Newsletter Spring 2018

NH Water and Watershed Conference Highlights

Scientists and managers from across New Hampshire gathered on March 23 to hear the latest science and issues pertaining to water. The keynote speaker was UNH Assistant Professor Wilfred Wollheim. He accurately noted that water quality monitoring is undergoing a major shift. In the past, the condition of our waterways was assessed by taking single samples once a week, or once a month, or even once a year. The snap-shot results revealed a few traits that are important to wildlife and humans. These include temperature (colder is better), pH (a measure of acidity), dissolved oxygen (how much oxygen gas is dissolved), conductivity (an indirect way of determining how much salt is dissolved), turbidity (how cloudy the water is), *E. coli* (bacteria associated with human and animal feces), and maybe the concentrations of nitrogen and/or phosphorus (nutrients that act as fertilizers to algae). These single tests, while helpful, were and are woefully simplistic. As Wolheim noted, “And that's like trying to listen to a symphony by hearing only one note in every hundred.”

The new, state-of-the-art monitoring involves deploying sampling devices that test and record multiple water traits every fifteen minutes for an entire sampling season. The amount of data that these devices record is immense, but computers can sort and graph the details. And those details are awesome and exciting. Instead of saying that Stream X had this much dissolved nitrogen at 10:00 A.M. on June 15, the graph shows that dissolved nitrogen fluctuates with changes in flow, or over the course of a rainstorm, or with daily changes in dissolved oxygen after the sun goes down and photosynthesis stops for the day. These details help researchers better understand how the stream or lake actually functions and help managers focus limited resources to obtain the best results.

The Lamprey River is fortunate to be a key study area of this exciting research. If you would like to learn more, visit https://seagrant.unh.edu/storm-event-nitrogen-fluxes and then click on the short video at the bottom of the article.

Spring Events along the Lamprey River

- Earth Day Clean-up and Celebration April 21 at Mary Blair Park, Epping, 10-noon
- Nature Inside (Out) at the Epping Library, April 27, 11:00
- Lamprey River Canoe Race April 28 (sponsored by Epping Lions)
- Herring Aid May 12, Macallen Dam, Newmarket, 10:00-noon

Vernal Voles


Photo credit Maine.gov

Late winter/ early spring is a great time to observe meadow voles (*Microtus pennsylvanicus*)**.** These small rodents are common in wet grassy areas throughout middle and northern North America. Adults are about 7 inches long, with a tail of 1.25 to 2.5 inches. They have chestnut brown fur with gray bellies. Voles breed year-round, producing 4-6 pups per litter. Pups are weaned after twelve to fourteen days and reach their full adult size at two to ten months. The typical lifespan is less than 16 months.

Voles are active year-round, but when the snow starts to retreat, the presence of these normally hidden creatures becomes most noticeable. During the winter, they dig and eat their way through flattened grasses under the snow, creating squiggly paths. They form nests of woven grass where they sleep and raise their young. As the snow depth decreases, these paths and nests become more visible. For hikers who are extra astute, communal toilet areas can also be seen.


vole shallow tunnels and deep mole tunnel hole
photo by RC Grimsley


exposed vole nest
photo by RC Grimsley

Voles can cause damage to some human crops, but they are very important ecologically. They help to break down plant matter and release the nutrients back to the ecosystem. They help to speed the recovery of fields that have been burned. They are food sources for most raptors and many other birds, including crows, gulls, and some wading birds. They are eaten by most mammalian predators and some snakes.

As winter yields to spring, go outside and get away from the usual rat race; evidence of the vernal vole race awaits.

Improving Access to the Lamprey River



The Lamprey Rivers Advisory Committee is assisting several towns to improve access areas for paddlers and other visitors. Most of the projects are in the planning stages, but enthusiasm is already running high. Please contact us at info@lampreyriver.org if you would like to help with any of these projects.

In Newmarket, the new Schoppmeyer Memorial Park is taking shape. The site is located behind the Newmarket Community Church and will feature benches, picnic tables, and carry-in boat access. The town's park advisory committee is also looking into the possibility of including a handicap- accessible kayak launch. The LRAC donated money for the purchase of the site and will help with the design of a kiosk dedicating the park in memory of Chris Schoppmeyer.

Also in Newmarket, a pocket park located adjacent to the top of the fish ladder is being planned as part of repairs to the Macallen Dam. Following dam repairs, invasive weeds will be removed, soil and fresh plants will be brought in, and benches, picnic tables, and a kiosk will be installed. Planners are considering including a kayak ramp so that paddlers can safely transfer between the freshwater portion upstream and the salt water portion downstream of the dam.

In Epping, the canoe landing at the Route 87 bridge crossing is in need of repairs and reconfiguration. This is the finish area for the annual Lamprey River Canoe Race. The Epping Conservation Commission and LRAC are looking at alternatives for relocating the canoe launch to a safer area within the site, preparing to replenish gravel for the parking lot and do trail maintenance on the flood plain educational path, and potentially replacing a tired kiosk.