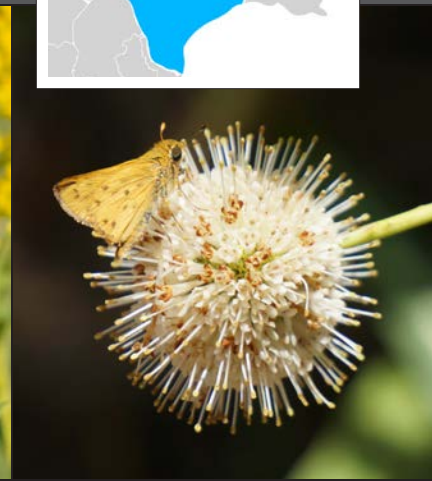


Southern Plains Region



Antelope horns milkweed, showy goldenrod, and buttonbush

The Southern Plains, which includes eastern Colorado, Kansas, Oklahoma, Arkansas, and Texas, are characterized by hot summers and mild to cold winters. A strong precipitation gradient runs from east to west, with western areas receiving less than 20" of rain while the east receives more than 40", enough to support scattered forests and savannas. In the east, oak and juniper savannas with tall and mixed grass understories dominate. Tallgrass prairie thrives across much of the region, extending down to the coast. The western expanse is arid steppe with shortgrass vegetation.

This region is home to a remarkable range of pollinators, including a diverse mix of eastern and western species. The region includes the southern portion of the monarch butterfly's central flyway, along which migratory monarchs travel to and from their Mexican overwintering grounds. Other declining pollinators found in this region include the American bumble bee (*Bombus pensylvanicus*), the Southern Plains bumble bee (*B. fraternus*), and many skipper species. As a group, these and other pollinators 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 regional native plants 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. With few exceptions, these species occur broadly across the region and can be purchased as seed or transplants. 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.

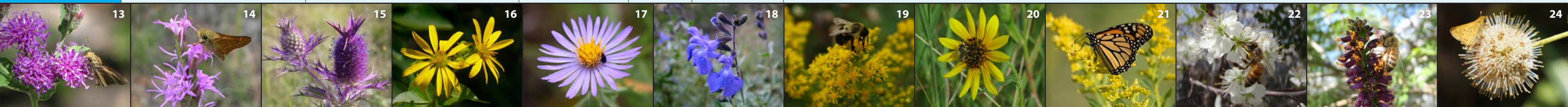




This list of pollinator plants for the Southern Plains Region was produced by the Xerces® Society. For more information about pollinator conservation, please visit www.xerces.org.



Bloom Period	Common Name	Scientific Name	Flower Color	Max. Height*	Water Needs	Notes
	Forbs			(Feet)	L: low; M: medium; H: high	All species are perennials, unless otherwise noted. *Max. Height is an average, individual plants may vary.
Early	1 Antelope horns milkweed	<i>Asclepias asperula</i> ssp. <i>capricornu</i>	green	2	M	<i>Asclepias</i> spp. are host plants for monarch, queen, and soldier (<i>Danaus</i> spp.) butterflies; highly attractive to bees and beneficial insects
	2 Cream wild indigo	<i>Baptisia bracteata</i>	pale yellow	2	L	Found in eastern half of the region; visited by queen bumble bees and other long-tongued bees; butterfly and moth host plant
	3 Prairie penstemon	<i>Penstemon cobaea</i>	purple	2	L	Grows in a variety of soils; visited by butterflies, moths, and bees; a host plant for the dotted checkerspot butterfly (<i>Poladryas minuta</i>)
	4 Prairie spiderwort	<i>Tradescantia occidentalis</i>	blue	2	L	Drought tolerant; will grow in partial shade; deer-resistant; attracts bumble bees, honey bees, and beneficial flies
Early-Mid	5 Scarlet globemallow	<i>Sphaeralcea coccinea</i>	orange	1	L	<i>Sphaeralcea</i> spp. are drought tolerant; visited by bees and butterflies; a host plant for the small checkered skipper (<i>Pyrgus scriptura</i>)
	6 Blanketflower	<i>Gaillardia pulchella</i>	red/ orange	2	L	Establishes easily from seed; supports a wide range of beneficial insects; grows as an annual, biennial, or perennial
	7 Lemon beebalm	<i>Monarda citriodora</i>	purple	2	L	Hawk moths, hummingbirds, and long-tongued bees (including bumble bees) are visitors; grows as an annual, biennial, or perennial
	8 Mexican hat	<i>Ratibida columnifera</i>	yellow/ red	2	L	Foliage repellent to deer; attracts bees and beneficial flies, beetles, and wasps during its long bloom period
Mid	9 Narrowleaf coneflower	<i>Echinacea angustifolia</i>	pink	3	L	Key nectar source for skippers; <i>Echinacea</i> spp. attract bees in the genera <i>Bombus</i> , <i>Melissodes</i> , <i>Svastra</i> , and <i>Megachile</i>
	10 Narrowleaf mountain mint	<i>Pycnanthemum tenuifolium</i>	white	3	M	Found in eastern half of the region; attracts blue and copper butterflies, many bees (including honey bees), beetles, flies, and more
	11 Purple poppy mallow	<i>Callirhoe involucrata</i>	purple	1	L	Drought tolerant; long bloom period; attracts bees and beneficial flies; a host plant for the grey hairstreak butterfly (<i>Strymon melinus</i>)
	12 White prairie clover	<i>Dalea candida</i>	white	2	L	This and <i>D. purpurea</i> very attractive to pollinators and beneficial insects; a host plant for the southern dogface butterfly (<i>Zerene cesonia</i>)
	13 Baldwin's ironweed	<i>Vernonia baldwinii</i>	purple	5	L	Grows under a variety of conditions; spreads via rhizomes; this and other <i>Vernonia</i> spp. attract late summer butterflies and bees
Mid-Late	14 Dotted blazing star	<i>Liatris punctata</i>	purple	2.5	M	<i>Liatris</i> spp. are the primary nectar source for many skipper species; attracts numerous bee and butterfly species (including monarchs)
	15 Leavenworth's eryngo	<i>Eryngium leavenworthii</i>	purple	3	L	Showy annual with spiky flowers that provides brilliant summer color; attracts bees; deer-resistant; tolerates partial shade
	16 Wholeleaf rosinweed	<i>Silphium integrifolium</i>	yellow	6	L	Grows in a variety of soils; attracts bees and beneficial flies, and is a host plant for the silphium moth (<i>Papaipema silphii</i>)
Late	17 Aromatic aster	<i>Symphyotrichum oblongifolium</i>	purple	2	L	Late blooming with fragrant foliage; visited by butterflies, moths, bees, and beneficial wasps and flies; a host plant for many moths
	18 Azure blue sage	<i>Salvia azurea</i>	blue	6	L	Grows in a variety of soils; fragrant foliage; attracts long-tongued bees; a host plant for the hermit sphinx moth (<i>Lintneria eremitus</i>)
	19 Giant goldenrod	<i>Solidago gigantea</i>	yellow	7	M	Very adaptable; spreads via rhizomes; beyond attracting pollinators, goldenrods (<i>Solidago</i> spp.) are host plants for several moth species
	20 Maximilian sunflower	<i>Helianthus maximiliani</i>	yellow	8	L	This plant may spread easily, via rhizome and seed; very attractive to a huge diversity of bees and other pollinators
	21 Showy goldenrod	<i>Solidago speciosa</i>	yellow	5	M	Goldenrods are frequented by beneficial solitary wasps, pollen-eating soldier beetles, honey bees, monarch butterflies, and much more
	Shrubs and Trees					
Early	22 Chickasaw plum	<i>Prunus angustifolia</i>	white	25	M	Thicket-forming shrub or tree with fragrant flowers that attract bees and butterflies; a host plant for several butterflies
Mid	23 False indigo bush	<i>Amorpha fruticosa</i>	purple	12	M	Prefers moist soil; attracts a diversity of bees and beneficial insects; a host plant for numerous butterfly and moth species
Mid-Late	24 Buttonbush	<i>Cephalanthus occidentalis</i>	white	8	H	Prefers wet or moist soil; attracts many long-tongued bees and butterflies; a host plant numerous moths and butterflies



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.

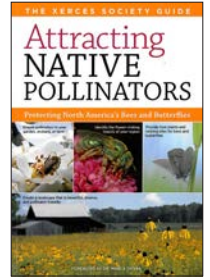
Protect Pollinators from Insecticides

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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Written by Nancy Lee Adamson, Brianna Borders, Jessa Kay Cruz, Sarah Foltz Jordan, Kelly Gill, Jennifer Hopwood, Eric Lee-Mäder, Anne Stine, and Mace Vaughan. Designed by Kaitlyn Rich. Formatted by Sara Morris. **PHOTO CREDITS:** The Xerces Society/Anne Stine: 1 (inside), 15, 24 (cover); Peter Gorman*: 2, 17; Craig Hansen, USFWS Mountain-Prairie*: 14; Matthew Lee High (mlhradio)*: 13, 18, 20; JanetandPhil*: 21 (inside and cover); Belinda Lo (belinda712)*: 9; Joshua Mayer (wackybadger)*: 12, 19; Dan Mullen (milesizz)*: 16; Scott Seigfreid: 4; Elizabeth Sellers (AussieBotanist)*: 5, 10; Ken Slade (TexasEagle)*: 1 (cover), 6, 7, 8 (inside and cover). Sandy Smith, Lady Bird Johnson Wildflower Center: 3. Patrick Standish*: 11; Jeff Wright (eakspeasy)*: 22, 23. *Via flickr.com. Photographs remain under the copyright of the photographer.

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