



A NEWSLETTER

from the

CAPE ANN VERNAL POND TEAM

Winter/Spring 2019

www.capeannvernalpondteam.org

Email: cavpt@yahoo.com

THE CAVPT IS A NON-PROFIT VOLUNTEER ORGANIZATION DEDICATED TO VERNAL POND CONSERVATION AND EDUCATION SINCE 1990.

Daring Turtle Rescue at Heron Pond

by Rick Roth

Sometime last summer I got an email from our good friend, Francie Caudill from the Manchester/Essex Conservation Trust. She got word that there were 2 snapping turtles trapped in a beaver deceiver at Heron Pond.

Okay...it wasn't a daring rescue at all. I just said that so you would read this. Worked didn't it?...

For those of you who don't know, a beaver deceiver is a fence around a culvert, which stops the beavers from jamming wood into the culvert and ultimately raising the water level so it flows over the road which defeats the purpose of the culvert. Anyway, Nick Taormina and I set a turtle trap baited with sardines in there.

Next day we had two 12" snappers. Presumably they were females on an egg laying foray. On their way back to the pond they walked into the deceiver and couldn't get out.

They exhibited the foul disposition that snapping turtles have while we removed them from the trap and took a photo to commemorate the occasion and show the proper way to hold a large snapper...by the hind leg and away from your body. They do have impressive claws, but they're not very sharp. Jaws on the other hand need to be avoided. Then they went back into Heron Pond.



Photo credit Rick Roth

Don't miss any of our exciting upcoming events!

Check out our website at:

www.capeannvernalpondteam.org

Like Us on  Facebook Cape Ann Vernal Pond Team

Is anyone interested in being our Social Media person?

Citations for "Did you Know":

Capps, K. A., Rancatti, R., Tomczyk, N., Parr, T. B., Calhoun, A. J., & Hunter, M. (2014). Biogeochemical Hotspots in Forested Landscapes: The Role of Vernal Pools in Denitrification and Organic Matter Processing. *Ecosystems*, 17(8), 1455-1468. doi:10.1007/s10021-014-9807-z

DID YOU KNOW...?

by Nathan Mineo

Did you know that vernal ponds are biogeochemical hotspots? I'm sure some of you may be thinking, "what the blue blazes is he talking about!?" Try to recall all those many days ago when you were sitting in your biology class learning about the carbon cycle, nitrogen cycle, and the phosphorus cycle. Molecules made with these elements are biogeochemicals, and the cycling of these elements through our environment is crucial for the existence of life as we know it. They are some of the building blocks for essential molecules like sugars and DNA.

Decomposition is a big part of the carbon cycle. One could think of decomposition as the second step of a two-step process in the recycling of carbon. In the first step, detritivores, like isopods and caddisfly larvae, rip apart and shred leaves into small pieces. In the second step, microbes take over and further break down the leaf-litter by excreting enzymes that chemically break down the leaf particles. Some of the resulting molecules are then used by the microbes for their life processes, while others, like carbon dioxide, are released into the atmosphere for plants to use in photosynthesis.

The last step in the nitrogen cycle is a process known as denitrification. This process converts nitrate into nitrogen gas (which comprises about 78% of the air we breathe). Nitrate is a byproduct of animal waste. It is fertilizer for plants, but too much in the water can be harmful for aquatic life. Denitrification is important in maintaining water quality and recycling nitrogen.

Vernal ponds were found to be "hotspots" for the cycling of the aforementioned biogeochemicals. The term "hotspot" is not thrown around lightly in the scientific community. To be considered a hotspot, the area in question must have a significantly higher concentration of activity than the surrounding areas. In a 2014 paper published in the journal *Ecosystems*, Krista Capps et al. make the claim that vernal ponds are hotspots in forest ecosystems, specifically for the cycling of carbon and nitrogen.

Capps and her team tested leaf-litter in three separate vernal ponds in Maine. They examined decomposition rates, denitrification rates, and extracellular enzyme activity (part of decomposition) in the three ponds for one season (March to August). The study confirmed that decomposition rates, denitrification rates, and extracellular enzyme activity were all higher in the seasonally flooded vernal ponds than in the surrounding, dry forest floor, suggesting that vernal ponds play a significant role in nutrient cycling.

The fact that vernal ponds are hotspots for biogeochemical cycling is further evidence of their importance in the ecosystem and the need to protect them. The processes occurring in vernal ponds are not only beneficial to the plants and animals in the forest, they are necessary for our own existence as well. The carbon, nitrogen, and phosphorus in our bodies has been cycling on Earth since the beginning of its existence, and some of the elements that make you you may have been cycled through a vernal pond—from tree to tadpole to bacteria to you.



THE FOOLS

We had one cool Benefit Concert in September at The Pavilion at The Cape Ann Marina (you know, The Mile Marker there). Great band... The Fools, great crowd, cool auction action, two Rick Roths and fun critters. Thanks to Rebecca at the Marina, all who donated great stuff to the auction, our volunteers, everybody who showed up and our Sponsors.

Cape Ann Savings Bank
TD Bank

Bertone Construction
Good Harbor Graphics
Mile Marker 1
NE Herpetological Society
Taormina Tile



Nature Cape Ann *That's what we're calling it*

Our vision for the future is to open a wildlife center on Cape Ann. This will not be restricted to vernal ponds - all kinds of New England fresh water and land-based habitat will be represented.

We have a committee who meet regularly to create a fund-raising plan and timeline. The idea is for Nature Cape Ann to be its own entity, but Cape Ann Vernal Pond Team will have a home there and continue to do what we do. This is an ambitious project, but the Cape Ann community often comes together to make good things happen.

bioblitz

Between the dates of April 26 and 29, cities across the world will be competing in bioblitz. This is an engaging and competitive means of identifying and reporting wildlife in your corner of the world. Anyone can participate and it is a fun way to make observations and share them with the larger global community. All evidence that supports the existence of wildlife be it plant, animal, or fungi can be photographed and shared via a smartphone app, iNaturalist. This is a great way for families, educators, students, and citizens to provide a snapshot of an area's biodiversity whether it be, rural, suburban or even in a backyard. More information can be found at <https://www.nationalgeographic.org/projects/bioblitz/>

Organizational Development Update - March 2019

2018 was a big year in the continued development of our organization. We started out the year with a new website which interfaced with our programs and activities allowing us access to a large number of volunteers and participants. 2018 was also the first full year using our new streamlined bookkeeping and accounting systems.

With the assistance of funds donated by The Boston Foundation's Belinda Fund, many hours were dedicated to preparing our organization for additional strategic fundraising in 2018. Although our highly successful community fundraisers are one piece of our organization's funding pie, there are other untapped opportunities that we plan to pursue.

In order to access these opportunities, we first updated two major online nonprofit services. Both the Giving Common and GuideStar USA give us an online location to make us accessible to donors and funders everywhere. In these locations we are able to showcase our programs and tell our organizational and financial story. Philanthropists and foundations use these resources as the basis for informed giving.

Having updated these two resources, we now have the ability to more efficiently apply for grants making 2019 a grant application year!

If you have a grantor or donor that you would like us to pursue, email us at cavpt@yahoo.com or call 978-559-9684.

Fundraising

Amazon Smile

In this day and age of virtual technologies, donating to your favorite charity is easier than ever. Most of us frequently make purchases through Amazon. It's fast, convenient, and can be done pretty much anywhere at any time with your smartphone. Thanks to Amazon Smile, when making your online purchases you can choose a favorite charity and Amazon will donate a percentage of your total to them at no cost to you.

Please support what we do and consider selecting the Cape Ann Vernal Pond Team as your charity of choice.



We're the Clutter Busters...we want your stuff

Spring is on the way and when you think about having that garage sale in a month or two and feel overwhelmed by the thought of all the work it will take to make a couple of bucks.....consider donating your things to the Cape Ann Vernal Pond Team. Money brought to us this way isn't earmarked for specific uses as are most grants. It can go directly to overhead expenses such as rent, insurance and animal care.

There are 2 easy and great ways to donate:

1 - Our Amazing Yard Sale

Bring your donations to St. Peter's parking lot on Saturday, May 25 between 7 and 9am. Our sale runs from 9am to 1pm. Rain date is Saturday, June 1, same location. Items should be gently used and worth a little something. We don't accept TV's, Computers, Mattresses or Junk.

We are joined in this event by our sister organization Kestrel Educational Adventures. Your donation benefits two great non-profit conservation groups on Cape Ann.

Oh...and by the way, this is a wonderful opportunity to volunteer! An hour or two gives a break to someone who started the day early.

Thanks again to Mac Bell for donating the great location!

A new way to donate to us:

2 - The Shop

These donations would have more value than what you find at your average yard sale. **The Shop** is an area in our new office located at 242 Main St. #5, Gloucester. The items for the store are curated and are perhaps tax deductible. Please email us to set up a time for **The Shop** donation at cavpt@yahoo.com

What a great feeling knowing your cool stuff gets upcycled to support our wonderful programs and mission.

Your Boots are Made for Walking, so..

Get your Pride Stride pledge sheet from the website - www.gloucesterpridestride.com and walk for CAVPT on Sunday April 28. This is another great way to raise money for us. So, round up your family and friends and walk for us. In past years we have had a wonderful live animal exhibit and we'll be there again this year weather permitting.

Rainy Nights and Flashlights

Every spring CAVPT members lead nighttime field trips to the ponds to see the amphibian-breeding activity. Check your flashlights, get new batteries, and put your rain gear on the hook by the door. To avoid habitat destruction and critter disturbance, we limit the number of participants on each trip. We also ask that you leave your dog at home. Interested? Email us at cavpt@yahoo.com



Photo credit Susan Boyé

Last Year We...

- Led our usual nighttime vernal pond field trips
- Led a daytime field trip for NE Herpetological Society
- Presented a power point about CAVPT to the Boston Biodiversity Consortium
- Presented "Intro to Vernal Ponds" at:
Perley School, Georgetown
Brooksby Village, Peabody
- Presented "Snakes of New England and the World" at:
Sawyer Free Library, Gloucester
Summer Fun Daycare at Rockport Elementary School
Riverfest at Great Woods National Wildlife Refuge, Sudbury
The Crane Estate for The Trustees of Reservations, Ipswich
Earth Fest at Lynn Woods
Cape Ann YMCA Summer Adventure Fair, Gloucester
Devereux at Waring School, Marblehead
- Presented Vernal Pond/Snake Exhibits at:
Bridge Cape Ann Fall Fest, Gloucester
Cape Ann Sustainability Fair, Gloucester
Strawberry Festival, Gloucester
Mass Reptile Expo, Brockton
Endicott College Earth Day Celebration, Beverly
- Presented Vernal Pond Exhibit at:
Earth Day at Applied Materials, Gloucester
- Snakes of New England and the World Exhibits:
Petco Pet Rally, Gloucester
Hamilton-Wenham STEM Night
Maritime Gloucester Heritage Day
2 Main Street Block Parties, Gloucester
Cape Ann Farmer's Market, Gloucester
Gloucester Sidewalk Bazaar
and at our Benefit Yard Sale
- Presented a Native Snake Display at:
Audubon Nature Festival, Ipswich River
Wildlife Sanctuary, Topsfield
- 60 volunteers, thousands of volunteer hours

Strider drawing by Ollie Balf

The CAVPT newsletter committee is powered by



Delaney's
PIZZA

332 Main St., Gloucester
978-282-7878

Grants & Donations

In 2018 We Received Grants From:

Thanks to everyone who responded to our annual appeal with generous donations, and to those who donated throughout the year.

Special thanks to,

- Beth and Linzee Coolidge
- Anne Rosenfeld
- New England Herpetological Society
- William Taylor

We are proud, and oh so grateful, to have over sixty volunteers generously donating their time and energy to make CAVPT grow and flourish.

Certification Report

Vernal pool evidence was collected in Gloucester, Danvers, and Rockport in 2018. We were invited to the UU church in Danvers to check out some pools on their property and adjacent to the rail trail that runs from Peabody to Boxford. Reports have been submitted to the Natural Heritage & Endangered Species Program which is responsible for the protection and conservation of hundreds of species across the state of Massachusetts.

We continue to look for volunteers adept in map reading, bush whacking (scouting pools), and people who enjoy the outdoors. If you are at all curious or interested in certification or know of pools that need to be certified, please reach out via our website, capeannvernalpondteam.org, or email us at cavpt@yahoo.com.

Turtle Trapping/Blandings Turtle Survey

In 2018 we continued our survey looking for the elusive Blanding's turtle on Cape Ann. Traps were baited and checked daily for three weeks in the Thompson Reservation in West Gloucester, and no turtles were trapped. Blandings turtle's are a wide-ranging, semi-aquatic reptile that are found in pockets across North America. They are especially threatened in the eastern part of the United States due to habitat loss and alteration, hatchling predation, and roadkill. The largest known populations occur in Massachusetts although most are found in the southern part of the state with no known sightings on Cape Ann for decades. For more information contact Bryan Windmiller at <https://grassrootsfund.org>.

Applied Materials Earth Day Expo



CAVPT volunteer
Ann Byers



Howie Amaral
with our black
rat snake



Our vernal
pond display

FEATURED CREATURE

Northern Black Racer

SCIENTIFIC NAME: *Coluber c. constrictor*

SIZE: Adults can get 6' long

RANGE: Eastern US

DIET: Varied, small mammals, insects, frogs, toads, small birds, eggs, snakes, lizards



DESCRIPTION:

- **Habitat:** Moist or dry areas, deciduous and pine forests and wooded areas, elds, roadsides, swamps, marshes, clearings, stone walls and farms. Partially arboreal
- **Abundance:** Common in some localities.
- **Breeding:** April to early June
- **Egg deposition:** June to early July- 3 to 30 eggs hatch in late August to September. Hatchlings are about the size of a pencil. Light in color with dark blotches on their backs. They gradually become black over a few years.
- **Comments:** Slender and fast, for a snake. If you are nimble enough to catch or corner one they will usually rattle their tails (a lot of snakes do this, not just rattle snakes) strike, musk and defecate. Racers come out of the egg angry and never get over it. The snake was described *Coluber c. constrictor* in 1758 by Carolus Linnaeus himself, the father of binomial nomenclature. Linnaeus, evidently, had the racer confused with the Pilot black snake, later called black rat snake and now Eastern rat snake, *Pantherophis alleghaniensis*. They do look similar. Populations are declining as a result of habitat loss and fragmentation. We do find racers in vernal pond habitat. They really like frogs.

Maritime Gloucester

Maritime Gloucester is happy to support vernal ponders and their crepuscular activities through use of our bulk-mailing permit. Because conserving the environment starts locally and is driven by education, come see our efforts in our Sea-Pocket Aquarium and our Stellwagen Bank exhibit. Or end a day of vernal ponding with our beautiful harbor views, a sail on a schooner, or exploring our working waterfront at 23 Harbor Loop, Gloucester. www.maritimegloucester.org



If we value wildlife, we must protect vernal ponds.....

What a CAVPT membership offers:

- A really neat CAVPT car decal
- CAVPT t-shirts and hats
- Subscription to our annual newsletter
- Email updates of vernal pond activities and events
- Guided field trips to local vernal ponds
- The satisfaction of knowing you are helping preserve these unique and vital habitats

Our programs & activities include:

- Vernal pond certification
- Exhibits & presentations
- Daytime & nighttime field trips
- Certification workshops
- "Intro to Vernal Ponds" Presentation
- Website: capeannvernalpondteam.org
- Scout patch program
- Snakes of New England & the World

Salamander linoleum cut by Isabel Natti



Anna DiPerna shows a wood frog egg mass to some interested young vernal pond field trippers.

The funding for our programs is provided by:

- Corporate gifts
- Grants
- Sale of our merchandise
- Donations from community members like you
- Memberships

CAVPT thanks the following organizations and foundations for their generous support over the years:

The EnTrust Fund • The Norcross Wildlife Foundation • GoodSearch
New England Herpetological Society • Sweetwater Trust • TD Bank
Toad Hall Bookstore • Gloucester Cultural Council • Sam Park & Company
New England BioLabs • The Bellevue Fund • The William P. Wharton Trust
New England Grassroots Environment Fund • Cell Signaling Technology
Barnes Group • Captain Planet Foundation • The Boston Foundation's Belinda Fund

Support the Cape Ann Vernal Pond Team. Become a member or renew today!

Membership and donations can also be completed on our secure website, www.capeannvernalpondteam.org

Membership levels

☐ **Family - \$35.00 (USD)**

Subscription period: 1 year
Yearly membership to CAVPT for a family (2 adults and children)
Gift includes a CAVPT decal & bumper sticker
*Please list names of adults and names/ages of children

☐ **Family - Lifetime - \$350.00 (USD)**

Subscription period: Unlimited
Lifetime membership to CAVPT for a family (2 adults and children).
Gifts include CAVPT decal & bumper sticker, Vernal Pond Field Guide, Shirts or hats
*Please list names of adults and names/ages of children

☐ **Individual - \$20.00 (USD)**

Subscription period: 1 year
Yearly membership to CAVPT for an adult (17 years and older)
Gift includes a CAVPT decal & bumper sticker.

☐ **Individual - Lifetime - \$200.00 (USD)**

Subscription period: Unlimited
Lifetime membership to CAVPT for an adult (17 years and older).
Gifts include CAVPT decal & bumper sticker, Vernal Pond Field Guide, Shirt or hat

☐ **Junior (under 16) - \$10.00 (USD)**

Subscription period: 1 year
Yearly membership to CAVPT for juniors (16 years and younger)
Gift includes a CAVPT decal & bumper sticker

Name _____

Street _____

City, State, Zip _____

(address required if paying by credit card)

Phone _____ Email _____

☐ Send me email updates about field trips and events

☐ Yes! I'd like to be a volunteer

☐ Additional donation \$ _____

☐ Check enclosed: \$ _____ Payable to: Cape Ann Vernal Pond Team

☐ Charge my credit card (Visa, MC, Amex, Discover)

CC # _____

exp date ____/____ CVV code (on back of card) _____

Signature _____

(required if paying by credit card)

Please detach this form and mail with your donation to:

Cape Ann Vernal Pond Team
242 Main St. #5, Gloucester, MA 01930



CAVPT is a 501(c)(3) non-profit organization. Your contribution is tax deductible

Cape Ann Vernal Pond Team
242 Main Street #5
Gloucester, MA 01930

Return Service Requested

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Block print by Isabel Natti

The Need for Protection...

The temporary nature of vernal ponds often belies their importance. Countless plants and animals live in vernal ponds. Insects, amphibians, reptiles, birds and mammals visit to drink, feed, breed and nest. Some species, such as spotted salamanders, wood frogs and fairy shrimp are totally dependent on this habitat.



Photo by Keith or Nick or both, or neither

We found this toadlet on one of our Vernal Pond Surveys.
Aren't they cute when they're little?

How to Protect...

The best way to protect vernal ponds is to own the property. The next best way to protect them is to certify ponds with the Natural Heritage & Endangered Species Program. Certification applications are now done online and include photographs and field observation data. To learn more go to www.capeannvernalpondteam.org or check out the Vernal Pool Association's website at www.vernalpool.org



Salamander print by Isabel Natti