VOLUME 54 NUMBER 3 · FALL EDITION · SEPTEMBER—NOVEMBER 2021

## Colors of Animals

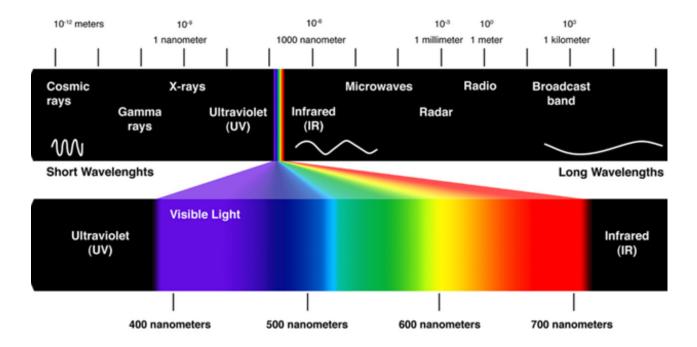
## by Carrie Spencer

What is color? In Webster's Third New International Dictionary the definition of "color" takes up two and one-half pages! Something seemingly simple can actually be quite complex depending on how you think about color. The first definition in Webster's, though, states: "any manifold phenomena of light or of visual sensation or perception that enables one to differentiate objects even though the objects may appear otherwise identical." In addition, I think color could be a sensation, or a feeling. Color could hold a memory, or cause us to experience feelings. Yes, color helps us interpret our world, but it also helps us see the world's wonderment and beauty. Many other animals use color to navigate their worlds, as well. Maybe color doesn't create wonderment for them, but it certainly is used for attraction or hiding, and warning or hunting. To think about color and how wild animals use it, we must first understand color, and how it comes to be.

Color is what we see of the visible light spectrum. The visible light spectrum is a segment of the electromagnetic spectrum, just as radio waves, infrared radiation, ultraviolet radiation, x-rays, and microwaves are a part of it. Everything on the electromagnetic spectrum is light, and is transmitted in waves or particles at different wavelengths and frequencies.

Our human eyes are only able to see a small portion of the spectrum (between 380 nanometers and 740 nanometers), which we call visible light. The rest of the electromagnetic spectrum has wavelengths that are too large or too small for our eyes to receive and interpret.

It was Isaac Newton, in the 1660's, that demonstrated that clear, white light of the sun was composed of seven visible colors, like we see in a rainbow or when light travels through a prism. Red is at one end of the visible light spectrum with longer wavelengths of 740 nanometers (nm), green is in the middle, and violet has the shortest wavelengths at 380nm. White light contains all colors in combination. Color, in turn, is first determined by the frequency of wavelengths, and then by how those frequencies are combined when they reach our eyes. Light is received by receptor cells called cones, which are at the back of the eye. Most of us have three main cone cells: one sensitive to longer wavelengths (reds), one for medium wavelengths (greens), and one for shorter wavelengths (blues). These signals are then sent to the brain where the wavelengths are deciphered and blended to represent all the colors we see. An average human can see around a million colors, but perception of color is highly subjective and varies from person to person.



#### Reflections...

The sound of silence...grew tiresome after a while. So, it was with great happiness that we welcomed children to our Camp Seven Ponds! experience this summer. After a full school year without classroom field trips to the nature center, it was wonderful to have groups of kids back at Seven Ponds, exploring, discovering, learning, and laughing.

The nature center is for everybody, but children have always been the lifeblood of our organization. Ever since the first school groups arrived in the spring of 1967, our programs and our environmental education efforts have focused largely on developing future naturalists. People only fight for the things they are connected to, and our job through the years has been to help as many kids as possible connect with the wild world. It is estimated that during our 54-year history more than 700,000 youth have participated in Seven Ponds programs. From September through May of each year, the nature center echoes with the sounds of school children experiencing and enjoying nature.

But the 2020-21 school year brought only silence. With schools in a state of flux due to COVID-19, field trips were put on hold. Our naturalists compensated by visiting schools, bringing Seven Ponds to classrooms and school yards throughout our service area. This shift was good and positive and important, but still left the nature center largely devoid of children.

After a "no camp" summer in 2020, our naturalists were excited to bring camp – and kids – back to the nature center in 2021. Starting with 2-3 and 4-5 year-old children in June, participating in our week-long Pint-sized Explorers and Knee-high Naturalists camps, then followed by the 6-11 year-olds in our Young Explorers sessions, and finally 12-15 year-olds in our Junior Naturalists camp, a total of 175 kids camped at Seven Ponds this year. Week-long themes for camp this summer included Art in Nature. Go Green. Survival, and Nature Detectives, and included such activities as games, crafts, stories, hikes, wildlife discoveries, canoeing, fire-starting, shelter-building, and more. Our Junior Naturalists even learned how to filet a fish, then cook it over the fire they had started. Despite weather challenges, including rain, storms, and muggy heat, fun was had by all. And we were so happy to have kids exploring once again at Seven Ponds!

As much as we love working with children, make no mistake that we enjoy helping adults connect with nature as well. Check out our fall line-up of classes and programs and I'm sure you'll find something that matches your interests. Or just stop by and take a walk on the trails – autumn is spectacular at Seven Ponds.

See you out there!

Daryl Bernard
Executive Director
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\*\*Members Only -- Save the Date\*\*

## Holiday Auction & Christmas Party Saturday, December 4

After a one-year hiatus in 2020, the nature center's 29th Annual Holiday Auction and Member Christmas Party will be held on Saturday, December 4th at 6:30 pm. The evening is always a lot of fun and all Seven Ponds members are invited. Now is a good time to start thinking about a special dish for the food table, or gift items for the silent auction. Auction items might include artwork, antiques, holiday items, services, or gift certificates. Use your individual talents and resources to provide a unique item for the auction. This is a very important fundraising event for the nature center and we need everyone's help to make this year's auction a big success. Make a contribution and then join us for an entertaining evening. All proceeds help support environmental education activities at Seven Ponds! Contact the center for additional information. Online registration will begin in mid-fall.



#### Heron Tracks

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The mission of Seven Ponds Nature Center is to conserve the natural environment of Seven Ponds as a sanctuary for native plants and animals, as a living classroom for environmental education, and as a peaceful retreat for its visitors. The nature center fosters an understanding and appreciation of our natural world and development of an environmental ethic in the people and communities of Southeast Michigan through education, service as a community resource, and responsible stewardship of Seven Ponds and adjacent lands.

Executive Director:

Director of Environmental Education:

Office Manager:

Nicole Kopas, Katie McKiernan, Dominique McKillop
Gift Store Manager/Weekend Receptionist:

Weekday Receptionist:

Maintenance - Buildings & Grounds:

Daryl Bernard
Carrie Spencer
Diane Rankin
Stacey Holinsworth
Krincy Rice
Mike Grappin

In some cases, people are color blind (only have two cone cell types), and may only see around 10,000 colors. There are also people, called tetrachromats, which have a fourth type of cone cell, and could see possibly 100 million colors.

So, how does something get its color? An object, like a tomato, gets its "color" from the wavelengths that are reflected back for eyes to receive. What part of the visible light spectrum is reflected back off the object, or absorbed into the object depends on the atom structure of the object. So a tomato is red because the pigment atoms in the skin absorb all visible light spectrum wavelengths, except the red wavelengths. Also, keep in mind that the light source could change color as well. The light coming from the sun at high noon or twilight, a candle, or an LED light would all create different shades of the same color.

Colors of animals are created in two different ways, from pigments or from the structure of the animal's exterior coverings, such as feathers, or insect and fish scales. Melanin is a major pigment found in the living world, and can produce a huge color range, from black to a sandy brown to red. Melanin also makes fur and feathers stronger, and more resistant to wear than those without. Animals can make melanin in their bodies, but can't make other pigments. Plants, on the other hand, make a range of pigments, and by eating the plants many animals become colored by what they eat. The red of the male Northern Cardinal (Cardinalis cardinalis) or the red found on the male House Finch (Haemorhous mexicanus) is produced by carotenoids which come from their diets. Caroteniods create yellow and orange colors, like the brilliant orangish-yellow of the male Blackburnian Warbler (Setophaga fusca). Melanin and caroteniods can also interact to create colors like the olive-green of the female Scarlet Tanager (Piranga olivacea). Also, how the bird metabolizes the seeds or berries that produce caroteniods may result in a different color than the ingested pigment. So, one type of seed, eaten by one bird might produce a yellow color, but eaten by a different bird might produce a pink color.



Most animals lack the ability to make green and blue pigments, or absorb it through their diets. Most of their greens and blues are created through structural effects. Instead of pigments, these colors are produced as light is refracted off the animal. A bluebird makes melanin, and would appear gray, but tiny air sacs in the feather scatter light and make it appear blue. Birds that have iridescent feathers, like hummingbirds, have structures on their feathers that act like a prism, splitting the light into amazing colors. Many birds also have ultraviolet feathers. Birds can see ultraviolet light (in addition to visible light), and can appear very different to each other than they do to us. Sometimes, the animal's coloring is created by a combination of pigment, structure, and diet.

From the amazing array of colors and patterns found on wild animals, we know they too can see colors. There is continued research into color vision and perception across the animal kingdom, and we are limited in our understanding of how they "see" their world, but with our understanding of eye structure and cones (eye receptor cells) we understand the colors they could see.

Some animals just have light sensitivity, like the earthworm. They have simple light receptors that allow them to react quickly and tunnel back into the ground if exposed to sunlight. Animals that live in a world of darkness, where there is no visible light, do not have need for interpreting the visible light spectrum, or for color. Insects, like honey bees and butterflies, are able to see the visible light spectrum, and their eye sight extends into the ultraviolet. With their eyesight they are able to see the ultraviolet patterns found on flower petals. These patterns guide the pollinators deep into the flower, and help the plant spread its pollen. Fish and reptiles also have a large array of color vision. Some species of snake have thermal pits in addition to their eyes allowing their vision to expand into the infrared range. With the exception of humans and other primates, mammals have rather weak color vision. Many mammals make up for that with their other senses heightened.

This colorful world isn't just for beauty, but these colors help animals stay alive and create life. The color of an animal offers protection by means of camouflage, mimicry, or warning coloration. An animal's colors may also aid in reproduction, by allowing the male to appeal to the female with bright colors, or for the female to signal she is ready for mating. Colors may also help an animal thermoregulate, by cooling or warming the animal. The black morph of the gray squirrel (*Sciurus carolinensis*) has the ability to stay warmer in the winter than their gray counterparts. This is consistent with the predominance of melanistic morphs found mostly in the northern part of their range. Melanins in the skin also protect tissues against ultraviolet radiation.

Color is an amazing thing, how we perceive it and how it is used. Thinking about colors for this article has opened a new layer of the world to me. Color is now a new and intriguing puzzle piece to our remarkable natural world.

### Wandering with the Birds

By Daryl Bernard

It's no secret that most of my travels are bird-related. Whether leading a Seven Ponds birding field tour, vacationing out of state, exploring northern Michigan, or chasing a rare bird, if I'm out and about it's probably because of birds.

But summertime brings a lull in the action. Most of our migrants have passed through the area by late May or early June, headed to their breeding territories in northern Michigan or Canada, and they won't pass through this way gain until fall. Meanwhile, our local breeding birds are often hidden deep in forest canopy or underbrush, too busy tending to eggs and nestlings, hidden by heavy foliage. It's hot, it's muggy, it's buggy, it's...the perfect time to stay home!

One of my favorite summer evening pastimes is sitting on my back deck, enjoying the birds that visit our feeders or fly overhead. Red-winged Blackbirds and Common Grackles become numerous at my feeders during the summer months, and I enjoy their antics and the raucous sounds they make. Rubythroated Hummingbirds take a break from sipping nectar and eating small insects to take a drink from my sugar-water feeder (remember - no red dye!). Ruby-red Northern Cardinals, bright yellow American Goldfinches, and gaudy Blue Jays add splashes of color, augmenting the Mourning Doves that are daily visitors. Those beauties from the far south - Baltimore Orioles and Rose-breasted Grosbeaks - add tropical flavor to my backyard feeder action. Song Sparrows furtively dash out from the shrubbery to kick seeds around, scavenging for spilled seed in the grass. Woodpeckers - Downy, Hairy, and Red-bellied all take turns hammering bits of suet free from the cages. And our mighty little trio of regulars, White-breasted Nuthatches, Tufted Titmice, and Black-capped Chickadees – all make quick stops for sunflower seeds.

Overhead, Tree Swallows and Chimney Swifts patrol the skies, eating thousands of insects over the course of the summer. Occasionally a Turkey Vulture or two drift past, their V-shaped profile rocking gently in the summer breeze.

These are the regulars, the everyday birds that never fail to bring me joy. But sit and watch long enough, and something extra-special is bound to come your way. On one such day, a long-hoped-for visitor stopped by for a quick dinner: a Red-headed Woodpecker! I managed to snap a few iPhone pics through my binoculars, then just sat back and enjoyed. I watched for perhaps twenty minutes as this most-handsome woodpecker took its fill of suet treat. Then it flew off, and it was gone. I've not seen it since. Perhaps it was just passing through and needed to refuel. Had I not been birding on my deck that evening, I would have missed it.

Amazing, the things you see – even in your own backyard, when you're out wandering with the birds.

## **Volunteer News**

#### On the Trail

Thanks to all the many volunteers who helped with a variety of tasks this past summer.

- **Denitsa Marinsk**a for working on invasives with our field crew.
- **Zowie B.** For helping trim our trails.
- **Joey Janicki** for stopping in on Fridays to trim back the trails.
- **Joanna Livingston** for all her work in caring for our animals.
- The **McHale family** for helping to clean up our roadsides of trash.
- Marianna Fitzgerald, Kathy Cole, and Karen Blaszyk for their help at Party at the Ponds.
- Claudine Zach for taking over animal care.
- **Noah Elkins** for helping with various tasks around the nature center.
- **Don Dukelow** for helping with various projects around the nature center.
- Walt Cory for assisting with maintenance projects.
- Our nest box monitors for keeping tabs on our nesting Tree Swallows, Eastern Bluebirds, House Wrens, and Black-capped Chickadees all summer long.
- Marianna Fitzgerald, Kathy Cole, and Karen Blaszyk for helping out at the Lavender Festival.
- Our **Stingers** for all their hard work during their annual rummage sale as well as setting up their Resale Shoppe during Party at the Ponds.
- All our Garden Volunteers for another great season of beautiful plants. Your work does not go unnoticed and is enjoyed by everyone who visits the nature center.

#### **Invasive Plant Work Days**

Nicole Kopas, our naturalist charged with land stewerdship, is planning two invasive plant workdays: Saturday, September 18, and Sunday, November 14, both from 2:00 to 4:00. Please register online and join us to help reduce the negative impact these invaders have on our forests and fields, and what you can do to control invasive plants on your own property.

#### **Volunteer Opportunities**

As you can see from the list above, volunteers help with many tasks and projects at the nature center, and we can always use more help. Call us at 810-796-3200 or contact Natualist and Volunteer Coordinator Katie McKiernan at kmckiernan@sevenponds.org if you are interested in volunteering at Seven Ponds. You can also fill out the volunteer interest form located on our website.

# Seven Ponds Tributes Memorials, Buy-a-Tree, In Honor

#### In memory of Gregory Velasco

- Darlene & James Kinney
- Kathryn Paul
- Strategic Staffing Solutions

#### In memory of Carol Leonard

- Friends & Family of Carol Leonard
- Joan Grawe
- Geraldine Howard
- Bill & Terry Meyer
- Nancy & Ray Pihlaja
- Pontiac Branch WNF&GA
- Paula Varteresian
- Rita Cochran
- Romeo & Juliet Garden Club
- Pauline Bennett, Maxine Louwaert, Debbie McDonald, Taddiken

#### In memory of Sue Ann Vermillion

- Joyce Korson
- Roger & Judy Morgan
- Nancy O'Brien
- Bob & Sharon Winstead

#### In memory of Mary Ann White

• Mt. Vernon UMC

#### In memory of Henry Wiebrecht

• Argie Renieri

#### In memory of Harold Prowse

• Dianne Bishop

#### In memory of Adolph Arendt

• Dianne Bishop

#### In memory of Elaine Clampitt-McDonald

• Candace Clampitt

#### In honor of Nancy Kautz

• The Women of Potlucky

#### Buy-a-Tree in memory of Sue Cornell

• Lori Blaker & Richard Greer

#### Buy-a-Tree in memory of Max Seidell

• Seven Ponds staff

#### Buy-a-Tree in memory of Carol Leonard

• Pauline Bennett, Maxine Louwaert, Debbie McDonald, Taddiken

#### Buy-a-Tree in memory of Helga Peltonen

• Lapeer Wildflowers Branch - WNF&GA

#### Buy-a-Tree in memory of Nora Tebben

• Lapeer Wildflowers Branch - WNF&GA

#### Buy-a-Tree in memory of Terence L. Cleeton

• Tamela Delvecchio

# Fall Tree & Shrub Sale

Saturday, September 25 9:00 AM - 4:00 PM

An assortment of native trees and shrubs will be available for purchase, with naturalists on hand to answer your tree and shrub questions.

Supplies are limited, so stop by early for the widest selection.



## **Around the Nature Center**

#### Welcome New Staff!

This past summer we hired a number of seasonal employees to assist with reception, summer camp, maintenance, and invasive plant control. All of our seasonal staff did a great job and the nature center benefitted from their contribution. Two of those individuals are staying with us as year-round employees. If you've stopped by or called the nature center over the past few months, you've probably talked with Krincy Rice (receptionist). She has been a fantastic addition to our staff and offers a friendly and informative welcome to all of our visitors. Dominique McKillop (Naturalist) first came to the nature center as a young child on school field trips. During a summer break from her college studies she served as an Intern in 2017. This past summer she was one of the lead seasonal naturalists for Camp Seven Ponds, and now she will be with us as a regular staff member. We are thrilled to welcome both Krincy and Dominique to our Seven Ponds family.

#### **Invasive Species Removal at Seven Ponds**

Our seasonal field crew has been hard at work managing the invasive plant species that are invading our nature center. Some of the plants they have been working on are: Canada thistle, crown vetch, oriental bittersweet, purple loosestrife, and phragmites. The field crew has also been responsible for helping us keep invasive and other unwanted plants out of our demonstration gardens. Thanks to the following seasonal employees who worked on the field crew during this past spring/summer/fall: Mike Klingensmith, Kyle Freeland, Luke Childs, Hunter Smith, Logan McComb, and Stephen Mowbray.

#### Seasonal Naturalists & Maintenance

Dominique McKillop and Heidi Couch worked as seasonal naturalists during June and July to help organize and execute Camp Seven Ponds. Jasmine Brock assisted as a Summer Intern Naturalist and was a wonderful addition to the crew. Del Hunsinger started as a seasonal maintenance worker in spring and continues into fall, and has helped with numerous projects around the center along with keeping the grounds in great shape.

#### Check Out Our New Dock and Boardwalk

The dock on Treetop Pond has provided beautiful views for decades. Unfortunately, the supporting structure under the platform was no longer keeping the dock level and safe. Our small maintenance crew (Mike & Del) tackled the job in early July, and overcoming hot, muggy, buggy weather, structural challenges, and numerous problemsolving opportunities, they completed the dock in early August. We are very happy with the results. Check it out!

In true environmentalist fashion, our crew then used the salvaged dock lumber to construct a boardwalk on the trail through Rain Barrel Marsh. This trail is often wet and overgrown, and therefore sees little foot traffic. With a dry, solid platform underfoot, hopefully more people will enjoy this beautiful area of the nature center.

#### **Big Things are Coming**

You might notice a large part of our understory gone from our forest near the picnic area. We are clearing out all the invasive plants from that space to make way for a brand new nature playscape for children!

#### **Planted Tank**

Our 100+ gallon fish tank received a little makeover recently with some new driftwood and live plants. The plants may be small for now but the hope is that they will grow and fill the tank space with lots of places for fish to swim and hide. Perch will be added to the tank once it has been established for a while.

#### Additional Projects in the Works

- New roof for our boat house
- Canoe & kayak launch on Treetop Pond dock
- Teaching platfrom on Waterfowl Pond in the North-80
- Native Bee Hotel
- New enclosure for our Box Turtles
- Boardwalk near the A-Frame Bridge

Some of these projects will not be completed until 2022.

#### Here and There...

Thanks to Holden Realty (Metamora) for the use of their marquee sign advertising our Stingers rummage sale.

Thanks to Jonathan Nugent (Grand Blanc) for the donation of two Barred Owl nest boxes.

Thanks to **Edwards Tree & Land Clearing Services** (Metamora) for removing a large dead tree from our Treetop Pond dock area at no cost.

Thanks to **Connie Kreuger** for donating numerous Monarchs for our display.

#### CORKS & CAPS ~ We did it!

Canceled altogether in 2020 and postponed from June in 2021, our (nearly) annual Corks & Caps Fundraiser was finally held Friday, August 6, 2021 at the Metamora Golf & Country Club. This fun event included gourmet dinner, wine and beer, live and silent auctions, a wine pull, and fun raffles. Jim Siudara graciously took on the role of Master of Ceremonies, Brian Rowley once again offered his inestimable talent as auctioneer, and Rick Fleming along with his fantastic staff at the country club made sure everybody was fully satisfied with food and beverages. Hundreds of hours of planning were necessary to pull off this event, and we are grateful to the Seven Ponds Development Committee for their tireless efforts over the past year or more. More gratitude than we can express goes to the individuals and businesses who donated items and experiences for our live and silent auctions - and to those who placed winning bids! This is our biggest fundraising event of the year, and we are thankful to everybody who helped make it a resounding success.

The following individuals and businesses provided support by sponsoring the event:

#### PLATINUM \$1000

Gaye Butterfield • Amelia & Wayne Inman • Jocelyn Scofield • Jim Sillers • Nan & Doug Toppin Yolanda & Charles Turner • Advanced Auto Trends, Inc. • Metamora Equestrian Conservation Alliance

#### **GOLD \$750**

Karen & Denis Callewaert • Michael Kubinski DDS

#### SILVER \$500

Karen & Greg Gossick • Lynn & Alec Harding • Heyners & Pratts • Lisa & Robert Katzman Karen & Bill Rykhus • Susie Stroh • Karen & Terry Toland • Wendy & Casey Wise Gary Wasserman & Charles Kushner • ChoiceOne Bank • Metamora Equestrian Conservation Alliance Carole Porretta/Coventry Realty LLC

#### BRONZE \$250

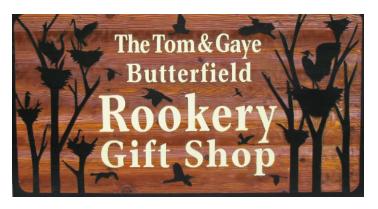
Laura & Ronald Barnard • Monique & Brian Molnar-Bates • Leigha & Achille Bianci • Mark Diksas Katherine Horton Boyle • Nancy & Gerald Buck • Kathy & David Churchill • Christina & Emory Clark Jody & Bruce Judkins • Nancy & Rich Kautz • Linda Lu & Troy Kosal • Robert Nehmer • Madeline O'Neill R.J. Holden Realty • O'Neill Foundation

We hope you will join us for next year's Corks & Caps!

## **Seven Ponds Clubs**

Astronomy Club • Beekeeping Club
Birding Club • Photography Club
Friends of Herbs • Butterfly Gardeners • The Stingers

Visitors are welcome at all club meetings.
For additional information about any of the clubs which meet at
Seven Ponds, please visit sevenponds.org.



The Rookery Gift Shop offers a variety of locally handmade items. Including body products like body powder, foot scrub, wax melts, lip balm, lotion bars, and soap. As always we have our locally made honey, maple syrup, teas, sniffle bags, bug off, lavender wands, wax melts, vinyl decals, faux leather earrings, hand crafted jewelry, and artwork made by local artists. Other items are bird houses, bird feeders, birdseed, field guides, children's books, nature themed jewelry, toys, puzzles, games, and wind chimes. So come get your unique items today!

Include a gift membership or Rookery gift certificate with your next purchase. These are the gifts that keep giving through all the seasons.

To help reduce the abundance of single-use plastic items we have reusable Chico bags that are made from recycled materials. Other reusable items are Blue Q bags, totes, pencil cases, lunch bags, and coin purses all made from 95% recycled materials.

#### **BIRDSEED HOME DELIVERY!**

We now offer birdseed delivery within a 20-mile radius for just a small \$5.00 delivery fee.\*

#### **CURBSIDE SHOPPING!**

Curbside shopping is also available - just call the nature center to place an order and we will deliver right to your vehicle.\*

\*All delivery and curbside orders must be prepaid.

Purchases made in the Rookery Gift Shop support the nature center, including all of the programs we do and land stewardship we perform. Your purchase dollars help us do good things!

#### ROOKERY GIFT SHOP PRE-HOLIDAY SALE October 19-24

(see flier for details)

#### Seven Ponds Nature Center

3854 Crawford Road Dryden, MI 48428 810-796-3200 www.sevenponds.org

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# Fall Programs

September - October - November 2021

Autumn brings crisp, cool air and glorious colors to the landscape, making it a wonderful season to visit Seven Ponds. Unless otherwise noted, the cost for most programs listed below is included in the admission fee (free to members, \$3 per adult and children over 12 years). **Please register online for all programs at sevenponds.org.** 

## **September**

#### **Morning Paddle**

Saturday, September 4, 10:00 ам

Summer is coming to a close so it is a good time to get on the ponds and experience the end of another great season. Fee: \$5.00 per person (\$3.00 for members) Minimum 5 years old to ride and 10 years old to paddle. Please pre-register online by September 3rd.

#### **Labor Day Holiday**

Monday, September 6, 9:00 am to 5:00 PM Our building and trails will be open - come on out for a walk and enjoy the holiday

#### Seven Ponds 2021 Michigan BioBlitz Weekend

Saturday, September 18 & Sunday, September 19 Using iNaturalist, submit your animal, plant, and fungi observations made in Michigan this weekend for our BioBlitz How many organisms can we document in Michigan over the course of the weekend? All you need is an iNaturalist account – which is free and easy to set up – and a smart phone with a camera. Fun for the entire family. See our website for more information. Ready, set, GO BIOBLITZ!

#### Land Stewardship Work Day

Saturday, September 18, 2:00 - 4:00 PM

We will be working on non-native invasive woody plants at the nature center. This is a great chance to earn community service or Master Gardener hours. Bring your own work gloves, water, and tools will be provided. If you wish to bring your own tools, you may.

#### **Prairie Walk**

Sunday, September 19, 2:00 PM

As we move through the fall the prairie is still changing! Hike with a naturalist to learn about the amazing features of our tall grass prairie.



#### Yoga at the Ponds with Peaceful Moon Yoga Beginners/Basic Yoga Class

THURSDAYS, SEPT. 23 THROUGH OCT. 28, 10:00-11:00 am Unwind, rejuvenate and relax with Cat Minolli and the 'Peaceful Moon' series. These classes are designed for newcomers and beginning yoga students and/or those who wish to become re-acquainted with the practice. Participants will experience the mind, body, spirit connection while learning basic yoga poses in a serene environment. You don't have to be able to touch your toes or twist into a pretzel to participate, however many postures are done from a seated or prone position on the floor. Participants should wear comfortable clothing and bring a yoga mat or a blanket. Fee is \$10.00/session.

#### **Autumn Hike in Johnathan Woods**

Sunday, September 26, 2:00 PM

The cool, crisp days of autumn are upon us. Take a walk through Jonathan Woods with one of our naturalists and welcome in the season. We will meet at the nature center and then drive over separately. Space will be limited.

## **October**

#### Fungi with a Fun Gal!

Sunday, October 3, 10:00 ам

During this program we will be learning about fungi, or as they are more commonly thought of as...mushrooms! We will learn about the different types of fungi, why they are important to our ecosystems, and lastly we will take a hike to try and find some.

#### The Big Sit!

Saturday, October 9, sunrise to sunset

How many birds can we identify in a single day while staying within a 17-foot diameter circle? Join us as we participate in this world-wide activity to document and enjoy birds from a single location. We will be confined to one spot at the nature center, trying to see how many birds we can identify. Join us for all or part of the day. Let's have FUN with this!

#### Painting at the Ponds

Saturday, October 9, 5:00 PM

Come learn how to paint an awesome nature scene with friends! Enjoy a lovely view with an adult beverage as we learn how to create a step by step painting with Naturalist Katie. All painting supplies will be provided for you. You bring your own beverage. Pre-register by October 8th, space is limited to 14 people. Ages 21 and up. Fee: \$25.00 (Members \$20.00)

#### **Evening Paddle on the Ponds**

Saturday, October 16, 6:00 PM

Fall is in full swing which means it's a great time to get onto the ponds to catch the beautiful colors and watch the sunset. Fee: \$5.00 per person (\$3.00 for members) Minimum 5 years old to ride and 10 years old to paddle. Please pre-register online by October 14th.

#### **Prairie Seed Collecting**

Sunday, October 17, 2:00 PM

Want to learn about or maybe even start your own tall grass prairie? You're in luck, join a Naturalist for a walk in the prairie to learn about the plants and the ecosystem they create. We will end our time by collecting seeds for you to take home and plant!

#### **Beginner Phone Photography**

Sunday, October 24, 2:00 PM

Like taking pictures on your phone but don't know where to start? Want to learn some cool new techniques or just get out in nature? This might be the class for you. This class is geared towards teaching beginning phone photography to those that want to advance their skills. Bring your phone and snap some cool pictures of things we see along the trail.

#### Birch Bark, Leaf Decor

Saturday, October 30, 1:00 PM

In this fall crafting class you will get to pick out your favorite fallen, fall leaves and arrange them on a birch wood tree slice from a fallen Seven Ponds birch tree. All supplies will be provided for you. Please pre-register by September 16th, space is limited to 10. Fee: \$20 (Members \$15)

## **November**

#### **Prairie Seed Collecting**

Saturday, November 6, 2:00 PM

Enjoy the changing seasons in the prairie as we see how nature is getting ready for winter. We will venture out to the prairie and collect seeds for you to take home and plant your own tall grass prairie.

#### **Curious Nature Detectives**

Saturday, November 13, 3:00 PM

Are you and your kids curious about nature? Spend some time with a naturalist as we hike around the nature center looking for clues that help answer questions about our environment.

#### Land Stewardship Work Day

Sunday, November 14, 2:00 - 4:00 PM

We will be working on non-native invasive woody plants at the nature center. This is a great chance to earn community service or Master Gardener hours. Bring your own work gloves, water, and tools will be provided. If you wish to bring your own tools, you may.

#### **Owl Prowl**

Saturday, November 20, 6:00 PM

Join us for a night time hike through the woods of Seven Ponds as we attempt to call in some of Michigan's owls.

#### **Thanksgiving Holiday**

Thursday & Friday, November 25-26

The nature center will be closed on these two days; members are welcome to walk the trails.

#### Hike Around the Ponds

Saturday, November 27, 10:30 am

Looking for something to do with the family after the holiday feast? Let's enjoy a nice walk around the ponds and see how winter is approaching the nature center.

#### **Tree Painting**

Sunday, November 28, 2:00 PM

Sunday Fun-day for the family! We will be painting our trees here at Seven Ponds with chalk and water to add some color to our trees as winter creeps in.

#### **FALL BIRD WALKS**

Seven Ponds bird walks are open to birders of all skill and experience levels, and beginners are always welcome. Bird walks are free for Seven Ponds members, and \$5 for non-members. Pre-registration is required, and bird walks are limited to ten participants. Each fall bird walk will begin promptly at 8:00 AM at the trailhead of the destination park or preserve.

September 22 - Cranberry Lake Park

September 29 - BEAR CREEK NATURE PARK

October 6 - Flynn Township Nature Center

October 13 - CHARLES ILSLEY PARK

October 20 - SUTHERLAND NATURE SANCTUARY

October 27 - Seven Ponds Nature Center

## Nature Study Series for Homeschoolers

Seven Ponds Nature Center is an ideal outdoor classroom where children can experience nature first hand. In this series of programs, our experienced staff and well-trained volunteer naturalists guide children toward an awareness and appreciation of our natural world, using hands-on activities, specimens, slide shows, and nature walks. These programs complement state science objectives and focus on specific ecological concepts. Fee: \$4.00 per person (Any adults who plan on participating in the program also pay this fee.). All Homeschool programs take place from 1:00 to 3:00 PM. Space is limited. To register for the classes go to www.sevenponds.org.

#### Wednesday or Thursday, September 15 or 16

#### **Nature's Bounty**

#### Grades K - 2 and Grades 3 - 6

Students will learn how animals are preparing for the long winter by changing their diets, eating as much as they can, or storing their food. They will also see how nature provides for all their needs through hands-on activities. This session will be divided into younger and older groups of learners. Younger learners will learn about lifecycles, animal basic needs, and adaptations. Older learners will focus on animal/plant relationships, and adaptations.

#### Wednesday or Thursday, October 13 or 14

#### **Dressed for Success**

#### Grades K and 2

CONCEPT: STRUCTURE, FUNCTION, AND INFORMATION PROCESSING

Through hands-on activities and exploration students will learn how animals use their external structures to survive in their environments.

#### **Cattails to Crayfish**

#### Grades 3 and 4

**CONCEPT: TRAITS AND ADAPTATIONS** 

While pond dipping and hiking the nature center trails, students will learn how an animal's characteristics can help them survive, find a mate, and reproduce.

#### **Death Eaters**

#### **Grades 5 - 6**

CONCEPT: FOOD CHAINS AND FOOD WEBS

Students will learn about food chains and food webs, but will focus on the decomposers! They will learn that the end of a food chain is the beginning to many animals.

#### Wednesday or Thursday, November 17 or 18

#### The Gobbler Effect

#### **Grades K-2 and Grades 3-6**

Turkeys are amazing animals, and in honor of Thanksgiving we will learn all things turkey. This session will be divided into younger and older learners. Younger learners will focus on the turkey's needs and lifecycle. They will also learn about the turkey's feathers, head, and feet. Older learners will focus on the turkey/plant relationships, adaptations, and their role in their ecosystems.

## **Knee-High Naturalist Classes**

For preschool children around 3 or 4 years old

Fridays 10:00 – 11:30 AM

Fee: \$7.00 per child (\$6.00 for members)

Come out and enjoy nature with your child. All classes include nature fun like walks, crafts, games, stories, snacks, and so much more!

Online registration required.

Note: there may be special provisions in place due to COVID-19

FALL WINTER SPRING

Flowers The Mitten Cats of Michigan

SEPTEMBER 24, 2021 DECEMBER 17, 2021 MARCH 18, 2022

Leaves Tracks Rainbows
October 22, 2021 January 21, 2022 April 22, 2022

First Snow Dogs of Michigan Animals of the Past

NOVEMBER 19, 2021 FEBRUARY 18, 2022 MAY 20, 2022

#### ASSISTANT NATURALIST CLASSES

Classes are open to Assistant Naturalists only. We will start each class at 12:00 PM by having lunch (please bring your own) and then proceed to the day's lesson. If you would like to become a part of this fine program, contact naturalist Katie McKiernan at 810-796-3200 or kmckiernan@sevenponds.org.

#### **EXPLORER PROGRAMS - Fifth Grade & Middle School**

Saturday, September 18, 12:00 pm

Come and learn how to teach our young adults with fun nature lessons.

#### FRESHWATER INVERTEBRATES - Using Dichotomous Keys

Saturday, October 23, 12:00 PM

Pond dipping is a staple to any environmental educator. Do we really know how to use a dichotomous key to help identify these aquatic critters?

#### **BATS**

Saturday, November 13, 12:00 PM Learn all about the only true flying mammals.

