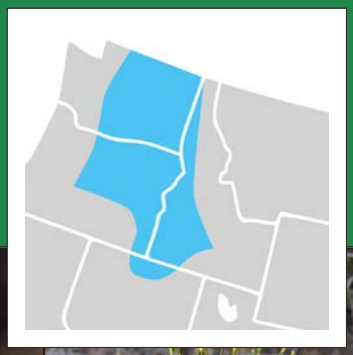
MONARCH NECTAR PLANTS

Inland Northwest



Left to right: Monarch on showy milkweed, cobwebby thistle, and yellow spiderflower.

The Inland Northwest encompasses much of eastern Oregon and Washington stretching from the eastern slopes of the Cascades into parts of western Idaho and northern Nevada. The landscapes in this region are dominated by shrub steppe and open prairie interspersed with juniper woodlands and pine forests. Nectar-rich shrubs and forbs take on special importance in this often arid landscape and are critically important resources for a number of insects and other wildlife, including breeding and migrating 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. 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 in the Inland Northwest. This guide features native Northwest 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. The list also includes moisture requirements, so that you can choose plants to create a drought-tolerant garden. 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.

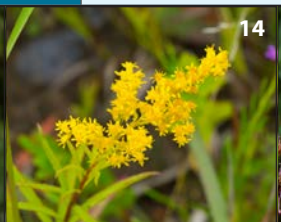
The species in this guide will be adaptable to growing conditions across most of the region. Please consult regional floras or the Biota of North America's North American Plant Atlas (http://bonap.net/napa) for details on species' distributions in your area.

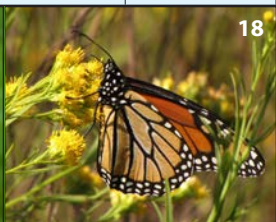
MONARCH JOINT VENTURE

XERCES SOCIETY for Invertebrate Conservation

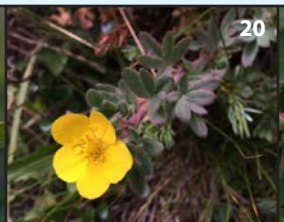
NATIONAL WILDLIFE FEDERATION GARDEN FOR WILDLIFE

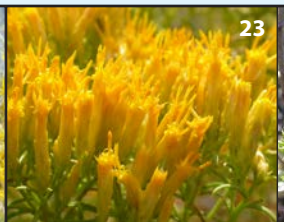
Bloom		Common Name	Scientific Name	Flower Color	Max. Height
		Forbs			(Feet)
Spring to Summer	1	Cobwebby thistle	*Cirsium occidentale*	Pink/white/purple	4
	2	Heartleaf milkweed	*Asclepias cordifolia*	pink/purple	3
	3	Purple sage	*Salvia dorrii*	Blue	3
	4	Yellow spiderflower	*Cleome lutea*	Yellow	3
Summer	5	Mountain monardella	*Monardella odoratissima*	White/blue/purple	1
	6	Narrow-leaved milkweed	*Asclepias fascicularis*	pink/white	3
	7	Nettleleaf giant hyssop	*Agastache urticifolia*	purple/red	2
	8	Nuttall's sunflower	*Helianthus nuttallii* ssp. *nuttallii*	Yellow	10
	9	Royal penstemon	*Penstemon speciosus*	Blue	3
	10	Showy milkweed	*Asclepias speciosa*	pink/green/purple	3
Summer to Fall	11	Blanketflower	*Gaillardia aristata*	Red/yellow	2
	12	Canada goldenrod	*Solidago canadensis*	Yellow	5
	13	Common sunflower	*Helianthus annuus*	yellow	5
	14	Missouri goldenrod	*Solidago missouriensis*	Yellow	3
	15	Pacific aster	*Symphyotrichum chilense*	Yellow/violet	4
	16	Sulphur-flower buckwheat	*Eriogonum umbellatum*	White/yellow	2
	17	Western coneflower	*Rudbeckia occidentalis*	Yellow/green	7
	18	Western goldentop	*Euthamia occidentalis*	Yellow	6
		Shrubs and Trees			
Spring to Summer	19	Black chokecherry	*Prunus virginiana* var. *melanocarpa*	White	20
	20	Shrubby cinquefoil	*Dasiphora fruticosa*	Yellow	4
	21	Woods' rose	*Rosa woodsii* var. *ultramontana*	Pink	6
Summer to Fall	22	Rubber rabbitbrush	*Ericameria nauseosa*	Yellow	6
	23	Yellow rabbitbrush	*Chrysothamnus viscidiflorus*	Yellow	3
Winter to Summer	24	Arroyo willow	*Salix lasiolepis*	Yellow/purple	16





Water Needs	Notes
Low, Medium, or High	All species perennials, unless otherwise noted. Monarchs are present June through September in the Inland NW.
L	Biennial. Attracts bees, butterflies, and hummingbirds. Larval host for several butterfly species.
L	Monarch caterpillar host plant.
M	Excellent plant for dry desert gardens. Attracts birds, butterflies, and moths.
L	Annual.
L	Does best at mid to high elevations. Attracts many species of butterflies.
M	Monarch caterpillar host plant. Tolerates clay soils and wet or dry conditions.
L	Establishes better from transplant than seed. Tolerates clay soil and wet conditions.
M/H	A showy perennial sunflower that prefers moist soils.
L	Great for rock gardens. Attracts numerous pollinators.
M	Monarch caterpillar host plant.
L	Excellent nectar plant for butterflies.
M	Drought tolerant once established.
M	Annual. A favorite of many bee species. Easy to establish and tolerant of clay soils.
L	Easy to grow. Host plant to a number of moth species and an important pollinator plant.
L	One of the latest fall-blooming plants. Important for pre-hibernation bumble bee queens. Clay tolerant.
L	Attracts many species of bees and butterflies.
M	A favorite of bees.
M/H	Wetland-riparian.
M	Flowers attract early butterflies. Birds will eat the fruits.
M	A durable member of the rose family with a long bloom period. Prefers moist soils.
L/M	Fragrant flowers and large rosehips. Excellent bird plant.
L	Very drought tolerant.
L	Host plant for the northern checkerspot. Nectar plant for many butterfly species.
M	Tolerates sand and seasonal flooding; good for erosion control. Important wildlife plant.





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 from May through September in the Inland Northwest. If you are located to the west of the Cascade mountains, check out our guide for the Maritime Northwest, available at: www.xerces.org/monarch-nectar-plants.

Why Plant Native?

Although monarchs use a variety of nectar plant species, including exotic invasives such as butterfly bush and purple loosestrife, 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.

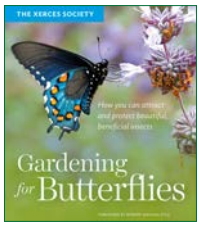
Tropical milkweed is a non-native plant that is widely available in nurseries. This milkweed can persist year-round in mild climates, allowing monarchs to breed throughout the winter rather than going into diapause. Tropical milkweed may foster higher loads of a monarch parasite called Oe (*Ophryocystis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

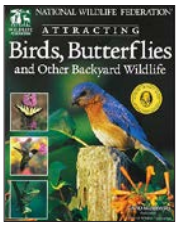
Both insecticides and herbicides can be harmful to monarchs. Herbicides can reduce floral resources and host plants. Although dependent on timing, rate, and method of application, most insecticides have the potential to poison or kill monarchs and other pollinators. Systemic insecticides, including neonicotinoids,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

Guide to the Native Milkweeds of Oregon
www.xerces.org/or-mw-guide

Guide to the Native Milkweeds of Washington
www.xerces.org/wa-mw-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 Oregon & Washington

Xerces Society & USFWS Milkweed and Monarch Survey
www.xerces.org/milkweedsurvey

Monarch Butterflies in the Pacific Northwest
www.facebook.com/MonarchButterfliesinThePacificNorthwest

Journey North www.learner.org/jnorth/monarch

Monarch Larva Monitoring Project www.mlmp.org

Project Monarch Health www.monarchparasites.org

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