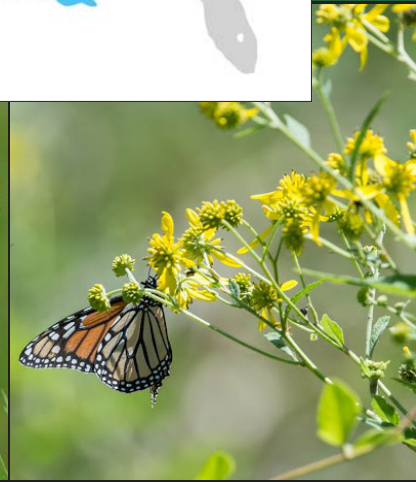


MONARCH NECTAR PLANTS

Southeast



Left to right: Monarch on swamp milkweed, beach blanket-flower, and monarch on wingstem.

The Southeast region encompasses the states of Kentucky, Tennessee, Louisiana, Mississippi, Alabama, Georgia, and South Carolina. Reaching from the Gulf of Mexico to the Atlantic Ocean and spanning the Smokey, Blue Ridge, and Appalachian mountains, this area boasts incredible ecological diversity within a complex network of coastal marshes, longleaf pine forests, bottomland hardwoods, and mixed riparian woodlands. A diverse assemblage of wild pollinators thrives in these habitats, including summer breeding and fall migrating 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 from the northern U.S. and southern Canada migrate back to the overwintering sites, where they generally remain in reproductive diapause until the spring, when the cycle begins again.

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, on the other hand, are completely dependent on their milkweed host plants. Inadequate milkweed or 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 Southeast 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 Southeast region. 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 April through July and again from late August through November in the Southeast.
Spring to Summer	1 Butterfly milkweed	<i>Asclepias tuberosa</i>	Orange/yellow	2	L	Monarch caterpillar host plant and nectar source for many bees.
	2 Eastern smooth beardtongue	<i>Penstemon laevigatus</i>	Pink/purple	3	M	Also attracts bees and hummingbirds.
Spring to Fall	3 Beach blanket-flower	<i>Gaillardia pulchella</i>	Red/yellow	2	L	Establishes easily from seed; grows as an annual, biennial, or perennial.
	4 Smooth oxeye	<i>Heliopsis helianthoides</i>	Yellow	5	L/M	Tolerates clay and moist soils.
Summer	5 Whorled milkweed	<i>Asclepias verticillata</i>	White	3	L	Monarch caterpillar host plant.
	6 Slender mountainmint	<i>Pycnanthemum tenuifolium</i>	White	3	L	Only found in eastern half of the region. Attracts bees, butterflies, and birds.
Summer to Fall	7 Blackeyed Susan	<i>Rudbeckia hirta</i>	Yellow/brown	3	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 Camphorweed	<i>Heterotheca subaxillaris</i>	Yellow	5	L	Annual plant. Can be more of a weed species.
	10 Dense blazing star	<i>Liatris spicata</i>	Purple	4	M	Highly adaptable and easy to grow. Attracts many butterflies, bees, and hummingbirds.
	11 Giant ironweed	<i>Vernonia gigantea</i>	Purple	8	M	Thin regularly to control spread by suckers. Attracts a wide variety of pollinators.
	12 Joe pye weed	<i>Eutrochium fistulosum</i>	Pink/purple	7	M	Great nectar plant that attracts many pollinator species.
	13 Seaside goldenrod	<i>Solidago sempervirens</i>	Yellow	8	L	Tolerates saltwater spray and sandy soils. An important nectar source for coastal migrating monarchs.
	14 Spotted beebalm	<i>Monarda punctata</i>	White/pink/yellow	3	L	Tolerates dry, sandy soils; blooms prolifically; highly attractive to beneficial wasps and bees.
	15 Swamp milkweed	<i>Asclepias incarnata</i>	Pink	4	M	Monarch caterpillar host plant.
	16 Wingstem	<i>Verbesina alternifolia</i>	Yellow	8	L/M	Attracts numerous insects, especially bumble bees.
Fall	17 Narrowleaf sunflower	<i>Helianthus angustifolius</i>	Yellow	3	M	Important nectar source for fall migrating monarchs. Latest flowering sunflower species.

Shrubs and Trees

Spring	18 Eastern redbud	<i>Cercis canadensis</i>	Pink	30	L	Stunning pink flowers in spring. Visited by native bees for nectar and nesting material.
	19 Flowering dogwood	<i>Cornus florida</i>	White/pink	40	M	Beautiful spring flowers with red fruits and foliage in the fall. Fruits eaten by birds and mammals.
Spring to Summer	20 Smooth sumac	<i>Rhus glabra</i>	White	20	L	Tolerates poor soils. Good for stabilizing banks.
	21 Common buttonbush	<i>Cephalanthus occidentalis</i>	White	12	M	Fragrant, showy flowers that attract butterflies.
Summer to Fall	22 Devil's walking-stick	<i>Aralia spinosa</i>	White	20	M	Can be aggressive in small spaces. There is an invasive <i>Aralia</i> species that should not be planted.
	23 Eastern baccharis	<i>Baccharis halimifolia</i>	White	15	M	Tolerates saltwater spray and sandy soils. Good for erosion control.
Winter to Spring	24 Fragrant sumac	<i>Rhus aromatica</i>	White	12	L	Tolerates poor soils. Good for stabilizing banks or creating informal hedges.



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 April through November in the Southeast. Providing nectar plants that bloom from spring through fall will be important for breeding and migrating monarchs in the region.

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 where they have 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

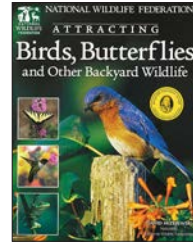
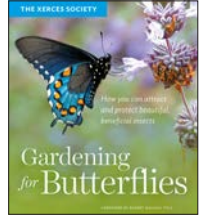
Both insecticides and herbicides can be harmful to monarchs. Herbicides can reduce floral resources and host plants. Although dependent on timing, rate, and method of application, most insecticides have the potential to poison or kill monarchs and other pollinators. Systemic insecticides, including neonicotinoids, 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.

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 the Southeast

Journey North www.learner.org/jnorth/monarch

Monarch Larva Monitoring Project www.mlmp.org

Project Monarch Health www.monarchparasites.org

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