

Vernal Pool PATROL



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vernal pool (n.): a seasonal body of standing water that typically forms in the spring from melting snow and other runoff, dries out completely in the summer, often refills in the autumn, provides an important breeding habitat to critters

A spring walk in the woods may lead you to one of Michigan's more common but lesser known wetlands – a vernal pool. These seasonal or temporary wetlands are often small in nature yet significant in ecological value. Wet in the spring, vernal pools characteristically dry up as summer progresses. In fact, those exploring woodlands late in the summer may trek through a vernal pool without realizing they passed through this important wetland ecosystem.

As the snow of winter melts giving way to spring, these wetlands fill with water and explode with life. Scientists of Michigan Natural Features Inventory (MNFI) and Michigan State University Extension (MSUE) study the ecology of these vernal pools during this small window of time each spring. Yet this can be a challenge to visit large numbers of vernal pools each spring, when life is most active, but before these seasonal wetlands dry up.

Launching a new Vernal Pool Patrol Project aimed at schools and youth, these researchers are calling on our youngest citizen scientists to help collect and report data in these vernal pools across Northern Michigan.

Contributing as part of a statewide vernal pool mapping and monitoring project with MNFI, teachers from 10 Northern Michigan schools gathered this past April to learn how to involve their



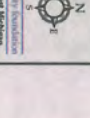
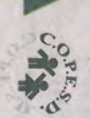
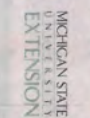
—photo courtesy of Jeff Kalamber

other partners.

students as Vernal Pool Patrol partners. This place-based stewardship education training connected teachers with MNFI scientists to learn about vernal pool ecology, exploring firsthand the biodiversity of plants and animals living within vernal pools. A great professional learning opportunity for educators supported by the Northeast Michigan Great Lakes Stewardship Initiative and Grand Traverse Stewardship Initiative networks, including U.S. Fish and Wildlife Service, Huron Pines, 4-H Youth Programs, Michigan Sea Grant, among

Little is known about vernal pools in Michigan. They are widely recognized among scientists for their important ecological value. Rich in biodiversity, vernal pools have been called the 'coral reefs' of our forests, home to some species that only exist in vernal pools. For example, fairy shrimp (tiny, bright orange crustaceans) only occur in vernal pools since their eggs have to dry and freeze before they can hatch each spring. Other species, such as the wood frog, spotted salamander and blue spotted salamander, excel in vernal pools because these habitats

lack predatory fish that would eat their eggs and larvae. In addition, many plants grow within and around vernal pools and can provide clues that these pools were once full of water even during their dry phase. In the northeast U.S., vernal pools are home to some 550-700 species of plants and animals, including many rare species. These ecologically rich wetlands also function to improve water quality, help recharge ground water, store water and provide flood control, and serve as nutrient sinks (where organic matter collects and decomposes).





Funded by Great Lakes Fisheries Trust, the MNFI will work with schools from 2015-2017 where students will gather valuable data to help MNFI monitor these unique wetland ecosystems. With this project, students apply science and technology, math, reading, writing and more to complete their investigations. They discover the importance of teamwork, organization, and observation needed to accomplish these types of field studies. In service of science and their communities, students will collect, analyze and report data to the MNFI to populate a statewide vernal pool monitoring database. Overall, this project allows students to learn more about their local environment while raising awareness and appreciation toward these small, seasonal, yet ecologically important vernal pools in their local communities.

Already this spring, several schools across Northern Michigan helped pilot

this new citizen science project. Students from Roscommon Schools ventured into the woods with their teachers, Mrs. Evans and Mrs. Zucher, alongside MNFI scientists and MSUE educators to explore and gather data from their local vernal pools. Kelli Polleys introduced her Harbor Springs' 8th grade students to the concept of vernal pools, working with Little Traverse Conservancy to discover and assess wildlife in their local pools. Chemistry students from Gaylord High School, led by teacher Jeff Kalember, researched vernal pool ecology as part of their

class, and they are mapping and visiting several potential vernal pool habitats in their school's local nature area. Outside of school, the Alcona 4-H Environmental Stewards Club took to the field to identify vernal pools in the coastal Negwegon State Park, even finding the 'fairy shrimp' – a signature species of vernal pools.

Spring is the time when vernal pools come to life, and also a time when students grow excited to get out of the classroom and outside to explore. The Vernal Pool Project offers these young scientists an amazing hands-on learning experience exploring their local wetlands. In partnership with MNFI, these youth are helping scientists and their communities to better understand and care for vernal pools across Northern Michigan. 🌱

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