



## 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

### Research & Advocacy

### Member Events

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

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

For more information call:  
Ed Friedman  
Chair of Steering Committee  
666-3372



## New Critters Join FOMB Taxidermy Collection

This spring we welcomed several new critters to our already impressive taxidermy collection. New arrivals include: fisher, Canada goose, Eastern meadowlark, Baltimore oriole, broad winged hawk, peregrine falcon, willow ptarmigan and Atlantic puffin. Most but not all of our critters have been killed accidentally, often by a car or flying in to a window. Some are already mounted specimens donated to us. FOMB holds the required Federal and state permits required to keep most critter mounts. If you have a mount you would consider donating please call Ed Friedman at 666-3372.



For recent donated mounts, thanks to Bob Naegely of Berrie's Guild Opticians for our goose, Sandy Allen for the ptarmigan and puffin, and the China Village Library for meadowlark and oriole.

FOMB's taxidermy mounts are an important educational tool used at schools, libraries and public events to help further our mission protecting the Bay. There is no better way to learn about the animals around the Bay than by seeing them up close!



*FOMB critters bring joy to school classes.*

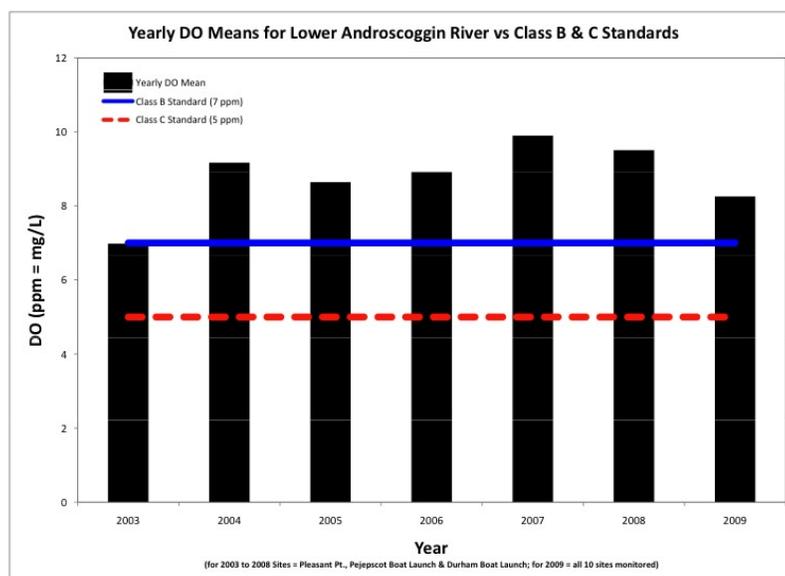
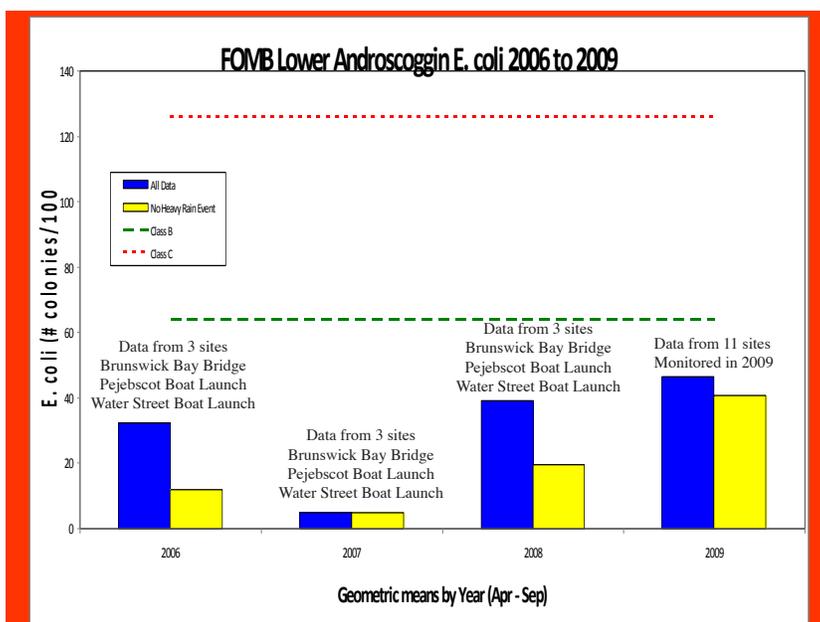
Thank you to volunteer, Emma Schneider, who is currently working on fact sheets to accompany each new critter friend. All of FOMB's critters can be seen during regular library hours at the Bowdoinham Library. If you would like to schedule a critter visit for your class or group please call Misty Gorski at 737-8508.

## Lower Androscoggin Meets Class B Standards

After our 2008 proposal to upgrade the lower Androscoggin was rebuffed by the DEP and Legislative Committee on Natural Resources despite extensive supporting data, we strengthened our sampling program in 2009. More data and cooperation with the DEP was what the Natural Resources Committee requested of us and codified in a Resolution they passed.

We increased frequency of sampling in our target area (Durham to the Bay) from monthly to every other week between April and mid October, increased our sample sites from three to ten and with the support of Bath Savings Institution, purchased EPA certified equipment for analyses of coliform bacteria. We also engaged with and trained with the DEP as part of their new Volunteer River Monitoring Program.

Even with a supportive data set and thorough written report (available in the Cybrary on our web site) showing attainment of Class B standards, as well as continued support from most of the affected communities; the DEP and Committee refused to follow laws which state when a river meets the standards of the next highest classification, it shall be upgraded. We had the opportunity to make a presentation to the Committee in February and enlisted the help of environmental attorney Steve Hinchman to address legal aspects while FOMB Chair, Ed Friedman spoke to the science, monitoring program, study methodologies and results. We might as well have been talking to ourselves. Natural Resources Committee Co-Chairs Sen. Seth Goodall of Richmond and Rep. Bob Duchesne deserve huge THUMBS DOWN for continuing their scofflaw approach to state water quality law and the federal Clean Water Act when it comes to the Androscoggin.



FOMB data show the Lower Androscoggin from Durham Boat Launch to Merrymeeting Bay consistently meets Class B standards for dissolved oxygen and E. coli bacteria. The DEP and Legislative Committee on Natural Resources continue to violate state and federal law in their refusal to recommend an upgrade.

## Bay Cleanups a Success

On Saturday June 5, in a post thunderstorm rally-for-the cause, Cleanup Coordinator Helen Watts led a small group the length of Abby Pt. and back, ferreting out several hundred pounds of accumulated trash which filled the back of a pickup. On June 19, coordinator Dave Barber led a similar cleanup of Butler Cove in N. Bath. An early spring gave the invasive Japanese Knotweed a boost, hiding well the flotsam and jetsam that had washed up from last year but we still found a few tires, an old propane or water tank, foam, a boat cushion and a lot of miscellaneous material. A far sight better than in years past. We do make a difference!

Thanks to Helen Watts, Rae and Katie Webster, Steve Musica, Ed Friedman, Piers Beirne, David Barber, Kermit and Debbie Smyth and the Bowdoinham Recycling Center, Cathy Reynolds in particular.

# Magical Memories Made at Bay Day

Driving down the winding dirt road to Chop Point School it's easy to imagine the excitement children must experience moments before arriving at FOMB's Spring Bay Day. Learning about Merrymeeting Bay in the classroom is pretty exciting stuff, but to experience the Bay's leaping sturgeon, majestic bald eagles, and witness the tiny narrows through which passes over 38% of Maine's freshwater is simply enlivening.

On May 18<sup>th</sup> over 100 students from Pittston, Woolwich, Chop Point, and Mt. Ararat participated in our annual Spring Bay Day at Chop Point School in Woolwich. Students played like coyotes, conversed about created, remediated and prevented non point pollution sources, became amateur archaeologists, created environmental art and fish prints of anadromous species, investigated geological formations, studied ecosystems, constructed mud based watershed models of the Bay and even attempted beach seining for native fish. Others were lucky to watch local birds around the Bay, build wigwams similar to what the Native Americans in the area once created and even imitate macro invertebrates while learning their crucial role in freshwater ecosystems. With each activity students participated in, they learned the importance of Merrymeeting Bay to our communities and just how rare and unique this ecological gem is.

Bay Day would never be possible without the overwhelming support of our volunteers. A huge thanks is due to the many people that made this Bay Day so magical for the attending students. Thank you!

Chaperones: Joan Llorente, Tom Walling, David Whittlesey, Milo Stanley, Diane Richmond, Monique Lucarelli, Richard



*a perennial favorite, the archaeology dig*



*flaking the beach seine*

Nickerson, Petey Ambrose, John Ambrose, Bill Heaphy, Bill Briggs, Ed Benedikt, and Emma Schneider.



*building a wigwam*

Guides: Kathleen McGee, Sarah Cowperthwaite, Geri Vistein, Kent Cooper, Jay Robbins, Betsy Steen, Leslie Anderson, Nate Gray, Steve Musica, Cindy Montanez, Jessica Palmer, Jamie Silvestri, Heather Bertrand, George Sergeant, Tom Weddle, and Ed Hanlon.

Thanks to Doffie Barstow, Fred Barstow, Nancy Murphy, Ed Friedman and Misty Gorski for coordinating portions of the event. Additional thanks to our host Chop Point School and Wild Oats Bakery for a wonderful lunch!

Mark your calendars, Fall Bay Day will be held on September 21<sup>st</sup> in Bowdoinham at the Bowdoinham Merrymeeting Bay Wildlife Management Area. We hope you can join us!

## Pittston Feedback

"Thank you for inviting us to Merrymeeting Bay to see all kinds of sights and have activities for us. My favorite part was every second I was there."

"Merrymeeting Bay was the finest field trip I have ever been to. I would love to come again."

"The beach seining was super cool."

"The rocks were awesome."

"I can't guess which thing was my favorite, they were all really fun. I hope I can come again."

## 2009 FOMB Volunteer Water Quality Review

Each year, once a month from April to October, volunteers from all around Merrymeeting Bay participate in FOMB's Water Quality Monitoring Program. Volunteers are trained to sample pH, turbidity, dissolved oxygen (DO), and coliform bacteria, as well as water and air temperatures. Other general information about the sites, weather conditions and tide are also recorded during each sampling period.

Volunteer collected data provide an important source of information about possible changing health of the Bay, further assisting our efforts at protecting the resource. Annual data collected by FOMB volunteers supplements data collected by the Maine Department of Environmental Protection, who operate on a five year sampling scheme, one year for each major watershed in the state before repeating the cycle.

River health is assessed by classification ratings based on water quality parameters. River classification focuses mostly on dissolved oxygen and coliform bacteria levels.

Dissolved oxygen measures the amount of gaseous oxygen (O<sub>2</sub>) dissolved in the water. Oxygen gets into water mainly by diffusion from the surrounding air, and as a by-product of photosynthesis. The amount of dissolved oxygen in a system is indicative of its ability to support aquatic life. Dissolved oxygen all along the Bay follows a seasonal pattern where oxygen levels are lowest during the hot summer months and higher during spring and fall. The seasonal changes occur because cold water has a higher capacity to hold dissolved oxygen than warm water, and because lower flow rates in the summer mean less water mixing with air, causing a resulting decrease in dissolved oxygen. DO levels also fluctuate on a diurnal basis as organisms at night deplete oxygen created during the day through photosynthesis. Thus, all other conditions being equal, early morning sampling will show lowest DO levels while end of day samples show highest levels. During 2009, dissolved oxygen levels remained above class B levels on both the Androscoggin and Kennebec Rivers indicating good health. The smaller tributaries did show the expected seasonal pattern with lower dissolved oxygen levels during the warmer summer months.

### Maine River Classification System:

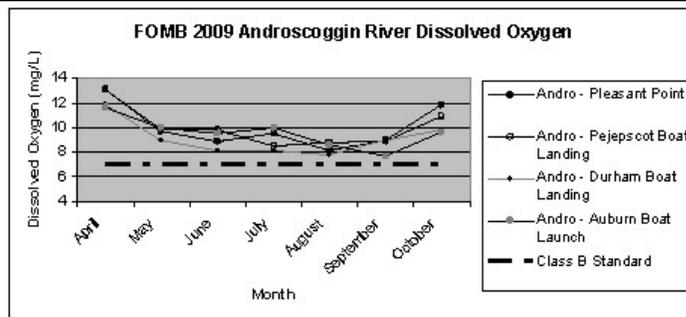
Maine's River Classification System was designed to protect and improve Maine's water systems and direct the State's work managing surface waters, protect water quality for intended management purposes, and where standards are not achieved, direct the State to enhance the quality in order to achieve intended purposes.

Rivers entering Merrymeeting Bay meet Maine State Water Quality Classifications for Class B and C. Class B rivers have fewer restrictions on activities than Class A and AA rivers but still maintain high water quality criteria. Class C waters have the least restrictions on use and the lowest water quality criteria. Class C waters are still good quality according to the State, but the margin for error before significant degradation might occur in these waters in the event of an additional stress being introduced (such as a spill or a drought) is the least.

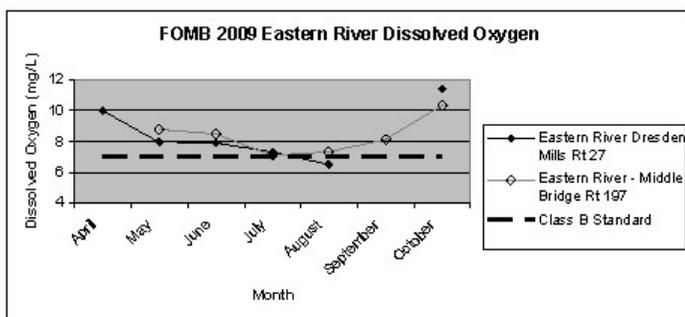
Water classifications are determined primarily by dissolved oxygen and E-coli levels recorded in each river system. Maine Classification Standards evaluate the dissolved oxygen content in parts per million (ppm or mg/L). E-coli levels are evaluated based on the geometric mean of colonies recorded per 100 milliliter sample. E-coli can often vary by orders of magnitude; using a geometric mean provides an unbiased average across a number of samples.

Maine DEP Water Quality Standards	Class	Dissolved Oxygen (ppm)	Average (Geometric Mean, count/100mL H <sub>2</sub> O)	Instantaneous (count/100mL H <sub>2</sub> O)
	Class AA	as naturally occurs	as naturally occurs	as naturally occurs
	Class A	7	as naturally occurs	occurs
	Class B	7	64	236
	Class C	5	126	236

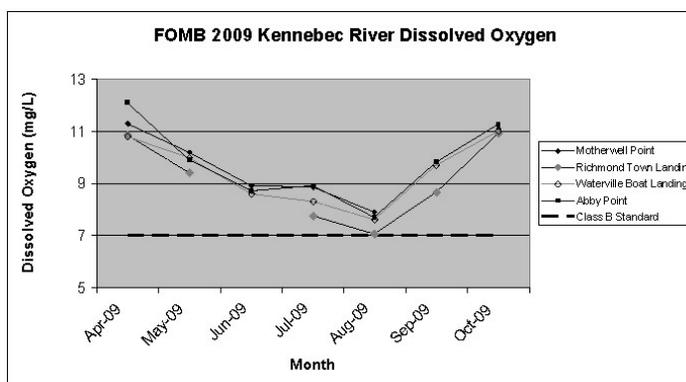
# Water Quality Graphs and Explanation



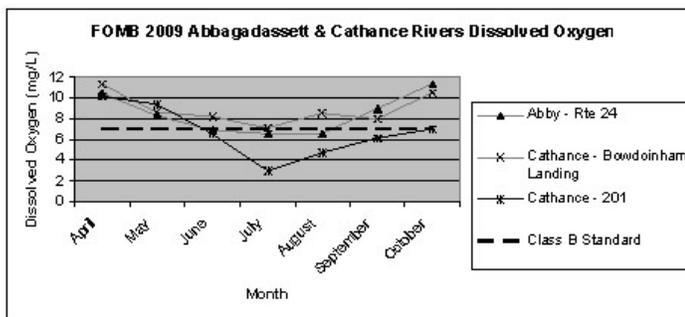
**Fig. 3:** Androscoggin River dissolved oxygen (DO) results for 2009; recorded in mg/L. Samples indicate the river is meeting Class B standards from the Auburn Boat Launch to Pleasant Point in Merrymeeting Bay.



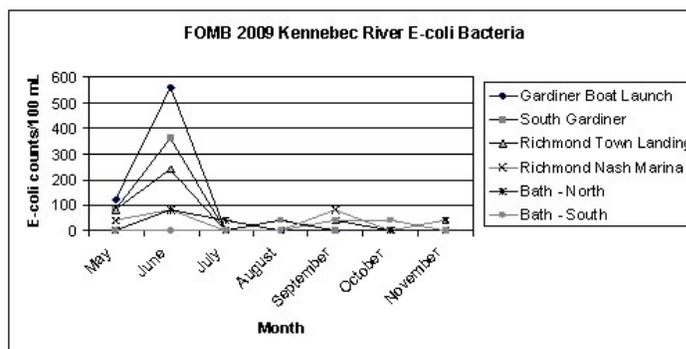
**Fig. 1:** Eastern River dissolved oxygen (DO) results for 2009; recorded in mg/L. Samples indicate the river is meeting Class B standards most of the time with only one recorded incident of DO levels below this standard. Lower DO levels during late summer, in this case August, can be attributed to lower water levels and increased water temperatures.



**Fig. 4:** Kennebec River dissolved oxygen (DO) results for 2009; recorded in mg/L. Samples indicate the river is meeting Class B standards from the Waterville Boat Landing to Motherwell Point in Woolwich.



**Fig. 2:** Abbagadasset and Cathance Rivers dissolved oxygen (DO) results for 2009; recorded in mg/L. Samples indicate the lower Cathance is meeting Class B standards while the upper Cathance is experiencing significantly low levels of DO during the later summer months. Low DO levels during late summer on small rivers, like the Cathance, can be attributed to lower water levels and increased water temperatures.



**Fig. 5:** E-coli levels recorded in 2009 on the Kennebec River. The June E-coli spike on the Kennebec River can be correlated to increased precipitation during the early portion of the sampling season. Rainfall and associated overland runoff carries pollution from non point sources. Heightened periods of rain can significantly increase non point pollution entering our rivers and ultimately alter bacteria levels in each water system.

## FOMB Protects Maine's Premier Archaeology Site

7,000 years ago, Goodwin Narrows on the Kennebec in Dresden was about as far upstream as the tide could reach. Opposite the north end of Little Swan Island, this bit of ledge also probably slowed migratory fish on their way to upstream spawning habitat. Any fisherman knows the fishing can be pretty good at a dam blocking or slowing anadromous species like salmon, alewives and sturgeon.

Land conservation is one of the most effective tools we can use to protect water quality, working farms and wildlife around Merrymeeting Bay; to date, FOMB has successfully facilitated the permanent protection of over 1,300 acres and 11 miles of shoreline around the Bay. The Houdlette Conservation Project will permanently protect an incredibly important series of parcels on the shore of Merrymeeting Bay in Dresden, Maine. This FOMB project prevents poorly planned growth, protects water quality of the Bay, provides recreational opportunities, and conserves both extremely high value wildlife habitat and one of



*two adze type heads and a gouge*

the most important archaeological sites in New England.

Bruce Bourque, Chief Archaeologist at the Maine State Museum writes: *"I can think of no site that remotely approaches its importance for the study of this early period (5,000-8,500 years ago) of Maine's prehistory."* The project area, once at head of tide, is theorized to have been a Native American fishing village with supporting artifacts dating over 7,000 years old. Bourque and co-authors Cox and Lewis in their book **The Archaic of the Far Northeast** published by the Maine State Museum also say: *"While the sampling strategy employed at this site has been far from ideal, [there has never been a formal dig] it is clear that it has produced Early and Middle Archaic points in quantities an order of magnitude higher than any other known site in Southern Maine."* Protecting this historically important site provides a unique opportunity for citizens to learn more about the environment and history of the area.



*three points and half of a 1793 Spanish silver Reale*

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Friends of Merrymeeting Bay · Box 233 · Richmond, Maine 04357

**Membership Levels**

- \$1,000+ Sturgeon  \$750 American Eel  \$500 Wild Salmon  \$250 Striped Bass  
 \$100 Shad  \$50 Alewife  \$20 Smelt  Other

\_\_\_\_\_  
Name

\_\_\_\_\_  
RR# or Street Address

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

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Email

- Renewal  New Member  Send me information about volunteer opportunities.

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

**Friends of Merrymeeting Bay  
Steering Committee**

- Ed Friedman, Chair (Bowdoinham)  
Nate Gray, Secretary (Freeport)  
Vance Stephenson, Treasurer (Wilmington, NC)  
Tom Walling (Bowdoinham)  
Sarah Cowperthwaite (Topsham)

**Research and Advocacy**

Ed Friedman 666-3372

**Water Quality Monitoring Coordinators**

Bill Milam 443-9738  
Kermit Smyth 725-8420

**Executive Coordinator**

Misty Gorski 582-5608 email: fomb@gwi.net

**HRHG Outreach Coordinator**

Kathleen McGee 666-3598 email: kmcgee@gwi.net

*Thanks to David Hansen for layout  
and design of this issue.*

# FOMB Protects Maine's Premier Archaeology Site

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U.S. Fish and Wildlife Service identifies this area as highest value wildlife habitat; the project area contains forested wetland, upland grassland nesting habitat, tidal wetlands and undisturbed shoreline along a section of the Kennebec classified by the state an “*outstanding river segment.*” The project area is also in close proximity to large areas of already protected land, thus increasing connectivity in this Bay-side habitat brimming with rare and endangered species.

Our work began on the parcel known as the *Houdlette Complex*, two years ago when FOMB grassroots efforts halted an illegal subdivision planned for the site by a new owner. For the last two years FOMB has been working behind the scenes supporting Land for Maine’s Future efforts to partially protect the site (some funding resulted but acquisition attempt failed). Working recently through a “bridge buyer” we have been able to put the entire core parcel into friendly hands and negotiate a purchase option for part of one adjacent property. Both of these opportunities are time-limited.

To make the Houdlette Conservation Project a reality we have partnered with land owners, community members, Maine Historic Preservation Commission, The Archaeological Conservancy, Dresden Conservation Commission and The Maine Archaeological Society and are actively building additional support. Your special contributions are needed to save these parcels.

To protect these critically important parcels about \$600,000 is needed. So far the Maine Historic Preservation Commission has secured about \$235,000 from the Land for Maine’s Future and The Archaeology Conservancy has promised \$75,000, both only towards the archaeology components of the project. FOMB has committed to raise a substantial portion of the \$290,000 balance through grants and member donations. Rarely will you have an opportunity to help protect such a resource.

Please write “Dresden” in the memo section of your very large check and send it to FOMB, P.O. Box 233, Richmond, ME 04357.



**Friends of Merrymeeting Bay**

P.O. Box 233

Richmond, Maine 04357

**Return Service Requested**

NON-PROFIT  
ORGANIZATION

**PAID**

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Dresden, ME

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## Goings On Outside-Pre-registration required.

**Bowdoinham Bird Walk -July 10, 6:30-8:30am. Will Broussard: 837-9520**

Join ornithologist and acoustics expert Will Broussard for this favorite early morning walk.

**Pownalborough Courthouse Tour-July 17, 3-5pm. Jay Robbins: 737-2239**

The next courthouse east of Pownalborough used to be in Machias so this historic building has seen its fair share of drama. Join Lincoln County Historical Society Executive Director Jay Robbins for this historical tour.

**Swan Island Living History Reenactment- July 31st and August 1st, 547-5322**

Step back in time to 1755 and interact with this group of historians as they re-create living on the Kennebec Frontier during the French and Indian War. Wander through their encampment to learn and observe local history taking place. For more information on Samuel Goodwin's Company of Fort Shirley/Pownalborough Courthouse, visit [www.goodwinwhite.com](http://www.goodwinwhite.com). Call ahead to reserve your spot for one of the passenger ferry trips to the island.

**Explore Swan Island- August 7, 10 am-12 noon. Jay Robbins: 737-2239**

Join FOMB member, historian, amateur archaeologist and Executive Director of the Lincoln County Historical Society

Jay Robbins on this always-popular tour. From Jay's extensive knowledge of the Island you will learn about the different style homes, who lived in them and when; what happened to the once thriving community and why, how former inhabitants made ends meet and what kinds of critters call the Island and surrounding skies and water their home. \$8/person Island use fee. This trip books quickly so sign up early.

**Merrymeeting Bay Paddle, Bath-September 4, 7:30-11:30am. Anne Hammond: 442-8535**

Explore the mid Bay for a few hours with Anne Hammond, naturalist and one of our resident expert kayak guides. Paddlers should have at least intermediate paddling skills and a PFD.

**Rare Mud Plant Walk, Dresden-September 12, 3-5pm. Andy Cutko: 666-3162**

Merrymeeting Bay is host to about a dozen rare mud-plant species, some found virtually nowhere else. Choice View Farm, protected by FOMB is one of the hottest plant spots on the Bay. Andy, an ecologist with the Maine Natural Areas Program knows the area well.

**Mushroom Walk, Bowdoinham-September 26, 2-4pm. Michaeline Mulvey**

Expert mycologist Michaeline Mulvey leads this walk on protected property at the head of tide along the Abbagadasset River. Pre-register with Misty Gorski at 737-8508