

**PROJECT NATURE NEWSLETTER**

# **PROJECT NATURE NEWSLETTER**

**MARCH, 2019 ISSUE**

# Events



## Vernal Pool Display

*Battelle Darby Creek Metro Park - Nature Center*

2nd March - 10th March 9:00 am - 5:00 pm

See some examples of animals found in vernal pools and learn why they are important

## Weekly Bird Hike

*Scioto Audobon Metro Park - Grange Insurance Audobon Center*

2nd, 9th, 16th, 23rd, 30th 10:00 am - 11:30 am

Hike with experienced birders to find and learn about birds (Binoculars and field guides can be provided)

## Spring Birds

*Blendon Woods Metro Park - Nature Center*

3rd March 9:00 am - 10:00 am

Search for early spring migrants and resident species on a 1-mile hike

## I Found a Baby \_\_\_\_. Now What?

*Blendon Woods Metro Park - Nature Center*

9th March 2:00 pm - 3:00 pm

Learn what to do when you find wildlife that might need help. Live animals will be visiting for the presentation

## EPN Breakfast - emerging Contaminants & Our Water Resources

*Nationwide and Ohio Farm Bureau 4-H Center  
2201 Fred Taylor Dr*

5th March 7:15 am - 9:30 am

Learn about the new contaminants in in our waterways and drinking water systems, while enjoying breakfast hosted by the Environment Professionals Network

Registration - Free for students (\$10 otherwise)

## Pond Life Display

*Blacklick Woods Metro Park - Nature Center*

9th, 10th March 8:00 am - 6:00 pm

Learn about the creatures of Ohio pond ecosystems and the various roles they play

## Orphaned/Injured Wildlife Display

*Blendon Woods Metro Park - Nature Center*

9th March 9:00 am - 4:00 pm

Discover when animals need human help and when to leave them alone

## Vernal Pool Celebration

*Battelle Darby Creek Metro Park - Nature Center*

9th March 11:00 am - 4:00 pm

Learn about these most important wetlands from the displays in the nature center and then take a hike with the naturalist to an active vernal pool in the park

## Timberdoodle Time

*Three Creeks Metro Park - Confluence Area*

9th March 6:30 pm - 8:00 pm

Take a 1.5-mile walk to watch the aerial courtship display of the American woodcock

## Vernal Pool-ooza

*Gallant Woods Preservation Park*

10th March 2:00 pm - 4:00 pm

Hike with park naturalist to the vernal pool and explore the salamanders and other inhabitants of these pools

## Salamander Search

*Blacklick Woods Metro Park - Nature Center*

10th March 2:00 pm - 3:00 pm

Explore the trails while looking for this elusive amphibian

## Eagle Walk

*Highbanks Metro Park - Nature Center*

10th March 2:00 pm - 4:00 pm

Hike 3-miles and look for Bald Eagles in their nest

## Vernal Pool Exploration

*Rocky Fork Metro Park - Bulletin Board*

10th March 2:00 pm - 4:00 pm

Explore the swampy fields and forest to search for frogs and salamanders at the height of their breeding season

# Events



## Geology and Fossils of Highbanks

*Highbanks Metro Park - Big Meadow Picnic Area*  
16th March 10:00 am - 12:30 pm, 12:00 pm - 2:30 pm  
Join Ohio geologists for a talk and 2.6-mile rugged hike through the ravines and learn about the rocks and fossils of Highbanks **Signup Required! (free)**

## Stone Fence Hill Hike

*Clear Creek Metro Park - Park Office*  
16th February 10:00 am - 1:00 pm  
Take a rugged 4-mile backcountry hike to Stone Fence Hill

## Coffee and Birds

*Blendon Woods Metro Park - Nature Center*  
17th March 9:00 am - 11:00 am  
Enjoy a warm cup by the Nature Center window while watching hungry winter residents and early migrants

## Woodcock Watch

*Blendon Woods Metro Park - Natural Play Area Shelter*  
17th March 7:00 pm - 8:00 pm  
Learn about these fascinating birds and view their awesome mating flight

## Beginner Bird Series - Feeder and Winter Birds

*Highbanks Metro Park - Nature Center*  
17th March 2:00 pm - 4:00 pm  
Learn to identify common feeder birds, then take a hike to look and listen for some other winter visitors

## Howl at the Moon

*Highbanks Metro Park - Nature Center*  
17th March 6:00 pm - 7:45 pm  
Enjoy a 3.5-mile hike with your dog. Please no leashes longer than 6 feet. Bring a flashlight

## Vernal Pool Monitoring

*Glacier Ridge Metro Park - Shelter House*  
17th March 2:00 pm - 3:00 pm  
Take a 1-mile hike to the vernal pools. Help to collect data and look for salamanders in the vernal pools

## Spring Birds: Woodpeckers

*Blendon Woods Metro Park - Nature Center*  
23rd March 10:00 am - 11:00 am  
Enjoy a 2-mile hike on woodland trails to see and hear these beautiful birds

## Skydancer Saturday

*Sharon Woods Metro Park - Apple Ridge Bulletin Board*  
23rd March 7:30 pm - 8:30 pm  
Witness the amazing aerial display of the American woodcock

## Eagle Watch Weekend

*Madison Christian Church Parking Lot*  
23rd March 10:00 am - 11:30 am, 1:00 pm - 2:30 pm  
24th March 2:00 pm - 3:30 pm  
Take a 1-mile off-trail walk to see the nesting bald eagles through a spotting scope

## Woodcock Watch

*Battelle Darby Creek Metro Park - Nature Center*  
24th March 7:30 pm - 8:30 pm  
Check out the woodcock's aerial courtship dance. Binoculars recommended

## Butterflies to Trees: Spring Fling 2019

*Inniswood Gardens Metro Park - Innis House*  
24th March 2:00 pm - 4:00 pm  
Get ready for spring with two OSU Extension garden experts. Joe Boggs discusses how butterfly gardens can attract more than just butterflies. Jim Chatfield presents about the Ten Trees You Should Know

## Wildflower Display

*Blacklick Woods Metro Park - Nature Center*  
30th, 31st March 8:00 am - 6:00 pm  
View displays and learn about spring wildflowers

# Vernal Pools

Vernal pools are seasonal depressional **wetlands** covered by shallow water - typically less than 3 feet deep - for variable periods from winter to spring, but may be completely dry for most of the summer and fall. Usually found in a depression in the forest, these wetlands range in size from small puddles to shallow lakes - typically less than an acre. Beneath vernal pools lies either bedrock or a hard clay layer in the soil that helps keep water in the pool. Vernal pools do not have a continuous surface water connection with a permanent body of water, and fill annually from melting winter snow, precipitation, run-off, and rising ground water. The term vernal comes from the Latin “vernus”, which means “belonging to spring”. The fact that vernal pools dry up for part of the year is extremely significant because it excludes the predatory fish from these pools, which provides the several amphibian species a relatively safe environment for laying eggs and the development of their larvae. Other terms often used for vernal pools are - temporary, ephemeral, semi-permanent ponds, spring or woodland pools.



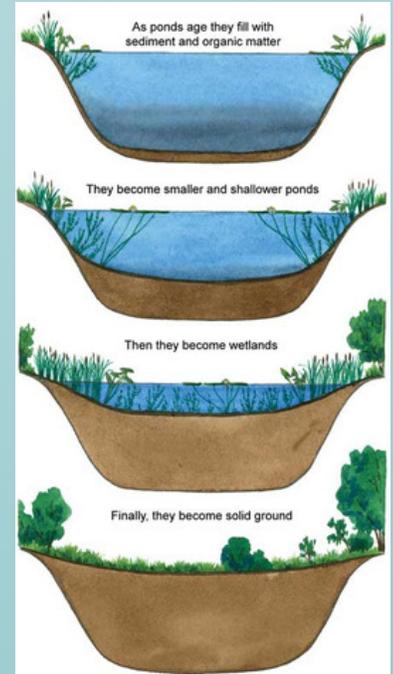
Vernal Pool at Highbanks Metro Park

## Wetlands

*Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year. Wetlands are transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface. Wetlands may support both aquatic and terrestrial species. The primary factor that distinguishes wetlands from other land forms or water bodies is the characteristic vegetation of aquatic plants, adapted to the unique hydric soil - soil formed under saturated environment, resulting in anaerobic conditions.*

*Vernal pools are only one of the several types of wetlands!*

Most of Ohio’s vernal pools and those of the midwest and the northeast are a result of the glacial activity. Glaciers scoured the landscape creating depressions deep enough to form ponds and lakes in some areas, while only a shallow relief elsewhere. Some of these shallow depressions were lined with water-impermeable clay or silt. As the glaciers retreated some 12,000 years ago, a few broken-off blocks of ice from the glaciers were left behind, and after melting, depressions were formed where ice once stood. A large block of ice created a lake or a pond, called **kettle pond**, whereas a small ice block merely created a shallow depression, some of which were lined with impermeable sediment and created vernal pools. Additionally, natural *ecological succession* over the course of time has allowed some of the large lakes and ponds to fill in, leaving only minimal dips in the surface today, some of which have become vernal pools.



*Ecological succession of a lake/pond*  
Source: [texasaquaticscience.org](http://texasaquaticscience.org)

Other vernal pools form in moving waterways, where a stream or river may cut a new channel to abandon the old one, creating a channel pond. Some of these ponds get isolated from the main waterway and fill seasonally as vernal pools. Occasionally the uplifted roots of a windblown uprooted tree would remove enough soil to create a basin for vernal pool. Even wind action can create depressions to create temporary pools. Vernal pools have also been formed inadvertently by humans. The ancient earthworks at Highbanks Metro Park, built by the native Indians of Cole culture approximately a thousand years ago, created vernal pools where they dug the dirt for the hills.

## What Body of Water Qualifies as a Vernal Pool?

Not every or any shallow pond is a vernal pool! There are several characteristic features that make a vernal pool. Vernal pools necessarily need to dry up for a part of the year; are isolated from other bodies of water and other wetlands; are situated in or near a woodland; lack fish and other predatory aquatic animals; and support a biological community of **obligate species**. Obligate species, sometimes also referred to as *indicator species*, are organisms that are restricted to a specific habitat, only found in that habitat and nowhere else. The obligate species of vernal pools



*Fairy Shrimp*  
Photo Credit: MaLisa Spring

are certain species of mole salamanders, crustaceans, and water mites. Obligate species also include microorganisms such as some daphnia, ostracod, and cyclops.

Obligate species of Ohio's vernal pools are the fairy shrimp and the spotted salamander.

In Ohio's vernal pools, all the obligate species are animals, which means that plants found in the vernal pools in Ohio are also found elsewhere.

***The Spotted Salamander is the state amphibian of Ohio!***



***Spotted Salamander - State Amphibian of Ohio!***  
Photo Credit: Matt Jepson/Shutterstock  
Source: reptilesmagazine.com



***Egg mass of the Spotted Salamander***  
Photo provided by: Chrissy Hoff, Senior Naturalist, Highbanks Metro Park

In addition to the obligate species, vernal pools also contain a host of several other aquatic organisms, called the ***facultative species***. Facultative species are those organisms that live not only in vernal pools but also in other types of aquatic ecosystems, such as lakes, ponds, rivers and streams. The facultative species in vernal pools are very diverse. Most common facultative species found in Ohio's vernal pools include several species of frogs like the wood frogs, spring peepers, turtles, snakes and insects. Additionally, above and around the vernal pool, one will find a variety of birds and some mammals as well.

The forest surrounding the vernal pools is extremely important in not only providing a food source for life in the pools, but also cover. The many amphibians that rely on these ephemeral wetlands for feeding and/or breeding, also depend on a buffer of up to 200 meters of forest to feed, breed and find cover.

# Importance

Though usually small, vernal pools are a dynamic ecosystem that come to life bubbling with activity every spring, and then disappear by the fall. They are a mini ecosystem in themselves, fascinatingly complex and delicately fragile. A very important player in the larger ecosystem, they serve to improve the water quality, filter sediment, replenish ground water, slow the flood waters, filter our pollutants from waterways, provide habitat to hundreds of species including migratory birds, and sequester carbon! They are also rich environments for mosquito predators. In one night, amphibian larvae and some macro invertebrates in a vernal pool can eat hundreds of mosquito larvae and adults.

# Concern

Vernal pools are an increasingly threatened ecosystem. Organisms in these pools race against time to complete the necessary steps in their life cycles before the pools dry up. Increased urbanization has the potential to upset the delicate and amazing balance of life in these pools. Habitat destruction is the major threat to vernal pools, and this threat comes predominantly from developers who unknowingly destroy them. The agricultural practice of using drainage tiles has destroyed many vernal pools since they can't hold the seasonal water anymore. Other threats include invasive species, pollution from runoff, mosquito control, destruction of surrounding habitat, and lack of community interest in or knowledge of the pools. Often, people mistake seasonally wet areas as "wasteland," and proceed to fill in or drain these critical habitats. Sometimes landowners mistakenly believe that by making a vernal pond permanent (by digging it bigger and deeper) they are increasing the value of the area for wildlife. Additionally, the buffer area around vernal pool is critical to its success, and landscape alterations to these can seriously impact them.



*Jefferson Salamander*  
Photo Source: Wikipedia

***Ohio has lost 90% of its wetlands since the European settlement, and a large percentage of these are vernal pools.***

# Conservation and Hope!

Lots of conservation efforts are in place to protect these extremely valuable but vulnerable and delicate ecosystems. Several conservation-minded land-owners are restoring drained or damaged vernal pools or are creating new ones. In Central Ohio, nature parks and nature preserves such as Columbus and Franklin County Metro Parks, Rush Run Preserve, Stratford Ecological Center, Preservation Parks of Delaware County, and Whetstone Prairie are some of the places that are working hard to protect and maintain the vernal pools. Columbus and Franklin County Metro Parks have constructed or restored vernal pools in several parks. There are vernal pools in 12 of the 19 Metro Parks. All these vernal pools are very carefully monitored, studied and managed.

*A large part of conservation depends on getting the general public informed and educated about these precious ecosystems, and getting the communities engaged in protecting these assets. There are numerous educational public programs that are organized all around the city during spring season offering a great opportunity to learn about these fascinating mini worlds!*

