MLMP Updates

an e-newsletter of the Monarch Larva Monitoring Project

Summer 2024

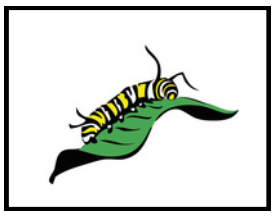
This summer's newsletter includes a 'Save the Date' for our first-ever virtual end of season gathering. We also share news of a recent interview and publication based on the data you collect for the Monarch Larva Monitoring Project along with an update on the monitoring season thus far. Read on!

Thank You for Monitoring!

We appreciate all the monitoring that has been done so far this year, from **181 sites** in **30 states**. The data you collect has been key for better understanding the monarch population so far this season, as well as for use in long-term analysis and research. Thank you for continuing to monitor with the MLMP!

We often are asked when to start and stop monitoring each season. To start the season, it's best to monitor every week as soon as the milkweed comes up. It is just as important to document monarch absence as it is to document presence. You will almost always see eggs before you see adults, so you shouldn't wait until you see your first adult to start monitoring. In the fall, you should monitor until all the monarchs are gone. We recommend going out twice after you've seen your last egg or larva.

Save the Date! Virtual End of Season Gathering



Wednesday, October 30, 2024 2pm CDT

This year, we will hold a first-ever virtual end of season gathering to thank you for your efforts collecting data throughout the year. We will give you an update on 2024 results and research, and we'll also be highlighting some of the great work you've done over the years by recording and submitting invaluable information and data. We hope you will join us!

Save the date: **Wednesday, October 30**, at **2pm CDT**. More details to follow.

Recent Research & MLMP Data-in-Action

- Karen Oberhauser, MLMP Founder and Coordinator and University of Wisconsin Madison Entomology Professor Emerita, recently was interviewed on Wisconsin Public Radio (WPR) about a recent study showing the impacts of insecticides on butterflies. You can read the WPR article here and listen to the August 1 WPR interview here.

- Additionally, a recent journal article, featuring MLMP data in action, describes characteristics of urban milkweed gardens that influence monarch abundance. You can read it at this link.

The **Monarch Larva Monitoring Project** is a partnership of the **Monarch Joint Venture** and the **University of Wisconsin-Madison Arboretum.**

MONARCH JOINT VENTURE

Arboretum UNIVERSITY OF WISCONSIN-MADISON

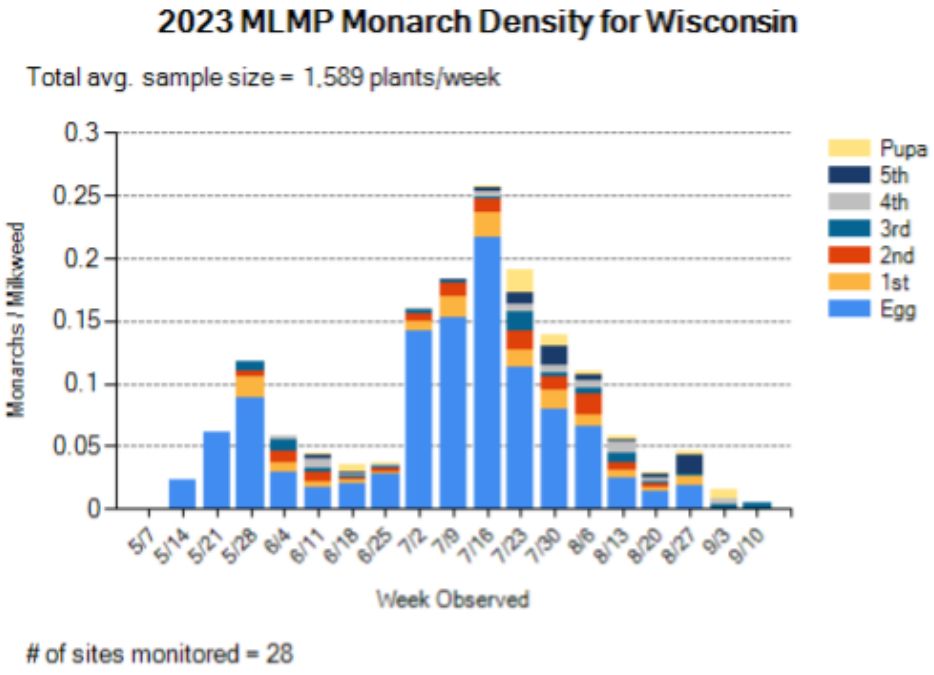
Midwest Monarchs 2024: A promising start that fizzled out?

by Karen Oberhauser

For almost 30 years, volunteers in the Monarch Larva Monitoring Project have visited milkweed patches, documenting monarch egg and larva abundance throughout the monarch breeding range. The resulting data allow us to compare monarch populations from year to year, and week to week within years. Graphs at this link and below represent per plant monarch densities in Wisconsin; please click on the results home to see data from other states. We'll focus on WI here because more sites have reported data this year, but the patterns are similar in other states.

Generally, we see a pattern like the one from 2023 (Figure 1). The first new generation of the year flies north from the southern US, and lays eggs over a period of just over a month, from early- to mid-May to late June. There's then a lull as these butterflies die and before their offspring start emerging as adults, and then another period of egg laying by the overlapping second and third generations of the year. The abundance of eggs laid by generations 2 and 3 monarchs generally peaks in mid-July. Monarchs laid as eggs from mid-July on will migrate to Mexico. Usually the population increases from spring to summer.

Figure 1.



Midwest Monarchs 2024: A promising start that fizzled out? (continued)

by Karen Oberhauser

But sometimes, like this year, the population does not increase (Figure 2, data through August 2). We've passed mid-July, and monarch densities are lower than they were in mid-May. This happened even more dramatically in 2012 (Figure 3), which resulted in low monarch numbers at the Mexican wintering sites. 2012 was unusual for other reasons; monarchs returned much earlier than usual and in very high numbers, and then crashed. Interestingly, 2024 was an early year too; volunteers found eggs during the week of May 5, earlier than in most years.

Figure 2.

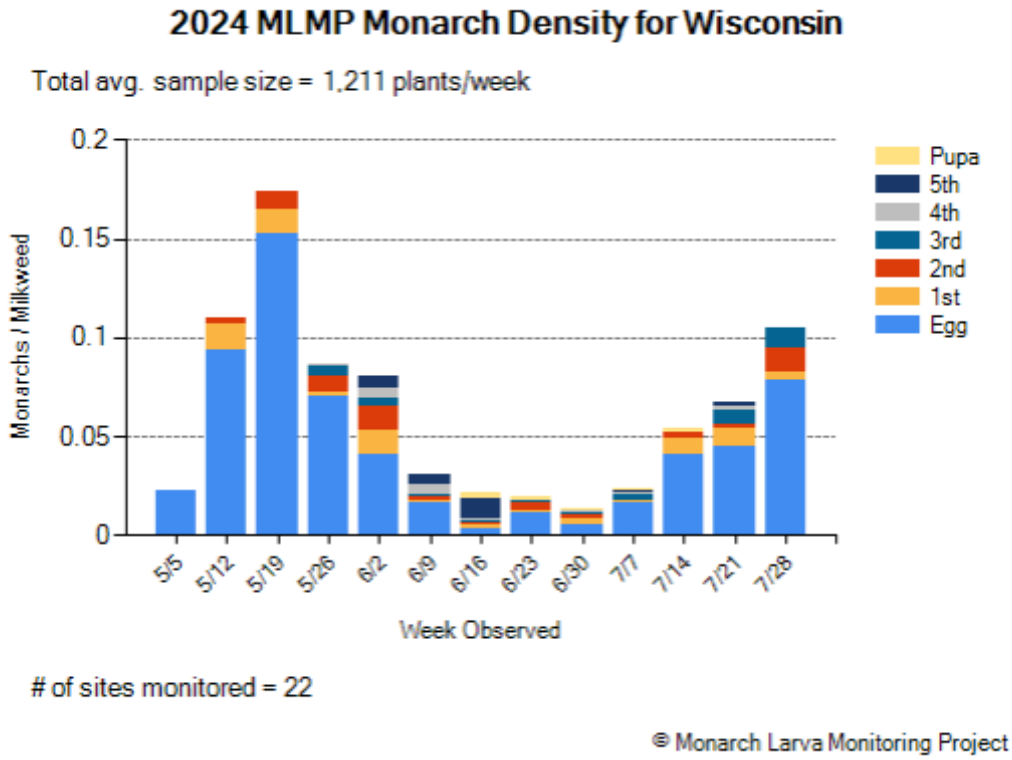
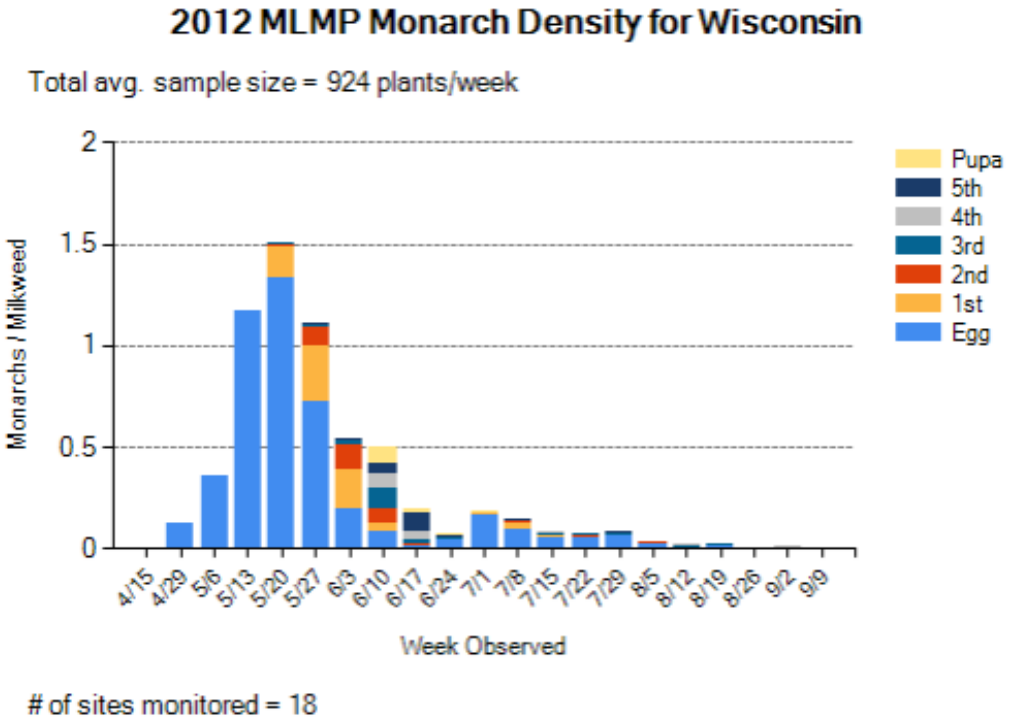


Figure 3.



Midwest Monarchs 2024: A promising start that fizzled out? (continued)

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While data from other monitoring programs are not yet available, anecdotal evidence from several NABA count coordinators suggest that adult numbers reflect a similar decline.

What happened in the middle of July? A possible cause is the big rainstorms just as generation 2 was about to eclose. Adult monarchs are good at hunkering down when it's raining; they can't lay eggs, but they can generally find shelter and wait the rain out. And we don't have good evidence that normal rainstorms wash eggs, larvae, or pupae off plants (although this hasn't been well-studied). But eclosion from pupa to adult is a vulnerable, albeit short event, and monarchs probably can't delay it to wait for better weather. The intense heat early in the summer may also have affected both eclosion success and butterfly fitness. Long term data, like we can get from the MLMP and NABA, can help us understand the relationship between weather patterns and monarch numbers.

The likelihood that weather in the midwestern US is impacting monarch numbers this year illustrates the importance of habitat on broad regional scales. In years when monarchs don't do well in some locations it's important that habitat is available in locations where the weather is better.

Thanks to volunteers out there keeping track of monarchs at all life stages, we may be better equipped to support them. Please feel free to explore the MLMP graphs at our website, and if you aren't yet a monitor, join us!

Karen Oberhauser, protected by netting from the abundant mosquito population, examines milkweed plants for monarch larvae and eggs in July 2024 at the University of Wisconsin Arboretum. photo: Erik Schwerdtfeger

You can support MLMP in many ways!

Please consider supporting our collective conservation efforts with a donation that supports training, materials, and maintenance of the data you collect.

You can make a financial contribution today here.

Have a story from your site or art to share? We'd love to hear from you!

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