



Friends of Merrymeeting Bay (FOMB) is a 501(c)(3) non-profit organization. Our mission is to preserve, protect, and improve the unique ecosystems of the Bay through:

Education

Conservation & Stewardship

Research & Advocacy

Member Events

Support comes from members' tax-deductible donations and gifts.

Merrymeeting News is published seasonally and is sent to FOMB members and other friends of the Bay.

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DODGING NATURAL LAW

This spring of 2016 began like none I recall. No snowpack to speak of. Early warming and ice out on the lakes and ponds some of the earliest on record. The ice was out on China Lake in late March. Some lakes and ponds experienced fish kills caused by rapidly warming water. Temperatures continued to rise. April came and went and the showers so often predicted failed to materialize. The May flowers came up anyway. And the river herring that typically show up in May did show up with a vengeance. Fish passage operations began throughout the state. Numbers seemed to be up for the remaining runs in extant on the eastern seaboard. At Benton Falls, the numbers which are staggering to begin with became downright epic. In all, this facility passed three point five million river herring. This is a minimal count. The technology we use to count the fish can only count so many at once. It's not as if the fish know to get in line, remain orderly and pass the counter single file. Nope, they're on a mission to procreate, their sexual maturity driving them on. The Sebasticook system is open to the ocean now and many thousands of acres of historical spawning habitat are accessible. What we predicted would happen...happened in a huge way. So huge, in fact, there can be no doubt as to the veracity of the early colonists' observations: "You could cross the river on their backs!" they said. Those who came later on passed that statement off as so much hyperbole. Seeing the alewives this spring I know the truth. I didn't test the "walking on water" hypothesis but I remain curious. The river ran black with them.

May came and went with alarming speed. So did flows on all the rivers. Any promise of a steady rain repeatedly quashed. Meanwhile the fish continued to pour on. American shad, the largest herring species in the world, and one we've worked hard restoring returned in good numbers. While the numbers of shad were not staggering, they were very encouraging. At Benton Falls the numbers of shad passed were not that high and there is a reason for that. The river simply ran out of water. At 900 square miles the Sebasticook basin is pretty big. But it will only hold so much water. When the rains failed to come, the river dried up.



Photo: Ed Friedman, Shad Tombstone; Monica Chau

The downstream bypass at Benton Falls dam were opened in late May to allow the post spawn adult river herring egress from the system above. This dedicated fish bypass consumes 30 cubic feet per second (CFS). The fish lift consumes up to 90 CFS. The turbines can consume many times that amount. But the water resource just wasn't there. In order to maximize the downstream potential for the 3.5 million fish above us we decided to suspend active lifting upstream in mid-June. The turbines fell silent shortly after and remained silent the entire summer.

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DODGING NATURAL LAW (CONTINUED)

On June 19th I paddled the Sebasticook River from Benton Falls downstream to its confluence with the Kennebec at Fort Halifax in Winslow. I was acting as fisheries interpreter for a group of fine folks with the Sebasticook Regional Land Trust. Most folks were in kayaks. The one canoe carried Kerry Hardy who was the naturalist/native American interpreter. This stretch of river is littered with remains of an occupation of peoples spanning thousands of years. Carried by the swirling currents of the river, it doesn't take much imagination to understand why this was so. The Sebasticook still teemed with fish in late June. I saw one shoal of shad numbering at least a thousand strong. A school of white suckers blackened the bottom gravel as they darted in mass from beneath my kayak for a minute solid. Individual schools of blueback herring flitted in the shallows. Sea lamprey nests were scattered on gravel shoals. And most stunningly, the shore was littered with the carcasses of river herring by the thousands. Their tiny bodies lay in all stages of decay, many showing signs of active scavenging. We saw songbirds galore, eagles, osprey, a beaver, great blue herons, gulls and the list goes on. All of these species are beneficiaries of the river herring in one way or another. Either directly or indirectly, the decomposition of these fish feed the river nutrients. These in turn feed bacteria, plant growth, insects, in short a stunningly rich and functional ecosystem. By the end of the paddle I was nearly speechless. I'd just covered a six mile stretch of river and seen more fish than most will in a lifetime.

“Catch the fish, sort the fish, load the fish, count the fish, drive the fish, dump the fish, and repeat until you run out of fish.”

I was asked many times about the number of dead fish scattered on the shoreline. I got the idea that most folks seemed uncomfortable with the thought of these fish dying on their spawning run. Why so many? Isn't this a bad thing? Why'd they die? Innocent enough questions, and ones most find disturbing in a reflective sort of way. The answer I find is somewhat miraculous. Having come to the job early on in the restoration, slaving for eight or nine weeks each spring to move one hundred thousand river herring by truck, past the dams to historical habitat, is something I can look back upon now with nostalgia. At the time it was a major grind. Seven days a week, ten, twelve, fourteen hours per day. Catch the fish, sort the fish, load the fish, count the fish, drive the fish, dump the fish, and repeat until you run out of fish.

That was the reality from 1983 to 2008 on the Sebasticook. If we had significant mortalities in the trucks we wracked our meager brains for a solution. We got better at trucking fish. But we were no surrogate for Mother Nature. Mother Nature demands all run the gauntlet. She cares not for the individual. Some make a wrong turn at the right time for the osprey or heron. Others may be on their second or third spawning run and are the human equivalent of an octogenarian. Many succumb to exhaustion in the oxygen depleted warm water. Whole shoals of herring might be driven ashore by hungry stripers, flipping desperately on dry gravel. Some flip the wrong way, back to waiting stripers or, further up the bank to eager herons. And man has certainly done his share to harvest them. It's tough hoeing being an alewife.

For the alewife it is a numbers game. The “You can't eat us all” strategy. Given a decent playing field, the alewife will produce numbers of young that are staggering. Females carry up to and beyond 100,000 eggs. A runs composition is close to 50% female. So, the 2016 run going into the Sebasticook could potentially produce up to 175,000,000,000. That's 175 billion eggs. If we look at the average adult returns on the Sebasticook of 2.7 million, then from egg to adult (4 years avg.) the alewife's odds of making it to maturity are 1:64,815. I've learned that alewives love long odds.

Nate Gray

Editor's Note:

2016 brought a relatively unique set of circumstances: low river flows, and high temperatures. These factors caused the dam owners to husband their precious impoundments for fear there would not be a rainy day to raise levels. Add recovering migratory fish biomass into this mix, dissolved oxygen (DO) levels fall, fish suffocate and die. With climate changing, this may become the new norm or, may never happen again. Regardless, we suggest a Department of Marine Resources/Department of Environmental Protection initiative to monitor temperatures and DO, taking action if temperatures get too high and DO too low. Call it a SWAT team for Surface Water Ambient Temperatures. When conditions get dire, dam owners must be required to release water. Higher flows equal greater DO and less chance of fish kills.

FALL BAY DAY-SEPTEMBER 27, 2016

Early morning showers stopped right on schedule giving about 130 students from Pittston, Bowdoin and Bowdoinham as well as 30 volunteer guides and chaperones a perfect Bay Day at the Merrymeeting Bay Wildlife Management Area in Bowdoinham next to the Cathance River mouth. Fabulous hands-on sessions included watershed modeling, anadromous fish printing, primitive skills, macroinvertebrates, conservation canines, field ecology and art in nature. How could you not have a blast??

Thanks to Guides:

Steve Eagles, Kent Cooper, Kathleen McGee, Leslie Anderson, Tom Hoerth, Betsy Steen, Nate Bears, Mark Gershman, Bethany Brown, Roy Morejon, Fred Koerber, Jay Robbins, Nate Gray, Toby Bonney, Megan McCuller, Hannah Goodman and Grant Connors.

And to Chaperones:

Tom Hughes, Tom Walling, Richard and Rachel Evans, Carole Sargent, Bob Goldman, Heather Cox, Phil Brzozowski, Tina Goodman, David Hammond, Martin McDonough, David Whittlesey.

Special thanks to: Kathleen McGee and Ed Friedman for organizing, scheduling and photos. Wild Oats Bakery for the delicious lunch wraps, Keel Kemper, IF&W Regional Biologist for use of the area and the weather gods for the usual rarified atmosphere of Bay Day!



Archaeology



Fish Printing



Watership Modeling



Primitive Skills-Wild Rice Foraging

BROOKFIELD ENERGY KILLS FISH

This Fish Kill occurred at Brookfield's Brunswick Dam on 10/15 & 10/16. While these thousands of fish were mostly river herring, they could easily be endangered salmon smolt. The only regular non-turbine passage through this dam is an 18" pipe seen spewing from the power house between multiple turbines. One of our water quality monitors called this in and we reported the kill to the Federal Energy Regulatory Commission (FERC) who licenses the dam, DEP, USFWS and NOAA Fisheries. Dispicable on so many levels. Brookfield, a multi-national, kills fish at many Maine dams.



WATER FROM AFAR

Maybe we're a little spoiled. Merrymeeting Bay is a beautiful place and the water quality these days at least, not half bad. Built into their culture, the Wabanakis were true stewards of land and water in this area. Since our intrusion into their domain 400 plus years ago, there's been a slow deterioration. By the 1960's scum flowed freely throughout the majority of U.S. rivers. In our neighborhood Androscoggin, fume-filled river fog peeled house paint and Kennebec foam at the Chops was several feet deep. Whether it was carelessness, ignorance, bad science, or the "profits over people and environment" mantra of capitalistic policy....fresh water was filthy and change was needed.



Maine's Senators Muskie and Mitchell were very instrumental in implementing legislation to improve our nation's (and Merrymeeting Bay's) water quality. Muskie with his work on the Clean Water Act of 1972....regulating discharge of pollutants into navigable and certain service waters and putting enforcement teeth into same....and Mitchell in the 1980's with his dedication in securing Federal funding for upgrading waste water treatment facilities and dealing with non-point pollution.

Six rivers drain into our Bay. They in turn gain their volumes from hundreds of streams, outlets, and land-shed waters along the way. Over 6,000 square miles of water-shed drains through. Upwards of 38% of all Maine waters rushes out of Chop Point in route to the Gulf of Maine. So while Friends of Merrymeeting Bay has been near the stirring (yes, pun intended) wheel over the last 40 plus years improving and monitoring our Bay's water quality, there are more players in the equation. Besides individuals and families who serve as advocates for water quality, lake associations and their brethren spawned from the environmental movement.

A prime example within our watershed is the Cobbossee Watershed District (CWD). It was authorized by the State Legislature in 1971 and, although many lake associations exist (Belgrade, China, 30 Mile River, etc.) CWD is Maine's only "Watershed District".

Partially located within Gardiner, West Gardiner, Richmond, Litchfield, Readfield, Manchester,

Monmouth, Mt. Vernon, Wayne, and Winthrop....member towns (plus Winthrop Utilities District and minus West Gardiner) appoint trustees to set policy, establish a budget, and oversee staff projects and activities. They contribute the vast majority of the annual budget (\$306 K in 2015-16) which is approved annually by the nine members.

CWD regularly monitors 26 lakes, ponds and streams of the Cobbossee Watershed, a 217 square mile drainage basin, to protect and maintain water quality conditions. Special emphasis is given to restoration of lakes with impaired water quality. They also manage and monitor water levels, advise and cooperate with dam operators, and work with farmers and camp owners to identify and reduce non-point pollution. Much of this work is funded by federal grants awarded to the District.

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WATER FROM AFAR (CONTINUED)

Millions of gallons of water annually leaves the District through Cobbossee Stream into the Kennebec River and on to the Bay. Water improved to benefit users all along the way. Users that include many more forms of life than we visiting humans. Our Native American “forefathers,” made up of people with the foresight to see water as perhaps our greatest natural resource, might be proud of the groups discussed above.

Steve Musica

(Note: The author serves as the Town of Richmond’s representative on the Boards of FOMB and CWD)

Editor’s Note:

Connectivity between water bodies in a watershed is critical to the health of and even presence of native migratory fish. Cobbossee watershed, dammed at head of tide in 1761 remains the largest coastal watershed in Maine impassable to native migratory fish. Some alewives are trapped and trucked here but only a few eels can ascend the watershed on their own. Unfortunately while the CWD regulates water levels behind dams in the highly blocked watershed, the District has no criteria for minimum stream flows. (Watts, 2012) So, in terms of diadromous fish access and habitat, the watershed gets a failing grade. In terms of potential however, it gets an A+.

Reference:

Watts, D. 2012 Cobbosseecontee Watershed, Maine. Fish History, Water Quality, Hydrology and Aquatic Restoration Overview

ANNE HAMMOND DONORS-THANK YOU!!

Thanks so much to the following people for their FOMB donations in memory of Anne Hammond:

Hannah Trowbridge, Robert & Avis Meade, Maria & Richard McElman, Shirley & Donald Kenney, Sally Joy, Scott Shaffer (Makita USA), Sarah Redfield, Lorraine Norton, Kathie Weibal, Peter Fessenden, E. Ahlquist Chadbourne, Dot & Dan Erickson, Judith & Robert Mansfield, Ed Friedman &, Kathleen McGee.

GET WIRED (NOT WIRELESS)!

We have discussed the growing issue of radiofrequency radiation (RFR) or electromagnetic frequency (EMF) pollution in several articles over the years but what we can we do to decrease our RFR footprint and minimize harmful exposure to ourselves and others?

After Reducing Your Use of Unnecessary Electronics, Get Wired! - Use corded phones [portable phones are very high RFR emitters since their base stations are constantly on]; use direct cable connection and modems without wireless for computers; if your modem or router have wireless functions, you may be able to have them disconnected by your provider; turn off the default wireless search on your computer; opt out of smart meters, if and when using a cell phone, use speaker function or air tubes to your ears and, disconnect wireless baby monitors, put them on timers or hard wire them. Consider exposure to others when out and about with the urge to use your wireless device. For many, including some wildlife, the RFR from your device is debilitating. Meters to measure RFR are readily available as are various shielding materials for those acutely sensitive. Using the internet, learn a lot more from organizations [on page 7 graphic](#), that took part in a New York City Forum this past spring or call Ed with questions at 666-3372.

WE NEED YOU! PLEASE SUPPORT OUR IMPORTANT WORK

FOMB Leadership

Our accomplishments are due to the hard work of dedicated volunteers, especially those who serve on our committees. If you want to get involved and serve, please contact the committee chair or Kathleen McGee. We always welcome member input and we'd love for you to join us!

Steering Committee

Ed Friedman, Chair (Bowdoinham)
 Nate Gray, Treasurer (Freeport)
 Tom Walling, Secretary (Bowdoinham)
 Steve Musica (Richmond)

Education Committee

Betsy Steen, Co-Chair, 666-3468
 Tom Walling, Co-Chair, 666-5837

Conservation and Stewardship Committee

Chair Vacancy

Membership and Fundraising Committee

Nate Gray, Chair, 446-8870

Research and Advocacy Committee

Ed Friedman, Chair, 666-3372

Coordinator/Organizer

Kathleen McGee, 666-1118

Friends of Merrymeeting Bay • PO Box 233 • Richmond, Maine 04357

Membership Levels

- | | | |
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| <input type="checkbox"/> \$750 American Eel | <input type="checkbox"/> \$100 Shad | <input type="checkbox"/> Other |
| <input type="checkbox"/> \$500 Wild Salmon | <input type="checkbox"/> \$50 Alewife | |

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- | | |
|-------------------------------------|---|
| <input type="checkbox"/> Renewal | <input type="checkbox"/> Send information about volunteer opportunities |
| <input type="checkbox"/> New Member | <input type="checkbox"/> I would like a sticker |

\$7 Enclosed (optional) for a copy of *Conservation Options: A Guide for Maine Land Owners* [\$5 for book, \$2 for postage].



Thanks to Will Zell and Zellous.org for newsletter layout.

WIRELESS TECHNOLOGY HARMS HUMANS, ANIMALS & THE ENVIRONMENT

NO SUCH THING AS "SAFE" WIRELESS!

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DOCTORS WARN

OCCUPY EMF HARM

WIRELESS SAFETY SOLUTIONS

EMF LESSON

TAKE BACK YOUR FREEDOM

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2016-2017 Winter Speaker Series!

All talks 7:00pm at Curtis Memorial Library,
Brunswick, unless noted. Details at www.fomb.org

OCTOBER 12 Ranked Choice Voting

Finn Melanson, League of Women Voters

NOVEMBER 09 Electronic Silent Spring

Katie Singer, Medical Journalist & EMF Activist •

Unitarian Universalist Church, Brunswick

DECEMBER 14 Twisted Genes, Distorted Narratives, CR Lawn, Founder, Fedco Seeds

JANUARY 11 Bateaux to Quebec: Life & Times of Ruben Colburn, Tom Desjardin, Author, Historian & Director, Bureau of Public Lands

FOMB Annual Meeting & Potluck: 6:00pm, Public Welcome, Cram Alumni House, Bowdoin College • 83 Federal St., Brunswick

FEBRUARY 08 Talking Fish-Heads

Nate Gray, DMR Fishery Biologist, Doug Watts, River Activist & Author, & Ed Friedman, FOMB, Moderator

MARCH 08 The King's Broad Arrow: Maine's Mast Trade, Harper Batsford, Assistant, Tate House Museum

APRIL 12 Cougar Recovery in Eastern North Americam, Chris Spatz, President, Cougar Rewilding Foundation

MAY 10 Dragonflies & Damselflies in Maine Ron Butler, Biologist, U. Maine Farmington