FALL 1999
To Preserve, Protect and Improve the Unique Ecosystems of Merrymeeting Bay.

Friends of Merrymeeting Bay is a 501c3 nonprofit organization. Support comes from members’ tax-deductible donations and grants.

Education
Hands Around the Bay, Speaker Series, field trips.

Conservation & Stewardship
Protecting natural resources through private and public ownership, easements and stewardship.

Membership Events
Swan Island Picnic, paddle tours of the Bay, field trips, conservation meetings, potluck suppers and shoreline clean-ups.

Research and Advocacy
Water quality, data collection, toxics, fisheries restoration.

1999 Steering Committee
Frank Burroughs, Bowdoinham
Dana Cary, Topsham
Andy Cutko, Bowdoinham
Ed Friedman, Bowdoinham
Kathleen Kenny, Dresden
Esther Lacognata, Topsham
Peter Lea, Brunswick
Bob Lenna, Bowdoinham
Pat Maloney, Topsham
Kathleen McGee, Bath
Tenley Meara, Topsham
Bill Milam, Woolwich
Mark Milam, Woolwich
Jay Robbins, Richmond
Karin Tilberg, Bowdoinham

Executive Director
Betsy Ham, Bowdoinham

On-Line
http://www.col.k12.me.us/mmb/fomb@gwi.net

MERRymeeting BAY
1999-2000 SPEAKER SERIES
7:00 p.m. Beam Classroom, Visual Arts Center, Bowdoin College, Brunswick

1999-2000 SPEAKER SERIES
( Nov. 17 & May 17 at Bridge Academy, Dresden, Maine )

OCTOBER 20  Preserving the Bay: The Thorne Head Experience
Anne W. Hammond, Lower Kennebec Regional Land Trust; Jack Witham, Holt Research Forest

NOVEMBER 17  Family Farming on Merrymeeting Bay
(Dresden Bridge Academy) • 7:30 pm
Jan Goranson & Rob Johanson, Goranson Farm, Dresden; Harry & Dave Prout, Prout Farm, Bowdoinham
Speakers follow FOMB Annual Meeting and Raffle Drawing (7:00 p.m.) – public invited, raffle drawing to follow (see pg. 2 for details).

DECEMBER 15  A Bridge Back to the Year 1000: The Bay at the Turn of the Millennium
Steve Cox, Maine State Museum

JANUARY 19  The Bay as Inspiration for Art
Bryce Muir, artist; Franklin Burroughs, author;

FEBRUARY 16  Environmental Trade-offs: Are They Worth It?
Edwards Dam, a Case Study
Christopher St. John, Maine Center for Economic Policy, Moderator; Steve Brooke, Kennebec Coalition and American Rivers; Jonathan Carter, Forest Ecology Network; Kevin Gildart, Bath Iron Works

MARCH 15  A Working Watershed from 1600 to 1950: Industry & Agriculture on Merrymeeting Bay
Edward Hawes, Consulting Historian

APRIL 19  A Bird’s Eye View of the Bay: A Look at Current Conditions & Changes Over Time Using Aerial Photos
Dave Edson, James W. Sewall Co.; Alan Haberstock, Kleinschmidt Associates

MAY 17  Eagles & Ospreys in Midcoast Maine
(Dresden Bridge Academy)
Don Hudson, Chewonki Foundation

FREE • Open to the Public • FREE
With support from Bowdoin College Environmental Studies Program, Patagonia Outlet, Enterprise Farms & Topsham Shop ‘N Save
THANK YOU FOR YOUR GIFT TO THE ANNUAL FUND

Thank you to all 73 members, nearly 25% of our membership, who have generously given to our Annual Fund so far for a total of $7,264 dollars. Don’t see your name on the list? A few of you who renewed at the time of the Annual Appeal mailing have not yet received your appeal letter. When you do, please give generously. For others, its not to late to give! If you have misplaced the form simply send your check to FOMB at Box 233, Richmond, ME 04357 and mark Annual Appeal in the memo section of your check. We hope to raise $10,000 from this drive by the end of the year.

Thank you to all of the following members who gave generously to the Annual Fund:


BUY A RAFFLE TICKET FOR A NIGHT ON THE TOWN
Tickets: $10
Drawing November 17

Five fantastic nights on the town will be raffled to five lucky winners at the Annual Meeting and November Speaker Series on November 17th.

PORTLAND: Complete dinner for two at Fore Street Restaurant and two tickets to any show of the Portland Stage Company during the 1999-2000 season including: Nixon’s Nixon [until 11/21], Collected Stories, A Christmas Carol, Waiting for Godot, Travels With My Aunt, and Blues for an Alabama Sky. Subject to availability of seats reserve ahead.

FREEPORT: Dinner for two at the Harraseeket Inn and a $50 gift certificate at L.L. Bean.

BUCKSPORT: Overnight, dinner and breakfast for two at the L’Ermitage Inn and two theater tickets and a $25 gift certificate at the Alamo Movie Theater and Northeast Film.

BATH: A night of blues! Dinner for two at Beale Street and two tickets to the December 18 concert of Sapphire; The Uppity Blues Women (Chocolate Church).

BRUNSWICK: Dinner for two at Henry & Marty and two tickets to any show at the Theater Project.

Sign up for a ticket on the night of the October or November Speaker Series and be automatically eligible to win the door prize as well.

You don’t have to be present to win the raffle. Whoever is selected first will get their pick of “night on the town” packages and so on until all five winners are chosen.

To be part of the raffle simply fill out the attached tickets and send the address part of the ticket plus $10 per ticket to FOMB at Box 233, Richmond ME. Buy one and sell the other to your neighbor or friend and join us at the Annual Meeting/Speaker Series on November 17th (see below for details) for the drawing!

ANNUAL MEETING TO BE HELD NOVEMBER 17TH
At the Bridge Academy in Dresden

6:30 pm: Dessert and friendship will be shared (we will provide dessert).
7:00 pm: Official Annual Meeting begins with yearly reports and election of Steering Committee members. A slate of candidates nominated by the nominating committee will be presented. Nominations will also be accepted from the floor. Nominations will be voted on by the members.
7:30 pm: Family Farming on the Bay (see page 1 for details). Raffle drawing to follow speakers. Members, friends and family are welcome!
THREATS TO THE BAY

Deep in the heart of Topsham lies a wonderful piece of land threatened by development. This approximately 500 acre parcel contains a variety of significant and special features including a large wetland, old quarries, timber and trails, ancient sea coast caves and a magnificent gorge through which the Cathance River runs just above it’s fall into tidewater. Through the Cathance Gorge are a series of whitewater drops aerating the river just above it’s tidal section where water from the gorge nourishes at least half a dozen rare plant types as well as a number of anadromous fish species for whom this section of river serves both as spawning and nursery grounds.

Bounded by the Brunswick-Topsham Bypass to the south the Cathance River Gorge to the north, Route 196/201 to the west, and Route 24 to the east, this land is a jewel in the center of Topsham. Used now by a variety of interest groups including the Mt. Ararat High School track team and biology classes, snowmobiles, cross country skiers, walkers, mountain bikers, amateur geologists, kayakers and canoeists this land should be a source of pride to Topsham.

At this summers Topsham town meeting an overwhelming majority of those present voted to approve a 50% tax break in the form of Tax Incremental Financing [TIF] for the developer holding the option on this land. The developer, John Wasileski who built the Highland’s Estates, would like to create the Highland’s North here with approximately 200 units through and around an 18 hole golf course. With its planned traditional golf course requiring intensive use of toxic chemicals in close proximity to one of the Bay’s most important tributaries, with the increased runoff, with the planned housing perched on the edge of the Gorge and with the loss of natural habitat and its effect on wildlife, and current human users, the proposed development poses a clear and present threat to the Cathance River and Merrymeeting Bay.

Mr. Wasileski only recently received state approval for his TIF and is now in the early stages of site planning and project development. Requiring Department of Environmental Protection (DEP), Topsham planning board and possibly Army Corp of Engineers (if wetlands are filled) approval and permits, these three groups are all places where your opinions can be heard. For more information: DEP [Chuck Kellogg 287-2111], Topsham Planning Office [725-1724], or FOMB [666-3376 or 666-3372].

Meanwhile, across the Bay in Dresden and Pittston two projects may threaten to impair the water quality of both the headwaters and the mouth areas of the Eastern River. In Pittston on the Hunts Meadow Road about a mile north of Route 194 a permit has been applied for to begin a commercial septage spreading operation on hilly land adjacent to the river. Well-organized opposition has led to a 180 day moratorium while plans for a proposed 3-acre greenhouse facility are underway in the area east of Carney Point. For more information call: DEP [Bill Hinkle 287-3901], Dresden Planning Board [Town Office: 737-4335].

Finally, upstream in Augusta a bit more information on the Kennebec PCB hotspot we brought to light in our spring issue of Merrymeeting News is available. DEP data on fish species sampled in 1997 have been obtained by FOMB. Mean PCB levels for the four species sampled were as follows and are in parts per billion [ppb]; striped bass 11.8, brown trout 54.6, smallmouth bass 341.6, and white sucker 830.6! Individual levels in the white suckers went as high as 987. Health advisories kick in at 11 ppb.

The physical distribution of contaminants and the source both remain unknown at this time and only very preliminary sediment sampling has been undertaken thus far. It is important that the state toxicologist not revise fish advisories downward in downstream areas including the Bay until due diligence, sound science and a precautionary outlook all justify these contemplated changes. For more information call TAC [871-1810], DEP [Barry Mower 287-7777], Bureau of Health [Dora Anne Mills 287-3270] and FOMB [666-3372 or 666-3376].

As the above cases illustrate, maintaining and improving the quality of Merrymeeting Bay requires constant vigilance. Whatever you feel about these issues, we urge you to learn the facts, make your own decisions and get involved. Large scale development is coming to the Bay with the new Highlands development likely to be just one example of it. A variety of old and new pollution sources threaten the water quality of the Bay. What can you do about it? We hope you will become involved in what ever way you feel comfortable whether that be joining a citizen action group or placing a conservation easement on your land. Working together, we can protect, improve and enhance the Bay.

TOXICS ACTION CENTER OPENS MAINE OFFICE

Toxics issue in your back yard? Who are you going to call? At the invitation of the Maine Toxics Action Coalition [MTAC] of which FOMB is an active partner the Toxics Action Center [TAC] has opened an office in Portland, Maine. Formed in the days of the Woburn, Massachusetts water pollution crisis on which A Civil Action was based, TAC will focus on local toxics issues while MTAC working closely with them covers toxics problems of statewide concern.

The Toxics Action Center helps residents wage effective campaigns against stubborn polluters and red tape bureaucracies, pressuring officials to act to protect our neighborhood’s health and safety. The Center has helped over 200 groups fight threats throughout New England since 1987. For information or assistance, you can contact Will Everitt at: 871-1810 or by email at will@toxicsaction.org
AQUATIC AND UPLAND HABITAT ASSESSMENT OF MERRymeeting BAY

If you saw questionable activities taking place on the Bay this summer (e.g., frantic biologist chasing after small craft being swept to sea by rising tide while flailing shovel, maps, GPS unit and data books), you were probably witness to the field component of a study instigated by the Friends of Merrymeeting Bay.

FOMB contracted with J.W. Sewall Company of Old Town, Maine and Kleinschmidt Associates of Pittsfield, Maine to perform a cover type analysis of the Bay’s aquatic and wetland habitats as well as map the land cover to a distance of 1/2 mile from the Bay. A trends analysis using historical aerial photographs from 1956 and 1981 will also be completed and will identify trends related to upland and aquatic vegetation, sand and silt. Aerial photo interpretation and field work (ground truthing) of 1998 color infrared (CIR) was completed during July and August. The ground truthing included a detailed description and photo-documentation of reference wetlands, or wetlands typifying the biotic and abiotic characteristics of each marsh type mapped. The final analysis will be completed this fall. This article summarizes some observations made during the study, mostly related to the ground truthing of Merrymeeting Bay marshes.

Perhaps the most dynamic and ubiquitous species in the Bay is wild rice. This annual, nonpersistent, wind-pollinated, emergent grass grows to a height of more than 2 meters. It favors soft, muddy areas where there is at least some flow of water (this species does not like stagnant water) and little competition from other species (at least some patches of bare substrate). The species’s survival into the next year depends entirely on its yearly seed crop. This species is seldom conspicuous before mid June and then increases its biomass rapidly through the remainder of the growing season. Some marshes may appear from an aerial view to be dominated by other marsh species such as softstem bulrush or pickerelweed earlier in the growing season (e.g., June) only to be overtopped/dominated by wild rice, that germinated in seemingly every available bare spot, by July/August. Because the current crop of wild rice is dependent on the previous years’ seed production, the population of wild rice in the Bay can swing from year to year in response to many variables including disease (certain fungi occasionally infect the plant), weather, sediment dynamics, seed consumption, water flows during germination and seed dispersal, carp numbers and habits (carp like to uproot and eat young plants) and maybe even wind direction during pollination. Preliminary results from the FOMB study, as well as observations from those familiar with the Bay, indicate that wild rice was more numerous in 1998-1999 than in previous years for which coverage was estimated.

Wild rice is a major wildlife food plant, but according to at least one book and according to local sources, it is often overrated. Other species with particularly high wildlife food values are wild celery (or tapegrass) and clasping-leaved pondweed (or redhead grass). These perennial species often occur in association with one another in the Bay’s aquatic bed cover type. This cover type occurs in areas of mixed sand and silt in protected areas and along sand bars. Motor boat props can damage these aquatic beds in areas of heavy traffic, however our observation was that most boats tend to stick with the deeper channels.

When this study is completed, we will have an excellent baseline from which Friends of Merrymeeting Bay can monitor changes over time on the Bay. To enable a similar study to take place in the future, we have defined different types of vegetation precisely.

Alan Haberstock
Senior Terrestrial Biologist
Kleinschmidt Associates

Editors note: Five, ten or twenty years from now we will be able to compare the wetland and upland habitats on the Bay in 1998 to what exists on the Bay in the future. This current and that future study may help us to understand what happens to species on and around the Bay when development occurs or when, for example, Edwards Dam is removed. This information will in turn help us to better preserve, protect and improve the unique ecosystems of Merrymeeting Bay.

A complete report on the aquatic and upland habitat study of the Bay will be presented by Alan Haberstock and Dave Edson at the April Speakers Series see page 1 for details.
Shortnose and Atlantic sturgeon are found in the estuarine complex of the Sheepscot, Kennebec, Sasanoa, and Androscoggin Rivers, which includes Merrymeeting Bay and its smaller tributaries. Together the complex is referred to here as the Kennebec River. The Kennebec River supports the largest population of shortnose sturgeon and the only known reproducing population of Atlantic sturgeon in the United States north of the Hudson River.

Beginning in the 1970’s the Maine Department of Marine Resources (MDMR) has conducted studies to determine the distribution and abundance of shortnose sturgeon in the Kennebec. Additional studies were conducted to determine the timing of the spawning run and location of spawning areas in the tidal section of the Androscoggin. The estimated population size for adults based on a tagging and recapture study performed from 1977 through 1981 was 7,200. The average density of adult shortnose sturgeon per hectare of habitat in the estuary was the second highest of any population studied through 1983. During these early studies very few sub adult Atlantic sturgeon were captured indicating that only a remnant population of this sturgeon species existed in the Kennebec.

Most recently MDMR has been conducting additional studies on shortnose sturgeon in the lower Kennebec River to delineate summer feeding grounds and overwintering area. Tracking 20 sturgeon implanted with sonic tags, these studies were conducted under contract with the Maine Department of Transportation [1996-98] to determine habitat use patterns in the immediate vicinity of the new Bath/Woolwich bridge. MDMR is also cooperating in an additional tracking study initiated in 1998 by Bath Iron Works (BIW) in the Bath region of the Kennebec. The major objective of this latter study, which is being conducted for BIW by Normandeau Associates, is to collect detailed information on the movements of both adult shortnose and sub adult Atlantic sturgeon in the vicinity of the BIW shipyard expansion. Both studies are providing valuable data on the feeding and overwintering areas for shortnose and Atlantic sturgeon. Preliminary assessment of the tracking data and earlier gill net studies indicates that the majority of shortnose sturgeon feed in the Bath region of the Kennebec from mid April through late November/early December and then migrate upriver to overwinter in Merrymeeting Bay although a significant number remained in the Bath area in 1998/1999. In addition, the MDMR/Normandeau sampling efforts from 1996 through 1998 indicate that the Atlantic sturgeon population has increased significantly since the late 1970’s.

The recently released Shortnose Sturgeon Recovery Plan (NOAA, 1998) identified several priorities necessary to facilitate recovery of shortnose sturgeon in the Kennebec River. These include updated information on population estimates, age structure, recruitment, growth rate, and reproductive success. Another priority task was to restore spawning and nursery habitat. This latter task will be accomplished with the removal of the Edwards dam in 1999. Priorities for Atlantic sturgeon recovery and interstate management were established in 1998. This management plan is essentially a recovery plan. The objectives include: 1) closing the fishery for at least 20 years; 2) reducing or eliminating bycatch; 3) determining and protecting spawning sites; and 4) reestablishing access to historical habitat. The removal of the Edwards dam will restore access for Atlantic sturgeon to their historical habitat in the Kennebec River.

The National Marine Fisheries Service (NMFS) has chosen to obtain updated population estimates and other population dynamics parameters for shortnose sturgeon in the Kennebec River in order to refine current management strategies to facilitate recovery or reclassify the population status, if warranted. The NMFS contract for the population estimate of shortnose sturgeon provides an opportunity for MDMR to collect additional valuable information on shortnose and Atlantic sturgeon by tagging all shortnose (up to 500) and Atlantic sturgeon captured with internal [long-lasting] and/or external [easy visual ID] tags. Last fall [1998] 346 shortnose sturgeon were tagged.

Plans for 1999 include capturing a sufficient number of shortnose sturgeon in order to make a reliable population estimate and tagging an additional 500 shortnose sturgeon. Tissue samples for genetic analysis have already been collected from adult shortnose on the spawning runs in the Androscoggin and Kennebec Rivers. Record numbers of shortnose sturgeon were captured on both river systems in early May. A total of 473 adult shortnose sturgeon were captured in an overnight set of two nets on the Androscoggin River and 134 were captured in an overnight set of one net on the Kennebec River.

Tom Squiers
Director, Stock Enhancement Division

FOMB owes a great deal of thanks to Tom Squiers, Lew Flagg, and their MDMR colleagues for their dedication to a Kennebec Fishery Restoration that will bear even more fruit with the removal of Edwards Dam.
I do not believe that either John or I was entirely free from longing, guilt, or nostalgia as we looked at things he has found. I would have recognized perhaps a quarter of them as being human handiwork. The majority of the pieces had no identifying shape. They were flat, like skipping stones or fragments of a broken plate. Their perimeters were unevenly and incompletely and apparently randomly scalloped. You had to look closely, and to know what you were looking for, to see that those edges resulted from an angled flecking and chipping—a human hand, using another stone or perhaps the tine of an antler, tapping carefully. The ragged, jagged tool that resulted would not have been nearly so good for cutting or scraping as a knife is, but represented a great improvement over teeth or fingernails.

The more obviously shaped pieces were arrowheads and spearpoints, some perfect, some broken. Many of the other pieces—perhaps almost all of them—must have represented partial failures: arrowheads that did not work out, but could still be used to scrape the flesh off a hide, or to haggle open the belly of a sturgeon. The work of the Paleo-Indians was particularly fastidious; people who know say that it was seldom equaled by their successors in Maine, or by stone-age people anywhere else on earth.

John says that he can sometimes close his eyes, here or there on the Bay, and imagine a steady, insect-like clicking and chipping all around him—all those people, all those years, leaving their very modest, very durable detritus. The stone was mostly chert, which is not local. Some came from as far away as Labrador and Ohio. There was never a large population of indigenous people here at any time—one book estimates perhaps 32,000 of them living in all of what is now Maine and the Maritime Provinces combined, at the time of the European arrival. But they obviously had networks of commerce and communication, upon which they depended for stone that was no less essential to their survival than fish, birds, mammals, and fire.

The most beautiful piece was a stone gouge. On it, you could see traces of red pigment—it had been placed in a man’s grave, because the dead were assumed to have a future. The man did not; his people did not. The grave itself disappeared, we assume, under the centuries and millennia of rain, decay, frost-heaves, erosion, and all the minute, incessant processes by which landscapes go on shaping themselves. The gouge was lying out on a bank, and John was paddling by and saw it, because he had educated his eye and disciplined his attention. When he picked it up, he picked up something older than the language we speak or the languages that were its parents and grandparents. About all that was the same between its time and ours was the human hand—the one that had made it and the one that now, our conversation completed, carefully put the gouge back into its box and closed the lid.
MERRymeeting Bay
Sediment Survey for Toxins

Building on a study done in 1995 by Chilcote and Waterfield, the Surface Water Ambient Toxics [SWAT] Program of the DEP has funded [$20,040] a FOMB proposal for a spatial analysis and screening level survey of toxins in the fine grain sediments of Merrymeeting Bay. Although an obvious flow of contaminants enters the Bay from its two major tributaries the fine-grained depositional deposits have not previously been characterized for contaminant levels. While Chilcote and Waterfield looked predominantly at coarse grained sediments [report on our website] accessible by boat FOMB will conduct sampling on foot in the mud.

We will collect samples mostly from the biologically active layer of sediment [the top 6 inches or so] to be analyzed for grain size, total organic carbon, lead, mercury, arsenic, total PCB’s, PCB aroclors (particular PCB’s), dioxin, and the chlorinated pesticides DDT and chlordane. Metals will also be analyzed. We will attempt to capture three cores of approximately a meter in depth in an exploratory effort at obtaining some historical depositional data. These cores will be frozen and archived to be analyzed at a future date. Future analysis will depend both on what we find in the shallow samples and on available funding. Sampling will be completed this fall.

Thank you to: David Hansen for designing this issue of MMNews.

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

Membership Levels:

- $15.00 enclosed for individual membership.
- $20 Family
- $30 Smelt   $50 Alewife  $100 Striped Bass  $250 Salmon  $500+ Sturgeon
- $_______ enclosed as an additional tax-deductible donation.

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Town / State / Zip
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- Renewal  - Gift From:  - Send me ____ add’l Raffle Tickets @ $10.00 ea.

- $6.00 enclosed for a copy of
  ($5 for the book, $1 for postage)

Thank you to: David Hansen for designing this issue of MMNews.
$50 MILLION PUBLIC LAND BOND TO GO TO VOTERS
Vote Yes on Question #7 on November 2nd

Maine voters have the opportunity of a lifetime on November 2nd—the opportunity to help protect our way of life and pass on some of Maine’s most valuable lands to future generations. We can vote to continue the highly successful Land for Maine’s Future Program that has already protected 65,000 acres at such special places as Scarborough Beach, Kennebunk Plains, Mount Kineo, Sebago Lake Beach and Grand Lake Stream. In the Merrymeeting Bay area, for example, the Land for Maine’s Future Program has pledged money to protect Thorne Head in Bath.

On election day, voters will be asked to approve a $50 million dollar public land bond that will replenish the Land for Maine’s Future Program. Increasingly, conservation projects benefit by partnering public and private resources. Passage of this bond will ensure that land trusts and municipalities will have a pool of State money to help protect special places in every region including Merrymeeting Bay.

Because you care about Merrymeeting Bay, FOMB strongly urges you to get out and vote on November 2. Because the Bay area has wildlife habitat of state and national significance, we have a very good chance of being able to buy land from voluntary sellers in the future using dollars from the Land for Maine’s Future Program. The bond must pass before we can take advantage of these dollars, however. We will be sending a reminder postcard to you just before the vote. If you would like to get involved to help pass the bond bill it’s not to late! The last few weeks of the campaign will be crucial. To learn about ways you can help call FOMB at 666-3376.

Vote yes on #7 on November 2 and encourage your neighbors and friends to follow your example.