

**COASTAL SALT MARSH ECOSYSTEMS
in the GULF OF MAINE**

**Thursday, May 1, 1997
WORKSHOP at the NEERS SPRING MEETING**

Salt marsh ecosystems are a prominent feature of Gulf of Maine (GOM) estuaries, with extensive back-barrier marshes dominating the coastal landscape from the tip of Cape Cod to the Kennebec River. From the Kennebec River to the Bay of Fundy, marshes are smaller, but abundant. Larger marshes again appear along much of the Bay of Fundy. Current understanding of Gulf of Maine salt marsh ecology draws largely from studies of more southerly sites, from Buzzard's Bay in Massachusetts to Sapelo Island in Georgia. It is likely that the ecology of Gulf of Maine marshes varies in important ways from these model systems to the south. We announce a workshop to discuss specific research and management needs regarding **fisheries ecology, productivity, habitat degradation/restoration, and biodiversity** of Gulf of Maine salt marsh ecosystems.

The objectives of the workshop are:

- *provide a forum for researchers and coastal resource managers to discuss the role of salt marsh ecosystems in the ecology of the Gulf of Maine, relative to other GOM coastal ecosystems*
- *identify the critical issues concerning resource management of Gulf of Maine salt marshes*
- *define research questions that best address management needs (for issues that cannot be resolved by existing research)*
- *define research questions regarding ecology of Gulf of Maine salt marshes best addressed through comparative study with other regions*
- *outline strategies to support needed research*
- *outline strategies to transfer research results to coastal resource managers*
- *produce and distribute workshop objectives, results and conclusions to appropriate audiences at state, regional and national levels*

Workshop Structure

This one day workshop will begin with a morning plenary session presenting research followed in the afternoon by discussions in working groups. Topics for plenary papers and working groups will be:

Role of salt marsh ecosystems in supporting Gulf of Maine fisheries

- feeding, growth and survival of finfish and shellfish (larval to adult stages)

Salt marsh ecosystem productivity

- primary and secondary productivity; energetic and nutrient linkages with near shore waters; comparison with other vegetated habitats (macroalgae, eelgrass), and unvegetated habitats

Degradation and restoration of salt marsh systems

- human disturbance to salt marsh ecosystems (e.g. tidal restriction and invasive species): ecosystem response to disturbance and to restoration efforts.

Biodiversity supported by salt marsh ecosystems

- species, communities and habitats maintained by salt marsh estuaries

Each working group will be lead by a chair and the proceedings recorded by a rapporteur. Participants will receive specific questions for discussion in each working group prior to the workshop. The steering committee, working group chairs and rapporteurs will meet after the workshop to construct a workshop report. A draft report will be reviewed by workshop participants to incorporate their comments into the final document.

Sponsors

The workshop will be held in conjunction with the Spring 1997 meeting of the **New England Estuarine Research Society** (NEERS - a regional chapter of the Estuarine Research Federation). The **Wells National Estuarine Research Reserve** (WNERR, Wells, Maine) is the local sponsor for the workshop and the meeting. A planning grant from the National Science Foundation is providing funds for the workshop.

Date and Location

The workshop will be held on Thursday, May 1, 1997, followed by regular NEERS sessions on Friday and Saturday, May 2 - 3. The workshop and meeting will be held at the Wells NERR. Call Tin Smith at the Reserve for more information about the meeting (207) 646-1555 x 19.

Workshop Participants

The workshop and meeting are open to all interested participants. If you would like to participate in the Coastal Salt Marsh Workshop, please register by **April 7, 1997**. For more information about the workshop, call Michele Dionne at the Reserve (207) 646-1555 x 36.

Thursday, May 1st*
Coastal Salt Marsh Ecosystems in the Gulf of Maine
Michele Dionne, Wells NERR, Session Chair

0800-0900 Meeting Registration

0900 WELCOMING REMARKS

0910 Michele Dionne, INTRODUCTION
SALT MARSH ECOSYSTEMS IN THE GULF OF MAINE - WHAT DO WE KNOW?

Fisheries

0925 Francis Juanes, University of Massachusetts and Rodney Roundtree, National Marine Fisheries Service, Woods Hole
A DISCUSSION OF SELECTED CRITICAL RESEARCH NEEDS IN GOM SALT MARSH/
ESTUARINE HABITATS: TOWARD UNDERSTANDING ESTUARINE DEPENDENCE

1010 Brian Beal, University of Maine at Machias
EFFECTS OF GEOLOGY, TIDAL HEIGHT, AND PREDATION ON SETTLEMENT AND
RECRUITMENT VARIATION IN AN ESTUARINE BIVALVE MOLLUSK

1030 BREAK

Ecosystem Processes

1045 John Portnoy, US Geological Survey, Biological Resources Division
SHORT TERM EFFECTS OF TIDAL RESTORATION ON SALT MARSH BIOGEO-
CHEMICAL CYCLING AND PRODUCTION

Habitat Degradation and Restoration

1105 David Burdick, R. Boumans and F. Short, University of New Hampshire
IMPACTS TO SALT MARSHES FROM TIDAL RESTRICTIONS AND RESPONSES TO
TIDAL RESTORATION

1125 Ed Reiner, US Environmental Protection Agency
RESTORATION OF TIDALLY RESTRICTED SALT MARSHES IN FLOOD PRONE AREAS -
EXAMPLES FROM MASSACHUSETTS

1145 Robert Buchsbaum, Massachusetts Audubon Society
MONITORING THE ECOLOGICAL IMPACTS OF TIDALLY RESTRICTED SALT
MARSHES OF PLUM ISLAND SOUND, MASSACHUSETTS

1205 CHARGE TO WORKING GROUPS

1215 LUNCH BREAK

1300- 1600 WORKING GROUPS MEET

1615 WORKING GROUPS REPORT

* Last day of mud season - workers can discard waders and parkas

Friday, May 2nd*
SESSIONS OF CONTRIBUTED PAPERS
WELLS NATIONAL ESTUARINE RESEARCH RESERVE
WELLS, MAINE

(K) indicates Ketchum Prize Candidate, (R) indicates Rankin Prize candidate, (D) Dean Prize Candidate

0800-1200 Meeting Registration, Wells National Estuarine Research Reserve

Morning Session
David Franz, NEERS Past President, Brooklyn College, Session Chair

- 0900 Frederick Short, NEERS President, University of New Hampshire WELCOME
- 0910 Allan Beck and S. Morin, Narragansett Bay National Estuarine Research Reserve
VISITING SCIENTISTS' RESEARCH PROGRAM AT THE NARRAGANSETT BAY
NATIONAL ESTUARINE RESEARCH RESERVE
- 0930 (K) Mark J. Brush and S. W. Nixon, University of Rhode Island
EFFECT OF BIOMASS LAYERING ON PRODUCTION AND RESPIRATION RATES OF
Ulva lactuca
- 0950 (K) Heidi M. Hoven, F T. Short and H. E. Gaudette, University of New Hampshire
EXPOSURE OF EELGRASS, *Zostera marina* L., TO MARINE SEDIMENT
CONTAMINATED WITH Pb: EVALUATING PLANT GROWTH AND PB UPTAKE
- 1010 BREAK
- 1030 (K) Ryan Davis and F T. Short, University of New Hampshire
FIELD EXPERIMENTS QUANTIFY THE EFFECT OF BIOTURBATION BY *Neanthes*
virens (SARS) ON TRANSPLANTED EELGRASS (*Zostera marina* L.)
- 1050 (K) Joanne C. Bintz and S. W. Nixon, University of Rhode Island
CAN *Idotea baltica* EXERT TOP-DOWN CONTROL ON THE ENRICHMENT
RESPONSE OF A COASTAL MARINE ECOSYSTEM? A MODEL SIMULATION
- 1110 (R) Aaron Spares and M. Dadswell, Acadia University
GOAT LAKE, A WARM WATER, ESTUARINE REFUGIA FOR MOLLUSCS
- 1130 (R) Coren A. Milbury, Dept. of Zoology, University of New Hampshire
THE DISTRIBUTION OF JUVENILE SOFT-SELL CLAM (*Myra arenaria* LINNAEUS)
RECRUITMENT WITHIN THE WEBHANNET RIVER SANCTUARY, WELLS, ME
- 1150 BREAK FOR LUNCH (NEERS Executive Committee meeting)

* Opening day for Black Fly Season (BFS) please wear purple for safety reasons

Afternoon Session
David Burdick, University of New Hampshire, Session Chair

- 1310 Matthew Liebman, D. Switzer, P. Nolan, and G. Hellyer, U.S. EPA
AN ECOSYSTEM HEALTH ASSESSMENT FOR EPA'S STATE OF THE NEW ENGLAND
ENVIRONMENT -- 1997
- 1330 (K) Pamela A. Morgan and F. T. Short, University of New Hampshire
ASSESSING FUNCTIONS OF CREATED SALT MARSHES OF THE GREAT BAY ESTUARY, NEW
HAMPSHIRE: PLANT DIVERSITY AND SOIL ORGANIC MATTER CONTENT
- 1350 (K) Jennifer M. Hogan and D. L. Graf, Northeastern University
DISTRIBUTION OF *Melampus bidentatus* IN A NATURAL AND RESTORED SALT MARSH
- 1410 (K) Lori K. Benoit, Connecticut College
IMPACT OF *Phragmites* ON TIDAL MARSH BIRDS IN CONNECTICUT
- 1430 (R) D. Christine O'Neill and R. Askins, Connecticut College
REPRODUCTIVE SUCCESS OF OSPREYS AT TWO SITES IN CONNECTICUT
- 1450 (K) Merrie A. Cartwright, University of Maine
DIETS OF FISHES IN THE LITTLE RIVER ESTUARY: TRENDS IN FEEDING SELECTIVITY
- 1510 BREAK AND POSTER SESSION

(D) indicates Dean Prize candidate

(D) Stanley Bonis and H. Gaudette, University of New Hampshire
TRACE METALS IN THE SEDIMENTS OF GREAT BAY: IS THE ESTUARY HEALTHIER TODAY?

(D) John F. Bruno and T.A. Rand, Brown University
NEW ENGLAND COBBLE BEACH PLANT COMMUNITIES: MECHANISMS OF
COMMUNITY FACILITATION BY *Spartina alterniflora*

(D) Christopher Comelisen, Massachusetts Coastal Zone Management
DEVELOPMENT OF A REGIONAL DATABASE ON COASTAL HABITAT RESTORATION

(D) Stefanie A. Getchell, A. J. Boeckeler and H. E. Gaudette, University of New Hampshire
TRACE METAL CONTAMINANTS IN THE BOOTHBAY REGION: CORE PROFILES OF
TRACE METAL CONCENTRATIONS AND Pb ISOTOPIC COMPOSITION

(D) Eric Olson and P. Fell, Connecticut College
SELECTED MACROINVERTEBRATES ON THREE RESTORING AND THREE
REFERENCE MARSHES AT BARN ISLAND, CT.

(D) A. C. Orsted, R. S. Warren and W. A. Niering, Connecticut College
RECOVERY OF VEGETATION AND MACROINVERTEBRATE POPULATIONS ON IMPOUNDED
CONNECTICUT SALT MARSHES WITH RESTORATION OF TIDAL FLOODING

(D) Theresa A. Theodose and J. B. Roths, University of Southern Maine
SPATIAL VARIATION IN SOIL NUTRIENT AVAILABILITY, PRODUCTION, AND PLANT
SPECIES DIVERSITY ON TWO HIGH SALT MARSHES IN SOUTHERN MAINE

(D) Henry Walker, EPA, D. Q. Kellog and A. Gold, University of Rhode Island
EVALUATING UNCERTAINTIES IN WATERSHED NITRATE LOADINGS UNDER VARYING SCENARIOS OF
LAND USE: IMPLICATIONS FOR COASTAL RECEIVING WATERS

1615 NEERS Business Meeting

1800-2130 NEERS Awards Banquet CLAY HILL FARM RESTAURANT, OGUNQUIT

Saturday, May 3rd*

Michael Mazurkiewicz, University of Southern Maine, Session Chair

- 0930 Edward H. Dettman and M. A. Abdelrhman, EPA
EVALUATION OF SOME METHODS TO MEASURE AND ESTIMATE EMBAYMENT
FLUSHING TIME
- 0950 Jack Kelly, North Carolina State University; Michele Dionne, Wells NERR; John Sowles, Maine DEP
DISSOLVED OXYGEN TRENDS IN MAINE COASTAL WATERS
- 1010 Charles Chester, University of New Hampshire
DEVELOPMENTAL PLASTICITY IN ESTUARINE NUDIBRANCHS
- 1030 BREAK
- 1050 Larry T. Spencer, Plymouth State College
H. B. BIGELOW, THE U.S. ALBATROSS AND THE GULF OF MAINE
- 1110 David R. Franz, Brooklyn College CUNY
EUTROPHICATION AND MARSH EROSION IN JAMAICA BAY -- SPECULATIVE LINKAGES
- 1130 Michele Dionne, Wells NERR; Dave Burdick, Jackson Lab, Robert Buchsbaum, Mass Audubon
SALT MARSH WORKSHOP SUMMARY / OUT OF POCKET PAPERS
- 1200 LUNCH BREAK
- 1300 LEAVE FOR COASTAL BOAT CRUISE
- 1600 CONFERENCE ENDS

Hello NEERS Members,

As you will remember from the last couple of NEERS meetings, the issue of a name change for NEERS has come up and been extensively discussed at meetings as well as on this NEERSlist. The proposal made was to change the name of the society to better cover the range of estuaries where NEERS members conduct research. Our procrastination has led a group of Canadians to consider forming their own estuarine research society. Actually, although it had nothing to do with NEERS, the proposed new society in the Atlantic Provinces is considering an affiliation to ERF in the same manner as NEERS and other regional affiliates. It is not clear yet when the Canadian group will form or if Canadian NEERS members will connect with this new group. In any event, given this new development, it seems inappropriate to make a change in the name of our society at this time. So I have made an "executive decision" that we will postpone, yet again, the decision on the name change until the Canadian group situation is clarified (or someone else is president). I have invited the Canadian group to join us in Wells in May, and we can discuss the whole issue -- again. Thanks for all the input and ideas. See you in Maine. Best, Fred.

* Maine winter officially over at 1037