

Lower Midwest



# *Native Plant* GARDENING FOR BIRDS, BEES & BUTTERFLIES



Jaret C. Daniels

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# Why You Should Plant a Garden

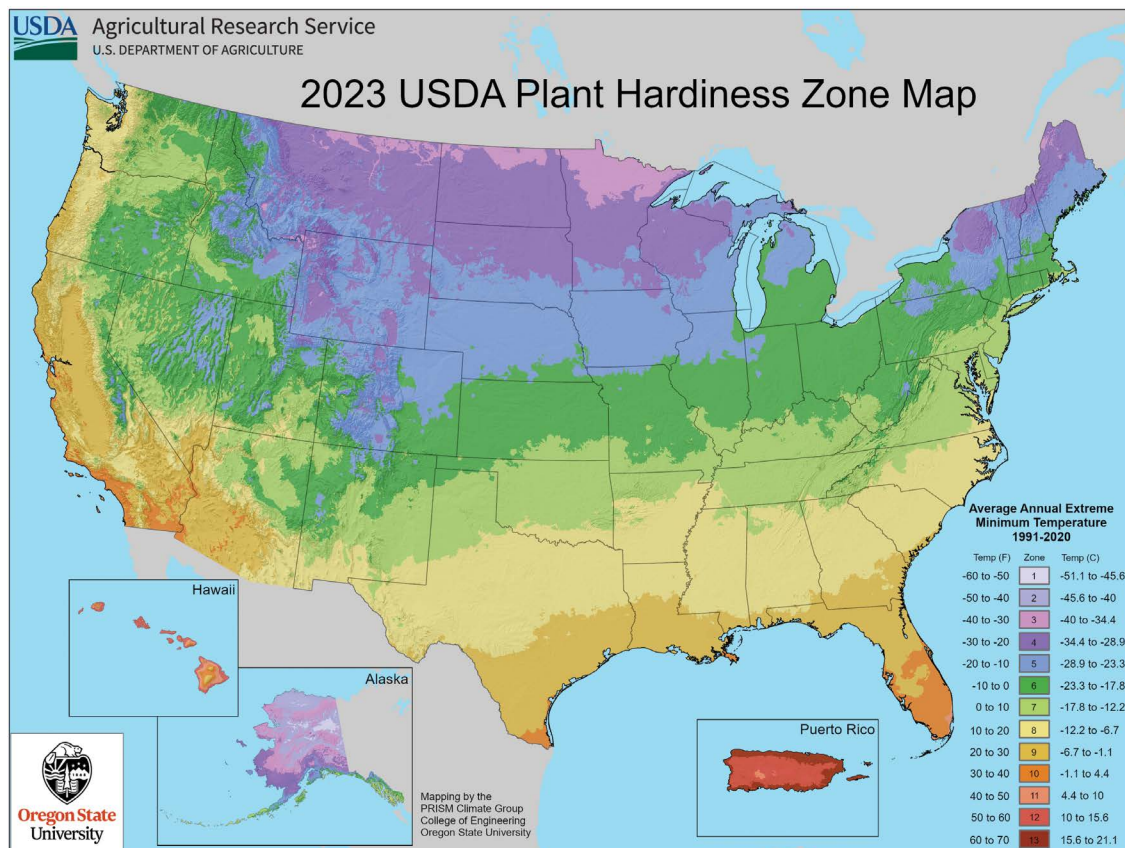
Landscaping with native plants offers numerous benefits. First and foremost, it helps increase habitat and provides critical resources for wildlife. Studies have shown that including native plants helps support a greater abundance and diversity of wildlife. Natives are adapted to the growing conditions, such as soil and climate, of the locations where they naturally occur. As a result, they tend to perform better than nonnative species; have fewer pest or disease problems, and require less water, fertilizer, and general maintenance. Lastly, they provide opportunities for people to connect—or reconnect—with nature.

## FIRST STEP: INVENTORY YOUR YARD

When you plant a garden, it's critical to consider a number of factors, such as light levels and soil conditions, but this isn't as complicated as it might seem at first. In fact, doing just a little homework ahead of time will improve your odds of growing healthy, beautiful plants.

## CHECK YOUR HARDINESS ZONE

An easy first step is to check your hardiness zone. The USDA maintains the **Plant Hardiness Zone Map** (see below and [planthardiness.ars.usda.gov](https://planthardiness.ars.usda.gov)), which can be used to help determine appropriate plants for your climate. It is divided into numbered 10°F increments (further divided into two zones per number), based on average annual extreme

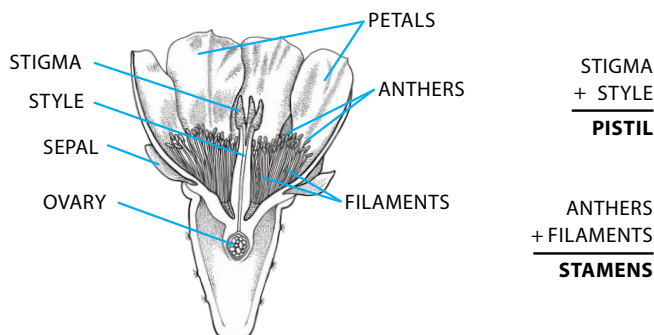


# The Basics of Plant Anatomy

Plants are complex living things. Their typical body plan consists of detailed structures, including leaves, stems, and roots, along with reproductive parts that include flowers, fruits, and seeds. Flowers represent the sexual reproductive organs of a plant. The male organs are called *stamens*; each stamen includes a pollen-bearing *anther* atop an elongated *filament*. The *pis-*

*til* represents the female organ. It includes a *stigma*, which receives and holds pollen and has a sticky surface. The majority of flowering plants that gardeners are familiar with are *bisexual* (or *perfect*, in horticultural parlance), meaning they have flowers with both male and female elements. Other plants bear *unisexual* (or *imperfect*) flowers: *monoecious* plants have both male and female flowers on the same plant; in contrast, *dioecious* plants bear male and female blooms on separate individual plants.

## PARTS OF A FLOWER



## FLOWERS

Flowers are arguably the showiest parts of a plant. In most cases, conspicuous and colorful petals surround the reproductive parts. They help publicize the availability of floral rewards, such as pollen and nectar, to an array of pollinating organisms. All the petals of a flower are collectively called the *corolla*. *Sepals* occur below the corolla. Like petals, they are modified leaves; frequently green in color and relatively small, they help protect the developing flower bud and support the corolla when in bloom. This outermost whorl of flower components is called the *calyx*. In some cases, however, sepals may be large and brightly colored. This typically occurs in flowering plant species that lack petals.

## FLOWER TERMINOLOGY

Botanically speaking, there are many types of flowers, but they can be simplified into five basic types. *Regular flowers* have a round shape, with three or more petals, and they lack a disklike center. *Irregular flowers* are not round but uniquely shaped, with fused petals. *Bell flowers* hang down with fused petals. *Tube flowers* are longer and narrower than bell flowers and point upward. *Composite flowers* (technically a flower cluster) are usually round, compact clusters of tiny flowers that look like they are one larger bloom.



Regular



Irregular



Bell






















Tube



Composite



# Lower Midwest Plants at a Glance

	COMMON NAME	SCIENTIFIC NAME	LIGHT LEVEL	SOUTH HARDINESS ZONE
<b>FULL SUN</b>				
	<b>Aromatic Aster</b> pg. 39	<i>Symphiotrichum oblongifolium</i>	full sun	3a–8b
	<b>Azure Blue Sage</b> pg. 41	<i>Salvia azurea</i>	full sun	5a–9a
	<b>Baldwin's Ironweed</b> pg. 43	<i>Vernonia baldwinii</i>	full sun	6b–9b
	<b>Bearded Beggarticks</b> pg. 45	<i>Bidens aristosa</i>	full sun	5a–9a
	<b>Black-eyed Susan</b> pg. 47	<i>Rudbeckia hirta</i>	full sun	3a–7b
	<b>Bush's Purple Coneflower</b> , pg. 49	<i>Echinacea paradoxa</i>	full sun	3a–9b
	<b>Butterfly Milkweed</b> pg. 51	<i>Asclepias tuberosa</i>	full sun	3a–7b
	<b>Button Eryngo</b> pg. 53	<i>Eryngium yuccifolium</i>	full sun	3b–7b
	<b>Common Milkweed</b> pg. 55	<i>Asclepias syriaca</i>	full sun	3a–7b
	<b>Common Ninebark</b> pg. 57	<i>Physocarpus opulifolius</i>	full sun	2a–7b
	<b>Common Sneezeweed</b> pg. 59	<i>Helenium autumnale</i>	full sun	3a–7b
	<b>Compass Plant</b> pg. 61	<i>Silphium laciniatum</i>	full sun	6b–9a
	<b>Cream Wild Indigo</b> pg. 63	<i>Baptisia bracteata</i>	full sun	3b–9b
	<b>Cup Plant</b> pg. 65	<i>Silphium perfoliatum</i>	full sun	4a–7b
	<b>Dense Blazing Star</b> pg. 67	<i>Liatris spicata</i>	full sun	3a–7b
	<b>Dotted Blazing Star</b> pg. 69	<i>Liatris punctata</i>	full sun	3b–9b
	<b>Golden Tickseed/Plains Coreopsis</b> , pg. 71	<i>Coreopsis tinctoria</i>	full sun	6b–11a
	<b>Green Antelopehorn</b> pg. 73	<i>Asclepias viridis</i>	full sun	5b–10b
	<b>Hoary Vervain</b> pg. 75	<i>Verbena stricta</i>	full sun	3a–7b



Pinkladies, Showy Evening Primrose



Roughleaf Dogwood

# Full Sun



Aromatic Aster



Button Eryngo



Scarlet Globemallow





**Bearded Beggarticks**



**Butterfly Milkweed**



**Common Milkweed**

From Tall Coreopsis (page 127) to Butterfly Milkweed (page 51), some of the plants we associate most with pollinators and hummingbirds thrive in full sun. These plants require at least 6 hours of direct sunlight, but that's the minimum. In many cases, they produce larger and more copious blooms if they have more than 8 hours of sunlight—especially during the afternoon hours, when the sun is at its strongest.



**Dotted Blazing Star**



**Azure Blue Sage**







# Bearded Beggarticks

**Scientific Name** *Bidens aristosa*

**Family** Aster (Asteraceae)

**Plant Characteristics** Upright, herbaceous annual or biennial to 3½ feet in height or slightly more; dark-green compound leaves with three to seven leaflets, lance-shaped to narrowly lance-shaped, each with strongly toothed margins; oppositely arranged on many branched, green-to-purplish stems; leaves become smaller up the plant; bright-yellow, daisy-like flowers with golden centers on long stalks.

**Hardiness Zones** 5a–9a

**Bloom Period** Late summer–fall (August–October)

**Growing Conditions** Full sun and moist-to-wet, organically rich soil.

This is a common, somewhat weedy wildflower of moist meadows, wetland margins, and wet roadside ditches. The fast-growing plants features airy, ferny, dark-green foliage but burst into bloom towards the end of summer and continue into the fall, providing an absolutely stunning late-season display. The abundant, large, resource-rich golden blooms are popular with bees and other foraging pollinators. The resulting spent flower heads produce many small, dark-brown seeds with two needlelike barbs that, like other beggarticks, enable them to stick to clothing or animal fur. Although often annoying, it helps broadly disperse the seed. Bearded beggarticks is probably not well-suited for most garden settings but is best used for naturalizing in larger landscapes with perpetually moist soils and looks particularly gorgeous en masse.

*Butterflies, bees, and many other insect pollinators. Songbirds, waterfowl, and small mammals consume the seeds. Provides cover for wildlife, particularly in and along wetlands.*









# New England Aster

**Scientific Name** *Symphiotrichum novae-angliae*

**Family** Aster (Asteraceae)

**Plant Characteristics** Upright, herbaceous perennial to 5 feet or more in height; rough, green-to-gray-green, narrow lance-shaped leaves with smooth margins, alternately attached to stems; extensive, branched terminal clusters of pink-to-purple, daisy-like flowers with yellow centers.

**Hardiness Zones** 3a–7b

**Bloom Period** Late summer–mid-fall (August–October)

**Growing Conditions** Full sun and organically rich, average-to-moist, well-drained soil.

This stunning perennial is arguably one of our most beautiful native plants and a must-have for any pollinator garden. The sturdy reddish-brown stems are encircled by hairy, distinctively clasping leaves. As autumn approaches, New England aster produces a profusion of magnificent blooms that range in color from deep purple to pink, highlighted by golden-yellow centers. While particularly showy en masse in prairie and meadow landscapes, individual plants or groupings add verticality and bright, rich hues to any cottage garden or perennial bed. For a particularly majestic effect, combine with goldenrods (pg. 113 and 271), black-eyed Susans (pg. 47), sneezeweeds (pg. 59 and 101), and blazing stars (pg. 67, 69, and 91). Beloved by pollinators, it represents a critical late-season resource for migrating monarchs and many other flower-visiting insects.

*Butterflies, bees, and other insect pollinators; serves as a larval host for the pearl crescent butterfly (Phyciodes tharos); many songbirds, game birds, and small mammals consume the seeds.*





Blackhaw



Pale Purple Coneflower



American Wisteria

# Full Sun to Partial Shade



Lemon Beebalm



Eastern Prickly Pear





**Prairie Rose**



**American Witchhazel**

From American Wisteria (page 147) to Cardinalflower (page 161), some pollinator- or wildlife-friendly favorites are somewhat adaptive when it comes to light level, performing well in either full sun or partial shade. These plants can tolerate 3–6 hours of direct sunlight per day but will often bloom more profusely with extended, but not direct, sunlight. Such plants are often good choices for open woodlands, forest margins, or other less-than-full-sun locations in the landscape.



**Purple Milkweed**



**Buttonbush**



**Black Willow**







# American Wisteria

**Scientific Name** *Wisteria frutescens*

**Family** Legume (Fabaceae)

**Plant Characteristics** Deciduous, woody, twining vine to 30 feet long or more; green compound leaves have 9–15 elliptical leaflets with smooth margins, oppositely attached to stems; dense, elongated, dangling clusters of lavender-to-purple, pea-like flowers.

**Hardiness Zones** 5a–9b

**Bloom Period** Mid-spring–early summer (April–June)

**Growing Conditions** Full sun to partial shade and rich, moist, acidic, organically rich, well-drained soils.

This highly ornamental, long-lived native vine is a superb alternative to the more aggressive and often invasive Chinese or Japanese wisteria (*W. sinensis* and *W. floribunda*). While easy to grow in slightly acidic, fertile, and moist soils, plants may take a few years to flower. Plants tend to bloom best in full sun; they can tolerate poor soils but do not perform well. Beginning in spring, plants produce pleasantly fragrant clusters of purplish blooms; each dangling cluster may exceed 6 inches or more in length. Elongated and flattened, bean-like seedpods mature later in summer. American wisteria is a great choice for smaller garden spaces or even patio gardens where it can be trained up a trellis, arbor, or fence, or grown in a larger container. Regular pruning is recommended, as flowering only occurs on new growth.

*Butterflies, bees, and hummingbirds. Serves as a larval host plant for long-tailed skipper (Urbanus proteus) and silver-spotted skipper (Epargyreus clarus) butterflies.*







# Cardinal Flower

**Scientific Name** *Lobelia cardinalis*

**Family** Bellflower (Campanulaceae)

**Plant Characteristics** Herbaceous perennial to 5 feet in height; lance-shaped, dark-green leaves with serrated margins, alternately attached to stems; terminal spike-like clusters of bright-red, tubular flowers, each with two lips; the upper lip has two elongated lobes, and the lower lip has three.

**Hardiness Zones** 3a–8b

**Bloom Period** Midsummer–mid-fall (July–October)

**Growing Conditions** Performs best in full sun to partial shade and rich, moist soil.

This stunning species is named for its vibrant cardinal-red, tubular blossoms that are a favorite of ruby-throated hummingbirds. Some larger butterflies, such as swallowtails, also frequent the blossoms. A moisture-loving perennial, it is a showy addition to regularly soggy sites, rain or wetland gardens, or pond and stream borders. It is adaptable to more traditional perennial garden settings with fertile, highly organic soil, as long as regular irrigation is provided. It also makes a wonderful addition to container water gardens. Plants are intolerant of drought, and sites where it is planted should not be allowed to dry out. Plants are short-lived and typically persist for only a few years, but they freely self-seed as well as reproduce via basal offshoots. The resulting seedlings and young plants grow quickly. Winter mulching is beneficial to help provide insulation from temperature extremes in northern portions of our region. Cardinal flower is generally deer resistant.

*Butterflies and hummingbirds.*







# Common Serviceberry

**Scientific Name** *Amelanchier arborea*

**Family** Rose (Rosaceae)

**Plant Characteristics** Small, deciduous tree to 25 feet in height or more; simple, elliptical-to-oval, green leaves with serrated margins, alternately arranged on twigs; small clusters of showy white flowers produced at branch tips.

**Hardiness Zone** 4a–9b

**Bloom Period** Early–mid-spring (March–April)

**Growing Conditions** Full sun to partial shade and moist, acidic, well-drained soils.

Typically having multiple stems and a rounded, shrub-like form, it offers year-round interest. Starting in early spring, the bare branches burst forth with an abundance of fragrant white flowers that attract a wide diversity of insect pollinators. Bronze-tinted young leaves soon follow. They are densely woolly on the lower surfaces and give rise to the species' alternate common name of downy serviceberry. As the summer arrives, trees are adorned with small, rounded, edible fruits that turn a bluish-black color at maturity. The show continues in autumn with a brilliant late-season display of golden-orange-to-crimson foliage. Easy to grow, hardy, and tolerant of various soil and light conditions, it is a must-have for any wildlife-friendly garden.

*Bees, flies, butterflies, and other insect pollinators; larval host for the striped hairstreak (Satyrium liparops) and red-spotted purple (Limenitis arthemis astyanax) butterflies; numerous songbirds, game birds, and small mammals consume the fruit; provides cover and nesting sites for songbirds.*



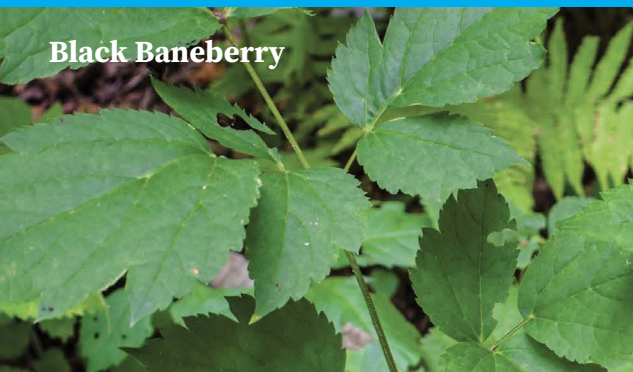


Dwarf Larkspur



Zigzag Goldenrod

# Partial Shade to Full Shade



Black Baneberry



Virginia Bluebells



Red Columbine





**Pawpaw**



**Carolina Elephants Foot**



**White Snakeroot**

From Virginia Bluebells (page 267) to White Snakeroot (page 269), some good wildlife-attracting plants prefer or can tolerate lower light levels. These plants often perform best with 3–6 hours of direct sunlight per day or less. In many cases, they benefit from some sun in the morning or evening, when light intensity is reduced, but they are sensitive to too much sun—which can lead to increased stress, dehydration, even scorching. These plants are often best used along forest margins.



**Heartleaf Skullcap**









# Virginia Bluebells

**Scientific Name** *Mertensia virginica*

**Family** Borage (Boraginaceae)

**Plant Characteristics** Upright, herbaceous perennial to 2 feet in height; large, gray-green, oval, and heavily veined leaves with smooth margins alternately attached to stems; terminal clusters of pendulous, tubular, light-blue flowers.

**Hardiness Zones** 3a– 7b

**Bloom Period** Spring (April–May)

**Growing Conditions** Partial to full shade and organically rich, moist, well-drained soil.

This is a lovely spring wildflower of moist woodlands and stream or creek margins, often blooming before most trees have fully leafed out. It thrives in moist, fertile soil and grows best in shadier portions of the landscape. A clump-forming perennial, it can often form sizable colonies over time under optimal growing conditions. The large light-colored leaves have a soft, floppy appearance and help brighten the understory. They also provide an excellent backdrop for the showy trumpet-shaped flowers. Each bud starts out pinkish before soon transforming into the characteristic light-blue color at maturity. True to its name, its dangling flower clusters do resemble miniature bells. Plants bloom for several weeks before dying back to the ground by midsummer. Virginia bluebells provide early-season interest and color to any woodland garden or shadier perennial border. It is also an exceptional species for naturalizing larger areas.

*Butterflies, larger bees, sphinx moths, and other insect pollinators.*







# White Snakeroot

**Scientific Name** *Ageratina altissima*

**Family** Aster (Asteraceae)

**Plant Characteristics** Upright, herbaceous perennial up to 3 feet tall; coarse, dark green leaves with serrated margins and prominent venation, lance-shaped to somewhat heart-shaped, oppositely attached to stems; flat, terminal clusters of small, five-lobed, fuzzy-looking white flowers.

**Hardiness Zones** 3a–7b

**Bloom Period** Late summer–mid-fall  
(August–October)

**Growing Conditions** Partial shade to full shade and organically rich, moist, well-drained soils.

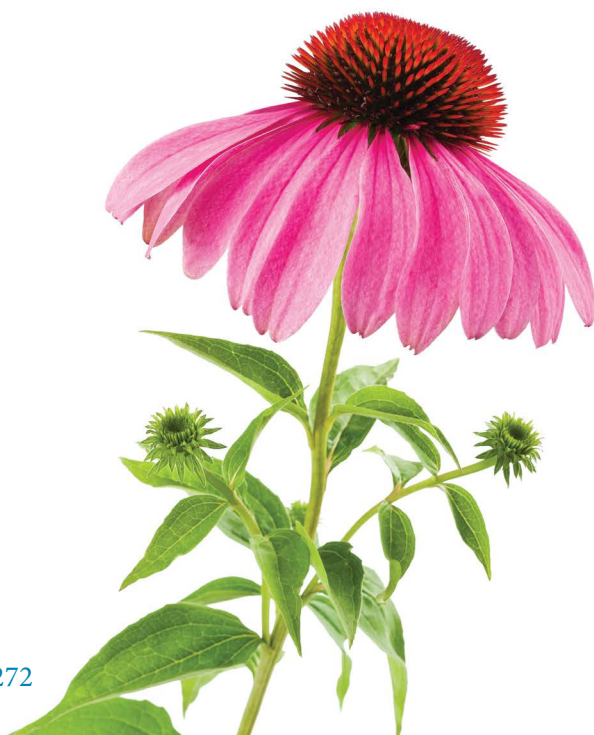
White snakeroot is a wildflower of deciduous woodlands, forest margins, and adjacent semi-open areas. Although it thrives in partially shaded sites with fertile, moist soils, plants are quite adaptable and tolerant of drier conditions and even full sun if regular irrigation is provided. It can even be grown in deep shade, but flowering may be limited. As summer nears an end, the somewhat ragged-looking plants explode into bloom, helping to brighten the late-season woodland garden or various dark corners of the landscape. The brilliant snow-white flowers appeal to a broad range of insects, including many small, night-flying moths, which can easily locate the abundant floral resources in low light. Plants remain in bloom for an extended period, well into autumn and until first frost. White snakeroot can quickly form larger colonies, spreading by a combination of seed and shallow, underground rhizomes. Its alternate common name—fall poison—serves as a warning that all parts of the plant are acutely toxic and may be fatal if ingested.

*Butterflies, bees, wasps, flies, and moths; songbirds consume the seeds.*



# Garden Plants for Butterflies

- 1 **America Wisteria** (*Wisteria frutescens*), pg. 147
- 2 **Baldwin's Ironweed** (*Vernonia baldwinii*), pg. 43
- 3 **Black-eyed Susan** (*Rudbeckia hirta*), pg. 47
- 4 **Button Eryngo** (*Eryngium yuccifolium*), pg. 53
- 5 **Common Milkweed** (*Asclepias syriaca*), pg. 55
- 6 **Giant Ironweed** (*Vernonia gigantea*), pg. 187
- 7 **Golden Alexanders** (*Zizia aurea*), pg. 189
- 8 **Great Blue Lobelia** (*Lobelia siphilitica*), pg. 193
- 9 **Lanceleaf Coreopsis** (*Coreopsis lanceolata*), pg. 79
- 10 **Leadplant** (*Amorpha canescens*), pg. 81
- 11 **Maryland Senna** (*Senna marilandica*), pg. 205
- 12 **New England Aster** (*Symphyotrichum novae-angliae*), pg. 83
- 13 **Obedient Plant** (*Physostegia virginiana*), pg. 213
- 14 **Purple Coneflower** (*Echinacea purpurea*), pg. 95
- 15 **Rocky Mountain Beeplant** (*Peritoma serrulata*), pg. 103
- 16 **Showy Goldenrod** (*Solidago speciosa*), pg. 113
- 17 **Swamp Milkweed** (*Asclepias incarnata*), pg. 121
- 18 **Tall Blazing Star** (*Liatris aspera*), pg. 125
- 19 **Wild Bergamot** (*Monarda fistulosa*), pg. 243







4



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# Plan Your Landscape or Garden to Help Pollinators

## THE PRESENCE OF BIRDS, BEES, AND BUTTERFLIES

suggests a healthy, Earth-friendly place. Turn your yard into a perfect habitat that attracts pollinators and helps them thrive. Learn how to landscape and create pollinator gardens with widely available perennials that are easy to care for and provide great benefits for wildlife.

### Inside You'll Find

- Overview of native pollinator species in the Lower Midwest
- Field guide to 115 native plants, organized by level of sunlight needed
- Quick-reference chart to plants, blooming periods, and what animals each plant attracts
- Hardiness zone information, weed control tips, and more
- **BONUS:** Garden plans that can be customized to suit your specific interests



**Plan, plant, and grow your beautiful garden.  
Then watch and enjoy your favorite backyard guests.**



**PUBLICATIONS**  
*Adventure*  
an imprint of AdventureKEEN

GARDENING / REGIONAL / LOWER MIDWEST  
ISBN 978-1-64755-441-5



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