WISCONSIN CITIZEN-BASED MONITORING NETWORK NEWSLETTER

Summer 2021

25 Years Of Monarch Monitoring

This June marks the 25th anniversary of the first time Monarch Larva Monitoring Project (MLMP) data were collected in Wisconsin. The anniversary is particularly special because it overlaps with this year's Pollinator Week, June 21-27, a time set aside to celebrate pollinators and the conservation work being done on their behalf.

MLMP is a popular citizen science project throughout the country; volunteers search patches of milkweed plants for monarch eggs and larvae to document distribution and abundance during the breeding season. The data have been used in numerous scientific papers and conservation efforts. MLMP was created by researchers at the University of Minnesota in 1996, and the project was piloted in Wisconsin that June. Dr. Karen Oberhauser and her lab surveyed a site at Erin Prairie in St. Croix County. Initial monitoring revealed three monarch eggs; monitoring continued for 10 weeks that summer, with lab members searching around 900 plants each week. Monarch density peaked in August, with over 160 eggs and larvae found.

A monarch larva on milkweed. Photo: DNR

Since 1996, over 500 volunteers have participated in MLMP in Wisconsin, and more than 300 sites have been monitored. Recently MLMP moved from the University of Minnesota and is now jointly run by the Monarch Joint Venture and the UW-Madison Arboretum, increasing the local connection for Wisconsinites. More volunteers are always needed; you can explore data, view online training materials and sign up to volunteer on the MLMP website.

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New Invasive Species Monitoring Opportunities

The Wisconsin First Detector Network (WIFDN) is recruiting volunteer observers for two new projects.

Spotted lanternfly (*Lycorma delicatula*) volunteers search for the highly invasive insect, which sucks the sap from trees and can seriously damage them. The species has been found in the eastern part of the country but not yet in Wisconsin. Its preferred host plant is tree-of-heaven (*Ailanthus altissima),* an invasive already found in Wisconsin. Volunteers map tree-of-heaven locations and monitor tree-of-heaven and other vegetation for spotted lanternfly. Early detection will be key in preventing the spread of spotted lanternfly if it arrives in Wisconsin.

Wisconsin Wasp Watchers monitor the nests of the native stingless wasp (*Cerceris fumipennis*) which brings metallic wood boring beetles to its nests for food. These beetles include the invasive emerald ash borer and other invasive insects that damage and kill trees. The Cerceris wasps often drop beetles outside of their nests, which can be found in sandy areas like baseball fields. Volunteers collect the dropped beetles and send them in for identification. By monitoring the native wasp nests for the presence of invasive beetles, volunteers can quickly find and report infestations.

Volunteers search for wasp nests in a sandy area. Photo: WIFDN.

Information on how to volunteer with these efforts and other invasive species monitoring is available on the WIFDN website.

Articles For Citizen Science Practitioners Available Online

Citizen Science: Theory and Practice is an online, open access (free) journal in which citizen science practitioners publish findings on best practices for creating and coordinating citizen science efforts. The journal's articles are targeted towards project managers, local coordinators, educators, researchers and evaluators. Recent topics covered in the journal include volunteer motivations, expanding volunteer involvement beyond data collection, accuracy of water quality monitoring efforts and more. To read journal articles or to learn about submitting an article, visit the journal's website.

Who's Pollinating Wisconsin's Flowers?

Wisconsin has over 400 species of native, wild bees that are uniquely adapted to the Midwest, yet their populations (and contribution to crop pollination) vary around the state. This local variation, combined with a short bloom season for many flowers, makes it challenging for just a handful of researchers to gather enough data to develop models that can predict wild bee abundance and diversity across Wisconsin's landscapes. To address this challenge, the Gratton Lab at the University of Wisconsin-Madison Department of Entomology received funding from a Baldwin Idea Award and Gwenyn Hill Farm to create a new community science app called WiBee: The Wisconsin Wild Bee App.

The goal of the WiBee App, *(pronounced wee-bee),* is to observe and collect data on the abundance and diversity of wild bees visiting blooming flowers or crops at your location. This app is publicly available for anyone to use. Whether you are a gardener, grower, student, or just interested in bees, we invite you to participate! After you install the app and take a brief tutorial on how to identify our six easy-to-recognize groups of bees, here's how it works:

- Select a 3 x 3 foot patch in bloom to survey.
- Answer a few questions in the app about the habitat/crop you're observing.
- Begin your first 5-minute survey. While the timer counts down, observe and record each time a bee or other pollinator visits a flower in the 3 x 3 foot patch.
- Once the 5 minute survey is complete, you can move to a new 3 x 3 foot area in your field and start another survey.

We can do the best statistical analysis if volunteers complete 3 surveys per day on 3 separate days (9 total) at a site. It's important to do observations over multiple days because bee activity is highly dependent on the weather.

How are the data used? We've designed the app to give you real-time insights about the data you are collecting, so that the app is a tool you can use to track and improve the pollinator community on your farm over time. The data from this project will also be pooled to help inform pollination management practices for growers producing a crop and land managers or property owners interested in promoting the pollination of specific floral species. This tool is more powerful and insightful the more people use it, so check it out if you can!
To get started:

- Download WiBee: The Wisconsin Wild Bee app today (available for both Android and iPhone).
- Visit www.pollinators.wisc.edu/wibee.
- Open the app and take a short Bee ID Quiz to confirm your identification skills, and then you are ready to begin completing 5-minute surveys of the bees on your farm.

Contributed by Colleen Satyshur, the project coordinator for WiBee: The Wisconsin Wild Bee App

Have an update or announcement you'd like to share in our newsletter? Email eva.lewandowski@wisconsin.gov.