



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. 1
February 2002



Watershed News

THE PISCATAQUOG WATERSHED ASSOCIATION NEWSLETTER

THE VOICE OF THE Turtle—

—no, not the voice of the turtle dove!

We are reporting our scientific documentation of vocalizations made by the wood turtle, *Clemmys insculpta*. Since last May, we have been working with Dr. Barry Wicklow at Saint Anselm College's 100 Acres Reserve in New Boston in a biodiversity study that began in 1998. The Middle Branch of the Piscataquog River winds through this diverse habitat, which includes multiple wetland types as well as lowland and upland forest. The property abuts equally diverse properties that together provide an important corridor connecting additional protected land. Our initial research focused on tracking the habitat requirements and home ranges of wood turtles using radiotelemetry. So far, six wood turtles have been found. The greatest threats to this species include degradation and fragmentation caused by development and certain kinds of human recreation. We collected one male and one female wood turtle. (This female was also tracked in last year's research.) We attached small transmitters to the backs of their shells and tracked the turtles from the beginning of June until they went into hibernation in the fall. They are now together beneath a beaver dam where they seem to be sharing the same hibernaculum.

An exciting development in our research occurred in October when Dr. Wicklow observed the two turtles vocalizing in the lab. We believe the calls are part of the courtship behavior of wood turtles. In October, a time of wood turtle courtship, we had recaptured the turtles to replace the transmitters. It was at this time that we heard the wood turtles' high pitched, whistle-like call. Although reported as early as the 1930's, turtle vocalizations have been discounted by modern scientists for lack of evidence. We recorded the vocalizations while the two turtles slowly approached each other, stared at one another, then touched nose to nose. Our computer analysis shows that male and female calls differ in quality and frequency.

by Amanda DesRoberts and Erin Kelly

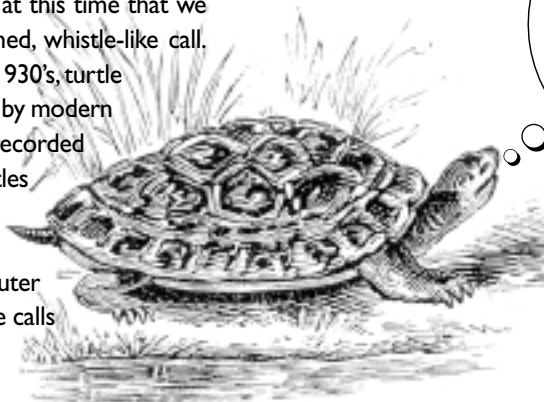


Erin Kelly and Amanda DesRoberts with wood turtle.

Photo by Barry Wicklow

In the spring, we plan to use the recordings to test our courtship hypothesis. We will continue to track these turtles through the extensive mosaic of interconnected habitats at 100 Acres. We also anticipate working with turtle expert David Carroll in Warner and PWA board member Graham Pendlebury within the watershed to further test our new findings. This is exciting research for us, and we look forward to sharing new discoveries this spring.

Amanda DesRoberts and Erin Kelly
are Environmental Science majors
at Saint Anselm College,
class of 2002.



Wild
Thing...
you make my
heart sing...

COME HEAR
THE TURTLES
FOR YOURSELF!

SEE SPECIAL EVENT
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Lyn Lombard*

Hannah Proctor*

Keeping Track

Coordinator

Barbara Thomson*

* member volunteer

New Boston Lands PROTECTED

by Margaret Watkins

Nearly a mile of frontage on the South Branch of the Piscataquog River and approximately 95 acres of open fields and forests of mixed white pine, hemlock, assorted hardwoods, and an occasional white birch have been permanently protected through the foresight and generosity of New Boston conservationist Sue Martin. In December Sue completed a conservation easement, which she gave to the PWA.

The land includes an esker, significant amounts of riverfront habitat (lowlands on northern portions, steep banks to the southeast), and several streams draining to the river. The esker is notable because sand and gravel mining have destroyed or compromised many examples of this glacial landscape feature in New Hampshire. The esker's steep slopes also offer wildlife alternative corridors for different weather conditions, as evidenced by wildlife paths along both the ridge and slopes. Deer, black bear, moose, and other wide-ranging mammals and birds know the property well. A pair of resident osprey are often audible or visible.

"Early New Year's morning I got up and walked the whole land," Sue muses. "All those walls, the steep slopes, the woods. And it was incredible to think that people generations from now will be able to walk this land, just as I can. It will be here forever. I don't have to worry that something's going to overwhelm it."

Sue worked with the PWA to develop an easement that realizes her hopes for the land and personal needs. She has retained a house site out of the easement and the ability to create one additional lot. She can practice forestry and agriculture,



Margaret Watkins is President of the PWA and lives in Dunbarton.

Some online bear links include:

www.bear.org

(Dr. Lynn Rogers, bear expert)

www.bears.org

(Includes bear mythology)

www.bearsmag.com

(See Articles: What's That Scat?)

www.wildlife.state.nh.us

(Click on Something's Bruin)

ATTENTION NEW BOSTON VOTERS

Last year, New Boston selectmen appointed a steering committee to consider the formation of a new Open Space Committee. The steering committee is recommending that a permanent Open Space Committee be created. **Be sure to cast your vote in favor of this committee at town meeting on March 12.**

subject to best management practices designed to protect the water quality, wildlife habitat, and other conservation values of the property.

"I chose to work with the PWA because there is so much river to protect. It seemed like a natural fit, and it has worked well."

Sue's land provides a critical link in ongoing efforts to create a connective greenway in southwest New Boston and beyond. In the vicinity of and along the South Branch are additional conservation lands protected by the New England Forestry Foundation (NEFF), the Town, the PWA, and the Society for the Protection of New Hampshire Forests.

Also in December Gordon and Barbara Russell added an abutting parcel to their existing "wildlands" easement property in New Boston. This forested lot is restricted to limited cordwood cutting for use at the residence on the property. It is otherwise to be left to natural processes, unmanaged and free of human impacts. The Russells have been rewarded with ongoing wildlife attractions, including sightings of Bald Eagles and a Golden Eagle last summer!

Don't Hibernate!

"Bears" is playing at the Omni Max Theatre at the Museum of Science in Boston through March 15th (and maybe longer). You can order tickets online at www.mos.org.

And always remember:

DON'T FEED THE BEARS!

"A fed bear is a dead bear."

Great Meadow Symphony

A TRACKING TALE BY LYN LOMBARD

Tracking scat, prints, and markings of wildlife is exciting and personally gratifying, but when a day of tracking culminates in a symphony with Olympic heros, orchestrated by Mother Nature, it stays with you for the rest of your days.

The first half of the Peacock Brook Keeping Track transect is a brushy one. However, one of the prettiest areas of the Middle Branch is where it draws water from Great Meadow. It is here that our team often sits and listens to the beauty of the sound of rushing water and watches the sparkles on the water from sunlight passing through the trees. This warming December day had not been particularly fruitful in finding unusual animal sign. I was tired and walked ahead of Barbara and Graham to Great Meadow where I knew I could sit and relax for a few minutes.

As I walked along the river I heard what at first I thought was an owl or hawk in trouble. The sound got louder as I approached Great Meadow. The eerie yet deeply mellow sound seemed to begin at the far right end and sweep to the far left end of the meadow. The melody played over and over, often beginning again before it had ended. Sitting there, watching and listening, I was consumed with peace in this huge hall of music.

With Graham and Barbara's help, I learned that it was the weather conditions that caused this unusual sensation. It had been very cold recently, but on this day and probably the day before, the temperature had risen to warm the top layer of wetland ice to melting. Simultaneously, the thick layer of ice below had begun cracking, causing beautiful sounds, like those my dad used to coax from his hand saw, to fill the Great Meadow Hall. My description of this phenomenon may not be quite accurate, but it is the best way I can describe it. Since that day I have tried desperately to describe the sound to others and found it nearly impossible! I'll leave it as "Dad's saw music."

Symphonies often have action in them and this one was no exception. On the far side of the meadow pond five otters skittered happily through the melted top ice as if they were star athletes in the Otter Olympics Longslide Competition. It doesn't get much better than this!

Lyn Lombard lives in New Boston and has been active with PWA's Keeping Track program since its inception.

If you
are not familiar with
the musical practice of "playing the saw",
check out this webpage with links to saw music recordings:
www.theremin-saw.com – Read about the theremin too!



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!

AMOUNT ENCLOSED: ☐ \$10 Student/Senior ☐ \$25 Family ☐ \$100-249 Supporter
☐ \$15 Individual ☐ \$50-99 Sponsor ☐ Other

DOES YOUR COMPANY HAVE A MATCHING GIFT PROGRAM? PWA QUALIFIES FOR MATCHING GIFTS!

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Remember to check the other side of this form. Then return it with your payment to:

Piscataquog Watershed Association • 5A Mill Street • New Boston, NH 03070

THANK YOU SO MUCH FOR YOUR CONTINUED HELP IN PROTECTING THE WATERSHED!

The best tracking
months are here!



Do join us!

Sunday, February 17 (Weare)

Call Gordon at 487-2994

Saturday, February 23 (New Boston)

Call Graham at 487-2636

Sunday, March 3 (New Boston)

Call Graham at 487-2636

Sunday, March 17 (Weare)

Call Gordon at 487-2994

Sunday, March 17 (Dunbarton)

Call Margaret at 774-7120

Dates are
subject to change.
Call leaders to confirm.



Winter photo by Cindy Stave

The Piscataquog River: A Decade of Health Check-ups

In 1991 the NH Department of Environmental Services (DES) established a Volunteer River Assessment Program. The PWA was among the initial volunteer groups. In testing over the last ten years, our river's vital signs continue to show positive results. In mid-July this year, Beth Malcolm from DES gave a hands-on session in the use of a variety of sensitive instruments that measure the river's physical and chemical properties. During the third week of July, Cheryl Christner, who coordinated this year's water testing effort, Gordon Russell, and Randy Parker tested water quality from 12 sites within the watershed, doubling the number of sites tested in past years. The water was tested for physical and chemical properties in the field and then samples were sent to the state lab to be tested for *E. coli* bacteria.

Chemical Tests

The results of all chemical tests were highly favorable and indicate a stable and healthy aquatic environment.

Those tests include the following:

- **Amount of dissolved oxygen.** Oxygen levels are vital because they directly impact the quality and diversity of aquatic life.
- **Water temperature.** Constancy is important; rapid change is undesirable.
- **Turbidity.** A high count of undissolved particles held in suspension can cause respiratory problems for water life.
- **Conductivity.** This measurement shows the amount of dissolved salts and metals coming from pollution sources.
- **Color.** The color reflects the amount of suspended sediment.
- **pH.** The acidity indicates the favorability of living conditions within the aquatic community.

Coliform Tests

The test for *Escherichia coli* (*E. coli*, fecal coliform) is important because increased levels can indicate a serious source of contamination. The state minimum standard for recreational waters, such as the Piscataquog River, is 406 *E. coli*/100ml in any one sample.

The *E. coli* results for 2001 are as follows:

RIVER SITE	BRANCH	TOWN	E.COLI/100ML
Gregg Mill Bridge	Middle Branch	New Boston	10
Depot Street Bridge	South Branch	New Boston	70
Route 13 (Tingley's)	South Branch	New Boston	80
Lyndeborough Road (Gougeville)	South Branch	New Boston	50
Clarksville Road	South Branch	Francestown	110
Route 136	South Branch	Francestown	10
Route 77	Middle Branch	New Boston	30
Route 149	North Branch	Deering	40
Route 114	North Branch	Weare	110
Route 77	North Branch	Weare	20
Peaslee Road	North Branch	Weare	130
Blueberry Farm	South Branch	Goffstown	30



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 Loosetrife 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, monitor conservation easements, 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!

Announcing the PWA Book Shop & Gallery

Those attending the PWA Open House were treated to a beautiful display of artwork and books supplied by author Jack Noon of Sutton, NH, and author-illustrator David Carroll and artist Laurette Carroll of Warner, NH.

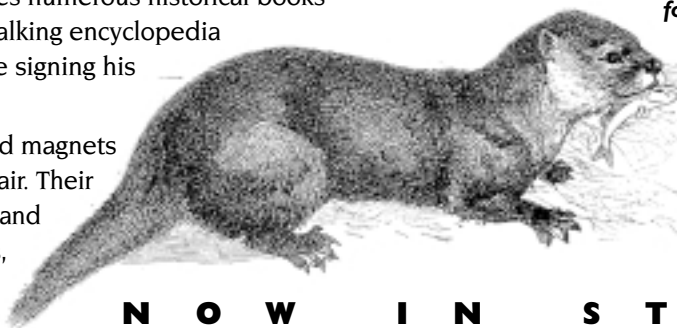
Jack is best known for his books about the history of freshwater sport fishery in New Hampshire. However, he also publishes numerous historical books about rural life in the state and is himself a walking encyclopedia on both subjects. Jack was at the Open House signing his books and sharing his bountiful knowledge.

David and Laurette Carroll's books, prints, and magnets demonstrate the many talents of this artistic pair. Their works focus on the natural beauty of wetlands and the inhabitants of these important ecosystems, as well as natural landscapes and flowers.

If you missed the Open House, you can still view the works of Jack Noon and the Carrolls. The PWA office now has a small gift shop that features their works and other items, such as the ever-popular PWA hats. The PWA is grateful to the Carrolls and Jack Noon for generously donating a portion of their proceeds to the PWA.

So now you have even more reasons to stop by the office!

Thanks to Manny & Kirsten Almeida, the new owners of the Good Neighbor Cafe in New Boston, for their donation of mini-muffins for the PWA Open House in December!



N O W I N S T O C K !

The Big Fish of Barson Falls

Jack Noon

Year of the Turtle

David Carroll

The Bassing of New Hampshire

Jack Noon

Trout Reflections

David Carroll

Lumber Queen

Ellen C. Anderson

- Prints and magnets by David and Laurette Carroll
- Salmon coloring books for kids – Free!

A Country Life

William S. Morse

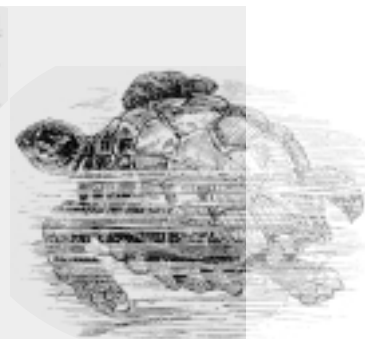
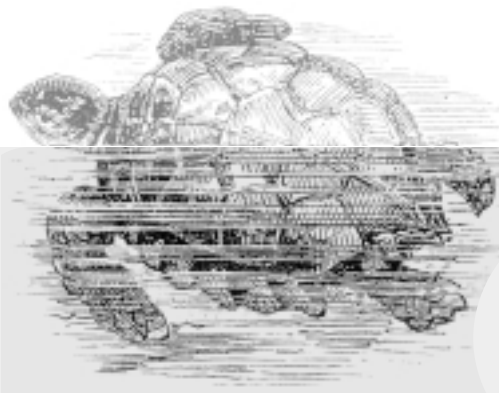
Field Guide to Animals of Vernal Pools

Leo P. Kenney and Matthew R. Burne
This spiral-bound treasure has beautiful photos and easy to read text. At only \$5, it is a "must" for spring walks – and thin enough to slip into a pocket or pack.

Recent Land Use Decisions Applauded

Weare: The New Hampshire Supreme Court recently upheld a lower court ruling that reaffirmed the Weare selectmen's 1998 denial of a permit to excavate gravel from property in Weare Center that is not appropriate for such purposes. According to former PWA president Gordon Russell, "Consistently strong and at times demanding input from area citizens, together with well supported land-use data supplied by the PWA, gave ample evidence that supported the initial court decision." Gordon cautions, however, that remains to be seen what the landowner, New Boston Aggregate Company, having exhausted all appeal options, will do with the land.

Manchester: On January 3, Gordon Russell, representing the PWA, and Jane Beaulieu, Chairperson of the Manchester Conservation Commission (MCC), spoke at a hearing before the Manchester Zoning Board of Adjustment and persuaded the Board to deny a special exception request for an autobody shop on Bass Island, an historic island at the mouth of the Piscataquog River. In 1994 the PWA, with other city groups, assisted the City of Manchester in purchasing a portion of this island now known as Bass Island Park. To avoid inappropriate development of the remaining portion of Bass Island, the PWA and MCC are exploring ways to permanently protect this unique resource.





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GOFFSTOWN, NH
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SPECIAL EVENT:

THE VOICE OF THE

Turtle-

Yes, the voice of the turtle is heard in our land! (See our cover story.)

Now you can hear it too! In this presentation by local wetlands biologist, Dr. Barry Wicklow, and St. Anselm students, you will see photos and hear recordings of wood turtle vocalizations made in the lab. These recordings are the first known scientific evidence of turtle vocalizations. Come witness history in the making!

Goffstown: St. Matthew's Episcopal Church, 5 Main Street

April 11 at 7:00 PM (Thursday)

*Co-sponsored by the PWA and the
Goffstown Conservation Commission*

Francestown: Town Hall, center of town at Rtes. 136 & 47

April 25 at 7:00 PM (Thursday)

*Co-sponsored by the PWA,
Francestown Land Conservation, Inc.,
and the Francestown Conservation Commission*



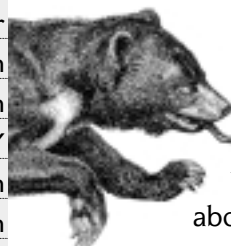
PWA Memberships Since December 2001

Elaine Benson-Mezoff	Goffstown
Cheryl Christner & Tim White	New Boston
Stuart F. Clark	Francestown
David Currier	Henniker
Catherine D'Agostino	Goffstown
Susan R. Deland**	Westwood, MA
Dorothy Eisenhaure	New Boston
Mr. & Mrs. William Ford	Hooksett
William Fredericks & Elaine Johnson	Goffstown
Sarah Hardy	Manchester
Taisto & Sirkka Holm	Francestown
Warren & Emily Howarth	Francestown
Charles & Joanne Lantz	Troy, NY
Robert & Lee LeComte	Goffstown
Sheryl Moloney*	New Boston
Margorie & Robert Moreau	New Boston
Pat Nelson	Francestown
Glenn & Charlotte Price	Weare

Jane & James Raymond	Goffstown
Priscilla & Terje Reinertsen	Dunbarton
N.B. & Carolyn Robinson**	Stratham
Judith Russell**	Goffstown
Keith Robinson & Lauren Warner	Deering
Constance & Harold Varnum	Francestown
Alicia Walker**	Weare
Margaret Watkins	Dunbarton

* denotes extra contribution

** denotes contribution of \$100 or more



A hearty **"Thank you!"** to the many members who have responded to our year-end appeal. Your support is vital. If you've been thinking about making a special contribution, now is the time.

Send the PWA a "Grrrrreat!" Valentine today!