

The Merrymeeting News



Winter 2007 VOLUME XVII, No. 1

The Newsletter of Friends of Merrymeeting Bay • Box 233 • Richmond Maine 04357

Outdoor Wood Boilers: Coming to a Neighborhood Near You?



Outdoor wood boilers (OWBs) are wood-burning devices used to heat homes, hot water and are also used commercially. Because of rising fossil fuel costs, OWBs popularity is increasing at an exponential rate. In 1999 nearly 5000 units were sold in the U.S. In 2004 that number had risen to 24,560. In Maine, according to the Maine Department of Environmental Protection (DEP), 400 more units will be bought this year, on top of 2,000 units already in the state.

“State health and environmental agencies have received a growing number of complaints from owners and neighbors that

Number of OWBs Sold Nationwide, 1999-2004

1999	2000	2001	2002	2003	2004	TOTAL
4828	6865	15330	10552	15340	24560	77475

OWBs produce thick, acrid, foul smoke that permeates buildings and homes, causing not only a nuisance, but also environmental degradation and health problems. Even when operated using clean seasoned wood, OWBs can emit significant pollution because the basic design of the OWB causes fuel to burn incompletely, or smolder, resulting in thick smoke and high particulate emissions.

The problem is aggravated when other materials, such as wet wood, processed wood, and garbage are burned. The short OWB chimney and reduced draft often fail to disperse the smoke, resulting in more concentrated pollution at lower heights reaching residents and neighbors. Exposure to this smoke, like other pollutants, can cause or contribute to short-term health harms such as eye, nose, throat, and lung irritation, coughing and shortness of breath, and may exacerbate asthma or trigger asthma attacks. Chronic exposure to smoke can cause long-term effects such as asthma, heart and lung disease, and cancer.”

Article, photo, charts, and text above reprinted from: *Smoke Gets in Your Lungs: Outdoor Wood Boilers in N.Y.* State-Eliot Spitzer, Attorney General, Environmental Protection Bureau, October 2005

OWBs are basically short stack incineration units emitting huge levels of carbon monoxide, dioxin, mercury, lead... and any byproduct of anything burned in them. While one is supposed to only burn hard wood that is rarely the case.

It's like open burning, illegal in Maine, times 10; only, because of a loophole, it's legal.

From a Bangor Daily News article, Dec. 9th, 2006: *Health officials claim outdoor wood boilers are among the most polluting types of sources of heat and hot water even when burning clean, seasoned firewood. But their large fireboxes may also encourage some owners to burn trash, tires and other non-wood waste that can spew even more toxins into the air, officials say.*

Outdoor wood furnaces typically emit anywhere from 20 to 300 grams of particulate matter, or soot, per hour. Even the cleaner burning models are often several times dirtier than older wood stoves. Newer wood stoves that meet federal air emissions requirements emit just 4 to 7.5 grams hourly.

The wood-fired boilers' air emissions become even more stark when compared to oil-fired or natural gas furnaces, which emit less than 0.02 grams per hour; according to reports.

Norm Anderson with the American Lung Association of Maine said outdoor wood boilers pollute the air above acceptable federal levels. The association wants a moratorium on the boilers until they can meet the same federal standards applied to wood stoves.

“We want everyone to understand that this is a public health problem and are not only cautioning the public against purchasing these boilers but also alerting the business community that this is an issue with some consequence,” Anderson said. “They need to be aware of that if they are promoting these units.”

Friends of Merrymeeting Bay

Friends of Merrymeeting Bay 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

Membership Events

Research & Advocacy

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

www.friendsofmerrymeetingbay.org

The Merrymeeting News is published seasonally by Friends of Merrymeeting Bay (FOMB) and is sent to FOMB members and other friends of the Bay.

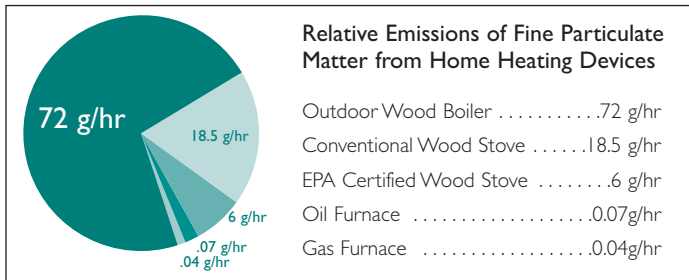
For information call:
Ed Friedman, Chair,
666-3372.



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Outdoor Wood Boilers

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There are NO restrictions as to where these units can be placed. Someone could easily put one right next door to you in Brunswick, Bath, Bowdoin, Topsham...in fact, several can go up in close proximity. People who live next door to these are getting very sick, cannot be outside on their own property and cannot sell their homes to get away from the problem because no one wants to live there, thereby making it both a health and property issue.

From a family in the Merrymeeting Bay area: *"We felt burning nostrils, throats, eyes, coughing, lung buildup, dizziness, nausea, and my oldest daughter had disorientation. Carbon monoxide poisoning presents like this and is present in OWB wood smoke, among other toxins, due to the way a unit burns if improperly designed without emissions control. (These units have inefficient combustion.) While playing in the yard, sitting on the deck, working on the barn and in the garden, we breathed their smoke. Our house was full of smoke, too. In summer, our windows are open, like everyone else's. We were being smoked-out by a dirty, poorly-designed OWB. (Not all of them are.)"*

At the federal level, the EPA has just announced a voluntary program for manufacturers of OWBs. Voluntary. They can continue to make particulate discharging, smoke belching, lung burning devices, but can voluntarily lower the rate of pollution so they can get an orange tag that says they're EPA certified. This is neither health nor environmentally protective. There are manufacturers, right now, who make OWBs with emissions which rival the highest EPA standard woodstove.

At the state level the DEP (and legislature) is abdicating its responsibility. Rather than suggest a voluntary program and/or forcing municipalities to pass ordinances to protect their citizens, the DEP should pass protective legislation now. Municipalities and

individuals look to the DEP for leadership and direction, but, too often, get neither. The state should not shift responsibility and cost to the local level.

It is simple; there is no protection without addressing, immediately, and making **mandatory**; all existing OWBs that do not meet current EPA emission standards for (new) wood stoves, should be taken off-line throughout the state (Existing units could be converted to meet higher standards, be replaced or removed. The state should consider funding buy-outs if necessary). The technology is there now, there are no excuses. We have made these kinds of public health choices before (i.e. lead) but have gotten to a point over the years of chronic compromise based on business profits, not public health needs.

According to Louis Fontaine of the Maine DEP, some OWBs have been banned by municipalities in Massachusetts, New Jersey and New York because they are such offensive polluters.

This issue encompasses concerns about public health, global warming, clean alternative energy, social justice, health care costs, quality of life and more. Safe, economical, renewable energy is important. Individually and as a town, state and nation, we should support renewable energy; but not at the expense of my health or yours. That isn't safe or economical.

We can support safe, economical, renewable energy AND our health. Outdoor boilers should at least meet the same requirements our indoor wood stoves and oil and gas furnaces do. Those that don't meet those standards should be retrofitted or banned.

Kathleen McGee



FMI: 800-771-7755 • www.oag.state.ny.us
 Full report available in Toxins section of FOMB web "Cybrary."
www.friendsofmerrymeetingbay.org

Fish & Wildlife Service Decision on American Eel Published

On February 2 the USFWS published in the Federal Register their status review of the American eel, undertaken in response to a citizens Endangered Species Petition filed by Doug and Tim Watts. The full document is available in the "cybrary" section of our web site. The review went on for over a year and yielded a disappointing but not unexpected result for the Watts brothers, FOMB and eels.

While the Service did find that problems from habitat loss, excessive commercial and bait fisheries, disease or predation, dams, inadequacy of existing regulatory mechanisms and contaminants all could have adverse local effects, that taken as an entire population, the cumulative effects were not sufficient to threaten the species in the foreseeable future.

We strongly disagree with their conclusions and the logic [or lack thereof] they used in reaching their decision; that local and regional effects are not impacting the whole.

Eels are panmictic, which is to say they are a single, well-mixed breeding population. In contrast to most other migratory species that often have discrete sub-populations, and sometimes return to particular rivers to spawn, eels all migrate to the Sargasso Sea to spawn once in their life.

After spawning, adults die and larval eels drift on the currents throughout the extent of their range, exiting off into river systems along the way. If a female eel out-migrates from the Kennebec and successfully spawns, there is no telling where her young will end up.

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Fish & Wildlife

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Think of eel range as radiating out from the Sargasso. As eels are killed and the population shrinks, the effects will be felt first at the farthest limits of the range because there are not enough eels in the pool to radiate out in sufficient numbers. They may [for awhile] still show evidence of distribution over their entire range but their numbers will be diminished.

Evidence of this is seen in the St. Lawrence River and Lake Ontario where the eel population, once the largest for the species, has literally collapsed. It is precisely because the species is panmictic, that loss of eels in a region can affect the eels at a population level. If the eels did form distinct population segments [DPS] instead, then and only then, might the entire population be insulated from regional effects.

The USFWS review states that American eel “remains well-distributed throughout roughly 75% of its historic freshwater range.” And yet other sources, including their own information sheets, several studies and the Atlantic States Marine Fisheries Commission [ASMFC] worry eels have lost access to 84% of their habitat, primarily from dam obstruction.

If they're in 75% of their historic range, it is in ever decreasing, and worrisome, numbers. Block off 84% of anyone's habitat, there will be serious consequences.

The review goes on to say that eel mortality, when going through hydropower facilities, is typically 25%-50% [a statistic that their colleagues working on Atlantic salmon would call shockingly high, but doesn't seem to concern USFWS in regard to eels]. They go on to suggest that when one or more hydro dam is encountered by eels, the cumulative mortality rate goes up to 40%-60%.

Wait. Let's get out our elementary school math for a moment.

If you assume 25-50% mortality per dam and then figure 4 dams or 10 dams or some additional number, what would the cumulative mortality be?

Borrowed from Doug Watts here's what the math on the Kennebec would look like with 50% of the eels being killed:

100 eels above Weston Dam = 50 eels below Weston

50 eels above Shawmut = 25 eels below Shawmut.

25 eels above Hydro Kennebec = 13 eels below Hydro Kennebec

13 eels above Lockwood Dam = 7 eels below Lockwood.

Total survival = 7 eels out of 100. Total killed = 93 of 100 eels.

That ain't no 40%-60%. Even only passing through 2 dams, certain death would be 75%. Add just 4 of the dams in our watershed and it's 93%. Sounds like a problem to me.

USFWS ascertains that one can only assess the threat to the species when one understands the distribution and dispersal patterns of eels.

Take the 40%-93% mortality from four dams alone, add to that the reality that each female can carry up to 15 million eggs, destroy them with turbines and their future does not look rosy. Elementary math students can figure that out too.

Further, the status review does not take into consideration at all, the effects of declining or contaminated eel populations on other species. Eels, in nearly every stage of their cycle, are a food source for a large number of other species. Not only is this important to our overall eco-system and food chain, but those who want eco-tourism to flourish might consider the sport fishery that depends on a steady supply of young eels.

From the USFWS Press Release:

“While the eel population has declined in some areas, the species' overall population is not in danger of extinction or likely to become so in the foreseeable future, the Service decided ... If we look at eels over time, we see fluctuations in the population numbers, so a decreasing number of eels right now does not necessarily forecast an irreversible trend.”

By implication then, what the Service seems to say is that we must wait until there is an “irreversible trend” of declining eels that will actually be “in danger of extinction” before we decide to list them as endangered. The Endangered Species Act is meant to prevent an irreversible trend, not wait until it's too late.

Ed Friedman

It's Not Just About Eels

FOMB is highlighting the eel as a surrogate species, representative of others, to attack and challenge several critical areas affecting biodiversity, toxics, water and public policy. While eels may appear to be our focus, it should be made clear that our petitions to the state Board of Environmental Protection (BEP) for immediate safe and effective dam passage are inclusive of anadromous fish species, throughout their historic range above current dams on the Androscoggin and Kennebec Rivers. Specifically, these are alewives, American shad, blueback herring, sea lamprey, Atlantic salmon and possibly some stripers.

From a biodiversity standpoint, there are relationships between all of these species and others in the Gulf of Maine that are interrupted when upstream access is denied or attempts at downstream out-migration result in turbine mortality or injury. One example might be that sea lampreys will physically move stones around on the bottom to establish their spawning zone or “nest.” These rocky depressions are then utilized by salmon in establishing their spawning spot or “redd.” Without the lamprey, the salmon (transported now by trap and truck above dams) will expend more energy in spawning, will not have as suitable a spot, and may not be as successful. In another example, MacArthur “genius award” recipient Ted Ames has drawn connections between the loss from dams on the St. Croix River of critical alewife habitat, resulting in reduced alewife numbers, that in turn, because alewives are a key forage species, may have contributed in a substantial way to collapse of the cod fishery in the Gulf of Maine.

The effect of turbine mortality on eels raises huge alarms regarding toxic contaminants and biodiversity. Due to their longevity, forage habits, habitat and fatty tissue, eels are known to harbor large concentrations of persistent organic pollutants. Left alone to leave the rivers and spawn, these levels likely do have some adverse effect on reproduction. However, when a contaminated eel is ripped open by a turbine, high loads of bioaccumulated contaminants become immediately available to any other species in the river or feeding from the river whether bald eagle (observed), osprey, mink, otter, or fish such as salmon. As an example of the severity of contamination, eels killed at Benton Falls on the Sebasticook River (with no pulp mill present) had PCB levels in the 500

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From the Chair

The UN's International Panel on Climate Change has just released its long awaited report noting the severity and rapidity of global warming and climate change. For many of us the conclusions are no surprise. Boiled down to their essence, we are in an environmental emergency and things are all connected. Long has FOMB taken a holistic approach to things. We can't, with any long term hopes of survival, protect the land without also protecting the water or air. We can't ignore the health risks of spraying our elementary schools with pesticides without being aware of long-term effects to our children. We can't decimate the elver population, kill migrating pregnant adult female eels and not realize that we will be affecting a broad range of species and river health in general. We can't poison our neighbors with Outdoor Wood Boiler smoke, or discharge 40 million gallons/day of pulp mill effluent into our rivers or keep driving extra large vehicles and leave them idling when we go into stores. Not if we want to leave a decent world for our children or the other species that we share the earth with.

There don't, so far at least, appear to be many earths in our piece of space. We can remember that we need to make conscious choices about how we live. We can remember to help each other out. We can realize that economy vs. the environment is a false choice and that alternative energy does not have to mean plugging up the Chops with propellers. We can choose to act well, think carefully and be well. And we can be better about thinking long-term. In multiple generations as the Native Americans did. We are blessed with living around Merrymeeting Bay, a resource that was probably one of the bread baskets of North America. It's still a special place, very special. And part of a whole.

It's a good time to again remember the image of earth taken from Apollo. We have been enjoying island living at its best, but it's still island living.

My thanks to our steering committee, active volunteers, staff, membership and many partners for your support.

Respectfully submitted,
Ed Friedman, Chair

Friends of Merrymeeting Bay 2006 Accomplishments

Media

Print: Approximately 12 articles: Education, DEP Enforcement, Atlantic Salmon Endangered Species Petition, Fish Restoration, American Eel Kills, Circulation Study, Outings, Sludge, Chops Hydro Proposal

Television: Local Cable (Brunswick, Biddeford): Merrymeeting Bay, eels, outdoor wood boilers, Bay Day, water rights

Radio: Maine Public Radio & WMPG: American eel

Volunteers

Minimum 3657 volunteer hours (457 days)
132 volunteers

Membership

359 members (65 new members this year)
Speaker Series - 288 people
Outside 2006 (Paddle Series & Walks - 128 people)
Newsletters – 3
Shoreline Cleanup-6 people-1200 pounds

Funds Leveraged

\$1,000,000 (land acquisition)

Grants

\$66,364: staffing, eels, education, circulation study, water quality

Outreach Presentations

Androscoggin Source to the Sea Trek, Gulf Island Pond
Toxics Action Center Conference, Brunswick
DMR Spring Running, Augusta
Wildlife Appreciation Day, Augusta
Patagonia Store, Freeport
F.W. Horch, Brunswick
Merryspring Nature Preserve, Rockport

Education

Two Bay Days (316 students)
Hall-Dale on the Bay (80 students)
Mid-Coast Senior College Kennebec Course-(30 students)
School Visits-12 (347 students)
Critter Visits-21 (810 students and public)
Web site updates-extensive additions to Cybrary & Friends of Merrymeeting Bay links

Conservation and Stewardship

Total Protected – 76 acres transferred to state.
1,600' Kennebec R., 2,600' inland wetland in Woolwich
Two conservation easements in process- Topsham Cathance & Androscoggin
Stewardship- All easements monitored

Research

Posted MHPC Umberhind/Leyman-Detweiler-LMF Archaeological Dig Report
Completed second phase of Circulation Study

Completed draft report of Caged Mussel Endocrine Disrupter Study
Assisted MDIF&W with bald eagle breeding surveys
Water Quality Monitoring – 20 Standard & 11 Fecal Coliform sites

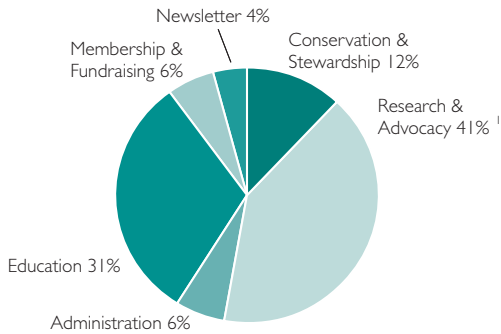
Advocacy (postings, letters, testimony, etc)

Channel Speed Limit Signs
Merrymeeting Bay Wildlife Sanctuary Signs
Land for Maine's Future Bond
American Eel Protection-Endangered Species Act Comments, BEP Petition
Kennebec Atlantic Salmon-filed Endangered Species Act Petition
Fish Consumption Advisories
Gulf Island Pond
Chops Hydro Intervener
Center for Environmental Health & Justice
Brunswick Aquifer Protection
Zone-Sludge Spreading
Androscoggin Upgrade
Land Conservation Donor Tax Changes-US Senate & House

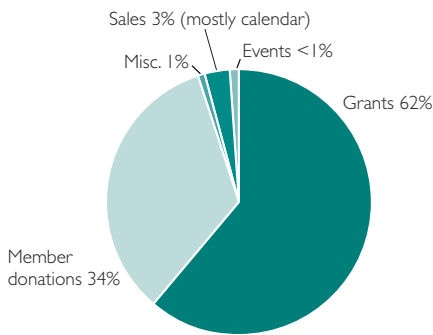
Primary Partners

The Nature Conservancy
Bowdoin College Environmental Studies
Department of Environmental Protection
Department of Inland Fisheries and Wildlife
US Fish and Wildlife Service
Maine Natural Areas Program
Department of Marine Resources
Friends of Casco Bay
Maine Toxics Action Coalition
Applied Biomonitoring
Maine Rivers
Maine Historic Preservation Commission
Environment Canada
Maine Coast Heritage Trust
Maine Wetlands Protection Coalition
Patagonia Outlet, Freeport
Land Trust Alliance
Maine ECO
Androscoggin Alliance
Friends of Kennebec Salmon
Maine Maritime Museum
Mid-Coast Senior College
Brunswick Pesticide Watch
Toxics Action Center
Maine Rural Water Association
SAD 75

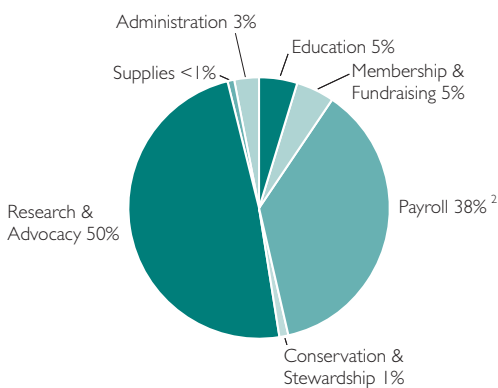
Volunteer Hours (3,657 hrs)



2006 Financials – Income (\$106,344)



2006 Financials – Expenses (\$76,791)



¹The high percentage of our expenses going to Research and Advocacy largely reflect our work on fish passage and the continuation of our study of circulation patterns in the Bay.

²Our 25 hour/week Executive Coordinator spent her time as follows: program work: 49%, fundraising & membership services: 42%, and administration: 9%. Added to our staff in Aug, was a 10 hr/wk Education Coordinator: FOMB is somewhat unique in its mix of paid staff and volunteer efforts. Our primary staff person was largely hired to work on fundraising, membership and volunteer coordination. Our active and engaged Board, as well as our many members, carry out the bulk of our program work. Consequently, our distribution of expenses (of which salary is a significant chunk) does not accurately reflect our distribution of energy.

It's not just about eels

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ppb range. The Maine state toxicologist issues fish consumption advisories protective of cancer when fish tissue levels of PCBs are at 11ppb. One could say that eels, given the chance to out-migrate, play a valuable role in cleaning our rivers. If interrupted, those contaminants are recycled right back into relatively closed ecosystems between dams.

Public policy is a huge issue here related to the licensing of dams. When a dam is issued a required water quality certificate it is done so by the state and approved by the Federal Energy Regulatory Commission (FERC). These licenses have typical durations of 30-50 years; probably a hold-over from when large amounts of capital were spent to build huge dams and investors wanted some protection. Modification of licenses to improve fish passage has only been attempted by river groups when licenses are up for renewal. The concept and practice that a license shall remain inviolate for its duration (unless dam owners want to change it for their benefit) is absurd. It does not allow for changes concurrent with our greater understanding of riverine ecosystems and could in fact result in the extirpation of a species. The laws do allow for fish and wildlife agencies (or anyone else) to petition FERC for license modifications. FERC does typically pay some attention to state agencies. If we are successful in convincing the Board of Environmental Protection to modify existing certifications then it is likely that the state agencies would petition FERC for those changes that the courts have said the states can require.

Thus, our eel work is not just work to help save the eel from extinction (particularly since the feds have refused to do so), but is a path chosen to directly affect the clean up of our rivers, improve the biodiversity and health of our watershed and the Gulf of Maine fishery and finally, to promote more realistic and effective methods of regulation that could bring the FERC licensing process, across the country, out of the dark ages for the benefit of all species.

Ed Friedman



OWL SNAGS THE MOON

Owl was perched in his hooting tree, his mind wandering. It was late on a winter night. The frost was deep, the river was coated in ice, and it was a hard job scaring up any vittles. Mouse and Vole had gone to ground and were holed up in their winter quarters under the snow. Even Hare was hard come by since Old Mother Coyote had prowled through the neighborhood. Owl dug his talons deeper into the Oak bough he was clinging to, and ground his beak, thinking about a fresh rodent.

All the stars were out glittering on the black Sky, and Owl could see deep into the snow-filled woods in the starlight. But nothing stirred. The frigid air was breathless. The only sounds were the booming of the ice and the popping of frozen pines.

Owl gave a sharp HOOT-HOOT and swiveled his head around, just in case, but no startled shadows flitted across his view. In fact there were barely any shadows at all. The Moon was old, and wouldn't rise until just before dawn. Only starlight dappled the snow below. Owl hopped around until he was comfortable, took a firm grip, ruffed out his feathers, and closed his eyes. Soon Owl was asleep.

In his waking life Owl is a wise old bird, not given to impulsive foolishness, or idle sport. It's true he loves a quick chase and a sudden kill, but they are as much part of his necessary economy as they are thrilling. Owl has a reputation for calm judgment, and deep insight into the dark reaches of the soul.

But in dreams Owl loves to skate. Maybe it's an inheritance from his Canadian relations, or some echo of another life. In any case, in dreams Owl longs to play hockey. So now the dreaming Owl was gliding effortlessly across the Black Ice, sweeping an Oak branch back in forth in front of him. His talons dug deeper into his perch. Owl skated on.

He skimmed along the Cathance, skating downriver from Town Farm Bend. Past the smelt camps at the Second Middle Ground, all dark and empty at this late hour. He skimmed smoothly down the Brooklyn shore, executing pirouettes and skating backwards, looking over his shoulder. When he came alongside Little Fish Camps, Owl lifted up gracefully and flew under the Bowdoinham Bridge, sailing over the open water in the old mill race. He touched down lightly opposite Cathance Landing. Owl skated on.

Owl was humming an old hootsong to himself as he swept through Riverbend Camps. He smacked an empty beer can left and right with his stick, then put it away into the darkness under the Oaks lining the river. Owl skated on.

Owl had a nice sweat worked up as he rounded Wildes Point and the Bay open up before him. And there, way out across the Bay, he saw the loveliest glowing puck, resting on the ice, just waiting for him. Owl skated on.

Faster now, as if swooping on a fleeing Hare, Owl raced across the Bay. Owl had never skated so swiftly. It was exhilarating. The cold air streaming into his face blew back his feathers, and made his eyes water. His vision blurred. Owl hooted happily to himself. Owl skated on.

Sprinting now, Owl sped up to the loose puck. It was edged in an eerie light, and seemed to shine in Owl's watering eyes. He swept out his stick and snagged the puck.

Owl braked sharply. Hooked around with the captured puck, and began racing back toward the Cathance. Owl swiveled his head around and around as he fled, hunting for an opponent who might challenge his possession. Each time Owl glanced over his shoulder he seemed to catch sight of a flickering shadow behind him. But, if he spun around to confront it, the shadow disappeared. Owl skated on.

Owl scuttled across the ice. Past Brick Island and Little Brick. Past the dark trees on Centers Point. Across the frozen flats. Faster and faster Owl skated. But he was more and more anxious. The chasing menace behind him appeared to get larger and darker and more ominous. Just before Owl reached the mouth of the Cathance he braked suddenly. Spun round and raised his stick to high check the pursuing shadow.

And the Old Crescent Moon escaped from Owl's stick. It lifted up off the ice and shone down onto the frozen Bay. Owl's dark double stretched out on the ice behind him, the shadow of his stick raised in the air to strike. Owl gasped in shock. Then laughed aloud at his foolishness.

Owl awoke on his perch, hooting in hilarity. The Old Crescent Moon was lifting up over the trees. Owl hooted again. And just then, a young Hare, foolishly sneaking out for a dawn assignation, was spooked by the wild hooting, and ran willy-nilly in a panic. Owl shook his head, and dropped into the chase, on silent wings. The Moon kept rising.

Which is why you may hear Owl hooting in delight when the ice is good, and the Moon is old. And why you must not pay him any heed when he's laughing at shadows.



Owl Snags the Moon.
Photo & sculpture: Bryce Muir

Bryce Muir

Reprinted by permission from: **Local Myths.**

Thanks to Our 2007 Water Quality Monitors!

In 2007 our 22 volunteers monitored 19 sites for dissolved oxygen, pH, temperature, and turbidity while 10 volunteers monitored 11 sites for fecal coliform bacteria. Tests were conducted monthly from April –October and during some additional rain events for the fecal testing. Testing dates and protocols are coordinated with those of Friends of Casco Bay. Our program samples each tributary of the Bay except the Muddy River. On the Androscoggin we sample as far upstream as above the oxygen infuser in Gulf Island Pond, Turner and on the Kennebec as far as Solon. The farthest downstream test site is below Lines Island in Woolwich.

Thanks to all the wonderful volunteers who have contributed to our efforts.

Coordinating our normal tests was Bill Milam.

Standard Test Monitors

Bill Milam, Bill Briggs, Kathleen McGee, Ken Emerson, Melinda Emerson, Pippa Stanley, Steve Eagles, Clancy Cummins, Bill Kunitz, Bill Barron, Jim Thibodeau, Dave Hedrick, Art Carrano, Don Taylor, Craig Denis, Helen Watts, Dick Nickerson, Nancy Murphy, Phil Brozowski, David Whittlesey, Michael Ebert, Ed Friedman.

Coordinating our fecal monitoring were Heather Caron and Bill Milam.

Fecal Monitors

Bill Barron, Judith Hunnewell, Bill Kunitz, Judy Lipetz, David Wall, Tamara Whitmore, David Whittlesey, Kermit Smyth, Clancy Cummins.

Special thanks go to Ruth Innes for running fecal analyses in Brunswick and to Chuck Applebee (Gardiner Waste-water Treatment Plant) and Jane Carroll (Augusta Wastewater Plant) for coordinating fecal testing in these facilities. Thanks also to John Lichter and Bowdoin College for use of their lab and to Kermit Smyth for data entry.

FRIENDS OF MERRYMEETING BAY

Steering Committee

- Clancy Cummins (Richmond)Secretary
- Will Everitt (Portland)
- Ed Friedman (Bowdoinham)Chair
- Nate Gray (Freeport)
- Steve Musica (Richmond)Treasurer
- Martha Spiess (Freeport)Vice Chair
- David Whittlesey (Bowdoinham)

Committee Chairs

- Membership and Fundraising
- Will Everitt671-1315

- Research and Advocacy
- Ed Friedman666-3372

- Water Quality Monitoring Coordinator
- Bill Milam443-9738

Thank you to Tom and Martha Mitchell for designing this issue of The MMNews & to all our contributing writers.



Friends of Merrymeeting Bay, P.O.Box 233, Richmond, Maine 04357

MEMBERSHIP LEVELS

- \$_____ Other.
- \$20 Smelt
- \$50 Alewife
- \$100 Shad
- \$250 Striped Bass
- \$500 Wild Salmon
- \$1,000+Sturgeon

Name

RR# or Street Address

Town /State/Zip

Phone

Email

- \$7.00 enclosed for a copy of Conservation Options:
- A Guide for Maine Landowners.
- (\$5 for the book, \$2 for postage)

- Renewal
- New Member
- Please send me information about volunteer opportunities

Friends of Merrymeeting Bay
P.O. Box 233, Richmond, ME 04357
Return service requested



Non-Profit
U.S. Postage
PAID
Permit No. 1
Dresden, ME

Merrymeeting Bulletins

We wish you well

After three years as our Executive Coordinator, Sarah Wolpov is leaving her position with FOMB. While all along ably managing our database work, and coordinating volunteers, it was particularly in this last year that Sarah hit her stride with grant writing efforts that brought substantial funds to FOMB in support of our program work and staffing.

Unfortunately, Grace Cooney, our Education Coordinator will also have moved on by the time you receive this.

The two vacancies will probably be combined into one fairly full-time position. Job opening details are posted on our website.

We thank Sarah and Grace for their work and wish them well in their future endeavors.

Special Thanks

Special thanks to Fred Horch of F.W. Horch in Brunswick for including FOMB in his "Giving Green" holiday promotion. We just received a check from Fred for \$174.19 representing our share of his profits during the week before Christmas. Thanks as well to the staff at the Patagonia Outlet in Freeport for featuring our American eel work in a large display along their stairwell. Patronizing businesses like these helps FOMB and similar organizations to better do our work.

Further thanks are due Martha Spiess for all of her filming efforts and to attorneys Dave Nichols and Bruce Merrill for moving our legal efforts forward in the fish passage arena

Hearing Alert

The BEP will be holding a public hearing on March 15 from 9-5 and 6-9 at the Calumet Club in Augusta to rule on our request for license modifications at dams on the Kennebec River. We are requesting immediate safe and effective fish passage for all native migratory species. Hearings could go into overtime on the 16th from 9-12. Testimony and cross-examinations of all official parties will be held during the day. Public comments will be heard in the evening session. Your attendance is important! Please contact Ed Friedman for more details: 666-3372 or edfomb@gwi.net.