

# Merrymeeting News

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

## WINTER 1996

### *To Preserve, Protect and Improve the Natural Ecosystems of Merrymeeting Bay.*

Friends of Merrymeeting Bay was formed in 1975 for people who care about the Bay's future. FOMB was revitalized in 1991 and re-incorporated as a 501 (c)(3) nonprofit organization. Our support comes from memberships, tax-deductible donations, and grants.

**Education** — Much of what we do is intended to increase our own awareness and knowledge of the important ecosystems that make up Merrymeeting Bay. We strive to learn more about the interrelationship we share with the Bay's flora and fauna, and about what impact our activities have on the Bay.

**Research** — We work to obtain basic data about the Bay, both for our own use and for use by others, to help us make well-informed decisions.

**Conservation & Stewardship** — As a land trust serving the communities of Bath, Woolwich, Dresden, Richmond, Bowdoinham, Topsham and Brunswick, we provide information about conservation easements to area property owners, hold land in trust, and provide long-term stewardship.

## "HANDS AROUND THE BAY"

### Linking Students and Teachers in Schools Around the Bay

CAN MERRYMEETING BAY help elementary students work together on science projects in neighboring towns? Can school kids in Bowdoinham work with kids in Woolwich on local history? Would a group of kids in Brunswick who keep a nature journal be interested in sharing it via computer modem with kids in Dresden? Could a Merrymeeting Bay web site be installed on the Internet for use by teachers and students?

Hands Around the Bay seeks to answer these intriguing questions. Program coordinator Ed Friedman of Bowdoinham wants to see if the Bay itself can help students learn about science and history, and if students in neighboring or distant towns can work together. "The kids have pen pals in the Midwest and Europe, why not have a pen pal on the other side of Merrymeeting Bay? The kids study science and history anyway, why not use Merrymeeting Bay as a subject and a working laboratory?"



Teachers in schools throughout the Bay area have expressed great interest in making this vision a reality. Pat Maloney, a teacher at Bowdoin Central School, is co-coordinator of the project. The Beacon School Program and the Community of Learners Network have offered to help. Small grant proposals have been written for seed money. Local businesses are already donating money and offering in-kind help.

The program seeks to encourage more 4th, 5th and 6th grade teachers to use Merrymeeting Bay as part of their curriculum. By encouraging kids to learn about the Bay, we hope to foster a deeper awareness of the Bay's importance and of our mutual responsibility in its stewardship. Projects would draw attention to its beauty, tranquility and natural resources, and benefit the Bay more directly through shoreline clean-up activities and water testing.

Through working partnerships and field trips, students and teachers in neighboring towns will work on projects that emphasize critical thinking, communication and self-expression. The program will encourage the use of newsletters, local computer networks and e-mail, as well as an Internet site, to exchange ideas and information. Project results will be presented in schools and communities, and a booklet describing all projects will be published for teachers, libraries, interested parents and others.

The role of FOMB in Hands Around the Bay will be to recruit teachers and volunteers, encourage donations, and assist in developing curriculum projects. We will seek media relationships and promote awareness of the program, and serve as a contact and conduit for services and equipment. We could help facilitate the development of computer networks and a web site, provide equipment, speakers and materials to support classroom projects, and help participants share their ideas and projects with local communities.

Ideas and volunteer participation are welcomed, as are donations of money and in-kind services. Members and other friends of Merrymeeting Bay are urged to support and get involved in this innovative and exciting program. If you know of teachers or community people who would be interested in the program or if you can provide access to the Bay or can speak about the Bay or provide a particular service that would help, please let us know. We'd love to hear from you.

For more information, write to us at P.O. Box 233, Richmond, ME 04357; or call Hands Around the Bay coordinator Ed Friedman in Bowdoinham at 666-3372.

## PROTECTING WILDLIFE HABITAT IN COASTAL MAINE

LOIS WINTER of the U.S. Fish and Wildlife Service will speak about "High-Tech Habitat Protection: Federal, State & Local Partnerships" on Sunday, February 11, at the Patten Library in Bath at 2 p.m.

The presentation, with slides, will discuss new, cooperative efforts to protect important wildlife habitats in the coastal regions of the Gulf of Maine.

"High-tech habitat protection" describes a new approach. New ideas and technologies are being combined. Electronic satellite mapping, for example, is being combined with biological expertise on the ground. Broad and interrelated ecosystems can be defined and analyzed from the air, showing which specific areas are most important.

Public awareness and knowledge of

ecology is an integral part of habitat protection. Money for easements and the purchase of important lands is currently available through the North American Waterfowl Management Plan.

These methods are being applied cooperatively, using technical services of state and federal research agencies in combination with the education, membership, and stewardship activities of conservation groups and local land trusts. Easements and property purchases will be made possible using grants of federal money determined by the value of new and recent conservation easements in specific study areas. Two high-priority study areas in the program are the Lower Kennebec River and Merrymeeting Bay.

The public is welcome to this talk, which is sponsored by the Maine Island Trails Association (MITA). A meeting of MITA's Western Rivers group will follow the presentation.

## "HANDS AROUND THE BAY" MEETING SCHEDULED

Anyone interesting in learning more about or becoming involved in this new program is invited to come to the Bowdoinham Town Office on Wednesday, February 14 from 4 - 6 p.m.

Franklin Burroughs, author and Bowdoin College professor, will present a talk and slide show with Sally Butcher, describing Merrymeeting Bay and why it needs our careful attention.

We will also discuss project ideas and the establishment of a Merrymeeting Bay web site on the Internet.

For more information call either of our co-coordinators: Pat Maloney at Bowdoin Central School (666-5779); or Ed Friedman at 666-3372.



## FROM CAPE COD TO THE BAY OF FUNDY AN ENVIRONMENTAL ATLAS OF THE GULF OF MAINE

Edited by Philip W. Conkling, Island Institute. MIT Press, 1995. Softcover, 258 pp.

THIS REMARKABLE BOOK represents a breakthrough in what might be called "ecosystem science for people," or the "community science of eco-

systems." Either way, the book achieves a synthesis across disciplines that is a model for further emulation. It comes at a critical time, too.

First of all, the atlas is about a very large, complex ocean ecosystem, whose fisheries have been an economic mainstay of North America and Europe for centuries, yet whose workings are not fully understood. The *Atlas* examines all aspects of this dynamic ecosystem in great detail, using language that is technical, but accessible and compelling.

The book is also about the study of the earth's surface from the perspective of space using remote sensing. Information collected by satellites is interpreted by software and displayed on computer screens in colors or shades of gray. Using this imagery, scientists can answer questions about the relationships between organisms that live in the Gulf and how they are affected by land mass, heat, water depth, wave action, currents, and other factors. The *Atlas* is illustrated throughout with beautiful satellite images and photographs of the Gulf.

The story doesn't end here. The first Landsat satellite was launched in 1972, and since then many satellites of differ-

ent kinds have been collecting mapping data for use by the military, large universities, and corporations. With the advent of desktop computing in the last few years, however, this technology has become available to everyone.

Not only is the technology available, it is being used by kids in Maine classrooms to study how the environment in their own towns relates to the Gulf of Maine and to the planet as a whole.

In 1988 the Island Institute, headed by Philip Conkling, developed software to analyze satellite images of Maine islands using Macintosh desktop computers. The software, called GAIA, an acronym for "geographic access image and analysis," was then tested as a tool for teaching environmental sciences in Maine schools. The teaching program, called Gaia Crossroads, was developed by the Island Institute in partnership with Bigelow Laboratory for Ocean Science in West Boothbay, and has since spread throughout New England.

In sum, we have a highly readable book about the Gulf of Maine, illustrated throughout with exciting and informative satellite imagery. We also have a new approach to science. Sophisticated technology that has worldwide significance has been made available almost simultaneously to a new generation of earth stewards and ecologists.



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### *Merrymeeting News*

is the newsletter of Friends of Merrymeeting Bay, P.O. Box 233, Richmond, Maine 04357, and is published seasonally.

*Merrymeeting News* is sent to all FOMB members (\$10 annually), and to other friends of the Bay. For information call Tim Nason, Black Spruce Graphics, Dresden (737-4282).

## DIOXIN CONTINUES TO POLLUTE MERRYMEETING BAY

**D**IOXIN IS A TOXIC BYPRODUCT of the kraft paper bleaching process used by paper companies on the Kennebec and Androscoggin rivers. This chemical is considered to be as toxic to humans as chloroform, formaldehyde, PCBs, PCBs, and DDT. It is suspected of causing reproductive, developmental, and hormonal and immune system damage, even at very low levels.

The health hazards are particularly acute for breastfeeding infants. Women of childbearing age are warned to eat no fish taken from these rivers within 250 miles below paper mills and no lobster tomally from anywhere along the coast because of dioxin poisoning. Recreational anglers are also seriously at risk.

Human beings can avoid eating fish from these rivers, but wildlife cannot. The fact that bald eagles are not reaching sustainable levels of reproduction may be due to dioxin contamination.

Discharges of dioxin by Maine's seven bleach kraft mills are basically unregulated by the Maine Dept. of Environmental Protection. Though the dumping of waste materials that cause turbidity, color, foam, and oxygen-depletion have been reduced, but not eliminated, in the recent past, discharges of dioxin continue.

Technology is available to Maine papermills that would eliminate dioxin

discharge and lead to further reductions of other toxins and harmful materials.

FOMB members who are interested in working on this issue should write or call for more details. For information about dioxin itself and the kraft bleaching process, contact the Natural Resources Council of Maine at 622-3101.

## MEMBERS NEEDED FOR FOMB STEERING COMMITTEE

**A**S ANNUAL MEETING approaches in April, it is time to recruit members for our Steering Committee.

The purpose of the Committee is to guide the programs and operations of the group and also represent the broad range of interests of people who live around the Bay.

We have developed a new meeting structure to encourage participation by as many people as possible. Full Steering Committee meetings will be held bimonthly and will feature a guest speaker, if possible. The daily management of the association will be coordinated by the executive officers, i.e., chairman, vice chairman, treasurer and secretary. Programs will be handled by active committees that report monthly to the executive officers at their regular meetings.

We have settled on this new structure in an effort to expand the Steering Committee and make involvement more interesting and fulfilling for its members.

Until this point, the Steering Committee has met monthly, and all members have been involved in every aspect of the organization.

We are hopeful that our new structure will allow the Steering Committee to engage in setting broad goals and policies, oversee long-range programs, and bring a wide range of interests and skills to the organization.

Anyone interested in serving on the Committee for a one-year term beginning in April 1996 and in helping to direct our activities is more than welcome. Please call us or write.

## BACK RIVER SALT MARSH PROTECTED

**A** 275-ACRE SALT MARSH along the Back River, a tributary of the lower Kennebec River, has been donated to The Maine Chapter of The Nature Conservancy. The easement on the property protects not only several miles of salt marsh shoreline, but also the adjacent upland. The property is especially important because it is located at a point where the salt marsh meets the freshwater river ecosystem. Salt marshes are rare in Maine north of Cape Elizabeth.

The Nature Conservancy was instrumental in the recent purchase of 117-acre Lee Island, located in the Kennebec River near Phippsburg. The island is now owned by the State of Maine.

*Continued next page*

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

ANNUAL DUES \$10.00.  Renewal  Gift

*I enclose \$10.00 to cover membership for one year.*

I also enclose  \$15  \$25  \$50  \$100  \$500

Other \$ \_\_\_\_\_ as an additional tax-deductible donation.

NAME \_\_\_\_\_

RR#/STREET ADDRESS \_\_\_\_\_

TOWN / STATE / ZIP \_\_\_\_\_

PHONE \_\_\_\_\_

**I would like —**

- A copy of **Conservation Options: A Guide for Maine Landowners.** \$5.00 is enclosed.
- A copy of **Preserving Family Lands: Essential Tax Strategies for the Landowner.** \$5.00 is enclosed.
- An **FOMB T-Shirt** ( lg.  x-lg.  xx-lg) A check for \$15.00 is enclosed.

**Note:** Write checks payable to FOMB. An additional donation of at least \$2.00 per order is requested to cover the cost of postage and a padded envelope. Thanks!

## BACK RIVER SALT MARSH

*Continued from previous page*

The lower Kennebec River in combination with Merrymeeting Bay provide many square miles of waterfowl habitat, and form one of the largest freshwater tidal ecosystems in the United States.

The Lower Kennebec is the current focus of the Maine Wetlands Protection Coalition. Cobscook Bay in downeast Maine was an earlier focus of the Coalition's successful conservation efforts.

## FISH "ECOCIDE" GOES ON AND ON

**O**WNERS OF THE EDWARDS DAM amended their October 1995 relicensing application to severely cut back an already minimal fish passage system. The new plan would allow even fewer shad, alewives, and American salmon to spawn in the waters above the dam.

In addition, the amendment made no mention of or promise to install fish passage systems that would allow striped

bass, rainbow smelts, Atlantic sturgeon or shortnose sturgeon to ascend the dam.

Currently, a temporary vacuum pump system sucks fish through a pipe into a holding area for release above the dam. The newly proposed fishway would not increase the number of fish currently allowed upstream.

The "Kennebec River Resource Management Plan" (State Planning Office, 1993) recommended removal of the Edwards Dam altogether. Removal would result in an overall average fisheries increase of at least 66%. This breaks down into increases of: 83% for alewives (from 5.4 million fish in the Kennebec to 9.9 million); 78% for shad (from 690,000 to 1.2 million); 24% for smelts (from 122 million to 152 million); 100% for Atlantic sturgeon (from 5,000 to 10,000); 11% for shortnose sturgeon (from 10,000 to 11,000); and 100% for striped bass (from 28,000 to 56,000).

The dam, originally constructed in the 1840s, has prevented these species from spawning in their preferred habitat, which is in the 17-mile stretch of rough water above the dam. The once oxygen-

rich water flowing over stones and gravel in this area is now shut off by the dam. The existing flatwater conditions above the dam are not suitable for spawning, even for those fish that are transferred into it through the vacuum system.

Meanwhile, the relicensing process continues. The Federal Energy Regulatory Commission is preparing a draft Environmental Impact Statement about the dam owners' original proposal. There has been no comment regarding the proposed amendment, which dropped plans to quadruple the dam's generating capacity from 3.5 to 11 megawatts. The dam currently provides less than one-tenth of 1% of Maine's power needs. The dam is owned by the Edwards Manufacturing Company and is co-licensed by the City of Augusta.

The small amount of electricity produced by the dam (less than one-tenth of 1%) in proportion to the 66% destruction of the Kennebec River fishery argues for the immediate removal of the dam. This flagrant "ecocide" should not continue. Members who are interested in this issue should write us or call.



## FRIENDS of MERRYMEETING BAY

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*Forwarding and address correction requested.*

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