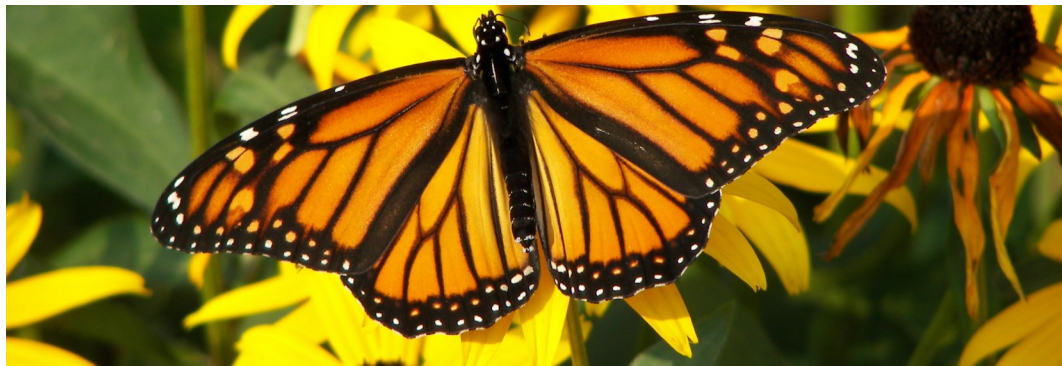


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Issue 3



MONARCH  
JOINT VENTURE

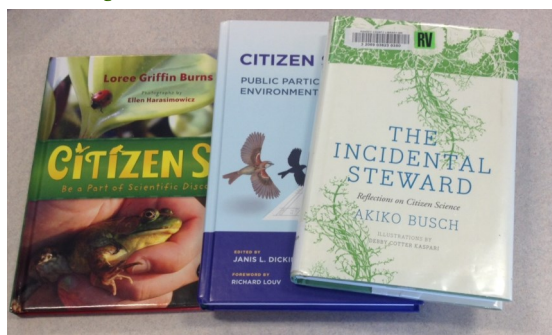


MonarchNet News  
A Citizen Science Newsletter

### Upcoming Events

- [Monarchs in Minnesota: Understanding an Iconic Insect](#) in Saint Paul, MN June 25. This is a one-day immersion course in monarchs, led by Dr. Karen Oberhauser of the University of Minnesota's Monarch Lab. Registration is required.

### Citizen Science Books



Summer is peak data collection time for many butterfly citizen scientists, but it's also a great time to relax with a good book. The surge in popularity of citizen science over the past few years has led to the publication of a number of interesting books. If you are interested in reading more about citizen science, here are a few suggestions:

*Citizen Science: Public Participation in Environmental Research*, by Janis Dickinson and Rick Bonney (eds), Cornell University Press, 2012.

This book contains scholarly essays by some of the most prominent researchers in the field of citizen science. It covers the basics of citizen science and addresses its impact on conservation, education, and participants. Examples come from a number of different projects, including one section on the Monarch Larva Monitoring Project by Dr. Karen Oberhauser. While this isn't light reading, it is interesting and accessible to adults with a passion for citizen science.

*The Incidental Steward: Reflections on Citizen Science*, by Akiko Busch, Yale University Press, 2013.

The author recounts her experiences with citizen science projects in the Hudson River Valley in this short nonfiction book. She shares her thoughts and observations on nature as she details her time spent volunteering with a variety of projects, ranging from clearing invasive plants to surveying amphibians in vernal pools.

*Citizen Scientists: Be a Part of Scientific Discovery from Your Own Backyard*, by Loree Griffin Burns, Henry Holt and Company, 2012.

This is a wonderful children's book that introduces kids to the concept of citizen science. It's overflowing with gorgeous photographs by Ellen Harasimowicz and has mini quizzes and checklists to supplement the descriptions of citizen science projects and participants. There is a detailed chapter on monarch tagging that describes monarch migration, the history of tagging, and how to capture and tag a butterfly. Other chapters focus on the Christmas Bird Count, amphibian monitoring, and the Lost Ladybug Project.



"Monarchs on Milkweed" by  
Barbara Richert.

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## Program Highlight: *Cascades Butterfly Project*

While monarch citizen science projects are numerous and active throughout the United States, there are many more citizen science projects that study all butterflies in an area, not just monarchs. The Cascades Butterfly Project, located in Washington, is one such project that includes but is not limited to monarchs. The project monitors butterflies throughout the mountains of the Cascade Range, with sites in North Cascades National Park, Mount Rainier National Park, Mount Baker-Snoqualmie National Forest, and Okanagan-Wenatchee National Forest, as well as in several Canadian provincial parks.

The Cascades Butterfly Project was created in order to study the effects of climate change on butterfly populations. Because the growth and development of a butterfly throughout its life cycle is temperature-dependent, climate change has the potential to alter reproductive success or shift the range of a population. There is also concern about the potential for host and nectar plants to emerge or bloom out of sync with butterflies as climate change occurs. The Cascades Butterfly Project is studying the health of butterfly populations and specifically looking for range shifts as regional temperature patterns change.

The project has established permanent butterfly monitoring transects in alpine meadows throughout a large swath of the Cascades. Volunteers walk them weekly to observe and record butterfly numbers. In addition to the transects, the Cascades Butterfly Project also makes use of anecdotal observations from citizen scientists across the study zone. Working with Butterflies and Moths of North America (BAMONA), the project has created a photo inventory of butterflies seen and photographed throughout the Cascades. Participants who photograph butterflies upload the pictures to BAMONA's online database, along with information such as when and where it was seen, the weather conditions, and behavioral observations. The species identification is then verified by a butterfly expert to ensure data accuracy.

The North Cascades Institute, one of the partner organizations working on the Cascades Butterfly Project, is also planning a Butterflies of the Cascades Citizen Science Bioblitz for later this summer. Bioblitzes have been gaining momentum lately and are often attractive to citizen scientists whose schedules don't allow them to monitor or collect data regularly. At a bioblitz, scientists and members of the public gather together for a short period (often 24 hours) of extremely intensive biological surveying, the goal of which is usually to record as many species as possible.



*Species identification during the Cascades Butterfly Project. Photo Courtesy of Karlie Roland, National Park Service.*

<https://www.flickr.com/photos/northcascadesnationalpark/7964972382/>

### Visit the Cascades Butterfly Project at

<http://www.butterfliesandmoths.org/project/cbp> or  
<http://ncascades.org/signup/programs/citizen-science>.



*North Cascades National Park. Photo courtesy of Debbie Dixon, National Park Service.*  
<https://www.flickr.com/photos/northcascadesnationalpark/7973666522/in/photostream/>

## *Volunteer Spotlight: Denny Brooks*

When it comes to citizen scientists, Denny Brooks of Midland, Michigan is about as dedicated as you can get. In the past decade and a half, he has tagged monarchs for Monarch Watch, surveyed milkweed larva for the Monarch Larva Monitoring Project, tested adult monarchs for parasites with Monarch Health, and submitted data on monarch sightings to Journey North. He also spreads the word about monarch conservation and citizen science by giving public talks and presentations each year.

Denny has been observing and studying nature for almost 50 years, but his interest in butterfly citizen science is more recent. He started tagging monarchs in 2000, and joined the Monarch Larva Monitoring Project in 2004. Every summer, he has monitored a large patch of milkweed at the Chippewa Nature Center Arboretum, spending hours each week carefully examining hundreds of milkweed plants for tiny monarch eggs and larvae. This year, Denny has noticed considerably fewer milkweed plants at his usual monitoring spot. But he's not deterred; he's considering switching his monitoring site to a different area with plenty of milkweed.

An avid nature photographer, Denny has a keen eye for detail. His data sheets are always carefully completed and often contain observations and side notes. In addition to his regular monitoring, Denny also devotes a great deal of his time to searching for and observing monarchs, and he regularly submits his anecdotal observations to the Monarch Larva Monitoring Project. This year, Denny is planning to undertake what he calls a "search for monarchs". He has numerous sites in the Mid-Michigan for searching out and observing monarchs. He also hopes to survey some filter strips, those thin bands of vegetation around farm fields that filter and slow runoff.

Dr. Karen Oberhauser of the University of Minnesota's Monarch Lab cites Denny as one of the Monarch Larva Monitoring Project's most dedicated and motivated volunteers. She writes:

*One of the joys of coordinating the Monarch Larva Monitoring Project for so long is developing "long distance relationships" with so many amazing people. Denny really stands out in this stellar crowd. I have an email box folder full of his Monarch Butterfly Updates, messages that are chock-full of interesting observations of the status of monarch population in mid-Michigan and beyond. As he begins his 11th year of monitoring for monarch larvae, I'd like to salute Denny for his amazing contributions to our understanding of monarchs and his dedication to sharing his knowledge with a broad audience.*

## *We want to hear from you!*

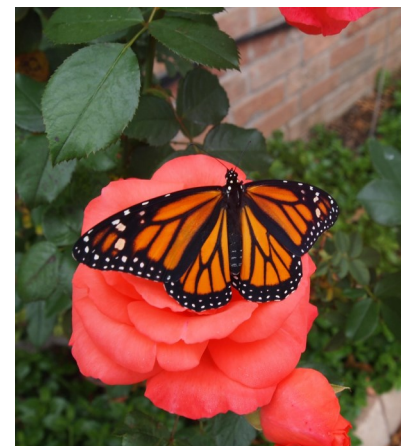
Are you a butterfly citizen scientist with a story to tell? Would you like to nominate a volunteer or program for recognition in the newsletter? Write to us at [monarchs@monarchjointventure.org](mailto:monarchs@monarchjointventure.org) with what you would like to see in the newsletter.

Help us spread the word. Send this newsletter to friends who may be interested, and encourage them to "Get Updates" under News & Events on the MJV website!



*Denny Brooks netting monarchs.  
Photo courtesy of Denny Brooks.*

**Do you want to advertise a butterfly citizen science event? Email us, and we can include it in the next newsletter.**



*Photo courtesy of Kelly Nail.*