

IMNature The newsletter for IMN hosts and certified graduates

2023 Winter Edition



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Naturally inclined.....

..... a note from the State Council President.

Years ago, when I was taking classes to become a Master Naturalist, I decided to try a variety of activities to get a better idea of the volunteer opportunities available. One that I selected was training for Hoosier Riverwatch. I'd grown-up with a lake at the bottom of the hill from our house, and a creek a short hike through the woods in the other direction, but as a boy I didn't think about the quality of the water, let alone monitoring it. During the training session, I enjoyed the classroom portion, learning about watersheds, habitats and the chemical tests we would conduct, but when we got out in the river to learn about biological monitoring, things changed.

Before the training, if asked to identify a macroinvertebrate, I would have been stumped—"something without a backbone" would have been my best guess. But in the water that day, scooping with a net, I was having a lot of fun. So much fun, that when we needed to return to the classroom and finish the class, the instructor had to call me several times to come out of the water—I was too engrossed with catching the little critters.

Fortunately for me, the local SWCD had an active education program with the STEM schools in Warsaw. I purchased a pair of waders and jumped in (figuratively). It didn't take long for me to differentiate between damselflies, dragonflies, mayflies and caddisflies in their nymph/larva stage, and identify other macros like crayfish, scuds, sowbugs, right- and left-handed snails. And, to be able to explain to the students which macros were intolerant to pollution, and why that was important. I had no difficulty showing up early at a SWCD school activity to catch samples to be used for the identification portion of the day's activities. When collecting macros for ID, I tried to get a variety of samples, but I was always on the lookout for the best dragonfly nymphs. Even the name is cool: I mean, what kid doesn't like dragons? And they're a good size for the students to hold for "photo ops".

Over the years, I've tried to increase my knowledge about dragonflies. I learned they are common in many aquatic habitats, spend most of their life in the nymph stage, (some can live 5 years in the water before becoming an adult), all have 6 long legs, large eyes, are usually drab in color and have gills located inside their rectum. They actually breath



by drawing water in and out of their rear end. This can also serve as a defensive maneuver if they forcefully shoot the water out; it works like jet propulsion. They are “lie-in-wait” predators, waiting quietly on the substrate until a meal comes near. They have a large extendible jaw that covers most of the bottom of their head and use it to snatch and draw in their food.

Depending on the species, dragonflies can molt between 9 and 17 times as they develop. During the final nymph stages, they start to develop their adult wings, although the wings remain tucked inside wing pads. Prior to the final molt, an intricate system of tubes inside their body has to transition from getting oxygen from its gills to breathing air. When it is finally ready, the nymph crawls out of the water for its last molt, leaving its exoskeleton behind.

If you’ve watched adult dragonflies, you may have noticed that there are slight differences in body shape, size and color. Nymphs come in different shapes and sizes, too. And of the 8-10 locations I’ve scooped for macros, one spot (Eagle Creek), has a really large species that I love to find. Due to some severe storms in the area this past summer/fall, that location was inaccessible for most of the SWCD fall program sessions, but in early October we were able to get two groups of students to the creek and I caught one of the large nymphs.

I wanted to know what it looked like as an adult, so I took a photo, (see above) and came home to check in my copy of *Beginner’s Guide to Dragonflies*, only to find the guide just includes photos of adult dragonflies. So, I quickly turned to the internet—lots of photos of dragonfly nymphs, and a couple the same kind as I had, but none identified the specific species. More web searching turned up a book, *Dragonfly Nymphs of North America: An Identification Guide*, with a description that read, “

Mexico, the focus being accurate identification of the 330 species of Anisoptera that occur in the region.” Perfect; just what I wanted. I clicked on Amazon, found the book, published in 2019, and—YIKES, it sells for \$223.71 !

After some more searching on the web, I found a link to the Dragonfly Society of America. I sent them an email, with a photo, explaining my interest in identifying the dragonfly in my photo. I was pleasantly

I can tell you it’s in the Macromiidae family, though I’m sure you already knew this much. (Actually, I didn’t.) She went on to say, “Many of the characters that are important to determine the Macromiidae genera are all related to the spines on S9 and 10, but those are both difficult to see in your image.” She asked if I had more photos. Again, I didn’t. She referred me to a site that mentioned Macromiidae in Michigan, since it “is close-ish” to Indiana.

adult in the area, and determine which Cruiser it is. Seems like a lot of work for a small piece of information, but dragonflies can be a lot of fun.

Wishing you a happy new year!

Chuck

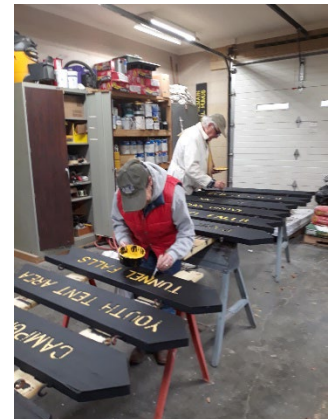
What Does a Friends Group Do?

By Cathy Cleveland

The Friends of Clifty Falls State Park elected its first board of officers in 2020, with the mission to foster community stewardship of the park through conservation, preservation, and interpretation of its unique natural and cultural resources for current and future generations. More simply put, as a Friends group, we help the park and its staff by volunteering on various projects and raising money to fund projects and special events. We became a non-profit in September, 2021, allowing us opportunities to apply for grants that could greatly impact our contribution to Clifty Falls SP.



2022 found the Friends group engaged in numerous activities. Often, the Friends will volunteer at the Nature Center, remove invasive plants, paint signs, rework flower beds and pick up trash. Last spring, we supported Madison High School's volunteer day, working with the students to make bulletin boards, paint fences at the Nature Center and to put out bluebird nest boxes. In May, we worked with park staff to install stepping stones on Trail 8 over Big Clifty Creek, allowing hikers to cross an otherwise impassable trail after heavy rains. In October, we staged the inaugural Clifty Falls of Fear Haunted House. Currently, we are working to blaze the trails for easier navigation of the trails. This winter we plan to plant trees in the Campground, having completed a survey of the existing campground trees last summer.



In 2023, we hope to plan and obtain funding for a new playground, plus sponsor the Vintage Camper Rally, hikes and educational programs for the public. We are also looking forward to hosting the Indiana Master Naturalists statewide gathering in March, 2023. Hope to see you

Save the Date! The 2023 IMN Gathering will be held at Clifty Falls State Park in Madison, IN, on March 31- April 2 !

Teter Retreat & Organic Farm

by Rev. Amber Good

Teter Retreat & Organic Farm is 120 acres of land that stretches for a mile along the bank of the White River in Northern Hamilton County. The land is descended from the Miami, Kaskaskia, and Kickapoo. Just across the river is Strawtown-Koteewi County Park, which highlights the indigenous people that lived here before them. The area is an historically important corridor for a diversity of life.



As with much of the land in Indiana, both the upland and bottomland areas were farmed for a good portion of the last century. When conventional agriculture became the norm in the middle of the 20th century, the trees were cut along the bank and the fertile soil was plowed to grow row crops of corn or beans. In places, the steep ravine was used as a dump for metal appliances and vehicles.

In the late 80s, the land that had been owned by the AW Teter family was donated to the Noblesville First United Methodist Church as a retreat. Dedicated members of the church began to take steps toward cleaning and caring for this environmentally sensitive land. Teter was initially enrolled as a conservation partner with the IDNR and then in Conservation Reserve Plans with the Natural Resources Conservation Service. The bottomlands were planted with a mix of hardwoods that allowed for the land to return to its original vocation as the ecologically important buffer it is, while 13 acres of upland remained conventionally farmed until 2016.



Sunset in the CRP at Teter, Sept 2022

To continue the trajectory of living in sensitive cooperation with the land while providing for people, the farmland was removed from conventional farming practices and moved into no-till, regenerative practices. With the help of the NRCS, Teter Organic Farm now raises diversified vegetables that are sold to the Community Supported Agriculture members and at the Noblesville Farmers Market. The funds raised through these sales support the donation of our fresh vegetables to Hamilton County Harvest Food Bank. Promoting food security while promoting healthy ecosystems is the primary focus at Teter.

Teter Retreat & Organic Farm is a place where the public is invited into community with nature and other like-minded people. It has often been called a thin space, a term for a place that seems to have an extraordinary serenity; a place where heaven and earth are thought to be closest. Many people come out to Teter to relax, meditate, pray, or simply to be around other like-minded folks. Though it is owned by the Noblesville First United Methodist Church, it is an inclusive and safe space for people of any faith or no faith tradition. Dedicated volunteers offer their time and talents to provide programs about ecology, animals, and restorative farm practices, as well as a multitude of chores to manage and maintain the farm and forested areas. It's a place that provides space and guidance for IMNs to earn volunteer hours by planning and providing interpretive programs and helping to eradicate invasive plants. As an IMN alum, I am developing the interpretive program



Wildlife interpretive program at Teter, Sept 2022

initiative at Teter by planning, promoting, hosting and providing a variety of programs while also helping to maintain the natural areas. Fellow IMNs are always welcome at Teter. In fact, there are at least two other IMNs already affiliated with Teter. If you would also like to become part of the education team and earn volunteer hours, contact me at agood@noblesvillefirst.com.

During 2022 children and adults encountered insects and wildlife and experienced nature in new ways. Our local beekeeper helped kids encounter the wonders of honey bees and native pollinators.



Adventure Club gave kids an opportunity to explore the creek and discover living treasures that call Indiana waterways home. Guests of all ages were able to get up close and personal with opossums, a raccoon, and even a barred owl when a wildlife rehabilitator brought out a few of her animal ambassadors. Adults learned about foraging and made tea with our guest Greg from Persimmon Herb School. The Amos Butler Audubon society inventoried migratory birds in the spring and fall while the Indiana Wildlife Federation conducted a monarch tagging event in October. Experiences like these encourage a deeper understanding of our interconnectedness with all creatures and habitats which

elicits greater concern for the impact of human actions on nature and human neighbors across the globe. Baba Dioum once said, “In the end, we will conserve only what we love, we will love only what we understand, and we will understand only what we are taught.” It is our aspiration and joy to share this small piece of Earth with anyone and everyone who visits the land at Teter, to teach understanding through encounter and love through experience.

You too are invited to visit Teter Retreat & Organic Farm, located at 10980 E. 221st St., Noblesville, IN 46062. Teter is open from dawn to dusk and boasts more than a mile of trails. The lodge and cabin are available for rental and are maintained by Teter staff and volunteers. Scout groups often rent our green spaces to hold camporees or other overnight events. A variety of ecology education events and programs are held throughout the summer months, available to the public of all ages. For more information about upcoming events and other happenings at Teter Retreat & Organic Farm, you can visit our website, <https://www.teterorganicfarm.com/> or sign up for our occasional newsletters.

Rev. Amber Good is the Director of Faith and Ecology Education (volunteer) at Teter Retreat & Organic Farm, Pastor of Community Engagement Zionsville United Methodist Church, and an Advanced IMN from the 2021 Class at Mounds State Park and a National Association for Interpretation Certified Guide.

Want to promote your alumni group, highlight a volunteer, or tell about your favorite experience with nature? Have an article and/or pictures you would like to submit? Or does your organization need volunteers? Let us know by contacting chapman_ej@yahoo.com

Deadline for submissions for the **spring edition** will be **March 15**.

Submitted articles may be awarded volunteer hours!

National Audubon Society's "Climate Watch" Program

By Mary Kauffmann-Kennel, Elkhart County Advanced IMN

Would you like another excuse to go birding and help scientists gather data needed to help our birds? (And tally some volunteer time for your IMN year?!)



In 2016, National Audubon Society developed a community science program called "Climate Watch," to explore how North American birds are responding to climate change. Volunteers survey assigned areas once during the winter (January 15 – February 15) and again once early summer (May 15 – June 15) each year.

For Indiana, the birds focused on are Eastern Bluebird, American Goldfinch, Eastern Towhee, White Breasted Nuthatch, and Red Breasted Nuthatch. The actual survey involves documenting all birds seen or heard during a 5 minute period at 12 different stops within your designated area.

To participate, check the website for a local coordinator for your area. If there is none, you can sign up to be a coordinator or just sign up as an individual. Everything you need to know to get involved can be found on the following website. <https://www.audubon.org/conservation/climate-watch> You can also read what the scientists are learning from the data received.

Earth Discovery Center, Eagle Creek Park

By Susan White



Tucked back off the main road in Eagle Creek Park (Indianapolis) is the Earth Discovery Center, one of two nature centers in the park. Although the park is 50 years old, the Earth Discovery Center was opened in 2007, with the goal of enhancing environmental education for all ages. On any given day you may find children on a school field trip scooping in the geothermal pond, little ones and a parent or caregiver gathered for story time and nature crafts, park users checking out an art exhibit or the various live animal displays, or day campers or home schoolers attending a variety of class offerings related to nature and the environment. You will also find a dedicated staff of naturalists assisted by volunteers, many of whom are Indiana

Master or Advanced Master Naturalists.

At the Earth Discovery Center, you will find displays of animals, insects, and plants all designed to educate the public. Many of the animal ambassadors, some on display and some only available for programs, are cared for at the Earth Discovery Center because they are unable to be released back into the wild. Programs are developed by the naturalists to share the interesting and unique qualities of a specific animal. Popular among these programs right now is "Breakfast with the Bats" where the public has an opportunity to observe and learn



Pond scooping is a favorite school field trip activity.

about a red bat or a big brown bat as it chows down on mealworms. A common outcome of this program is that the “watchers” are able to see/learn that bats are not scary, but rather cute and very useful in nature.



When I retired from teaching, I was not ready to retire from interacting with people, especially children. At the Earth Discovery Center, I engage with the public by taking a weekly shift (or two) at the welcome desk. Everything from giving directions to explaining about one of our animal ambassadors to answering the phone all fall within my realm as a desk volunteer. I have also assisted with preschool programs, led field trip hikes, and taught home school classes. Volunteers, many of whom have completed the master naturalist class, also assist with trail construction, “rubbish busting” throughout the park, animal care, invasive plant removal, and a score of other activities. There is always a way to contribute.

Drop in sessions for park visitors are offered each month. Here visitors are learning about one of our educational ambassador (non-releasable) bats.

If you are in the area, Eagle Creek Park, especially the Earth Discovery Center, as well as the other nature center, the Ornithology Center, is well worth your time to visit.

<https://eaglecreekpark.org/earth-discovery-center/>

Susan took the IMN class at the Earth Discovery Center at Eagle Creek Park in Indianapolis in 2018 and became an Advanced IMN in 2019.



Twenty Years of the IMN Program

Here are summaries of two of the various programs that were put on to celebrate our 20th anniversary.



From Kosciusko County: October 8th was a beautiful autumn day and a great day for 27 IMNs to celebrate 20 Years of IMN at Koinonia Environmental Retreat, just south of Pierceton, in Kosciusko County. The theme for the day’s workshop was *The Values of IMN*, and four enthusiastic speakers from the Indiana Department of Natural Resources shared their expertise on four different subjects of interest to IMNs.

Angie Manuel, Interpretive Manager, explained *The Value of Interpretation*; Brad Westrich, Mammologist, gave a power-point presentation on *The Value of Bats*; Jody Heaston, Volunteer and IMN Coordinator, gave insights into *The Value of Insects*; and Adam Delucenay, North Grassland Biologist, shared his knowledge concerning *The Value of Prairie Restoration*.

The sessions were arranged so that each workshop participant was able to hear each speaker. A light lunch was served downstairs in the lodge, and as an added bonus, Tim Brauch, a certified IMN from North Manchester and one of the people responsible for caring for Koinonia, gave an unplanned, impromptu history and report about the property.

Each attendee received a “goodie bag” including a copy of the latest edition of *Outdoor Indiana*, an IMN soup mug, a packet of native seeds, a variety of pamphlets and handouts on various topics related to the day’s activities. IMN swag was available for purchase, and at the conclusion of the day, raffle items, (including bird houses, a bat house, field guides, a walking stick and several other items), were given away to 10 lucky winners. It was an enjoyable day filled with education, camaraderie and a sense of celebration for the Master Naturalist program in Indiana. (Chuck Harvuot)



From Pokagon State Park: On October 15 at Pokagon State Park IMN 20 year celebration many IMN alumni met at the nature center to listen to “As Nature Falls Into Winter” by Jan McGowan and “Native Plants in All Seasons” by Kate Sanders. Jan McGowan explained that nature is in an energy crisis as summer turns into fall then into winter. Energy flows from plants to consumers. We learned about hibernation, microclimate, torpor, denning, diapause, and brumation. Hibernation is a condition to save energy done by groundhogs, dormice and bats. They go inside a microclimate which could be thicker fur or a cave to keep warm. A groundhog will dig to the bottom of their tunnel system and some animals like snakes and skunks will share the groundhog’s tunnel at a level closer to the top or middle. Torpor is a more temporary condition where the animal has an overnight temperature reduction to match the area (cave, etc.) they go in which is done by eastern chipmunks. Denning is similar to sleep and is done by opossums, skunks, raccoons, bears. Diapause is a stopping of an insect’s life cycle which they enter before food scarcity and cold temperatures. Insects use proteins in their blood as antifreeze to keep them dormant until their cycle can continue in the spring. Brumation is when reptiles and amphibians slow down and stop functioning at certain temperatures. At the end of the lesson, we went on a nature walk to look for signs of organisms preparing for fall and winter that included receding chlorophyll from leaves, new buds awaiting next year’s growth, chewed up nuts or nuts being cached or carried, plants with berries, birds hiding sunflower seeds, burrow holes, reptiles or amphibians, butterflies, a goldenrod gall, and some migrating birds. We found leaves that were changing color, new buds, nuts that were chewed, berries, a groundhog hole, a goldenrod gall, and some birds flitting around the wooded area.



Kate Sanders taught us about “Native Plants in All Seasons.” Spring plants are tawny tan colored then in late spring they turn green. Summer brings us lots of color with native grasses, blazing stars, cut plants, mountain mint, queen of the prairie, wild bergamot, and coneflowers. Fall provides cover for wildlife with many yellow flowers like goldenrod, black- eyed Susan, New England aster, coneflower, and milkweed. Then winter has a subtle color so insects can overwinter. To help our wildlife we should let leaves lay because some insects stay in cocoons like the luna moth. Bundle sticks and put them in other places in your yard for animal cover. Plant a variety of colors, shapes and sizes of plants for all seasons to attract pollinators. Plant tall plants in back then middle height then short in the front to keep order and beauty, join groups that exchange plants or collect seeds since native plants can be hard to find. Remember plants that are green first in the spring are often not native. Lastly, diversity brings more life to your garden. An organization that is helpful is the Indiana Native Plant Society. Join to build community and knowledge. <https://indiananativeplants.org/> Prairie Moon nursery is also a great resource. (Lou Anne Hostetler)

Life Before a State Park was Born

By Bob Mosshammer

Recently, I have been enjoying hiking some Indiana State Parks and I have noticed structures that, I thought, should not be on a State Park. This got me thinking what was this land, what was it used for, and who was here before the State Park was created.

Normally, while I was working on my State Park Explorer pin collection, I would just hike all the trails each park had to offer without giving a second thought to these “odd” structures. Given this new found wonderment that was swirling in my head, I made it my mission to look at Indiana State Parks differently—historically! I recently returned from a vacation trip to Raccoon SRA, Shades, and Turkey Run State Parks. Here are some past gems that I was able to locate myself and with some help from each State Parks’ DNR Interpretive Naturalist.

Raccoon SRA (est. 1960) was created by damming the Raccoon Creek to create Cecil M Harden Lake. There are many structures or buildings in the lake that are not visible however, you can see Old US Highway 36 ending right into the lake. Next to the swimming area there is an old round cement foundation from a grain silo. While hiking Trail 1 you will be able to locate the grave stones for the farming family that owned this property in the 1800’s.



I spoke with the park’s DNR employee of Shades State Park (est. 1947). He informed me that this park had a grist mill. The wooden mill structure is gone however, the park has two grist stones that are displaced on premise. The Civilian Conservation Corp (CCC) planted trees, created the pond, embankments, and built wooden structures. In the 1800’s there were seven “fountain of youth” mineral springs. I was not able to locate the springs however during your visit to Shades maybe you will be able to find the springs.

Turkey Run State Park (est. 1916) is very rich with past history that has been saved. Most of this can be credited to the Lusk family. The Lusk family built a Grist Mill and a brick house. The mill was destroyed in a flood but the house still stands. The CCC built many wooden buildings including the gate house that welcomes you to the park. The men of the CCC carved steps into the stone to create walk ways throughout the canyons. They also created the 70 steps down to the suspension bridge. On hiking trail four, I was able to locate a stone where the CCC carved into the stone to divert water. I wonder how many hours it took to perform all those carvings!



As you are hiking and enjoying each State Park, I challenge you to start looking for “life” before the State Park was born. List of properties can be found at <https://www.in.gov/dnr/state-parks/parks-lakes/>

The Indiana Master Naturalist program is sponsored by the Resource Conservation & Development Councils, Indiana Soil & Water Conservation Districts, Purdue Cooperative Extension Service and Indiana Department of Natural Resources. www.indianamasternaturalist.org



Extension



The mission of the Indiana Master Naturalist program is to bring together natural resource specialists with adult learners to foster an understanding of Indiana's plants, water, soils and wildlife, and promote natural resource volunteer service within the State of Indiana