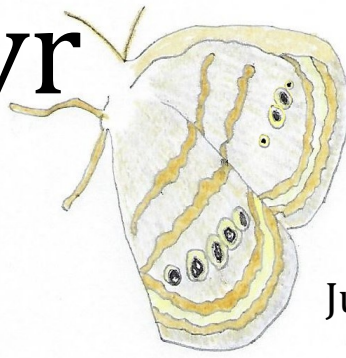


The Lonely Satyr

For Butterfly Enthusiasts of Northeast Indiana



June 1, 2022

Mitchell's Satyr Propagation at KNC

By Maci Bennett, KNC Research Technician

This article has been reprinted with permission from the "Michigan Butterfly Network eNews Summer Edition." Thank you to the author Maci, Jennifer Meilinger, and Kalamazoo Nature Center for sharing this article. A paragraph about fens was omitted for space.

Mitchell's satyr butterfly (MSB) (*Neonympha mitchellii mitchellii*) is a federally listed endangered species native to Michigan, Indiana, Ohio, Wisconsin, and New Jersey. Currently, this species may only be found in Michigan and Indiana, and continues to experience rapid population decline. In 1997, there were 30 populations of MSB between Michigan and Indiana; in 2021, there were only 10 populations left, one in Indiana and nine in Michigan. Its decline is believed to be from habitat loss, as MSB occupy a very rare type of wetland known as a fen.

MSB may be seen flying in fens during late June through early July. Adults are characteristic of other satyrs and are brown in color with yellow and black eyespots on the dorsal side of their wings. The number of eyespots varies. A more reliable way to identify MSB is by its movement through the fen. Since this butterfly is a weak flier, it stays low to the vegetation (sedges and graminoids) and has a jerky side to side movement. MSB use the sedge, *Carex stricta*, as a host plant, though caterpillars in captivity have been shown to feed and develop on others in the *Carex* genus.

Kalamazoo Nature Center (KNC) has been propagating MSB for five years. On July 4, 2021, KNC researcher staff collected eight adult females and two adult males from a Michigan fen. The adult butterflies were brought to KNC's propagation facility at Heronwood Field Station, where they were released into tent enclosures that contained potted *Carex stricta* host plants. Research staff monitored for ovipositing (egg-laying), and after 72 hours, the adults were returned to the native fen. Staff spent several days counting the eggs, some of which were on the *Carex stricta* host plant, though many others were in the soil of the potted plants, on the screen of the tent enclosure, and even on the pot itself!

In total, 207 eggs were found, and two weeks later, 199 of these eggs hatched. This was the most caterpillars in KNC's MSB history! Each of these caterpillars was then moved into its own enclosure with a potted *Carex stricta* host plant. The enclosures were checked weekly for caterpillars. There are currently 95 caterpillars in their 4th instar stage. Since MSB overwinter as 4th instars, they have been in diapause (a period of halted development). To ensure the caterpillars develop at similar rates as those living in the fen, staff rear them a special temperature- and humidity-controlled room that can house up to 400 caterpillars. Starting on May 4, staff began the process of steadily increasing the temperatures of our rearing room to bring the caterpillars out of diapause. Their host plants are already showing signs of new growth.

Propagation cont'd.

Once the caterpillars are no longer in diapause, they are expected to feed on their host plant until they are 5th instars. After this last larval stage, they will pupate and emerge as adults between late June and early July, when they will be released back into their maternal fen.

Follow-up Information added just for The Lonely Satyr:

Leslie Arnold asked Jennifer Meilinger, Community Science Coordinator at KNC, about the success of the program. Jen replied, "Here is the response from our Research Director, Holly Hooper, regarding the success of the Mitchell's satyr propagation at KNC so far."

Hooper stated, 'We released caterpillars in 2016, which was the first year the program was started, but the ultimate goal has been to release adults. Since 2017, KNC has been focused on protocol development with the first caterpillars to survive diapause occurring in 2022.' Keep up the good work KNC!

How can I help?

Contact the Kalamazoo Nature Center to make a donation, and ask for it to be earmarked for Mitchell's Satyr Propagation Project. Call (269) 381-1574 or visit <https://naturecenter.org/support/>

To donate to the Michigan Butterfly Network, visit <https://naturecenter.org/support/donatemibn/>

If you are concerned about Monarch populations and what is being done to help them, consider visiting the Monarch Butterfly Fund website and reading their Spring 2022 newsletter. It is jam packed with information about work being done in Mexico at the overwintering sites. There are also options to donate to the Monarch Fund.

<https://monarchconservation.org/mbf-newsletters/>

If you would like a printed copy of their newsletter, please contact me and I would be happy to mail you one.

Local Sightings

**There was a flurry of sightings reported at the end of May. They will appear in the July newsletter.*

Roger Wenger reported:

Eastern Tiger Swallowtail

5/14/22

near Shipshewana, IN

Amy Oberlin reported:

Monarch

Cabbage White(s)

5/14/22

Crooked Lake, Steuben Co., IN



Above: Silvery Blue
Photo credit: Doug Selzer
LaGrange Co., IN
5/14/22 & 5/16/22

Local Sightings cont'd.

John Brittenham reported:

Black Swallowtail

5/11/22

Fen at Duff Lake, Pine Knob Park, Howe, IN

Eastern Tiger Swallowtail

5/12/22

900 E, near South Milford, IN

Painted Lady

Pearl Crescent

5/17/22

Fen at Duff Lake, Pine Knob Park, Howe, IN

Mary Durand reported:

Mourning Cloak (3)

4/23/22

LaTierra Nature Preserve, Steuben Co., IN

Monarch

5/17/22

950 E, near Mount Pisgah, LaGrange Co., IN

Leslie Arnold reported:

Eastern Tiger Swallowtail

5/10/22

100 S & SR 3, LaGrange Co., IN

Monarch

5/15/22

SR 3, just north of S. Milford, IN

Cheryl Chapman (of Long Beach, IN) reported:

Monarch

5/15/22

Hwy 12 & Lake Side Drive, Lakeside, MI



Above: Olympia Marble

Photo credit: Ronda Spink

Allegan State Game Area, MI

photographed either May 9, 10, 16, 2022



Above: Brown Elfin

Photo credit: Ronda Spink

Allegan State Game Area, MI

photographed either May 9, 10, 16, 2022



Right: Juvenal's Duskywing

Photo credit: Ronda Spink

Allegan State Game Area, MI

photographed either May 9, 10, 16, 2022

Local Sightings cont'd.



Above: Eastern Pine Elfin

Photo credit: Ronda Spink

Allegan State Game Area, MI

photographed either May 9, 10, 16, 2022



Above: Eastern-tailed Blue

Photo credit: Ronda Spink

Allegan State Game Area, MI

photographed either May 9, 10, 16, 2022

Ronda Spink also reported on same dates & same location:

Sleepy Duskywing

Silvery Blue

Frosted Elfin

Edwards' Hairstreak eggs

Silvery Blue eggs

Community Calendar

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

MiBN Field Training with LRWP Volunteer Russ Vorhees

Saturday, June 18, start at 2:00 p.m.

Eagle Marsh, Fort Wayne, IN

This is part 2 of the butterfly monitor training offered by Little River Wetlands Project. If you are interested in becoming a monitor at their preserves, contact Maraiah Russell at m.russell@lrwp.org. RSVP for field training is required. Call 260-478-2515 x105 for more information.

NABA Chain O' Lakes State Park Count (Albion, IN)

Tuesday, June 21

12:00 - 3:00 p.m.

Meet at the Stanley Schoolhouse Parking Lot.

RSVP to Leslie Arnold by June 14 at 260-463-4022 or

larnold@lagrangecounty.org to get free admission for the day. Rain date is Friday, June 24.

Pollinatorpalooza

Saturday, June 25

Prophetstown State Park, West Lafayette, IN

Games, workshops, sessions for all ages. Contact the park for more details. (765) 567-4919

If you'd like your event information to be in July's newsletter, please turn it in by June 24. Local sightings are my favorite part of the newsletter, so please report what you're seeing. Don't be shy!

Photos are great!

To subscribe and submit, contact:

Naturalist Leslie A. Arnold

larnold@lagrangecounty.org

Maple Wood Nature Center at
(260) 463-4022

0505 W 700 S, Wolcottville, IN,
46795



Boom-Bust Butterflies?

Perhaps you've noticed that in one year a particular species of butterfly seems to be, well, everywhere. But, then the next year, that same species seems completely missing. I've spoken with several monitors and photographers, and while we can't quite explain what's happening, we definitely notice the population variations of certain species like Common Buckeyes, Red Admirals, and Painted Ladies. There are many cycle factors to consider: migration patterns, weather and seasonal temperatures, habitat loss or changes like prescribed burns, and cycles of predators. John Brittenham, an Indiana regional hub coordinator for the Michigan Butterfly Network, has kindly crunched numbers and created a cool table that compares the Top 15 butterflies from our Indiana monitoring sites. The Cabbage White, Pearl Crescent, and Monarch are strongholds. But, look down the lists and see the Red Admiral and others jump up and down the numbers. Who will we see this year? And why?

Thank you John Brittenham, Doug Selzer, Ronda Spink for sharing your thoughts and observations about population cycles.

2015 top 15 butterflies	2016 top 15 butterflies	2017 top 15 butterflies
1. Pearl Crescent	1. Cabbage White	1. Cabbage White
2. Spring/Summer Azure	2. Pearl Crescent	2. Spring/Summer Azure
3. Red Admiral	3. Orange Sulphur	3. Eastern Tiger Swallowtail
4. Cabbage White	4. Eastern Tiger Swallowtail	4. Silver-spotted Skipper
5. Monarch	5. Silver-spotted Skipper	5. Monarch
6. Silver-spotted Skipper	6. Clouded Sulphur	6. Pearl Crescent
7. Viceroy	7. Spring/Summer Azure	7. Red Admiral
8. Clouded Sulphur	8. Monarch	8. Eastern Tailed Blue
9. Orange Sulphur	9. Silver-bordered Fritillary	9. Northern Pearly Eye
10. Least Skipper	10. Great Spangled Fritillary	10. Spicebush Swallowtail
11. Mourning Cloak	11. Viceroy	11. Great Spangled Fritillary
12. Eastern Tiger Swallowtail	12. Black Swallowtail	12. Little Wood-Satyr
13. Eastern Comma	13. Juvenal's Duskywing	13. Zabulon Skipper
14. Question Mark	14. Red-spotted Purple	14. Eyed Brown
15. Giant Swallowtail	15. Red Admiral	15. Red-spotted Purple

2018 top 15 butterflies	2019 top 15 butterflies	2020 top 15 butterflies	2021 top 16 butterflies
1. Pearl Crescent	1. Cabbage White	1. Cabbage White	1. Cabbage White
2. Monarch	2. Monarch	2. Pearl Crescent	2. Least Skipper
3. Cabbage White	3. Silver-spotted Skipper	3. Monarch	3. Monarch
4. Spring/Summer Azure	4. Pearl Crescent	4. Least Skipper	4. Pearl Crescent
5. Viceroy	5. Painted Lady	5. Clouded Sulphur	5. Silver-spotted Skipper
6. Eastern Tailed Blue	6. Least Skipper	6. Silver-spotted Skipper	6. Little Wood-Satyr
7. Red-spotted Purple	7. Spring/Summer Azure	7. Eastern Tailed Blue	7. Orange Sulphur
8. Zabulon Skipper	8. Eastern Tiger Swallowtail	8. Little Wood-Satyr	8. Spring/Summer Azure
9. Clouded Sulphur	9. Little Wood-Satyr	9. Common Buckeye	9. Eastern Tailed Blue
10. Little Wood-Satyr	10. Viceroy	10. Eastern Tiger Swallowtail	10. Viceroy
11. Eastern Tiger Swallowtail	11. Black Swallowtail	11. Spring/Summer Azure	11. Northern Pearly-eye
12. Northern Pearly-eye	12. Zabulon Skipper	12. Viceroy	12. Zabulon Skipper
13. Least Skipper	13. Eastern Tailed Blue	13. Silvery Checkerspot	13. Clouded Sulphur
14. Great Spangled Fritillary	14. Red Admiral	14. Giant Swallowtail	14. Black Swallowtail
15. Silver-spotted Skipper	15. American Painted Lady	15. Eyed Brown	15. Eastern Tiger Swallowtail