



Western Monarch & Native Insect Pollinator Working Group

# Monarch Community Science

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



Credit: Emma Pelton

*The importance of community science is highlighted in WAFWA's Western Monarch Conservation Plan, which identified a number of conservation Strategies and Actions related to community science efforts. Data from community science efforts have also been used by Xerces and other groups to develop key best management practices (BMPs) for landowners and land management agencies.*

## Become a monarch scientist!

One of many ways to get involved in monarch conservation is to help community science programs collect data on monarchs and their habitat.

### What is community science?

Community science (sometimes referred to as citizen science) is when members of the public help collect data for local, regional, or national scientific research studies. Through the volunteer efforts of community members, scientists can often reach broader audiences (both geographically and demographically), collecting data that would otherwise be too costly or labor-intensive to gather.

### We can't do it without you

Community science plays a critical role in the understanding of monarch biology and migration. Currently, local, regional, and national community science efforts are underway to report locations of monarch butterflies, identify locations where monarch habitat is present (i.e., milkweed and/or nectar sources), understand patterns of disease and parasites,<sup>2</sup> and even tag monarchs so their migration patterns can be tracked.<sup>1</sup>

We rely on data collected through the Xerces Society's decades-long Western Monarch Thanksgiving Count community science effort to track the size and status of the western monarch overwintering population.<sup>3</sup> Similarly, much of what we currently know about the migration patterns of the western population, and how the western population is connected to the eastern population, has been learned through community science tagging efforts of the Southwest Monarch Study and other organizations.





Credit: Tonya Kieffer-Selby


# Ways to Participate


## What community science program is right for you?


A number of monarch related community science opportunities are available at a range of commitment levels, however, please note that some states may have laws prohibiting certain activities or require permits. Ask the organization or leader of the community science project if their activities are allowed and permitted in your area.

Assist WAFWA in tracking progress towards our Western Monarch Conservation Plan goals by uploading your habitat projects or educational activities into our [Monarch Crucial Habitat Assessment Tool \(CHAT\)](#) 

Help identify important breeding areas throughout the western US by uploading your milkweed sightings to the [Western Monarch Milkweed Mapper](#) or take on more in-depth monitoring by adopting one of the [Integrated Monarch Monitoring Program's](#) habitat plots 

Participate in [Project Monarch Health](#) to help us understand how *Oe* impacts monarch health 

Track monarch survival in your yard through [Monarch Larval Monitoring Project](#) 

Contribute to the annual census of the overwintering population in California by participating in the [Western Monarch Thanksgiving and New Year's Counts](#) 

## Check out more community science opportunities:

- ◆ [Monarch Joint Venture's list](#) of community science resources
- ◆ State Conservation Groups like [Arizona Monarch Collaborative](#) and [Utah Pollinator Pursuit](#)
- ◆ Local city and nonprofit initiatives like [Mayor's Monarch Pledge](#) and [Waystation Program](#)
- ◆ Additional community science projects on [iNaturalist](#)

## References

1. James, D. G., T. S. James, L. Seymour, L. Kappen, T. Russell, B. Harryman, and C. Bly. 2018. Citizen scientist tagging reveals destinations of migrating monarch butterflies, *Danaus plexippus* (L.) from the Pacific Northwest. *Journal of the Lepidopterists' Society* 72(2):127–144.
2. Oberhauser, K. S. 2012. Tachinid flies and monarch butterflies: citizen scientists document parasitism patterns over broad spatial and temporal scales. *American Entomologist* 58:19–22.
3. Schultz, C. B., L.M. Brown, E.M. Pelton, E.E. Crone. 2017. Citizen science monitoring demonstrates dramatic declines of monarch butterflies in western North America. *Biological Conservation*, 214: 343-346.