Monarch Nectar Plants Great Lakes





Left to right: Monarch on eastern purple coneflower, spotted beebalm, and monarch on rough blazing star.

The Great Lakes region encompasses eastern Minnesota, Wisconsin, Michigan, Ohio, northern Pennsylvania, and most of western and central New York. Within this area lies vast tallgrass prairies, sprawling wetlands, and mixed broadleaf forests. These communities are home to an impressive diversity of butterflies, including the northern migratory population of the monarch butterfly, which depends on the floral resources available within these habitats for its survival.

Each spring, monarchs leave overwintering sites in the mountains of central Mexico 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.

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 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 Great Lakes 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 <u>nwf.org/nativeplantfinder</u>. 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 (<u>bonap.net/napa</u>), or the USDA's PLANTS database (<u>plants.usda.gov</u>) for details on species' distributions in your area.









Bloom		Common Name	Scientific Name	Flower Color	Max. Height	Water Needs
		Forbs			(Feet)	Low, Med., or High
Summer	1	Butterfly milkweed	Asclepias tuberosa	Orange	2	L
	2	Common milkweed	Asclepias syriaca	Pink	5	L-H
	3	Swamp milkweed	Asclepias incarnata	Pink	4	M / H
Summer to Fall	4	Common boneset	Eupatorium perfoliatum	White	6	M / H
	5	Eastern purple coneflower	Echinacea purpurea	Pink / purple	5	L/M
	6	Field thistle	Cirsium discolor	Pink / purple	7	L
	7	Marsh blazing star	Liatris spicata	Purple	5	M / H
	8	Meadow blazing star	Liatris ligulistylis	Purple	5	М
	9	Mountain mint	Pycnanthemum virginianum	White / purple	3	M / H
	10	Ontario blazing star	Liatris cylindracea	Purple	2	L
	11	Rough blazing star	Liatris aspera	Purple	4	L
	12	Sawtooth sunflower	Helianthus grosseserratus	Yellow	10	М
	13	Showy goldenrod	Solidago speciosa	Yellow	5	L
	14	Spotted beebalm	Monarda punctata	White / pink / yellow	3	L
	15	Spotted Joe Pye weed	Eutrochium maculatum	Pink	6	н
	16	Stiff goldenrod	Oligoneuron rigidum	Yellow	5	L/M
	17	Swamp thistle	Cirsium muticum	Pink / purple	7	н
	18	Sweet Joe Pye weed	Eutrochium purpureum	Purple / pink	6	M / H
	19	Whorled milkweed	Asclepias verticillata	White	3	L
	20	Wild bergamot	Monarda fistulosa	Purple	5	L/M
Fall	21	Aromatic aster	Symphyotrichum oblongifolium	Purple	2	L
	22	Maximilian sunflower	Helianthus maximiliani	Yellow	8	L
	23	New England aster	Symphyotrichum novae-angliae	Pink / purple	6	М
		Shrubs and Trees				
Summer to Fall	24	Buttonbush	Cephalanthus occidentalis	White	10	М/Н

Notes

This list of monarch nectar plants for the Great Lakes region was produced by the Xerces® Society. For more information about monarch conservation, please visit <u>www.xerces.org</u>



All species perennials, unless otherwise noted.

Host plant for monarch caterpillars and excellent nectar plant for adults. Very showy flowers. Prefers dry soils and full sun. Host plant for monarch caterpillars and excellent nectar plant for adults. Fragrant flowers. Thrives in a wide range of soils. Excellent monarch caterpillar host plant and nectar plant. A great option for shorelines, rain gardens, and riparian buffers. Tolerates sandy or clay soils but needs constant moisture. Also attracts bees and an amazing assortment of beneficial wasps. Attracts a number of butterflies, native bees, and hummingbirds. Native range includes most of the region apart from MN. Not to be confused with exotic thistles, this non-aggressive native thistle is exceptional for pollinators and songbirds. Biennial. Highly adaptable and easy to grow. Attracts many butterflies, bees, and hummingbirds. A great Liatris for wet soils. The ultimate monarch magnet, even compared to other Liatris. Native range stretches east only as far as WI. Medium soils. Pollinator magnet. Leaves can be used for tea.

Shorter than other Liatris species and tends to bloom later in the year. Requires dry soils.

Another incredibly attractive Liatris for monarchs as well as many other insects. Drought tolerant.

Tolerates many soil types. Can be quite large in the garden. Continues blooming late into the fall. Rhizomatous.

An excellent monarch nectar plant; also visited by beneficial solitary wasps, pollen-eating soldier beetles, and more.

Prolific blooms are highly attractive to beneficial wasps and bees. Prefers dry, sandy soils. A beautiful, unique flower.

Prefers moist soils. Attracts numerous butterflies and bees, including the very rare rusty patched bumble bee.

This plant offers abundant and accessible pollen and nectar—a utopia for insects! Flat-top flower is unusual for a goldenrod.

This lovely native thistle attracts numerous butterflies and bees. Host plant for the swamp metalmark butterfly. Wet soils. Biennial.

Be sure to give it the water it needs during droughts

Monarch caterpillar host plant and exceptional nectar plant. This small milkweed plant is great for landscaping. Dry soils.

A superb bumble bee plant, also known as bee balm. Also attracts hawk moths and hummingbirds. Aromatic foliage.

Very late blooming aster with fragrant foliage. Stiff stems branch out to create a bush-like appearance. Full sun and dry soils.

Very showy and vigorous plant. Caterpillar host plant for the silvery checkerspot and bordered patch butterflies.

One of the latest fall-blooming plants. Butterfly magnet and important food resource for pre-hibernation bumble bee queens.

A wetland plant that does fine in gardens.



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 June through October in the Great Lakes region. Providing nectar plants that bloom from early summer 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 (Buddleja spp.) and English ivy (Hedera helix), 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 (Asclepias curassavica) is a non-native plant that is widely available in nurseries. This milkweed can persist yearround 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: <u>https://</u> tinvurl.com/89cmcaeb.

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: xerces.org/pesticides.

Additional Resources

Publications & Resources

- 100 Plants to Feed the Monarch by The Xerces Society: xerces.org/books
- Gardening for Butterflies by the Xerces Society: xerces.org/books
- line with the second second second second second second with the second Wildlife: https://tinyurl.com/2p8c7zjm
- b Conservation Status and Ecology of the Monarch Butterfly in the U.S.: xerces.org/us-monarch-consv**report**
- linator Plants of the Central U.S.: Native Milkweeds: http://bit.ly/1z7CX4U



Milkweed Seed Finder: <u>xerces.org/milkweed-</u> seed-finder

Websites

- The Xerces Society: <u>xerces.org/monarchs</u>
- Monarch Joint Venture: <u>monarchjointventure.org/resources</u>
- Natural Resources Conservation Service: <u>nrcs.usda.gov/programs-</u> initiatives/monarch-butterflies
- National Wildlife Federation: <u>nwf.org/butterflies</u>

Community Science Efforts in the Great Lakes Region

- Monarch Watch Tagging Program: <u>monarchwatch.org/tagging</u>
- Journey North: journeynorth.org/monarchs
- Monarch Larva Monitoring Project: mlmp.org
- Project Monarch Health: monarchparasites.org
- Peninsula Point Monitoring Project: <u>thebutterflynetwork.org/</u> program/peninsula-point-monitoring-project

Data Sources

Nectaring data and observations, background information, and other contributions to this publication were taken from the published literature and generously provided by multiple researchers, gardeners, partners, and biologists. For the full list of data sources, please visit our website: xerces.org/monarch-nectar-plants.

Have you seen monarchs on native nectar plants? Share your monarch nectar plant observations with Xerces at https://tinyurl.com/XercesMNPO

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