Western Monarch & Native Insect Pollinator Working Group

Keep Monarchs Migrating

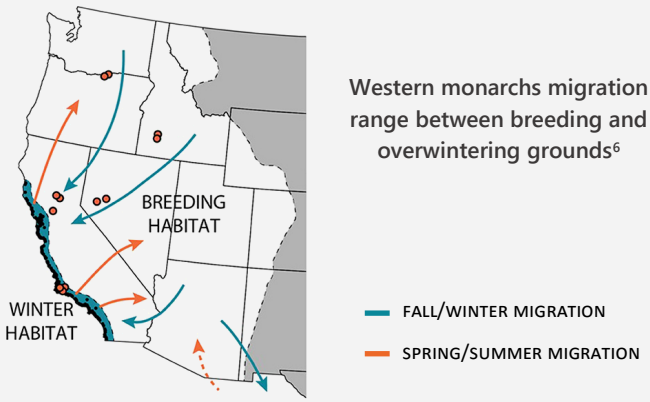
Advancing Collaborative, Proactive, Science-Based Fish and Wildlife Conservation and Management Across the West

Credit: USFWS

WAFWA's Western Monarch Conservation Plan provides guidance for protecting the habitat monarchs need to complete their migration, breeding, and overwintering stages throughout their western range. Some actions include planting native milkweed species and insecticide-free nectar plants.

Migration is an important component of the monarch butterfly's life history

Monarchs complete a fascinating, annual, multi-generational migration, returning to the same overwintering sites each fall and staying there through the winter until the next breeding season. Despite intensive study, the monarch's migration mechanisms remain a mystery that captures the imagination. Although flying hundreds to thousands of miles exacts a high physiological cost, migration is an important adaptation that helps to keep monarch populations healthy. By moving to new locations, monarchs can find new patches of milkweed, increasing their offspring's survival potential.[4] Migration also helps the butterflies break the parasite- or disease-host cycle.[1,2,8]



Western monarchs migration range between breeding and overwintering grounds[6]

By distributing the population over a large geographic area, monarchs spread out risks posed by predators or other impacts such as habitat destruction from high intensity wildfire. Migration also connects the eastern and western populations. Movement between populations may also help the butterfly maintain genetic diversity and adaptive capacity.[5]

Provide Native Habitat

Nectar plants support migration and overwintering

Adult monarchs only consume nectar, which contains sugar and other nutrients. Nectar acts as fuel that allows monarchs to migrate long distances as well as to survive the winter period by building fat stores.[3] Planting insecticide-free nectar plants that bloom during the periods of time when monarchs are present in your area will provide critical resources to assist them on their incredible journey.

For more information, please see:

- Xerces Society Monarch Plant List
- Monarch Joint Venture Tropical Milkweed Factsheet

Credit: Amanda Barth

Source: Outforia

Native milkweed keeps monarchs healthy

Monarchs coevolved with native milkweed species that die back in the winter. Because their breeding sites senesce every fall, western butterflies flock en masse to groves of trees along the California coast to overwinter in reproductive diapause—a state in which they don't breed for an extended period of time. The overwintering groves also provide shelter and climatic regimes that benefit monarchs during winter storms and low temperatures.[7]

To support the monarch's migratory behavior, plant native milkweed. Avoid planting tropical milkweed, which is introduced and does not die back in the winter. As an evergreen, tropical milkweed allows the protozoan parasite *Ophryocyctis elektroskirra* (Oe) to build up to unnatural levels, causing wing deformation or even death for exposed monarchs.

References

1. Altizer, S., Hobson, K.A., Davis, A.K., De Roode, J.C. and Wassenaar, L.I., 2015. Do healthy monarchs migrate farther? Tracking natal origins of parasitized vs. uninfected monarch butterflies overwintering in Mexico. PloS one, 10(11), p.e0141371.
2. Bartel, R.A., Oberhauser, K.S., De Roode, J.C. and Altizer, S.M., 2011. Monarch butterfly migration and parasite transmission in eastern North America. Ecology, 92(2), pp.342-351.
3. 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.
4. Flockhart, D.T.T, Martin, T.G., Norris, D.R. 2012 Experimental Examination of Intraspecific Density-Dependent Competition during the Breeding Period in Monarch Butterflies (Danaus plexippus). PLoS ONE 7(9): e45080. doi:10.1371/journal.pone.0045080
5. Freedman, M.G., de Roode, J.C., Forister, M.L., Kronforst, M.R., Pierce, A.A., Schultz, C.B., Taylor, O.R. and Crone, E.E., 2021. Are eastern and western monarch butterflies distinct populations? A review of evidence for ecological, phenotypic, and genetic differentiation and implications for conservation. Conservation Science and Practice, 3(7), p.e432.
6. Pelton, E., Schultz, C., Jepsen, S., Black, S.H., and Crone, E. 2019. Western Monarch Population Plummets: Status, Probable Causes, and Recommended Conservation Actions. Frontiers in Ecology and Evolution, Sec. Conservation and Restoration Ecology. https://doi.org/10.3389/fevo.2019.00258
7. Pelton, E., Jepsen,S., Schultz, C., Fallon, C. and Black., S.H. 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>
8. Satterfield, D.A., Villablanca, F.X., Maerz, J.C. and Altizer, S., 2016. Migratory monarchs wintering in California experience low infection risk compared to monarchs breeding year-round on non-native milkweed. Integrative and Comparative Biology, 56(2), pp.343-352.