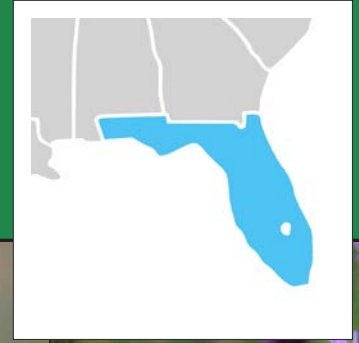


MONARCH NECTAR PLANTS

Florida



Left to right: Monarch on blackeyed susan, scorpion's-tail, and spiked blazing star.

Florida is a butterfly enthusiast's dream. From its temperate northern border to the hundreds of small subtropical islands beyond the peninsula's southern tip, Florida boasts an incredible range of habitats, including hardwood hammocks, mangrove swamps, pine flatwoods, and coastal strands. These communities give rise to an astonishing diversity of plants that serve as both larval hosts and adult nectar plants to roughly 180 different butterfly species, including some of our showiest butterflies such as zebra longwings, spicebush swallowtails, and our best-known tropical migrants, the monarchs.

Each spring, monarchs leave overwintering sites in the mountains of central Mexico and coastal California and fan out across North America to breed and lay eggs on milkweed, the monarch's host plant. Several generations are produced over the course of the spring and summer. In late summer and early fall, adults migrate back to the overwintering sites, where they generally remain in reproductive diapause until the spring, when the cycle begins again. Small year-round resident populations can also be found in some parts of South Florida.

Monarchs at overwintering sites in Mexico and California have declined dramatically since monitoring began in the late 1990s. Across their range in North America, monarchs are threatened by a variety of factors. Loss of milkweed from extensive herbicide use has been a major contributing factor, and habitat loss and degradation from other causes, natural disease and predation, climate change, and widespread insecticide use are probably also contributing to monarch declines. Because of the monarch's migratory life cycle, it is

important to protect and restore habitat across their entire range. Adult monarchs depend on diverse nectar sources for food during all stages of the year, from spring and summer breeding to fall migration and overwintering. Caterpillars are completely dependent on their milkweed host plants. Inadequate milkweed and nectar plant food sources at any point may impact the number of monarchs that successfully arrive at overwintering sites in the fall.

Providing milkweeds and other nectar-rich flowers that bloom where and when monarchs need them is one of the most significant actions you can take to support monarch butterfly populations. This guide features Florida native plants that have documented monarch visitation, bloom during the times of year when monarchs are present, are commercially available, and are known to be hardy. These species are well-suited for wildflower gardens, urban greenspaces, and farm field borders. Beyond supporting monarchs, many of these plants attract other nectar- and/or pollen-seeking butterflies, bees, moths, and hummingbirds, and some are host plants for other butterfly and moth caterpillars. For a list of native plants that host butterflies and moths specific to your zip code see www.nwf.org/nativeplantfinder.

The species in this guide are adaptable to growing conditions found across the state. 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' distributions in your area.



Bloom	Common Name	Scientific Name	Flower Color	Max. Height	Water Needs	Notes
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	Forbs			(Feet)	Low, Medium, or High	All species perennials, unless otherwise noted. Monarchs are present year-round in Florida.
Spring to Fall	1 Aquatic milkweed	<i>Asclepias perennis</i>	White/pink	2	H	Monarch caterpillar host plant.
	2 Butterfly milkweed	<i>Asclepias tuberosa</i>	Orange/yellow	2	L	Monarch caterpillar host plant.
	3 Frostweed	<i>Verbesina virginica</i>	White	6	L/M	Biennial plant. Does best when allowed to naturalize. Important monarch nectar plant.
	4 Giant ironweed	<i>Vernonia gigantea</i>	Purple	8	M	Thin regularly to control spread by suckers. Attracts a wide variety of pollinators.
Spring to Summer	5 Lyreleaf sage	<i>Salvia lyrata</i>	White/blue/violet	2	L/M	Easy to grow but prefers moist soils.
Spring to Winter	6 Spotted bee balm	<i>Monarda punctata</i>	White/pink/yellow	3	L	Annual. Tolerates dry, sandy soils; blooms prolifically; highly attractive to beneficial wasps and bees.
Summer to Fall	7 Blackeyed Susan	<i>Rudbeckia hirta</i>	Yellow/brown	3	L/M	Can be biennial. Butterflies attractant. Drought tolerant.
	8 Blue mistflower	<i>Conoclinium coelestinum</i>	Blue/purple	3	M	Thin regularly to control spread by runners.
	9 Spiked blazing star	<i>Liatris spicata</i>	Purple	4	M	Highly adaptable and easy to grow. Attracts many butterflies, bees, and hummingbirds.
	10 Swamp milkweed	<i>Asclepias incarnata</i>	Pink	4	M	Monarch caterpillar host plant.
	11 Sweetscent	<i>Pluchea odorata</i>	Pink/purple	3	L	Annual plant.
	12 Whorled milkweed	<i>Asclepias verticillata</i>	White	3	L	Monarch caterpillar host plant.
Fall	13 Azure blue sage	<i>Salvia azurea</i>	White/blue	5	L	Tough plant with long-blooming flowers. Does well in dry soils.
	14 Narrow-leaved sunflower	<i>Helianthus angustifolius</i>	Yellow	3	M	Important nectar source for fall migrating monarchs. Latest flowering sunflower species.
Year-round	15 Scarlet sage	<i>Salvia coccinea</i>	White/red/pink	3	M	Can be an annual or perennial.
	16 Scorpion's-tail	<i>Heliotropium angiospermum</i>	White	2	M	Annual plant.
	17 Seaside goldenrod	<i>Solidago sempervirens</i>	Yellow	8	L	Tolerates saltwater spray and sandy soils. An important nectar source for coastal migrating monarchs.

Shrubs and Trees

Spring to Fall	18 Common buttonbush	<i>Cephalanthus occidentalis</i>	White	12	M	Fragrant, showy flowers that attract butterflies.
Summer to Fall	19 Eastern baccharis	<i>Baccharis halimifolia</i>	White	12	M	Tolerates saltwater spray and sandy soils. Good for erosion control.
	20 Jack in the bush	<i>Chromolaena odorata</i>	Purple	6	L	Aromatic flowers attract bees, butterflies, and other insects.
Fall	21 Woody goldenrod	<i>Chrysoma pauciflosculosa</i>	Yellow	3	L	Extremely drought tolerant.
Winter to Spring	22 Carolina laurelcherry	<i>Prunus caroliniana</i>	White	36	M	Can be used as a hedge. Berries attract birds.
Year-round	23 Bushy seaside tansy	<i>Borrichia frutescens</i>	Yellow	3	M	Tolerates saltwater spray.
	24 Firebush	<i>Hamelia patens</i>	Red	12	M	Showy tropical plant. Attracts butterflies and moths as well as hummingbirds.



Planting for Success

Monarch nectar plants often do best in open, sunny sites. You can attract more monarchs to your area by planting flowers in single species clumps and choosing a variety of plants that have overlapping and sequential bloom periods. Monarchs are present year-round in Florida, particularly in South Florida, which is home to a non-migratory population. Providing nectar plants that bloom throughout the entire year will be important for breeding and migrating monarchs in the state.

Why Plant Native?

Although monarchs use a variety of nectar plant species, including exotic invasives such as butterfly bush and lantana, we recommend planting native species. Native plants are often more beneficial to ecosystems, are adapted to local soils and climates, and help promote biological diversity. They can also be easier to maintain in the landscape, once established.

Tropical milkweed is a non-native plant that is widely available in nurseries. This milkweed can persist year-round in mild climates, allowing monarchs to breed throughout the winter rather than going into diapause. Tropical milkweed may foster higher loads of a monarch parasite called *Oe* (*Ophryocystis elektroscirrha*), which negatively impacts monarch health. Because of these implications, we recommend planting native species of milkweeds in areas where they historically occurred. You can read more about *Oe* in a fact sheet by the Monarch Joint Venture: http://monarchjointventure.org/images/uploads/documents/Oe_fact_sheet.pdf.

Protect Monarchs from Pesticides

Both insecticides and herbicides can be harmful to monarchs. Herbicides can reduce floral resources and host plants. Although dependent on timing, rate, and method of application, most insecticides have the potential to poison or kill monarchs and other pollinators. Systemic insecticides, including neonicotinoids, 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 all plant tissues, including the leaves and nectar. New research has demonstrated that some neonicotinoids are toxic to monarch caterpillars that are poisoned as they feed on leaf tissue of treated plants. You can help protect monarchs 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 systemic insecticides. To read more about threats to pollinators from pesticides, please visit: www.xerces.org/pesticides.

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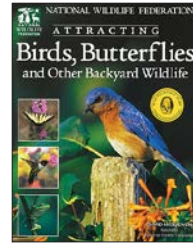
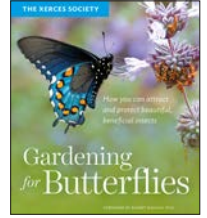
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Additional Resources

Publications & Resources

Gardening for Butterflies

The Xerces Society's newest book introduces you to a variety of butterflies who need our help, and provides suggestions for native plants to attract them, habitat designs to help them thrive, and garden practices to accommodate all stages of their life. Available through www.xerces.org/books.



Attracting Birds, Butterflies, and Other Backyard Wildlife

This award-winning book by the National Wildlife Federation's naturalist David Mizejewski is full of information on gardening for birds, pollinators and other wildlife, including illustrated how-to projects, recommended plant lists, and gorgeous color photos. You'll learn everything you need to know to create a Certified Wildlife Habitat. Available through <http://bit.ly/1Xhxfgu>.

Conservation Status and Ecology of the Monarch Butterfly in the U.S. Report www.xerces.org/us-monarch-consv-report

Southeastern U.S. Monarchs and Milkweeds
<http://bit.ly/2bAachw>

Milkweed Seed Finder

www.xerces.org/milkweed-seed-finder

Websites

The Xerces Society www.xerces.org/monarchs

Monarch Joint Venture www.monarchjointventure.org/resources

Natural Resources Conservation Service
www.nrcs.usda.gov/monarchs

National Wildlife Federation www.nwf.org/butterflies

Citizen Science Efforts in Florida

Journey North

www.learner.org/jnorth/monarch

Monarch Larva Monitoring Project www.mlmp.org

Project Monarch Health www.monarchparasites.org