MONARCH NECTAR PLANTS

Mid-Atlantic

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

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.

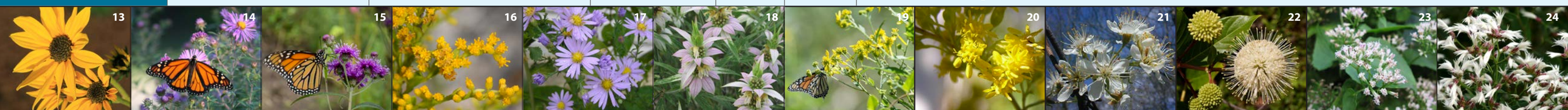
Monarchs at overwintering sites in Mexico and California have declined dramatically since monitoring began in the late 1990s. Across their range in North America, monarchs are threatened by a variety of factors. Loss of milkweed from extensive herbicide use has been a major contributing factor, and habitat 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.

MONARCH JOINT VENTURE
XERCES SOCIETY for Invertebrate Conservation
NATIONAL WILDLIFE FEDERATION GARDEN FOR WILDLIFE

Bloom		Common Name	Scientific Name	Flower Color	Max. Height	Water Needs	Notes
		Forbs			(Feet)	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.
Summer	1	Common milkweed	*Asclepias syriaca*	Pink	8	M	Monarch caterpillar host plant. Drought tolerant. Considered undesirable in livestock forage.
	2	Joe-pye weed	*Eutrochium fistulosum*	Pink/purple	7	M	Great nectar plant that attracts many pollinator species.
	3	Swamp milkweed	*Asclepias incarnata*	Pink	4	M	Monarch caterpillar host plant.
	4	Wild bergamot	*Monarda fistulosa*	Purple/pink	3	L	Aromatic foliage. Flowers attract butterflies, bees, and hummingbirds.
	5	Blackeyed Susan	*Rudbeckia hirta*	Yellow	3	L	Can be biennial or annual. Butterfly attractant. Drought tolerant.
	6	Blue mistflower	*Conoclinium coelestinum*	Blue/purple	3	M	Thin regularly to control spread by runners.
	7	Butterfly milkweed	*Asclepias tuberosa*	Orange/yellow	2	L	Monarch caterpillar host plant. Drought tolerant.
	8	Common boneset	*Eupatorium perfoliatum*	White	6	M/H	Tolerates sandy or clay soils but needs constant moisture.
	9	Dense blazing star	*Liatris spicata*	Purple	4	M	Highly adaptable and easy to grow. Attracts many butterflies, bees, and hummingbirds.
	10	Flat-top goldentop	*Euthamia graminifolia*	Yellow	6	M	Attracts many species of bees, wasps, flies, butterflies, moths, and beetles.
	11	Grass-leaved blazing star	*Liatris pilosa*	Purple	4	L	
Summer to Fall	12	Narrow-leaved mountain-mint	*Pycnanthemum tenuifolium*	White	3	L	Attracts bees, butterflies, and birds.
	13	Narrow-leaved sunflower	*Helianthus angustifolius*	Yellow	3	M	Important nectar source for fall migrating monarchs. Latest flowering sunflower species.
	14	New England aster	*Symphyotrichum novae-angliae*	Pink/purple	6	L/M	One of the latest fall-blooming plants. Frequented by bees and pre-hibernation bumble bee queens.
	15	New York ironweed	*Vernonia noveboracensis*	Purple	8	M	Easy to grow and tolerates a wide range of soils, although prefers rich, moist soils.
	16	Seaside goldenrod	*Solidago sempervirens*	Yellow	8	L/M	Tolerates saltwater spray and sandy soils. An important nectar source for coastal migrating monarchs.
	17	Smooth blue aster	*Symphyotrichum laeve* var. *laeve*	Blue/purple	4	M	Larval host of the pearl crescent butterfly.
	18	Spotted bee balm	*Monarda punctata*	White/pink/yellow	3	L	Drought tolerant. Annual plant.
	19	Wingstem	*Verbesina alternifolia*	Yellow	6	M	Attracts numerous insects, especially bumble bees.
	20	Wreath goldenrod	*Solidago caesia*	Yellow	3	L/M	Drought tolerant.
		Shrubs, Trees, and Vines					
Spring	21	Wild plum	*Prunus americana*	White	35	L/M	Edible fruits. Relatively easy to grow.
	22	Buttonbush	*Cephalanthus occidentalis*	White	12	M	Fragrant, showy flowers that attract butterflies.
Summer to Fall	23	Climbing hempvine	*Mikania scandens*	White	9	M	Low-climbing vine used by butterflies for nectar. Height of flower stalks is ~1 ft.
	24	Eastern baccharis	*Baccharis halimifolia*	White	15	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.

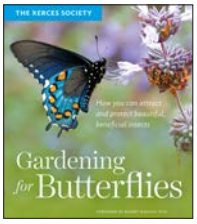
Tropical milkweed is a non-native plant that is widely available in nurseries. This milkweed can persist year-round in mild climates, allowing monarchs to breed throughout the winter rather than going into diapause. Tropical milkweed may foster higher loads of a monarch parasite called Oe (*Ophryocystis 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.

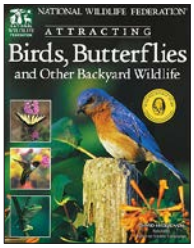
Additional Resources

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

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Written by Candace Fallon, Nancy Lee Adamson, Sarina Jepsen, and Mace Vaughan. Designed by Kaitlyn Rich. Formatted by Michele Blackburn. PHOTO CREDITS: Uli Lorimer*: 1. James Gaither*: 2. Kelly Gill, Xerces Society: 3. Jean Pawek***: 4. Barbara Powers: 5. Evan Raskin****: 6. Peter Gorman*: 7, 8. Lotus Johnson*: 9. Joshua Mayer*: 10. Suzanne Cadwell*: 11. Nancy Lee Adamson, Xerces Society: 12, 17, 20. John Branauer*: 13. Candy Sarikonda: 14. Chesapeake Conservation Landscaping Council*: 15 (cover). Sam Fraser-Smith*: 16. Jennifer Hopwood, Xerces Society: 18. Nicole Hamilton: 19. John Hilty, Illinois Wildflowers: 21. Desmodium**: 22. Suzzane Caldwell*: 23. Nancy Magnusson*: 24. *Courtesy of flickr.com/**Wikimedia Commons/***CalPhotos/****iNaturalist. Photographs remain under the copyright of the photographer.

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