

# WATERSHED

A Newsletter of the Wood-Pawcatuck Watershed Association

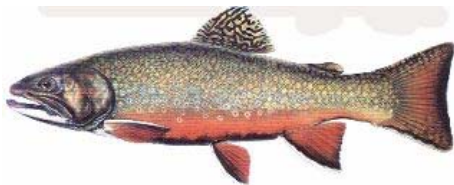
Volume 20 No. 1

WINTER 2003

## WPWA Releases Report of Fish Assemblages in the Watershed

S. Saila, D. Burgess, L. Urso

A report on fish assemblages in the Queen and upper Wood Rivers is now available from WPWA. The 30-page document entitled "Interspecific Association, Diversity and Population Analysis of Fish Species in the Wood-Pawcatuck Watershed Area," is co-authored by S. Saila, D. Burgess, M. Cheeseman, K. Fisher and B. Clark. The report contains data, with interpretation and conclusions by Saila, from a 2002 field study on fish habitat, with an emphasis on brook trout *Salvelinus fontinalis* (Mitchell). In the summer and fall of 2002, with funding from The Nature Conservancy John Wald Science Grants, and equipment on loan from Vanasse Hagan and Brustlin, Inc., WPWA sampled sixteen stream sites in the Pawcatuck Watershed to identify fish assemblages and associated habitat characteristics.



Brook trout *Salvelinus fontinalis*

The fish assemblage report briefly describes and provides some background for the methods utilized in the study, as well as a more detailed definition of both methods and results, and some of the preliminary inferences. A brief summary is provided and conclusions drawn. It is believed that these methods and analyses will provide a suitable base which will increase in

value with larger samples taken in the future.

The report takes a look at species interactions, which are considered important in the process of understanding the overall ecology of species. In any given habitat there are a number biotic and abiotic factors which may influence the distribution, abundance, and interactions among species. A pattern of interspecific association between two species will depend upon whether or not the two species select or avoid the same habitat, have some natural repulsion or attraction, or have no interaction at all. Thus, interspecific association may be positive, negative or nonexistent. In the report, methods for detecting the existence of association and for assessing the degree of association are applied to fish assemblages collected by electrofishing at the selected sites. The methods for interspecific association are based on the presence or absence of species at specific locations or sites, which are termed sampling units (SUs) in the analyses which follow. The detection of a pattern of interspecific association does not provide an understanding of the causation for such a pattern. It remains to generate and test various hypotheses for possible causalities in future studies.

Ecologists frequently use species diversity indices that can be utilized for characterizing some species abundance relationships. These methods are based on actual estimated numerical abundances in the report. It is useful to consider species diversity as consisting of two (Fish, Page 4)

## Capacity-building sessions benefit WPWA, watershed councils

Bruce Clark

We have entered a period where governmental agencies are relying more and more on non-governmental organizations to spearhead sustainable growth and natural resource protection initiatives. Without question, effective NGO leadership takes on a renewed meaning. All of our good work will be wasted if sound organizational management practices are not in place. For this reason, representatives of the WPWA recently attended a series of leadership enhancement workshops. This 24-hour seminar, held over four days, was entitled *Building Capacity in Watershed Organiza-*

*tions*. It was extremely well represented with 30 local water resource staff attending.

Solid leadership and operational capacity-building are defining attributes of productive organizations. The Wood-Pawcatuck Watershed Association is no exception. The RI Rivers Council, along with the Narragansett Bay Estuary Program and RI Sea Grant retained the services of the Institute For Conservation Leadership to facilitate these discussions, designed to empower water resources staff while helping them capitalize on limited resources in this financially competitive market. The Audubon Society of Rhode Island graciously played host for the event. The objective of the workshop was to address pertinent topics thought

most important to insure operational excellence. In brief, the workshop opened with a look at characteristics and practices of successful non-profits followed by an assessment of each group's internal strengths and weaknesses. Armed with this information, the focus then turned towards defining unique organizational capacity (internal capability to do work). Fundraising strategies, grant writing effectiveness, and sound business management rounded out the second and third workshop sessions. Exercises included productive and often humorous role-playing. The final workshop addressed perhaps the most important aspects of successful non-profit operation, that of volunteer recruitment and man-  
*(continued on page 7)*

## Ana Flores begins artist residency at WPWA

On January 15th Ana Flores began to set up her office and studio at the WPWA campus. Her residency is being funded in part by Rhode Island State Council on the Arts.

Flores is a sculptor, environmentalist and community arts advocate who lives in Charlestown and is very familiar with the Watershed. Her work is shown internationally and is in private, corporate and institutional collections throughout the United States.

For twenty years Flores has



*Earth Speaks Through You*, by Ana Flores

been an artist in residence in schools, universities and public institutions. She is the co-director of Manos, an arts group working to enhance and humanize institutional spaces, and the co-founder of the Arts and Healing Program at the Rhode Island School of Design. Most recently she convened a unique forum entitled the "Gaia Dialogue,s" bringing together environmentally committed professionals in Rhode Island from the fields of art, science and education to create opportunities for richer dialogue and collaboration between the disciplines of art and science. Both Lori Urso and Denise Burgess of WPWA were participants.

The artist residency is a first for WPWA, but it seemed a natural extension for the organization, after 8 years of working with artists to promote the Watershed

during the annual Art Auction.

During her five-month residency Ana will work to integrate the arts into the educational outreach of the organization, engaging school groups with special projects using the arts and science and the community through a six week workshop beginning in April, entitled "Drawn to Nature". She will also set up studio in our "learning shed" and continue her own creative work which is concerned with the healing and spiritual elements of the natural world.

An advisory committee is being formed to work with Ana during her residency. Please contact her directly if you would like to be involved or if you have some ideas to share with her: (401) 539-9017 or ana@artfarm.net.

## Ashaway family donates land for public access

An Ashaway family has donated land in response to WPWA's public access improvement program.

Rogean Makowski, Carolyn Meece, and Mariette Dionne transferred ownership of the 38,000



Hopkinton Conservation Commission chair Harvey Buford at the site.

sq ft piece on the Ashaway River, with frontage on Laurel Street.

The donation was made possible through the intervention of Theodore Dionne.

The Hopkinton Town Council has responded favorably to an initial request by WPWA for property tax exemption. WPWA has petitioned the council to pass an ordinance granting the exemption now that it has taken title to the land.

The plan for the site includes necessary clearing to provide off-street parking, and a footpath to make portage easier. Finally, blowdown clearing to enable passage from the Ashaway onto the Pawcatuck, just downstream of the Potter Hill Dam.

The family's only request was, should the access be named in the future, that the family name Brown be included in the name, in honor of former property owners Roger W. and Marie J. Brown.

WPWA also recently received a grant from the Small Craft Access Trust in the amount of \$10,000 to

prepare the site for public use.



## Planning for enhancement at Switch Road underway

WPWA is currently working with Chief Real Estate Specialist Lori Capaldi at RIDOT, as well as locally with engineer Ray Cherenzia, to prepare the Switch Road access site for enhancement work.

To facilitate the project, RIDOT

and WPWA are discussing a transfer of ownership of the land to WPWA, which will take over for future maintenance of the site.



Erosion is common at the Switch Road river access.

Plans call for riverbank restoration, erosion control measures, revegetation, dedicated parking area, and an information kiosk.

## Narrow River curriculum to be taught in April

Educators in the North Kingstown, South Kingstown, and Naragansett School Departments are invited to learn the *Active Watershed Education (AWESome!)* Curriculum. The Narrow River Preservation Association (NRPA), in conjunction with WPWA, is sponsoring an eight-week, three-credit, graduate level course, entitled *Watershed Science for Educators*. Instructor Denise Burgess will fo-

cus specifically on the Narrow River Watershed. The course will provide teachers with basic scientific information and interactive lessons that set the stage for further student investigations. Each participant will receive a curriculum guide, groundwater and wetland activity books, Geographic Information System watershed maps, posters, and other resources. Materials have been designed for use by grades 4 through 6, but educators at all levels are encouraged to participate and adapt materials to suit their needs. You don't have to be a science teacher to learn to incorporate watersheds into your lesson plans.

The eight-week program begins the week of February 24, and includes after-school classes and two field trips. All program and material fees will be paid by NRPA education grants. Graduate-level credits are available through URI's Feinstein College of Continuing Education (registration fee \$90). For more information contact Denise Burgess, 401-539-9017, or Tony Lackiewicz, 401-783-6277 or email [nrpa@netsense.net](mailto:nrpa@netsense.net).

## EPA Water News Free by email

WaterNews is a weekly on-line publication that announces publications, policies, and activities of the US Environmental Protection Agency's Office of Water

Subscribe for a free electronic copy by sending an email message to [listserv@unixmail.rtpnc.epa.gov](mailto:listserv@unixmail.rtpnc.epa.gov). Leave subject line blank, in the body, type Subscribe WaterNews

### From the Executive Director

This release of the Winter 2003 issue of Watershed marks the start of WPWA's 20th year!

For fun I found two newsletters from early on to see how the content or the look may have changed. I was amazed to find very similar documents had come well before this one.



On the cover of Volume 1, No. 1, November 1983, is an introductory piece by founder W. Edward Wood entitled "The Birth of an Organization." Inside speaks of a canoe trip, the rivers, and the return of the first salmon captured at Potter Hill Fish Ladder on May 2, 1982. First editor Ham Salsich makes a hand-written plea for articles, poems, photos, and news on the back cover.

With Volume 4, No. 1, Winter 1986 came the professional look of new editor, Polly Matzinger, and designer Russell Kolton, though they did not print credits to themselves until the following issue. The cover story announces the establishment of a Conservation Easement program. Inside, then-president Peter Lacouture writes about the board's long-range planning session, and a "river captains" stewardship program.

In this issue, similar look, similar themes: fish habitat study, river access, watershed education. Twenty years of sustainable watershed conservation, documented in an 8-page newsletter called *Watershed*.

*Lou Ursso*

### WPWA Announces Grant Awards

Champlin Foundations  
\$25,000

This award supports the ongoing capital renovations to our Barberville campus.

The Forrest C. Lattner Foundation  
\$25,000

This award in memory of Forrest C. and Frances H. Lattner, supports our transient water quality monitoring program for 2003, and funds the purchase of electronic data loggers for this purpose.

RI Rivers Council  
\$5000 operational  
\$2000 program

These awards support our operations as a Watershed Council, and provide funds for the purchase of monitoring equipment, respectively.

RI State Council on the Arts  
\$1000

This matching grant provides partial support for a 6-month artist residency at our facility, and the development of art-science programs.

Ashaway Charitable Trust  
\$1000

This gift will provide general operating support.

### WPWA Mitch and Betty Salomon Fund dedicated

The WPWA Mitch and Betty Salomon Fund has been established at the Community Foundation of Southeastern CT. The Foundation offers a match of \$1000 for every \$10,000 invested (up to \$100,000.) The endowment is presently valued at approxi-

mately \$16,000, and the use of funds earned through investments is restricted to purposes of municipal education. The fund was established by an anonymous donor to honor the Salomons, and also provides for annual recognition of an outstanding municipal official in the area of local environmental protection. Donations to the WPWA Mitch and Betty Salomon Endowment are appreciated.

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### Fish (Cont'd from Page 1)

components. The first is the number of species in an assemblage (species richness), and the second component is species evenness or equitability. These terms refer to how abundances are distributed among the various species in the assemblage. Indices which attempt to combine richness and equitability into a single value are termed diversity indices, of which there are many kinds. It should be recognized that diversity indices may confound variables that characterize an assemblage by attempting to combine them, such as the number of species (richness) with relative species abundance (evenness). In spite of these apparent difficulties, diversity indices are commonly used by ecologists and fisheries scientists. The report describes and utilizes a few of the very many diversity indices. A few evenness indices are also described and utilized.

For a copy of the report, please visit our website at [www.wpwa.org](http://www.wpwa.org), or call 401-539-9017.

## Annual Appeal 2002—2003

Thank you everyone for your support!

*Leadership Giving* (\$1000 and up)  
Ashaway Line and Twine  
Richard and Ardis Holliday  
Harold R. Ward  
Warren Liepold

*Major Donor* (\$500 to 999)  
Anonymous

*Founder's Society* (\$250 to 499)  
Peter Heywood  
and Nancy Jacobs

*Trustee's Circle* (\$100 to 249)  
John and Grania Ackley  
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Philip Brencher  
Mary Anne and Maury Connors  
Pamela Crandall  
David and Gerry Cunningham  
Theodore Dionne  
Steve Elman and  
Joanne D'Alcomo  
Elwood and Cynthia Johnson  
Ocean Pharmacy  
Russell Kolton  
Peter and Marnie Lacouture  
John and Karin McCormick  
Kenneth Payne and Helen Drew  
Carla Ricci  
Albert Romanella  
Bob and Betty Schiedler  
Thurman and Doris Silks  
Burt Strom  
Linda and Ed Wood  
Gabriel Warren

*Watershed Club* (\$50 to 99)  
Peter and Sandra Arnold  
Alan Banister  
Alan Buck, Tech. Maintenance  
Roberta Burkhardt

Raymond Cherenzia  
Robert Conrad, MD  
Dr. and Mrs. A. John Elliot  
Gordon Fraquhar  
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Jerry Weiss  
Betty and Mitch Salomon  
Dr. and Mrs. Thomas Sculco  
David and Carol Shilling  
Margaret Slosberg  
Mary Louise Steere  
Mike and Bonnie Stewart  
Jane and Bob Whyte  
Jake and Linda Wise  
Kathryn Worthington

*Stream of Friends* (up to \$49)  
Anonymous  
David Asquith  
Clare Bailey  
Sam Bliven, A&B Oil  
Peter Brownell  
Bruce Clark  
Jim and Nancy Cole  
Betty Connors  
Arthur Cottrell III  
Nathaniel Dodge  
John Drew  
Roberta Engel  
Larry and Karen Fine  
Robert Hauschild and  
Margaret Palmer

Peter Innis  
Joe Lombardo  
David and Elizabeth McNab  
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Susan Moffett  
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Thomas and Ruth O'Brien  
Bryan Rabbett  
Andrew and Joyce Reid  
Mal Rochford  
Lionel Rush  
Helen Schell  
Henry and Peggy Sharpe  
Dr. Richard Slimak  
Albert Spicer  
James Tackach  
Fred Vocatura  
Barbara Chaves  
Dr. Biddle Morris, DMD

*If you made a donation and your name is not listed above, your donation may have arrived after the newsletter deadline. If you believe there is an error, please call 401-539-9017 to inquire.*

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**Trout Unlimited Narragansett  
Chapter 225**  
Annual Banquet  
Sunday April 6, 2003; 3PM  
Greek Church of the Annunciation  
175 Oaklawn Avenue  
Cranston, RI  
Buffet dinner \$25 per person

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**Watersheds and Well Water  
Protection Workshop**  
Tuesday, April 29; 7-9 PM

This workshop, conducted by URI Cooperative Extension and WPWA, will teach private well owners the importance of protecting their wells and the environment around them. Free and open to the public. Pre-register by calling URI Cooperative Extension at 401-874-5398.

## Drought Lifted

M. Paul Sams, General Manager  
RI Water Resources Board

The Rhode Island Drought Steering Committee has recommended reducing the current Drought Watch level to Normal. There are five drought levels: Normal, Advisory, Watch, Warning, and Emergency. In November, the Committee re-assessed several areas of the state from Warning, placing the entire state in a Drought Watch. Droughts are long-term events, and in order to ensure that levels in groundwater and surface water reservoirs were truly indicating long-term recovery and an end to the drought, the Committee continued a statewide Drought Watch for November and December.

"We have been fortunate to receive better than average precipitation at a critical time of year for recharging groundwater and surface water supplies," said M. Paul Sams General Manager of the Rhode Island Water Resources Board. In November and December, surface and groundwater levels returned to normal or above normal according to the US Geologic Survey data. Experts from the National Weather Service and the US Geologic Survey indicated that hydrologically, the drought has ended. However, supplies, most notably the Scituate Reservoir that provides drinking water to 60% of the state, are still recovering. The reservoir remains



Volume and velocity return to the Wood River.

roughly six feet below the historic average for this time of year, a level that falls within the "normal operating range" and above the 70% seasonal capacity drought trigger said Robert Kilduff, General Manager and Chief Engineer of the Providence Water Supply Board. The Scituate Reservoir level rose approximately eight feet or nearly seven billion gallons as of today, from the November 12 low of 263.92 feet. While this represents a nice recovery

to date, we still have a way to go before we reach full capacity of 284 feet. Fortunately, time is on our side and if trends continue we should see full recovery in time for peak demand in the summer months," said Kilduff.

Nicole Belk, Service Hydrologist for the National Weather Service also emphasized the importance of snowpack, noting that Northwestern Rhode Island has a range of seven to ten inches of snow to contribute to the recovery of the Scituate. In addition, the moderate El Nino weather pattern is expected to continue. This should translate to at least normal precipitation for January. For the three-month period of February, March, and April, the Climate Prediction Center forecasts above normal precipitation.

During this recovery period, Rhode Islanders are encouraged to continue conserving water and to increase their awareness of how much water is used and wasted every day. Water suppliers are

urged to continue leak detection programs, retrofit programs and public information initiatives to increase public awareness about conserving water. "It is always the right time of year to conserve water in our homes and our businesses," said Sams. In general, run water for less time, use less when you can, and find ways to reuse water. The Water Resources Board, offers some tips for indoor conservation and encourages residents to visit the Board's website at [www.wrb.state.ri.us](http://www.wrb.state.ri.us) to learn more about conserving water from a variety of sources. "Remember water is a finite resource essential to the aesthetic, social, economic, and physical health of our state, said Sams. Becoming aware of how much water we use and waste is the first step in preserving our precious water resources."

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## RI Water Resources Board Water Allocation Program

A Partnership for Developing a Statewide Water Allocation Program.

The RI Water Resources Board (Board) has invited interested partners to serve on the Water Allocation Program Advisory Committee (WAPAC, organized around the business process of managing water.) It is an interdisciplinary, ad hoc committee that will undertake the task of recommending an overall work plan with budget for the water allocation program.

Learn more, get updates, at  
[www.wrb.state.ri.us](http://www.wrb.state.ri.us)

**WPWA CANOE AND HIKING GUIDES**

**Order Form**

**Wood-Pawcatuck River Guide**

By Charlie Hickox and Elly Heyder

\$4.50 per copy (\$3.50 members)

Navigate the Wood and Pawcatuck Rivers from source to sea with this colorful folded map.

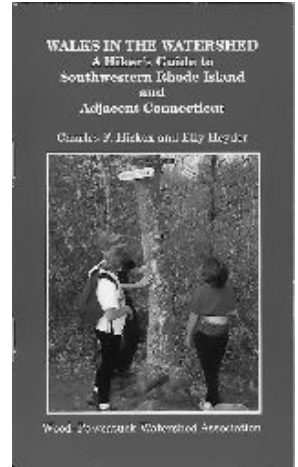


**Walks in the Watershed**

By Charlie Hickox and Elly Heyder

\$4.50 per copy (\$3.50 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

(Cont'd from Page 2)

agement. It can not be over-emphasized that not-for-profit work would certainly fall short without the limitless support of dedicated volunteers.

The WPWA, designated in 1999 by the RI Rivers Council officially as the Pawcatuck Watershed Council, commands legal standing regarding state-wide water resource decision-making. Our leadership role in Southern New England watershed management is recognized. As such, the Rivers Council has continued second-year funding earmarked for operational support. In order to insure our effectiveness within the regional community, staff professional development must keep pace with trends and environmental threats.

It has been said that when outside change exceeds internal change than the end of an organization is in sight.

**Welcome new trustee  
Anna Prager**

WPWA is pleased to announce the appointment of Anna Prager to the Board of Trustees. Prager, a South Kingstown resident, is a former member of the South Kingstown Town Council, and a former town planner. She has an outstanding record of community service and we welcome her to the board.

**Best wishes to outgoing trustee  
Linda A. Ozga**

Stonington resident and eco

conomic development consultant Linda A. Ozga has completed a 4-year term on the WPWA Board of Trustees. We all wish her well and express our sincere appreciation for her time and dedication to the association.

- Volunteers needed**
- Opening Day
  - Earth Day
  - Bulk Mailing
  - Rivers Month Guides
  - Water Monitoring
  - Art Auction
  - Workshops

If you would like to volunteer your time to support the local environment, get involved on any level with WPWA, in the field, or in the office. Call us at 401-539-9017. It's fun, and worthwhile.

### 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 extra contribution of \$\_\_\_\_\_

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

### Board of Trustees

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- Michael McAndrew (Stonington)
- Anna Prager (South Kingstown)

### WPWA Staff

- Lori Urso, Executive Director
- Denise Burgess, Program Director
- Ana Flores, Artist in Residence

### WPWA Campus

203 Arcadia Road, Hope Valley  
 at Barberville Dam  
 401-539-9017  
 info@wpwa.org  
 www.wpwa.org



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



WPWA Campus beside the Wood River at Barberville Dam

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