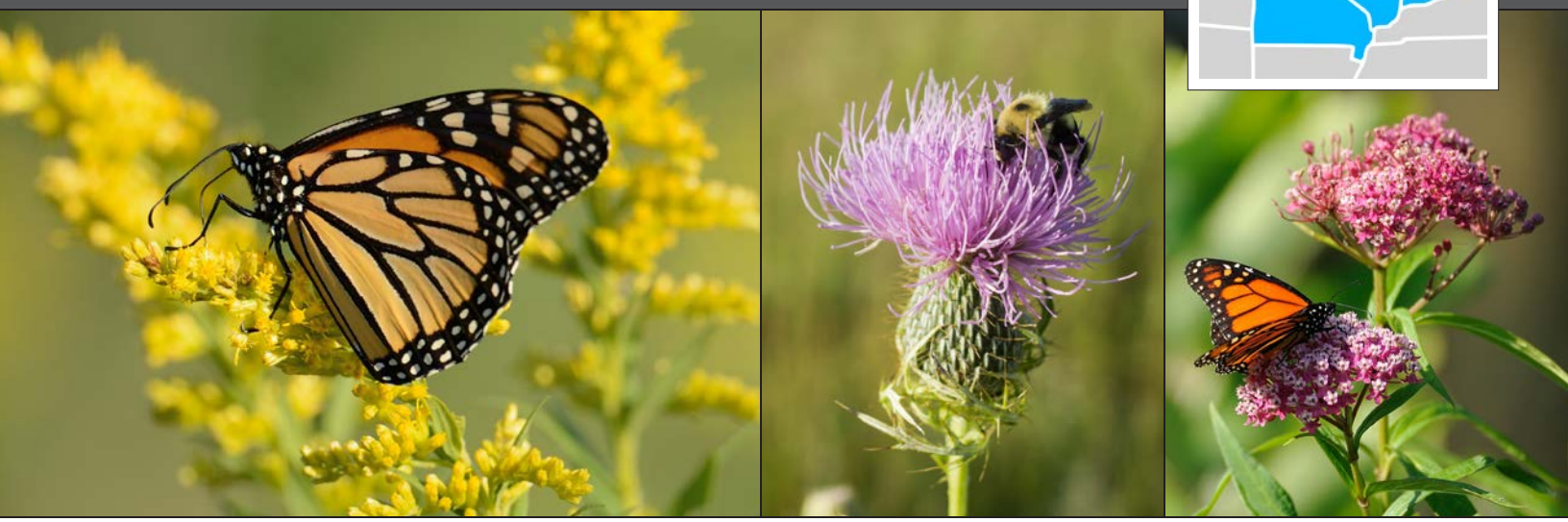
POLLINATOR PLANTS

Midwest Region



Showy goldenrod, field thistle, and swamp milkweed

In the Midwestern states of Iowa, Missouri, Illinois, and Indiana, a wealth of plant diversity grows in lush tallgrass prairies, as well as in oak savannas, windswept lakeshore dunes, shallow soils and rocky slopes of glades, and within deciduous forests.

The native plants of the Midwest support a diverse range of pollinators including thousands of species of native bees, butterflies, beetles, flies, wasps, and moths. The Midwest region is an important breeding area for the monarch butterfly (*Danaus plexippus*) and is also home to several imperiled species of bumble bees and butterflies, including the endangered rusty patched bumble bee (*Bombus affinis*). Pollinators in the Midwest maintain healthy, productive plant communities, provide food that sustains wildlife, and play an essential role in crop production.

Providing wildflower-rich habitat is the most significant action you can take to support pollinators. Adult bees, butterflies, and other pollinators require nectar as their primary food source. Female bees also collect pollen as food for their offspring. Native plants, which are adapted to local soils and climates, are usually the best sources of nectar and pollen for native pollinators. Incorporating native wildflowers, shrubs, and trees into any landscape promotes local biological diversity by providing shelter and food for wildlife. Native plants are better adapted to regional climate cycles, do not need fertilizers, and are less likely to become weedy.

This guide features plants native to the Midwest that are highly attractive to pollinators and are well-suited for small-scale plantings in gardens, on business and school campuses, in urban greenspaces, and in farm field borders. In addition to supporting native bees and honey bees, many of these plants attract nectar-seeking butterflies, moths, and hummingbirds, and some are host plants for butterfly and moth caterpillars. Most of these species can be purchased as seed or transplants, and are adaptable to growing conditions found across the Midwest. Please consult regional Floras, the Biota of North America's North American Plant Atlas (http://bonap.net/napa), or the USDA's PLANTS database (http://plants.usda.gov) for details on species's distributions in your area.

Our **Bring Back the Pollinators** campaign is based on four principles:

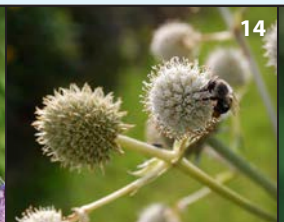
1. **Grow** a variety of pollinator-friendly flowers;
2. **Protect and provide** bee nest sites and caterpillar host plants;
3. **Avoid** using pesticides, especially insecticides: *and*
4. **Spread** the word!

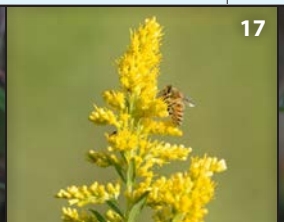
You can participate by taking the **Pollinator Protection Pledge** and registering your habitat on our nationwide map at: www.bringbackthepollinators.org.

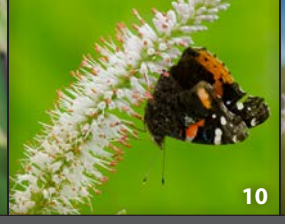
BRING BACK THE POLLINATORS
A Xerces Society Conservation Campaign

XERCES SOCIETY
for Invertebrate Conservation

		Bloom Period	Common Name	Scientific Name	Flower Color	Max. Height*	Water Needs
			Forbs			(Feet)	L: low; M: medium; H: high
	1	Early	Cream wild indigo	*Baptisia bracteata*	cream	2	L
	2		Golden Alexanders	*Zizia aurea*	yellow	3	H
	3		Wild geranium	*Geranium maculatum*	pink	1	M
	4	Early–Mid	Smooth penstemon	*Penstemon digitalis*	white	2	M
	5		Narrowleaf mountain mint	*Pycnanthemum tenuifolium*	white	2.5	M
	6		Pale purple coneflower	*Echinacea pallida*	purple	3	L
	7	Mid	Purple prairie clover	*Dalea purpurea*	purple	2	L
	8		Swamp milkweed	*Asclepias incarnata*	pink	5	M–H
	9		Wild bergamot	*Monarda fistulosa*	purple	4	M
	10	Mid–Late	Culver's root	*Veronicastrum virginicum*	white	5	M
	11		Field thistle	*Cirsium discolor*	purple	6	M
	12		Missouri ironweed	*Vernonia missurica*	purple	5	M
	13		Prairie blazing star	*Liatris pycnostachya*	purple	5	M
	14		Rattlesnake master	*Eryngium yuccifolium*	white	6	M
	15		Yellow giant hyssop	*Agastache nepetoides*	yellow	6	M–H
	16	Late	Gray goldenrod	*Solidago nemoralis*	yellow	2	L
	17		Showy goldenrod	*Solidago speciosa*	yellow	5	M
	18		Smooth blue aster	*Symphyotrichum laeve*	blue	4	L
	19		Wingstem	*Verbesina alternifolia*	yellow	6	M
			Shrubs and Trees				
	20	Early	Cockspur hawthorn	*Crataegus crus-galli*	white	35	L
	21		Ninebark	*Physocarpus opulifolius*	white	8	M
	22		Prairie willow	*Salix humilis*	white/ green	8	L
	23	Mid	Buttonbush	*Cephalanthus occidentalis*	white	12	H
	24		Lead plant	*Amorpha canescens*	purple	3	L







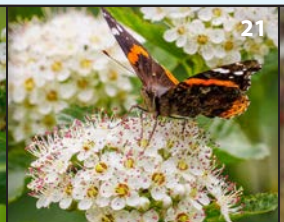
Notes

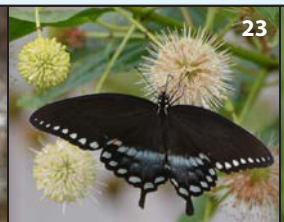
This list of pollinator plants for the Midwest Region was produced by the Xerces® Society. For more information about pollinator conservation, please visit www.xerces.org.

XERCES SOCIETY for Invertebrate Conservation

All species are perennials, unless otherwise noted. *Max. Height is an average, individual plants may vary. HP = host plant (caterpillar)

Visited by queen bumble bees (*Bombus* spp.) and other long-tongued bees; **HP:** numerous butterflies and skippers
Tolerates some shade; attracts bees and beneficial insects; **HP:** black swallowtails (*Papilio polyxenes*)
Prefers partial but tolerates full sun; attracts mining (*Andrena* spp.), mason (*Osmia* spp.), digger, and bumble bees; **HP:** several moths
Grows in a variety of soils; visited by butterflies, moths, and bees, including honey bees
Fragrant foliage; visited by blue and copper butterflies, many bees (including honey bees), flies, beetles, and other beneficials
Withstands drought well; attractive to a wide range of pollinators, and a key nectar source for skippers
Legume (contributes nitrogen to the soil); very attractive to many bees, as well as butterflies, flies, and beetles
Milkweeds (*Asclepias* spp.) are host plants for the monarch butterfly (*Danaus plexippus*); great nectar sources for bees and beneficials
Hawk moths, hummingbirds, and long-tongued bees (such as bumble bees) are common visitors
Does well in average to wet soil; flowering stalks may need support in gardens
Distinct from invasive, non-native thistles; very important for butterflies and bumble bees; grows as a perennial or biennial
Grows under a variety of conditions; ironweed species (*Vernonia* spp.) attract late summer butterflies and bees
Blazing stars (*Liatris* spp.) support bees as well as many butterflies including monarchs, swallowtails, skippers, and sulfurs
Attracts incredible insect diversity and is the host plant for the rattlesnake master borer moth (*Papaipema eryngii*)
Flowers may appear green from a distance; attractive to bees (including honey bees), butterflies, and some beneficial insects
Blooms later than most goldenrods; in addition to attracting pollinators, goldenrods are host plants for numerous moth species
Goldenrods (*Solidago* spp.) are frequented by beneficial solitary wasps, pollen-eating soldier beetles, honey bees, and much more
Grows in a variety of soils; visited by butterflies, moths, bees, beneficial wasps, and flies; **HP:** many moths species
Shade-tolerant, grows well in rain gardens; attracts butterflies and bees (great for honey bees); possibly limited in nurseries
Adapts well to many growing conditions; supports a variety of bees; attracts songbirds; **HP:** over 25 species of moths
Tolerates some shade and a variety of soil conditions; attracts bees, butterflies, beneficial wasps, and flies
Important for spring pollinators; pollen-producing and nectar-producing flowers found on separate shrubs; supports songbirds
Prefers moist soil, great for rain gardens; attracts bees, butterflies, and skippers; **HP:** several moths
Tolerates a variety of soil types (prefers drier soils and full sun); attracts leafcutter bees (*Megachile* spp.), honey bees, and other insects





Planting for Success

Sun Exposure

Most pollinator-friendly plants prefer sites that receive full sun throughout most of the day and are mostly open, with few large trees. A southern exposure can provide the warmest habitat, but is not required.

Plant Diversity

Choosing a variety of plants with overlapping and sequential bloom periods will provide food for pollinators throughout the seasons.

Habitat Size and Shape

Habitat patches that are bigger and closer to other patches are generally better than those that are smaller and more isolated from one another. However, even a small container garden can attract and support pollinators!

Planting Layout

Flowers clustered into clumps of one species will attract more pollinators than individual plants scattered through a habitat patch. Where space allows, plant clumps of the same species within a few feet of one another.

Seeds or Transplants

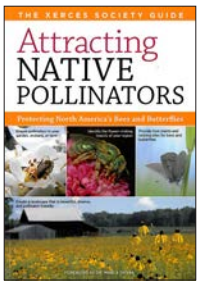
It is usually cheaper to establish large habitat areas from seed; however, seeding native wildflowers on a large-scale is an art unto itself. For step-by-step instructions, see *Establishing Pollinator Meadows from Seed* and the Pollinator Habitat Installation Guides listed in the Additional Resources section. For smaller areas like gardens, transplants are usually easier to use and will bloom faster than plants started from seed.

Protect Pollinators from Insecticides

Although dependent on timing, rate, and method of application, all insecticides have the potential to poison or kill pollinators. Systemic insecticides in particular have received significant attention for their potential role in pollinator declines (imidacloprid, dinotefuran, clothianidin, and thiamethoxam are examples of systemic insecticides now found in various farm and garden products). Because plants absorb systemic insecticides as they grow, the chemicals become distributed throughout plant tissues and are sometimes present in pollen and nectar. You can help protect pollinators by avoiding the use of these and other insecticides. Before purchasing plants from nurseries and garden centers, be sure to ask whether they have been treated with insecticides. To read more about threats to pollinators from pesticides, please visit: www.xerces.org/pesticides.

Additional Resources

Attracting Native Pollinators



Our best-selling book highlights the role of native pollinators in natural ecosystems, gardens, and farms. This comprehensive guide includes information about pollinator ecology, detailed profiles of over 30 common bee genera, and habitat designs for multiple landscapes with over 50 pages of fully illustrated regional plant lists. Available in bookstores everywhere, and through www.xerces.org/books.

The Xerces Pollinator Conservation Resource Center

Our Pollinator Conservation Resource Center includes regional information on pollinator plants, habitat conservation guides, nest management instructions, bee identification and monitoring resources, and directories of native pollinator plant nurseries.
www.xerces.org/pollinator-resource-center

Lady Bird Johnson Wildflower Center

The Xerces Society has collaborated with the Lady Bird Johnson Wildflower Center to create lists of plants that are attractive to native bees, bumble bees, honey bees, and other beneficial insects, as well as plant lists with value as nesting materials for native bees. These lists can be narrowed down with additional criteria such as state, soil moisture, bloom time, and sunlight requirements. The Center's website also features image galleries, how-to articles on native plant gardening, and more.
www.wildflower.org/conservation_pollinators

Establishing Pollinator Meadows from Seed

These guidelines provide step-by-step instructions for establishing pollinator meadows from seed in areas that range in size from a small backyard garden up to an acre. Topics include: site selection, site preparation, plant selection, planting techniques, and ongoing management.
www.xerces.org/establishing-pollinator-meadows-from-seed

Pollinator Habitat Installation Guides

These regional guidelines, developed in collaboration with the USDA's Natural Resources Conservation Service, provide in-depth practical guidance on how to install nectar and pollen habitat for bees in the form of wildflower meadow plantings or linear rows of native flowering shrubs. Region-specific seed mixes and plant recommendations are included in the appendices of each guide.
www.xerces.org/pollinator-habitat-installation-guides

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