

COASTAL STUDIES CENTER

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Attention Alumni

Learn more about Bowdoin's Coastal Studies Program this summer at Alumni College:

*Living on the edge:
People and Coasts*

June 19-24, 2005

For details see URL:
(<http://www.bowdoin.edu/alumni/otherEvents.shtml>)

FROM THE DIRECTOR

ANNE HENSHAW

I often hear that prospective students choose Bowdoin because of its coastal location. No doubt our position along the Maine coast is unique, but more important are the programs we offer students to experience that coast first-hand. A growth in Bowdoin projects taking place up and down the Maine coast and beyond, including at the CSC, have in many ways made our coastline a living classroom for students to engage with the people and environments that surround them. Whether through service learning, student research opportunities with faculty, or field-based learning activities in courses from around the college, students are increasingly experiencing the dynamic quality of our environment and what it means to the people who live here. From the debates surrounding the development of a Liquefied Natural Gas terminal in Harpswell to the environmental history of Merrymeeting Bay, students are getting out of the classroom to research and explore the rich tapestry of educational opportunity our coastline affords. The success of our programs very much depend on the departments, faculty, students and staff that bring them to life. It is with great pleasure I recount some of the events and people that made the 2003-2004 academic year an educationally rich and exciting one.

RESEARCH AND TEACHING



Ben Martins using GPS to map intertidal as part of island monitoring project.

It was an exciting summer for student research this past year with 20 students working on projects at the CSC and a variety of areas up and down the Maine Coast. The Merrymeeting Bay ecology and environmental history project led by **Professors John Lichter (Biology/ES), Peter Lea (Geology) and Matt Klinge (History/ES)** topped the charts engaging nine students in independent research projects related to this history, geology, biology, ecology and archaeology of Merrymeeting Bay (MMB). **Ethan Galloway** (Luce Fellow) and his advisor **Barry Logan (Biology)** studied the growth, photosynthesis and leaf biochemistry in nitrogen-fertilized wild rice in

MMB. **Lucy Van Hook** (Rusack Fellow) working with Biology Lab Instructor **Jared Reblin** studied the population status, home range and nesting success of snapping turtles in MMB. Lucy and Jared placed radio collars on a number of turtles and tracked them daily with a radio antenna plotting their location using a Global Positioning System. Working for her second summer on the MMB project, **Chrissy Souther**



Professor Leslie Shaw oversees archaeological excavations with volunteers from Friends of Merrymeeting Bay.

RESEARCH AND TEACHING

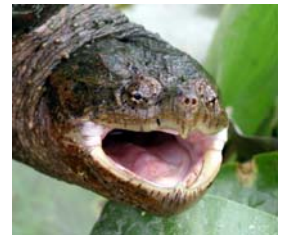
(Doherty Fellow) and her advisor **John Lichter** tracked the seasonal plankton dynamics in MMB. **Sam Farrell** (Martha Coles Fellow) also working her second summer on the MMB project with Professor **Matt Klinge** studied the environmental history of water quality in the Bay. Newcomers to the project **Freeland Church** (Rusack Fellow) and **Anthropology Professor Leslie Shaw** and archaeologist **John Cross** added an archaeological dimension to the project by partnering with the Friends of MMB to excavate a well known but little studied Archaic Period site on the upper banks of the Androscoggin River in Brunswick. Also in conjunction with the MMB project, **Geology Professor Peter Lea** super-



Flow dynamics at "the chops" at Merrymeeting Bay, image courtesy of Ratsirin Supcharoen, 2004

vised "a small army" of students including **Chris Proctor** (Doherty Fellow), **Ratsirin Supcharoen "Prae"** (Doherty Fellow), **Owen McKenna** (Doherty Fellow), and **Holly Kingsbury** (Doherty Fellow). Each of these students studied different hydrological dimensions of river and tidal flow dynamics in MMB. Professor Lea also mentored Geology major **Daniel McGrath** (Rusack Fellow) in his study of tidal dynamics in the Nonesuch River in Scarborough.

On Harpswell Neck, **Kim Stevens** (Rusack Fellow) together with her advisor **Anthropology Professor Sara Dickey** undertook a study examining the ways in which the Liquefied Natural Gas terminal proposal voted down in March, 2004 was tied to cultural constructions of place, geography and community. Kim conducted sixteen interviews that included twenty-two people



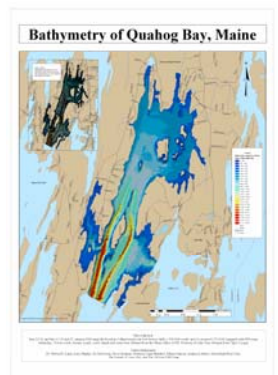
Snapping turtle in MMB

representing different perspectives on the debate. Issues related to Maine tourism also received research attention this summer. **Amelia Fisk** (Rusack Fellow) working with **Sociology Professor Nancy Riley** conducted a project entitled "Selling the Maine Coast: a comparative study of the effects of Maine tourism." Amelia traveled up and down the Maine Coast looking at how Maine is sold to tourists and how the Maine tourist industry speaks to larger issues of consumption, identity, peripherality and authenticity. **Patrick Mahoney** (Rusack research assistant) working with **Economics Professor David Vail** took a different approach to understanding tourism by focusing on coastal prototypes for Maine ecotourism certification program. Pat and David studied Maine sea kayak guiding as a potential model. As part of the project, Pat participated in several guided sea kayaking tours as well as conducting interviews with outfitter companies about their business practices. Pat worked with fellow student **Ben Martens** and Maine Sea Grant marine extension associates **Natalie Springuel** and **Tracy Hart** on Banks Island as part of an Island Monitoring Project monitoring the effects of recreational activities on Maine islands up and down the coast.



2004 summer fellows at the Coastal Studies Center

At the Coastal Studies Center **Jonathan Harris** "set up shop" at the Terrestrial Lab to study the effects of brown tail moth herbivory on apple leaf physiology and morphology. Down at the marine lab **Molly Wright** (Rusack Fellow) and **Ben Stranges** (Doherty Fellow) together with their advisors **Biology Professor Amy Johnson** and Research Associate **Olaf Ellers**, teamed up to continue work on sea urchin growth under different temperature conditions. Molly examined metabolic scaling and growth while Ben, a math major, focused on mathematical modeling of sea urchin growth. CSC scholar-in-residence **Marney Pratt** also worked throughout the summer in the marine lab investigating the physiological ecology of native and invasive Bryozoa species. Director **Anne Henshaw** continued her research on the Baffin Island Placename Project and the CSC archaeology project. Together with **Mathew Spooner** (Gibbons Fellow), Director Henshaw continued building a Geographic Information System database on the Brewer Cove shell midden that will be used not only for research but for teaching her "Environmental Archaeology" class in the fall semester. Nearby in Quahog Bay Professor **Ed Laine** and students **William Voinot-Baron** (Gibbons Fellow) and **David Mortimer** (WHOI research assistant) conducted a bathymetric survey as part of a long term project to understand submarine water discharge in Casco Bay.



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CSC SCHOLAR-IN-RESIDENCE

This year the Coastal Studies Center hosted marine biologist **Marney Pratt** ('97) as the 2003-2004 scholar-in-residence. In the fall, Marney successfully defended her dissertation entitled "*Flow, Feeding, and Form: Consequences of Coloniality in Bryozoans*" at Department of Biology, Duke University. During the spring semester Marney taught "Intertidal Ecology" to an enthusiastic group of Bowdoin students who were willing to brave the winter weather and ice to learn about Maine intertidal habitats and communities. As part of the class,



Intertidal ecology out in the field, Spring 2004

Marney's students built a website and developed lesson plans for local middle school science classes. Marney will continue her work at the marine lab during the 2004-2005 academic year as Visiting Assistant Professor in the Biology Department.

In collaboration with the Environmental Studies Department, **Anne Hayden** was chosen as the 2004-2005 CSC visiting scholar. Anne brings over 20 years of marine research and policy development experience to the position. She plans to spend the year working on marine resource governance issues with Prof DeWitt John as well as teaching a course on the Gulf of Maine.



Marney Pratt in CSC marine lab

PUBLICATIONS, PRESENTATIONS AND EXHIBITS

Articles:

Henshaw, A.H. (2003). Climate and Culture in the North: the interface of archaeology, paleoenvironmental science and oral history. In *Weather, Climate and Culture*, edited by Ben Orlove and Sarah Strauss, pp: 217-232. Berg Publishers, New York.

Lohrmann, N.L., Logan, B.A., Johnson, A.S. (2004). Seasonal acclimatization of antioxidants and photosynthesis in *Chondrus crispus* and *Mastocarpus stellatus*, two co-occurring red algae with differing stress tolerances. *Biological Bulletin*: 207.

Pratt, M.C. (2004). The effect of zooid spacing on bryozoan feeding success: is competition or facilitation more important? *Biological Bulletin* 207:17-27.

Exhibits:

James Mullen (2004). New Works, Hay Gallery, Portland, ME.

James Mullen (2003). Quadrants, UMF Art Gallery, University of Maine at Farmington.

Student honors theses:

Grason, E.W. (2004). Influence of an invasive bryozoan on *Onchidoris muricata* prey selection in the Gulf of Maine. Biology Department.

Julie Grinvalsky. 2004. Population ecology of *Eriocaulon parkerii* in Merymeeting Bay and its tributaries. Biology Department.

Lynne Davis. 2004. An analysis of diet, spine length, competition and mutable collagenous tissues as indicators of somatic and gonadal growth in the green sea urchin, *Strongylocentrotus droebachiensis*. Biology Department .

Sarah Fick (2004). Scientific and educational approaches to invasive species: a case study on the soft shell clam. Environmental Studies Program.

Daniel Abraham (2004). A Radiochemical Tracer Study of Submarine Groundwater Discharge at Waquoit Bay, Falmouth, Massachusetts and Quahog Bay, Harpswell, Maine. Geology Department.

Kurt Jendrek (2004). Bedrock Controls on Submarine Groundwater Discharge in Eastern Casco Bay. Geology Department.

COMMUNITY SERVICE AND PUBLIC OUTREACH

Thanks to the vision of Maine Sea Grant Director, Paul Anderson, we had the great fortune this year to welcome **Maine Sea Grant Marine Extension Associate Tracy Hart** to the CSC. Through the fine carpentry skills of CSC caretaker **Mark Murray**, we transformed the old woodshed attached to the farmhouse into beautiful new office space for Tracy and Mark. Through Sea Grant, Tracy is engaged in a variety of statewide marine related projects including marine characterization, citizen-based monitoring, and policy development related to Marine Protected Areas. Tracy is also serving as an advisor in a summer teacher training institute Bowdoin is designing for middle and high school teachers on marine and coastal science in Maine. We are very lucky to have Tracy at the CSC as we grow our outreach and community service activities.



Tracy Hart, Maine Sea Grant marine extension associate



Biology Lab Instructor David Guay with Cliff Island students in the CSC marine lab

This year the CSC also participated in the Maine Coastal Program's COASTWEEK clean up project. On a very wet Saturday afternoon in September, **Mark Murray** led six volunteers picking up the debris scattered along the 2.5 miles of coastline at the CSC during Bowdoin's Common Good Day. The debris is recorded on datasheets and included in a statewide database used to monitor the effects of human debitage on marine mammals. Thank you Greta Van Campen ('05), Abby Berkelhammer ('05), Julie DeRocchis, Fariba Shaffiey ('05), Joel Cartwright '06), and Carrie Atkins ('06) for helping in this effort! Problem-based service learning came alive this year at the CSC through a partnership formed between Director Anne Henshaw and her class the "Anthropology of Islands," the **Island Institute**, and the K-5 school located on **Cliff Island** in Casco Bay. The partnership provided an experiential opportunity for Bowdoin students to gain an appreciation for island life while simultaneously helping design a website for the school that could tie into the Island Institute's Lobstertales project. Lobstertales is a web-based initiative signed to encourage people around the world to learn about the importance of Maine's small fishing communities in the global marketplace. Visit the site at www.lobstertales.org.



Anthropology of Islands class returning home from Cliff Island

CONTRIBUTIONS TO CAMPUS INTELLECTUAL LIFE

Renown Maine author **Linda Greenlaw**, who wrote *The Hungry Ocean* and *The Lobster Chronicles*, kicked off the fall semester as the Common Hour speaker in September. In front of a full capacity Pickard Theatre audience, Greenlaw recounted humorous anecdotes as well as a sobering insights into the struggles fisherman now face in making a living up and down the Maine coast. In addition to Greenlaw, Coastal Studies Center was pleased to host a variety of symposia and visiting lecture series made possible through the Rusack Coastal Studies Symposium Fund. The **Women's Studies program**, led by Director **Jennifer Scanlon** and coordinator **Anne Clifford**, hosted two events focusing on women and the Maine coast. A fall event highlighted the photo documentary work of Bowdoin Graduate **Brita-Lena Lasko ('99)** and focused on women's work and the Maine coast. The evening featured three of the women that Brita interviewed and photographed as part of her Master's Thesis "A photo documentary study of contemporary women in the Maine Fishing Industry." **Jennifer Elderkin-Wickline**, a lobsterman from Southport Island, **Lee Hudson** owner of Frenchman's Bay Fisheries, and **Allyson Jordan**, manager of Jordan Marine and Fishing Vessel repair, recounted their life history and work against the backdrop of Brita Lena's photographs. **Connie Chiang**, 2002-2003 CSC scholar-in-residence and now Visiting Assistant Professor in History and Environmental Studies, moderated the panel discussion. In the spring, the Women's Studies program hosted another event focusing on Women Artists who explore and transform the Maine Coast. The panel of artists featured the work of landscape artist **Connie Hayes**, Vinalhaven Island sculptor **Aviva Rahmani**, and

Bowdoin College

Coastal Studies Center
 6775 College Station
 Brunswick, Maine
 Phone: 207-833-8018
 Http://Academic.bowdoin.edu/csc



Special thanks to a very dedicated and hard working support staff

Marjorie Parker (coordinator)
 Mark Murray (caretaker)
 Mike Chipman, Ken Durgen,
 and Jason Goguen (marine lab technicians)

And to the 2003-2004 CSC Advisory Committee for all their help and input during the year:

DeWitt John (Environmental Studies)
 Mike Kolster (Visual Arts)
 Peter Lea (Geology)
 Sarah McMahan (History)
 Amy Johnson (Biology)

*Photographs credits:
 Anne Henshaw, Marney Pratt, Lucy Van Hook*

CONTRIBUTIONS TO INTELLECTUAL LIFE

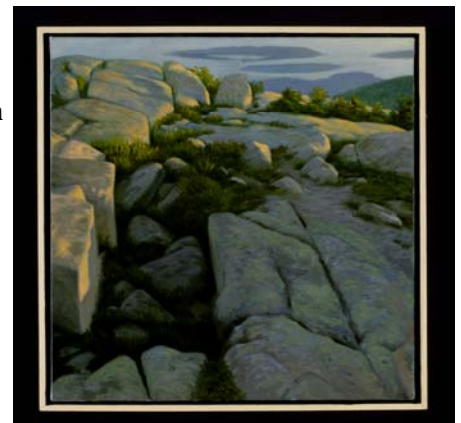
architect **Carol Wilson**. The bodies of work presented were varied and impressive. **Pamela Fletcher**, Assistant Professor of Art, moderated the discussion. One of the exciting outcomes of the event is that Carol Wilson became nominated for the position of the Coastal Studies scholar-in-residence during the 2005 fall semester. We look forward to hosting Carol next fall! During the spring semester, the CSC also co-sponsored a month long lecture series hosted by Associate **Professor of Anthropology, Pamela Ballinger**. The series entitled "Inventing the Seaside" was planned in connection to her first-year seminar of the same name. During the month of April four distinguished anthropologists presented their research on a variety of marine related themes. Dr. **Lena Lencek** from Reed College spoke on the social history of beaches and shifting concepts of utopia in the west. Dr. **Christine Walley** from MIT spoke on the politics of marine conservation with Tanzania's Mafia Island Marine Park. Dr. **James Acheson**, Professor of Anthropology and Marine Sciences at the University of Maine presented his research on the development of Lobster Conservation Law to a full audience of students and faculty in the Environmental Studies Commons. MIT Professor **Stephan Helmreich** discussed cultural and scientific classifications related to the hotly debated topic of marine invasive species in Hawaii. The CSC was also pleased to help co-sponsor **Joseph Taylor** who presented his timely research on the social and environmental history of salmon harvesting and aquaculture in the United States.



Left to right: Anne Hayden, DeWitt John, James Acheson and Pam Ballinger

CREATING AN INSTITUTE FOR COASTAL STUDIES

The newly proposed Institute for Coastal Studies received a significant boost this past summer thanks to matching endowment grant pledged by the **Henry L. and Grace Doherty Charitable Foundation**. The endowment will fund the new **Doherty Marine Biology Visiting Scholar**, a position which will foster region-wide collaboration, cooperation and communication in research on a topic related to the current crisis in depleted fisheries. The Doherty Visiting Scholar in marine biology will complement research being conducted by **Billingsley Professor of Biology Amy Johnson** and will contribute to growing collaborative institutional partnerships and may bring research expertise in sea urchins, or other ecologically important species for which there is a large fishery that is in crisis. We anticipate that the visiting scholar will contribute significantly to the intellectual community of an Institute for Coastal Studies and the College as a whole through participation in classes and symposia, as well as involvement in the on-going mentoring of student research projects and research exchanges. The Doherty Marine Biology Visiting Scholar's work will be undertaken largely at the CSC Marine Lab; however, he/she will spend periods of time in each of several regional labs for periods ranging from two days to two weeks, learning about the techniques and research performed in each of these labs. This Doherty-sponsored Visiting Scholar Program will further elevate the integration of research and teaching as an important pedagogical strategy at Bowdoin, with its emphasis on doing research that moves beyond classroom.



Locus 2 © Jim Mullen 2003