



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.

For more information, contact:

Kathleen McGee  
Coordinator/Organizer  
207-666-1118  
fomb@comcast.net



## INSECT SURVEYS

Often forgotten but critical for their great importance in our ecosystems are Maine bumble bees, butterflies, dragon and damsel flies. Maine surveys these valuable insects and survey partners include: MDIF&W, USFWS, The Nature Conservancy, Maine State Museum, Maine Outdoor Heritage Fund, UM at Farmington, Colby College, U Maine and Natureserve. MDIFW has completed similar atlas projects for breeding birds (1978), amphibians and reptiles (1999), and freshwater mussels (2000) -- all of which were among the first of their kind in North America.



*Cecropia Moth (not a butterfly!)*  
Photo: Ed Friedman

## MAINE BUTTERFLY SURVEY

[HTTP://MBS.UMF.MAINE.EDU/](http://MBS.UMF.MAINE.EDU/)

With at least 118 species native to Maine, butterflies contribute a colorful and conspicuous component to our state's biological diversity. Butterflies play an important ecological role in terrestrial and wetland ecosystems by serving both as pollinators of many wildflowers and as prey (both caterpillars and adults) to larger species ranging from dragonflies to neotropical migrant birds. Butterflies are also widely recognized for their value as ecological indicators of ecosystem stress due to such factors as climate change, pollution, and habitat loss (Sparrow et al. 1994). Their potential economic contribution in terms of "watchable wildlife" is difficult to estimate, but clearly no other group of insects has attracted as much attention from amateur naturalists and ecotourists, a group whose ranks increasingly include bird watchers armed with close-focusing binoculars in place of collecting nets. Many neighboring states and provinces -- Vermont, Connecticut, Massachusetts, and New Brunswick -- have compiled updated atlases of their butterfly fauna, but despite growing local interest in butterflies and their conservation Maine has only a baseline level of knowledge of the group (See Webster and deMaynadier 2005 under "MBS Press & Publications" to download a baseline assessment of Maine's butterflies).

There is an increasing demand from conservation planners for information on the status and distribution of all forms of wildlife in Maine. The Maine Department of Inland Fisheries and Wildlife (MDIFW) frequently receives requests for data on butterflies and moths from land trusts, environmental organizations, state permitting agencies, consulting biologists, and members of the general public. This is in part because several of Maine's butterfly species are of regional, national, and global conservation concern. Of special note is the relatively high proportion (~20%) of Maine butterflies that are currently considered Historic or Extirpated (9 spp.), or state-listed as Endangered, Threatened, or Special Concern (15 spp.), a result consistent with global trends elsewhere for the group. Greater statewide butterfly survey effort will likely demonstrate that some species are more widespread and abundant than formerly believed, while others are likely to merit increased conservation attention. By marshalling the efforts of

professional and citizen scientists from across Maine, this 5-year statewide butterfly atlas is designed to provide MDIFW and its partners with a significant increase in knowledge on the status and distribution of our state's butterfly fauna, as well as geographic priorities for its conservation.

## MAINE BUMBLE BEE ATLAS

[HTTP://MAINEBUMBLEBEEATLAS.UMF.MAINE.EDU/](http://mainebumblebeeatlas.umf.maine.edu/)

Bumble bees, with their bold yellow and black stripes, large furry bodies and relatively docile dispositions, are a familiar backyard insect to most people. The important role they play in our environment, however, often goes unrecognized. Bumble bees are an essential component of pollination for flowering plants throughout the Northern Hemisphere. They pollinate many of our spring and summer wildflowers, as well as a wide variety of other plants, including most garden flowers, fruits and vegetables. This ecosystem service is key to maintaining not only cultivated crops for human use, but also native plant communities which provide habitat for Maine's diverse wildlife species.

Unfortunately, some North American bumble bee species have experienced significant population declines during the last few decades. Several species, including four native to Maine, were once very common throughout their ranges but are now rarely observed. Various factors are believed to be contributing to these declines, including habitat loss and fragmentation, pesticides, and diseases and parasites introduced through widespread use of commercially raised bumble bees. These same declines have likely also occurred in Maine, but because we have so little information about our bumble bee fauna it is difficult to assess the status of the 17 species known to live here.

In order to document the diversity, distribution and abundance of bumble bees in Maine, the Maine Department of Inland Fisheries & Wildlife (MDIFW) has initiated the Maine Bumble Bee Atlas (MBBA) project. Designed as a multi-year statewide survey, the project is being coordinated by MDIFW in partnership with the University of Maine at Orono and Farmington. Closely modeled after MDIFW's highly successful Maine Butterfly Survey (2007–2015) and Maine Damselfly and Dragonfly Survey (1999–2005), the Maine Bumble Bee Atlas will marshal the efforts of volunteer citizen sci-

tists from across Maine to greatly increase our knowledge on the status of the state's bumble bees.

## MAINE DRAGONFLY & DAMSELFLY SURVEY

[HTTP://MDDS.UMF.MAINE.EDU/](http://mdds.umf.maine.edu/)

Insects in the order Odonata, damselflies and dragonflies, are a significant and conspicuous component of Maine's wildlife diversity. At this time 158 species have been documented in the state, comprising nearly 36% of the total North American odonate fauna (435 species)! Considering the distribution and habitat associations of odonates in neighboring states and provinces 5 to 10 additional species may yet be awaiting discovery in Maine. Factors contributing to Maine's odonate wealth include the state's large size and its diversity of landforms and unspoiled wetland ecosystems. Additionally, Maine holds a unique geographic position, providing habitats for species with both boreal affinities and more southerly Appalachian and coastal plain associations. Indeed over half of the state's odonates are comprised of species that reach the edge of their latitudinal range in Maine.

There is increasing demand for information on the status, distribution, habitat relationships, and conservation of damselflies and dragonflies in Maine. Forest industry, hydroelectric, land-trust, and municipal interests are requesting information from the Maine Department of Fish and Wildlife (MDIFW) concerning these and other species of conservation concern for environmental permitting, relicensing projects, voluntary habitat protection, and land acquisition. Demand for information is also growing from the scientific community and the general public as interest in statewide biodiversity issues increases. While odonates are considered highly sensitive to freshwater habitat degradation and experiencing declines nationwide, baseline information for the group has been lacking in Maine, until recently.

The MDDS is believed to be among the first state-sponsored odonate atlas projects in the country. By recruiting and training volunteers statewide MDDS has generated 3,000–4,000 records annually, yielding several times the amount of information on Maine Odonata, in just a few years, than had been collected

in the last 150 years combined! Considerable opportunities still exist to make significant contributions to our knowledge of Odonates. Whether you are already a member of the growing and fervent cadre of amateur dragonfly watchers nationwide, or simply harbor a latent curiosity about these fascinating and colorful insects we hope you will consider joining us in learning more about Maine's winged aquatic jewels.

*Ed. note: Thanks to Jay Robbins for alerting us to these surveys.*

## BAY DAY THANK YOU

On Tuesday May 19th, the week's only forecast big rain event couldn't keep 200 Pittston, Bath, Woolwich, Chop Pt., West Bath and Topsham fourth graders from enjoying a mostly gray, but only slightly damp Spring Bay Day. Bay Day is our biannual hands-on environmental educational event held in the spring at Chop Point School and in the fall at the Merrymeeting Bay Wildlife Management Area in Bowdoinham. Approximately 45 volunteer guides and chaperones make the days possible, leading sessions like archaeology, fish printing, conservation canines, watershed modeling and native American dwellings all designed to get students dirty, have fun and provide meaningful memorable educational experiences.

### Thanks to Guides:

Betsy Steen, Leslie Anderson, Kathleen McGee, Angela Kimberk, Kent Cooper, Steve Eagles, Geri Vistein, Nate Gray, Fred Koerber, Jay Robbins, Charlotte Cooney, Tom Weddle, Grant Connors, Devin Lamb, Dominique Walk, Margot Madden, Priscilla Seimer, Steve Musica, Cathy Reynolds, George Sergeant, Blaine Carter, Tina and Hannah Goodman and Helen Watts;

### And to Chaperones:

Dana Cary, Tom Walling, Bob Fesler, Janet Booth, Bert Singer, Heather Cox, Bill Heaphy, David Whittlesey, Linda Hornbeck, Tina Phillips, Anne Harwood, Tom Hughes, Carole Sargent, Martin McDonough, Tom Foote, Kevin McGee, Martha Spiess and Melodie Huston.

**Special thanks to:** Wild Oats Bakery, Mary-Ellen Dennis, MDEP, and of course our fabulous hosts at Chop Pt. School.



*Bay Day Archaeology Activity  
Photo: Ed Friedman*

## INTERNATIONAL APPEAL: SCIENTISTS CALL FOR PROTECTION FROM NON-IONIZING ELECTROMAGNETIC FIELD EXPOSURE

For several years FOMB has been one of the only environmental groups in the country sounding an alarm over the mandatory deployment of radiation-emitting, detailed-information-gathering smart meters on homes and businesses. After a three year State Supreme Court initiated investigation into the health and safety of the meters, the Maine Public Utilities Commission (PUC) issued a faulty decision on December 19th, 2014. The decision was appealed again to the Law Court by environmental and human health advocates from the Maine Coalition to Stop Smart Meters on May 12th.

The day before our Maine appeal was filed, an illustrious group of nearly 200 scientists from 39 countries submitted a letter and plea to the UN and World Health Organization (WHO) requesting the agencies adopt more protective exposure guidelines for electromagnetic fields (EMF) and wireless technology in the face of increasing evidence of risk. These exposures are a rapidly growing form of environmental pollution worldwide. The scientists collectively have more than 2,000 peer reviewed papers in the fields of radiofrequency (RF) and electromagnetic frequency (EMF) radiation to their credit.

The letter calls on the UN to strengthen its advisories on EMF risk for humans and to assess the potential

## INTERNATIONAL APPEAL: (CONTINUED)

impact on wildlife and other living organisms under the auspices of the UN Environmental Programme.

### **From the letter:**

We are scientists engaged in the study of biological and health effects of non-ionizing electromagnetic fields (EMF). Based upon peer-reviewed, published research, we have serious concerns regarding the ubiquitous and increasing exposure to EMF generated by electric and wireless devices. These include– but are not limited to–radiofrequency radiation (RFR) emitting devices, such as cellular and cordless phones and their base stations, Wi-Fi, broadcast antennas, smart meters, and baby monitors as well as electric devices and infra-structures used in the delivery of electricity that generate extremely-low frequency electromagnetic field (ELF EMF).

### **Scientific basis for our common concerns:**

Numerous recent scientific publications have shown that EMF affects living organisms at levels well below most international and national guidelines. Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damage, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans. Damage goes well beyond the human race, as there is growing evidence of harmful effects to both plant and animal life.

These findings justify our appeal to the United Nations (UN) and, all member States in the world, to encourage the World Health Organization (WHO) to exert strong leadership in fostering the development of more protective EMF guidelines, encouraging precautionary measures, and educating the public about health risks, particularly risk to children and fetal development. By not taking action, the WHO is failing to fulfill its role as the preeminent international public health agency.

### **Collectively we also request that:**

1. Children and pregnant women be protected;
2. Guidelines and regulatory standards be strengthened;
3. Manufacturers be encouraged to develop safer technology;
4. Utilities responsible for the generation, transmission, distribution, and monitoring of electricity maintain adequate power quality and ensure proper electrical wiring to minimize harmful ground current;
5. The public be fully informed about the potential health risks from electromagnetic energy and taught harm reduction strategies;
6. Medical professionals be educated about the biological effects of electromagnetic energy and be provided training on treatment of patients with electromagnetic sensitivity;
7. Governments fund training and research on electromagnetic fields and health that is independent of industry and mandate industry cooperation with researchers;
8. Media disclose experts' financial relationships with industry when citing their opinions regarding health and safety aspects of EMF-emitting technologies; and
9. White-zones (radiation-free areas) be established.

Many Appeal signers offered responses to the question “*what do you want the world to know about the importance of this appeal?*” Several of these follow:

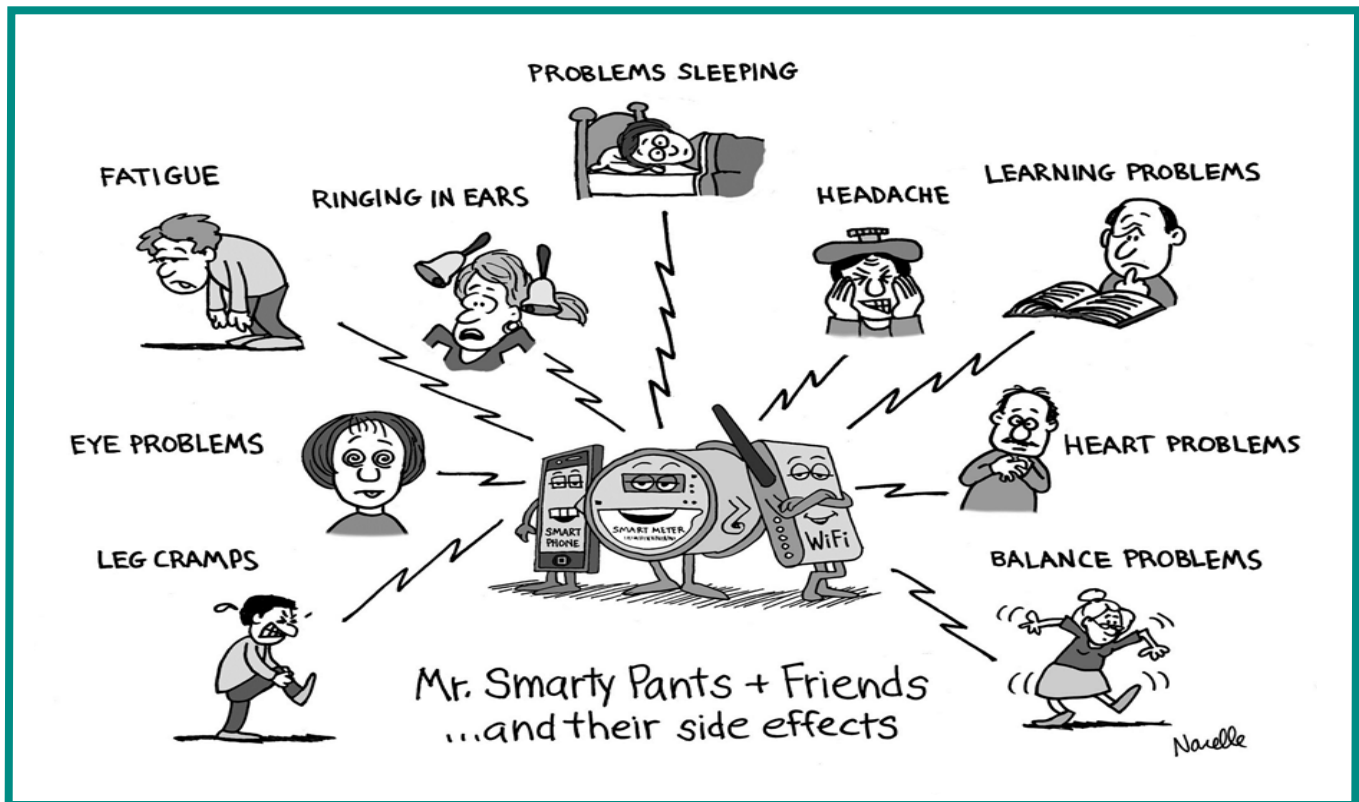
“One of the most serious environmental pollutants affecting the health of human populations and resulting in chronic illness is electrosmog. A combination of low frequency electromagnetic fields, poor power quality, ground current and especially radio frequency and microwave radiation is making people sick. We have enough peer-reviewed scientific studies documenting the adverse effects, which include cancers, reproductive problems and symptoms of electrohypersensitivity, for governing bodies to promote practices, devices and legislation that reduce our exposure to these frequencies.

Putting Wi-Fi in schools; allowing cordless phones that radiate constantly to be manufactured; placing wireless baby monitors near an infant; using a wireless tablet, smart phone or computer while pregnant; holding a cell phone next to the head and keeping a cell phone in a bra or hip pocket or under a pillow; placing cell phone antennas near homes, schools and on hospitals; metering electricity, water and gas with wireless smart meters and designing smart appliances for the home will be viewed by future generations as dumb technology generated by greed for a population that is largely ignorant of the consequences. We need to protect the health and wellbeing of future generations, because without them there is no future! If we don't do it . . . who will?” **Dr. Magda Havas, PhD, Environmental and Resource Studies, Centre for Health Studies, Trent Univ., Canada**

“It is immoral that the regulatory standards electromagnetic fields (EMF) used in cellular communication are inadequate and pose a serious health risk. The amount of harm from radio frequency EMF exposure to the brain is inestimable. Children are at higher risk, than professional workers.’ **Professor Yury Grigoryev, MD, Chairman of Russian National Committee on Non-Ionizing Radiation Protection; Member, International Advisory Committee for the WHO “EMF & Health” Program. Moscow, Russia.**

“While we like our electronic gadgets, the worldwide demand for these technologies of convenience only grows, as do the gargantuan profits that come from selling the devices and their services. While human health and safety continue to be dismissed by many, growing scientific evidence is showing a dark side to cell phone, WiFi, smart meter and point-to-point technologies. Migratory birds -- incredibly important to the global economy and for the ecological services they provide -- now appear to be negatively affected by non-ionizing radiation. This alarm sounds a call to action acknowledging that electromagnetic radiation is indeed a problem that needs to be addressed.” **Dr. Albert Manville, Adjunct Professor, Johns Hopkins University; Senior Wildlife Biologist, U.S. Fish & Wildlife Service (FWS), Emeritus/Retired; and Wildlife Consultant, WHCS LLC., USA**

For more information: [www.mainecoalitiontostopsmartmeters.org](http://www.mainecoalitiontostopsmartmeters.org)



Smarty Pants Cartoon- Credit: Thanks to emfsafetynetwork.org and narellecartoons.com

## OUTSIDE 2015!

ALL PROGRAMS ARE FREE\* & OPEN TO THE PUBLIC

- May 23**      **Annual Shore Clean-Up**  
Bowdoinham 10 am - 2 pm, Kathleen McGee at 666-3598
- July 6-17**    **Thwings Pt. Archaeology Field School with Lee Cranmer\***  
Woolwich, M-F: 2 sessions/day, Tom Walling at 666-5837
- July 9**      **Little Swan Island Evening Paddle, with Warren Whitney**  
Richmond 5:30 - 7:30 pm, Warren Whitney at 666-3376
- July 25**      **Search & Rescue Dog Demo with MESARD**  
Bowdoinham, 9 - 11 am, Jim Bridge at 725-8432
- Aug 15**      **Bird Sounds Walk, with Will Broussard**  
Bowdoinham, 7 - 9am, Ed Friedman at 666-3372
- Aug 28**      **Mud Plant Walk, with Andy Cutko**  
Bowdoinham, 5 - 7pm, Andy Cutko at 666-3162
- Sep 11 & 13**    **Swan Island Outing, with Jay Robbins\*(\$8 Island Fee)\***  
Richmond, 9:15 am - 1 pm, Jay Robbins at 737-2239

*PRE-REGISTRATION REQUIRED. To register for a program or for questions, please call the contact number for each individual trip.*

*PADDLERS PLEASE NOTE: Participants must bring own boat and possess at least intermediate paddling skills. PFDs required.*

*\*Archaeology Donation Requested: Min. \$50 non-members, \$20 members*

## REGULATORY AGENCIES ATTACK ST. CROIX ALEWIVES (AGAIN)

The area of West Grand Lake watershed comprises 26% of the St. Croix watershed but 35% of the river herring habitat there. In 1988 there were 2,500,000 river herring in the system. According to a DMR report, the potential capacity 21 million herring. In 1991 following fishway closures on the lower river, available herring habitat dropped to zero and the population near that. With the Grand Falls dam fishway reopened a few years ago thanks to litigation initiated by FOMB and Doug Watts, river herring entering the system are back up to 92,000 so far this year. Landlocked salmon are genetic cousins to sea run Atlantic salmon with only slightly different DNA, having since the ice age evolved a preference for fresh water. Contrary to their name, landlocked salmon have always had access to salt water and have mingled for thousands of years with anadromous species with no ill effects. Non-native large and smallmouth bass and landlocked alewives have all been introduced to the St. Croix by local sport fisherman with at minimum, a wink and a nod from IF&W.

Under the guise of barring largemouth bass and landlocked alewives from interfering with landlocked salmon in West Grand Lake, IF&W (and we believe soon DMR and USFWS) is requesting a closure at the Grand Lake Stream fishway that in reality is meant to exclude native anadromous river herring: alewives, blueback herring and American shad. The dam/fishway at West Grand Lake Stream is part of a water storage complex permitted by FERC and currently under relicensing. FERC has issued a final Environmental Assessment and all that remains is for the Commissioners to reach a licensing decision and issue a license in some form. Deadlines for comments expired at the beginning of 2015 yet the agencies are hoping their recently submitted request will be acted upon. IF&W only submitted their comments following the unanimous "ought not to pass" vote of the legislative Marine Resources Committee on

# 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, 865-9377

### 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

- |   |   |                                     |
|---|---|-------------------------------------|
| <input type="checkbox"/> \$1,000+ Sturgeon  | <input type="checkbox"/> \$250 Striped Bass | <input type="checkbox"/> \$20 Smelt |
| <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       |                                     |

Name \_\_\_\_\_

Address \_\_\_\_\_

Town/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

- |                                     |   |
|-------------------------------------|---|
| <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.*

LD 800, a bill that would have re-closed the Grand Falls fishway [subject of our lawsuit a few years ago] to river herring. DMR has recently submitted a letter to FERC notifying them of a planned meeting between IF&W, DMR and USFWS on July 13 to develop a unified position on the proposed West Grand closure. FOMB working with Doug Watts continues to oppose closure of this system to migratory fish which has no biological or legal basis and would adversely affect river herring restoration in the watershed and Gulf of Maine.

## SHORE CLEAN UP RECOVERS THREE TRUCKLOADS

On a beautiful May 23 at low tide our small but hardy volunteer group cleaned the south shoreline of Abbagadasset Pt., catchment for trash blown by prevailing SW winds across the Bay. The Point is also a shore portion of the Merrymeeting Bay Wildlife Sanctuary, a triangular area including Bowdoinham and Woolwich shores and a large tide-water area of waterfowl and fish nursery habitat. From our many cached piles we hauled two truckloads on cleanup day and returned a few days later for the remaining trash. Highlights include multiple buoys, a couple of large DOT orange traffic barrels, a damaged foam and fibreglass boat, massive roll of agricultural plastic mulch, a safe, 5 tires



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

Return Service Requested

NON-PROFIT  
ORGAINIZATION

**PAID**  
PERMIT NO. 1  
Dresden, ME

Printed on Genesis Writing. 100% Recycled, 100% post-consumer waste, processed chlorine-free.

## SHORE CLEAN UP (CONTINUED)

with rims and probably 18 bags of recyclables and trash. We couldn't have asked for better weather. Thanks to Kate McLinn, Linda Hornbeck, Kermit Smyth, Gerry and Piers Beirne, Karen Tilbor, Ed Friedman, Chet Gillis, Lillian and Zoe Waterman and the very accommodating Bowdoinham Recycling Barn crew.



Photos: Left: Piers and Gerry Beirne, Right: Piers Beirne  
Phot: Ed Friedman