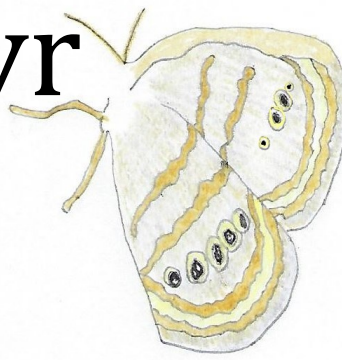


The Lonely Satyr



For Butterfly Enthusiasts
of Northeast Indiana

May 1, 2024

Q & A on Prescribed Burns

with John Brittenham, Blue Heron Ministries

I emailed John a series of questions about prescribed burns to help us better understand this management tool and how our local ecosystems may benefit. Thank you, John, for taking the time to educate us on the role fire has had, and could play, in saving prairies and butterflies. John's answers are shared here without any editing. The photographs were provided by John, and were taken in March at a fen in Indiana. John shared that he's seen Red Admirals and Cabbage Whites so far! Cheers, Leslie

How do you decide an area could benefit from a prescribed burn?

“We first look at the plant community. If there are species present that are fire adapted/dependent, we take notice. Usually, based on the plant community and the abiotic components of the area (hydrology, soils, etc.) we can determine if an area was historically a fire dependent ecosystem. We may also investigate historical records to see what the landscape was like before European settle-



ment. One of the main results of frequent fires is the reduction of woody species and the presence of trees and shrubs that can tolerate frequent fires (think oak species primarily). Often, we choose to burn an area where woody species are beginning to encroach and push out the more sun loving herbaceous species. Most fire adapted ecosystems need frequent fire to maintain the plant species and therefore the animal communities found there. Historic lengths between fires were often every year to every few years in these prairie and savanna ecosystems. Therefore, we may choose to burn an area because it has been a few years since it was last burned. Finally, we may choose to burn an area because fire will harm invasive and aggressive species or prepare the area for the targeted use of herbicide to control invasive species.”

Q & A continued

How does fire help native plants and prairies (and then also butterflies)?

“Fire is a historic and vital part of many of our local ecosystems. Prairies, savannas, open oak woodlands, wet meadows, etc. all depended on frequent fires for their existence. Grazing from animals, drought, flooding, and other natural disturbances also helped keep these ecosystems stable, but by far, fire was the largest influencer. After an area is burned, many of the plants grow more robustly and produce more foliage, nectar, and seed resources. Because of this, fire dependent ecosystems are arguably the most productive ecosystems for wildlife, especially butterflies. There are several known reasons why fire promotes more vigorous plant growth and probably even more unknown reasons. A few of the reasons are: micronutrients are released from the burned vegetation and are made available for the growing plants, old dead plant material is removed allowing seedlings to germinate, spring soil temperatures increase due to the blackened burned area if burning happens before the growing season starts, and competition from trees and shrubs is reduced because they are top killed by the fire. Without disturbances like fire to keep out woody encroachment, many prairies, savannas, open oak woodlands, etc. would be replaced by shaded forest areas. This is the trend currently in many of our open herbaceous areas and is a significant reason why many of the animals that exist in these landscapes become less and less common.”

What steps do you take to have a safe burn?

“The first step to having a safe burn is the training, education, and experience we complete before the burn begins. Most of our crew has undergone wildland firefighting and prescribed fire training. We also spend a lot of time with people new to prescribed fire during a burn to help familiarize and educate them with and about the process. There is a lot to learn about prescribed burning



and by far experience is the best teacher. The next step to having a safe burn is having adequate and appropriate equipment and tools. Everything from our flame resistant Nomex uniforms to our modified water spraying ATVs to our specially designed drip torches. Everything is adapted for the prescribed fire process. We also always prepare a prescribed burn plan for each site. This outlines each individual property, the reason and objectives for conducting the burn, and the conditions in which we are comfortable proceeding with the prescribed fire. Once at the site, we talk over the burn using maps of the area and familiarize everyone with the reason for the burn and how we will conduct it. We then take the area weather conditions using a belt weather kit and contact local emergency response (county or local dispatch) to let them know the location of the prescribed fire. Finally, we always meet after the burn is completed for an after-action review to go over the fire and talk through things we noticed or learned and ways we can improve.”

Q & A continued

How does the Mitchell's Satyr habitat, in particular, benefit from fire?

“Mitchell’s Satyr butterflies depend on a very unique habitat. The butterflies require a combination of fine textured wetland sedges (mainly *Carex stricta*) and a mix of open/sunny and shaded areas. This mosaic of open herbaceous and shaded shrubby/treed areas was historically maintained by natural disturbances like fire and flooding. Mitchell’s Satyr butterflies seem to be particularly attracted to areas the years after a burn has occurred. Potentially the vegetation in these areas is better for caterpillar food or resources are more available for the butterfly in general. Fire also keeps the shrubs and trees from completely shading out the wetlands, which would stop *Carex stricta* from growing and deprive the Mitchell’s Satyr butterfly caterpillars of their required food source. Fire is also the most effective management tool in creating and maintaining Mitchell’s Satyr habitat. It is hard to see a way to save Mitchell’s Satyr butterflies and their required habitat without the extensive, but careful use of prescribed fire.”

Can you tell us about the thought process of risk vs. reward using prescribed burns, especially related to an endangered species like Mitchell's Satyr.

“There are two ways to think about this question. First, what is the risk to species like the Mitchell’s Satyr butterfly if fire is used in their habitat. Second, what is the risk if fire is not used in their habitat. This can be a complicated and debated topic but is important to the continued survival of a species like the Mitchell’s Satyr. The main risk to species that live in fire dependent ecosystems is that individuals will be killed or harmed by the fire. If the loss of individuals in a fire is beyond the species’ ability to replace them in the coming years, then fire can be a further stressor to already threatened and endangered species. On the flip side, many species like the Mitchell’s Satyr butterfly depend on ecosystems that require fire for their long-term survival. In order to maintain the ecosystems that these species depend on, some individuals may be killed in a fire. But the net gain from increasing the quality and quantity of their habitat is larger than the net loss. So often to save the whole species, you risk killing some individuals. Without the use of fire, the entire habitat would be lost and with it the threatened or endangered species that depend on it. Additionally, animal species that live in fire dependent habitats have evolved strategies to help them survive fires. The size of the habitats where threatened and endangered species now live is much smaller and more disconnected than the historical range. Therefore, it is very important when using fire in areas with threatened and endangered species that best management practices are used to ensure the least amount of harm happens. Burns are often conducted when threatened and endangered species are not present or are hibernating. Also, not all the area is burned in a give year. The most common practice is to burn only 1/3 of an area and rotate the areas burned so that each area of an occupied habitat is burned every three years. This gives the species like the Mitchell’s Satyr butterfly time to reoccupy the burned areas before the area is burned again.”



Blue Heron Ministries in partnership with the Michigan Butterfly Network's Northeast Indiana hub will conduct a training session to educate volunteers to identify and monitor butterfly populations to assess ecosystem health in Northeast Indiana. The training session will teach citizen scientists to:



Know Your Butterflies!

- ◇ Identify local butterflies.
- ◇ Monitor butterfly populations according to a national butterfly monitoring protocol on a site in their community.
- ◇ Conduct six surveys of their site throughout the summer (June-August).
- ◇ Enter data into a national butterfly monitoring database.
- ◇

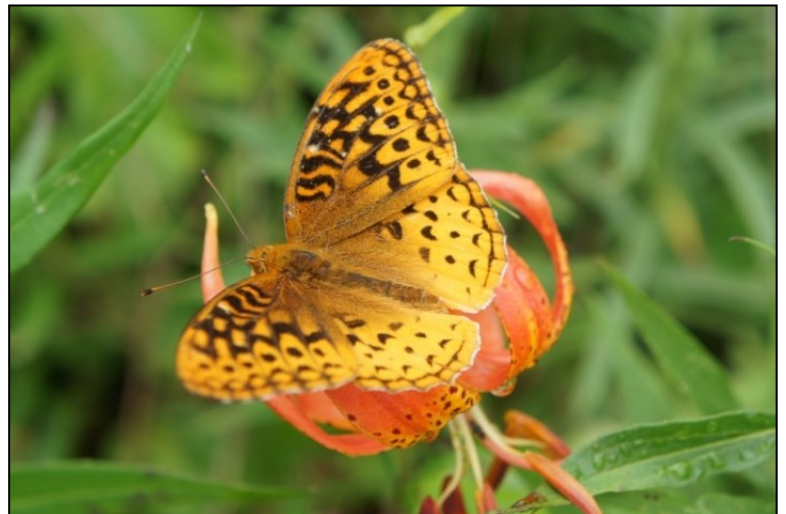
Know Your Butterflies Training Session – All levels of experience are welcome!

Date of Indoor training:
Thursday, May 23rd, 2024, 6-8 P.M.

Location: Carnegie Public Library
322 S. Wayne St., Angola, IN 46703

Date and location of Outdoor training:
To be announced at training.

For Information contact John Brittenham at:
johnbrittenham@gmail.com or 260-242-2759.



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

Sneak Peek for June 2024! More photos and fun facts about the Harvester butterfly. Thank you Ronda Spink, Michigan Butterfly Network Coordinator, for sharing your photos! The photo (right) is a Harvester ovapositioning.



Community Calendar

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

Saturday, May 4

10:00am - 6:00pm

Riverview Native Nursery, 5635 County Road 72, Spencerville, IN
Rural Artists Studio Tour & Nursery Open House

Wednesdays, May 8, 15, 22, 29

5:30-7:30pm

Little River Wetlands Project, Inc.

Invasive Species Pulling

Meet at 5000 Smith Rd., Fort Wayne, IN

Saturday, May 25

9:00am - NOON

Clear Lake Land Conservancy Plant Sale
Outer Drive, Fremont, IN

Lions Club BBQ Chicken; park across from the Clear Lake Lutheran Church

Saturday, May 25

9:00am - NOON

Lake George Conservancy Fundraiser Plant Sale
Lake George Boutique, 1042 Old Angola Road, Coldwater, MI

Saturday, June 1

9:00am

Wawasee Area Conservancy Talk and Eat Plant Sale

WACF Ruddell Pavilion, 11586 N. SR 13, Syracuse, IN

Light breakfast served and guest speaker Martha Ferguson of Riverview Native Nursery, local plants for sale

Now - June 23

Color in Motion: Butterfly Exhibit

Foellinger-Freimann Botanical Conservatory

1100 S. Calhoun St., Fort Wayne, IN

Call 260-427-6440 for hours and admission costs.

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

Community Sightings

3/11/24

Eastern Comma

Amy Oberlin, Brennan Woods, Clear Lake, IN

3/13/24

Cabbage White

Crooked Lake, Steuben Co., IN

2 Eastern Commas (together)

Amy Oberlin, Brennan Woods, Clear Lake, IN

3/21/24

Eastern Comma

Eva Curtis, Fort Wayne, IN

4/13/24

Cabbage White

Leslie Arnold, Pretty Lake, LaGrange Co., IN

4/27/24

Spicebush Swallowtail

Eva Curtis, Huntington Arboretum, IN

4/28/24 - Just for dear Fred Wooley

Baltimore Orioles (1 male and 1 female)

Leslie Arnold, Pretty Lake, LaGrange Co., IN

To subscribe and submit, contact:

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