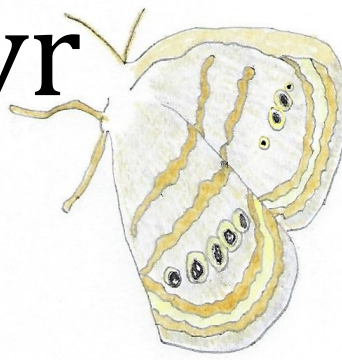


The Lonely Satyr

For Butterfly Enthusiasts
of Northeast Indiana



August 1, 2024

Insecticides found to be primary driver of butterfly decline

By Alex Dardas, June 20, 2024

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A Michigan State University study finds insecticides are the primary driver of butterfly decline and species diversity in the Midwest.

Insecticide use is the single largest factor contributing to a decline in total butterfly abundance and species diversity in the Midwest, according to a newly released study published by the journal *PLOS ONE* from Michigan State University.

This study builds upon research performed by Braeden Van Deynze with Scott Swinton, a University Distinguished Professor in the Department of Agricultural, Food and Resource Economics. Van Deynze earned his doctorate from MSU in 2019 and is currently a natural resource economist for the Washington Department of Fish and Wildlife.

“What drives butterfly decline is a hard nut to crack, due to rapid changes in chemical and genetic technologies alongside changes in climate and butterfly habitat,” says Swinton. “Our team was able to link 17 years of farm-level data on crops and inputs with detailed county-level data on butterfly abundance by species. This research is the first to evaluate the long-term effects on butterflies of herbicides, sprayed insecticides and systemic insecticides, while controlling for climate and land use change.”

While habitat loss, climate change and pesticides have all been implicated as potential causes for the declining insect abundances being observed globally, this work was the first comprehensive long-term study to evaluate their relative effects. Using 17 years of land use, climate, multiple classes of pesticides and butterfly survey data across 81 counties in five states, the researchers found that shifts in insecticide use toward neonicotinoid-treated seeds are associated with an 8% decline in butterfly species diversity across the American Midwest.



Above: Duke's Skipper
Photo credit: Ronda Spink
Southeast MI
7/25/2024

Also reported: Horace's Duskywing

Insecticides continued

These findings include the decline of the migratory monarch butterfly, which has been a prominent concern. Specifically, it is noted that insecticides rather than herbicides are the strongest pesticide factor associated with monarch declines.

This research is particularly impactful as butterflies play an essential role in pollination and serve as key markers of environmental health. Understanding the primary factors contributing to their decline will help researchers working to protect these species, benefiting our environment and the sustainability of food systems.

“As the best-known insect group, butterflies are key indicators of broader insect decline, and the implications of our findings for conservation will extend to the entire insect world,” said ecologist Nick Haddad from the MSU W.K. Kellogg Biological Station and the Department of Integrative Biology.

The paper notes the complexity of these many contributing factors and how difficult they can be to separate and measure in the field. The study calls for more publicly available, reliable, comprehensive and consistently reported pesticide use data, particularly for neonicotinoid seed treatments, to fully understand the drivers of butterfly decline.

In addition to Van Deynze, Swinton and Haddad, co-authors for this paper include David Hennessy from Iowa State University and Leslie Ries from Georgetown University.

Read the full paper on PLOS ONE at <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0304319>

Read this original article at <https://msutoday.msu.edu/news/2024/insecticides-drive-butterfly-decline>

Summer Sightings



Above: Harvester ovipositing

Right: Harvester eggs

Photo credit: Ronda Spink

MI

7/30/2024

For curious photographers:

Adult & some Egg Photos: Sony RX10 IV

Macro Egg Photos: Olympus TG4



Summer Sightings

Leslie Arnold reports:

Pretty Lake, LaGrange Co., IN:

7/8 - Red-spotted Purple

7/10 - Common Buckeye

7/11 - Mourning Cloak

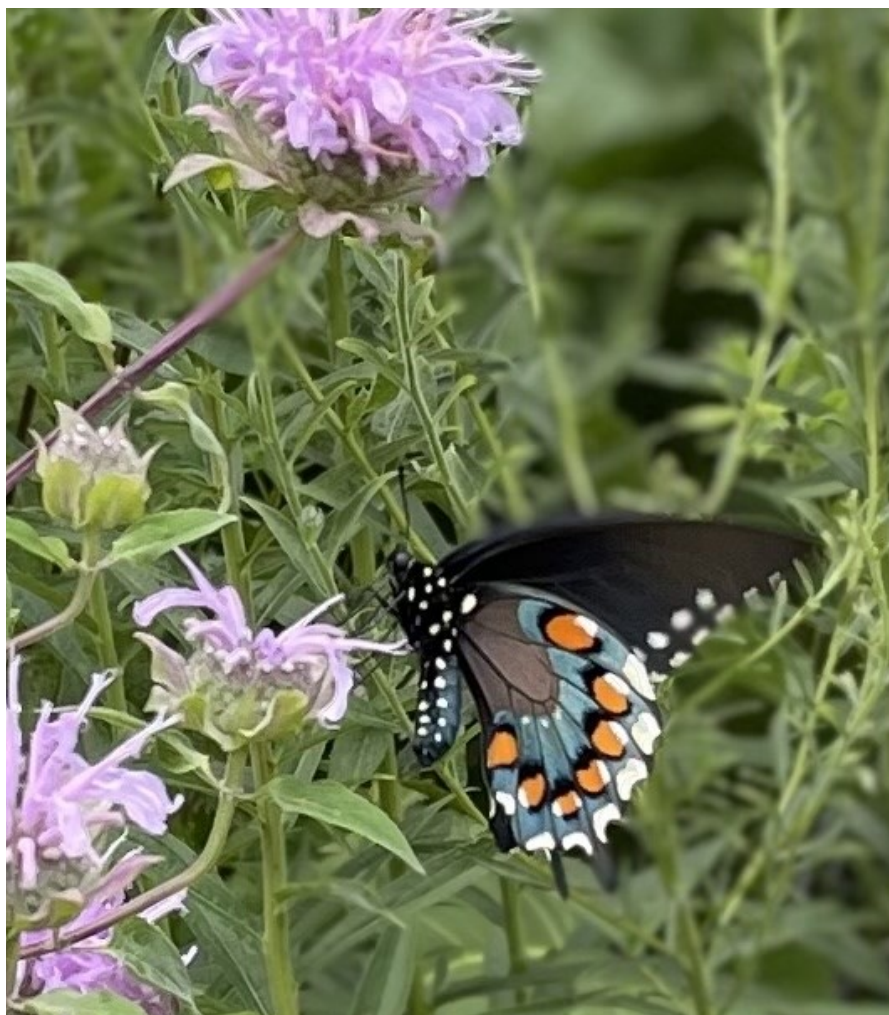
7/17 - Viceroy

7/22 - Eastern Tiger Swallowtail

7/30 - Silver-spotted Skipper



Above: Common Buckeye
Photo credit: Steven Etheridge
Northern IN
7/2024



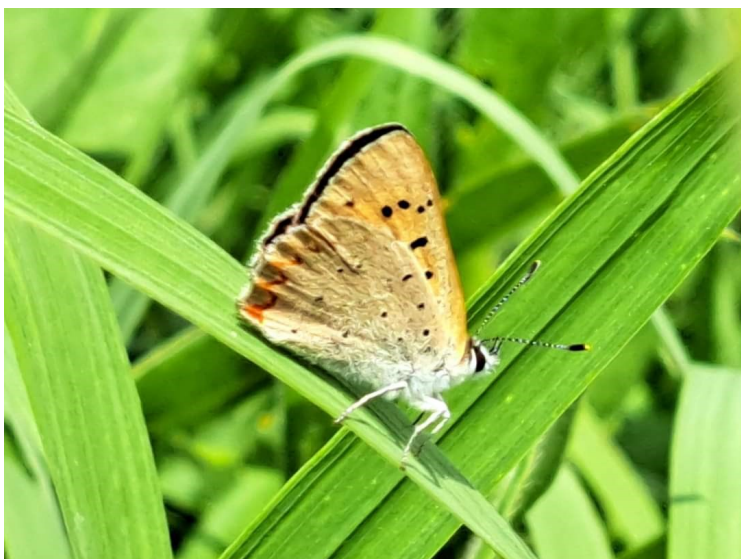
Above: Pipevine Swallowtail
Photo credit: Jan McGowan
South Bend, IN
7/11/2024

Steven also reports:
Pearl Crescents, Spicebush Swallowtails,
Eastern Tiger Swallowtails, Monarchs, Viceroy,
Eastern Commas, Giant Swallowtails, Black
Swallowtails, Question Marks, Silver-spotted
Skippers, Summer Azure, Common Wood
Nymph, Red Admirals, Little Yellow Sulphurs,
Hackberry Emperors, Zabulon Skipper, Cabbage
Whites and Tawny Emperors

Locations: ACRES Land Trust Properties, Gene
Stratton Porter Historic Site, Willow Slough,
and Kankakee Sands, IN

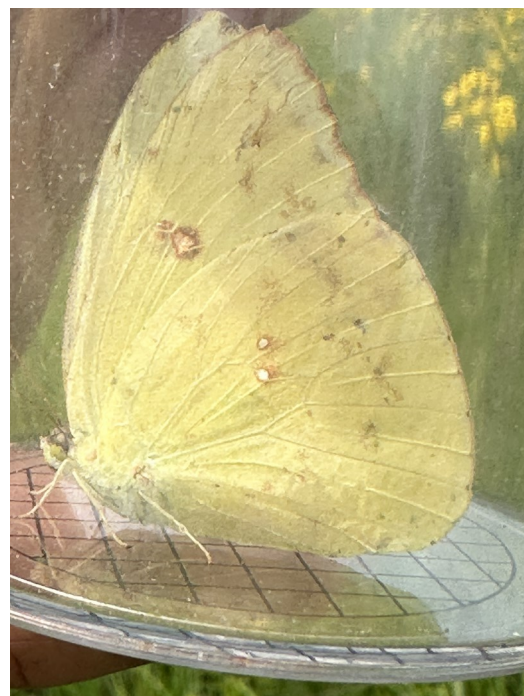
Steve - you've been busy! Congrats!

Summer Sightings



Above: Purplish Copper
Photo credit: John Michael Durback
Allegan State Game Area, MI
7/26/2024

John Michael also reports:
Regal Fritillary, Kankakee Sands, IN ,
7/27/2024



Above: Cloudless Sulphur
Photo credit: Talus Rutgers and Ronda Spink
Chikaming Open Lands, MI
7/25/2024

Sometimes there are just great butterfly stories.
Ronda shared this is only the 3rd Cloudless Sulphur she's ever seen in MI. Her grandson Tal is going to have her beat; this is his 2nd sighting. A "big deal" butterfly photo in MI! Congrats!

Also reported: Little Yellow Sulphur



Above: Hackberry Emperor
Photo credit: Ron Schmidt
Trine State Recreation Area, IN
7/28/2024

Community Calendar

Contact the event host prior to traveling to make sure it's not cancelled.

Saturday, August 3

10:00am

Clear Lake Nature Preserve Wildflower & Butterfly Hike

7265 E 675 N, Fremont, IN

Join John Brittenham, Blue Heron Ministries, for a guided hike through the prairie at Clear Lake Township Land Conservancy's Clear Lake Nature Preserve. Learn about wildflowers, butterflies, and land restoration efforts. Meets in the parking lot of the Clear Lake Nature Preserve. Hike is estimated to be 1.5 miles and 2 hours length. Trail is easy to mod, with no wet areas anticipated. Check the weather before coming; this hike will go rain or shine. Contact John at johnbrittenham@gmail.com with questions.

Sunday, August 11

1:00pm

Mike Metz Fen Wildflower & Butterfly Hike

Pine Knob Park

2835 E IN 120, Howe, IN 46746

Join John Brittenham, Blue Heron Ministries, for a guided walk on the boardwalks surrounding Mike Metz Fen. Learn about the wildflowers and butterflies that make the fen their home. Meets in the parking lot of Pine Knob Park, then carpools to separate starting place. Trail is 1.9 miles long, and walk will take an estimated 2.5 hours. Water, closed-toe footwear, insect repellent, sunscreen are recommended. Check the weather before coming; this hike will go rain or shine. Contact John at johnbrittenham@gmail.com with questions.

Saturday, August 17

10:00am - 1:00pm

Monarch Mania

Chain O' Lakes State Park

2355 E 75 S, Albion, IN 46701

All activities held at Glacier Ridge Shelter; includes craft tables, games, informational booths, Monarch Migration and Tagging program at 1:00pm. There is a 2:00pm Wildflower Walk starting at the Stanley Schoolhouse. Event is free, but there is a park entrance fee per car.

(No endorsement or discrimination of specific events or vendors on this community calendar is intended or implied.)

Save the Date!

Sunday, September 8

12:00 - 5:00pm

Monarch Festival

Little River Wetlands Project, Fort Wayne, IN

Tuesdays, September 10 & 17

1:00 - 3:00pm

Monarch Tagging with Michigan Butterfly Network

Fee: \$7/Member, \$10/Non-member

Visit <https://naturecenter.org/michiganbutterfly/> to register (when registration opens).

Saturdays, September 14 & 21

1:00 - 3:00pm

Monarch Tagging with Michigan Butterfly Network

Fee: \$7/Member, \$10/Non-member

Visit <https://naturecenter.org/michiganbutterfly/> to register (when registration opens).

If you'd like your butterfly photo and/or event information to be in September's newsletter, please turn it in by Aug. 26.

Please seek permission to use any photos in this newsletter. Butterflies make you work for them, so reward dedication!

To subscribe and submit, contact:

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