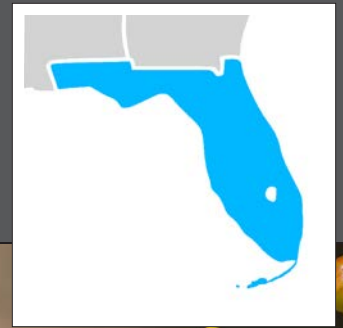


Florida



Hummingbird at scarlet sage, sunflower bee on blanketflower, and green sweat bee on east coast dune sunflower

Florida’s panhandle and peninsula host diverse plants and wildlife. With its subtropical to tropical climate, “la florida” (“flowery” in Spanish) has plants blooming throughout the year. Longleaf pine, sand and clay hills, scrub, xeric hammocks, lowland and upland hardwoods, dry and wet prairies, diverse coastal plain and wetland communities, and many other unique habitats support a striking diversity of pollinators.

Specialist bees like the southeastern blueberry bee (*Habropoda laboriosa*), squash bees (genera: *Peponapis*, *Xenoglossa*), and hibiscus (or okra) bee (*Ptilothrix bombiformis*); seven bumble bee species (*Bombus* spp.); tropical bees; and thousands of other native bees, butterflies, flower flies, beetles, wasps, and moths help to ensure healthy, productive plant communities, provide food that sustains other wildlife, and play an essential role in crop production. Yet, ongoing declines in native plant communities, and other forms of habitat loss, threaten many pollinators in the region—such as those monitored by the Florida Natural Areas Inventory (www.fnai.org).

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 and provides shelter and food for a diversity of

wildlife. Additional advantages of native plants are that they may require less water than non-natives, do not require 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 Florida Native Plant Society (www.fnps.org), 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.





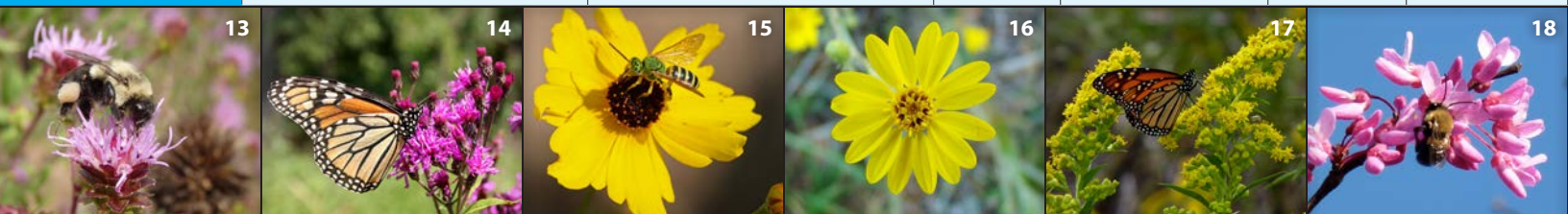
Bloom Period	Common Name	Scientific Name	Life Cycle*	Flower Color	Max. Height†	Water Needs
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Forbs					(Feet)	L: low; M: medium; H: high
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Early	1	Dotted horsemint	<i>Monarda punctata</i>	P	pink	2–4	L
	2	Manyflower beardtongue	<i>Penstemon multiflorus</i>	P	white	1.5–2.5	L
	3	White wild indigo	<i>Baptisia alba</i>	P	white	2–5	L
Early–Late	4	Aquatic milkweed	<i>Asclepias perennis</i>	P	white	1–3	H
	5	Blanketflower	<i>Gaillardia pulchella</i>	A, P	yellow/ red	2	L
	6	Butterfly milkweed	<i>Asclepias tuberosa</i>	P	orange	1–2	L
	7	East coast dune sunflower	<i>Helianthus debilis</i>	A, P	yellow	1–2.5	L
	8	Ohio spiderwort	<i>Tradescantia ohiensis</i>	P	blue	2–3	M
	9	Rattlesnake master	<i>Eryngium yuccifolium</i>	P	white	2–5	M
	10	Scarlet sage	<i>Salvia coccinea</i>	A	red	2–6	L
Mid–Late	11	Blue mistflower	<i>Conoclinium coelestinum</i>	P	blue/ purple	1–3	M
	12	Crimsoneyed rosemallow	<i>Hibiscus moscheutos</i>	P	white/ pink/ red	4–6	M
	13	Dense gayfeather	<i>Liatris spicata</i>	P	purple	2–5	L
	14	Giant ironweed	<i>Vernonia gigantea</i>	P	purple	2–6	M
	15	Leavenworth's coreopsis	<i>Coreopsis leavenworthii</i>	A, P	yellow	1.5–3	L
	16	Narrowleaf silkgrass	<i>Pityopsis graminifolia</i>	P	yellow	2–3	L
Late	17	Seaside goldenrod	<i>Solidago sempervirens</i>	P	yellow	2.5–3.5	L

Shrubs and Trees						
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Early	18	Eastern redbud	<i>Cercis canadensis</i>	P	pink	15–30	L
Early–Mid	19	False indigobush	<i>Amorpha fruticosa</i>	P	purple	6–12	M
	20	Sparkleberry	<i>Vaccinium arboreum</i>	P	white	6–25	L
Mid	21	Beautyberry	<i>Callicarpa americana</i>	P	pink	4–8	L
Late	22	Buttonbush	<i>Cephalanthus occidentalis</i>	P	cream	5–20	M
Winter–Early	23	Flatwoods plum	<i>Prunus umbellata</i>	P	white	12–20	L
	24	Highbush blueberry	<i>Vaccinium corymbosum</i>	P	white/ pink	6–12	M





Notes

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



*Life Cycle abbreviations: A: annual; P: perennial; B: biennial. †Max. Height is an average, individual plants may vary.

Showy pink bracts attract bees, butterflies, wasps (aphid predators) to nectar-rich blooms; fragrant foliage produces thymol

It is fun to watch bees squeeze into the nectar rich flowers in early spring; prominent nectar guides signal “follow me”

Legume; excellent for bees, esp. bumble bees (*Bombus* spp.); larval host for wild indigo and Zarucco duskywing butterflies

Asclepias spp. are host plants for monarch, queen, and soldier butterflies (*Danaus* spp.); excellent nectar source for bees and beneficials

Easy to grow, long-blooming annual that will reseed into bare soil; excellent cut flower; supports many pollinators

Adapted to dry soils; highly attractive to diverse pollinators; host plant for numerous butterflies, including monarch, queen, and soldier

Low, spreading ground cover; excellent source of pollen, nectar, and seed (for birds); reseeding annual in areas with winter freeze

Diverse pollinators visit beautiful blue to purple flowers; long bloom period makes it valuable as late fall nectar and pollen source

Supports a huge diversity of bees, butterflies, and other insects with beautiful, unique flowers; *E. aquaticum* also recommended

Long-blooming tubular red flowers attract hummingbirds and butterflies; readily reseeds; other *Salvia* spp. also great nectar sources

Stunning periwinkle flowers; important fall resource for pollinators and migrating butterflies; may bloom early and persist into fall

Supports the hibiscus bee (*Ptilothrix bombiformis*), a specialist of the Malvaceae family (including hibiscus, okra, and cotton)

Showy purple spikes of *Liatris* spp. are butterfly and bee magnets; long-blooming resource—especially important for fall migrants

Dark purple blossoms support diverse bees, butterflies, and moths, including fall-migrating insects; beautiful cut flowers

Showy bright blooms support diverse pollinators; reseeds on bare soil (don't mulch); other *Coreopsis* spp. are equally beneficial

Supports great diversity of bees and other pollinators; attractive silvery foliage; drought tolerant; thrives in dry, sunny conditions

Goldenrods (*Solidago* spp.) are vital late nectar sources for migrating insects, pre-hibernation bumble bee queens, and honey bees

Harbinger of spring; vital early spring bee nectar, pollen, and nest material source; larval host for Henry's elfin and Io moth

Legume; excellent resource for bees and other wildlife; larval host for southern dogface, gray hairstreak, and silver-spotted skipper

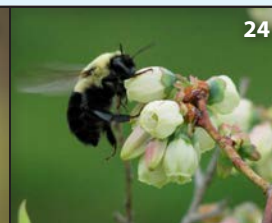
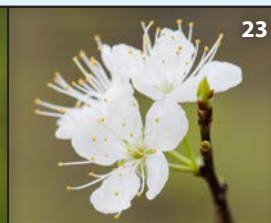
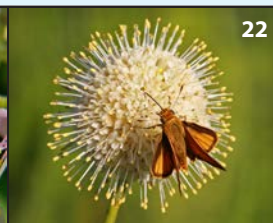
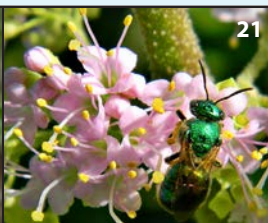
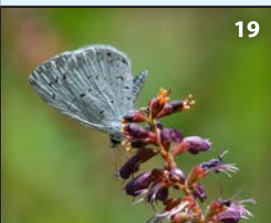
Gorgeous foliage and flowers with long bloom period attract many bees and other insects; larval host for striped hairstreak

Pioneer species; tiny flowers feed bees, wasps, and butterflies; magnificent magenta fruit in fall supports birds and other wildlife

Butterfly magnet; supports diverse bees and other insects in heat of summer; larval host for titan and hydrangea sphinx moths

Provides early pollen and nectar for various pollinators; larval host for many butterflies; produces edible plums after showy bloom

Visited by specialist southeastern blueberry bee (*Habropoda laboriosa*) and many other insects; produces delicious fruit; red fall foliage



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.

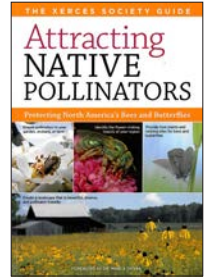
Protect Pollinators from Insecticides

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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