

## Newsletter Winter 2013



### **New Kiosk Panel Installed at Wiswall Falls**



Richard Lord, member of the Wiswall Historic Interpretation Committee and LRAC, stands next to the newly-installed NRCS historic interpretation panel located at Wiswall Falls. *Courtesy Richard Lord*

Wiswall Falls in Durham has been a hub of activity in recent years. A new bridge was installed in 2009. A kiosk was constructed and installed and two historic panels were placed in the kiosk in 2010 (panels can be viewed at <http://www.lampreyriver.org/parks-wiswall> Panels 1 and 2). In 2011, the dam was repaired, a Denil fish ladder was installed, and a series of fish “plunge pools” was installed. In the spring of 2012, approximately 30,000 river herring made use of the fish ladder to get up and over the dam and access historic spawning grounds upriver.

The most recent activity was the December 2012 installation of a new panel designed by the Wiswall Historic Interpretive Committee and the Lamprey Rivers Advisory Committee. It was funded by the USDA Natural Resources Conservation Service (NRCS) as historic mitigation when the fish ladder was built. You can view the new panel at Wiswall Falls or by checking out Panel 3 at <http://www.lampreyriver.org/parks-wiswall>.

## **2013 Lamprey Rivers Management Plan**

The original Lamprey River Management Plan was written in 1995 and was an ambitious undertaking. In 2007, a revision was completed and has served as the guiding document for LRAC activities. With the addition of ten new towns represented in LRAC, the need for another revision was clear. The committee is hard at work adding new projects, adjusting focus areas, and seeing an even bigger picture that covers the 212 square miles that comprise the Lamprey River drainage area.

New Hampshire RSA 483, which created the Rivers Management and Protection Program, lists the creation of a management plan as one of the duties of a local river advisory committee such as LRAC. The committee is making good progress and a draft version will be available for review shortly at [www.lampreyriver.org](http://www.lampreyriver.org) as well as at the town halls for the fourteen towns. If anyone has comments or suggestions, please forward them to Mike Russo, LRAC chair, at [M.Russo@dover.k12.nh.us](mailto:M.Russo@dover.k12.nh.us), or Sharon Meeker, outreach chair, at [s-meeker@comcast.net](mailto:s-meeker@comcast.net) or call her at 659-5441.

## **2012 Small Grants Wrap-up**

Three Small Grants were selected for funding in 2012. These grants were offered through the Small Grants Program managed by the Outreach Sub-committee. Grantees summarized their projects and turned in their final reports to the Wild and Scenic Sub-committee at the February meeting.

Dawn Genes of the Lamprey River Watershed Association described her work to create a working, up-to-date database of the 38 dams in the lower watershed. For each dam listed by the NH Dam Bureau, she took photos, evaluated the site for evidence of damming and potential obstruction of fish passage, and documented the potential for removal or alteration. Of the dams she studied, only two had the potential for improving fish passage: Wadleigh Falls in Lee and the Piscassic Dam in Newmarket. Both dams prevent fish passage, but could be modified with natural stone placement to allow better passage. Most dams were not found to block fish passage. Other dams were not good candidates for additional effort because they were blown out or were associated with dug ponds or access roads to private houses. Culverts and road crossings were found to be more of a problem to fish passage than were dams.

Nicole Bizzaro and Kim Milliken of Epping Recreation described their project to develop a master plan for Mary Blair Park. The park currently is primarily used for youth baseball. The work the grantees undertook resulted in several GIS maps of the park, including soils and natural features. They created a framework for a natural playground and educational opportunities that would help teach children about the natural assets of the park and the river. In the process of developing

the plan, several Epping partners got involved. The conservation commission discovered that cars were being parked on the roots of trees that abut the river, thus posing a potential erosion issue. It was also discovered that lawn clippings were being dumped close to the river. The plan for the park has taken these facts into consideration and the whole community will benefit from the collaborative nature of the planning process.

Michael Vose of the Epping Historic Society used his Small Grant to work with professionals to plan a trail highlighting the historic features of Mary Blair Park associated with the former Folsom Mills and Bunker Pond Dam. In addition he also created a plan for a park-wide trail system that connects nature and history. The trails are mapped and ready for volunteers to begin work.

The Committee thanks the grantees for their creativity and efforts.

### **2013 Small Grants Program**

Do you have a BIG, creative idea for a Small Grant? Proposals for Small Grants up to \$5000 are now being accepted for consideration. Proposals must enhance outreach and address needs identified in the Lamprey River Management Plan 2007 Revision available at <http://www.lampreyriver.org/about-us-2007-mgmt-plan-revision>. Details about the Small Grants Programs are available at <http://www.lampreyriver.org/about-us-2013-small-grants-program>. We hope to hear from you soon!

### **Snow Specks**

Few phenomena are as perfect as fresh snow: it is pure and white, it is smooth and peaceful, it protects the soil below against the harsh cold of winter, and it is oh-so fleeting. Freshly fallen snow rarely stays smooth and white; critters walk across or through it, trees drop twigs, branches, and other debris. Don't despair; some of the specks that litter the snow are worth a closer look.

White, or paper, birches are colonizers of open soil. By looking for their seeds in winter, it is easy to see why and how they colonize so successfully. Birch seeds develop in tiny cone-like bundles called catkins. These catkins and their seeds develop during the growing season, but they aren't released until winter. The trefoil, or three pronged bract, is similar to the hard plate of a cone. As in a cone, that hard part helps to protect the seed during development. The actual seed is smaller and much lighter. Again, as is true with the seeds associated with cones, birch seeds have wing-like membranes that help to carry the seeds far away from the parent tree. If you look carefully on the surface of snow, or in the picture below, you can see both the bracts and seeds. These speckles on the snow are signs of things to come, if the seed lands on a suitable place to grow.



This photo shows the remains of a white birch catkin in the upper left corner, bracts at the top, and the pencil is pointing to a seed.

photo from [botit.botany.wisc.edu](http://botit.botany.wisc.edu)

Another cool snow speck to observe is the snow flea, with a length of 1-2 millimeters. These insects are present year-round, but in winter they become really easy to see, especially when they gather in large groups. Snow fleas are not really fleas; they belong to the springtail family. They are decomposers, eating bits of plant debris or tree sap, not animals. They are most easily seen on warm winter days at the base of trees. They look like tiny dark specks, but these specks move, a lot. Their tails are spring-loaded. When the lock is released, the energy in the tail causes the snow fleas to spring up by a few inches. Their movements are random, so when watching them, sometimes it is fun just to blur one's vision to see all the activity.

Snow fleas are able to remain active in winter due to natural, protein-rich anti-freeze. Scientists at Queens University in Canada have been studying the anti-freeze in hopes that it will enable longer storage times for transplanting human organs. According to an October 21, 2005 article in [www.physorg.com/news7456.html](http://www.physorg.com/news7456.html), organs for transplant must be kept at the freezing point or slightly higher. If the organ can be stored at a cooler temperature, it can be preserved for a longer period of time. Once in the recipient's body, the organ warms and the anti-freeze breaks down quickly. The patient can then eliminate the protein and reduce the risk of antibody development.



snow fleas photo from [www.cjclandandseaphoto.com](http://www.cjclandandseaphoto.com)

### **Little Stinkers**

Most people recognize the familiar large leaves of skunk cabbage in spring and summer, and some have had the misfortune of having their noses assaulted by

the stench of damaged skunk cabbage tissue. These prolific plants provide knee-high ground cover along streams banks, flood plains, and other wet areas.

In late winter and into early spring, well before the plant's leaves cover the ground, skunk cabbage is literally all fired up to escape the cold grip of winter. What? A plant can have its own furnace?



photo from  
<http://www.nwf.org/Wildlife/Wildlife-Library/Plants/Skunk-Cabbage.aspx>

*And Spring arose on the garden fair,  
Like the Spirit of Love felt everywhere;  
And each flower and herb on Earth's dark  
breast  
rose from the dreams of its wintry rest.*

*~Percy Bysshe Shelley, "The Sensitive Plant"*

Skunk cabbage is a rarity in the plant world in that it is thermogenic and actually creates its own heat through the breakdown of certain sugars and amino acids. The pollen-producing stigma of skunk cabbage is not frost-tolerant, so the plant maintains an internal temperature of 68-70° F for about two weeks, even when the air outside is freezing cold. The heat causes snow and ice surrounding the plant to melt away, leaving small, cleared areas with a stiff, hooded plant at the center. Inside the hood sits a flower without petals that smells of carrion. The season's first insects pollinate the plants, converting "death" into life. Once the pollen has been shed, the plant stops producing its own heat.

Skunk cabbage is a long-lived, perennial plant. Some estimates indicate that some individual plants might be up to a hundred years old. Few animals eat the plant. It is not toxic, but it is unpleasant to eat, due to its rank odor and the hot, peppery sensation its calcium oxalate raphide crystals deliver when eaten. In French Canada, the plant is called *tabac du diable* ("devil's tobacco") or *chou puant* ("stinking cabbage"). No matter what it is called, this plant is not a typical flower, but it is an easily recognized plant of the Lamprey rivers landscape.

*The Lamprey Rivers Advisory Committee-  
Protecting the rivers that connect our fourteen communities.*