

WATERSHED

A Newsletter of the Wood-Pawcatuck Watershed Association

Volume 22 No. 3

SUMMER 2005

Brook Trout tagging employs latest data-logging technology

As part of an ongoing study of native brook trout habitat, WPWA is using ground breaking instrumentation to help uncover the mysteries of travel of anadromous (sea run) brook trout.

On June 28, a team of project partners, lead by fisheries biologist and WPWA trustee Dr. Saul Saila, and veterinarian Dr. Richard Wolke, worked on Red Brook Stream at the Lyman Preserve in Wareham, Massachusetts, catching, tagging, and releasing wild trout. This site was selected because it is a controlled catch and release site, and has a known anadromous run.

Steve Hurley from MA Division of Fish and Wildlife, Warren Winders from Trout Unlimited, and Jim Rassman, MA state forester and caretaker of Lyman Preserve,

worked with additional volunteers to catch and release the wild fish.

Inserted into each trout, a total of ten fish in this first round, was a 27mm DST micro data storage tags. Billed as the smallest tag in the world, and newly released in May by the Star-Oddi

company in Reykjavic, Iceland, the tags are experiencing a maiden voyage of sorts in this application.

Not to be confused with radio transmitters, these tags are actual computers that are activated before insertion to record up to 21,000 data points per year, that can be stored for up to 20 years. The tags are recovered when the fish are recaptured. The tags will record hourly depth, temperature, and salinity readings.

Outreach efforts to fishermen in the catch and release area will begin in the spring, when the first efforts to recapture will take place, as well as the tagging of additional fish. WPWA has 11 more tags on hand, and will be seeking

funds to tag as many as 60 fish in the coming two years. At \$ 450

per tag, the cost of the research can be easily escalate.

This initial round of study has been made possible by funding from the Trout Unlimited Embrace-A-Stream program, and the Wood-Pawcatuck Watershed Association.

Volunteer consulting services have been provided by Dr. Saul Saila, Dr. Richard Wolke, Dr. Stewart Wyand (UConn), and Dr. Monique DiSanto Rosario.



Dr. Saila and Dr. Wolke surgically insert microtags.



DST micro data logger from Star-Oddi company.



Mass. DFW and Trout Unlimited staff capture trout.

From the Executive Director

This week I had a second meeting, through the courtesy of Ron Gagnon, at RIDEM's Office of Compliance, to figure out a method for accessing old RIDEM complaint files in bulk, and looking through them for outstanding environmental violations in our watershed.

This is not as easy as it may sound, because although the RIDEM has a procedure for making records publicly available, they generally are requested by plat and lot number, for a known situation that an individual may want to research.

Until now it has not been possible to go in and ask for "all the files from 1985" for example, and see what relics may remain outstanding in our watershed.

Sitting down with Ron, Dean Albro, Teresa Ryan, and Maureen Casey, I was able to convince these RIDEM officials to let us try.

So, next week I have a date to meet Maureen, who will have a couple of boxes retrieved from the catacombs at RIDEM, that I will manually flip through and see if my proposed method will work. We may find it impossible to do in this manner. Or it may just work, and in the process we'll all get better educated on how these old documents are stored.

Either way, it's an attempt at a comprehensive way of following up on past violations that could be posing threats to our water quality. Stay tuned as I make my way through the archives.



Thanks to Sue Cerullo for a fabulous riverbank garden

Volunteer Sue Cerullo has dedicated many hours to the maintenance and upkeep of our riverbank restoration garden, planted over the past two years with funds from USDA's Wildlife Habitat Incentives Program.

The garden, which features numerous native plants such as columbine, cone flower, arnica, milk weed, butterfly weed, and trumpet vine, is open for public viewing. All plants have been labeled, and most are in bloom.

Our thanks to Sue for her time and stewardship and for sharing her skills.

Poirier, volunteers honored at Annual Meeting in May

WPWA hosted its 22nd Annual Meeting the evening of Thursday, May 12, 2005 at the Wood River Inn.

The program included tributes to several long-time volunteers and river advocates.

Sandra M. Poirier, chairwoman of Richmond Rural Preservation Land Trust, was awarded The Salomon Award in recognition of her exemplary efforts to preserve the natural resources of the Wood-Pawcatuck Watershed.

Water quality monitors Werner Wiskari, who has monitored Pasquisset Pond for 10 years; Amy Tait-Kamradt, 5 years at Locust-



Denise Poyer and Lori Urso present The Salomon Award to Sandy Poirier on May 12.

ville and Wyoming Ponds, and Jim Cummings, 5 years at Usquapug Pond, were also honored. Special recognition was given to Susan Cerullo for her work on many projects, and to local engineer Raymond Cherenzia, for his contribution to helping WPWA improve public access to the rivers.

During the brief business meeting, trustees Dante Ionata, Anna Prager, Saul Saila and Nancy Hess were reappointed to additional terms on the Board of Trustees.

2005-06 annual membership renewal underway

WPWA launched its annual membership renewal drive in early June. Thank you to those members who have sent in their dues. These funds are important to our continuing operations. Dues are accepted throughout the year, though the membership term runs from June 1 to May 31 each year.

Board Elects Officers for 2005-2006

The nominating committee of WPWA's Board of Trustees presented a slate of officers at the June 9 monthly trustees meeting. The following trustees were elected to serve on the executive committee through May 2006: Harold R. Ward, President Robert Schiedler, 1st V. President Anna F. Prager, 2nd V. President Kenneth F. Payne, Secretary Richard C. Holliday, Treasurer

Our thanks to these trustees for their willingness to devote their time to the governance of the association.

Lawson Cary receives two conservation awards in June

Lawson Cary of Coventry RI, long-time WPWA volunteer, and president of Trout Unlimited Narragansett Chapter, has been awarded the Alfred L. Hawkes Award from the RI Department of Environmental Management, and the RI Rivers Council River Heroes Award, all in one week.

Lawson's history of stewardship of the Wood and Pawcatuck Rivers and their watershed has not gone unnoticed throughout the years.



Meg Kerr presents Lawson Cary his River Heroes award on June 23.

In presenting the River Heroes award for the Pawcatuck on June 23, WPWA executive director Lori Urso likened Cary's personal mission to that of WPWA. "Both WPWA, and Lawson as an individual, have adopted the mission of promoting and protecting the Wood Pawcatuck watershed resource," she said. In his remarks, Cary stressed to attendees that Trout Unlimited is not just a fishing club, but an organization that works hard to take action that makes a difference in the quality of habitat.

On June 21 the RI DEM hosted a luncheon in Cary's honor at the Raddison Hotel in Warwick.

Some of Cary's accomplishments include erosion control projects on the Wood River; float stocking of trout along the Wood; water quality monitoring; lobbying to maintain catch and release fishing areas on the upper Wood

River, Flat and Falls Rivers; and thousands of hours of volunteer time for WPWA, TU, and other organizations.

Member participation sought in Purple Loosestrife Survey

During the summer, you may have noticed a tall plant with lovely purple flowers growing in wetlands and along wet ditches in roadways. This plant, Purple Loosestrife (*Lythrum salicaria*), is a highly invasive European herb that has adverse impacts on indigenous plants and animals. Purple Loosestrife has no native predators and can grow unimpeded in wetlands. Once Purple Loosestrife is established in an area, it usually crowds out the native plants. Since Purple Loosestrife does not provide any food value for native animals, they will also lose habitat.

WPWA is asking your help to conduct a survey of this plant in the Wood-Pawcatuck Watershed this summer. We are only interested in Purple Loosestrife that is growing along the Wood and Pawcatuck Rivers and any of their streams, or ponds and wetlands in the Pawcatuck Watershed. When you are out boating, fishing, or swimming this July and August, keep on the lookout for a tall wetland plant with a long spike of dense, purple flowers on top. The plant averages between 3 to 6 feet tall, has leaves that are opposite or in whorls of three, and an angular stem that is somewhat woody near the base. The flower spikes can be up to 15 inches tall. If you see any, please notify WPWA at 401-539-9017 or email de-

nise.poyer@wpwa.org. Please note where you see the Purple Loosestrife and how to access the site. If you can, take pictures and send them along. It would be useful if the pictures could help identify the locations.

WPWA will compile a map of these sites for use in future habitat improvement projects. We believe that Purple Loosestrife is not yet extensive in this Watershed. However, we will be participating in biological control projects in cooperation with the Plant Science Department at URI. By controlling this invasive pest before it destroys wetlands we hope to preserve the valuable wildlife habitat that is so important in the Wood-Pawcatuck Watershed.



Purple Loosestrife
Lythrum salicaria

Preservation of Hopkinton Farmlands protects 210 acres from future development

The Department of Environmental Management joined representatives from the US Department of Agriculture/Natural Resources Conservation Service (USDA/NRCS), RI Agricultural Land Preservation Commission, The Nature Conservancy, and the Hopkinton Land Trust to announce the preservation of three farms in the Town of Hopkinton: Miner, Panciera, and Tomaquag Valley farms.

Miner Farm

The Rhode Island office of the USDA/NRCS announced that it has secured a Grasslands Reserve Program (GRP) conservation easement – the first of its type obtained in the northeast and mid-Atlantic states – on Miner farm, located in the historic Tomaquag Valley section of Hopkinton. The easement, purchased for \$157,328, will permanently protect 16 acres of pasture on the 61-acre farm, which consists of various livestock, chickens, and other exotic birds.

The grassland protected in the easement area is a mixture of native grasses and improved varieties. The grassland is only minimally grazed or cut, providing habitat for ground-nesting songbirds in decline, including bobolinks and grasshopper sparrows. The pasture also abuts a large pond and wetland complex associated with Tomaquag Brook, providing both important habitat for aquatic species and an aesthetically pleasing landscape. Along with the GRP permanent ease-

ment, Bob Miner is beginning work on a restoration plan for the property, which calls for brush management to address invasive plants along the property's stone walls and dotted through the pastures, a watering system for his livestock, and a rotational grazing system.

"The purchase of the Miner farm conservation easement will provide permanent protection for the land and protect it from conversion to non-grassland uses," said State Conservationist Judith Doerner, USDA/NRCS. "The Grassland Reserve Program helps conserve grasslands, while maintaining viable farming operations. Rhode Island's grasslands provide economic and ecological benefits and play a key role in environmental quality."

The GRP is a voluntary program offering landowners the opportunity to protect, restore, and enhance grasslands on their property while still being able to use the land for grazing. Grassland habitats represent breeding, feeding and wintering grounds for birds and mammals native to Rhode Island. The NRCS' Rhode Island office (RI-NRCS) is in the process of purchasing three additional grassland conservation easements on Rhode Island farms.

Panciera Farm

DEM Acting Director W. Michael Sullivan, PhD also announced that the RI Agricultural Land Preservation Commission, in partnership with RI-NRCS and The Nature Conservancy, has purchased development rights to the 199-acre Panciera farm. This is the Commission's first purchase of development rights in the Town

of Hopkinton. A hay and beef cattle farm operates on approximately 100 acres of the Panciera land. The remainder of the property is forested and contains tributaries to the Pawcatuck River. The purchase of development rights will allow the farmland to remain in agricultural use.

"The Panciera farm is located in an area of the state where land preservation began several years ago in order to save important natural resources," said Acting Director Sullivan. "Protection of the development rights to this prime farmland will ensure continued agricultural use and the protection of an important wildlife habitat in the Town of Hopkinton."

Total purchase price for the Panciera farm was \$1 million. The RI Agricultural Land Preservation Commission contributed \$500,000 from State Farmland Bond Funds. The USDA provided \$282,000 in federal funding for the project, through a grant from its Farm and Ranch Lands Protection Program to the RI Agricultural Land Preservation Commission. The Nature Conservancy, through a grant from the Champlin Foundations, contributed \$218,000.

Janet Coit, State Director of The Nature Conservancy, said, "It is a privilege to be part of an effort to preserve a beautiful working farm like Panciera. Through this project, the Agricultural Land Preservation Commission maintains a lovely private farm as agricultural land into the future, and also provides significant acreage for wildlife. And, once again, The Nature Conservancy celebrates our collaboration with The Champlin
(*Cont'd pages 6 & 7*)

Report released on small dams and habitat quality in low order streams

In the summer and fall of 2004, WPWA conducted the necessary field work to study the impacts of small dams on habitat quality in low order, wadeable streams of the watershed. The full report of this study, *Small Dams and Habitat Quality in Low Order Streams* (Saila, Poyer, Guillot, Aube), is available online at wpwa.org under research reports.

The original project proposal stated that information from this study may help to assess the possibility of small dam removal or to suggest other procedures in order to improve passage of migratory fish in our watershed area. In the execution of this proposal it soon became evident that it was necessary to obtain information on the physical properties of dams and culverts in order to be able to assess their role in affecting fish passage. To that end, the full report includes sections that address dams and culvert properties as well as preliminary hydraulic and fish behavioral studies related to them. Properly designed and installed culverts and fishways need to be based on important biological factors, preferably with respect to the weakest swimmers of the species expected to migrate. This material is then followed by addressing temperature effects of dams as well as changes in biological communities on free flowing versus impounded sections of streams.

From our preliminary examination of dam properties in a portion of our watershed area, it seems possible to make some initial ob-

servations and suggestions. This analysis suggests that the presence of dams in the study area of this report may not be a complete barrier to the return of some migrating adult Atlantic salmon under specified conditions. This statement is made based on the assumption that a pool depth of 8 ft. is or could be made available at the base of each of these dams and that other conditions such as flow, aeration, and temperature are adequate. It is also evident that the existing dam heights preclude successful upstream passage by brown and rainbow trout as well as brook trout.

WPWA contends that fish passage facilities to be constructed in this watershed should be designed to facilitate passage of the weakest swimmer among the species of interest. In this case, it is suggested that the brook trout is a reasonable candidate for this purpose. Usually this facilitates passage of stronger swimming species. However, it is recognized that some of the stronger swimmers may also have other specific requirements. A careful and extensive study of culverts and other obstructions to free passage should be made in order to aid in successful fish restoration and other management related activities. An ecologically significant temperature rise occurs in impoundments created by small dams in our watershed area. An example of this is the increase in some predator species resulting from warmer water conditions. This problem merits further study in order to permit adequate stream restoration for some migrating fish species.

Culverts in Low Order Streams

Although the major objectives of this study involved small dams at lower order streams, several culverts were found at streams visited by our investigators. It was evident from a preliminary examination that some of these culverts are or could become unsuitable for migration by certain indigenous fishes. Included in these is the brook trout during its spawning migration, which usually occurs under low flow conditions. Improper design and installation of culverts can be an important factor in impeding unrestricted movement during migration periods for this species and possibly others. It should be recognized that the brook trout does not attempt to leap over obstacles in contrast to the Atlantic salmon which has remarkable leaping abilities. In addition, the brook trout appears to be the weakest swimmer among other salmonid fishes which have been tested for swimming ability (Peake et al, 1997).

This brief discussion of culverts in relation to small streams is very limited in scope since it was not part of the project proposal, however their importance was clearly recognized. It is strongly recommended that WPWA and cooperating agencies develop a project which involves a comprehensive inventory and assessment of culverts in our watershed area with a view toward minimizing the delays to successful migration by the species of concern.

For the full study report, visit www.wpwa.org, or call WPWA at 401-539-9017.

Audubon Seeks Volunteers for Butterfly Survey

The Audubon Society of Rhode Island invites participants to its second annual North American Butterfly Association (NABA) Butterfly Survey from 10 a.m. to 2 p.m. on Saturday, July 9 with a rain date of Sunday, July 10, at its Powder Mill Ledges (PML) and Fisherville Brook refuges. Please call 949-5454 in northern Rhode Island or 295-8283 in southern Rhode Island to register for an orientation session which will be held 6:30 p.m. on July 6 at Audubon's headquarters (PML) or at 7 p.m. on July 7 at Fisherville Brook refuge. There is a \$3 charge to help defray printing and program costs, with children under 12 and "garden watchers" being free. Garden watchers count butterflies in a garden and report the highest number of individuals of a species seen at one time.

"The Butterfly Survey is a wonderful opportunity for individuals with varying levels of experience to enjoy these fascinating organisms and their habitats while providing useful scientific data", comments Larry Taft, ASRI's executive director. This is the second year Audubon has participated in the NABA Butterfly Count, but it has been held annually since 1975, when only 29 counts took place. In 2004, 467 counts were held in 48 U.S. states and D.C., four Canadian provinces, and one Mexican state. Volunteers around North America select a count area with a 15-mile diameter and conduct a one-day census of all the butterflies observed within that circle. The counts are usually held in the few

weeks before or after the 4th of July, but the best timing for butterfly observation in each count circle varies. The count program is intended to promote interest in butterflies and provide results useful for scientific monitoring of butterflies.

Last year's survey was a success with 32 species counted. It was held in one 15-mile diameter count circle with PML refuge as its center, and encompassing other sites such as Audubon's Fort refuge, Wolf Hill Conservation Area, Snake Den State Park, Mowry Conservation Area, and others. This year a second circle has been added, with ASRI's Fisherville Brook refuge at its center, and also including Big River Management Area, Arcadia Management Area, ASRI's Parker Woodland, the Ladd School, and W. Alton Jones Campus. For more information on NABA and the count program, please check out their website at www.naba.org or send a self-addressed, stamped business envelope to NABA, 4 Delaware Road, Morristown, NJ 07960. The final report for the 2005 count will be available in the spring of 2006, and costs \$6 for NABA members and \$10 for non-members. Reports can be paid for on day of count.

Farmland Preservation

Cont'd from Page 4

Foundations and DEM, a partnership that allows us to do far more, together, to protect open space than any of us could do on our own."

Tomaquag Farm

Also today, the Hopkinton Land Trust announced that it has pur-

chased development rights to the 95-acre Tomaquag Valley farm, one of three remaining dairy farms in Hopkinton, for \$240,000 from Barry and Ruth James. The property, located on Tomaquag Road, is contiguous to a 40-acre parcel that is also protected by the land trust. "The Hopkinton Land Trust is very pleased to be able to work with the James family on the preservation of this important property," said Thomas Thompson, President of the Hopkinton Land Trust. "The purchase of this conservation easement will help keep this family in farming and help keep farming in Hopkinton."

Also announced at today's event was a \$2.35 million USDA grant to the state's Agricultural Land Preservation Commission to help purchase development rights to five Rhode Island farms. Preliminary negotiations are underway for the five farms for which the grant was awarded. The farms will be identified at the time of purchase. The grant, from the USDA's Farm and Ranch Lands Protection Program, was awarded through the Rhode Island office of the NRCS in Warwick. To date, the Commission has received a total of \$5,749,300 from the USDA to purchase farmland development rights.

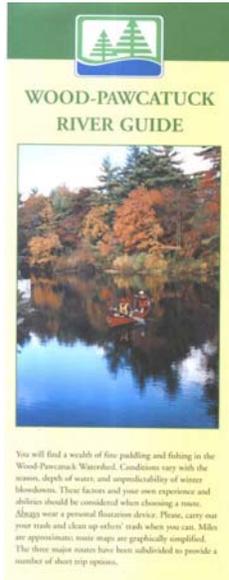
"The Farm and Ranch Lands Protection Program helps ensure that valuable, productive land is protected from non-agricultural uses," said RI-NRCS Program Manager Vicky Drew. "Interest in protecting farmland from urbanization remains very strong in Rhode Island. Public support for funding farmland protection and other open space initiatives has *Cont'd next page*

WPWA CANOE AND HIKING GUIDES

Order Form

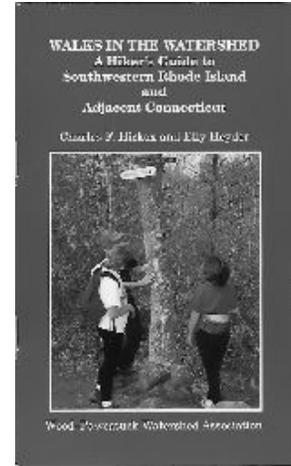
Wood-Pawcatuck River Guide (2nd edition)

By Charlie Hickox and Elly Heyder
 \$3.50 members (\$4.50 non-members)
 Navigate the Wood and Pawcatuck Rivers from source to sea with this colorful folded map.



Walks in the Watershed

By Charlie Hickox and Elly Heyder
 \$3.50 members (\$4.50 non-members)
 Sixteen of the watershed's best loop hikes contained in a handy pocket-sized guide



Quantity:
 _____ Wood-Pawcatuck River Routes Map
 _____ Walks in the Watershed
 _____ Pawcatuck Watershed Report (free)

Add \$1.50 postage and handling per item.

Name _____

Address _____

Mail form and payment to:
 WPWA
 203 Arcadia Road
 Hope Valley, RI 02832

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been unwavering for the past twenty years."

Farms to which the state acquires development rights are working farms and remain in private ownership. The easements require that the lands remain in agriculture or in a condition available for agricultural use. The agriculture industry in Rhode Island -- totalling 858 farms that generate more than \$100 million annually -- is not only an integral part of the state's economy but provides a valuable contribution to Rhode Island's open space and quality of life.

In the past 20 years, with state bond funds and federal funds, and in concert with partners including municipalities, land trusts, and non-profit agencies, the state has purchased develop-

ment rights to 62 farms in Rhode Island, totaling 4,580 acres. In total, there are 35 farms currently on the Agricultural Land Preservation Commission's waiting list, and five farms are expected to close by the end of 2005.

Dragon Fly Program moved from July 9 to July 16

On July 16, dragon fly expert Ginger Brown will lead a program on the many different species of dragon and damsel flies, and how to identify them.

The program, which will run from 10am to 1pm on Saturday July 16, will teach participants about these winged jewels and what they mean to the rivers.

The presentation will be followed by a short paddle up the Wood River to see the dragon flies up close.

The fee for the program is \$5 for members, \$7 for non-members. Bring your own boat for the paddle, or rent a kayak from WPWA for an additional \$5.

To register, contact Denise Poyer at denise.poyer@wpwa.org, or call 401-539-9017.

July is Learn to Fish Month

Youth fishing programs will be offered by WPWA and partners in July. On Friday, July 8 and July 15, kids 15 and under can learn to fish at the Carolina Trout Hatcher from 10am-1pm. Bagged lunch included in \$5 fee (\$7 n.m.).

On July 22 and 29, TU and United Flytiers will teach fly tying and fishing from 4-6pm at the WPWA campus. Email Danielle@wpwa.org or call 401-539-9017 to pre-register.

Application for Membership

Name _____

Street _____

City _____ State ____ Zip _____

Phone _____ Email _____

- _____ Individual \$25
- _____ Family \$40
- _____ Contributor \$50
- _____ Corporate \$100
- _____ Supporter \$100
- _____ Sponsor \$250
- _____ Patron \$500
- _____ Benefactor \$1000

In addition to my dues, I am enclosing an additional contribution of \$_____

All but \$5.00 of your dues is tax deductible within the limits of the law.

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Wood-Pawcatuck Watershed Association



Photo by Tom Ardito

An inhabitant of the lower Shannock Falls area catches some rays on the riverbank.

Opinions expressed in *Watershed* are not necessarily those of WPWA, its Board of Trustees, or staff.

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