

February, 2017

Issue 17



**MONARCH
JOINT VENTURE**



**MonarchNet News
A Citizen Science Newsletter**

Upcoming Events

- Designing Seed Mixes for Native Habitat Webinar, Feb 16, 2-3 PM ET. [More.](#)
- Designing and Creating Outdoor Signs for Monarch Habitat Webinar, Feb 23, 2-3 PM ET. [More.](#)
- Monarch Parasitoids Webinar, March 23rd 2-3pm ET [More.](#)



Photo: Sandy Sagalkin

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Cover photo: Candy Sarikonda

The Monarch Migration and Citizen Science

Sandy Sagalkin, President of The Monarch Alliance (an MJV Partner), shares his account of experiencing the monarch migration and how important citizen science is to that discovery. The Monarch Alliance's mission is to educate the public about the monarch butterfly and how the public can participate in monarch conservation.

Every year, the leading edge of the monarch migration arrives in Mexico's monarch sanctuaries within a day or two of the Day of the Dead, which is celebrated on November 2nd. There they will spend the winter in an ideal micro-climate in the trans-volcanic mountain region of central Mexico at an elevation of about 10,000 feet.

This year, they poured into the sanctuaries right on time. The indigenous people of the region traditionally celebrate their arrival, believing they represent the spirits of their departed ancestors.

The monarchs continue to arrive at the sanctuaries from their northern breeding range in the United States and Canada in a race against time and temperature until early December. They must avoid sustained freezing temperatures and have to find nectar sources along the way. Many do not survive the difficult journey.

I visited the monarch sanctuaries in February 2014. It was astonishing to see millions of monarchs, mostly clustered on the Oyamel Fir trees, or, on warm days, leaving their clusters in search of water or nectar. The Oyamel Fir forest provides shelter and a blanket for the monarchs. For the most part, monarchs will not eat during the 4-5 months they are in the Mexican forest.

To participate in tracking the migration, The Monarch Alliance sponsored six Monarch Watch tagging events in September in our region. Thirty four volunteers trekked over the Otto Farm at the Antietam National Battlefield after these winged creatures. Another dozen helped us capture them at the National Conservation Training Center in Shepherdstown.

We raised and tagged them as an educational opportunity for children and families at Discovery Station. And we tagged them at Kiwanis and City parks. All of these monarchs would be heading to Mexico for the winter.

We hope one or more of these tagged monarchs might be found in one of the twelve sanctuaries this winter. If so, the information will feed into a database at Monarch Watch that will help scientists answer outstanding questions about the migration.

Dr. Fred Urquhart, who had begun the first tagging program several decades earlier, first visited the monarchs' wintering grounds on January 9, 1976. Soon after he entered one of the sanctuaries, he found a monarch that had been tagged by school children in Chaska, Minnesota in August 1975, over 2000 miles away. It was then that he understood the significance of his find.

Participating in monarch citizen science programs continues to contribute to our understanding of this iconic species. Scientists and conservation practitioners need our help to learn more about monarchs, their migration, breeding, habitat and more. Find out how you can participate in citizen science programs near you by visiting the [Monarch Joint Venture's citizen science page.](#)

Featured Citizen Science Project: Journey North

Journey North (JN) is an international citizen science project that tracks monarch migration each fall and spring as the butterflies travel to and from Mexico. Participants are based at over 60,000 sites across North America, including formal and informal educational settings. People report sightings from the field, track migration on real-time maps, and help scientists learn more about the critical migratory stage of the monarch's annual cycle. Monarch migration news is published weekly and incorporates sightings and images from the field. Journey North provides an easy entry point to citizen science, with relatively simple protocols, strong online support, and immediate results. Beyond its value to science, the project unites people across North America to celebrate the monarchs and their migration. Elizabeth Howard, founder of Journey North, spoke with us to share the story of this pioneering citizen science program.



Elizabeth Howard

Howard told us that she was inspired to start JN by an early online education project tracking challenging human expeditions. She saw the connection between these explorers, and migratory wildlife that cross the globe each season. This sparked the idea for a compelling way to engage students in the story of nature and science by following animal migrations using first-hand observations collected through the internet.

MonarchNet: What were the goals of JN when you began?

Howard: When Journey North began, our main goal was to give children a window into the wonder of wildlife migrations - and to help them see, first-hand, how complex and interconnected the natural world is. We were motivated primarily by the fascination and inspiration of it, and knew this was needed in the classroom. We didn't recognize the scientific potential until later. JN was a pioneer of online citizen science. At the time, there were many scientific projects that used observations from citizen volunteers, but few operated online. The phrase 'citizen science' hadn't been coined yet.

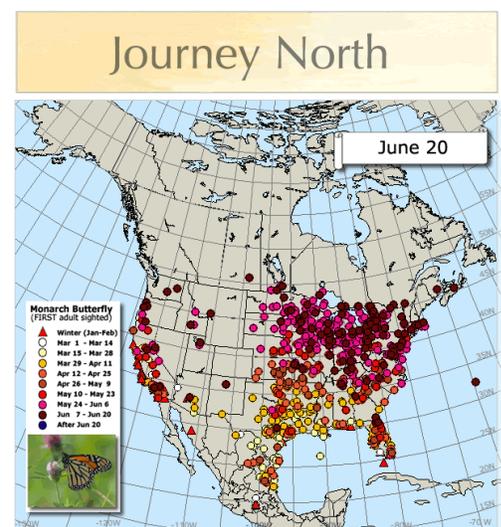
MonarchNet: How has Journey North changed since it began?

Howard: We began entirely as a school-based project. Now our participants are about half educators and half members of the general public. Technology-wise, we have changed by keeping up with the amazing technical advances that have grown exponentially since we began. We had a text-only website as early as 1995. We incorporated images and video clips increasingly over the years, as quickly bandwidth allowed. Later we incorporated a real time database, live maps, and user-submitted images. Most importantly, we continued to expand the scientific value of our long-term database.

MonarchNet: Now, Journey North both unites people across North America to celebrate the monarchs and their migration, and works to help understand how monarchs respond to weather, climate and the changing seasons on an annual basis and in the long-term. Scientists and conservation practitioners incorporate the migration data tracked by JN into research and conservation efforts. JN has provided data for many [peer-reviewed scientific publications](#) and other conservation tools, for example, the MJV Handout [Mowing: Best Practices for Monarchs](#). By involving regular people in scientific research and discovery, monarch citizen science projects like Journey North provide inspiration for people who want to help preserve the monarch's spectacular migration.

MonarchNet: What inspires you to continue doing this work?

Howard: Inspiration comes easily when you study monarchs! I love Dr. Lincoln Brower's humorous comment and share his feelings: "No matter how long I study the monarchs, I never get sick of them." I'm most proud of the way we are able to tell the story of monarch migration by using the real time observations people make across the migration route. We 'turnaround' the data we collect immediately, so everybody can see how their own contributions fit into the big picture. When people report the emergence of milkweed and the arrival of the first monarchs, they see the importance and relevance of the habitat they are creating and/or preserving for monarchs. Journey North also adds relevance and context for school habitat projects. Children can watch the migration approach in the spring and see how their own habitat fits into the picture. They see themselves as an integral part of the global conservation community.



Report Your Sightings

Downloadable Monarch Citizen Science Training Materials Available

Are you an experienced monarch citizen scientist, interested in spreading the word about your program? You can take your passion for monarchs out into your community by hosting your own monarch citizen science training and recruiting fellow volunteers to join in different projects! The MJV has put together a collection of resources including presentations, agendas, and evaluations to help you conduct your training. [Find these training resources here.](#)

Things to keep in mind before conducting a citizen science training:

- Make sure you are able to accurately identify the different life stages of monarchs, as required by each project you will discuss, and be ready to answer other questions about monarchs and their conservation.
- You should be confident in the protocols and method for each project you are going to discuss in your training.
- Incorporate a field demonstration of collecting data into every training if possible.
- You should be comfortable demonstrating data collection and reporting.
- Make sure you are prepared and comfortable speaking in front of a group of people.
- After the training, we encourage you to be a resource for people trying out the project. Having some guidance on how to set up a monitoring site or how to report, especially if it has been a short while since the training, can make all the difference in someone's ability to get involved.

Support MJV Monarch Conservation Projects

The Monarch Joint Venture is [raising funds](#) to support monarch conservation projects across the U.S. With help from supporters like you, more conservation projects across the nation will take shape and more monarchs will take flight.

[Donate here:](#)

<https://crowdfund.umn.edu/MonarchConservation>

Citizen Science Updates

• **New Arizona Bat Watch Citizen Science Program Begins**

Did you know that some bats are important pollinators? For example, the lesser long-nosed bat is a pollinator for agave and southwestern cacti. But, scientists know very little about the behaviors of these bats in the wild. Researchers have asked the public for help in studying the behavior of the lesser long-nosed bat. Using the Zooniverse program, citizen scientists can watch videos of bats entering and exiting a roost and identify the behaviors seen from the comfort of their home. Volunteers have really stepped up to support this project, with nearly 1500 participants conducting over 6000 classifications! [You can find out more about this project here.](#)

• **MonarchNet Citizen Science and Research Hub**

MonarchNet.org is a hub for monarch citizen science data and publications. You can find important monarch conservation research, as well as articles using data from monarch citizen science programs. Learn more about different monarch programs and how you can participate! [You can visit MonarchNet here.](#)

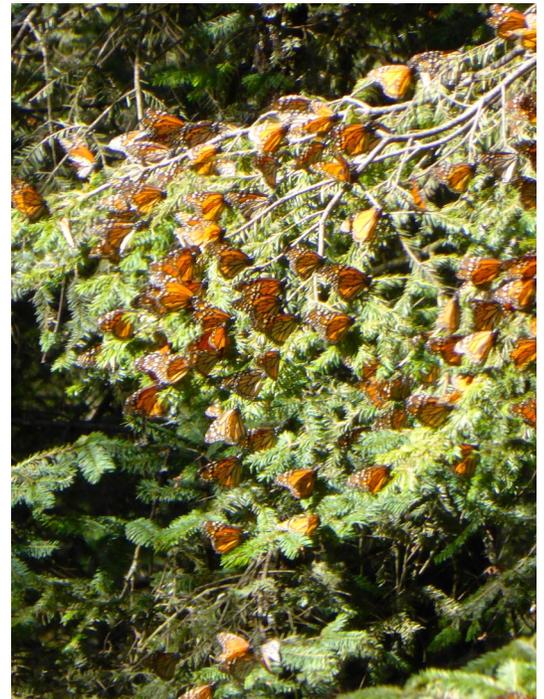


Photo: Sandy Sagalkin

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.