

River Talk

Newsletter of the Carantouan Greenway



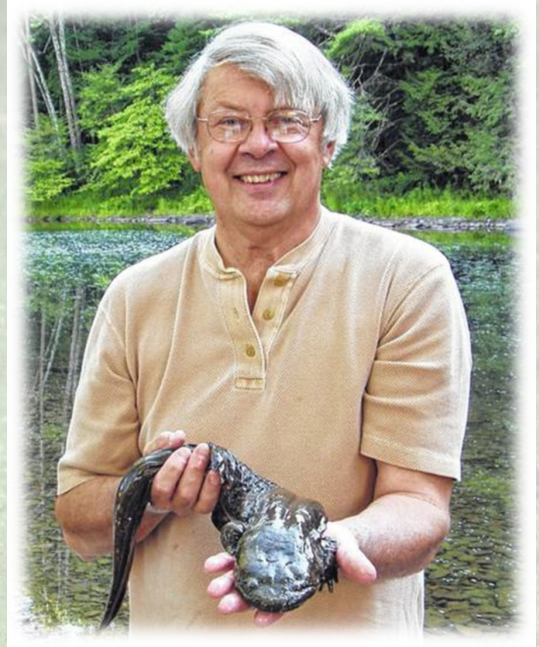
Spring 2018

Hellbender is Topic of Dinner Meeting

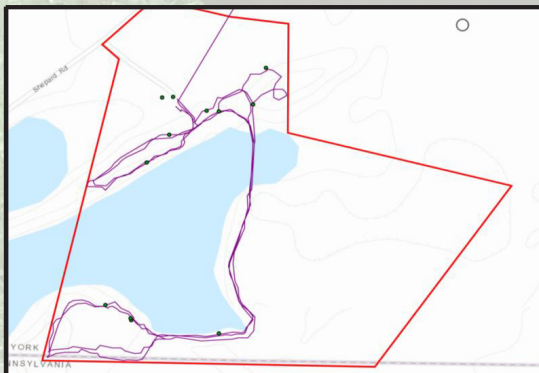
If you never knew there was such a thing as a hellbender living in our rivers and streams you came away from the annual dinner meeting enlightened and brimming with a new cache of knowledge about this interesting creature who is in the running to be named Pennsylvania's official amphibian. Dr. Peter Petokas of Lycoming College's Clean Water Institute has dedicated around 30 years of his career to studying the environments, life cycles and threats to the hellbender. He stated one reason the hellbender is important is that it is an indicator species that reflects the health of our water. They are found in the Allegheny and Susquehanna watersheds. Essentially gone in the north branch of the Susquehanna in New York state they are candidates for the endangered species list. In the early 1900's they were hunted to near extinction because fisherman were under the impression that they were eating fish, particularly trout. Their cousin, the Ozark hellbender, is considered an endangered species.

The hellbender lives under rocks in streams with cool, calm water and can be quite difficult to spot due to the camouflage that makes them look like just another rock. Crayfish are their food of choice but they will eat small fish and other invertebrates. They breathe through their skin and have no gills.

This salamander is not closely related to American species, but is most closely related to the Chinese and Japanese salamanders. The females are larger than the males, but the males guard the eggs, which grow for several months before hatching. These creatures have been imbued with a number of nicknames including snot otter, water dog and Allegheny alligator. Dr. Petokas has caught and microchipped over 4000 hellbenders. He lists threats to the species as removal of large rocks from streams and dams; fish stocking, as trout eat salamander eggs; and invasive species like the rusty crayfish. The most impactful conservation opportunity to protect this fascinating creature is adding large rocks to streams and education about the hellbender.



Trail Map Now Available on Smart Devices



This map spotlights the Greenway's Wildwood Reserve on Shepard Road. The red line is the property border, the purple lines are the hiking trails, and the green dots are Points of Interest (POI), which are hyperlinked to additional details on the actual site.

Funding from a Mildred Faulkner Truman Foundation grant facilitated mapping of trails at several hiking locations in the Valley including Wildwood Reserve, Waverly Glen, Two Rivers State Park, and the Forbidden Trail using GPS and ERSI technology. Maps included numerous trails accompanied by points of interest and photos. A diverse group of people including mapping professionals, naturalists, and community leaders were involved to bring the project to fruition. Another exciting aspect of the project was the ability to capture and embed video, pictures, pertinent information and Points of Interest, resulting in an interactive user experience. The Wildwood Points of Interest link below spotlights additional features. A user can be fully educated on many diverse topics from the comfort of their home, prior to even stepping foot on the trail. Wildwood points of interest link: cgreenway.maps.arcgis.com.

In this issue

- 2018 Cloverleaf 4K Run
- Art Students Get Creative with Birdhouses
- CG Sponsors Tick and Lyme Disease Education
- Giving Tuesday Winners
- Hellbender is Topic of Dinner Meeting
- Seeing Stars
- Trail Maps Now Available on Smart Devices
- Winter Adventure

Carantouan Greenway Sponsors Ticks and Lyme Disease Education in Local Schools

Tioga County is facing a growing public health concern for Lyme disease, which accompanies the growing tick population in our region. In response, the Carantouan Greenway has sponsored the “Youth Ticks and Lyme Disease Educational Awareness Campaign”, bringing information resources and presenters to 1,330 students at six Tioga County schools. The project involves a collaboration with Southern Tier Lyme Support, A Hope for Lyme, PA Lyme Resource Network, Tioga County Public Health Department, Binghamton University, Waverly and Tioga Central School Districts and the Carantouan Greenway. The program has been funded by Community Fund of the Community Foundation for South Central New York (CFSCNY) and the Floyd Hooker Fund of the Community Foundation for the Twin Tiers (CFTT). Information resources, presenter time and tweezers were donated by the Tioga County Public Health Department. Packaging materials were provided by the Morning Times. Pictured is Marty Borko of the Carantouan Greenway holding a white footed mouse for elementary students.



2018 Cloverleaf 4K Run



With winter not quite ready to relinquish to spring, patches of snow could be found on the Carantouan Greenway's trail on a sunny March 17th as runners, walkers, teens, and dogs headed out to the nature preserve's open and wooded trails for the Greenway's annual 4K trail run. The run is a noncompetitive fun run and as such health-themed prizes were drawn randomly. New board member Dakota Relyea warmed runners and volunteers with a delicious homemade soup.

Winter Adventure

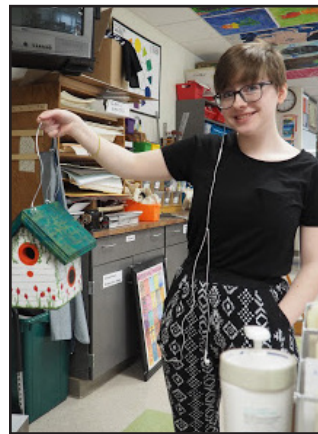
What started out to be a chance to get out of the house turned into a photo opportunity for Larry Salmi. On a winter day he and Sandy Covington headed out to Wildwood Nature Preserve for what they thought would be some fresh air, but instead turned out to be a memorable visit. Here is Sandy's story.



“It had been so cold and snowy, we had a little cabin fever and decided to take a ride. We were going by and noticed there were no tracks in the drive there but it looked like we could make it in. We thought it might help others to get back in there. As we drove in Larry noticed the bobcat and I handed him the camera. The snow was probably a good 10”+ deep that day. The bobcat was in no hurry as it made its way around the field there until it was out of sight just behind the parking lot.”

The Greenway hopes you get a chance to get out and find your own adventure.

Art Students Get Creative with Birdhouses



Athens High School student displays creation.

Some lucky birds are going to be living the “high life” in designer homes this year. The Greenway recently donated dozens of birdhouses to local high school art classes so students could design and paint unique abodes for our feathered friends. Students from Athens High School and Notre Dame flexed their design muscles and imaginations. Athens art teacher Andy Wales reports that his students were “thrilled to have this opportunity”.



An interpretation from a Notre Dame High School student.

The requirements for students were that the houses had to follow the rules of design and be placed outside for birds to use. See more of their great designs at <https://aahsart.blogspot.com/2018/04/the-birdhouse-project.html?m=1>

Seeing stars

The remarkable sensory adaptations of the star-nosed mole

Here's a riddle:

I touch with 22 fingers...

I can see in total darkness...

I can catch and eat my prey faster than you can blink...

I can smell inside a bubble...

And though you might never have met me, I'm your neighbor, and you've probably stood right outside my walls.

Who am I?

A fantastic chimerical beast of legend? Good notion, but no. Maybe some human lesson veiled in tricky metaphors, as if by the Sphinx? Also plausible, but wrong again.

The answer, amazingly, is an actual animal, seemingly too strange to be true, but alive and real. Meet the star-nosed mole.

The riddle's answer lies in the mole's remarkable snout. The star consists of 22 fleshy pink appendages, or "rays," which radiate from the point of the mole's narrow nose, in arcs of 11 around each nostril. Each ray is covered with tiny bumps called Eimer's organs, which contain specialized nerve endings for detecting shapes and textures. Each star, with about 25,000 Eimer's organs, has six times more sensory neurons than an entire human hand.

Neurobiologist Kenneth Catania of Vanderbilt University has noted astonishing analogies between the mole's touch perception and the eyesight of surface-dwelling animals, including humans. The mole browses its dark network of tunnels, pressing the star rapidly here and there against the walls to generate a broad scan, just as we build a mental image of our surroundings by shifting our eyes from spot to spot. When any ray touches a possible food item, the mole then applies subsequent touches with the two most sensitive rays, at the bottom center of the star. Like the fovea of the retina, these central rays are relatively small but have disproportionate nerve density and processing area in the brain, thus allowing the mole literally to focus on objects of interest, but with touch instead of sight.

Immediately after these ultra-sensitive rays zoom in and confirm something edible, they part to make way for the mole's tweezer-like front teeth to snap up the prey. The mole carries out this whole process, from identification to ingestion, with speed unmatched by any other known mammal -- as fast as 120 milliseconds, or more than twice as fast as a blink of your eyes. Such speed, Catania suggests, has allowed the mole to adopt an expanded diet, including very tiny prey that wouldn't provide sufficient caloric reward to be worth the time of slower foragers.

Aside from its singular snout, the star-nosed mole also differs outwardly from other mole species by its unusually long tail. In winter and spring, the tail thickens with fat deposits, which may serve as energy storage or a means of heat retention. Otherwise, the star-nosed mole looks much like other moles, with very thick, dark fur and short, strong forelimbs with long claws for digging. Star-nosed moles have tiny eyes, which probably serve only to distinguish light from dark.

Star-nosed moles live throughout eastern North America, from central Canada to the Atlantic, south to the coast of the Carolinas and Georgia. Star-nosed moles are common in the Finger Lakes region, but are rarely seen because they spend almost all of their time under the surface, out of view.

More than other mole species, they favor areas with wet soils, such as moist woods, edges of ponds and waterways, marshes,

and poorly drained meadows. These soft, saturated soils were likely a defining factor in allowing the star to evolve with such



Ken Catania

complexity and exquisite sensitivity, as mole species that live in drier soils have tougher snouts with fewer Eimer's organs. Star-nosed moles can dig approximately 8 feet per hour, with tunnels extending from the surface to depths of up to 2 feet. Active year-round, they also create tunnels through snow.

The tunnels of star-nosed moles often open directly underwater. Unlike other moles, they are strong swimmers, propelling themselves with powerful alternating forepaw swipes. Remarkably, the star-nosed mole is the first mammal, along with the water shrew, with the known ability to smell underwater. It does so by blowing bubbles through its nostrils onto submerged objects or scent trails, then quickly inhaling the bubbles back in, several times a second. The mole can stay underwater for about ten seconds before having to catch a breath at the surface.

So, no, the star-nosed mole is not a mythical creature, nor an allegory, nor a crazy flight of imagination. Indeed, thanks to the discoveries of science, it's even becoming less and less of a riddle. Rather, it's a marvelous reality of our world -- utterly unique and practically right next door. -- Mark Chao

Reprinted with permission from *The Land Steward: Newsletter of the Finger Lakes Land Trust*, Winter 2017-2018, Vol. 30, No.1.

Giving Tuesday Birdhouse Winners Announced



In celebration of Giving Tuesday the Carantouan Greenway sponsored the Ralph Geiger Birdhouse Giveaway. The Greenway wishes to thank all those that entered, as well as those that helped support the event, including 911 Earth, the Waverly Library and Ralph and Diane Geiger. Congratulations to our winners Cynthia Lord, Claudia Wilson and Marcia Kesten."

Pictured are Wilson, Greenway's Theresa Pipher, and Lord.

Friends of the Carantouan Greenway

Yes! Count me in! I believe in protecting farm and forestland, wildlife habitat and watersheds in the Penn-York Valley. I want to become a member of Carantouan Greenway!

- Mighty Oak \$500/year
- Golden Eagle..... \$75/year
- Stargazer \$50/year
- Trailblazer \$25/year
- Other \$ _____
- Renewing member** **New member**

- I would like to receive the newsletter via email. Email address _____
- I prefer to receive the newsletter in the mail.
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Gifts to Carantouan Greenway are fully tax deductible! (Tax ID Number 23-2750872)

Please send all contributions to Carantouan Greenway, P.O. Box 441, Sayre, PA 18840-0441 or P.O. Box 827, Waverly, NY 14892-0827 or on-line at carantouangreenway.org/joinonline



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