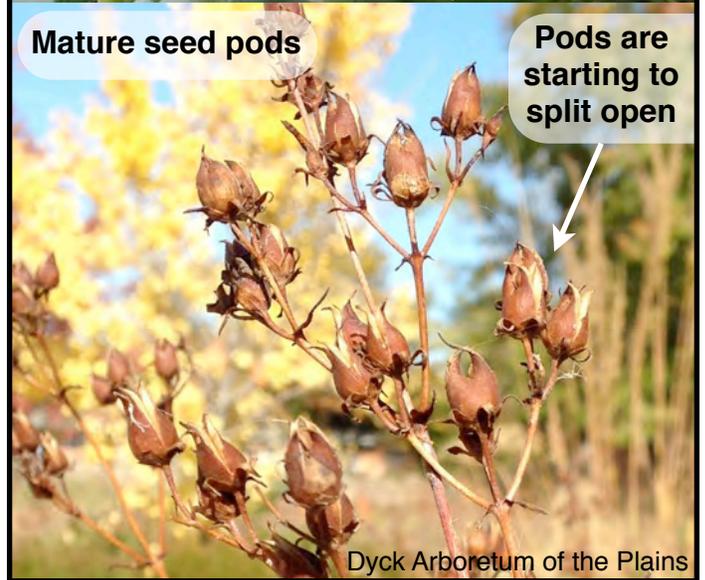
Hairless, opposite, slightly toothed leaves

John Hilty, Illinois Wildflowers



Glandular hairs on flower, flower stem and calyx

Dan Tenaglia, Missouri Plants



Mature seed pods

Pods are starting to split open

Dyck Arboretum of the Plains



Cleaned Seeds

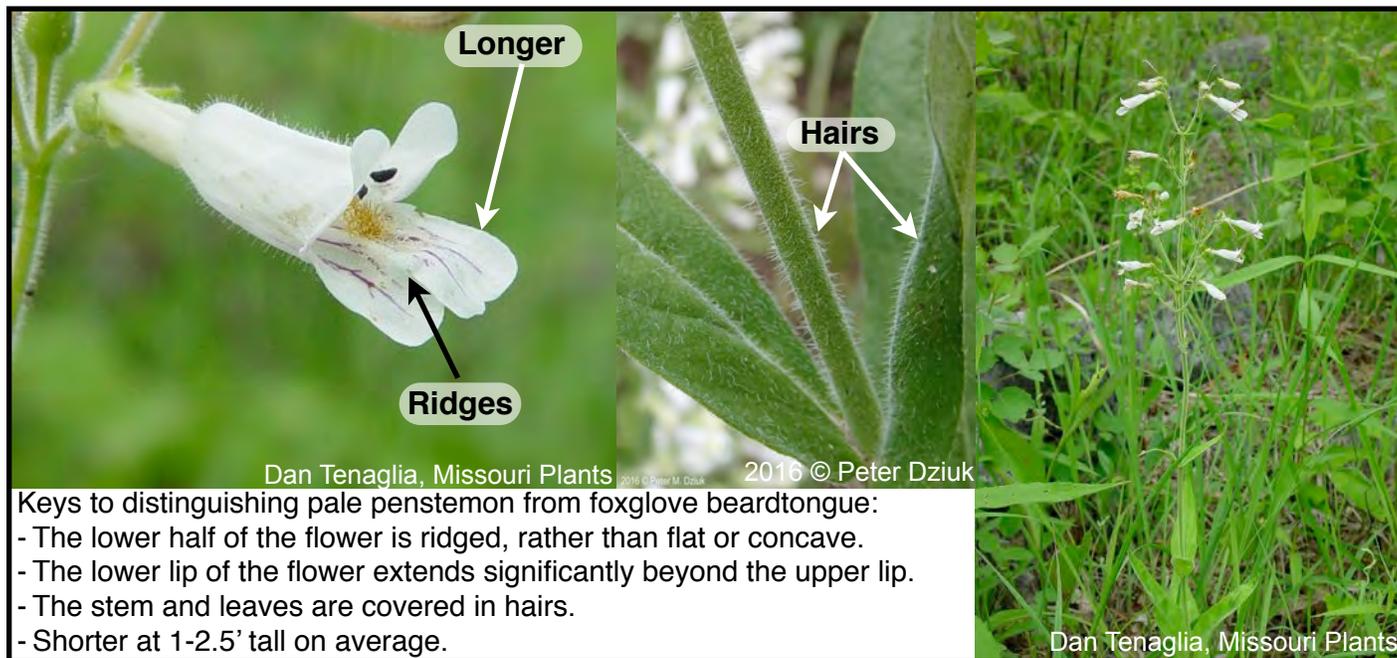
Prairie Moon Nursery

Penstemon digitalis

foxglove beardtongue

FOXGLOVE BEARDTONGUE COULD BE CONFUSED WITH:

Penstemon pallidus - pale penstemon



Keys to distinguishing pale penstemon from foxglove beardtongue:

- The lower half of the flower is ridged, rather than flat or concave.
- The lower lip of the flower extends significantly beyond the upper lip.
- The stem and leaves are covered in hairs.
- Shorter at 1-2.5' tall on average.

Penstemon calycosus - long-sepal penstemon



Keys to distinguishing long-sepal penstemon from foxglove beardtongue:

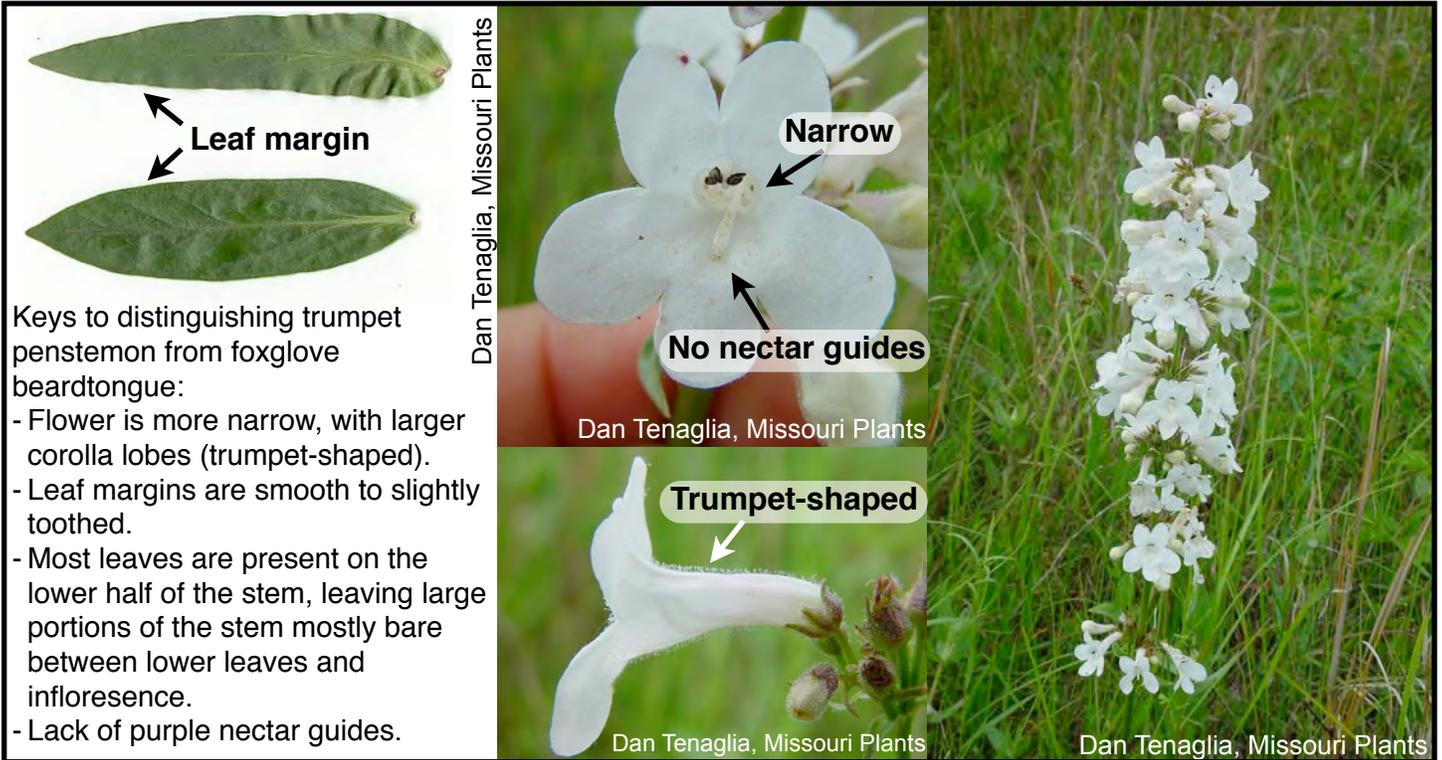
- The sepals are longer.
- Has light violet or purple flowers.
- The stem sometimes has fine white hairs.
- Leaves have more widely spaced teeth.

Penstemon digitalis

foxglove beardtongue

FOXGLOVE BEARDTONGUE COULD BE CONFUSED WITH:

Penstemon tubaeflorus - trumpet penstemon

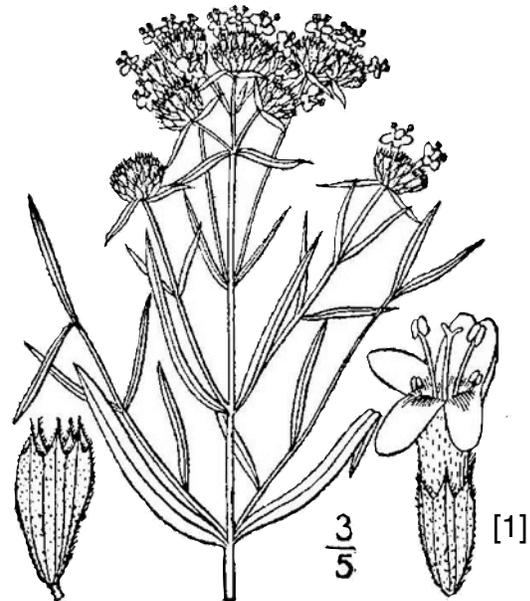


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Pycnanthemum tenuifolium

narrowleaf mountainmint

Other common names include: slender mountain mint and common horsemint

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 2-3' tallLeaf: Opposite; up to 3" long and ¼" across. Leaves have no petiole (leaf stem), are linear, and hairless, with a prominent central vein and smooth edges. Leaves smell minty when crushed.Stem: Stiff, smooth, slender, square stem, with no hairs.Flower: The short tubular flowers are white, often with scattered purple dots, and individually about ¼" long. The flower petals have an upper lip, and three-lobed lower lip.Seed collection**: Late September - Late October [2]**What it can be confused with:**

This plant has a delicate, somewhat airy appearance. *P. tenuifolium* closely resembles *Pycnanthemum virginianum* (Virginia mountainmint), except that the *P. tenuifolium* has hairless stems and leaves that never exceed ¼" across. *P. virginianum*, on the other hand, has lines of white hairs on its stems, and some of the larger leaves will exceed ¼" across. *P. virginianum* tends to be taller, stouter, and less branched in appearance; it also blooms a little later in the year. [3]

Known Pollinators:

Honey bees, native bees, flies, wasps, butterflies, skippers, and beetles. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

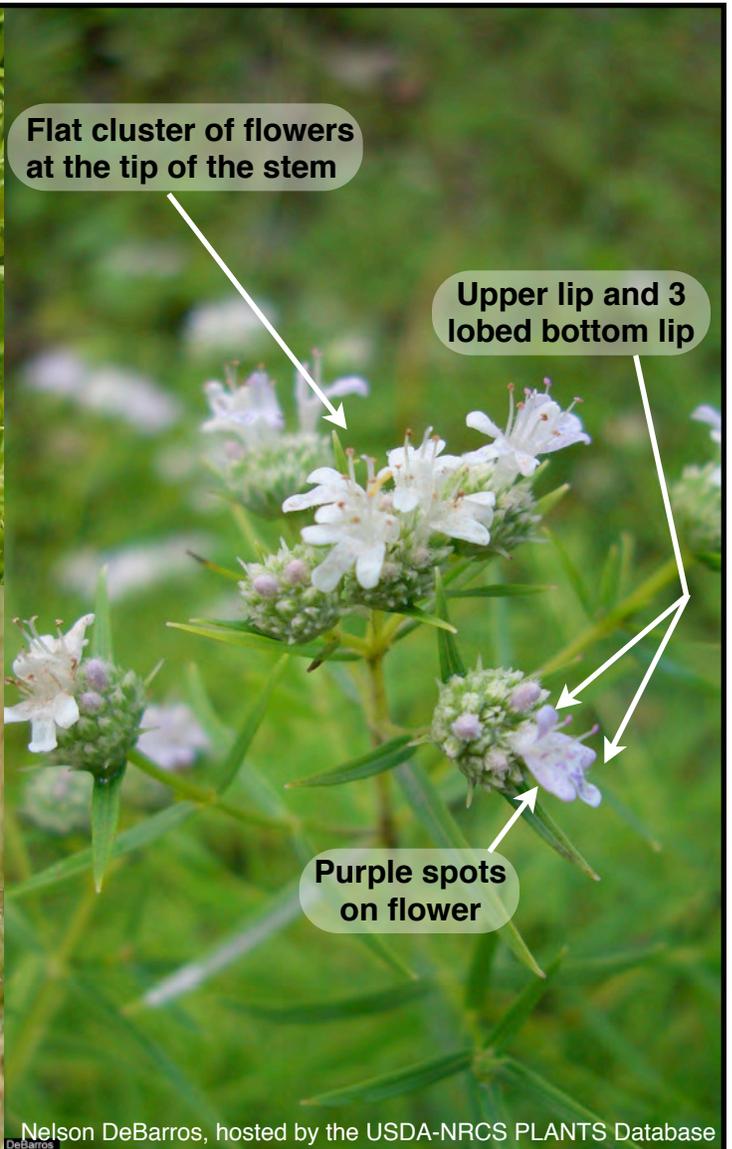
[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 142.

[2] http://plants.usda.gov/plantguide/pdf/pg_pyte.pdf

[3] http://www.illinoiswildflowers.info/prairie/plantx/slm_mintx.htm

Pycnanthemum tenuifolium

narrowleaf mountainmint

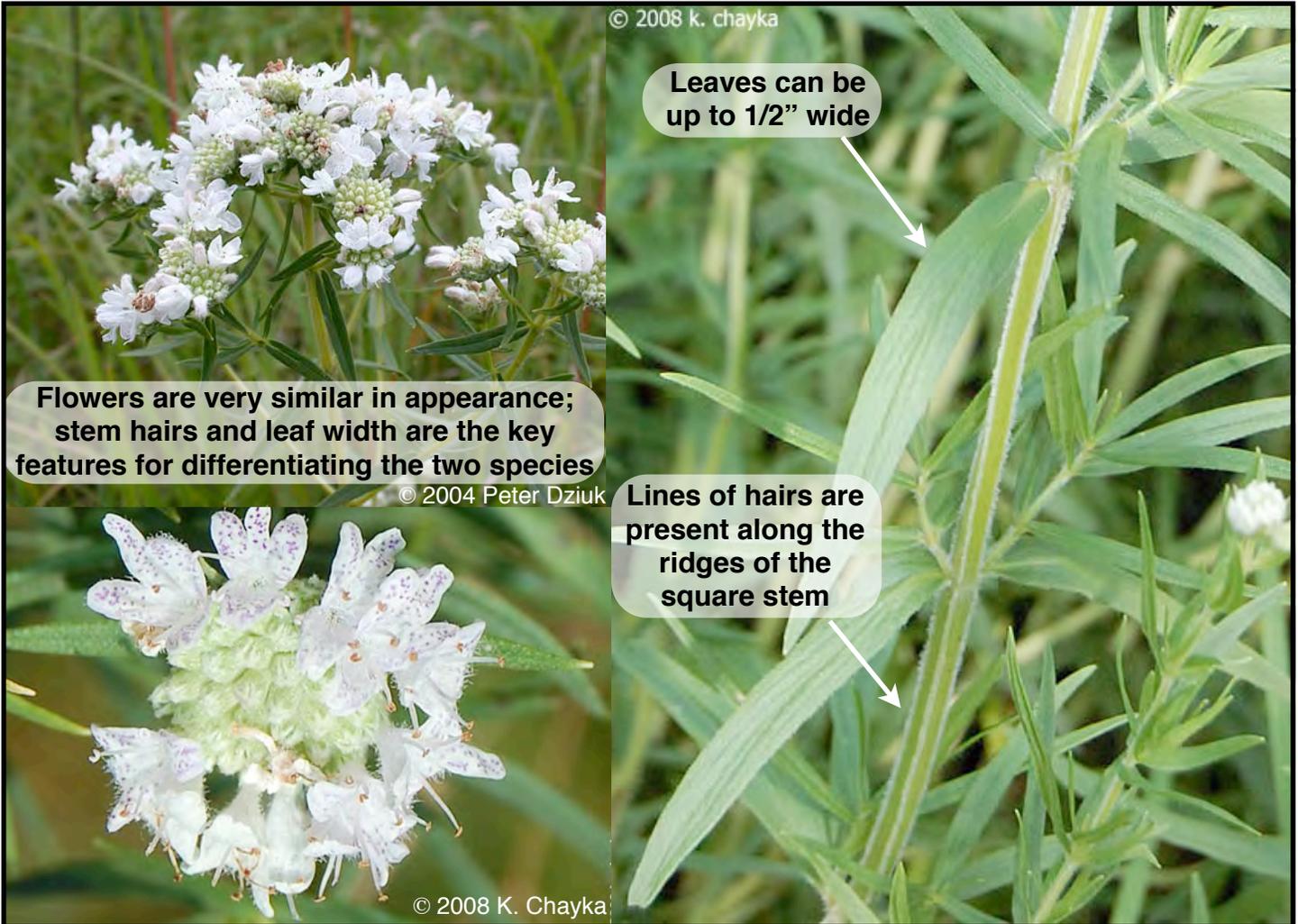


Pycnanthemum tenuifolium

narrowleaf mountainmint

NARROWLEAF MOUNTAINMINT COULD BE CONFUSED WITH:

Pycnanthemum virginianum - Virginia mountainmint

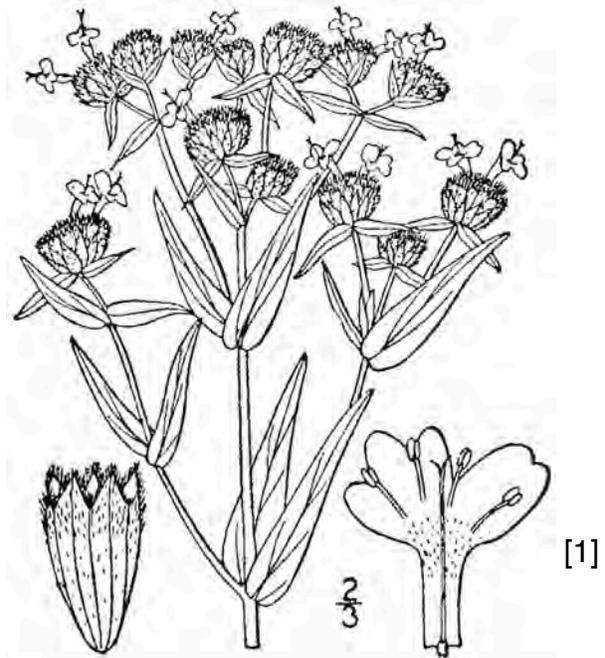


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Pycnanthemum virginianum

Virginia mountainmint

Other common names include: American mountain mint, common mountain mint

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 1-3' tallLeaf: Opposite; up to 2½" long and up to ½" wide; growing directly on the stem and toothless, very narrow and grass-like. Releases a strong mint scent when damaged.Stem: Green or reddish, strongly four-angled, having scattered white hairs; often bushy in appearance.Flower: Upper stems terminate in flattened heads of small white flowers, about ¾" across, containing up to 50 flowers. Each flower is tubular, about 1/8" long, and 2-lipped. Outer flowers bloom first, followed by inner flowers.Seed collection**: Early September-Late October [2]**What it can be confused with:**Virginia mountain mint is similar to narrowleaf mountainmint (*Pycnanthemum tenuifolium*), but can be distinguished by white hairs along the stem ridges and leaves wider than ¼". Narrowleaf mountainmint lacks hair on its stem. [3]**Known Pollinators:**

Bumble bees, other native bees, honey bees, wasps, flies, small butterflies, and beetles. [3,4]

Larval Host: None

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

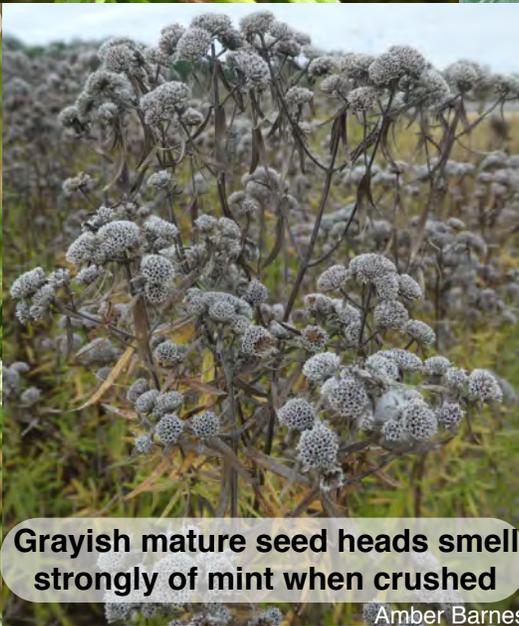
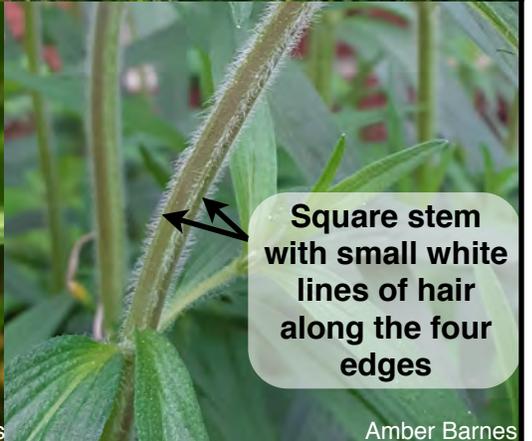
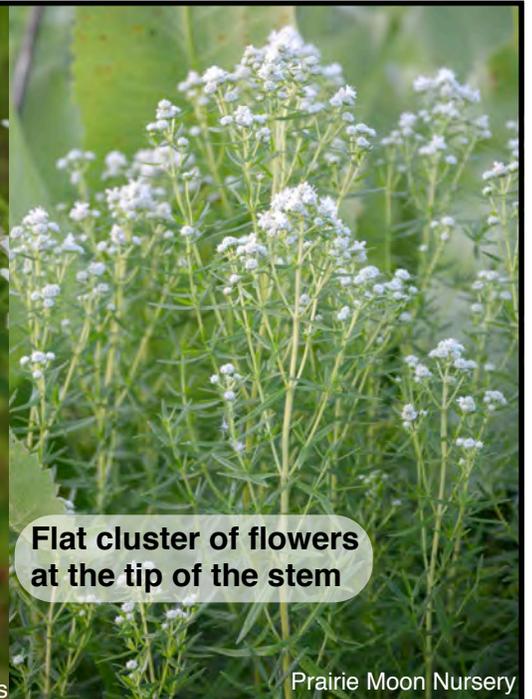
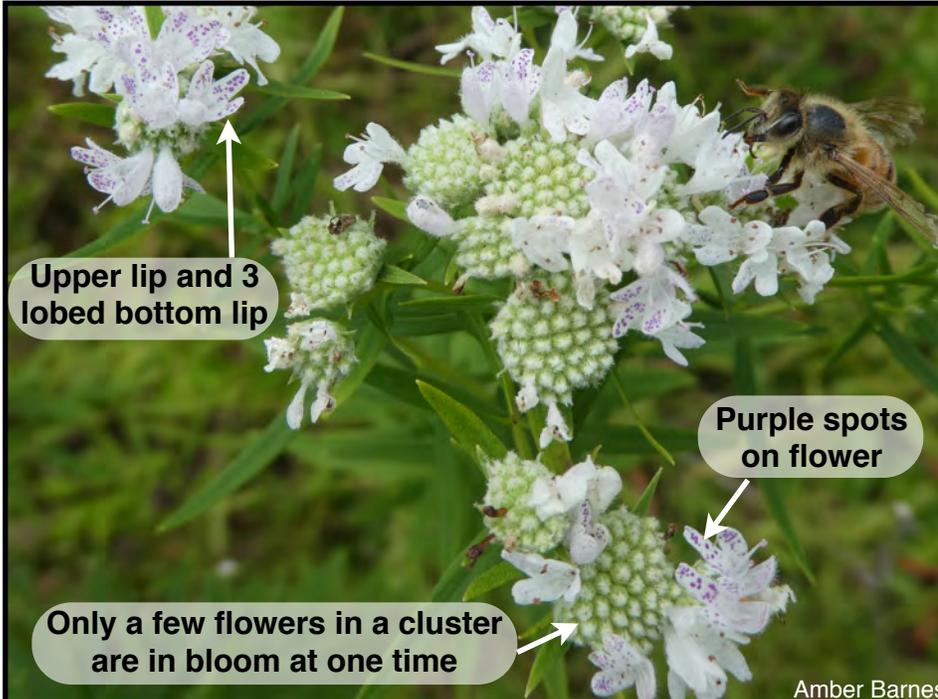
[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 142.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html> [3] https://www.illinoiswildflowers.info/prairie/plantx/cmt_mintx.htm

[4] https://www.wildflower.org/plants/result.php?id_plant=PYV1

Pycnanthemum virginianum

Virginia mountainmint

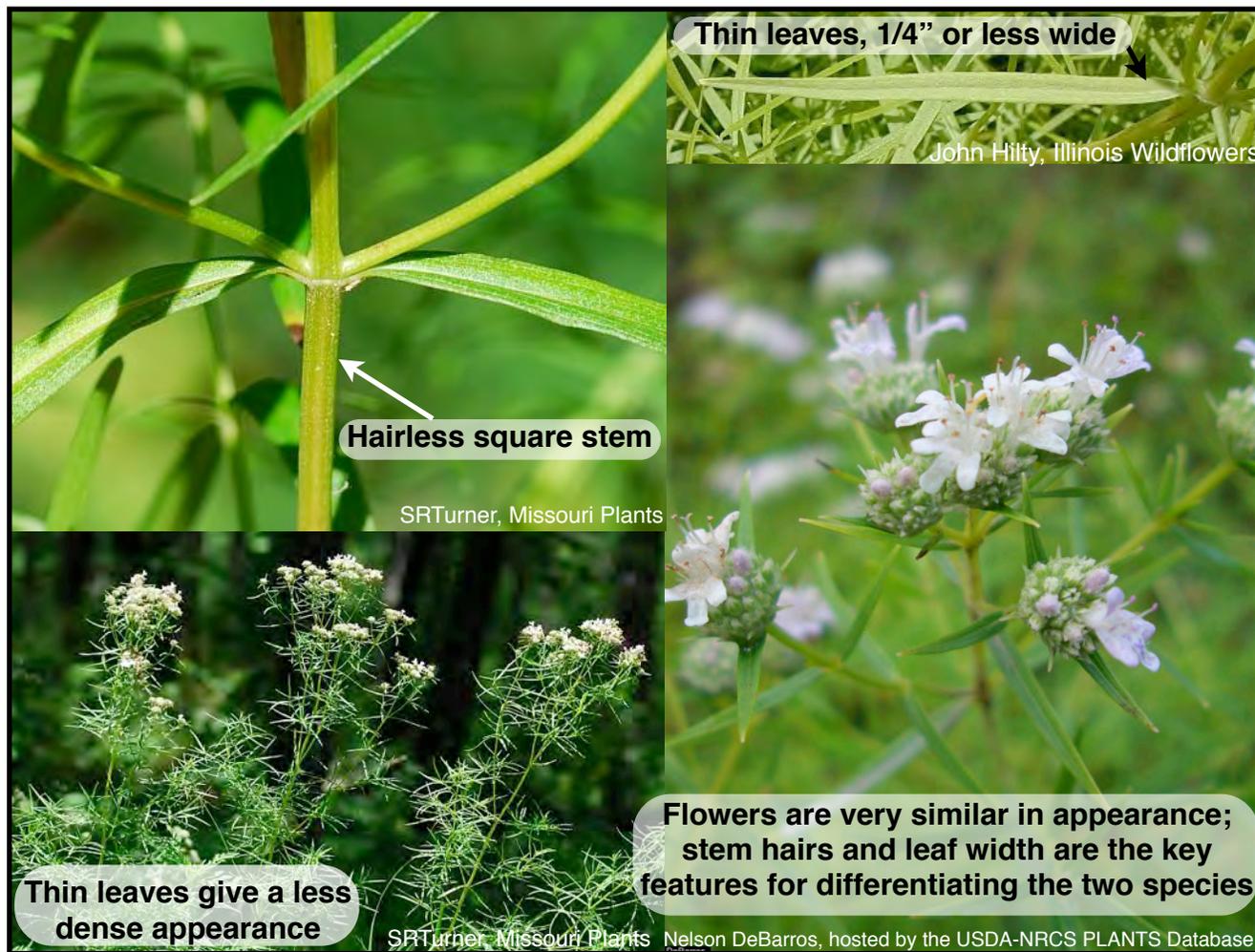


Pycnanthemum virginianum

Virginia mountainmint

VIRGINIA MOUNTAINMINT COULD BE CONFUSED WITH:

Pycnanthemum tenuifolium - narrowleaf mountainmint



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Ratibida pinnata

yellow coneflower

Other common names include: gray-headed coneflower, grayhead coneflower, gray-headed Mexican hat, grayhead Mexican hat, and pinnate prairie coneflower



[1]

Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 3-5' tallLeaf: Alternate; irregularly shaped; up to 8" long and 5" wide; basal leaves are compound with 3-7 lobes, sometimes with 1-2 secondary lobes; small, stiff hairs and bumps, smooth or sparsely toothed.Stem: Long, slender, hairy, and slightly ridged.Flower: Composite flower occurs at the tip of the stem; up to 13 yellow ray florets (outer petals) up to 1-2½" wide, disk floret head ½-¾" tall; little to no floral scent.Seed collection**: September - Early October [2]**What it can be confused with:**

Yellow coneflower can be distinguished from other yellow colored coneflowers like *Rudbeckia hirta* (black-eyed Susan) and *Rudbeckia laciniata* (cutleaf coneflower) by the drooping ray florets, grayish central cone, ridged stem, height, and complex structure of the basal leaves. [3]

Note: While considered common in all other PW states, *Ratibida pinnata* should not be collected in Pennsylvania due to potential change in legal status.

Known Pollinators:

Native bees, wasps, flies, small butterflies, and beetles. [3]

Larval Host: Silvery checkerspot butterfly, wavy-lined emerald moth, and common eupithecia moth. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 474.

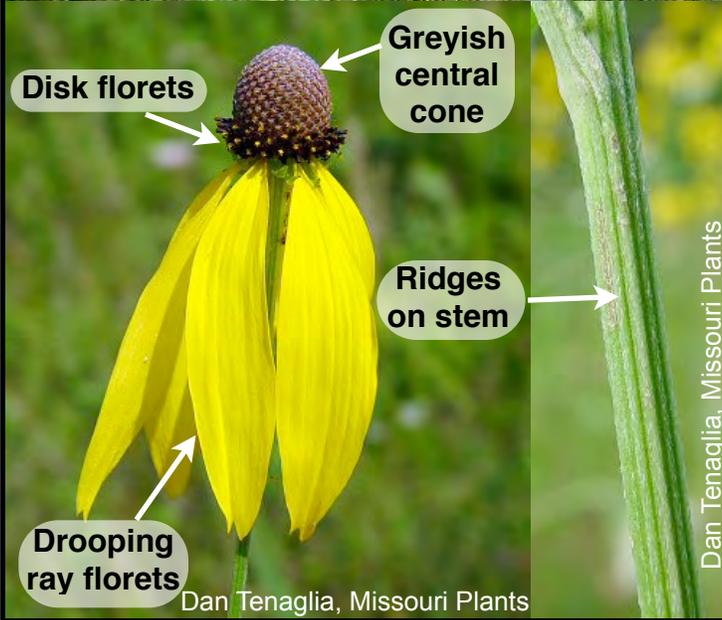
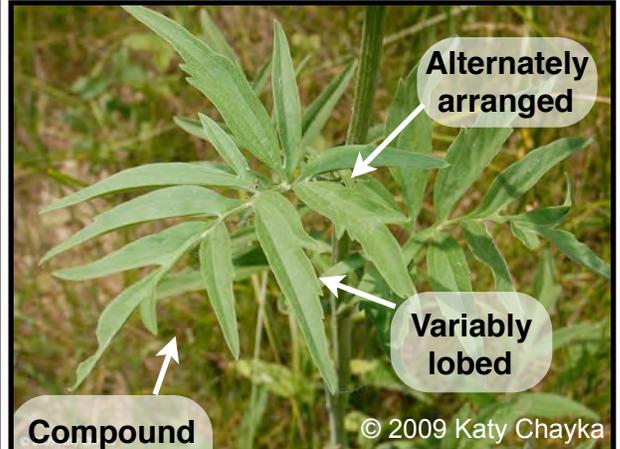
[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] http://www.illinoiswildflowers.info/prairie/plantx/y/_coneflowerx.htm

[4] http://www.wildflower.org/plants/result.php?id_plant=RAPI

Ratibida pinnata

yellow coneflower



Ratibida pinnata

yellow coneflower

YELLOW CONEFLOWER COULD BE CONFUSED WITH:

Rudbeckia laciniata - cutleaf coneflower

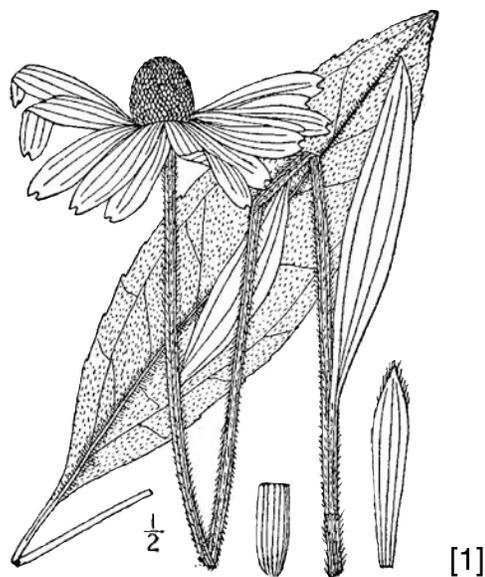


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Rudbeckia hirta

black-eyed Susan

Other common names include: common black-eyed Susan and brown-eyed Susan

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: BiennialType: ForbSize: 1-2.5' tallLeaf: Alternate, greyish green, up to 7" long and 2" across, pubescent (covered in small hairs).Stem: Upper stem is devoid of leaves and has long, white hairs.Flower: Yellow, 2-3" across, 8-20 yellow ray florets surround a cone-shaped group of brown disk florets.Seed collection**: Mid September - Mid October [2]**What it can be confused with:**

Black-eyed Susan can be distinguished from other *Rudbeckia* spp. by its lanceolate hairy leaves and the long hairs on the stems; most of the leaves occur toward the base of each stem, and never have lobes. The species *Rudbeckia fulgida* (orange coneflower) is quite similar in appearance, but usually blooms later, and has style-tips that are shorter and more rounded. [3]

Known Pollinators:

Bees, flies, wasps, butterflies, and beetles. [3]

Larval Host:

Gorgone checkerspot, bordered patch butterfly. [4]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 470.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] http://www.illinoiswildflowers.info/prairie/plantx/be_susanx.htm

[4] https://www.wildflower.org/plants/result.php?id_plant=RUHI2

Rudbeckia hirta

black-eyed Susan

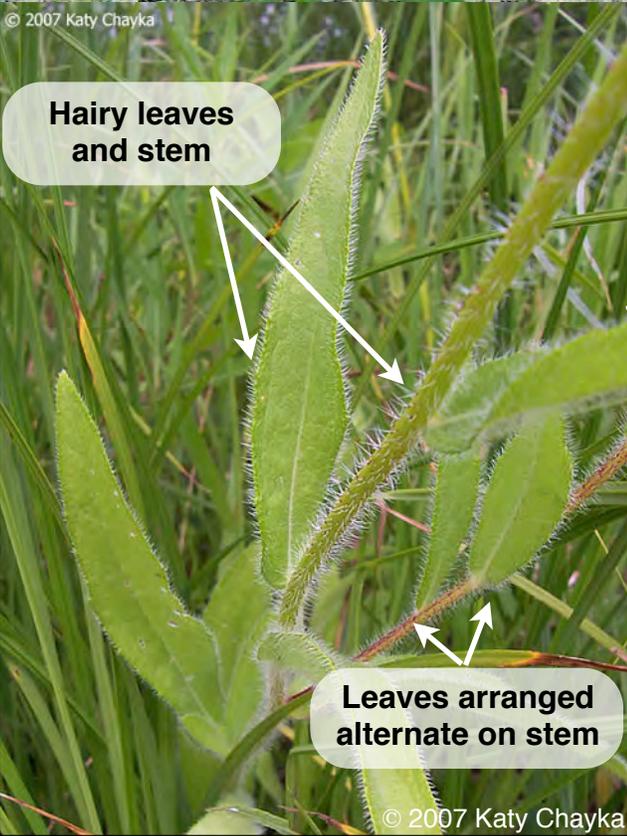


Dan Tenaglia, Missouri Plants



John Hilty, Illinois Wildflowers

© 2007 Katy Chayka



Hairy leaves and stem

Leaves arranged alternate on stem

© 2007 Katy Chayka



John Hilty, Illinois Wildflowers

Basal leaves are lanceolate with a longer petiole than the upper leaves



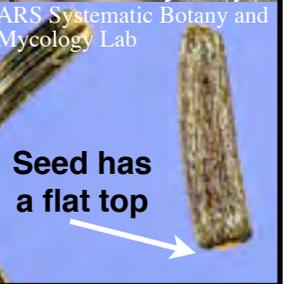
Mature seed heads

© 2013 Katy Chayka
ARS Systematic Botany and Mycology Lab



Cleaned Seeds

Prairie Moon Nursery



Seed has a flat top

Rudbeckia hirta

black-eyed Susan

BLACK-EYED SUSAN COULD BE CONFUSED WITH:

Rudbeckia fulgida - orange coneflower

Dan Tenaglia, Missouri Plants

The mid and basal leaves have a long thin petiole on an ovate leaf.

While both varieties are still hairy, they are noticeably less hairy than the black-eyed Susan.

Two varieties of orange coneflower can be found in the region, but each can be differentiated from black-eyed Susan based on their: leaves, seeds, and stems.

John Hilty, Illinois Wildflowers

The *sullivantii* variety has a clearly winged petiole.

The end of the orange coneflower seed has small teeth, while the black-eyed Susan seed does not.

Dan Tenaglia, Missouri Plants

Dan Tenaglia, Missouri Plants

John Hilty, Illinois Wildflowers

John Hilty, Illinois Wildflowers

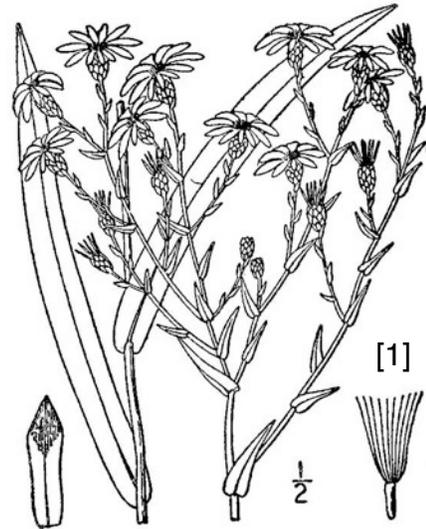


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Symphotrichum laeve

smooth blue aster

Other common names include: smooth aster and smooth american aster



Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							X	X	X		

Plant Characteristics:

Duration: Perennial

Type: Herb

Size: 1½ - 3' tall

Leaf: Alternate; up to 6" long and 1¼" wide; smooth or bluntly toothed margins. Upper leaf surfaces are medium to grayish blue, hairless, and sometimes glaucous (a whitish film that rubs off); lower leaf surfaces are light green or light grayish blue, hairless, and sometimes glaucous.

Stem: Light green or light blue and hairless

Flower: Central stem terminates in a panicle (branching cluster) of flower heads and lateral upper stems and upper leaves may terminate in smaller panicles. Each flower is about ½-1" wide, consisting of 15-30 ray florets (outer petals) surrounding a head of disk florets. Ray flowers are light lavender or rarely white; disk florets are 5 lobed (petaled) and turn from whitish yellow to purplish red during blooming.

Seed collection**: Early - Mid November

What it can be confused with:

Smooth blue aster is easily distinguished from other asters (*Symphotrichum* spp.) due to its bluish tint and smooth leaves and stem. Other asters typically have hair on either the leaves or stem. One species which is similar to smooth blue aster is the sky blue aster, which grows in similar habitat and blooms around the same time. The keys to distinguishing the two are the leaves and flowers. The leaves of smooth blue aster are sessile (no petiole) all along the stem. Sky blue aster, on the other hand, only has sessile leaves on the top half of the plant, the lower and basal leaves have clear petioles. Additionally, sky blue aster has smaller flowers, averaging about ½" across, while smooth blue aster is about ½-1" across. [2,3]

Known Pollinators:

Honeybees, bumblebees, native bees, sphecid wasps, flies, butterflies, and skippers. [2]

Larval Host: Leaf-mining fly, papery blister gall midge, pearl crescent butterfly. [2]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 420.

[2] http://www.illinoiswildflowers.info/prairie/plantx/sm_asterx.htm

[3] <https://www.minnesotawildflowers.info/flower/smooth-blue-aster>

Symphotrichum laeve

smooth blue aster

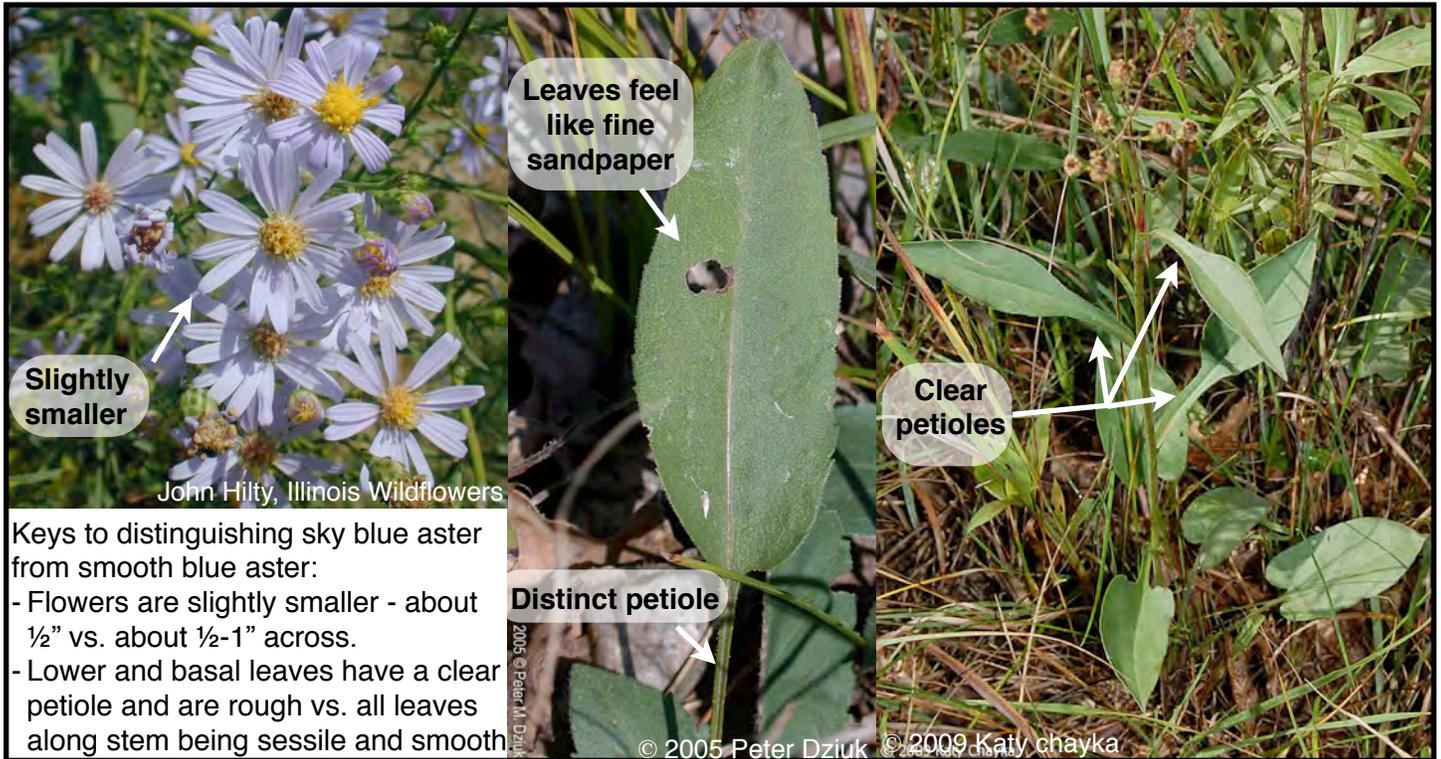


Symphotrichum laeve

smooth blue aster

SMOOTH BLUE ASTER COULD BE CONFUSED WITH:

Symphotrichum oolentangiense - sky blue aster



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Symphotrichum novae-angliae

New England aster

Other common names include: New England American aster and Michaelmas daisy

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							X	X	X		

Plant Characteristics:Duration: PerennialType: HerbSize: 4' tallLeaf: Alternate; up to 4" long and 1" wide; pubescent with smooth, but ciliate margins (lined with small hairs), clasping, becoming smaller as they ascend the stems.Stem: Single or multiple from the base, mostly erect, brown to reddish, and covered in short, spreading hairs.Flower: Upper stems terminate in clusters of composite flowers. Each flower is about 1½" wide, consisting of yellow or gold disk florets, surrounded by 30-100 purple, lavender, or light pink ray florets (outer petals); no floral scent.Seed collection**: Early - Mid November**What it can be confused with:**

New England aster is easily distinguished from other asters (*Symphotrichum* spp.) because of its more numerous ray florets, larger flowers, and hairy spreading phyllaries. Another large-flowered aster it could potentially be mistaken for is the purple-stemmed aster (*Symphotrichum puniceum*). The two species can be distinguished by a few key features observed on the leaves and phyllaries. New England aster can be differentiated from purple-stemmed aster by: the smooth leaf margin vs. widely toothed leaf margin, the variably pubescent leaves vs. glabrous leaves with hairs along the central veins of their underside, and the hairy spreading phyllaries vs. smooth spreading phyllaries. [2,3]

Known Pollinators:

Honeybees, bumblebees, native bees, bee flies, butterflies, and skippers. [2]

Larval Host: Many species of moths. [2]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 417.

[2] http://www.illinoiswildflowers.info/prairie/plantx/ne_asterx.htm

[3] <https://www.minnesotawildflowers.info/flower/new-england-aster>

Symphotrichum novae-angliae

New England aster



Symphotrichum novae-angliae

New England aster

NEW ENGLAND ASTER COULD BE CONFUSED WITH:

Symphotrichum puniceum - purple-stemmed aster



Keys to distinguishing purple-stemmed aster from New England aster:

- Ray petals are light violet to blue-violet vs. purple, lavender, or light pink.
- Less ray petals (30-60) vs (30-100).
- Leaves are fairly hairless except along the central vein of the underside of the leaf vs. a variably pubescent leaf.
- Leaf margin is widely toothed vs. smooth and ciliated.
- Leaves taper to a sharp point vs. tapering to a pointed or rounded tip.
- Phyllaries are hairless vs. covered in small hairs.
- Flowers are slightly smaller: $\frac{3}{4}$ – $1\frac{1}{4}$ " across vs. $1\frac{1}{2}$ ".



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Tradescantia ohioensis

Ohio spiderwort

Other common names include: bluejacket

**Bloom Period:**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			X	X	X	X					

Plant Characteristics:Duration: PerennialType: ForbSize: 2-4' tall

Leaf: The grass-like leaves are grey- or blue-green, alternate, up to 15" long and 1" across. They are linear, although wider at the base (where the leaves wrap around the stem in sheaths), than at the tip. They are also hairless, with parallel venation, and smooth margins.

Stem: Central stem is round, hairless, and occasionally glaucous (a whitish film that can be rubbed off).

Flower: The light violet to blue-violet flowers occur in small clusters on hairless flowering stems at the top of the plant. Underneath each inflorescence are 2 small bracts, each up to 3" long and less than ½" across. Each flower is about 1" across, with 3 rounded petals, 6 bright yellow anthers, and fine spiderly violet hairs near the base. The flowers open up during the morning and close by the afternoon in sunny weather, but remain open longer on cloudy days.

Seed collection**: Early - Mid July

What it can be confused with:

Ohio spiderwort can be readily distinguished from Virginia spiderwort and prairie spiderwort by the absence of conspicuous hairs on the flowering stems near the inflorescence, and the greyish or bluish appearance of the thin leaves. It also tends to be taller and more spindly in appearance than other species of spiderwort, and has smaller bracts below the inflorescence. Another species, zigzag spiderwort, prefers shaded woody areas, has a stem that slightly zig-zags between its broader leaves (up to 2" across), which are typically dark green, and the flower stems are covered in hairs. [2]

Known Pollinators:

Native bees and flies. [2,3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

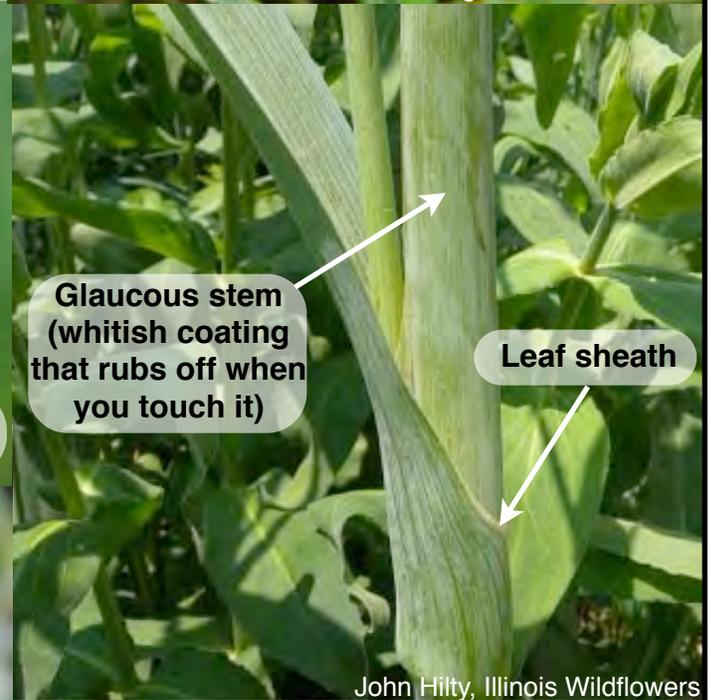
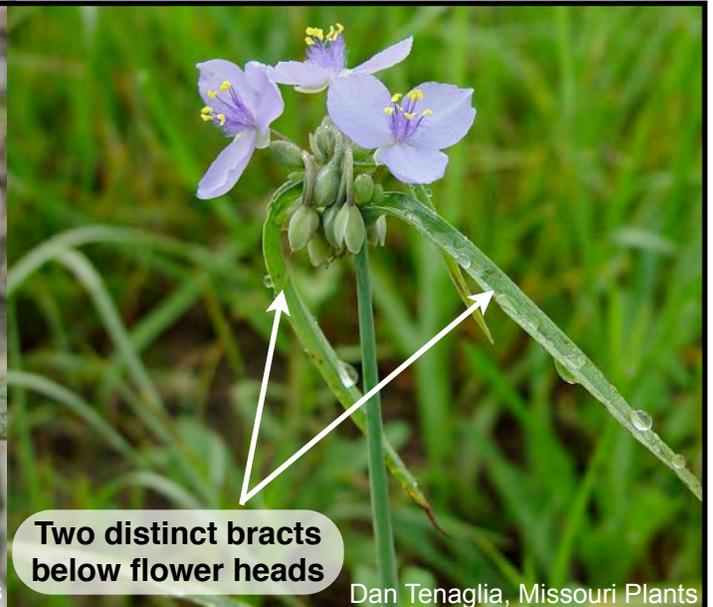
[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 1: 461.

[2] http://www.illinoiswildflowers.info/prairie/plantx/oh_spiderwortx.htm

[3] https://www.wildflower.org/plants/result.php?id_plant=TROH

Tradescantia ohiensis

Ohio spiderwort



Tradescantia ohioensis

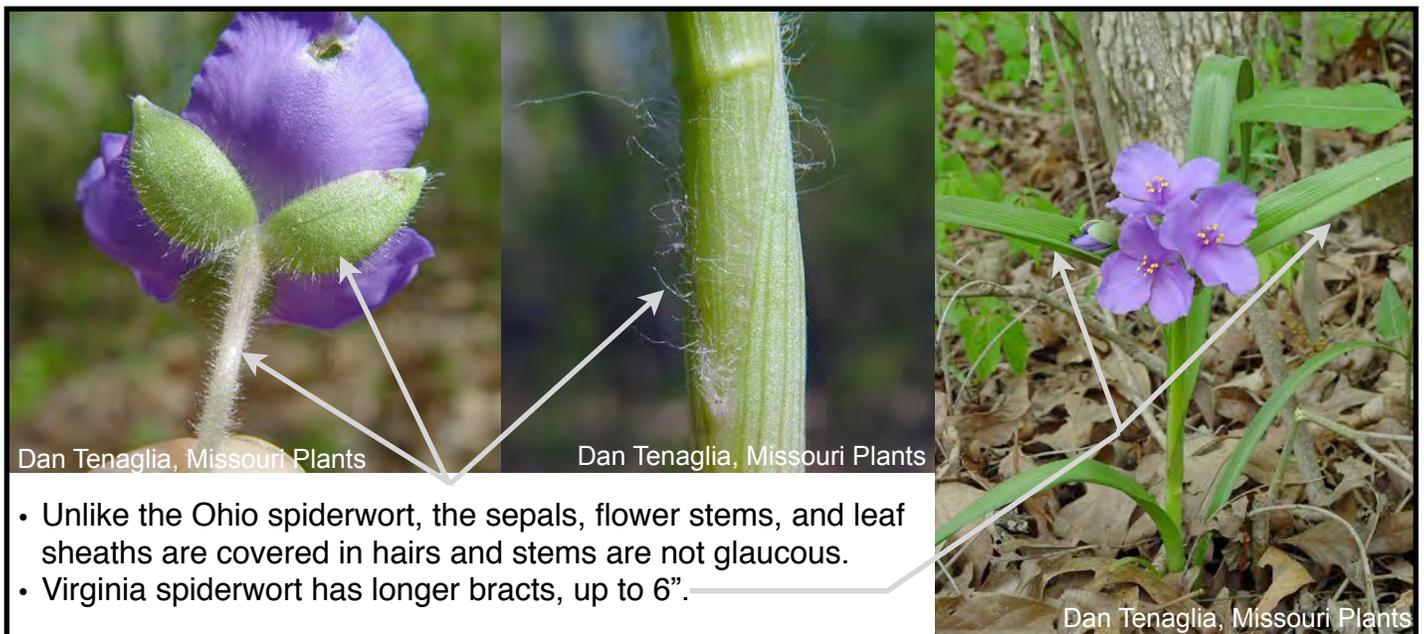
Ohio spiderwort

OHIO SPIDERWORT COULD BE CONFUSED WITH:

Tradescantia bracteata - prairie spiderwort



Tradescantia virginiana - Virginia spiderwort



Tradescantia ohiensis

Ohio spiderwort

OHIO SPIDERWORT COULD BE CONFUSED WITH:

Tradescantia subaspera - zigzag spiderwort



- Unlike Ohio spiderwort, the sepals and flower stems are covered in hairs.
- The stem has a tendency to zigzag slightly between the alternate leaves and is not glaucous.
- The leaves are up to twice as wide (2") as that of Ohio spiderwort.

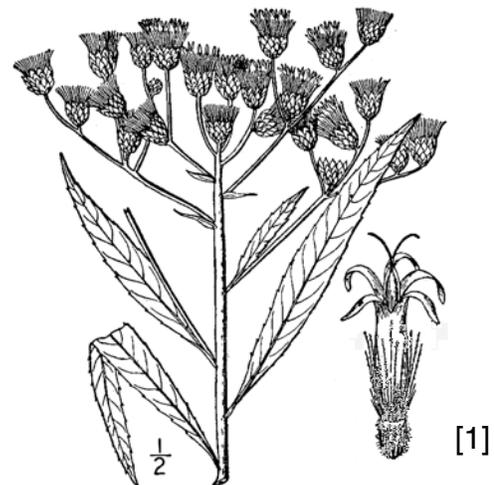


Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Vernonia gigantea

giant ironweed

Other common names include: tall ironweed



Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
						X	X	X	X		

Plant Characteristics:

Duration: Perennial

Type: Herb

Size: 3-7' tall

Leaf: Alternate; up to 9" long and 2½" wide; toothed margins. Upper leaf surfaces are dark green and hairless; lower leaf surfaces are light green and sparsely pubescent. Each leaf has a short petiole (leaf stem) or is sessile (no leaf stem).

Stem: Usually unbranched, light green or purplish green, and pubescent.

Flower: Central stem terminates in a panicle (branched cluster) of flowerheads from 6-16" across. Each flowerhead consists of 10-30 disk florets and no ray florets (outer petals); tubular, magenta corolla (petals) with 5 recurved, narrow lobes; exerted style is bifurcated (2 branching) and strongly recurved. No floral scent.

Seed collection**: October [2]

What it can be confused with:

Tall ironweed hybridizes with other *Vernonia* spp. (ironweeds), especially *Vernonia missurica* (Missouri ironweed). The latter hybrid is referred to as *Vernonia x illinoensis* (Illinois ironweed). Giant ironweed can be distinguished from its hybrid, because Illinois ironweed is more hairy and has flowerheads with 30-35 disk florets. Another species, Missouri ironweed, has flowerheads with 35-50 disk florets and it is more hairy than tall ironweed; both stems and leaf undersides of Missouri ironweed are often white-woolly from the abundance of these hairs. Smooth ironweed (*Veronia fasciculata*) differs from giant ironweed in that it is smaller in size, has hairless stems and leaves, and sometimes has dark dots on the undersides of its leaves. [3]

Known Pollinators:

Native bees, bee flies, butterflies, and skippers. [3]

Larval Host: Eupatorium borer moth, ironweed borer moth, red groundling moth, pyralid moth, ironweed bud midge, and ironweed blossom midge [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 352.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] http://www.illinoiswildflowers.info/savanna/plants/tl_ironweed.htm

Vernonia gigantea

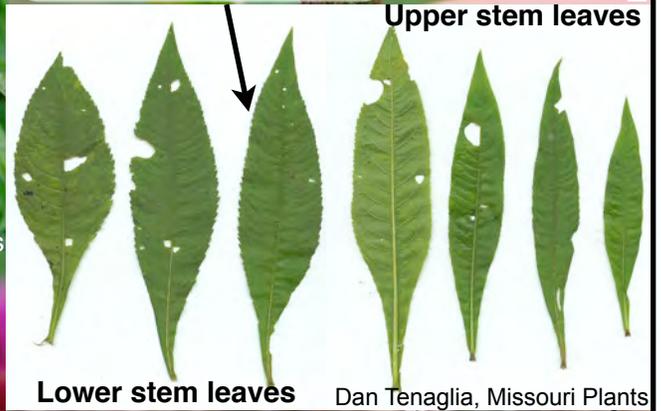
giant ironweed



Dan Tenaglia, Missouri Plants



Dan Tenaglia, Missouri Plants



Dan Tenaglia, Missouri Plants



R. W. Smith, Lady Bird Johnson Wildflower Center

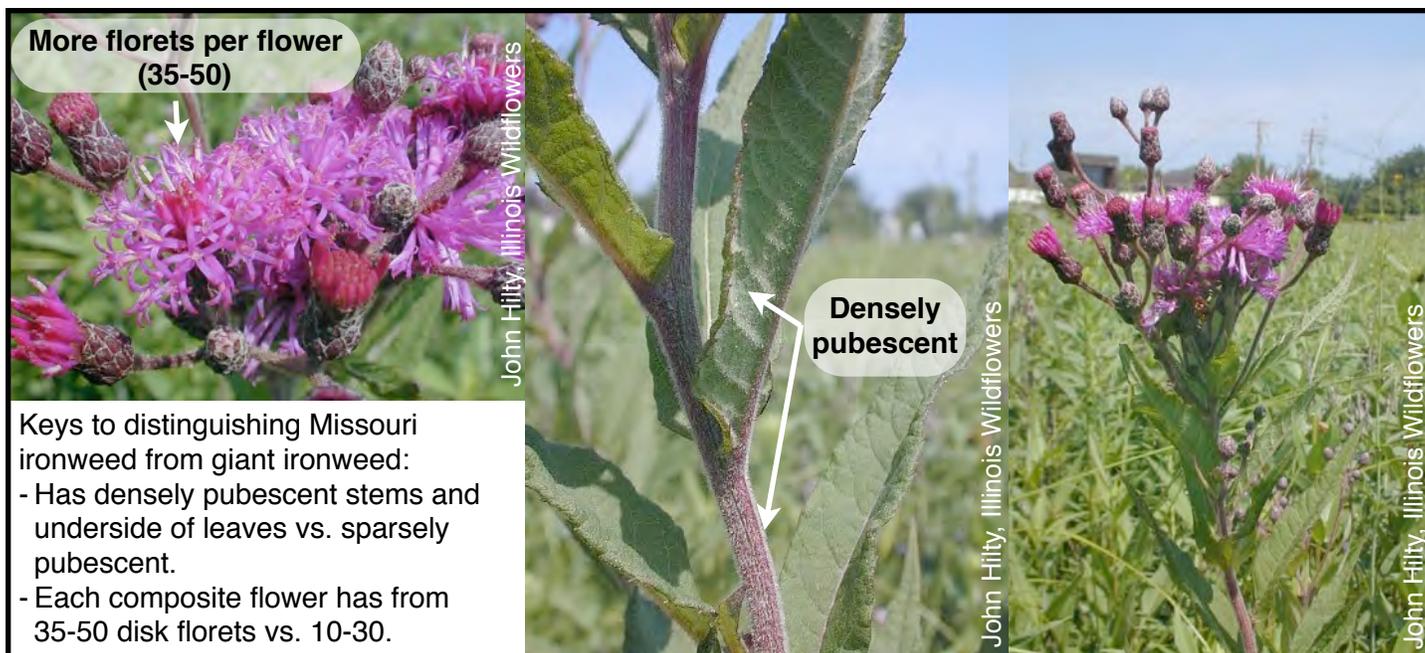


Vernonia gigantea

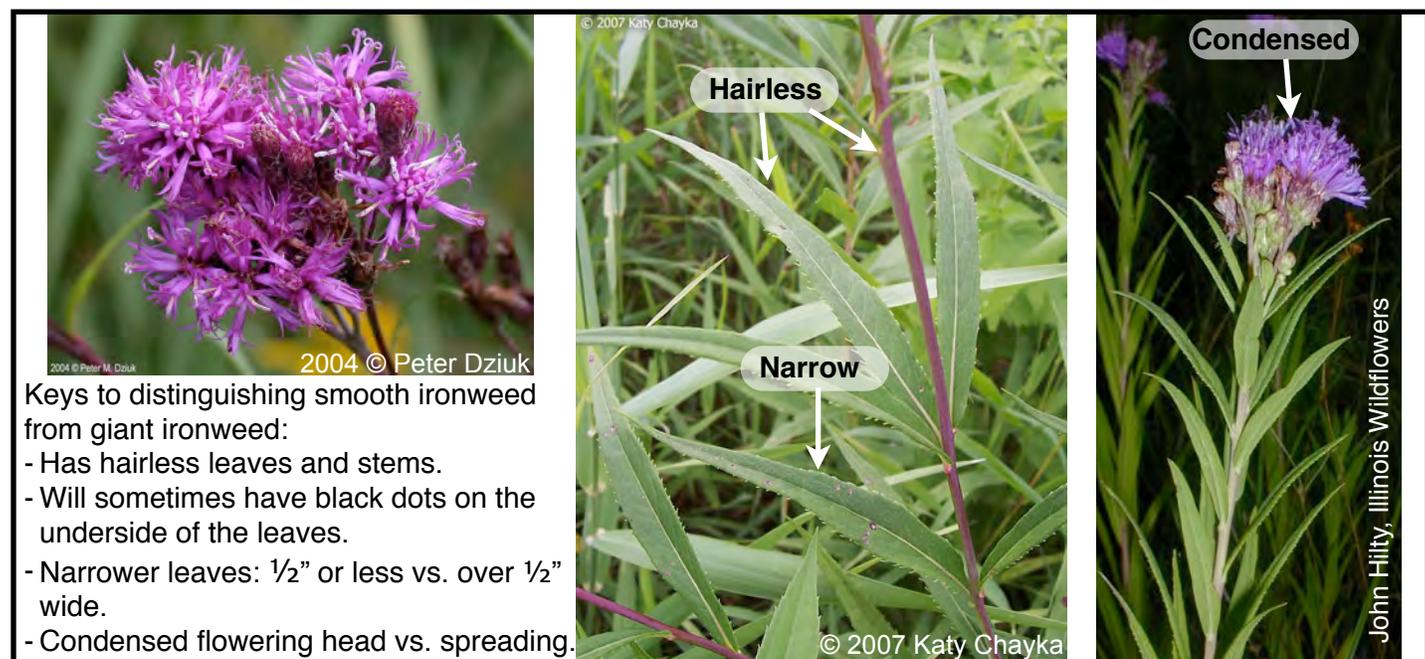
giant ironweed

GIANT IRONWEED COULD BE CONFUSED WITH:

Vernonia missurica - Missouri ironweed



Vernonia fasciculata - smooth ironweed



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

Veronicastrum virginicum

Culver's root



[1]

Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					X	X	X	X			

Plant Characteristics:Duration: PerennialType: HerbSize: 3-6' tallLeaf: 3-7 whorled; up to 6" long and 1½" wide; toothed with hairy undersides, tapering to a point at both ends and either with a short petiole or growing directly on the stem. May turn yellowish green in bright sunlight or during a drought.Stem: Round, smooth, and unbranched except near the inflorescence.Flower: Upper stems terminate in white spikes of flowers up to 8" long. Each tubular flower is about ¼" long with 2 brown or yellow stamens exerted, blooming from bottom to top. No scent. Several spikes in whorls surround the longer main spike, resembling a candelabrum.Seed collection**: Late August-Late September [2]**What it can be confused with:**

Culver's root is quite a distinct plant on the landscape with both inflorescence and mature seed-heads being readily identified. Due to their whorled serrate, lanceolate leaves, young plants that have yet to form inflorescence can look similar to some *Eutrochium* spp. but are easily differentiated once the inflorescence forms (see *Eutrochium maculatum* example below). Mature seed pods can look somewhat similar to *Verbena* spp. (such as the *Verbena hastata* example below) but *Verbena*'s opposite leaves and square stem cannot be mistaken for the whorled leaves and round stem of *V. virginicum*.

Known Pollinators:

Bumble bees, other native bees, honey bees, sphecid wasps, syrphid flies, butterflies, and moths. [3,4]

Larval Host: Culver's root borer moths.

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 204.

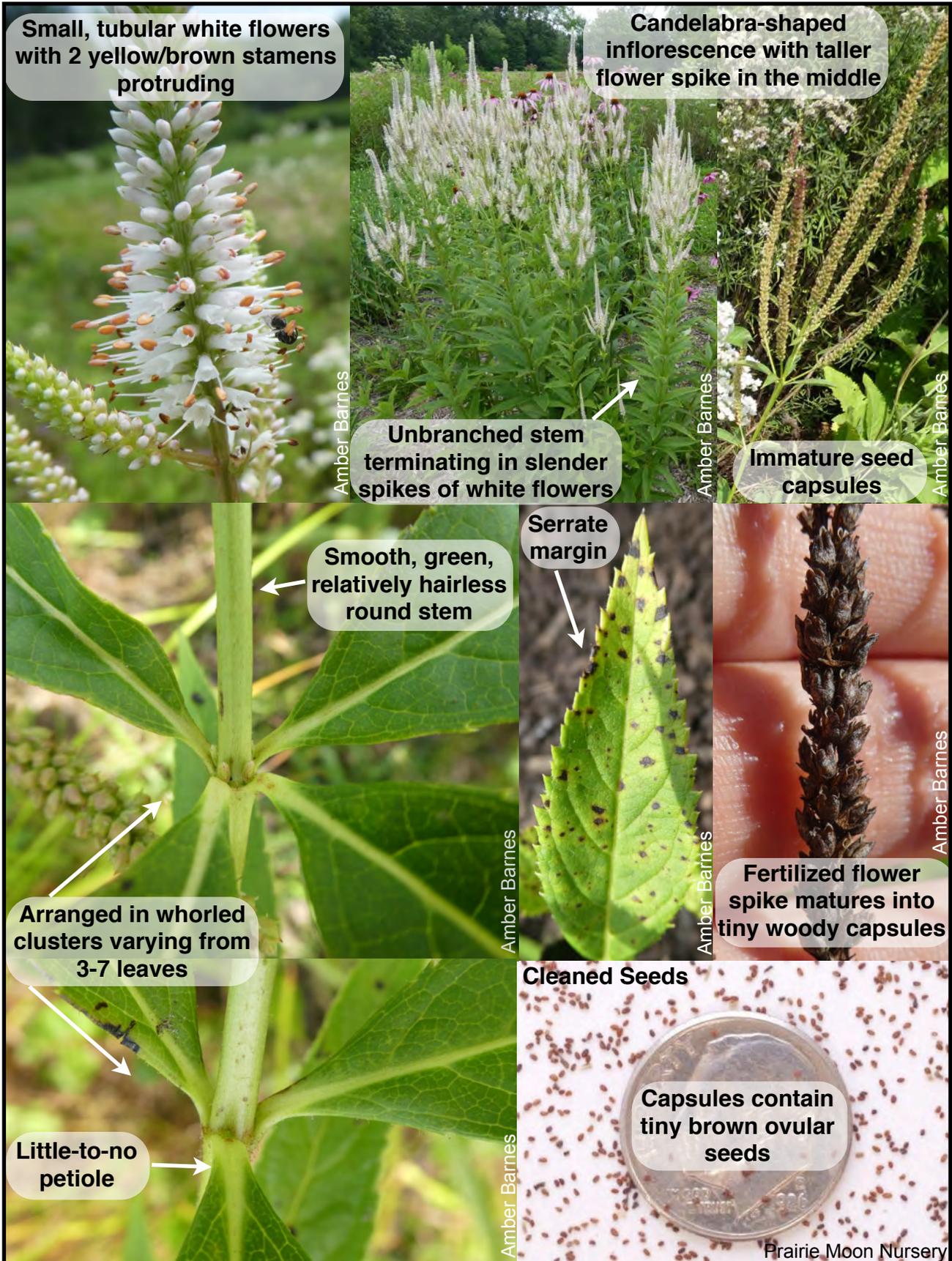
[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] <https://www.illinoiswildflowers.info/prairie/plantx/culverx.htm>

[4] https://www.wildflower.org/plants/result.php?id_plant=VEV14

Veronicastrum virginicum

Culver's root



Veronicastrum virginicum

Culver's root

CULVER'S ROOT COULD BE CONFUSED WITH:

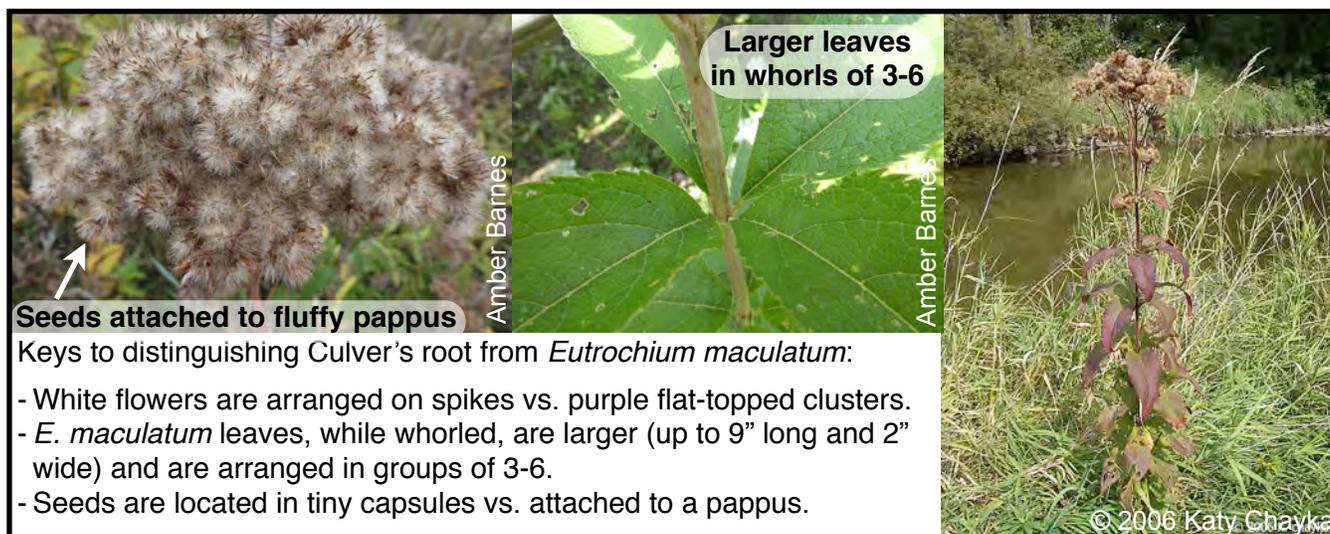
Verbena hastata - blue vervain



Keys to distinguishing Culver's root from *Verbena hastata*:

- Flowers are white vs. blue/purple.
- Flower spike arrangement: Larger main spike surrounded by smaller spikes vs. a series of similarly-sized flower spikes.
- *V. hastata* has larger, rectangular-shaped seeds.
- Round stem vs. square stem.
- Whorled leaves vs. oppositely arranged leaves.

Eutrochium maculatum - spotted joe-pye weed



Keys to distinguishing Culver's root from *Eutrochium maculatum*:

- White flowers are arranged on spikes vs. purple flat-topped clusters.
- *E. maculatum* leaves, while whorled, are larger (up to 9" long and 2" wide) and are arranged in groups of 3-6.
- Seeds are located in tiny capsules vs. attached to a pappus.



Special thanks to: Project Wingspan's additional core partners - Michigan State University, Michigan DNR, and Pennsylvania DOT and our sponsor - Commonwealth Edison

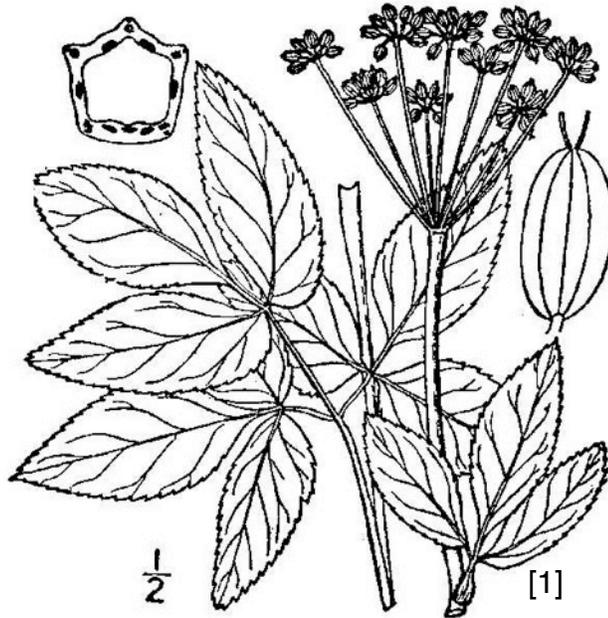
Zizia aurea

golden Alexander

Other common names include: golden zizia



2003 © Peter M. Dziuk



Bloom Period:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			X	X	X						

Plant Characteristics:

Duration: Perennial

Type: Herb

Size: 2 ½' tall

Leaf: Alternate, compound leaves with 3 or 5 leaflets; hairless, shiny, and medium green; 3" long and 2" wide; toothed margins. Lower leaves with long petioles (leaf stem); larger leaflets with 1-2 cleft lobes.

Stem: Forming occasional, lateral stems; light green, hairless, and shiny.

Flower: Upper stems terminate in compound umbels of yellow flowers, measuring 2-3" across and consisting of 12 umbellets of 21 flowers each. Each flower is about 1/8" wide, consisting of 5 incurved yellow petals, 5 stamens, and a pistil. No floral scent.

Seed collection**: Early August - Mid September [2]

What it can be confused with:

Golden Alexander is sometimes confused with wild parsnip (*Pastinaca sativa*) and yellow meadow parsnip (*Thaspium trifoliatum aureum*). Wild parsnip blooms later, is taller, and has more leaflets in each leaf than golden Alexander. It can be distinguished from yellow meadow parsnip due to the parsnip's short pedicel on the central flowers of each umbellet, the winged seeds, and simple rather than trifoliate basal leaves. [3]

Known Pollinators:

Native bees, wasps, bumblebees, butterflies, and true bugs. [3]

Larval Host: Black swallowtail butterfly, Ozark swallowtail butterfly, and rigid sunflower borer moth. [3]

** Seed collection times will vary due to location and weather conditions during the growing season. This is a general time seed may be ready, locations will need to be scouted to get a more accurate timetable for each location.

[1] USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 3: 641.

[2] <http://pleasantvalleyconservancy.org/seedcollectingtimes.html>

[3] http://www.illinoiswildflowers.info/prairie/plantx/gld_alexanderx.htm

Zizia aurea

Golden Alexander



Dan Tenaglia, Missouri Plants



Odd-pinnate compound leaves

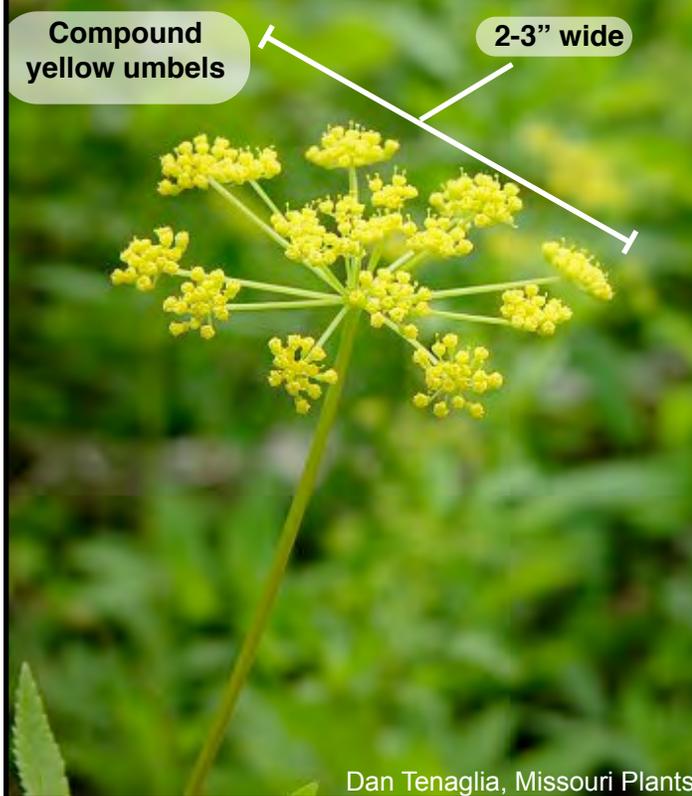
3-5 leaflets

John Hilty, Illinois Wildflowers



Smooth, hairless stem

John Hilty, Illinois Wildflowers



Compound yellow umbels

2-3" wide

Dan Tenaglia, Missouri Plants



Mature seeds

Amber Barnes



Immature seeds

2008 © K. Chayka



Cleaned seeds

Prairie Moon Nursery

Zizia aurea

golden Alexander

GOLDEN ALEXANDER COULD BE CONFUSED WITH:

Thaspium trifoliatum aureum - yellow meadow parsnip



Pastinaca sativa - wild parsnip



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