



Belfast Bay
Watershed
Coalition

WATERSHED NEWS

BBWC Celebrates Penobscot Bay Stewards Class of 2023

By Lisa Pohlmann, Pen Bay Stewards Class of 2023



The alewives were leaping, all facing the same direction and determined to make it up the rocky streambed. The rural fishermen were emphatic as they described the things that were wrong with state government. The fishways full of insects told the Stewards about the water quality of the Passagassawakeag River. The gentleman at the Belfast sewage treatment plant advised them that the 3Ps - paper, pee and poop – should be the only things they flush. The young folks at Hurricane Island conducted a hands-on exercise where scallops were counted that had originally hung from bags in the ocean. Plus, there was a boat ride out to and back to shore from this exciting island where remains of carved stone, graveyards, and buildings told of the once vital quarry that had housed and employed a community of quarrymen and their families. The retired geologist, who volunteered to take us around Settlement quarry in Stonington, provided an inspiring example of who the rest of us could be, if we so chose: lively, excellent teachers, and scientists.

This is just a snapshot of the varied adventures provided in the Penobscot Bay Stewards Program. Twice a week for six weeks in Spring 2023, 19 Belfast area residents traverse the Penobscot Bay watershed, visiting with experts who live, work and study the watershed and the beautiful land and rivers it includes. They met with numerous non-profit and for-profit leaders and volunteers who shared their wisdom and expertise, including Friends of Sears Island, the Searsport Shores Campground, Opal Build, the Blue Hill Heritage Trust, the Island Heritage Trust, and the Maine Center for Coastal Fisheries.

The Penobscot Bay Stewards program was initiated by Maine Coastal Programs, a state-sponsored program in the mid 1990s. After their experiences in the program, some of the first Stewards formed The Passy Coalition. In 2004, the Passy Coalition was renamed Belfast Bay Watershed Coalition (BBWC). In 2008, the state turned the program over to BBWC which has been offering this program ever since. The program is free. All that is asked is that Stewards contribute 30 hours of volunteer time to any environmental organization they choose in the year after they complete the program. Past stewards have successfully campaigned to ban plastic bags in

Continued on page 2

www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

Pen Bay Stewards, continued from page 1

Belfast, initiated and maintained the collection of cigarette butts in Belfast, founded the Belfast Climate Crisis Committee, organized water quality monitoring in the bay, and created the Natural Literacy Program in Waldo County elementary schools. The 2023 Stewards are doing Little River Community Trail maintenance, monitoring water quality in the Bay, volunteering in natural literacy programs, writing for this newsletter, organizing the BBWC Book Club, and serving in leadership positions in BBWC and other environmental organizations.

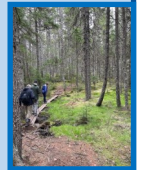
All in all, the stewardship program provides an extraordinary in-depth experience of education about the Penobscot Bay watershed and a close-up look at all that goes into and out of the waters that surround us. As a bonus, it offers a wonderful opportunity to get to know others of like mind whom you will see around town and at alumni events. If you are interested in participating, applications will be available in mid-January on the BBWC website (belfastbaywatershed.org). Contact gbiddi@gmail.com for more information.

Widening My World: My Experience as a Penobscot Bay Steward

by Cheryl Wienges, Penobscot Bay Steward Class of 2023

When I applied (and was chosen) for the Pen Bay Stewards 2023 Internship program, I had the hope that it would widen my world. I was interested in finding out more about the ecology of the Belfast Bay watershed and anxious to learn of the forces and influences that were affecting our world, immediate and far-flung. I was very attracted by the concept of seeing some of these first-hand rather than only hearing about them from speakers and other types of programs. I was not disappointed.

Every session promised something different. Though they were long days with many different activities packed into them, they were interesting and engaging enough to not truly tire us as we went from one learning experience to another. Each day of activities was so different from the others that they remained fresh and exciting. The sessions took us to waterways, islands, forests, quarries, vistas and views – beautiful sights as well as significant learning opportunities, and, as we traversed all these venues together, we got to know one another better and to make some new friends.



Each day was special in its own way. On one day, we saw ponds and streams where alewives made their way upstream to their natal pond. Through these observations, we were able to see the life cycle that we'd read about in action. A quarry tour showed us the bedrock that our state of Maine largely stands on. We walked through stunning forests of mosses and ferns, magical in their green lushness, learning about them as we hiked.

Another day found us racing across the open water of Penobscot Bay to the small island called Hurricane Island, where we saw archeological evidence of a town that once thrived there but was deserted almost overnight. The island has come back to life as the Hurricane Island Center for Science and Leadership, which conducts research, trains environmental leaders, and hosts school groups and others, including our Pen Bay Steward class, who want learn of the several scientific endeavors now taking place there, from scallop farming studies to archeology and more.



Tuesdays and Thursdays through May and June brought us days of myriad activities: visiting fish hatcheries, permaculture farms, vegetable, dairy and oyster farms. We heard about kelp farming from a lobsterman who farms kelp for supplemental income now that the lobster population is dwindling. We visited institutes with experts studying seabirds and another that studied the sad tale of microplastics in our environment. We heard the history of the Rockland waterfront, saw the invertebrates that can indicate the health of a stream or river, and walked new and old land trust acres. We met on Penobscot tribal land to hear about the issues they are facing that include clearing the Penobscot River of the dams that impede the Atlantic Salmon's trip upstream to spawn. We put our hands to taking care of a hiking trail and learned about sustainability issues and solutions in a conference setting.

I joined the Penobscot Bay Stewards Program to widen my world. What I didn't realize is how much it would also deepen my understanding of it.

www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

BBWC Leads Sears Island Excursions

This Spring, the Belfast Bay Watershed Coalition (BBWC) took four groups to Sears Island to explore the natural beauty found there. On May 30, BBWC Board member Cloe Chunn guided a group of artists from a Searsport Art-in-Residency program on Sears Island, looking at natural phenomena, great and small. The artists were enthralled and inspired by the variety of mosses they encountered in the Sears Island woods.

On May 31, Cloe welcomed a field trip of two classes from Telstar High School in Bethel. Western Maine doesn't offer students beach experiences, and as they carefully lifted strands of seaweed, students shrieked with excitement when they discovered a crab or starfish. They gathered to see what was being sheltered under the seaweed, and then gently laid the seaweed back over the periwinkles and crabs to protect them from the sun until the tide came in. They also enjoyed tasting some of the many edible plants growing on the upper beach and dunes.

Students from Searsport High School's Alternative Education Program who are studying marine biology were guided around Sears Island by Cloe Chunn and David Thanhauser on June 12. David brought his seine net and the students took turns seining. There were no fish in the nets, but students did see green crabs, shrimp, several hermit crabs residing in periwinkle shells, and mussels and clams everywhere along the beach.



On August 9, Cloe, BBWC members Dave Sprague and Holly Faubel, and new Pen Bay Steward Jacquie Kahn accompanied teacher and BBWC Board member Dave Thomas and student Maeve Littlefield from Belfast Area High School to try out the high school's ROV, Remotely Operating Vehicle. The project is to update the survey of eel grass beds around Sears Island since the last survey in 2005.



www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

Hurricane Island Adventure

by

David Wessels, Teacher, Troy Howard Middle School



There was a buzz in the air as the Vinalhaven ferry pushed off into the dense fog of Penobscot Bay. A group of ten Troy Howard Middle School Students were racing around the deck in excitement. For many, it was their first time away from home, first time on a boat, first time going to an island. At one point, they made their way to the bow and stood, shoulder to shoulder, peering into the thick fog ahead. One student said it felt like they were “flying on the waves.” The image was emblematic of the adventure they had chosen—a leap into the unknown. These students had chosen to leave their normal lives behind for a week to live on Hurricane Island, a research facility and education center off the coast of Vinalhaven where they would live together in close quarters, sharing meals, helping in the garden exploring the island, and stretching their comfort zones and their minds. Thanks to generous support from the Belfast Bay Watershed Coalition, Pamela and Harvey Geiger, and First National Bank, and other generous (anonymous) donors, this trip was available on a sliding scale, making it accessible to students who had never been to summer camp, many of whom had never spent time away from home.

On the first morning, I used rope to draw two large concentric circles on one of the smooth granite domes that undergird the island. I explained that the inner circle represented the “comfort zone,” a space where you could feel safe and relaxed. The next circle represented the “stretch zone,” a space where you are challenged, out of your element, where you need to learn and adapt. Finally, outside of the “stretch zone” we identified the “panic zone,” a space where you lose your ability to respond to challenges, where your ability to adapt breaks down. We named different scenarios—taking a test, speaking to a large audience, rock climbing, asking some one out on a date, and handling a live snake—and saw how different people moved in and out of their various zones of comfort. A slight challenge for one person could be a nightmare for another; change the context and suddenly the roles are reversed. Then we discussed where learning and growth happen, often in the stretch zone, with plenty of opportunities to land back in the comfort zone. We talked about the importance of autonomy, of choosing when you step outside of your comfort zone and of knowing you can step back in. This activity was useful because we would spend much of our week weaving in and out of our personal comfort zones, challenging ourselves and supporting others in doing the same. We agreed to govern ourselves democratically, opening and closing each day with a circle in which each person had an equal chance to speak. We made decisions by consensus, choosing how to spend our days amongst the rich opportunities of the island.

Students had many opportunities to step into their stretch zones. For some it was leaving family for the first time; for others, it was jumping off the pier into the freezing waters of the bay, or or holding a live lobster, or living

(Continued on page 5)

www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

without flush toilets and daily showers or rock climbing on the sheer face of the old quarry. For many, the challenge of living and making decisions with a diverse group of peers presented the biggest challenge and the biggest opportunity for growth. Students responded powerfully to the freedom of the island: one began volunteering daily in the kitchen, another organized a nightly sunset hike, others joined the Game Loft (another group who were visiting) for role playing games after dinner.



Marine science was woven through our visit. We collected “seed scallops” from spat bags for a research study, adding them to Hurricane Island’s 3 acre experimental aquaculture farm. We pulled lobster traps with Kyle, learning about the interactions between climate change, marine ecology and Maine’s lucrative lobster fishery. We explored the intertidal zone where students gathered invasive green crabs that were later battered and deep fried for dinner. Once again, it was driven home that there is no such thing as a “bad student,” only varying abilities to cope with a childhood spent indoors on a laptop. Provided a little freedom and immersion in the living world, I’ve never met a child who failed to learn with joy and dedication.

Students were skeptical when we walked down to the shore for a lesson on plankton. They dragged the plankton net through the water and peered at the barely legible shapes floating on the surface of the water. But as soon as we put the samples under microscopes, the squeals and shrieks of amazement began. Dinoflagellates, copepods, and Cnidaria danced and twirled under the lenses, and students were delighted by the diversity and fecundity hidden in each drop of ocean water.



Hurricane Island’s commitment to sustainability was embodied in every aspect of the experience. We toured the infrastructure of the island from the water storage systems to composting, energy and food production, but experience often speaks louder than words, and it was living in these systems that made an impression on students: limiting showers to save water, using composting toilets, composting food waste and adding it to the garden. Students were also proud to connect these efforts to their own work at Troy Howard where we also have an extensive garden and composting operation, and they enjoyed using their skills and knowledge to lend a hand in the island’s garden.

When we talk about sustainability, we often focus on material flows and cycles (and rightfully so!), but more and more we are seeing an effort to reckon with the social dimensions of sustainability. This means talking about equity and access and listening to voices that have not always been amplified. This work, though perhaps less obvious than material infrastructure, was apparent at Hurricane, and at times I felt like I was catching a glimpse of what a sustainable social future might look like: scientific institutions that are embedded in and governed by the communities that support them, communities that understand and invest in youth development, regardless of social position, an effort to steward ecosystems democratically as global commons. Maybe that sounds a little abstract, so I’ll give the last word to a student who brought it home for me in her thank you note: “You guys made me feel welcome and you cared for every single one of the staff and the kids. Everybody here made me feel safe and loved. I was free. I was accepted.”

BBWC is now raising funds to send another group of students to Hurricane Island in Summer, 2024. If you would like to contribute to this important effort, send a check to BBWC earmarked “Hurricane Island.”

www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

Another Good Year Making Friends with Nature

BBWC's Natural Literacy Program 2022 - 2023

I learned so much! Ms. Jenni took us to the vernal pool. That's when the learning happened. - Gigi



It was so interesting that the whole class, even me had lots of questions about lobsters - Willa



Wow! I had so much fun this year with you! I loved the time we acted like woodcocks. - Tyson



Many elements synthesize to produce Belfast Bay Watershed Coalition's Natural Literacy educator, the iconic Jenni Judkins. Each year, she brings students and teachers outside beneath sky and forest canopy, to appreciate and better understand the beautiful world they inhabit. Identified by her overalls, hat, glasses, and white braid down her back, she represents more than herself. She represents the Moon, Lobster, Spider, Snake, Lichen, Vernal Pool - Nature in all her wonders.



During the past school year, Miss Jenni educated and enchanted 360 students in 4 Waldo County elementary schools. She spent 100 hours roaming forests and wetlands teaching students about the plants and animals that live there.

In winter, as the days grew longer and the cold and the snow deepened, Miss Jenni continued lessons in the phylum Arthropoda highlighting Crustaceans. First barnacle, next crab and shrimp, and then, almost as iconic as she is - the lobster.

Finally, as the weather warmed and the ground thawed, out crawled the only terrestrial crustacean, Isopod, aka Roly Poly with her remarkable 14 feet and marsupium to nurture her young. Sitting in circle on the snow passing around a 5 pound Maine lobster doesn't happen every day. These animals inspired wonder, games of tag and songs. Students will long remember this wonderful winter.

When spring blossomed, students spun into "Arachnids around the Equinox" studying spiders before returning again to insects. They gently dipped for larvae in the vernal pools overflowing with Spring's rain. Most students and all teachers remembered their muck boots on 'Miss Jenni days'!

When the school year came to an end, students celebrated with a forest Tea. The first cup of mint and honey tea was given in appreciation to the forest that fostered their growth through the year. In gratitude, they reflected how each school's unique outside space naturally lends itself to learning and making friends with Nature.

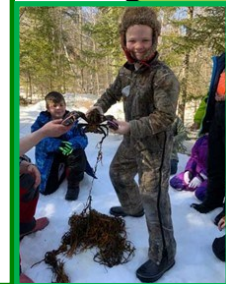
I never would've known pine needles and leaves could be so interesting if you did not teach science - Elias



I really had fun with cockroaches! I was really excited to learn about them and touch them. They were big and weird feeling but I didn't care and still had fun—Ari



I'm sad that we are done having classes this year with you but you have made my year, Ms. Jennie - Leif



www.belfastbaywatershed.org

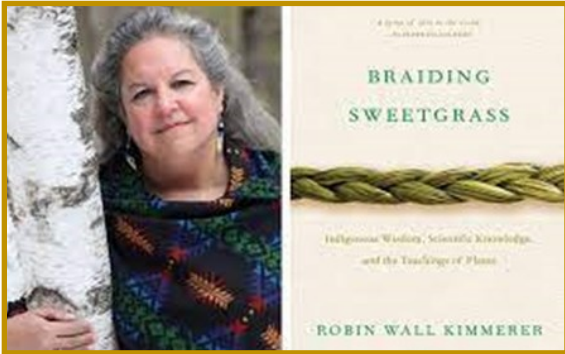
Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

What We're Reading

Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants A Celebration of Science, Beauty and Human Values



In *Braiding Sweetgrass*, Robin Wall Kimmerer weaves together indigenous wisdom, botany, and her own love of the natural world. A member of the Citizen Potawatomi Nation, Kimmerer became fascinated with plants as a teenager. Entering the School of Forestry, she remembers that at her intake interview, she told the adviser that she wanted to know why goldenrod and purple aster grew together so beautifully when each could have grown alone. The adviser dourly informed her that what she was talking about was definitely not science. After extensive study, Kimmerer completed her PhD and began to teach at a university. By then, she knew very well that there is a botanical reason that asters and goldenrod bloom together. But

she also argues that beauty is not separate from science and that it serves a purpose for plants as well as humans.

Kimmerer's essays stitch together botanical science and the beauty of the natural world, but she makes these connections especially heartfelt by her use of native American lore and anecdotes from her own family. In one essay, she begins by telling the story of her grandfather, a skinny brown boy, stuffing the legs of his jeans with pecans and running home in his white underpants with the bounty of nuts that will feed the family. The essay develops beyond a charming anecdote as Kimmerer muses on the bounty of the world and teaches the reader about mast fruiting in a grove of pecans and how the science illustrates the importance of staying together for the good of all.

In another essay, she describes her struggle to learn the Potawatomi language. She puts up sticky notes throughout her house to help her learn the names of things. But it's not just the nouns, she realizes. It's the verbs that make a difference. The 'grammar of animacy', she realizes, is one of the keys to helping us look at the world in a more responsive way. Instead of seeing the natural world as a collection of objects, she argues, we need more nuanced language to help us see that world as a web of relationships.

From one lyrical essay to the next in *Braiding Sweetgrass*, a reader learns not only about botany but also about indigenous culture and the values of generosity, community, and gratitude. Using personal anecdotes, Kimmerer brings these essays to life in a bittersweet and memorable way, inspiring readers to honor what we have been given and also what we have taken from the natural world.

Review by Jennifer Craig

Read with Us This Winter

This winter, curl up with a good book that informs and inspires our appreciation for our beautiful natural world, then join us for a great discussion. We will meet once a month on Tuesdays, 3:00 - 4:30 at the Belfast Free Library. **Save these dates: January 23, February 27 and March 26**

www.belfastbaywatershed.org

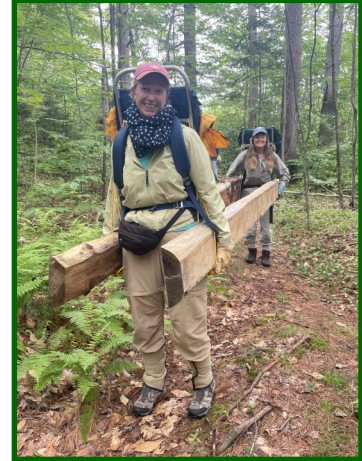
Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

Little River Trail Gets a Big Lift

BBWC has a new enthusiastic trail crew diving in and caring for the 5 mile Little River Community Trail, that runs through Belfast from the mouth of the Little River to the Hutchinson Center on Route 3. This hard working crew, composed of energetic community members including some of the Penobscot Bay Stewards class of 2023, has been building new bog bridges and removing invasive species.



Crew pictured L to R standing on the newly replaced bridges: Sarah Torresen, Dianne Torresen, David Bond, Linda Meadows, Teddy Mattson, Andrew Watkins. Off bridge: Jeff Shula.

On August 5, the self-named “Buckthorn Brigade,” composed of Jeff Shula, Kip Hillman, David Thanhauser, and Cloe Chunn, went wild, uprooting and lopping buckthorn along half a mile of the Little River Community Trail where it picks up at the Walsh Ballfields on Rt. 52. It was a cool morning, so they were able to work hard for a few hours. They had to drag Kip away, or he would have lopped until dark!



Pictured L to R: Kip Hillman, Jeff Shula and David Thanhauser. Cloe is behind the camera.

If you enjoy working outdoors, have time and energy to spare, help our trail crews maintain the Little River Trail in Belfast and the Davis Bog Trail in Morrill. Crew members take a stretch of trail to hike and access. The work is fun, friendly and very important to our community. Contact Cloe Chunn - cloechunn@gmail.com

www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

New Wave of Energy for Water Quality Monitoring

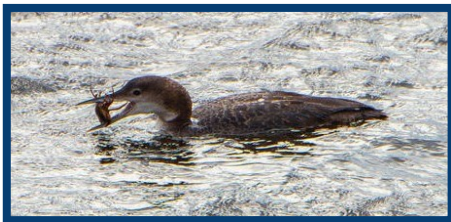
The Belfast Bay Watershed Coalition water quality monitoring (WQM) Team is a group of volunteers who monitor the water quality in Belfast Bay. Joy Bowles (Pen Bay Steward class of 2023) has stepped up to lead this important team. Joy has experience in conducting water quality monitoring as an environmental regulator in Texas and a trainer for their volunteer citizens' monitoring program. She also has extensive experience in developing environmental and safety written programs (including the training program), and conducting trainings. She is currently updating procedures and, with John Tipping, developing a program for the BBWC, training a new group of monitors, reviewing documentation of the sampling and developing plans to make the data collected more useful.

The Water Quality Monitoring program began in August, 2018 under the leadership of water quality professional and proprietor of Lotic Lab, John Tipping and Leo Shay who organized the Team. Using John's equipment, the team sampled water each week at high and low tide at two locations in the Bay. BBWC purchased its own state of the art equipment in 2020 but the program was suspended during the Covid epidemic.

Volunteers will collect and analyze samples to determine the amount of oxygen in the water, which indicates the ability of the Bay to support aquatic life. Low levels of oxygen occur when there is excessive organic matter in the water. The team will also track the levels of salt in the water (salinity) by monitoring the ability of the water to conduct electricity (conductivity). Temperature and clarity of the water (turbidity) are also measured. Fluctuating salinity and temperature can affect biological organisms that live in the Bay; changes in conductivity and turbidity indicate pollution.

To become part of this important team, contact Joy Bowles (joyl.bowles@gmail.com).

Save these Dates for Winter Birding on the Bridge:



**November 11
December 9
January 13
February 10
March 9**



Winter is the best season for seeing birds in Belfast Harbor. We see several arctic species who migrate down "south" for better eating. Many of our resident birds are also here.

The Belfast Bay Watershed Coalition invites you to drop in at the Belfast Footbridge where Ron Harrell and Gary Gulezian lead a monthly bird watch. From November through March on the second Saturday of each month, Gary and Ron will be at the footbridge at 8:30 am with their spotting scopes to show people the birds in the harbor area and answer questions about them. The birdwatch lasts until 10:00, depending on the amount of bird activity present. Bring personal binoculars and dress appropriately for the weather.

www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

Fall Outings

Saturday, September 2, 10:00 am – Marsh River Paddle



Join us and paddle the South Branch of the Marsh River in Frankfort. We will let the rising tide help us paddle 3 miles upstream through Mendall Marsh. We'll see mature woodlands, salt marsh, and tidal grasses, with possible sightings of Marsh Wrens, Sharp-Tailed Sparrows, and several species of warblers and ducks. We might even see a sturgeon leap out of the water. At the head of tide, we will stop for a picnic lunch, and when the tide turns at 1:00 pm, we'll paddle back downstream as it falls. Allow 4 hours. Meet at 10:00 am at the Frankfort Boat Launch on Rt. 1A. Bring canoe or kayak, paddles, PFD, water, lunch, binoculars, and protection from sun, wind, rain, and insects. To register, call Cloe - 207-338-1147.

Saturday, September 23, 10:00am – Little River Community Trail Hike

Join us for a hike of the least traveled part of the Little River Community Trail in Belfast. Meet at 10:00 am at the back of the Hutchinson Center parking lot on Rt. 3. Bring water, lunch, rain gear, and binoculars. There is much to see on this 2 mile hike.

Saturday, October 14, 10:00am – Hill to Sea Trail Hike

Join us to hike the Hills to Sea Trail from City Point Train Station to Rt. 137 in Waldo, Meet at the train station at 10:00 am. Bring water, lunch, rain gear. This is a 4 mile hike; wear sturdy footwear. Binoculars are optional.



Sunday, November 5, 10:00am – Mt. Waldo Hike



Hike Mt Waldo in Frankfort with a group of friends. Mt. Waldo, Kinahpskatenek, *Where there is a big, bouldery mountain*, lives up to its Wabanaki name. We will hike a short, steep road up to the quarry, climb up rocks to the top of the quarry, and then hike a more moderate path through woods and over open summits to the top, where we'll eat our lunch and admire the 360 degree view. This hike will take about 4 hours. Meet at 10:00 am at the Frankfort Boat Launch on Rt. 1A to caravan to the trailhead.

Bring water, lunch, warm layers, rain jacket, hiking poles if you use them, and binoculars. Wear sturdy shoes and orange (even though it is Sunday).

Saturday, December 2, 10am – Rail Trail Winter Tree Identification

Walk this ADA accessible trail and learn about our tree friends after they shed their leaves. Meet at 10:00 am at the central parking lot on the Rail Trail, a mile out on outer High Street. We'll spend 2 hours walking, examining conifers, and learning how to know bare trees by their twigs and bark.



www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

Fall Programs

Thursday, September 20 - Climate is changing Maine ecosystems: Implications for land and water conservation - George Jacobson, Professor Emeritus of Biology, Ecology and Climate Change, University of Maine



Global changes in climate and the biosphere during the Quaternary Ice Ages of the past 2.6 million years provide important clues about our modern world and its future. George will discuss how long-term climate dynamics offer a framework for decisions related to conservation planning from local to global scales.

Since his arrival in Maine in 1979, Dr. Jacobson has been a member of the Climate Change Institute, and was Director of the Institute for nearly a decade. His scientific research has focused on forest responses to climate changes during the past 60,000 years. He has served as a Board member and chair of both the Maine Chapter of The Nature Conservancy and the Forest Society of Maine. He was an external advisor on climate to the European Science Foundation, and the Finnish Academy of Sciences. From 2008 to 2014, he had the honorary designation of Maine State Climatologist.

Thursday, October 26 - Kelp Farming and Related Projects from the Belfast Area High School & BCOPE Marine Institute - Dave Thomas and BAHS Faculty & Students

Teachers and students from RSU 71 including Belfast Area High School and the alternative program BCOPE will be describing the newly formed Belfast Marine Institute, an initiative born out of state-funded grants and community support. Several Marine Institute projects will be described including a licensed kelp farm, field trips, certification and internship opportunities for students, and technology and equipment currently used by students to conduct marine-related research and monitoring.



David Thomas has taught high school science in four public high schools in New York, Virginia, Wisconsin, and Maine for over 20 years. He holds a B.S. in limnology (the study of biological, chemical, and physical features of lakes and rivers) from the University of Wisconsin-Madison and an M.S. in science education from Cornell University. He currently serves on the BBWC Board.

Thursday, November 16 - The Remarkable Recovery of the Kennebec River - Ron Joseph, Maine Fish and Wildlife Biologist



Ron will discuss the remarkable ecological recovery of the Kennebec River, including increasing numbers of spawning alewives, shad, and Atlantic Salmon. Bald Eagles, which were rarely seen during his youth along the Kennebec River, are now approaching an estimated 800 pairs statewide. Each May during the alewife spawning season, Bald Eagles can be seen daily cruising the Sebasticook River (a tributary of the Kennebec) between Clinton and Winslow.

When Ron Joseph was born in 1952 in Waterville, the nearby Kennebec River was heavily polluted by effluent from multiple mills and municipalities. During a 33-year career as a Maine fisheries and wildlife biologist, he conducted breeding bird surveys and worked to restore Atlantic salmon in the Penobscot River. His lifetime as a Mainer and biologist is captured in his first book, *Bald Eagles Bear Cubs and Hermit Bill: Memories of a Maine Wildlife Biologist*. Ron volunteers for the Kennebec Land Trust, participates in the Maine Bird Atlas project, leads birding trips, and plants Atlantic salmon eggs in the Sandy River, a major tributary of the Kennebec.

Programs will be held at 6:30 pm in the Abbot Room of the Belfast Free Library.

www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook

Volunteer Opportunities Available

The Belfast Bay Watershed Coalition is looking for committed individuals who are interested in the health of the Belfast Bay watershed and have time and energy to share. Work with a great group of people, have fun, and make a positive impact on our environment. At this time, we are looking for:

Water Quality Volunteers: Help monitor the quality of water in Belfast Bay. Learn how to take and assess samples of bay water and how to interpret results.

Trail Crew and Organizer for Little River Trail: Trail Crews maintain the Little River Community Trail in Belfast and the Davis Bog Trail in Morrill. Crew members take a stretch of trail to hike and assess. The Trail Crew Organizer calls the crew together when work is needed on the trail. This work is fun, friendly, and very important to our community.

BBWC Board of Directors

Greg Biddinger, President

Ann Kennedy, VP

Kate Hanson, Secretary

Gene Randall, Treasurer

David Bond

Cloe Chunn

Noah Gilchrist

Pat Gladding

Marjie Gormley

Dave Thomas

John Tipping

Staff

Jenni Judkins,

Natural Literacy Educator

Nicolle Littrell,

Publicity and Website

Ann Kennedy,

Newsletter Editor



New Members Invited!

Jump on board and help expand and strengthen our work in the community and watershed.

Visit our website or email us at info@belfastbaywatershed.org.

Printed on Recycled Paper

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.*

Subscribe on-line to this newsletter and receive monthly reminders of our activities. Subscribe at www.belfastbaywatershed.org or send an email to info@belfastbaywatershed.org.

Please visit our website calendar for updates on outings and programs

BBWC wishes to thank all our individual members, community partners and supporting businesses including the Belfast Free Library, Belfast Veterinary Hospital, Front Street Pub, Front Street Shipyard, First National Bank, Left Bank Books, The Grasshopper Shop, The Green Store, Little River Veterinary Hospital and the Belfast Free Library. Many thanks to our granting organizations: Leonard C. and Mildred F. Ferguson Foundation, Maine Community Foundation, New England Grassroots Environmental Fund, and the Onion Foundation.

www.belfastbaywatershed.org

Belfast Bay Watershed Coalition, PO Box 152, Belfast, Maine 04915

info@belfastbaywatershed.org

Find us on Facebook