



An Ohio, non-profit, all volunteer, organization

# Wetland Trumpeter

Newsletter - December 2017

## Our Mission

Ohio Wetlands Association is dedicated to the protection, restoration and enjoyment of Ohio's wetlands and associated ecosystems through science-based programs, education and advocacy.

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## New OWA Logo and a Message of Hope

Although there is no direct, documented scientific proof that the Trumpeter Swan (*Cygnus buccinator*) is a native Ohio bird, there are historic reports that it was found in the western Lake Erie marshes of Michigan. Being an easy target, it was most likely extirpated as a result of hunting by early traders and trappers coming into Northern Ohio. There is abundant evidence that this species of waterfowl is quite comfortable in Ohio and that the expansive Lake Erie marshes would have been heavily populated with Trumpeters. Reports of nesting and breeding Trumpeter Swans in Ohio are becoming more common.

The history of Ohio's wetlands was first to drain and fill, then, only more recently, to preserve and restore. With gratitude to state and federal land management and hunt clubs along the marshy shorelines of western Lake Erie, waterfowl populations are mostly stable. One of the great recovery stories is that of the Trumpeter Swan. A combination of habitat protection and captive rearing has led to a revival of Ohio's largest waterfowl. Equal to a Bald Eagle (*Haliaeetus leucocephalus*) with

an 80 inch wingspan, the Trumpeter Swan is twice the length and weight (60"/23lb.) of our national symbol.

For these reasons, OWA has used the powerful yet graceful Trumpeter Swan as the symbol of resilience, resurgence and beauty of Ohio's Wetlands. Our new logo



Trumpeter Swans. (U.S. Army Corps of Engineers photo)

features the Trumpeter quietly nestled among shoots and pendant inflorescences of the Fringed Sedge (*Carex crinita*). This captivating image suggests the majesty, power and hope that inspires OWA to champion our most productive and threatened habitats, and their promise of "Wetlands for a Better Ohio".

## You Shop. Amazon Gives

AmazonSmile is a website operated by Amazon that lets customers enjoy the same wide selection of products, low prices, and convenient shopping features as on Amazon.com. The difference is that when customers shop on AmazonSmile ([www.smile.amazon.com](http://www.smile.amazon.com)), the AmazonSmile Foundation will donate 0.5% of the price of eligible purchases to the charitable organizations selected by customers. Link your Amazon account to the Ohio Wetlands Association today! Just go to [www.smile.amazon.com](http://www.smile.amazon.com).



## Compelling Need

By Ray Stewart

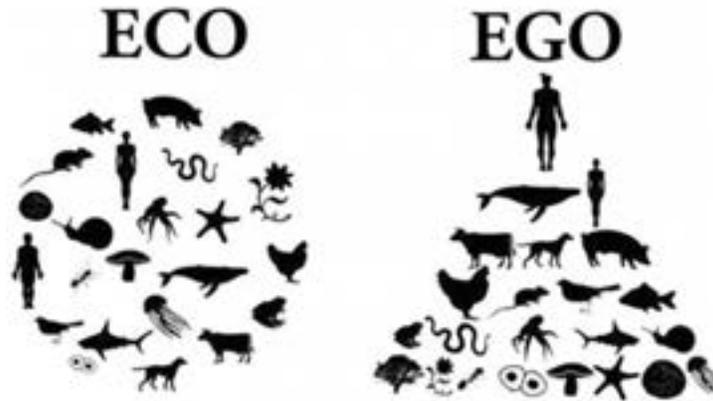
Why do we care so much about wetlands? Do we love their function as kidneys in the landscape? Do we revere the riparian swamp forests, estuaries and coastal marshes? Do we get a kick out of those wicked big puddles we call vernal pools? Why have we been organizing, teaching, advocating, networking and leading our communities and decision makers to protect and restore wetlands since 1991? You, our board, generous volunteers, members and donors have invested countless hours and thousands of dollars in support of wetlands across the State of Ohio. What gives? The words of Aldo Leopold seem prophetic today more than ever: *"We abuse land because we see it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."*

We have confidence that it is the ECO mindset, and not the EGO perspective that spurs our valued members to action. If we forget our place, natural disasters can remind us of how divorced our society can be from the community that existed before we arrived on the scene. Consider the megalopolis we call Houston, Texas. Located just 50 miles from the Gulf Coast it occupies over 600 square miles. A major shipping hub, it stands just 50 feet above sea level.

In its early years, the water supply came from wells. However, as the population grew, the ground water was depleted, and reservoirs had to be created outside of town to provide drinking water for the metropolis. Dry, shrinking soil subsided in many parts of the city, dropping its elevation by 10 feet, creating flood prone areas where they had not been before.

The city has four major bayous passing through it. These low-lying channels are wetlands with slow moving streams, often with poorly defined banks. Many bayous are very productive natural areas know for a variety amphibians, shellfish, alligators and wading birds. They can absorb excess storm water and release it slowly into the main shipping channel and off to the Gulf of Mexico.

In the last 20 years, Houston has experienced a residential and commercial construction boom in



which 25,000 acres of wetland and grassy meadow were urbanized. A recent account shows that the once named "Bayou City" has lost 30% of its original wetlands. These wetlands would have been an important asset to protect the city during extended rain events. They could have provided the natural capacity to absorb 4

billion gallons of precipitation from a tropical storm, had the city not lost this capacity through short-sighted land use decisions. In recent years, thousands of residential homes have been built in known floodplains. The lack of zoning and common sense regional planning is a reflection of a long-standing attitude of Texas individualism. There is a cultural resistance to the kind of governmental regulations that would impose principles of 'smart growth'. This roughshod posture puts many people in harm's way. The cost of unregulated growth is now measured in the billions of dollars of federal relief and reconstruction funding, the draining of charity coffers at the Red Cross and Salvation Army, untold hours of lost wages and the degradation of infrastructure. This region learned the hard way that Mother Nature won't heed the "Don't Mess with Texas" warning.

Doesn't it make sense to preserve the natural services that make our communities resilient in the face of natural catastrophes? At Ohio Wetlands Association, we believe that it does. Wetlands, prairies, floodplains, bayous, coastal marshes, mangroves, swamp forests and many other natural areas can be worth a king's ransom when natural phenomena exceed the norms. Tidal surges, torrential rains and flash floods can all be mitigated by natural services provided freely (and for free!) by wetlands. We know that Texas is not the only place subject to extreme weather. Ohio is also in need of the services that only natural areas can provide. With 90% of Ohio's wetlands converted to other purposes, we are lacking in the 'free' natural services we have spoken of so many times in this newsletter.

Because we care about Ohio, our communities, our families and our legacy, we have a compelling

*(Continued on page 3)*

## A Plant to Thrill: Common Buttonbush (*Cephalanthus occidentalis*)

By Mark Dilley

Editor's Note: Board Member Mark Dilley delivered a presentation at the 2016 Flora Quest conference with the title "Wetland Plants: Twenty to Thrill, Five to Kill." He will be sharing details of select plants from this talk in a series of articles for the OWA newsletter.

A member of the Madder Family (Rubiaceae), Common Buttonbush is an iconic plant of vernal pools and is frequently also found on the edges of lakes, rivers and marshes. Although I've never heard it so called, my research found that this species is also sometimes referred to as Button Willow or Button Ball. The "buttons" or beautiful, white spherical flowers are what people notice about this plant, apparently! These interesting flowers attract bees, butterflies, and hummingbirds. Its seeds are eaten by waterfowl and shorebirds and deer browse the leaves. Its seeds are spread by water, helping to distribute the plant widely in flood-prone and frequently-inundated areas. Woods ducks have been known to nest within dense stands of buttonbush, since the thick foliage provides substantial cover and protection.



Common Buttonbush, *Cephalanthus occidentalis*



Black Morph Tiger Swallowtail on a Common Buttonbush

While deer may enjoy snacking on the leaves of buttonbush, humans should avoid foraging on this species. It produces a poison called cephalanthin, which will induce vomiting, paralysis, and convulsions if ingested.

In vernal pools, buttonbush stems provide very important structure onto which breeding amphibians may lay their egg masses. The dense stems also afford safe refuge during the breeding process. In terms of its adaptability to varied conditions, button bush borders on amazing. This plant develops swollen stem bases that are typical of many wetland tree species and it can withstand three feet of inundation for months during the winter and spring due to its elongated lenticels (which allow for gas exchange).

As a final interesting note, there is a very rare sedge, the Cypress-knee Sedge (*Carex decomposita*) that is Endangered in Ohio and only known from Licking

County, which in our region is known to grow primarily on the lower stems of this unique wetland shrub. As wetland plants go, there is much to like about buttonbush!

## Compelling Need (Cont'd)

(Continued from page 2)

need to speak up for wetlands and champion "Wetlands for a Better Ohio." Please help us be that voice and consider a generous year-end donation to help us further our outreach, education and advocacy efforts!



Consider Ohio Wetlands Association in your year end giving. All donations are tax-deductible and appreciated very much!

## Ohio Vernal Pool Network 2018

By Ray Stewart



The Ohio Vernal Pool Network (OVPN) (previously the Ohio Vernal Pool Partnership), is a collaborative effort organized by the Ohio Wetlands Association (OWA) and the Midwest Biodiversity Institute (MBI), with a growing network of affiliates. Its purpose is to provide educational resources, opportunities and experiences to further the understanding, protection and enjoyment of Ohio's hidden wonders found in the precious seasonal wetlands we call Vernal Pools.

The 2017 workshops were a great success, with record attendance of nearly 120 people overall. The follow-up expeditions were also well attended, and are a great way to see what is going on in the pools later in the season. The OVPN has two workshops in March of 2018 to provide an informative and enjoyable overview of these wetland gems within Ohio's landscapes.

### 2018 Vernal Pool Workshops – Registration is open!

Under the **EVENTS** tab see: [www.ohwetlands.org/vernal-pool-workshops.html](http://www.ohwetlands.org/vernal-pool-workshops.html):

- March 17, 2018; Stratford Ecological Center, Delaware Ohio
- March 24, 2018; Brukner Nature Center, Troy Ohio

Discovery Expeditions are free and open to the public but registration is recommended.

### 2018 Vernal Pool Discovery Expeditions:

- April 7, 2018; Grand River Conservation Campus, Rock Creek Ohio
- June 2, 2018; Coyote Run Farm, Pickerington Ohio

### What is a vernal pool?

Vernal pools are shallow, temporarily flooded, depressional forested or forest edge wetlands that are typically dry for most of the summer and fall. These wetlands are generally inundated in the late winter and spring when they are subject to a burst of biological activity, including amphibian breeding. Flooded vernal pools are often comprised of areas of open water or with dense shrubby pockets of buttonbush. They are fueled by accumulated leaf litter, tree limbs and other organic debris cumulatively referred to as detritus.

### Interested in joining the OVPN?

We are expanding the program to reach more people each year. At the heart of this effort is the development of a train-the-trainer program. We are building a "tool kit" that will be offered to education network affiliates with everything needed to produce their own vernal pool workshops. The tool kit will include copies of the vernal pool field guide, Ohio's Hidden Wonders, and Vocal Calls of Ohio Frogs and Toads digital files. Under development are a series of PowerPoint presentations based on those offered at our workshops. OVPN will also help our partners with promotion and marketing. Contact: [ovpn@ohiovernalpoolnetwork.org](mailto:ovpn@ohiovernalpoolnetwork.org)

The Ohio Vernal Pool Network would like to extend a special thank you to the Ohio Environmental Education Fund and the Columbus Zoo and Aquarium for their support.



## How to Identify a Dry Vernal Pool

By Ray Stewart

Most of the forested areas in Ohio have some vernal pools. Even where there is steep terrain, a groundwater-fed vernal pool at the base of a slope or near a spring is not unusual. More often, vernal pools are filled by rain and snow melt. The late fall rains and winter snows add to the surface water and raise the ground water. Shallow depressions, with no outlet or channel to carry the water off, can fill with water and incite a riot of biological productivity.

If you are hoping to locate vernal pools, it is best to look from late winter through spring. Once trees are fully leafed out, the water normally disappears. When water is present, you will have the advantage of confirmation through easily observed biological activity. Especially in the earlier weeks of the season, when amphibians are breeding and other biological evidence is easily recognized, vernal pool characteristics are hard to miss. If you hear frogs calling from the woods in March and April, there is a good chance that a vernal pool is near.

One of the key characteristics of a vernal pool is the absence of water during the driest time of year, normally late summer and into fall. At other times of year, when the amphibians have finished their breeding and the tadpoles and salamander larvae have sprouted legs and vacated the pools as the water recedes, you will need to look for other clues. You could find some plants that point you in the right direction. From a distance, clues of a profoundly wet area (even with no standing water) can come in the form of wet-loving bottomland trees like cottonwood, pin oak, swamp

white oak, red and silver maples, green ash, and sycamore. Tree trunks in vernal pools can take on a distinct appearance, as they often develop an exaggerated flare or buttress at the base, and these props are often colonized by thick moss with a distinct



A dry vernal pool.

horizontal upper limit that represents the high water mark. Heavy mosses may also adorn coarse woody debris and fallen trunks since abundance and duration of high water favors these species.

On closer inspection, a shrub layer that includes spicebush, winterberry holly, and buttonbush speak to the high water table and possible seasonal inundation. Should you find an abundance of sedges or skunk cabbage you are tipped off to the presence of very wet soil, often with a groundwater influence.

In the absence of inundation, you can look for the key physical signs that standing water has left behind. The specific topography or gradient of slope can be very difficult to detect. Most vernal pools develop where only inches separate them from the surrounding uplands. Some vernal pools develop a "pit and

mound" texture. The unevenness results from plants that love water and build elevation through years of root accumulation, forming tussocks. You may also observe large areas of dark, water-stained leaves in a depression that

wetland scientists refer to as a "sparsely vegetated concave surface." Once the home and hearth of vernal pool denizens, these leaves have been decomposed in water and a relatively low oxygen environment compared with the uplands. A lack of vegetation in these leaf-lined depressions can provide an equally strong indication of the presence of a vernal pool as the plants mentioned above. This forest floor basin may appear to be a sterile and dark wasteland. However, nothing could be further

from the truth.

Should one delve deeper, the soils beneath a vernal pool will have hydric or wetland characteristics. The trifecta of wetland designation is hydrology (water), hydric (water adapted) plants, and hydric soils that result over time from the former. For an area to be considered wetland, all three components will be present - and this holds for vernal pools, as they are, after all, wetlands!

Reading the landscape and interpreting the woods is not a skill common to most modern Americans. We will all be richer in character when we better understand the natural wealth around us and participate in its protection and enjoyment. To learn more and hone your vernal pool sleuthing skills, consider participating in one of OWA's vernal pool discovery days!

## Tracking a Restored Wetland: An Assessment of the Miller Valley Wetland at The Wilds

By Julia Wolf with editing by Dr. Rebecca Swab

In 2011, about 16 of the 55 acres of the Miller Valley wetland at The Wilds was restored. During this process, invasive species were removed; 13,000 native plant plugs, 3,000 native trees and more than 75 pounds of seed were planted; and a weir was constructed to increase and control the water levels.

In the summer of 2017, Julia Wolf, an apprentice at The Wilds, completed a project tracking how the Miller Valley restoration had progressed. To compare the restored and unrestored sections of the wetland, Julia focused on plant communities. A Vegetation Index of Biotic Integrity (VIBI) was completed in both sections of the wetland. This test, developed by John J. Mack for the Ohio EPA, is a standard way to survey and assess the quality of plant communities in Ohio wetlands. It yields a score 0-100 that shows how healthy the wetland is based on the vegetation.

This year, in the Miller Valley Wetland, the restored section scored a 43, and the unrestored section scored a 29. This difference in scores may seem to indicate that the restored section is much healthier than the unrestored section. However, this may not be the case.

Wetland Tiered Aquatic Life Uses were established by Mack as part of the VIBI. This separates wetlands into several different categories based on the VIBI score. These categories are analogous to those of the Ohio Rapid Assessment Method (ORAM) which classifies wetlands based on the quality of their habitat. The categories range from 1-3 with Category 3 being the highest quality. There is also a separation of the Category 2 wetlands into two different types. A Modified Category 2 is of



The Miller Valley Wetland in August 2017.



Julia laying out her plot in the restored section of the wetland where vegetation was identified.

slightly lower quality than a Category 2 wetland. For the Miller Valley Wetland, both the restored and unrestored sections of the wetland fall under a Modified Category 2, which is considered restorable wetland habitat according to the Wetland Tiered Aquatic Life Uses. So, despite a difference in score of 14 points, both sections would be categorized the same, indicating that the overall health of the wetland is generally the same in both the restored and unrestored sections of the wetland.

Since there have been VIBIs done in the restored section since 2010, we are able to see how the Miller Valley Wetland's health has changed over time. Looking at the trends in the VIBI scores in the restored section, you can see that the wetland is slowly degrading. Before the restoration in 2010, the VIBI score was 19, then a year after restoration in 2012 the

VIBI score reached its peak, hitting 57. But since then, the scores have been decreasing and currently in 2017 it stands at a score of 43. The initial restoration work did help the wetland greatly, increasing the score by 38 points in two years. But after the restoration work was completed, those scores started to drop. And now, since both sections of the wetland are classified as restorable wetland habitat, it is obvious that there is a need for some kind of maintenance.

Looking at the differences between the data in 2016 and 2017, there are several things that could be causing the VIBI scores to decline. The first is a greater amount of cattail. From 2016 to

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## Wetlands at The Wilds (cont'd)

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2017, there was approximately a 20% increase in the cover for cattails. There was also an increase in the amount of open water in the plot surveyed for the VIBI. This means that there is less vegetative cover overall. With more invasive cattails and less vegetation in general, the VIBI scores are decreasing.

Thus, further restoration work will be necessary to maintain and improve the quality of the Miller Valley Wetland. Invasive species removal will help to get rid of the abundance of cattails plus other invasive species such as autumn olive, multiflora rose, and teasel. Water level management could also benefit the wetland greatly, to ensure that there is a healthy amount of vegetation. This need for continual restoration work is common for many restored sites because it takes time for natives to establish. And at



**Pickerel weed growing in the restored section of the wetland.**



**Cattail growth in the unrestored section.**

a site such as The Wilds, where invasive species are common, it is important that there is regular maintenance on the wetland.

### **About Julia:**

Julia is currently a junior at The Ohio State University where she is studying Environmental Science with a specialization in ecosystem restoration. Her interest in environmental science started early in high school when she participated in a week long summer program where she worked on a lake in Connecticut testing water quality and studying fish. After that, she knew she wanted to do something with ecology and helping the environment. She hopes her degree will lead her to a career working on restoration projects and conservation.

## 2017 Wetland Leaders



**Chris Collier accepting the Wetlands Leader Award for Restoration from Mick Micacchion for Black Swamp Conservancy.**



**Bill Resch accepting the Wetlands Leader Award for Education from Mick Micacchion for the New Albany EcoLab initiative.**



**Alex Czayka accepting the Wetlands Leader Award for Protection from Mick Micacchion for Western Reserve Land Conservancy.**

## OWA BioBlitz 2018 @ Coyote Run Farm

Ohio Wetlands Association invites interested naturalists to join our second-round effort to observe, discover and report on the diversity of all living things on the Coyote Run Farm. The owners of this property are devoted to protecting and restoring the habitat where they live and the land around them in perpetuity. OWA strongly supports their efforts. Wetland restoration projects are currently underway. Add your interest and expertise to our project.



**Save the dates! Friday June 1 and Saturday June 2, 2018 at Coyote Run Farm, 9270 Pickerington Road, Pickerington, Ohio.**



Coyote Run Farm

Come for a short stint or hang out for the full two-day event. Early birding activities will begin at 6 am. After hours mothing, owling and {bat}ing will be supported by campfire. Bring a camper or tent and stay over Friday night if you like. Some food, drinks and snacks will be provided.

**Registration is required, but FREE!** Just sign up at <http://www.ohwetlands.org/bioblitz-2018.html>. You will be sent periodic updates. Participants are asked to use iNaturalist to report observations (alternate methods accepted). With our first-round bioblitz effort in 2017, we have over 1300 observations and 625 species. With your participation we will confirm and expand this dataset in 2018.

For specifics, see <https://www.inaturalist.org/projects/coyote-run-farm>.

Contact: OWA Board Secretary, Ray Stewart [ray@OHwetlands.org](mailto:ray@OHwetlands.org)

## Vernal Pool Discovery Day with the Nature Conservancy

In 2017 one of our vernal pool workshops was at the Grand River Conservation Campus in Ashtabula County. We had a record attendance and field trips into some of the richest vernal pool complexes in Ohio. We were delighted to work with The Nature Conservancy (TNC) and appreciate the use of their facilities.

More recently, TNC has opened the Dr. James K. Bissell Nature Center. The center features exhibits for both adults and children depicting the

natural history of Morgan Swamp Preserve and the Grand State Wild & Scenic River. I encourage everyone with an interest in wetlands, nature and outdoor recreation to visit.

Closed for the winter, the Nature Center will reopen this spring on April 7, 2018. OWA will participate in this season opening by offering a public Vernal Pool Discovery Day event at the conservation campus. Please save the date and stay tuned for more details

## Call for Marsh Monitoring Volunteers

By Ray Stewart

This year marks the 24th season of the Great Lakes Marsh Monitoring Program (GL MMP). The GL MMP is a bi-national, long-term monitoring program that coordinates the skills and dedication of hundreds of volunteer Citizen Scientists throughout the Great Lakes basin of Ontario and the United States. Ohio Wetlands Association (OWA) has provided training for this program for many years, placing volunteers mostly in NE Ohio. There is a need for additional volunteers in NW Ohio where there are extensive marshes and rich habitats. In 2018, we are offering training at the Ottawa National Wildlife Refuge visitor center, in the heart of Ohio's most extensive marshlands.

The program is designed to collect information about the presence and abundance of bird and amphibian species in Great Lakes coastal and inland marshes, to contribute to our understanding of these species and their habitat needs. GL MMP volunteers have a unique and rewarding opportunity to support the study and conservation of some of North America's most important - and threatened - ecosystems.

This program uses a standardized protocol to monitor frogs and secretive marsh birds in the Lake Erie basin. We are seeking wetland enthusiasts to monitor amphibians and/or marsh birds (prior experience not necessary) and who are willing to spend about 10 hours per year as a volunteer surveyor of a local marsh. We will teach you the techniques used in the nationally recognized Marsh Monitoring Program.

Participants are given an in-depth orientation to the program and an invitation to survey an amphibian and/or bird route. Once placed with a

route, registered volunteers will receive Handbooks, a Training CD, Data forms and more.

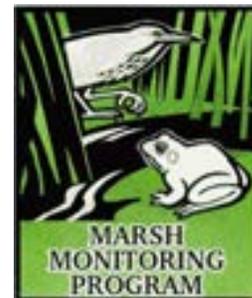
Volunteer Training is at the Ottawa National Wildlife Refuge visitor center, multi-purpose room is on Saturday March 3, 2018, 10 am to 2 pm. Bring your own lunch and beverage. We will take a break around noon.

Registration is required. Details and registration for the Great Lakes Marsh Monitoring Volunteer Training are at <http://www.ohwetlands.org/marsh-monitoring-training.html>

For even more information about the GL MMP go to <http://www.birdscanada.org/volunteer/glmp/>

The Ohio Wetlands Association is a statewide, all volunteer, 501(C) 3, nonprofit organization. OWA serves to protect, restore and enjoy Ohio's wetlands and associated ecosystems through science based programs, education and advocacy. OWA envisions the state of Ohio where wetlands are healthy, plentiful, and support ecological and societal needs and where citizens care for, appreciate, and interact with these natural treasures. Membership information and other ways you can help support Ohio wetlands can be found at [www.OHwetlands.org](http://www.OHwetlands.org).

For questions about OWA or the Ottawa NWR training, contact [ray@OHwetlands.org](mailto:ray@OHwetlands.org)



## 2018 Wetland Trumpeter Sponsorship Program Opportunities



Ohio Wetlands Association recognizes the individuals and organizations that show a deep commitment to OWA's mission by understanding the ecological, social and economic value of conserving Ohio's wetlands. This is your opportunity to be one of those we celebrate!

Become a Wetland Trumpeter Sponsor for our 2018 programming year which includes two Vernal Pool Workshops and Discovery days! Sponsorship levels range from \$1,000 to \$100 and information, as well as a sponsorship form can be found at [www.OHwetlands.org](http://www.OHwetlands.org)  
Thank You!

## Vernal Pool Isopods

By Ray Stewart

The most familiar isopod is the roly-poly bug you might see underneath an outdoor flowerpot. Sometimes called 'potato bug', 'sow-bug', or 'pill-bug', this terrestrial form is the exception. Most isopods are aquatic. These crustaceans are not actually insects. While insects have 3 pairs of legs the isopods have 6-7 pairs. Their segmented body is wide and flat with a series of plates running along the back. These small creatures are less than an inch long and many of them can be less than ¼ inch.

Fossil records of isopods go back to the Carboniferous period 300 million years ago. Today, thousands of terrestrial and aquatic species are found in all but the coldest parts of the world and in most habitats. In vernal pools, isopods can be omnivores, grazers and filter feeders inhabiting the leaf litter. They may eat algae and small organisms that cling to submerged rocks and logs. Tolerant of pollution and disturbance, they may be the only macroinvertebrates in contaminated pools.



Isopod



D-Net

Isopods are important scavengers in vernal pools decomposing and recycling detritus while helping to clean the water. They are an important food source for larger organisms including tadpoles and dragonfly larvae. You are not likely to notice them unless you explore the leaf litter at the bottom of the pool.

A great way to discover macro invertebrates of vernal pools, like the isopods, is to grab a handful of wet leaves and place them in a white tray, bucket or tub. Having enough water for them to swim around, slowly pick through the larger leaves and cast them aside. Soon, there will be few hiding places. In a healthy vernal pool, a wide variety of hidden wonders will be revealed. A magnifying glass, portable microscope or a camera with macro (close-up) lens can reveal even more. When done, submerge the container in the pool and let the contents gently wash away. Repeat as desired. A 'D' net or aquarium net can be used to sample, too. Have fun exploring your local vernal pools!

## Conservation-minded Holiday Gift Giving Ideas

### Give the Gift of Membership:

\$20 - Individual, - \$30 - Family - \$10 - Senior or Student



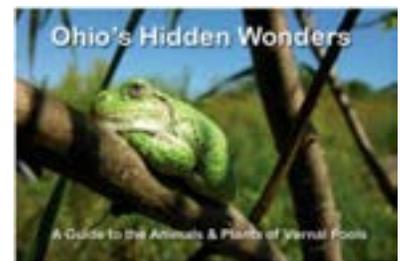
**Give a book:** *Ohio's Hidden Wonders—A Guide to Animals and Plants of Vernal Pools*

**Give a conservation stamp: Federal Duck Stamp**

<https://www.fws.gov/birds/get-involved/duck-stamp/buy-duck-stamp.php>

**Give a conservation stamp: Ohio Wildlife Legacy Stamp**

<http://wildlife.ohiodnr.gov/about-contacts/support-ohios-wildlife/ohio-wildlife-legacy-stamp>



## Wetlands Science Summit, a Real Barnburner!

The 6th Annual Wetlands Science Summit filled the Everal Barn, an historic landmark in Westerville, Ohio, on October 14th. All across our State and Nation, water quality is a serious matter. The conference title "H2 OH! Ohio Wetlands Work for Water Quality" set the theme of the conference hosted by the Ohio Wetlands Association (OWA), which brought together wetland experts to share their research and practical applications of wetland restoration for improving water quality. Communities across the state are recognizing that wetlands provide cost-effective natural services that improve our quality of life and - OH yes - improve water quality by removing excess nutrients, sediments, toxins and other contaminants that can harm us and, at best, keep us from fully enjoying our rich Ohio water resources.



**Mark Dilley, OWA President, presenting Wetlands of Westerville: Improving the Quantity of Water and the Quality of Life in a Growing Suburb.**

OWA's Vice President and Wetland Ecologist for the Midwest Biodiversity Institute, Mick Micacchion emceed the day's events, which included programs describing how wetlands can - and do! - provide solutions to many water quality issues. The keynote presentation, given by Dr. Bill Mitch, Director of the Everglades Wetlands Research Park in Naples Florida and OWA Board Member, advocated for restoring part of the Great Black Swamp and likened wetlands to kidneys. Mark Dilley, Chief Science Officer and co-owner of MAD Scientist Associates and OWA President shared details of the construction, functional attributes, and community benefits of several Westerville wetlands. Kristi Arend, Research Coordinator and Fisheries Biologist at Old Woman Creek National Estuarine Research Reserve (NERR) spoke about how wetlands in the Old Woman Creek have been studied to provide quantification of their pollutant cleansing ability, with an emphasis on nutrient reduction that benefits Lake Erie's Western Basin. She also

talked about the restoration effort to be conducted in Sandusky Bay to reestablish natural wetland habitats and provide additional removal of pollutants from Lake Erie.

OWA then presented three 2017 Wetland Leader Awards. The award for education went to Bill Resch for his work with the New Albany High School Ecolab. The restoration award was presented to Black Swamp Conservancy and was accepted by Chris Collier. The preservation award was accepted by Alex Czayka on behalf of the Western Reserve Land Conservancy.

After a vegetarian lunch buffet, Kevin Egan, University of Toledo Economics Professor, shared the economics of water quality issues. He portrayed a variety of compelling cases where



**Touring the Westerville wetlands with Dick Lorenz, Westerville Water Utility Manager and Mark Dilley, OWA President.**

wetland restoration is a cost-effective method of improving water quality. Finally, John Watts, Columbus and Franklin County Metro Parks' Resource Manager, talked about the his organization's efforts in restoring wetland within many of their Parks. In addition to providing a wealth of other ecosystem services, these projects have helped protect water quality in the National Scenic Big Darby Creek watershed and other watersheds in which restoration has been accomplished.

At the end of formal presentation, conference participants were able to participate in one of the three wetland project tours: Heritage Park and the Westerville Water Treatment Plant, the New Albany High School Ecolab, and the Olentangy River Wetlands Research Park on the campus of The Ohio State University. These tours were highly rated by participants and made for a fun and informative end to a productive and engaging Summit.



**Ohio Wetlands Association**

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www.OHwetlands.org

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