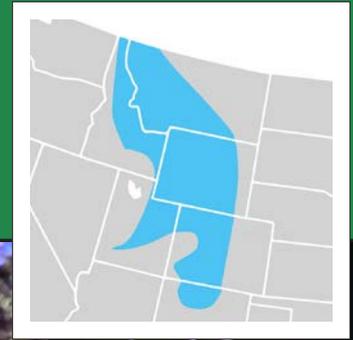


MONARCH NECTAR PLANTS

Rocky Mountains



Left to right: Monarch on swamp milkweed, littleflower penstemon, and Rocky Mountain blazing star.

The Rocky Mountains region spans large sections of Idaho, Montana, Wyoming, Utah, Colorado, and New Mexico. It is characterized by some of the tallest mountains in the continental U.S. and is home to diverse forests, serpentine river canyons, and high alpine zones. A huge variety of plants and wildflowers, from tiny alpine blooms to large stands of rabbitbrush and goldenrod, can be found in this region. These plant communities support numerous pollinators and other wildlife, including summer-visiting monarch butterflies.

Each spring, monarchs leave overwintering sites in central Mexico and along the California coast and fan out across the North American landscape to breed and lay eggs on milkweed, the monarch's host plant. Several generations are likely produced during this time. In the 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 their decline. 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. 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 Rocky Mountain native plants that have documented monarch visitation, bloom during the times of year when monarchs are present in this region, 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. 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 will be adaptable to growing conditions across most of the Rocky Mountains. Please consult regional floras or the Biota of North America's North American Plant Atlas (<http://bonap.net/napa>) 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 July through October in the Rocky Mountains.
Spring to Fall	1 Butterfly milkweed	<i>Asclepias tuberosa</i>	Orange/yellow	2	L	Monarch caterpillar host plant.
	2 Showy milkweed	<i>Asclepias speciosa</i>	Pink/green/purple	4	L/M	Monarch caterpillar host plant.
Summer	3 Nettleleaf giant hyssop	<i>Agastache urticifolia</i>	Purple/red	5	M	Establishes better from transplant than seed. Tolerates clay soil and wet conditions.
	4 Tall fringed bluebells	<i>Mertensia ciliata</i>	Blue	3	H	Prefers moist soils, including stream banks and wet meadows.
Summer to Fall	5 Blanketflower	<i>Gaillardia aristata</i>	Red/yellow	3	L/M	Drought tolerant once established. Excellent nectar plant for butterflies.
	6 Common sunflower	<i>Helianthus annuus</i>	Yellow	8	M	Annual. A favorite of many bee species. Easy to establish and tolerant of clay soils.
	7 Dotted blazing star	<i>Liatris punctata</i>	Pink/purple	2	L	Very drought tolerant once established.
	8 Flodman's thistle	<i>Cirsium flodmanii</i>	White/purple	3	M	Important nectar source for native bees.
	9 Jerusalem artichoke	<i>Helianthus tuberosus</i>	Red/pink/yellow	10	L	Can be aggressive in the garden if no competition is present.
	10 Maximiliani sunflower	<i>Helianthus maximiliani</i>	Yellow/brown	10	M	Very showy plant. Can be aggressive in the garden.
	11 Missouri goldenrod	<i>Solidago missouriensis</i>	Yellow	3	L/M	Drought tolerant once established.
	12 Rocky Mountain beeplant	<i>Cleome serrulata</i>	White/pink	4	L/M	Annual plant but will re-seed. Attracts bees. Seeds are important for birds.
	13 Rocky Mountain blazing star	<i>Liatris ligulistylis</i>	Pink/purple	6	M	An incredible monarch nectar plant. Birds eat the seeds.
	14 Spotted joe pye weed	<i>Eutrochium maculatum</i>	Pink/purple	6	M/H	Prefers moist soils, including damp meadows. Attracts butterflies.
	15 Sulphur-flower buckwheat	<i>Eriogonum umbellatum</i>	White/yellow	2	L	Drought tolerant once established.
Fall	16 Swamp milkweed	<i>Asclepias incarnata</i>	Pink	4	M	Monarch caterpillar host plant.
	17 Swamp verbena	<i>Verbena hastata</i>	Blue/purple	5	M/H	Biennial plant. Attracts butterflies and is a host for the common buckeye.
	18 Western coneflower	<i>Rudbeckia occidentalis</i>	Yellow/green	6	M/H	Good bee plant.
	19 Western goldentop	<i>Euthamia occidentalis</i>	Yellow	6	M/H	Wetland-riparian.
20 Canada goldenrod	<i>Solidago canadensis</i>	Yellow	5	M	Drought tolerant once established.	

Shrubs

Spring to Summer	21 Woods' rose	<i>Rosa woodsii</i> var. <i>ultramontana</i>	Pink	5	L/M	Prefers water but drought tolerant.
Summer	22 Littleflower penstemon	<i>Penstemon procerus</i>	Blue/purple	2	L	Drought tolerant once established.
Summer to Fall	23 Rubber rabbitbrush	<i>Ericameria nauseosa</i>	Yellow	8	L	Very drought tolerant.
	24 Yellow rabbitbrush	<i>Chrysothamnus viscidiflorus</i>	Orange/yellow	3	L	Host plant for the northern checkerspot. Nectar plant for many butterfly species.



Planting for Success

Monarch nectar and host 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 can be present from July through October in the Rocky Mountains, although this can vary depending on your elevation.

Why Plant Native?

Although monarchs use a variety of nectar plant species, including exotic invasives such as dame's rocket and yellow toadflax, 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.

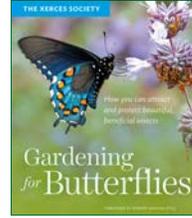
Tropical milkweed is a non-native plant that is widely available in nurseries. This milkweed can persist year-round in mild climates, allowing monarchs to breed throughout the winter rather than going into diapause. Tropical milkweed may foster higher loads of a monarch parasite called *Oe* (*Ophryocystis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

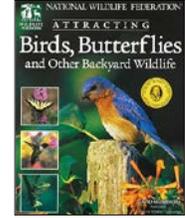
Both insecticides and herbicides can be harmful to monarchs. Herbicides can reduce floral resources and host plants. Although dependent on timing, rate, and method of application, most insecticides have the potential to poison or kill monarchs and other pollinators. Systemic insecticides, including neonicotinoids,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

Additional Resources

Gardening for Butterflies



Attracting Birds, Butterflies, and Other Backyard Wildlife



Available through www.xerces.org/books and <http://bit.ly/1Xhxfgu>.

Conservation Status and Ecology of the Monarch Butterfly in the U.S. Report

www.xerces.org/us-monarch-consv-report

Guide to Milkweeds and Monarchs in the Western U.S.

www.xerces.org/western-us-monarch-guide

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 Rocky Mountains Region

Southwest Monarch Study www.swmonarchs.org

Xerces Society & USFWS Milkweed and Monarch Survey

www.xerces.org/milkweedsurvey

Journey North www.learner.org/jnorth/monarch

Monarch Larva Monitoring Project www.mlmp.org

Project Monarch Health www.monarchparasites.org

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