



Citizen Science Monitoring

The monarch (Danaus plexippus) migration is one of the most awe-inspiring phenomenon in nature and may serve as an indicator of the health of our environment and the wellbeing of the Earth.

campaign.

Become part of a growing citizen science effort in North America to help monitor the status of the monarch. Wild Ones with their partners through the Monarch Joint Venture (MJV) invites you to become a citizen scientist. Volunteer today through our Wild for Monarchs



Citizen scientists are volunteers who help professional researchers collect data that guide scientific and conservation efforts.

Through scientific research and monitoring, we can better understand monarch biology, population trends, diseases, and habitat availability—factors that may influence the monarch's decline.

All ages and experience levels are welcome to get involved! Resources and guidance will be provided free of charge for each program. There may be a small supply cost, such as tags. The main investment is your time.

This brochure describes four citizen science programs to help you decide which program matches your interests and availability.

Wild Ones members are happy to help you get started.

Contact a nearby Wild Ones chapter:

http://www.wildones.org/connect/chapters/

For more information:

www.wildones.org/citizen-science

Follow each of the Wild for Monarch Citizen Science programs on Facebook and Twitter.

Questions? Call (877) 394-9453 or e-mail monarchs@wildones.org



The MJV is a partnership of numerous federal and state agencies, nongovernmental agencies, and academic programs working together to protect monarchs and their migration. Partners are experts in the fields of monarch conservation and education.

For information about monarch butterfly conservation in North America:

http://www.monarchjointventure.org/ get-involved/study-monarchs-citizenscience-opportunities/





WILD FOR MONARCHS Native Plant Butterfly Garden RECOGNITION PROGRAM

We invite you to join Wild Ones to help support monarch butterflies and plant a native plant garden or habitat with milkweed and a variety of nectar plants that bloom through the season. Help us develop a map of Wild Ones wildlife corridors.

For information, go to

http://www.wildones.org/butterfly-garden-program/

When your garden is established and contains 75% native species, Wild Ones will recognize it as a native plant butterfly habitat.

If your butterfly garden is already certified as a Monarch Watch Waystation (MW), or by the North American Butterfly Association (NABA), and your garden meets the Wild Ones native species guidelines, it can be recognized quickly.

Wild Ones: Native Plants, Natural Landscapes

PO Box 1274 Appleton, WI 54912-1274 1-877-FYI-WILD (394-9453) www.wildones.org

Journey North

Your seasonal monarch migration and habitat observations will be included on real-time maps on-line as part of a global education program.

http://www.journeynorth.org/monarch/

Each fall and spring, report your sightings to help track the migration as monarchs travel to and from Mexico. Your reports will be compiled with the reports of other citizen scientists and can be viewed on interactive maps. Highlights of weekly monarch activity will be available in news updates from Journey North (JN).

You will observe and report:

- 1st monarch adult butterfly sightings of the year; include wind, weather and habitat.
- 1st spring milkweed to emerge in your area; monarchs will arrive soon after.
- 1st monarch egg found on milkweed; the monarchs have arrived.
- 1st monarch larva seen; in just weeks, they will develop into adult butterflies of the next generation.
- Fall monarch migration; report any monarch adults you see in the fall.
- Roosting monarchs: report gatherings of fall migrating monarchs in the evening. These roosts generally occur in trees overnight.

JN FACT SHEET

http://www.learner.org/jnorth/tm/monarch/ SpringWatch.pdf



Help track the fall monarch migration by placing coded tags on the wings of wild-caught or reared monarchs.

http://www.monarchwatch.org/tagmig/index.htm

Information from the recovered tags is used to estimate the size of the fall population, determine mortality during the migration, and establish the origins, timing and pattern of the migration. These data are used to answer fundamental questions about the dynamics of the migration. To date, over 1.2 million monarchs have been tagged and more than 16.000 have been recovered.

Monarch Watch (MW) tagging kits with numbered tags and instructions are available from the Monarch Watch Shop: http://www.shop.monarchwatch.org

Here's what you'll do:

- Plan to begin tagging early August in the north and continue through October.
- Record on the datasheet; the tag code for each butterfly along with sex, wild-caught or reared, date, location and tagger name.
- Send the recorded information to MW.
- Check the MW website each spring for postings about recovered tags. You may also be notified by e-mail.

MW FACT SHEET

http://www.monarchwatch.org/tagmig/ 2014-datasheet-mini.pdf



Observe the monarch life cycle. Collect long-term data on eggs, caterpillars (larvae), adults and milkweed habitat. May study parasitism rates.

http://www.mlmp.org/

The goals of this project are to better understand how the monarch breeding population changes throughout the season and from year to year.

MLMP data are used to inform monarch conservation efforts.

You will learn to:

- Collect data on monarch eggs and larvae in a monarch habitat site of your choice.
- Estimate milkweed density and describe the habitat site.
- Report observations to be used in real scientific studies.
- Report data online and visualize monarch activity at your monitoring site(s) via monarch density graphs.
- Compare your observations with those of other citizen scientists.

Training sessions are available. Project information is available through on-line training videos. Datasheets for recording observations are available on-line. Additional monitoring materials and supplies can be purchased through the Monarch Lab Store.

http://monarchlab.org/store/

MLMP FACT SHEET

http://wildones.org/MLMP%20Info%20 Sheet.pdf



Assist by sampling and collecting data to help track the spread of the monarch butterfly protozoan parasite in North America.

http://www.monarchparasites.org

Host-parasite interactions can be important drivers of many populations, including monarchs. The goal of this project is to track rates of infection by a debilitating monarch parasite throughout the monarchs' range.

You will help to:

- Track the prevalence of the protozoan parasite Ophryocystis elektroscirrha (OE).
- Test monarchs for OE, a simple procedure that involves pressing tape to the monarch's abdomen. This does not harm the monarch.
- Enhance awareness of monarch biology and conservation.
- Understand how non-native milkweed, especially Asclepias curassavica, and changes in climate, affect monarch/OE interactions.

Sampling involves capturing or raising adult monarchs and testing them for OE.

To request a free sampling kit email: monarchhealth@gmail.com

MH FACT SHEET

http://monarchparasites.uga.edu/monarch health/MH%20brochure%202015.pdf