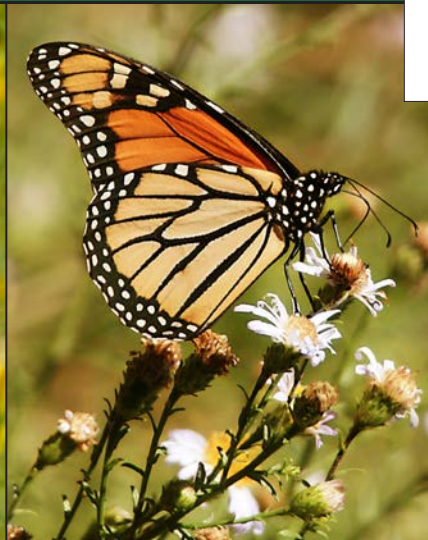
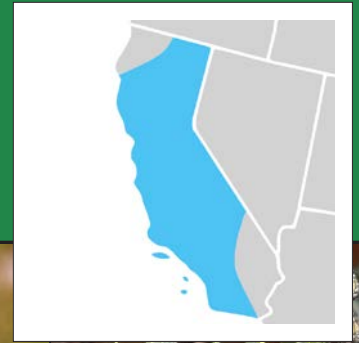


MONARCH NECTAR PLANTS

California



Left to right: Monarch butterflies on rabbitbush, Pacific aster, and clustered together on eucalyptus in a California overwintering site.

California is one of the most floristically biodiverse regions in the world, supporting unique plant communities such as prairie grasslands, chaparral, giant sequoia groves, and Joshua tree woodlands. The native plants that make up these communities in turn support an incredible array of insects and other animals, including the monarch butterfly. During spring and summer, monarchs leave hundreds of overwintering sites along the California coast and fan out across the western landscape to breed and lay eggs on milkweed (*Asclepias* spp.), the monarch's host plant. Several generations are likely produced during this time. In the fall, adults from throughout the western U.S. migrate back to overwintering sites in California and central Mexico, where they generally remain in reproductive diapause until the spring, when the cycle begins again.

Once, millions of monarchs overwintered along the Pacific coast of California and Baja, Mexico. By 2018, the population of western monarchs hit a record low of less than 29,000 butterflies, which represents a 99.4% decline since the 1980's. The significant problems afflicting western monarchs include habitat loss, pesticide use, and climate change. 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 native California plants that have documented monarch visitation, bloom during the times of year when monarchs are present and are commercially available... This list is not exhaustive, but focuses on the plants that appear to be the most important for western monarchs. The list also includes moisture requirements, so that you can choose plants to create a drought-tolerant monarch garden, if needed. 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 state, but may be less suitable for planting in the High Sierras, Modoc Plateau, and Eastern Interior Desert regions. Please consult Calflora (www.calflora.org) for details on species' distributions in your specific area.



Bloom	Common Name	Scientific Name	Flower Color	Max. Height	Water Needs	Notes
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PLEASE NOTE: In general, milkweed should not be planted within 5 miles of the coast north of Santa Barbara, nor within 1 mile of the coast from Santa Barbara south. These areas are generally outside of milkweed's historical range and planting milkweed too close to overwintering sites may interfere with monarch migration and overwintering behavior.

This list was produced by the Xerces Society. www.xerces.org
 XERCES SOCIETY for Invertebrate Conservation

Forbs							
				(Feet)	Low, Med., or High	All species perennials, unless otherwise noted. Monarchs can be found year-round in California.	
Spring to Summer	1	Nettleleaf giant hyssop	<i>Agastache urticifolia</i>	Purple/red	2	L	Establishes better from transplant than seed. Tolerates clay soil and wet or dry conditions.
	2	Yarrow	<i>Achillea millefolium</i>	White	3	L	Tolerates clay soil and wet or dry conditions. Attractive to many insects.
Spring to Fall	3	Coastal sand verbena	<i>Abronia latifolia</i>	Yellow	1	L	Tolerates salt spray and prefers sandy soils. Can bloom year-round.
	4	Gumplant	<i>Grindelia camporum</i>	Yellow	4	L-H	Tolerates clay soil and wet or dry conditions.
	5	Milkweed	<i>Asclepias</i> spp.	Pink/white/purple	2-4	L/M	Monarch caterpillar host plant. Likely entire genus is attractive to monarchs.
	6	Oregon gumweed	<i>Grindelia stricta</i>	Yellow	5	H	Wetland / riparian.
	7	Western vervain	<i>Verbena lasiostachys</i>	Purple	3	L	Good butterfly plant. Tolerates seasonal flooding, sand and clay. Can be used for erosion control.
Summer	8	Coyote mint	<i>Monardella villosa</i>	Pink/purple	2	L	Requires good drainage.
	9	Indian hemp	<i>Apocynum cannabinum</i>	White/pink	6	M/H	Poisonous to humans, pets and livestock.
	10	Mountain monardella	<i>Monardella odoratissima</i>	White/purple	1	L	Does best at mid to high elevations. Attracts many species of butterflies.
Summer to Fall	11	Pacific aster	<i>Symphotrichum chilense</i>	Yellow/violet	4	L	Tolerates clay soils and wet or dry conditions. Likely entire genus is attractive to monarchs.
	12	Goldenrod	<i>Solidago</i> spp.	Yellow	3	L	Important late-season forage for bees, butterflies, wasps, beetles, and more. Likely entire genus is attractive to monarchs.
	13	Smooth beggartick	<i>Bidens laevis</i>	Yellow	3	H	Prefers wet areas and can be used in bioswales. Attracts beneficial insects and butterflies in the fall.
	14	Sunflowers	<i>Helianthus</i> spp.	Yellow	5-8	M	Excellent butterfly nectar plant. Attractive to many insects. Likely entire genus is attractive to monarchs.
Winter to Spring	15	Western goldentop	<i>Euthamia occidentalis</i>	Yellow	6	H	Wetland-riparian. Likely entire genus is attractive to monarchs.
	16	Bluedicks	<i>Dichelostemma capitatum</i>	Purple	3	L	Attracts bees, butterflies, and hummingbirds. An early spring bloomer.
Winter to Summer	17	Seaside fleabane	<i>Erigeron glaucus</i>	Purple	2	L	A great butterfly plant.

Shrubs and Trees

Year-round	18	Coyotebrush, mulesfat, desertbroom	<i>Baccharis</i> spp.	White/yellow/pink	6-10	L	Easy to grow and attractive to many insects. Likely entire genus is attractive to monarchs.
	19	Black sage	<i>Salvia mellifera</i>	Blue/purple	6	L	Important butterfly and hummingbird plant. Quail eat the seeds.
Spring to Summer	20	Desert sage	<i>Salvia dorrii</i>	Purple	4	L	Very drought tolerant.
	21	Common buttonbush	<i>Cephalanthus occidentalis</i>	White	6	H	Fragrant, showy flowers that attract butterflies.
Summer to Fall	22	Rabbitbrush, goldenbush, mock heather	<i>Ericameria</i> spp.	Yellow	4-8	L	Great late season nectar source for bees and butterflies. Very drought tolerant. Likely entire genus is attractive to monarchs.
	23	Manzanita	<i>Arctostaphylos</i> spp.	Pink/white	1-30	L/M	Some species/varieties are very drought tolerant. Likely entire genus is attractive to monarchs.
Winter to Spring	24	Willow	<i>Salix</i> spp.	White	20-50	H	Tolerates sand and seasonal flooding. Important wildlife plant. Likely entire genus is attractive to monarchs.



Planting for Success

Monarch nectar and host plants often do best in open, sunny sites. You can attract more monarchs by planting flowers in single species clumps and choosing a variety of plants that have overlapping and sequential bloom periods. Monarchs can be present year-round in California, so you may want to provide nectar plants for migrating and breeding monarchs from spring through fall, as well as milkweeds in the spring and summer.

Why Plant Native?

Although monarchs use a variety of nectar plant species, including exotic invasives such as ice plant and cape 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 (*Asclepias curassavica*) 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. **In general, milkweed should not be planted within 5 miles of the coast north of Santa Barbara, nor within 1 mile of the coast from Santa Barbara south. These areas are generally outside of milkweed's historical range and planting milkweed too close to overwintering sites may interfere with monarch migration and overwintering behavior.** Because of these implications, we recommend planting native milkweeds in areas where they historically occurred. You can read more about OE in this Monarch Joint Venture fact sheet: http://monarchjointventure.org/images/uploads/documents/Oe_fact_sheet.pdf.

Protect Monarchs from Insecticides

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 shown 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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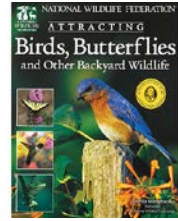
Additional Resources

Gardening for Butterflies by The Xerces Society



www.xerces.org/books

Attracting Birds, Butterflies, and Other Backyard Wildlife



<http://bit.ly/1Xhxfgu>

From the Xerces Society

- ↪ *Conservation Status and Ecology of the Monarch Butterfly in the U.S.:* [xerces.org/us-monarch-consv-report](http://www.xerces.org/us-monarch-consv-report)
- ↪ *Guide to Milkweeds and Monarchs in the Western U.S.:* [xerces.org/western-us-monarch-guide](http://www.xerces.org/western-us-monarch-guide)
- ↪ *Guide to California Native Milkweeds:* [xerces.org/ca-mw-guide](http://www.xerces.org/ca-mw-guide)
- ↪ *Milkweed Seed Finder:* [xerces.org/milkweed-seed-finder](http://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 California

- ↪ Xerces Society Western Monarch Thanksgiving Count: www.westernmonarchcount.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

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 see the Monarch Nectar Guides page on our website (www.xerces.org/monarch-nectar-plants).

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