



Belfast Bay  
Watershed

# BELFAST BAY WATERSHED NEWS

## It's Salmon Adoption Time!

"Awwww... aren't they SO CUTE! Look at their little eyes, those tiny dots!" was the refrain of the day at eleven schools in the Mid-coast area on February 6.

Each year the BBWC sponsors local participation in "Salmon-in-Schools," a salmon egg adoption program offered through the US Fish and Wildlife Service. BBWC Board President Tom King formerly directed the Craig Brook National Fish Hatchery in Orland, where the program started in 1992. Since joining our Board, Tom has made the program accessible to more and more schools each year. A few schools own their aquarium-chiller set-ups, but BBWC has funded most, adding one per year as costs can be borne.

Out of curiosity, I decided to ride with Tom on Delivery Day. We left Belfast at 7:30 am, stopped at Craig Brook NFH for insulated jugs, and drove to Green Lake National Fish Hatchery (GLNFH) north of Ellsworth to pick up hundreds of orange salmon eggs. They look, you guessed it, just like caviar. Each jug left with 200 eggs, pure spring water at 34 degrees, and chunks of ice to maintain it for the long day's journey. When the eyes appear, a tiny window of time allows for delivery, before eggs develop further. They have to be transported quickly and poured into their chilled, oxygenated "homes" for the next two months, all in one day. Waiting longer can be lethal, so all classrooms must be ready with pure aquarium water at 34 F. A required Endangered Species permit stays with the fish throughout their development, and teachers report back to the USFWS where and when they release their fish.

At each school on the route, we were greeted enthusiastically by the expectant class. Tom had to trouble-shoot a couple of the delicate chiller mechanisms, and explained the process of salmon egg rearing to the students, who were thrilled to be trusted with the responsibility.

Belfast schools participating in 2017 are the High School, Middle School, Captain Albert Stevens, East Belfast, and the Homeschool Coop. Other mid-coast participants include Ames in Searsmont, Drinkwater in Northport, Lincolnville Central School, Prescott in Washington, Appleton Village School, and Camden-Rockport Elementary.

Each school receives 200 eggs, a list of instructions for incubation, and access to lesson plans. The eggs will hatch about six weeks after delivery, and begin to look like tiny fish, called yolk sac fry or alevin, with a huge belly yolk sac. The yolk gradually disappears as the fry's sides grow around, enclose, and digest it. By this time, the fry actively swim around developing their muscles.

In early May when Maine brooks begin to warm, (see page 2 bottom)



*Tom delivers eggs to Belfast Area H.S.*

Belfast Bay Watershed Coalition

P.O. Box 152, Belfast, ME 04915

[www.belfastbaywatershed.org](http://www.belfastbaywatershed.org)

## Evening Program Series at the Belfast Library

All programs are free and open to the public.

Thursday, March 9, 6:00 pm. **Brown-Tail Moth, Unwelcome Newcomer to Waldo County.** Morten Moesswilde, our district forester, will inform us of how to nip a local infestation in the bud before the brown-tail moth becomes a menace to our trees and our health.

Thursday, March 16, 6:30 pm. **Bogs and Fens: New England's Most Pristine Ecosystems.** Dr. Ron Davis, founder of the Orono Bog. In New England, at least 25 bogs and fens can be visited on boardwalks to see carnivorous plants, orchids, and uncommon bird species. Davis, author of a new book on these peatlands, will explain some of the unique features of these beautiful and fascinating ecosystems, illustrated with his outstanding photos.

Thursday, April 20, 6:30 pm. **Ocean Acidification.** Mick Devin, marine biologist, researcher, and Maine State Legislator, will speak about the growing effects of ocean acidification on Maine's fishing industry. Devin has led the way in researching the culture and ecology of marine animals and plants and is working to use his research to develop new options for future fisheries' needs.

Thursday, May 18, 6:30 pm. **Bird Identification and Conservation.** Jody Telfair, a Maine Master Naturalist, will join our Bird Week efforts with a review of bird identification. She will discuss ways to help birds, resident and migratory, in their plight for survival.

## Evening Ocean Program in Rockland

Thursday, May 4. **Ocean Frontiers III**, a documentary showcasing leaders in Northeast Atlantic Ocean stewardship and the new blue economy, at the Strand Theater. The event, co-sponsored with Island Institute, begins at 6:00 with a reception, 7:00 film, followed by panel discussion, Q&A.

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(Salmon Adoption, continued from page 1) the class raises the temperature of the aquarium over a period of two weeks to get the salmon fry ready for their new home in nature. Critical to releasing the fry is an undammed brook they can learn is their "natal stream" or birth stream, to which they will return if they live long enough to come back to spawn. The brook must have natural habitat and unobstructed flow to the ocean to allow for a full life cycle.

The release site needs school bus access as well. An ideal release site in Waldo on Wescot Stream, a tributary to the Passagassawakeag River which forms Belfast Harbor, receives the fry each year. BBWC engages in a triennial water quality survey of the site by Lotic, Inc., which reports it to the state.

Students check the temperature of the stream to make sure it matches the water they brought the fry in, then proudly, and very gently, release their adopted "children" into the stream. Some teachers conduct various experiential science lessons at the site, investigate the water quality, study the surrounding riparian habitat, and some include sketching in journals. A count of the fry is tallied for the USFWS report, and a spirit of celebration catches hold of everyone.

The life of an Atlantic salmon is perilous from the start, especially in the early freshwater stage. If a fish makes it to the smolt stage and runs out to sea, its odds of living improve greatly. Adult salmon return to their natal streams to spawn when they are about four years old. Unlike Pacific salmon, the Atlantics do not die after spawning, and can return several times to reproduce.

Who knows? Maybe some day salmon will return to our coastal rivers. Meanwhile, students are learning important lessons about cycles of nature and the need to care and stick up for it.—*Cloe Chunn*

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## Earth Days Waldo County, April 15-23

Saturday, April 15. 10:00-12:00 **Geology of the Belfast Rail Trail**; Amber Whittaker, Maine Geological Survey. Meet at 10:00 in the parking lot on outer High Street, 1/2 mile out from Rt. 1. Bring warm layers, rain gear, water, snack.

Tuesday, April 18. **Primitive Skills Day** with Jason Chandler and Caitlin Thurrell, 10:00-2:00. Meet at the Thanhauser farm, 210 Oak Hill Road, Swanville, at 10:00 am. Fire-making with bow drill; uses and knowledge of plants; cooking bannock on a fire. Bring water, lunch, sharp knife, backpack, tick repellent. All ages. FMI: 338-1147.

Thursday, April 20. 6:30-8:00 pm. Belfast Library. **Ocean Acidification—the Evil Twin of Climate Change**. See Evening Programs, page 2.

Saturday, April 22. 9:00-12:00. **Earth Day hike on Hills to Sea Trail**. Meet at the Oak Hill Road train station outside of Belfast. Bring water, lunch or snack, protection from rain, ticks. 4.5 miles.

Saturday, April 22, 6:30-8:15 pm, Belfast Library. **“Climate of Change”**--a film documenting the growing difficulties faced by people who earn their living on the ocean as damage from climate change increases. A speaker from the Island Institute will lead discussion after each brief portion of the film is shown.

Sunday, April 23, several events, starting at 2:00 pm:

2:00 pm, Head of Tide Preserve, Doak Road, Belfast:

**Permaculture--It's not just about Gardening!** Experience first hand the benefits that can come from creating a permaculture gardening space when local permaculturist Karin Wittmann shows the hows and the whys of this unique approach to gardening.

5:00-8:00 pm, Belfast Library: **Community potluck dinner**, 5:00 pm, followed by a 6:00 showing of the film **"Inhabit."** This film, which focuses on **permaculture practices**, shows how humans everywhere are capable of being planetary healing forces. A brief discussion will follow.

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### We THANK YOU! We ARE YOU!

BBWC extends gratitude and appreciation to our

### Individual Supporting Members

and to the following business supporters:

**Bay City Cargo**

**Coyote Moon**

**Front Street Shipyard**

**Little River Veterinary Hospital**

**Searsport Shores Ocean Campground**

## Outings

Outings are open to anyone interested. For more information or in questionable weather, call 338-1147.

**BIRD BUS.** Back by popular demand, the Bird Bus rides again! Seth Benz drives again! The schedule is not confirmed in time to make this newsletter, so check our website until you see it posted.

**Saturday, March 11.** 9:00-1:00. **Snowshoe the Ridge to River Trail**, Georges River Land Trust. Meet at 9:00 on Ghent Road, off Rt. 131, at the bridge over the St. George River in Searsmont. Bring water, lunch, warm layers. 5 miles, some steep.

**Saturday, April 15.** 10:00-12:00 **Geology of the Belfast Rail Trail**; Amber Whittaker, Maine Geological Survey. Meet at 10:00 in the parking lot on outer High Street, 1/2 mile out from Rt. 1. Bring warm layers, rain gear, water, snack.

**EARTH DAYS WALDO COUNTY, April 15-23.**  
See page 3 for our many activities.

**Saturday, April 22.** 9:00-12:00. **Earth Day hike on Hills to Sea Trail.** Meet at the Oak Hill Road train station outside of Belfast. Bring water, rain gear, lunch or snack. 4.5 miles.

**CATHY MORGAN BIRD WEEK, May 13-20.**  
See our website next month, or see May Newsletter.

## BBWC Board of Directors

Tom King, President  
Karin Wittmann, Vice President  
Cloe Chunn, Secretary  
Barney Lutsk, Treasurer  
David Bond  
Skip Pendleton  
John Tipping

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Paul Eagle, Publicity and Website

## Subscribe on-line

to this newsletter and monthly reminders of activities on our website  
[www.belfastbaywatershed.org](http://www.belfastbaywatershed.org) or send an e-mail to [info@belfastbaywatershed.org](mailto:info@belfastbaywatershed.org)

Visit our website Calendar for updates on outings and programs that did not make it into the newsletter.

## Members invited

Come jump on board and help expand and strengthen our work in the community and watershed. Visit our website, call a board member, or email [cloechunn@gmail.com](mailto:cloechunn@gmail.com)

Mission: *The Belfast Bay Watershed Coalition works to support conservation and stewardship of natural, scenic, and public access resources of the Belfast Bay watershed through research, community-building, and education.*

## Penobscot Bay Stewards Program May 2017

Would you like to learn more about the Penobscot Bay region and help preserve its unique character and history? The Belfast Bay Watershed Coalition in partnership with Searsport Shores Ocean Campground is offering the Penobscot Bay Stewards Program to Penobscot area residents. This is a unique opportunity to learn about the Penobscot Bay region and ways to conserve its resources.

The program will run all day on Tuesdays and Thursdays from April 25 through May 25. Topics include Penobscot Bay history, marine life, island ecology, coastal land, intertidal and marine habitats, geology, the Penobscot Nation, fisheries, aquaculture, water quality, conservation issues, and current regional issues with impacts on our environment and human life.

Leading authorities in their fields will give presentations and lead field trips. The program will include classroom presentations, short hikes in nature preserves and state parks, and field trips to Rockland, Hurricane Island, Indian Island, Blue Hill / Stonington, Searsport, and the Belfast area. Some days will require early morning departures and boat trips. Participants should be prepared to car pool and bring a bag lunch.

The course is free, but participants are expected to volunteer 30 hours to local conservation efforts of their choice during the coming year. Classes will provide an ample selection of possible projects. The Belfast Bay Watershed Coalition ([www.belfastbaywatershed.org](http://www.belfastbaywatershed.org)) qualifies as a conservation organization.

Why should you join the Stewards? As you learn more about Penobscot Bay, the Mid-Coast, and local watersheds, you'll realize how very important and fragile they are. With this knowledge, you can be part of efforts to preserve and protect this valuable resource.

The course is limited to 20 enthusiastic participants who will participate in the entire program. If you would like more information, email [stewards@belfastbaywatershed.org](mailto:stewards@belfastbaywatershed.org) or call **Edie** at 207-338-0048 or **Barney** at 207-218-1088. The application deadline is April 1.

Mail applications to: Belfast Bay Watershed Coalition P.O. Box 152, Belfast.

# 2017 Penobscot Bay Stewards Program Application

Please attach an additional sheet of paper, if necessary. **Deadline: April 1.**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone numbers: \_\_\_\_\_

Email: \_\_\_\_\_

How did you hear about Penobscot Bay Stewards?

Why are you interested in becoming a Penobscot Bay Steward?

What is your related background and experience, including formal and informal training and experience?

What are your skills and interests?

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> computers             | <input type="checkbox"/> editing/writing | <input type="checkbox"/> marine science  |
| <input type="checkbox"/> editing/writing       | <input type="checkbox"/> teaching        | <input type="checkbox"/> fundraising     |
| <input type="checkbox"/> working with children | <input type="checkbox"/> organizing      | <input type="checkbox"/> public speaking |
| <input type="checkbox"/> naturalist activities | <input type="checkbox"/> photography     | <input type="checkbox"/> graphic arts    |
| <input type="checkbox"/> other: _____          |  |  |

Please describe your current and previous volunteer activities, including involvement in other organizations.

Do you have any physical limitation that could affect your participation in program activities?

References (Please provide two, and include all information requested.)

Name 1. \_\_\_\_\_ Phone: \_\_\_\_\_

Name 2. \_\_\_\_\_ Phone: \_\_\_\_\_

Relationship: 1. \_\_\_\_\_ 2. \_\_\_\_\_

Your signature: \_\_\_\_\_ Date: \_\_\_\_\_

*The Penobscot Bay Stewards are volunteers who learn about the natural and cultural elements that shape the Penobscot Bay region and turn this awareness into action. Thirty hours of volunteer service are required of each Steward.*