

## Newsletter Spring 2015



### **Phenology: To Everything, There Is a Season**

After two blizzards, tons of snow, and unending cold, most of us are looking forward to spring. Real spring might take a while to get here, but if we note the small changes, we are sure to see progress. This is what phenology is all about: the study of cyclic and seasonal natural phenomena, especially in relation to climate and plant and animal life.

The more carefully we observe nature, the more we can see that spring is on its way. We don't need to wait for the first red-winged blackbird, the first robin, or even that patch of crocuses. Here are some signs of hope:

- Note the change in day length every day. Sunrise will be a little earlier and sunset will be a little later each day. On March 20, the spring equinox will mark the official start of spring and we'll have twelve hours of daylight to counteract twelve hours of darkness. Day length will continue to increase until the summer solstice in June.
- Watch the buds on your trees and shrubs. As more water becomes available in the soil, more water will get pumped into the plant, swelling the buds in preparation for blossoms.
- Keep your eyes open for hatches of spring insects. Some mayflies begin to hatch as early as early March. Don't worry; these are not the pests that will plague us later when the really warm weather returns.
- Listen for changes in bird songs. The weather might still be cold, but birds must keep to their schedule and start their families on time.



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Most of us are ready for spring, but is nature? Citizens are being asked to share their phenology notes with researchers to help them discern changes in the usual natural schedule. When are certain insects hatching? Are migratory birds arriving in time to maximize the available food for their chicks? When are fruiting trees blossoming? If you are an astute observer of nature or want to be, groups such as [New Hampshire Audubon](#) and [NH Sea Grant](#) are eager to hear from you.

## Take a Hike: The Lamprey River Receives National Park Service Grant

The National Park Service will be celebrating its 100<sup>th</sup> anniversary in 2016. To help connect the nation's designated natural and historic areas to the people they serve, national parks, including Wild and Scenic rivers, were invited to submit ideas for grants that help build those connections. The Lamprey River has been awarded one of those grants.



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Canoeing the Lamprey is an obvious way to enjoy the river, but for those who prefer to enjoy the river by walking along it, existing opportunities are patchy. The Lamprey Rivers Advisory Committee was awarded \$6000.00 to perform a feasibility study whose goal is to create a footpath along the entire length of the river, from Northwood to Newmarket.

A few short trails already exist. Several properties that have conservation easements along the river have public access stipulations that could allow walking paths. Several towns own property along the river that might be developed for walking paths. Informal paths for fisherman to access the river exist and some of these might be suitable for inclusion in a linked trail.

This project will not include actual trail development, but it will lay the groundwork for towns to publicize existing trails and identify other possible walking paths. No trails will pass through private property unless the landowner specifically agrees. (The state of New Hampshire absolves landowners of any liability as long as they don't charge a fee for entry onto their land.) The project is also intended to identify ecologically sensitive areas where a foot path could result in erosion or harm to threatened species. In those cases, the goal is to find alternate, less harmful routes or investigate how impacts could be reduced or eliminated.

A trail that covers the almost 50 mile length of the Lamprey River corridor is an exciting and daunting challenge, so the plan is to begin with a 22-mile stretch in the lower part of the river. There is no guarantee of success, but as Margaret Mead famously noted, "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has."

## Musseling into Clean Water

Mussels aren't usually considered to have very strong muscles, but the work they provide to the river and its inhabitants is Olympic in scale. Mussels are filter feeders: they draw water into their bodies, collect small particles of food, and then expel clean water. This simple act, repeated thousands of times each day

and by many mussels, results in water that is much cleaner than it would be if there were no mussels.



eastern elliptio mussel  
image from <http://en.wikipedia.org>

The most common mussel in the Lamprey River is the eastern elliptio. It lives in the softer sediments where it can burrow out of sight and the flow of water is slower. Often, the only whole mussels that people see easily are those that have died or whose home has been disturbed by other animals or low water. With practice, mussel “necks” or siphons can be seen sticking out just above the sediment surface.

The Lamprey has several species of mussels and, up until the recent past, the river was home to healthy populations of several rare mussels. These rare mussels, including the endangered brook floater, are not doing well and might disappear altogether in the near future. The big floods of the last few years appear to have fatally impaired or buried most individuals. Recent studies have shown that the few rare mussels that remain are widely separated and are unlikely to be able to breed. No juveniles of the rare mussels have been found.

In Great Bay, American oysters are the important filter feeders. As with the river’s mussels, oysters actively clean Great Bay’s water. Oysters historically have been present in large numbers, but have been declining in recent years. The exact cause of the oyster decline is not certain, but nutrient pollution and heavy loads of flood-driven sediments from rivers are likely candidates. Researchers and volunteers are trying to bolster the number of American oysters through habitat restoration and assisted breeding programs.

Many surveys show that clean water is a top priority for most people. Mussels and oysters are ready to do their part. People can and must do their part to help these filter feeders succeed.

To read more about the mussels of the Lamprey, please visit <http://www.lampreyriver.org/about-the-river-lrac-studies-mussel-survey>.

To read more about oysters in Great Bay, please visit <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/newhampshire/oyster-restoration/>.

### **Spring into Fun: What’s Happening... Please join us!**

- Lamprey Rivers Advisory Committee meeting: March 26, 2015, 7:00, place to be determined.

- Lamprey Rivers Advisory Committee meeting: April 23, 2015, 7:00, place to be determined
- Lamprey River Canoe Race, Epping, April 25
- Hike It history and nature tour at Wiswall Falls, Durham, May 3, 2015, 11:00- noon
- Herring Aid: May 9, 2015, 10:00 -1:00, McCallen Dam, Newmarket  
Join NH Fish and Game researchers as they count river herring and help them up the McCallen Dam fish ladder and on their way upstream. Expect to see and handle plenty of fish and juvenile eels! Park in the municipal lot behind the library and follow signs.
- Bike It history and nature tour in Lee, May 17, 2015, 9:00 – 11:00
- Like It history and nature exploration at Mary Blair Park, Epping, June 7, 2015, 10:00 - noon

### Calling All Illustrators



The Lamprey Rivers Advisory Committee is working on a children's history and tour book of the Lamprey River. The target audience is pre-schoolers and early readers. The book will be printed and donated to local libraries, schools, and partners in environmental protection and history. It will also be available for free download on [www.lampreyriver.org](http://www.lampreyriver.org). We are seeking illustrations and design proposals for this publication. Our goal is to have the book completed and ready for initial distribution by fall, 2016. For more information, please email [s-meeker@comcast.net](mailto:s-meeker@comcast.net) or call Sharon Meeker at 659-5441. To be considered for this project, please submit a proposal by April 30, 2015.



photo nps.gov



Folsom's Mill  
west Epping

“Would you like an adventure now, or shall we have our tea first?” --Peter Pan