

A NEWSLETTER

from the

CAPE ANN VERNAL POND TEAM

Winter/Spring 2010

Website: www.capeannvernalpond.org

Email: cavpt@yahoo.com

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

A Good Year for Certification

by Rick Roth-CAVPT Executive Director

In May 2007, CAVPT received a letter from Michelle Harrison, attorney for Gloucester Crossing developer Sam Park. In mitigation for the loss of some upland habitat for three uncertified vernal ponds, Mr. Park offered a donation of \$10,000 to CAVPT to be used for the certification of vernal ponds in Gloucester. Another \$10,000 was offered to our sister organization, Kestrel Educational Adventures, to be used for vernal pond education in Gloucester.



Dan Wells wades into Cape Ann's biggest vernal pond certification season yet. Photo by Rick Roth.

My first thought was, "What do these people want from us?" Jessica Kagle, Kestrel executive director, and I met with Sam and Michelle. We came away from that meeting convinced that the donations were offered in good faith. Both of our Boards of Directors voted to accept the money.

With this money, CAVPT purchased equipment so we could locate ponds by GPS and print maps. We also hired Dan Wells from Hyla Ecological Services to certify 32 new pools in West Gloucester—the highest number ever to be certified in a single season on Cape Ann. Dan spent several days in the field working on this project. Nick Taormina and I assisted him, thus honing our vernal-pond field-survey skills.

KEA used their funding to subsidize Ponds in the Classroom programs (preschool through 5th grade) and the after-school Conservation Club (6th to 8th grades).

We would like to thank Sam Park for his generous donation.

Massachusetts pond-certification requirements include:

- Photo of the pool in springtime, full of water
- Photo of breeding evidence of obligate or indicator species, such as wood frogs or spotted salamanders (see photo right)
- Locating the pond on three types of maps: US Geological Survey AND color ortho photos (download from Mass. GIS) AND sketch map OR professional survey map OR GPS longitude/latitude coordinates
- Completed field observation forms (these basically describe the pond)

This information is then sent to the Natural Heritage & Endangered Species Program, a division of the Massachusetts Fish & Wildlife Dept., which maintains a statewide database. Their website is: www.mass.gov/dfwele/dfw/nhsp/nhsp.htm.

DID YOU KNOW...

by Nathan Mineo

Did you know that some salamanders and frogs have the ability to delay or accelerate the time to hatch based on the risk of predation? In other words, if there is a predator present that eats eggs, the eggs of some amphibians will hatch early so not as many eggs are lost to the predator. Or, if there is a predator present that eats tadpoles and larva, hatching may be delayed, allowing the embryos to develop into larger, more robust hatchlings that are better able to avoid predation.



Photo by Cheryl Briscoe

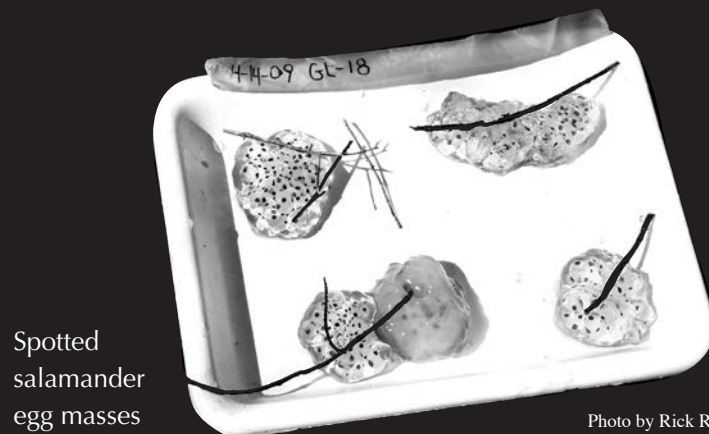
So how do the eggs know when to hatch? This is the question that many researchers have asked, and consequently studies have been conducted that attempt to answer this question. It really depends on the species of frog or salamander being studied, but basically the embryos inside the eggs can detect and respond to chemical cues. The embryos of some species can detect the chemicals released by the predators themselves, while those of other species detect the chemicals released by an injured egg that's being eaten. Pretty cool, right?

Wait, there's more! One species studied (a tree frog native to Oregon) could actually detect the chemical cues of both the predators themselves and injured eggs. Most species can only detect chemicals from one or the other, not both. So next time you see a leech on an egg mass in your favorite vernal pond, ask yourself if the embryos inside can detect the leech or the injured eggs the leech is eating...

Sources:

Sih, A. and R. D. Moore. 1993. Delayed hatching of salamander eggs in response to enhanced larval predation risk. *Am. Nat.* 142:947-960.
Annika L. Anderson and William D. Brown. (2009) Plasticity of Hatching in Green Frogs (*Rana clamitans*) to Both Egg and Tadpole Predators. *Herpetologica* 65:2, 207-213.
Chivers, D. P., J. M. Kiesecker, A. Marco, J. Devito, M. T. Anderson, and A. R. Blaustein. 2001. Predator-induced life history changes in amphibians: egg predation induces hatching. *Oikos* 92:135-142.

Vernal ponds are also known as vernal pools and spring pools. They are confined basin depressions with no permanent inlet or outlet; small, shallow, freshwater, temporary fishless wetlands that have a unique ecology. Vernal ponds provide more food for forest wildlife than any other type of wetland.



Spotted salamander egg masses

Photo by Rick Roth

Dear Fellow Dog Owners:

Almost nothing makes your dog happier than a springtime ramble through the woods. If, like me, you have a golden retriever, or other water-loving mudpuppy, you know that the ponds encountered along the way are totally irresistible.

But our vernal ponds are really fragile, folks. In the time it takes to jump in and jump back out again, a dog can destroy the egg masses of salamanders and frogs, and wreak general havoc on a pond's ecosystem. These unique and vulnerable creatures are no match for this abuse.

You love animals. Please don't let this happen. Leash your dog in the woods, especially at this time of year—if you're not certain what's a vernal pond and what's not, it's better to err on the side of caution. If being restrained is just too frustrating, take your dog to a drier place or the beach (allowed until May 1). Let every frog have its day.

Sincerely,
Teri Dunn (Buddy's "mom")



Illustration by Colleen Anderson



Kestrel Educational Adventures Update

Kestrel Educational Adventures was founded by CAVPT members in an effort to introduce vernal-pond ecology workshops to area schools. Kestrel is now an independent, incorporated non-profit offering several types of workshops. We maintain a close affiliation with CAVPT.

Our staff spent the past year using storytelling mediums to teach science and connect children with their land. Our revamped vernal-pond story-board workshop teaches students to assess habitat and identify hazards for wildlife as they create original stories about amphibian migration. Our new Ecosystems Movies program invites students to cast and direct movies highlighting unique relationships among organisms in special places.



Photo by Jessica Kagle

Instructor Amber Espar teaches Rockport students to use fine details to sketch and identify meadow wildlife.

These and other creative natural-science programs added up to workshops for 1,400 students from 21 schools in 2009. An exciting new partnership is with Rockport Elementary School, where all 1st through 5th grade students are now part of a fall and spring woodland-monitoring program. Meanwhile, the Conservation Club students worked with Essex County Greenbelt Association and other community partners to put together the first-ever map of all osprey nesting activity in Essex County. The upcoming year promises to be full of even more stories and natural connections!

For more information, please visit our website at: www.kestreleducation.org.

Field Trips

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.

Last Year We...

- Led our usual nighttime vernal pond field trips
- Presented Vernal Ponds at:
 - Sawyer Free Library, Gloucester
 - Biodiversity Celebration at Joppa Flats Audubon, Newburyport
 - Gloucester Pride Stride
 - Career Day at O'Maley School, Gloucester
- Held a Vernal Pond Certification Workshop at:
 - Agassiz Rock for The Trustees of Reservations
- Presented "Salamanders" at:
 - The Peabody Essex Museum, Salem
- Made several daytime field trips to photograph amphibian egg masses for certification
- Presented Snakes of New England and the World at:
 - Earthfest at Lynn Woods
 - Rockport Elementary School
 - Riverfest, Concord, MA
 - Halibut Point State Park, Rockport
 - Sawyer Free Library, Gloucester
 - Westborough Community Land Trust
 - Upton State Forest
 - Manchester Cub Scouts
 - Beeman School
 - National Trails Day at Bradley Palmer State Park
 - Great Brook Farm in Carlisle
 - Cape Ann Farmers' Market, Gloucester
 - Essex Library
 - Cub Adventure Day Camp
 - West Parish School Science Fair
- Presented Snake Exhibits at:
 - Camp Spindrift, Gloucester
 - Gloucester Sidewalk Days
 - Brookwood School Sustainability Fair, Manchester
 - Essex County Greenbelt's Harvest Fair
 - Peabody Essex Museum Patron's Event
- Participated in Fantastical Creatures Exhibit at Peabody Essex Museum, Salem

Snake drawing by Ollie Balf

Whale Center of New England

Thanks to the Whale Center of New England for the use of their bulk-mailing permit. Check out their free exhibit on Harbor Loop, open year-round. The Whale Center is looking for volunteer docents for their exhibit, and responders for their marine-mammal stranding program (training provided for both). Call 978-281-6351 for more information, or to report a stranded marine mammal. Please visit the website at: www.whalecenter.org.





The CAVPT Board of Directors

in front of our spiffy new office at 15 Lexington Ave., Magnolia.

Back row, from left: Executive Director Rick Roth, Director Nathan Mineo, Administrative Assistant Tori Rosati.

Middle row: Treasurer Tracy Bowen, Director Cora Hawks, Secretary Karen Camille.

Front row: President Nick Taormina and Vice President Ron Camille.

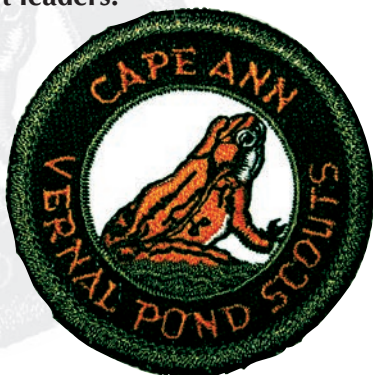
Without You, We Couldn't Be Us.....

We would like to take this opportunity to express our gratitude to those who have generously contributed to our cause. Your support drives our efforts in the community, both through outreach and through certification of vernal pools. CAVPT really depends on your membership fees and donations to continue with our mission. Please contribute as much as you can, whenever you can, and be sure to renew your membership each spring. Thank you!

The Fundraising Committee

Attention, Cape Ann Boy Scouts, Girl Scouts, and scout leaders:

Check out our website for information about our "Scout Patch" Program, and suggested guidelines for both boy scouts and girl scouts. Go scouts! Earn your vernal pond patches.



Norcross Wildlife Foundation awarded CAVPT a grant of \$2000 to purchase field equipment and exhibit materials. Thanks to Norcross Wildlife Foundation for their continuing support.

FEATURED CREATURE

Gray Tree Frog

SCIENTIFIC NAME: *Hyla versicolor*

SIZE: Adults average about 1¾" long.

RANGE: Eastern U.S. and Canada (more or less); locally common throughout the range, but hard to find in some places (like Cape Ann).

DIET: Eats mostly small insects and spiders.



Photo by Nicci Cataldo

DESCRIPTION:

- Sticky feet, often found clinging to moss, lichen, bark, or manmade structures such as the side of a house, a door, or a wooden fence.
- Able to change color from gray to green to match its background, making them almost impossible to spot unless they move or make a noise.
- Inside of legs is bright orange, visible when they jump or climb.
- The breeding call of the male is a short percussive trill that lasts just a few seconds, as opposed to a toad's trill, which can last 30 to 60 seconds.
- They breed in freshwater wetlands, often vernal ponds.
- Newly metamorphosed juveniles are emerald green.
- Lovely little frog.

Press News

Maybe some of you saw the article in **Massachusetts Wildlife Magazine** No. 4, 2008, "The Cape Ann Vernal Pond Team: Defending Vernal Ponds and Inspiring Community Action" by Nick Taormina. Really a nice article with some cool photies. Great publication. Only \$6 a year, four issues.
www.mass.gov/dfwele/dfw/

Look for an article by Sara Lenoë about CAVPT in the spring issue of **Cape Ann Magazine**. Also a very cool publication.
www.capeannmagazine.com

CALENDAR of upcoming stuff...

check out our website at
www.capeannvernalpond.org



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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.



Fairy shrimp drawing
by Ollie Balf



Come see us this spring! CAVPT leads nighttime field trips to witness the annual migration and breeding of spotted salamanders...see inside, or our website, for more details.

How to Protect...

The best way to protect a vernal pond is to own the property. The next best way to protect them is to certify ponds with the Natural Heritage & Endangered Species Program. Certification application reports include photographs, maps and field observation forms. To learn more go to www.capeannvernalpond.org or check out the Vernal Pool

Association's website at
www.vernalpool.org

