

THE POOL REPORT

February 8th, 2023 | Issue 7

eNews & Updates

Brought to you by the Michigan Vernal Pools Partnership

Merchandise For Sale, VPP Training Registration, Annual Meeting Recording & More!

There's a lot packed into this issue! Keep reading for...

- Annual Meeting Recording
- Outreach Material Request form
- Vernal Pool Merchandise, ON SALE NOW!
- Vernal Pool Patrol Training Registration

...and more!



The Michigan Vernal Pools Partnership

Annual Meeting Recording Available

Thank you to everyone who was able to attend the 5th Annual Vernal Pools Partnership Meeting this past December! We had almost 400 registrants this year and record turnout.

And a special thank you to our guest speakers and vernal pool patrollers who joined us to share their vernal pool expertise and experience, and helped make for another successful year. This year's meeting was full of great resources, and guest speakers covered topics such as forestry management effects on vernal pools, spotted turtle ecology, salamander migrations, and research on vernal pool classification.

If you are looking to re-watch your favorite segments or reference any of our guest speaker presentations, <u>visit our website</u> for the recording link and support materials.

Click here to share with us what you'd like to see more of next year!



View Recording



Request Outreach Materials

We have printed materials available for any of your vernal pool outreach needs! Use the button below to request brochures, rack cards, or vernal pool species posters. Visit our website to view the materials or download the printable files.

The Vernal Pool Patrol

Get up to date with the latest Vernal Pool Patrol news featured below and click the buttons to read more!

Support the Vernal Pool Patrol!

A vernal pool enthusiast's dream come true, merchandise is now available for sale for a limited time! **Open now until February 27th,** you can purchase your own vernal pool species t-shirt, spotted salamander hat, and various vernal pool sticker designs.

Your purchase supports the Vernal Pool Patrol! The goal of this campaign is to bring awareness to vernal pool ecology and conservation across the Great Lakes and raise funds to supply monitoring kits for the Michigan Vernal Pool Patrol community science program.

The merchandise was designed by Spencer High of Querkus Creative! Spencer is a creative partner with Michigan Natural Features Inventory and Vernal Pool Patrol. He is a designer that works with various environmental non-profits to help them tell their story, explore creative solutions, and fundraise. Check out more of his work here! - https://www.querkuscreative.com/products

Read More



Vernal Pool T-Shirt



MVPP Hat



Eight different sticker designs available!

Stickers

Shop Stickers

Welcome new 2023 Program Coordinators!

We'd like to give a warm welcome to four new program coordinators who will be coming on this year to provide assistance and training to those monitoring vernal pools in their respective communities. The Pool Patrol couldn't function as effectively without the support of our Program Coordinators!

Thank You and Welcome!

- Larry Flynn Cheboygan & Emmett County May Woods Nature Trail
- Tom Oliver Western UP Center for Science and Environmental Outreach (Michigan Tech)
- Jenavieve McMurray Genesee, Lapeer & Tuscola County
- Doug Jackson Waterloo Recreation Area DNR State Parks

Register for the Vernal Pool Patrol Virtual Training Series!











Register!

Vernal Pool Research Fund

Our greatest need is to find a way to consistently support our community scientists.

Volunteers are forever changed by their time spent exploring these incredibly diverse ecosystems. The experience sparks curiosity about the living world and encourages stewardship of our lands. Your support can help ensure that volunteers have the proper support and equipment needed to participate in the program and get outside!

Donations to the Research Fund directly support...

 The purchase of monitoring kits for program coordinators to have available for community scientists

- Host and provide training workshops each spring to train volunteers and connect with program coordinators.
- Support MNFI's continued leadership and involvement with vernal pools research and conservation in the Great Lakes region.

Support Vernal Pool Research

Vernal Pool Ecology Spotlight



The Importance of Connectivity

In this issue of the Pool Report, we are going to spotlight the ecological concept of connectivity, and how vernal pools and their species benefit from existing in proximity to other pools, wetlands & forested uplands!

Part of what makes vernal pools important to conserve is their role in the landscape relative to other wetlands and forested upland ecosystems. Connectivity allows for species to move across the landscape and meet all their needs safely and without barriers. For instance, blue-spotted salamanders, spotted salamanders, and wood frogs migrate to vernal pools to breed, and then return to the surrounding uplands once the pool is dry. Blanding's turtles are known to travel long distances across forested and wetland habitats to meet their breeding and feeding needs. Vernal pools act as stepping stones for them across the landscape. This journey is made more difficult and dangerous for species when connectivity is decreased and the landscape is fragmented by roads or other barriers, and decreased connectivity can disrupt population dynamics and gene flow.

In addition to allowing wildlife to move safely between habitats, connectivity is important for the sustainability of a healthy metapopulation. The term metapopulation refers to the larger population that is made up of all the local populations of a species in a certain area. For instance, imagine each park in your corner of Michigan has a population of spotted salamanders. The metapopulation consists of all the populations of spotted salamanders across all the parks.

Last year, maybe you didn't see any salamander egg masses at your vernal pool. However, it's possible that in following years egg masses will reappear. This is called recolonization, when individuals emigrate from one pool to another. If pools are in appropriate proximity to each other, depending on how far a species is likely to travel, it is more likely that you will see recolonization of a pool after a period of absence! This is a function of connectivity.

Connectivity has consequences for the genetic diversity within a population as well. When a population is isolated and connectivity is minimized, in-breeding can occur. This puts this population at risk of local extinction. Genetic diversity is increased, in part, by individuals moving in and out of an area, and a genetically diverse population is more resilient in the face of threats like disease. Connectivity allows for movement of individuals across a landscape and contributes to stability of the metapopulation through increased genetic diversity!

Sources:

- 1. Leibowitz and Brooks (2001), "Hydrology and Landscape Connectivity of Vernal Pools" in Science and Conservation of Vernal Pools in Northeastern North America
 - https://www.nrs.fs.usda.gov/pubs/jrnl/2008/nrs_2008_leibowitz_001.pdf
- 2. Smith et al., (2018), Biological Connectivity of Seasonally Ponded Wetlands across Spatial and Temporal Scales
- 3. https://www.wildlife.state.nh.us/nongame/documents/habitat-vernalpools.pdf

News and Notes

- Get Wet in the Woods with Vernal Pools at the <u>Michigan State</u>
 <u>University Science Festival!</u> Explore vernal pools at MSU's Baker
 Woodlot with us on Earth Day, April 22nd, from 1-3 pm! Free to
 attend and open to all ages!
- Are you a teacher looking to incorporate place-based education & stewardship into your lessons? Check out the <u>Great Lakes Literacy Education Exploration</u> module on vernal pools.
- If you live near the Rouge River, you should check out the <u>Friends of the Rouge frog and toad breeding call listening</u> <u>survey!</u> Training dates are February 12th and 25th, 10-11:30 am via Zoom.
- Dreaming of warmer weather? Check out the breathtaking winners from this year's <u>Michigan Nature Association photo</u> <u>contest</u>.
- Get involved with vernal pool conservation and citizen science! <u>Fill out our interest form</u> and we will connect with you

shortly.

MVPP Pool Patrol MNFI **MNA**

The mission of the Michigan Vernal Pools Partnership is to increase awareness, understanding and protection of vernal pools through conservation, research & mapping, education & outreach and collaboration.

The Vernal Pool Patrol is a place-based education program consisting of classroom instruction and data collection in the field. Members learn how to follow a standard protocol to help identify and map locations of vernal pools within their local communities.



Michigan Vernal Pools Partnership

[mivernalpools.com]







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