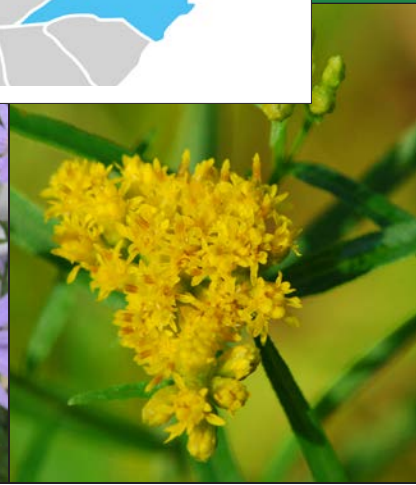
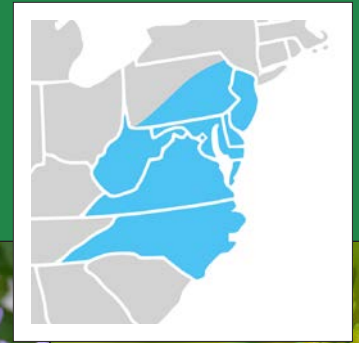


MONARCH NECTAR PLANTS

Mid-Atlantic



Left to right: Monarch on New York ironweed, smooth blue aster, and flat-top goldenrod.

The Mid-Atlantic region encompasses the states of North Carolina, Virginia, West Virginia, Maryland, Delaware, and New Jersey, as well as southeast Pennsylvania and the District of Columbia. These coastal states support a rich diversity of habitats, from salt marshes, pine forests, and bottomland hardwoods to an incredibly diverse array of freshwater wetland communities. Abundant wildlife can be found within these habitats, including hundreds of native pollinators such as 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 Mid-Atlantic 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 Mid-Atlantic. 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
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		Forbs			(Feet)
Summer	1	Common milkweed	<i>Asclepias syriaca</i>	Pink	8
	2	Joe-pye weed	<i>Eutrochium fistulosum</i>	Pink/purple	7
	3	Swamp milkweed	<i>Asclepias incarnata</i>	Pink	4
	4	Wild bergamot	<i>Monarda fistulosa</i>	Purple/pink	3
	5	Blackeyed Susan	<i>Rudbeckia hirta</i>	Yellow	3
	6	Blue mistflower	<i>Conoclinium coelestinum</i>	Blue/purple	3
Summer to Fall	7	Butterfly milkweed	<i>Asclepias tuberosa</i>	Orange/yellow	2
	8	Common boneset	<i>Eupatorium perfoliatum</i>	White	6
	9	Dense blazing star	<i>Liatris spicata</i>	Purple	4
	10	Flat-top goldentop	<i>Euthamia graminifolia</i>	Yellow	6
	11	Grass-leaved blazing star	<i>Liatris pilosa</i>	Purple	4
	12	Narrow-leaved mountain-mint	<i>Pycnanthemum tenuifolium</i>	White	3
	13	Narrow-leaved sunflower	<i>Helianthus angustifolius</i>	Yellow	3
	14	New England aster	<i>Symphotrichum novae-angliae</i>	Pink/purple	6
	15	New York ironweed	<i>Vernonia noveboracensis</i>	Purple	8
	16	Seaside goldenrod	<i>Solidago sempervirens</i>	Yellow	8
	17	Smooth blue aster	<i>Symphotrichum laeve</i> var. <i>laeve</i>	Blue/purple	4
	18	Spotted bee balm	<i>Monarda punctata</i>	White/pink/yellow	3
	19	Wingstem	<i>Verbesina alternifolia</i>	Yellow	6
	20	Wreath goldenrod	<i>Solidago caesia</i>	Yellow	3
Shrubs, Trees, and Vines					
Spring	21	Wild plum	<i>Prunus americana</i>	White	35
Summer to Fall	22	Buttonbush	<i>Cephalanthus occidentalis</i>	White	12
	23	Climbing hempvine	<i>Mikania scandens</i>	White	9
	24	Eastern baccharis	<i>Baccharis halimifolia</i>	White	15





Water Needs

Notes

Low, Medium, or High All species are perennials unless otherwise noted. Monarchs are present April through July and again from late August to November in the Mid-Atlantic.

M	Monarch caterpillar host plant. Drought tolerant. Considered undesirable in livestock forage.
M	Great nectar plant that attracts many pollinator species.
M	Monarch caterpillar host plant.
L	Aromatic foliage. Flowers attract butterflies, bees, and hummingbirds.
L	Can be biennial or annual. Butterfly attractant. Drought tolerant.
M	Thin regularly to control spread by runners.
L	Monarch caterpillar host plant. Drought tolerant.
M/H	Tolerates sandy or clay soils but needs constant moisture.
M	Highly adaptable and easy to grow. Attracts many butterflies, bees, and hummingbirds.
M	Attracts many species of bees, wasps, flies, butterflies, moths, and beetles.
L	
L	Attracts bees, butterflies, and birds.
M	Important nectar source for fall migrating monarchs. Latest flowering sunflower species.
L/M	One of the latest fall-blooming plants. Frequented by bees and pre-hibernation bumble bee queens.
M	Easy to grow and tolerates a wide range of soils, although prefers rich, moist soils.
L/M	Tolerates saltwater spray and sandy soils. An important nectar source for coastal migrating monarchs.
M	Larval host of the pearl crescent butterfly.
L	Drought tolerant. Annual plant.
M	Attracts numerous insects, especially bumble bees.
L/M	Drought tolerant.



L/M	Edible fruits. Relatively easy to grow.
M	Fragrant, showy flowers that attract butterflies.
M	Low-climbing vine used by butterflies for nectar. Height of flower stalks is ~1 ft.
M	Tolerates saltwater spray and sandy soils. Good for erosion control.



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 July and again from late August through November in the Mid-Atlantic. 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 English ivy, 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 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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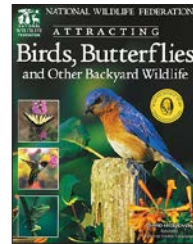
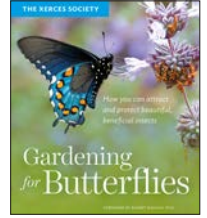
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Additional Resources

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

Milkweed Seed Finder www.xerces.org/milkweed-seed-finder

Eastern U.S. Monarchs and Milkweeds <http://bit.ly/2bAaZx0>

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 Mid-Atlantic

Cape May Monitoring Project
www.monarchmonitoringproject.com

Journey North www.learner.org/jnorth/monarch

Monarch Larva Monitoring Project www.mlmp.org

Project Monarch Health www.monarchparasites.org