

Connecticut Native Meadow Seedling & Plant Identification Guide

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Interest in pollinator health has grown exponentially over the last decade. Pollinator species have declined in population due to multiple factors - most importantly, the loss of their natural habitats and lack of forage opportunities.

Home gardeners and green industry professionals can improve pollinator health by increasing the amount and diversity of native plants in managed landscapes. The restoration and improved health of our Connecticut ecosystems will support a more diverse variety of beneficial insect and other animal species.

Meadows are a viable option to support pollinator health by expanding the use of native plants within the landscape. A meadow is composed of grasses and native wildflowers, becoming aesthetically pleasing, functional, and self-sustaining over time. Native meadow plants are resilient, have adapted to the regional climate, and can survive adverse conditions. Meadows that are incorporated successfully into property management programs reduce maintenance expenses over time. While the first year of management requires attention and effort, the installation of a meadow can reduce labor and energy inputs associated with repeated mowing of expansive turfgrass areas, as well as challenging maintenance of slopes and uneven terrain.

In 2022, a demonstration meadow project was initiated at the Plant Science and Landscape Architecture Research Facility in Storrs, CT to serve as an educational resource and to evaluate meadow establishment practices, planting methods, and weed management strategies. **This guide was developed to support the identification of pollinator meadow plants from germination to maturity.** Seedling identification can help distinguish weeds that germinate in the seedbed from the desired meadow plants.

Listed are descriptions and photographs of plant species selected for the meadow demonstration project. Identification characteristics are described for the young seedling stage where there is significant difference from the mature plant.

All plants are (*unless otherwise noted*):

- **Native to northeastern U.S.**
- **Perennial**, and will generally bloom in the **SECOND** year, when grown from seed.
- Hardy in the state of CT (USDA zones 5b to 7a).

See UConn's [Native Plant and Sustainable Landscaping Guide](#) for additional species to include in a meadow.

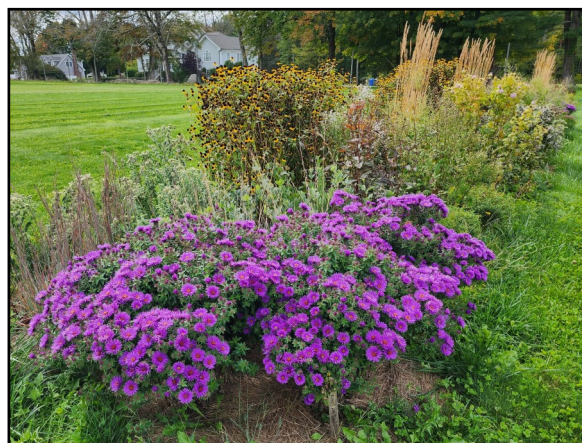


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<i>Coreopsis verticillata</i>	threadleaf coreopsis
<i>Echinacea purpurea</i>	purple coneflower
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<i>Liatris spicata</i>	blazing star
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<i>Penstemon digitalis</i>	tall white beardtongue
<i>Pycnanthemum tenuifolium</i>	slender mountain mint
<i>Rudbeckia hirta</i>	black-eyed Susan
<i>Senna hebecarpa</i>	wild senna
<i>Solidago bicolor</i>	white goldenrod
<i>Solidago nemoralis</i>	gray goldenrod
<i>Symphyotrichum laeve</i>	smooth blue aster
<i>Symphyotrichum novae-angliae</i>	New England aster
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EXTENSION

Bloom Time and Pollinators Supported by Meadow Species



= butterflies and moths



= bees



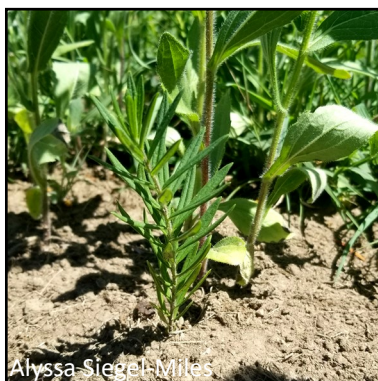
= birds

Botanical Name	Common Name	Flowering Time	Pollinators supported
<i>Zizia aurea</i>	golden Alexanders	May-June	
<i>Baptisia australis</i>	blue false indigo	May-June	
<i>Tradescantia ohiensis</i>	Ohio spiderwort	May-July	
<i>Oenothera fruticosa</i>	narrow-leaved sundrops	May-July	
<i>Penstemon digitalis</i>	tall white beardtongue	May-July	
<i>Coreopsis lanceolata</i>	lanceleaf coreopsis	May-July	
<i>Asclepias tuberosa</i>	butterfly weed	June-August	
<i>Echinacea purpurea</i>	purple coneflower	June-August	
<i>Heliopsis helianthoides</i>	oxeye sunflower	June-August	
<i>Monarda fistulosa</i>	bee balm	June-September	
<i>Chamaecrista fasciculata</i>	partridge pea	June-September	
<i>Pycnanthemum tenuifolium</i>	slender mountain mint	June-September	
<i>Rudbeckia hirta</i>	black-eyed Susan	June-September	
<i>Coreopsis verticillata</i>	threadleaf coreopsis	June-September	
<i>Liatris spicata</i>	blazing star	July-August	
<i>Senna hebecarpa</i>	wild senna	July-August	
<i>Solidago bicolor</i>	white goldenrod	July-October	
<i>Symphotrichum novae-angliae</i>	New England aster	August-September	
<i>Symphotrichum laeve</i>	smooth blue aster	August-October	
<i>Solidago nemoralis</i>	gray goldenrod	August-November	
<i>Symphotrichum oblongifolium</i>	aromatic aster	September-November	

Connecticut Native Meadow Seedling Identification Chart

Leaf Arrangement	Simple or Compound	Leaf Characteristics	Botanical Name	Common Name
Alternate	Simple	Narrow; pointed	<i>Asclepias tuberosa</i>	butterfly weed
Alternate	Compound (pinnate - trifoliolate)	Obovate; blue-green	<i>Baptisia australis</i>	blue false indigo
Alternate	Simple	Spatulate; hairy	<i>Solidago bicolor</i>	white goldenrod
Alternate	Simple	Elliptic or lanceolate; taper to narrow petioles; hairy	<i>Solidago nemoralis</i>	gray goldenrod
Alternate (leaflets opposite)	Compound (pinnate)	4-9 pairs of leaflets, which lay flat; narrow, linear-oblong; sensitive to touch	<i>Chamaecrista fasciculata</i>	partridge pea
Alternate (leaflets opposite)	Compound (pinnate)	2-4 pairs of leaflets, some face upright; oblong or elliptic; prominent midvein	<i>Senna hebecarpa</i>	wild senna
Basal rosette (opposite when mature)	Simple	Lanceolate; some deeply lobed, appearing compound	<i>Coreopsis lanceolata</i>	lanceleaf coreopsis
Basal rosette (opposite when mature)	Simple	Start round, mature to lanceolate-elliptic	<i>Oenothera fruticosa</i>	narrow-leaved sundrops
Basal rosette (opposite when mature)	Simple	Oval with petiole; purple-red margins	<i>Penstemon digitalis</i>	tall white beardtongue
Basal rosette (when mature, mostly alternate)	Simple	Ovate to lanceolate; long petioles	<i>Echinacea purpurea</i>	purple coneflower
Basal tuft (grass-like) (alternate when mature)	Simple	Linear, narrow, sessile, no hairs, prominent midvein	<i>Liatris spicata</i>	blazing star
Basal rosette (alternate when mature)	Simple	Oval, hairy, with petiole	<i>Rudbeckia hirta</i>	black-eyed Susan
Basal rosette (alternate when mature)	Simple	Ovate or lanceolate; long petioles; bluish	<i>Symphyotrichum laeve</i>	smooth blue aster
Basal rosette (alternate when mature)	Simple	Oval; sessile; hairy	<i>Symphyotrichum novae-angliae</i>	New England aster
Basal rosette (alternate when mature)	Simple	Oblanceolate; sessile; bluish	<i>Symphyotrichum oblongifolium</i>	aromatic aster
Basal rosette (alternate when mature)	Simple	Linear, sessile, long thin hairs, sticky sap; appears grass-like	<i>Tradescantia ohioensis</i>	Ohio spiderwort
Basal rosette (alternate when mature)	Compound (pinnate - trifoliolate)	Round leaves, with petiole; zigzag margins	<i>Zizia aurea</i>	golden Alexanders
Opposite	Simple	Triangular or heart shaped; serrated margins; prominent midvein	<i>Heliopsis helianthoides</i>	oxeye sunflower
Opposite	Simple	Serrated, with petiole, visible midvein; red-purple underside; square stem	<i>Monarda fistulosa</i>	bee balm
Opposite	Simple	Lanceolate; narrow	<i>Pycnanthemum tenuifolium</i>	slender mountain mint
Whorled	Compound (pinnate)	Stemless, thread-like, divided into three segments	<i>Coreopsis verticillata</i>	threadleaf coreopsis

Asclepias tuberosa — butterfly weed



Important monarch butterfly larval host plant.

Readily self-seeds. Good soil drainage is essential. Difficult to transplant - taproot. Perennial.

- Attracts butterflies, moths, and bees.
- Soil moisture: dry to medium.
- Full sun. Deer resistant.

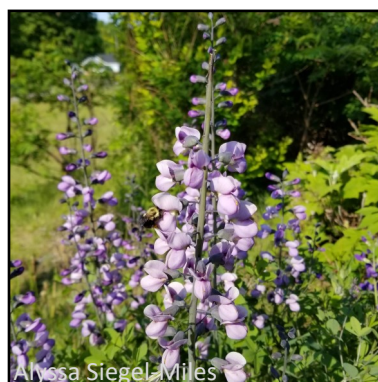
Identification

Seedling: Thick central stalk. Waxy, narrow, pointed, dark green leaves.

Mature: Height: 1-2.5'; Spread: 1-1.5'.

- **Leaves:** Oblong or lanceolate; glossy top leaf surface, lighter green and hairy on underside; toothless margins.
- **Stems:** Multiple, ascending, becoming hollow and hairy as the plant matures. Does not have milky sap typical of other milkweeds.
- **Flowers:** Orange umbels (June-August).
- **Fruit:** Seed pods (August-September) have ornamental value (*Figure 1*).

Baptisia australis — blue false indigo



Deep tap root and extensive root system.

Tolerates drought and infertile soils. Does not respond well to transplanting. Attractive seed pods in fall. Perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry to medium.
- Part to full sun. Deer resistant.

Identification

Seedling: 3 leaves compounded at distal point.

Mature: Height and spread: 3-4'.

- **Leaves:** Trifoliate, compound obovate, blue-green; alternate, with smooth edges.
- **Stems:** Considerable branching.
- **Flowers:** Blue or purple, pea-like, dense clusters on vertical spikes (May-June).
- **Fruit:** Ornamental green seed pods (*Figure 2*); mature to black. Good for dried flower arrangements.

Chamaecrista fasciculata — partridge pea



Butterfly larval host plant. Legume (fixes nitrogen; improves soil fertility). Used for erosion control. Seed in late March-May. Readily self-seeds.

Annual.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry to medium. Part to full sun.

Identification

Seedling: Thin, light green, erect stems.

Mature: Height and spread: 1-3'.

- **Leaves:** Pinnately-compound with small, yellow-green leaflets that are sensitive to touch. Up to 20 leaflets per leaf.
- **Stems:** Become reddish-brown as the plant matures. Tiny, reddish-orange glands on petiole produces nectar that attract insects.
- **Flowers:** Yellow, pea-like (June-September).
- **Fruit:** Seed pods in fall, initially hairy green (*Figure 3*); become hairless and dark brown. Good food source for gamebirds, songbirds.



Figure 3

Coreopsis lanceolata — lanceleaf coreopsis



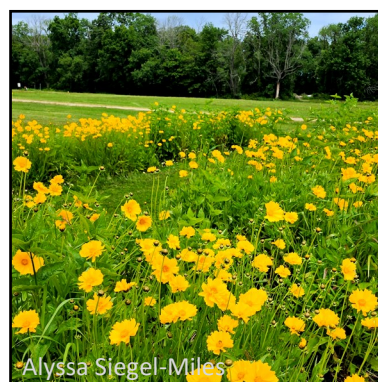
Butterfly, moth larval host plant. Grows well in heat and humidity. Drought tolerant. Forms extensive colonies; aggressive self-seeder. Dead-heading will extend flowering. Short-lived perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry to medium.
- Part to full sun. Deer resistant.

Identification

Mature: Height and spread: 1-2'.

- **Leaves:** Lanceolate, some deeply lobed, appearing almost compound. Basal rosette. Sparsely hairy. Opposite leaf arrangement in maturity. Leaves mostly in bottom half.
- **Stems:** Slender; multiple from base, growing in small clumps.
- **Flowers:** Yellow ray petals with light yellow central disc that gets darker with maturity, petals notched at tip (May-July).



Coreopsis verticillata — threadleaf coreopsis



Attracts beneficial syrphid flies, yellow-collared scape moth. Drought tolerant. Good plant for infertile, dry soils. Grows in dense, bushy clumps. Reblooms in September if sheared lightly in August. Self-seeds. Perennial.

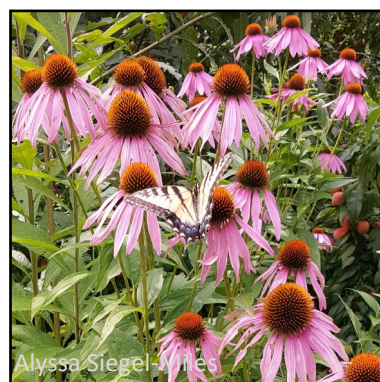
- Attracts butterflies, moths, and bees.
- Soil moisture: dry to medium.
- Part to full sun. Deer resistant.

Identification

Mature: Height: 2-2.5'; Spread: 1.5-2'

- **Leaves:** Stemless, thread-like, dark-green, pinnately compound; divided into three segments; whorled.
- **Flowers:** loose clusters (cymes) of yellow ray petals with central disks; petals without notching (June-September).
- **Stems:** thin, green.
- **Fruit:** Dark achenes (July-October).

Echinacea purpurea — purple coneflower



Seeds are a good food source for birds. Long summer bloom. Multi-season interest. Mixes well with grasses. Drought resistant; tolerates infertile soil conditions. Self-seeds. **Native to central to southeastern United States.** Perennial.

- Attracts butterflies, moths, bees, and birds.
- Soil moisture: dry to medium.
- Part to full sun. Deer resistant.

Identification

Seedling: Ovate to lanceolate leaves, on long petioles, grows from a basal rosette.

Mature: Height: 2-5'; Spread: 1.5-2'

- **Leaves:** Thick, rough, lanceolate or obovate; smaller toward the top of the stem. Margins have widely spaced teeth. Petioles are short and slightly winged.
- **Flowers:** Pink-purple ray petals, orange-brown disk flowers in center (June-August).

Heliopsis helianthoides — oxeye sunflower



Alyssa Siegel-Miles



Alyssa Siegel-Miles

Seeds are good food source for birds. Readily self-seeds. Long summer bloom. Deadhead to extend bloom season. Short-lived perennial.

- Attracts butterflies, moths, birds (including hummingbirds), and bees.
- Soil moisture: dry to medium. Full sun.

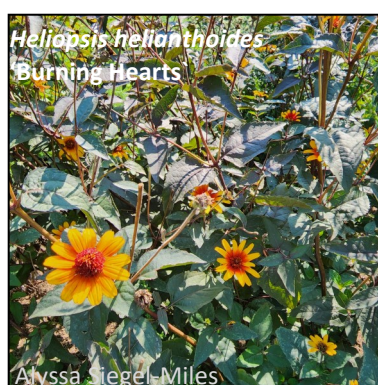
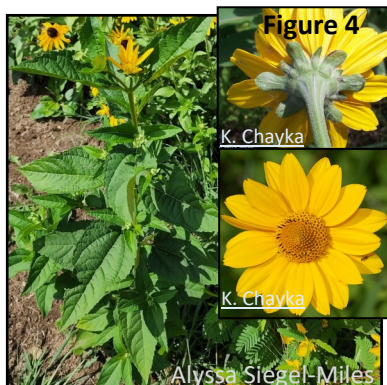
Identification

Seedling: Cotyledons round, margins entire.

Leaves are simple, elongated triangle, with petiole, serrated margins, leaf hairs, and prominent midvein.

Mature: Height: 3-6'; Spread: 2-3'.

- **Leaves:** Paired, cordate (heart-shaped), with serrated edges and a coarse texture.
- **Stems:** Hairy, stiff, branched; oval in cross section.
- **Flowers:** Orange-yellow ray petals with brown or golden disks (June-August). Alternating long and short bracts surround outer base of flower ([Figure 4](#)).



Liatris spicata — blazing star



Seeds are a good food source for songbirds (e.g., goldfinches). Flower stalk adds attractive architectural interest. Drought tolerant. Intolerant of wet soils in winter. Reproduces via corms or seeds. Perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry to medium. Full sun.

Identification

Seedling: Cotyledons oval, margins entire.

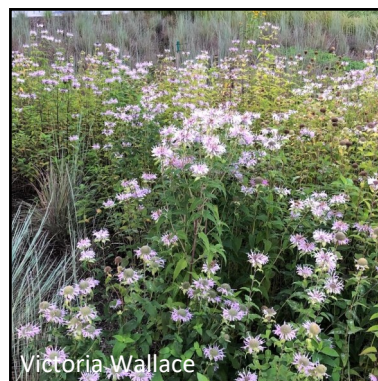
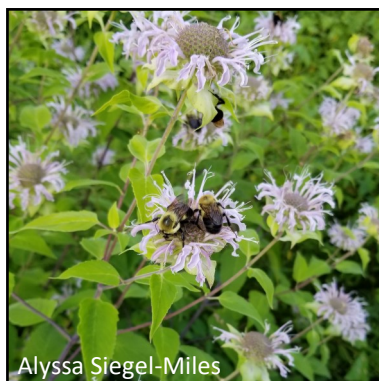
Simple, linear, sessile leaves, no hairs, prominent midvein. One or more stalks emerge from a basal tuft.

Mature: Height: 2-4'; Spread: 0.75-1.5'

- **Leaves:** Narrow, grass-like, medium green, alternate; smaller higher up the stalk. Glabrous to sparsely hairy. Margins entire.
- **Stems:** Green-purplish.
- **Flowers:** Red-purple, dense, narrow spike; blooms from the top down (July-August).



Monarda fistulosa — bee balm



Tubular flowers attract hummingbirds. Long summer bloom. Drought tolerant. Requires good air circulation to prevent foliar diseases; susceptible to powdery mildew. Perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry to medium.
- Part to full sun. Deer resistant.

Identification

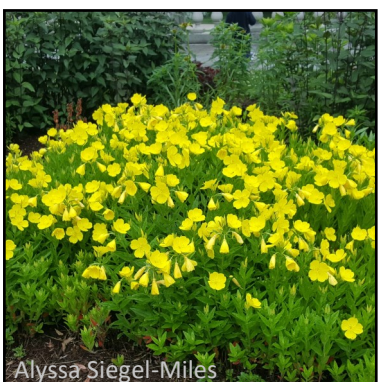
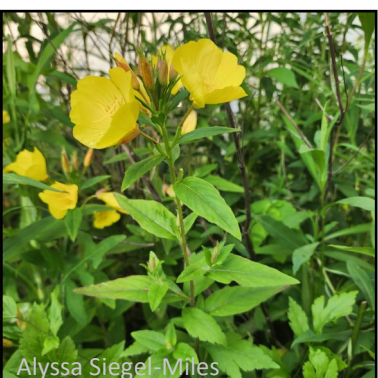
Seedling: Cotyledons round, margins entire.

Leaves simple, serrated, no hairs; with petiole, visible midvein, red-purple underside.

Mature: Height: 2-4'; Spread: 2-3'.

- **Leaves:** Oblong, opposite, coarsely toothed; rounded at the leaf base, tapering to a point at the tip. Aromatic.
- **Stems:** Reddish-brown, square.
- **Flowers:** Pink-purple, two-lipped, tubular, rest on showy whorl of bracts (June-September).

Oenothera fruticosa — narrow-leaved sundrops



Forms colonies; spreads easily by rhizomes. Propagate by seed and cuttings. Intolerant of wet soils in winter. Perennial.

- Attracts butterflies, moths, birds (including hummingbirds), bees.
- Soil moisture: dry to medium.
- Full sun. Deer and rabbit resistant.

Identification

Seedling: Round leaves, sinuate or undulate margins. Basal rosette.

Mature: Height: 1.5-2.5'; Spread: 1-3'.

- **Leaves:** Basal leaves are lanceolate, 1-4" long; margins entire to slightly wavy; moderately to densely hairy. Stem leaves are opposite, shorter (.75-1.5"), narrow elliptical.
- **Stems:** Hairy with green or reddish hue.
- **Flowers:** Yellow, cup-shaped (May-July).
- **Fruit:** Distinctive club-shaped seed capsules evident from June-November.

Penstemon digitalis — tall white beardtongue



Figure 5

Attracts hummingbirds. Late spring bloom. Drought tolerant. Quick grower. Exhibits clumping. Root rot may occur in wet, poorly-drained soils. Perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry to medium.
- Full sun. Deer resistant.

Identification

Seedling: Cotyledons oval, margins entire.

Simple, oval leaves from basal rosette; with petiole, entire margins, prominent midvein and purple-red margins.

Mature: Height 3-5'; Spread: 1.5-2'.

- **Leaves:** Basal leaves elliptic; stem leaves lance or oblong, opposite.
- **Flowers:** White, tubular in panicles; purple streaks direct pollinators (May-July).
- **Stems:** Slender, smooth, green to purple.
- **Fruit:** Ornamental seed capsules (*Figure 5*).

Pycnanthemum tenuifolium — slender mountain mint



Excellent nectar source for pollinators. Appears delicate, fine-textured. Drought tolerant. Self-seeds. Spreads quickly, but not aggressively. Perennial.

- Attracts butterflies, moths, and bees.
- Soil moisture: dry to medium.
- Part to full sun.

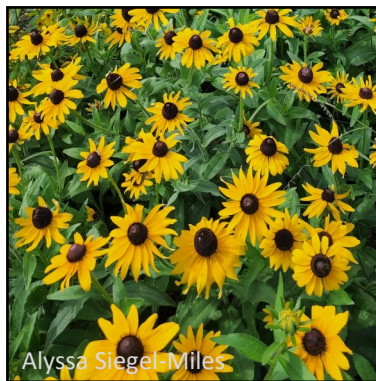
Identification

Seedling: Lanceolate leaves, becoming more slender as plant matures.

Mature: Height 2-4'; Spread: 2-3'.

- **Leaves:** Aromatic, opposite; numerous narrow leaflets. Branching occurs at the leaf axils.
- **Stems:** Smooth, square, purple-red.
- **Flowers:** White with purple spotting, borne at the top of the stems (June-September).
- **Fruits:** Nutlets. Ornamental dark gray seed heads provide fall-winter interest (*Figure 6*).

Rudbeckia hirta — black-eyed Susan



Use for early meadow establishment. Fast grower. Self-seeds freely. Long summer bloom extends into fall. Drought and salt tolerant. Susceptible to powdery mildew. Avoid overfertilization (will produce fewer flowers). **Biennial.**

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry to medium.
- Part to full sun. Moderate deer resistance.

Identification

Seedling: Cotyledons oval, margins entire; basal rosette; simple, entire, oval, hairy leaves with petiole and prominent midvein.

Mature: Height: 2-3'; Spread: 1-2'.

- **Leaves:** Narrow, oblong, alternate, hairy; toothed or almost smooth margins. Lower leaves larger than top. Winged petioles.
- **Flowers:** Yellow ray petals with brown, domed center disks (June-September).

Senna hebecarpa — wild senna



Host plant for sulphur butterflies. Versatile: attractive flower, foliage, and seed pods in fall and winter (*Figure 7*). Good fall color. Horizontal root system provides strength against winds. Can be used as a hedge. Legume (fixes nitrogen). Perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: medium.
- Full sun. Deer resistant.

Identification

Mature: Height 4-6'; Spread: 3-4'.

- **Leaves:** Compound pinnate in pairs of 5-10, gray-green, alternate; leaflets oblong or elliptic with a pointed tip. Stipules and small, club-shaped gland at base of petiole.
- **Stems:** Light green; slightly hairy at top.
- **Flowers:** Yellow, becoming white as they mature (July-August).
- **Fruit:** Dark brown seed pods.

Solidago bicolor — white goldenrod



Butterfly larval host plant. Seeds are a desirable food source for birds. Showy flower. Long summer bloom extends into autumn. Drought and salt tolerant. Exhibits clumping. Perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry.
- Part to full sun. Deer resistant.

Identification

Seedling: Spatulate leaves.

Mature: Height: 2-3'; Spread: 1-2'.

- **Leaves:** Hairy, elliptical; basal leaves shallowly toothed and with grayish down.
- **Stems:** hairy, grayish.
- **Flowers:** Spikes of white ray petals with a yellow center (July-October). Only goldenrod with white rays in the eastern U.S.

Solidago nemoralis — gray goldenrod

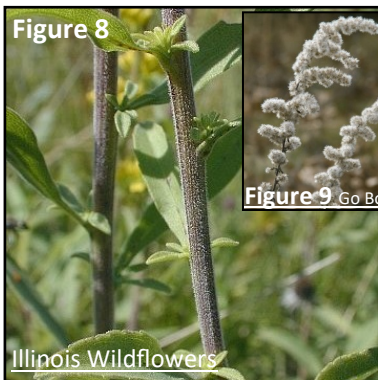


Figure 9 Go Botany

Blooms into late autumn. Drought resistant. Self-seeds and spreads rapidly, but not overly aggressively. Exhibits clumping. Showy flower. Perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry.
- Part to full sun. Deer resistant.

Identification

Mature: Height and spread: 0.5-2'.

- **Leaves:** Elliptic or lanceolate; taper gradually to narrow petioles; hairy; may be toothed; smaller towards top of stem. Small clusters of secondary leaves often in axils of middle to upper leaves (Figure 8).
- **Stems:** Unbranched, curving at flower tip; hairy; reddish or grayish green.
- **Flowers:** Yellow (August-November).
- **Fruit:** Achenes with hairy tufts (Figure 9).

Symphiotrichum laeve — smooth blue aster



Butterfly larval host plant. Autumn bloom.

Fast grower; self-seeds. Susceptible to powdery mildew. Drought tolerant. Perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry to medium.
- Full sun.

Identification

Seedling: Basal rosette of ovate or lanceolate leaves with long petioles.

Mature: Height: 2'-4'; Spread: 1'-2'.

- **Leaves:** Alternate, simple, bluish; lance to egg-shaped; partly clasping stems. Smaller and closer together towards top of stem.
- **Stems:** Light green-light blue or purple, glabrous, and often glaucous.
- **Flowers:** Panicle of blue or purple flower-heads with yellow disks (August-October).

Symphiotrichum novae-angliae — New England aster



Butterfly larval host plant. Nectar source for monarch butterflies. Autumn bloom.

Self-seeds. Showy flower. Requires good air circulation to prevent foliar diseases. Perennial.

- Attracts butterflies, moths, birds, and bees.
- Wide range of soil moisture tolerance.
- Full sun. Deer resistant.

Identification

Seedling: Cotyledons oval, margins entire. Simple, oval, sessile, hairy leaves.

Mature: Height: 3-6'; Spread: 2-3'.

- **Leaves:** Oblong or lanceolate, hairy, alternate; dense. Clasp stem at base of leaf. Smaller towards top of stem. Smooth margins; rough texture.
- **Stems:** Hairy. Central stem, with some branching at top.
- **Flowers:** Composite, in clusters of purple-blue ray petals with yellow disks (August-September).

Symphotrichum oblongifolium — aromatic aster



Butterfly larval host plant. Showy bloom through late autumn. Resistant to drought and rabbit damage. Can be top heavy; may benefit from spring pruning or staking. Spreads via seed. Perennial.

- Attracts butterflies, moths, birds, and bees.
- Soil moisture: dry to medium.
- Full sun. Deer resistant.

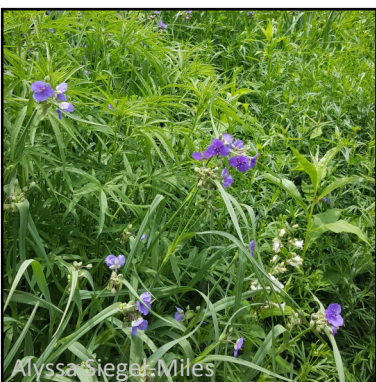
Identification

Seedling: Basal rosette.

Mature: Height and spread: 1-3'.

- **Leaves:** oblanceolate, bluish, sessile, slightly hairy, clasp, alternate. Densely crowded. Smaller towards top of stem. Aromatic.
- **Stems:** Stiff, slender, slightly hairy; dense branching, appears bushy. Lower stems turn brown and slightly woody with age.
- **Flowers:** Compound; purple ray petals with yellow disks that become reddish-purple.

Tradescantia ohiensis — Ohio spiderwort



Showy flower. Self-seeds aggressively. Prefers moist, acidic, sandy soil, but is highly adaptable. Tolerates part shade, but produces fewer blooms. Forms clumps. Can be propagated by division and cuttings. Perennial.

- Attracts butterflies, moths, and bees.
- Soil moisture: dry to medium.
- Part to full sun.

Identification

Seedling: Simple, linear, sessile leaves with entire margins, long thin hairs, and sticky sap. Appears grass-like.

Mature: Height: 2-3'; Spread: 1-2.5'

- **Leaves:** Simple, dark blue-green, linear, wider at base. Parallel venation. Lengthwise groove in center. Base of leaf clasps stem.
- **Stems:** Smooth; hairless; may be purplish.
- **Flowers:** Blue, tri-petaled (May-July); grow out of the leaf axil.

Zizia aurea — golden Alexanders



Perennial. Showy flowers. Self-seeds. Beautiful *en masse*. Can be used in meadows, rain gardens or border plantings. Grows in colonies. Tolerates dry soils.

- Attracts butterflies, moths, and bees.
- Soil moisture: medium; tolerates wide range.
- Part to full sun.

Identification

Seedling: cotyledons strap-like, margins entire.

Simple, round leaves, with petiole, zigzag margins, no hairs.

Mature: Height: 1.5-2'; spread: 1-2'

- **Leaves:** Pinnately compound, trifoliolate, serrated margins, with petiole. Purplish hue in the fall. Stems light green, hairless, shiny.
- **Flowers:** Yellow compound umbel (May-June).
- **Fruit:** Green capsules early to mid summer;

Glossary

Achene: a small, dry one-seeded fruit that does not open at maturity.

Alternate: leaf pattern arrangement with one leaf per node.

Annual: completes life cycle from seed to mature plant in one year.

Compound leaf: divided into several leaflets.

Cordate: heart-shaped leaf.

Cotyledon: an embryonic leaf in seed-bearing plants, one or more of which are the first leaves to appear from a germinating seed.

Distal point: far side from the place of attachment (shoot or root).

Elliptic: oval, with the widest part at or near the middle.

Entire: with a continuous, untoothed margin (leaf description).

Glabrous: smooth; not hairy or pubescent.

Glaucous: greyish or bluish waxy coating; usually rubs off easily.

Lanceolate: narrowly ovate. Wider at the base than at the middle, tapering toward the apex, at least 3 times as long as wide.

Larval host: a plant on which butterfly or moth females lay eggs, so that their larvae can then feed on the plant after hatching. Many species require specific plants for their larvae to feed on to survive.

Margin: edge of a leaf.

Nectary: plant gland that secretes nectar, usually located at base of flower stamens; draws pollinators into contact with the pollen.

Node: the joint of a stem; region of attachment of leaves to a stem.

Oblong: longer than broad; sides nearly parallel, rectangular with rounded edges.

Obovate: broader part at apex/above the middle, rather than base.

Ovate: broader at the base; gradually tapering to a rounded tip.

Opposite: leaf arrangement with two leaves per node.

Perennial: lives for more than two years. Returns each year; continues growing until reaching maturity.

Petiole: the stalk between the leaf blade and the stem.

Pinnately compound: divided into smaller leaflets; leaflets arranged on each side of leaf's central stalk/rachis.

Rosette: circular arrangement of leaves; grows from base.

Sessile: stalkless and attached directly at the base (e.g., sessile leaf).

Stipule: small, usually leaflike appendage at base of the petiole, often in pairs.

Serrated: margin notched like a saw, with sharp teeth pointing toward the tip.

Simple leaf: a leaf blade that is all one piece; may be deeply lobed or divided, but not separated in leaflets.

Sinuate: A sinuate margin has shallowly rounded divisions within the same plane of the blade.

Trifoliolate: having three leaves, leaflike parts, or (of a compound leaf) leaflets.

Umbel: an inflorescence, made up of many tiny flowers with stalks of nearly equal length that radiate from a common point to form a flat or rounded flower cluster.

Undulate: an undulate margin has wavy margins that occur above and below the plane of the leaf.

Whorled: three or more equally spaced leaves at a node.

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