



Western Monarch & Native Insect Pollinator Working Group

# Support Monarch Habitat

*Advancing Collaborative, Proactive, Science-Based Fish and Wildlife Conservation and Management Across the West*



Credit: Amanda Barth

## ***Protecting monarchs means preserving and restoring their habitats***

*Monarchs use a variety of different habitats to complete their lifecycle, including patches of milkweed for breeding, nectar plants for migration, and coastal groves of trees for overwintering.*

*As a far-ranging migratory species, monarchs need high-quality breeding locations and nectar resources distributed across the landscape. WAFWA's Western Monarch Conservation Plan promotes numerous strategies for enhancing habitats that support monarchs while highlighting that a habitat-based approach is the most appropriate for helping to conserve monarchs over the long-term.*

## **Create nectar-rich habitat**

Nectar is the primary food source of adult monarchs. Nectar creates fat stores that allow monarchs to migrate long distances as well as to survive the winter period.<sup>1</sup> Nectar resources are particularly important during the overwintering period as well as the fall migration, when flowering plants tend to be in short supply. Plant regionally appropriate native insecticide-free nectar plants, focusing on periods when monarchs occur in your area. For help selecting nectar plant species, see the Xerces Monarch Nectar Plant Guides.

## **Protect monarch habitat from insecticides**

It's important to ensure that the milkweed and nectar species you plant are insecticide- and pesticide-free so that you don't inadvertently harm monarchs by creating an ecological trap (i.e., providing a deadly food source instead of a beneficial one). A 2020 study found an average of 9 different types of pesticides in milkweed leaves,<sup>2</sup> including in plants purchased from nurseries. To learn more about purchasing plant materials, see the Xerces Society's Guide to Buying Bee-safe Plants. If habitat is developed in areas with high pesticide use (e.g., near agricultural fields), try to create spatial or vegetative buffers around habitat to limit drift.



Credit: Laura Chaskey



Credit: Kim Pegram



Credit: Sandy/Chuck Harris

## Plant regionally-appropriate milkweed species

As their obligate host plant, monarchs depend on milkweed (*Asclepias*) to reproduce. When creating habitat, include regionally-appropriate, native milkweeds. Avoid planting non-native perennial milkweed species such as tropical milkweed (*A. currasavica*) and balloon plant (*Gomphocarpus physocarpa*); these species don't die back in the winter thereby exposing monarchs to higher levels of disease and potentially inducing breeding during the winter period.<sup>3</sup> For more information on issues associated with non-native milkweed species, see the Monarch Joint Venture Tropical Milkweed Factsheet.

## Protect, improve management of, and restore monarch overwintering habitat

The overwintering period is a vulnerable time in the monarchs' life cycle.<sup>4</sup> Western monarchs overwintering habitat predominantly occurs along the California coast, historically reaching from Baja California to Mendocino County. Many overwintering sites are publicly-owned but have not been managed to protect the conditions that support the microhabitat conditions favored by monarchs. Advocating for better protections and management within the groves may contribute to their protection. If volunteer opportunities are available, you can get directly involved in habitat restoration activities.

If you live near an overwintering site, select nectar plants instead of milkweed for your garden. Focus on plants that bloom during the monarch's overwintering period (mid-September through mid-March). To identify existing overwintering habitat, consult the map on the Western Monarch Count website.

## Share your habitat projects!

The WAFWA Western Monarch Plan sets a short-term goal of creating at least 50,000 additional acres of monarch habitat. Help us track efforts around the west toward meeting this goal by adding your habitat project to our Monarch Crucial Habitat Assessment Tool (CHAT) at [monarchchat.org](https://monarchchat.org)



## References

1. Chaplin, S.B. and Wells, P.H., 1982. Energy reserves and metabolic expenditures of monarch butterflies overwintering in southern California. *Ecological Entomology*, 7(3), pp.249-256.
2. Halsch, C.A., Code, A., Hoyle, S.M., Fordyce, J.A., Baert, N. and Forister, M.L., 2020. Pesticide contamination of milkweeds across the agricultural, urban, and open spaces of low-elevation northern California. *Frontiers in Ecology and Evolution*, 8: 162.
3. James, D.G. and Kappen, L., 2021. Further insights on the migration biology of monarch butterflies, *Danaus plexippus* (Lepidoptera: Nymphalidae) from the Pacific Northwest. *Insects*, 12(2), p.161.
4. Pelton, E., S. Jepsen, C. Schultz, C. Fallon and S.H. Black. 2016. State of the Monarch Butterfly Overwintering Sites in California. 40+vi pp. Portland, OR: The Xerces Society for Invertebrate Conservation. <<https://xerces.org/publications/scientific-reports/state-of-monarch-butterfly-overwintering-sites-in-california>>