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MONARCH
JOINT VENTURE



MonarchNet News
A Citizen Science Newsletter

Public Perceptions of Citizen Science

“Members of the public are the foundation and the backbone of citizen science, but much remains unknown about how the public views citizen science.”

(Lewandowski et al, 2017)

Citizen science plays an integral role in various fields, including astronomy, meteorology, and medicine. Citizen scientists provide the capacity to collect sufficient data for issues that include climate change, the spread of invasive species, and population dynamics of geographically widespread species like monarchs.

Participants in citizen science projects contribute data that can be used to inform policy, and in conservation or ecology, conservation management decisions. The power of data collected by participants is incredible, but how does the public view these contributions?

A recent study (Lewandowski et al. 2017) sought to answer questions about public familiarity with, confidence in, and perceptions of citizen science by surveying people at the Minnesota State Fair. The graph shows respondents' confidence in citizen science findings compared to those generated solely by professionals. The different bars distinguish their confidence when the citizen scientists only collect the data, collaborate fully with professional scientists, or are completely responsible for the research. Respondents were most confident in findings when there was a full collaboration between the professionals and the citizen scientists, suggesting a new benefit of engaging the public in science research: increased public confidence in scientific findings.

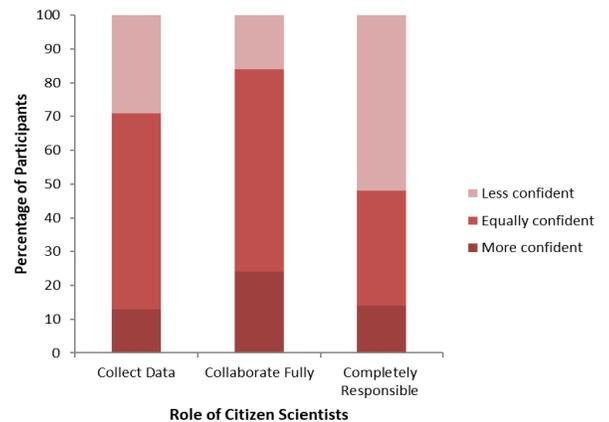


Photo: Whorled milkweed, Janet Allen

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Cover photo: Candy Sarikonda

Lewandowski, E., Caldwell, W., Elmquist, D., and Oberhauser, K. (2017). Public Perceptions of Citizen Science. *Citizen Science: Theory and Practice*, 2(1): 3, pp.1-9. DOI: <https://doi.org/10.5334/cstp.77>

Engaging Wisconsinites in monarch conservation through citizen science

Wisconsin is a priority state in the eastern monarch population's migratory flyway. MJV's partner, Natural Resources Foundation of Wisconsin (NRF), held two monarch citizen science trainings in August to build a corps of citizen scientists to participate in and share monarch monitoring projects throughout the state.

The trainings were offered in Milwaukee and Madison, and yielded 40 new trained citizen scientists! Participants were trained in Journey North, the Monarch Larva Monitoring Project, Monarch Watch tagging, and Project Monarch Health. Those interested in sharing the programs with others stayed an additional day to learn about training others to participate.

"As an environmental educator, I thought I knew everything to teach my students about habitats and butterfly life cycles. After going to the [workshop], I realized how little I actually knew. [I left] with new information that I was able to apply right away when teaching my husband and a family that we met on a hike the following weekend," said Carol Witt-Smith, a participant in the Milwaukee training.

By building a network of monarch citizen scientists across Wisconsin, NRF hopes to provide long-term support for monarchs in Wisconsin and beyond. "That's the beauty of monarch conservation – anyone can help out, whether by participating in a citizen science project, or by planting milkweed and native plants in your backyard," said Caitlin Willamison, Director of Conservation Programs at NRF.



Photos: Caitlin Williamson; Participants at the Monarch Monitoring training at the UW-Madison Arboretum in August

Monarch butterflies disappearing from western North America *New study reveals that western monarch decline is more severe than decline in East*

The eastern monarch population often gets more attention than the population west of the Rocky Mountains. A recent publication illustrates the severe decline of the western monarch population, and states that the risk of extinction for the western population is at least as high as that for the eastern population.

"In the 1980s, 10 million monarchs spent the winter in coastal California. Today there are barely 300,000," says lead author, Cheryl Shultz. Beyond the shocking decline in the last 35 years, the study shows that if nothing changes soon, western monarchs could go locally extinct in 35 years.

The researchers compiled data collected by hundreds of volunteers who participated in the Xerces Society Western Monarch Thanksgiving Count since 1997, and by amateur and professional butterfly enthusiasts in the 1980s and early 1990s. Using these numbers, the researchers were able to predict the western monarch population's extinction risk.

The precise cause of the drastic decrease in western monarch numbers is not clear, but habitat loss, pesticide use, and climate change are all likely contributors to the decline. Like the eastern population, it will take increased conservation efforts on all parts to save the western monarch butterfly population. Without the help of citizen scientists and observant residents, researchers would not be able to begin to answer the most important questions related to monarch conservation, including the very basics of current population trends.

Schultz, C. B., Brown, L. M., Pelton, E., and Crone, E. E. (2017). Citizen science monitoring demonstrates dramatic declines of monarch butterflies in western North America. *Biological Conservation*. doi:10.1016/j.biocon.2017.08.019

International Monarch Monitoring Blitz a Resounding Success

Because monarchs are widespread throughout North America, it is difficult to accurately capture the size of the breeding population (before they migrate). The Monarch Larva Monitoring Project (MLMP) partnered with organizations across Canada, the US, and Mexico to engage citizen scientists in gathering data about monarch late summer breeding for one week (July 29th – August 5th). By crowdsourcing data from across the entire range during one small time window, citizen scientists from all three countries helped capture a snapshot of monarch breeding activity prior to peak migration.

The Monarch Monitoring Blitz received an incredible level of participation and interest. Approximately 300 observations were submitted through the MLMP ‘Milkweed and Monarch Observations’ during the Monarch Monitoring Blitz! About 400 reports were received by Mission Monarch in Canada as well, and additional reports were collected by Naturalista in Mexico. Researchers in the Monarch Conservation Science Partnership will use these data in their conservation research. Thank you to everyone who participated in improving our understanding of monarchs through this effort!

Did you miss the blitz, or want to continue to help? Your regular monitoring data through MLMP activities are vital to monarch conservation research. Keep up the good work! And anytime you see milkweed, monarch eggs or caterpillars outside your regular MLMP site, you can submit your observations as a [‘Milkweed or Monarch Observation’](#). We’ll keep you posted about opportunities to participate in a future Monarch Monitoring Blitz!



You're invited!

Celebrating Monarchs
 Monarch Joint Venture Reception & Silent Auction

November 7, 2017 6:00pm | San Antonio Zoo
 Tickets & information: monarchjointventure.org/news-events/events/



Help monarchs take flight on November 7th at the Celebrating Monarchs Reception and Silent Auction!

Join the Monarch Joint Venture for an evening of celebrating monarchs and supporting their conservation. Enjoy a meal, an array of silent auction items, and mingle with premiere monarch experts.

For tickets and more information, visit monarchjointventure.org/news-events/events/. Space is limited, so register today to reserve your spot!

If you're unable to attend, or want to increase your support for monarchs beyond your ticket price, you can donate online today at

monarchjointventure.org/get-involved/donate/

Share your ideas!

Are you a butterfly citizen scientist with a story, photos, or artwork to share? Would you like to nominate a volunteer or program for recognition in the newsletter? Write to us at mjv@umn.edu with your ideas.