



Watershed News

THE PISCATAQUOG WATERSHED ASSOCIATION NEWSLETTER

OUR MISSION

TO CONSERVE THE
NATURAL AND SCENIC
ENVIRONMENT OF THE
PISCATAQUOG RIVER
WATERSHED AND
PROTECT THE PURITY
OF ITS WATERS.

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Volume 14, No. 4
August 2002



>>> PWA SPEARHEADS INNOVATIVE *Streambank Restoration Project*

by Margaret Watkins

When streambank erosion threatens roads and bridges, installing rock riprap is the typical solution. But this "solution" often has unfortunate consequences, including the displacement of riverbank trees, loss of both upland habitat and stream habitat, and the creation of additional erosion problems downstream of the "armored" bank, which does little to dissipate the energy of flowing water. For these reasons, the PWA has teamed with other organizations to explore a relatively new approach to bank stabilization at the Gregg Mill bridge off Route 13 in New Boston – an approach that we hope will be a model for the state. Last spring the PWA received a grant from the NH Department of Environmental Services (NH DES) to protect the bank and stream habitat using "natural" techniques that redirect flow away from the bank.

The plan is to install:

- >>> Two log veins projecting from the bank into the river
- >>> Two root wads to protect the bank and veins
- >>> An ice bumper to protect existing trees from further ice damage
- >>> A porous rock weir, to be placed upstream of the veins

The veins and weir are designed to redirect flow toward the center of the river and improve habitat for fish. The project also involves redirecting runoff from Route 13 away from the bank, redirecting parking to the other side of the river, and replanting the bank. St. Anselm College, a co-sponsor of the project, is providing design assistance and supervision of all activities affecting stream habitat. Barry Wicklow's Aquatic Ecology and Conservation Biology students will do pre- and post-project monitoring together with other partners. Trout Unlimited (TU) is also providing technical assistance and volunteers to help with revegetating the bank. Jim MacCartney, TU's River Restoration Specialist, will supervise installation activities.

The Town of New Boston owns the property and is working with the PWA on the project. Also assisting are the NH DES, NH Department of Transportation, and the Natural Resources Conservation Service. TU, St. Anselm College, NH DES, and PWA form the steering committee.

Key goals of the project are:

- >>> To protect critical habitat for a population of rare Brook Floater mussels from sedimentation. Dr. Barry Wicklow has been studying this mussel colony for ten years.
- >>> To protect the remaining trees along the bank. These shade and protect the river, but are being undermined by erosion.
- >>> To improve fish habitat in a small portion of a river system with numerous special places for anglers.

We have received a wetlands permit for the project, which is scheduled for mid-August and involves working with equipment in the river to install the veins and weir. Materials will be stockpiled at the site prior to then, so don't be surprised to see large boulders, logs, and tree stumps along the road. If you know of sources for these materials near the site, please call Laurie at 487-3331.

"The PWA bank restoration project involves all the aspects we like to see in a proposal for restoration funding – solid partnerships, innovative treatment techniques, and measurable results that pertain directly to degraded habitat and aquatic communities at risk," said Steve Landry, Merrimack Watershed Supervisor at NH DES. "This also marks one of the first large-scale bioengineered erosion control projects that DES has funded. We're looking forward to the success of this effort and the opportunity to transfer these methodologies to other streams and watersheds throughout the state."

photograph by Cindy Stave



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CONSERVING THE ECOLOGY OF THE PISCATAQUOG RIVER WATERSHED

by Ellen Snyder

Brook floater, Fowler's toad, Eastern hognose snake, wood turtle, pied-billed grebe, marbled salamander, and bobcat are some of the wildlife that we hope to document in the Piscataquog River watershed through the PWA & NH Living Legacy Project partnership.

In addition to documenting evidence of rare wildlife and plant species, the partnership will identify and map critical wildlife habitat, outstanding examples of natural plant communities, unique geologic features, wildlife corridors, and other features that contribute to the ecological health of the river and its watershed.

A grant from the U.S. Forest Service, State and Private Forestry, provided this opportunity. At an initial informational meeting on June 20 in New Boston, Ellen Snyder presented the overall concept for the watershed project and the statewide planning efforts of the Living Legacy Project.

The Project aims to protect the full spectrum of biological diversity in the state through voluntary land conservation and sound stewardship by landowners, communities, and land trusts. Dan Sundquist, Science Director for the Society for the Protection of NH Forests, showed a sample of maps produced for another watershed project on the seacoast. Dan will create similar GIS maps for the Piscataquog project.

For people and communities in the Piscataquog River watershed, we hope this project will generate enthusiasm to learn more about the watershed's ecology, what it means to their well-being, and how they can continue to enjoy a healthy watershed. We're excited about the tremendous amount of work that has been done already by conservation commissions, Keeping Track volunteers, landowners, researchers, teachers, students, and others who have explored, studied, and mapped important natural areas and features. We look forward to collectively pulling this knowledge, skill, and information together into a conservation plan that can guide land conservation and stewardship of the Piscataquog River watershed into the future.

Our immediate next steps for the watershed project are:

- To gather existing information from each of the watershed towns. Sarah Uhl, a student intern from ConVal high school, is helping the PWA gather this data. She will be contacting conservation commissions and others familiar with natural resource inventories in their town.
- To work with the Keeping Track volunteers in the watershed to digitize and map data from their wildlife tracking surveys and to collaborate on additional surveys to verify mapped habitat information.
- To establish a rare wildlife species atlas for the Piscataquog River watershed. Ellen Snyder is working with NH Fish & Game to develop a list of rare species and a reporting form. Anyone who would like to contribute to the atlas can request a form when the forms are ready this fall.

If you would like to receive regular project updates or contribute data, please contact Laurie Terwilliger of the PWA at 487-3331 or laurie@pwa.mv.com, or contact Ellen Snyder at 862-4277 or ellen.snyder@unh.edu.

Ellen Snyder is a UNH Cooperative Extension Biodiversity Specialist and the NH Living Legacy Project Coordinator.



Photograph by Joel Stave

Salmon Released in Goffstown

by Lois Wicklow

On June 17, twenty-two very eager and excited 4th grade students from Goffstown released 183 salmon fry juveniles into the Piscataquog River.

The salmon were raised in a PWA-supplied classroom incubator after Gordon Russell delivered the orange-colored eggs from the Nashua Fish Hatchery in January. During the next six months, the class observed the development of the eggs into the alevin and fry stages. The project engaged the students on many levels. As one youngster said, "It's cool to raise salmon because you're the grownup and it (the salmon) is like your child."

An intensive study of the Atlantic salmon and the Piscataquog River Watershed concluded with a Salmon Open House. Students presented various salmon projects to parents, including a map showing the migration route of the Atlantic salmon, a demonstration of a watershed (using a spray bottle to make rain), a model of a fish ladder made from Legos, and a board game about the life cycle of the Atlantic salmon. Mr. Russell also gave an enthusiastic slide show about the Piscataquog River Watershed.

This experience has touched the hearts of students, who now have a special connection with and love for the Piscataquog River. One student summed up the experience by saying, "It was really fun and a once in a lifetime experience."

PWA thanks teacher Lois Wicklow for her support in making the Adopt-A-Salmon program a vital experience for her students in Goffstown.



Gordon Russell looks on as teacher Lois Wicklow releases the last salmon fry. Photograph by Howard Gagnon

...and in Frankestown

Kim Heald's 3rd grade class in Frankestown also released more than 170 salmon fry into the Piscataquog River for the second year in a row. (Last year's release was covered in depth in the July/August 2001 *Watershed News*.) This year's fry were twice as big as last year's and the students wished them well on their long journey to Greenland and back. *Thanks again to Gordon Russell, Ms Heald, and other supporters who made this year's program a success.*



PLEASE CHECK YOUR MAILING LABEL.

If it has a red line, your membership is due for renewal. Won't you please renew right away? And tell a friend about PWA! We depend on your support!

- ☐ \$10 Student/Senior ☐ \$25 Family ☐ \$100 Wood Turtle (Gift option: PWA fanny pack)
☐ \$15 Individual ☐ \$50 Salmon (Gift option: "Vernal Pools" book) ☐ \$250+ Deer (Gift option: Handmade walking stick)
☐ Check here if you want the optional gift premium listed for higher levels.

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Remember to check the other side of this form. Then return it with your payment to:
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THANK YOU SO MUCH FOR YOUR CONTINUED HELP IN PROTECTING THE WATERSHED!

**RARE OPPORTUNITY TO
LEARN FROM A MASTER TRACKER**

SUSAN MORSE

to Give Training in New Boston

WHEN

Sunday, September 15, 10 AM to 4:30 PM

WHERE

New Boston

INFORMATION

Call Gordon Russell at 487-2994

If you've ever wondered what Keeping Track is all about – or you want to hone your animal tracking skills – here is your chance to learn from Susan Morse, the woman who started it all. Susan is nationally known and respected by conservationists for her work as a tracker and photographer, and especially for her exceptional expertise as a wildlife educator.

Gordon Russell has arranged to bring Susan to New Boston for a daylong training session. Since the original PWA trackers were trained in 1996-1997, the data they have collected has been key in protecting land in the watershed. As we work with the Living Legacy program (see article on page 2), we want to expand our Keeping Track program to collect data from more areas in the watershed. We hope you will join us and invite an interested friend! (Nonmembers from the watershed are welcome, space permitting.)

Participants are asked to make a tax-deductible donation of \$50 to Keeping Track, Inc. for this unique opportunity.

Space is limited to 20 participants, so call 487-2994 now to register.

Photograph by Cindy Stave

PWA AWARDED 2 GRANTS

The PWA has been awarded a \$930 grant by **Northeast Utilities System**, parent company of Public Service of New Hampshire, to cover expenses related to the PWA photo contest and a traveling Piscataquog River Watershed display that will feature photographs from the contest. This display will be exhibited in all town libraries (space permitting) throughout the watershed.



Photograph by Howard Gagnon

New England Grassroots Environment Fund awarded the PWA \$1,500 to support our water quality, purple loosestrife control, and streambank restoration programs. The New England Grassroots Environment Fund is a small grants program designed to foster local grassroots environmental initiatives in all the New England states. It provides small grants of up to \$2500 to fuel local activism that results in broader community involvement in projects that address a wide range of environmental issues and opportunities.

We are very excited about these grants and appreciate the support of these funding organizations.



PWA Feedback Form

Let us hear from you – anytime! Please share your news and ideas with PWA.
You can write to us at the address on the reverse or email us at contactpwa@yahoo.com.

- ☐ I'd like to join a Keeping Track team.
- ☐ I'd like to help the Purple Loosestrife Awareness Committee (PLAC).
- ☐ Please send PWA brochures for my neighbors and friends. How many do you need? _____
- ☐ I want to support the PWA in other ways (for example, lead a walk, blaze a trail, write an article, provide publicity, write a grant, do research, raise funds, volunteer to aid school programs, host a local information meeting, etc.).

PLEASE SPECIFY YOUR INTERESTS:

I WANT TO LEARN ABOUT:

- ☐ Ways to protect my land. ☐ Remembering the PWA in my will.
- ☐ Making a major contribution to the PWA.

THANK YOU FOR YOUR SUPPORT. YOU ARE THE PWA!

PWA to Expand Scope of Water Quality Monitoring Program

by Laurie Terwilliger

This summer the PWA will begin a long-term water quality monitoring program, which will build upon and expand previous water testing conducted by PWA volunteers. The new program is being designed and led by PWA members John Magee and Gordon Russell.

Past water quality testing has shown the Piscataquog River to be clean and healthy. As development increases in the Piscataquog River watershed, the PWA wants to ensure that water quality of the river remains high.

Water from thirteen sites along the river in New Boston, Frankestown, Goffstown, Deering, and Weare will be tested for temperature, dissolved oxygen, conductivity, turbidity, pH, nitrate, phosphate, acid neutralizing capacity, *E. coli*, and macroinvertebrates. Data collected will be used to monitor changes in water quality and identify areas where water quality needs improvement. It will also contribute to research involving native fish populations.

Temperature is one of the most important factors affecting aquatic wildlife and plants. In order to document temperature changes throughout the year, the PWA will install instream temperature loggers that continuously collect temperature data, which our monitors can periodically download to a computer. Gordon Russell has generously donated funds to cover half the expense of this equipment. **Thank you, Gordon!**

We will need at least five volunteers this first year. Volunteers will receive about four hours of training in the collection of samples and use of equipment. Because this is a long-term study, volunteers ideally should be interested and available to help for several years. Testing should begin in late July or early August. So, if you're looking for a way to keep cool, why not get your feet wet by being a water quality monitor! Please call Laurie at 487-3331 if you are interested.

Goffstown Old Home Days...



...and River Cleanup

Lyn Lombard, Cindy Stave, and Ken Lombard fish trash out of the flotsam near the dam in Goffstown. *Photograph by Margaret Watkins*

Our dedicated river cleanup crew filled several large trash bags on a relatively short stretch of river. Back on land, John McCausland and Laurie Terwilliger set up the PWA booth. In addition to displays, information, and items for sale, the booth included two hands-on, watershed models loaned by the NH Department of Environmental Services and transported by PWA member Paul Susca. Lemonade and edible turtles, courtesy of John, added another incentive for people to stop by. Pat Myers, Jed Callen, and Margaret Watkins were also on hand to talk with those who visited our display.

Novices always welcome!

Photograph by Cindy Stave

Keeping Track Autumn Dates

Gordon Russell & Joel Stave on the Buxton Brook Transect in Weare.

Sunday, Sept. 1 (New Boston) - Call Graham at 487-2636
Sunday, Sept. 22 (Weare) - Call Gordon at 487-2994
Saturday, Sept. 28 (New Boston) - Call Graham at 487-2636
Sunday, Sept. 29 (Weare) - Call Gordon at 487-2994
Sunday, Oct. 6 (Dunbarton) - Call Margaret at 774-7120
Dates are subject to change. Call leaders to confirm.

River Walks in Frankestown

Frankestown Land Conservation, Inc. is sponsoring a series of river talks and field trips led by PWA member and wetlands biologist, Dr. Barry Wicklow. The last two events in this series are:

August 3: Aquatic Life: Judging the Health of a River

August 24: Humans and Rivers: Our Dependence on Clean and Healthy Streams

Programs begin at 9:30 AM. Space is limited. To register, call Jennifer Byington at 547-6201 or 547-8862.

Purple Loosestrife Update

Apparently our guest/ghost writer, Aprille Phules, succeeded in writing a convincingly alarming article in the April 1st newsletter. She would like to assure all readers that her tongue was planted firmly in cheek and that the real Purple Loosestrife Awareness Committee (PLAC) had no hand in these shenanigans!

Meanwhile, the real PLAC chair, Lyn Lombard, reports that the 500 *Galerucella* sp. beetles that the PWA received in June are busily chomping on the potted and net-covered loosestrife that we raised in contained pools. It is hoped that these 500 beetles will reproduce to 25,000 beetles to be released soon into concentrated loosestrife sites. You can rest assured that the beetles are still at work destroying loosestrife and are not busy spelling out messages to airborne travelers!



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Save These Dates!

SEPTEMBER 15

Keeping Track training with Susan Morse
See article on page 4

OCTOBER 19

Annual Meeting with special guest,
Dr. Splatt of the RoadKill Project
(Details to follow...)

KEEPING TRACK AUTUMN SCHEDULE

See page 5

PWA Memberships Since June 2002

Donna Arnold	Goffstown
Robert & Georgette Beaudet	Manchester
Ryan Belanger (Alternative Bike Shop)*	Manchester
David Paul Bellemore	New Boston
Paul & Elizabeth Benson	Goffstown
Stephen & Jane Brzozowski	Goffstown
Donald & Marjorie Burke	Weare
Robert Clark, Jr. & Theodora Bray	Henniker
Ray Cadorette	Franklin
Reta Chaffee & Andy Cadorette	Goffstown
Jodi & Dave Craig	New Boston
Deborra & Paul Doscher	Weare
Mary Atwel & Nancy Frankel*	Weare
Mary Louise Gould	New Boston
Mr. & Mrs. Fred Greenhalge	Dunbarton
George Holt**	Dunbarton
Patricia Jennings	New Boston

Susanne Kibler-Hackler	Dunbarton
Thomas Lee	Goffstown
Mandy & Glenn Looney*	Goffstown
Reta M. MacGregor	Goffstown
Margaret & Tom Miller	New Boston
Kimberly Moody*	Weare
George Naum	Manchester
Daniel & Maria Nelson*	Goffstown
Janet & Terry O'Brien	Goffstown
Michael Palmer**	Swampscott, MA
Roger Paradis	Manchester
Randy & Gail Parker	New Boston
Laura Pavesi	New Boston
Michael S. Richard	New Boston
Pamela & David Ryan	Goffstown
Bill Scimone	Goffstown
William & Joanne Shields	Weare
Carl Simon, Jr.	Erie, PA

Gerald & Diana Sterling	Goffstown
Brett & Kristin St. Clair*	Dunbarton
Megan Thomas*	Washington, DC
John & Cynthia West	Francestown
Ofelia & Scott Wilkinson	Weare
J. Willcox & Natale Brown*	Concord

* denotes extra contribution

** denotes contribution of \$100 or more

Gifts in Memory of David Hardy

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