



NEERS SPRING 2012 MEETING
April 12 – 14, 2012
John Carver Inn, Plymouth, Massachusetts

Hosted By

Massachusetts Bays Program and Saquish Scientific
Local organizers: Sara Grady and John Brawley

Patrons

Normandeau, The Nature Conservancy, Woods Hole Sea Grant, YSI

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MEETING PROGRAM

All events at the John Carver Inn unless noted otherwise
All oral sessions are in the John Carver Room

Thursday, April 12th

12:00 – 1:00 pm	Meeting registration (Boardroom)
1:00 – 5:00 pm	Symposium: Shellfish Aquaculture, Restoration, and Conservation
5:00 – 6:00 pm	Meeting Registration (Boardroom)
5:00 – 7:00 pm	Welcoming Social (Winslow Room)
7:00 pm – 8:30 pm	Executive Committee Meeting (Boardroom)

Friday, April 13th

7:00 – 8:00 am	Meeting registration (Boardroom)
8:00 – 9:45 am	Oral presentations: Nitrogen – Pathways and Processes
10:05 am – 12:05 pm	Oral presentations: Nutrients/Bacteria/Biogeochemical Signatures
12:05 pm – 1:05 pm	Lunch on your own in Plymouth
1:05 pm – 2:45 pm	Oral presentations: Coastal Vegetated Communities I
3:00 pm – 4:20 pm	Oral presentations: Estuarine Fauna
4:20 pm – 5:00 pm	NEERS Business Meeting (John Carver Room)
5:00 pm – 6:00 pm	Poster presentations (Winslow Room)
6:00 pm – 7:00 pm	Social and poster viewing (Winslow Room)
7:00 pm – 9:00 pm	NEERS Awards Banquet (John Carver Room)
9:00 pm - ??	Music and dancing at T-Bones Road House (22 Main Street)

Saturday, April 14th

8:00 – 10:00 am	Oral presentations: Coastal Vegetated Communities II
10:20 am – 12:20 pm	Oral presentations: Estuarine Assessment and Management
12:45 pm	Field trip departure – see web site for details



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Thursday, April 12th

**SPECIAL SYMPOSIUM:
The Ecological, Economic, and Social Benefits of
Shellfish Aquaculture, Restoration, and Conservation in New England Estuaries**

Chair: John Brawley

* Presenter

- 1:00** Welcome and Introduction – John Brawley
Saqish Scientific LLC, Duxbury, MA
- 1:10** Macfarlane, Sandra
Coastal Resource Specialists, Orleans, MA
SOCIAL ASPECTS OF SHELLFISH AQUACULTURE AND RESTORATION PROGRAMS
- 1:30** Kite-Powell, Hauke
Woods Hole Oceanographic Institution, Woods Hole, MA
ECONOMIC CONSIDERATIONS IN SHELLFISH AQUACULTURE AND NUTRIENT MANAGEMENT IN NE COASTAL PONDS
- 1:50** Gregory, Shore
Island Creek Oysters, Duxbury, MA
SOCIAL AND ECONOMIC IMPLICATIONS OF OYSTER AQUACULTURE ACROSS LOCAL, REGIONAL, AND GLOBAL SCALES
- 2:10** Karney, Richard C.
Martha's Vineyard Shellfish Group, Inc., Oak Bluffs, MA
THE BENEFITS OF SHELLFISH AQUACULTURE TO THE ECONOMIC, ECOLOGICAL, AND SOCIAL INTEGRITY OF MARTHA'S VINEYARD
- 2:30** Leavitt*, Dale, S. Patterson, T. Scott, and M. Griffin
Ctr. for Economic and Environmental Development, Roger Williams Univ., Bristol, RI
THE TOWN POND RESTORATION - THEY DUG THE HOLE, NOW WHAT DO WE DO?
- 2:50** **BREAK**
- 3:10** Buttner, Joseph K.
Northeastern Massachusetts Aquaculture Center, Cat Cove Marine Laboratory and Dept. of Biology, Salem State University, Salem, MA
SOFTSHELL CLAM (MYA ARENARIA) RESTORATION AND ENHANCEMENT EFFORTS
- 3:30** Gomez-Chiarri, Marta
Dept. of Fisheries, Animal and Veterinary Science, Univ. of Rhode Island, Kingston, RI
DISEASE RESISTANCE IN OYSTERS: FROM FIELD EVALUATION TO ELUCIDATION OF MECHANISMS

- 3:50** Green* Mark A.¹, L. Hubacz¹, J. Salisbury², and G. Waldbusser³
¹Division of Natural Sciences, Saint Joseph's College of Maine, ME
²Ocean Processes Analysis Lab, University of New Hampshire, NH
³Oregon State University, College of Earth, Ocean, and Atmospheric Sciences, OR
**ACIDIFICATION OF THE COASTAL OCEAN: EVALUATING THE IMPACTS OF
 SEDIMENT CORROSIVITY ON BIVALVES**
- 4:10** Hancock*, Boze¹ and L. zuErmgassen²
¹Global Marine Team, The Nature Conservancy, URI Narragansett Bay Campus, RI
²Dept. of Zoology, University of Cambridge, Cambridge, UK
**SETTING GOALS FOR OYSTER REEF RESTORATION BASED ON ECOSYSTEM
 SERVICES**
- 4:30** Panel Discussion
- 5:00** **NEERS WELCOMING SOCIAL** (Winslow Room)
- 7:00** Dinner on your own in Plymouth

Friday, April 13th

- 8:00** Welcome and Introductory Remarks – Steve Hale, NEERS President

Nitrogen: Pathways and Processes

Chair: Steve Hale

* Presenter; **(K)** Ketchum Prize candidate for best graduate student presentation,
(R) Rankin Prize candidate for best undergraduate student presentation

- 8:05** Deacutis*, Christopher F.¹, H. Stoffel², S. Brown³, and B. Jenkins³
¹Narragansett Bay Estuary Program, URI Coastal Institute, Narragansett, RI
²URI GSO, Narragansett, RI; ³Cell&Molecular Biology, URI, Kingston, RI
**HYPOXIA IN NARRAGANSETT BAY: A DRIVER FOR A HIDDEN NITROGEN
 POSITIVE FEEDBACK LOOP? PART I: HYPOXIC CONDITIONS IN THE BAY**
- 8:25** **(K)** Brown*, Shelley M.¹, A. Jones¹, A. L. Ehrlich¹, C. Deacutis³ and B. D. Jenkins^{1,2}
¹Dept. of Cell and Molecular Biology, Univ. of Rhode Island, Kingston, RI
²Graduate School of Oceanography, Univ. of Rhode Island, Narragansett, RI
³Narragansett Bay Estuary Program, URI Coastal Institute, Narragansett, RI
**HYPOXIA IN NARRAGANSETT BAY: A DRIVER FOR A HIDDEN NITROGEN
 POSITIVE FEEDBACK LOOP? PART II: THE GENETIC EVIDENCE**
- 8:45** **(K)** Heffner*, Leanna R.¹, T. Murphey², and S.W. Nixon¹
¹Graduate School of Oceanography, and ²Dept. of Natural Resources Science, University
 of Rhode Island, RI
**EXAMINING THE RESPONSE OF NITROGEN-FIXATION AND
 DENITRIFICATION TO NUTRIENT ENRICHMENT IN SALT MARSHES OF
 NARRAGANSETT BAY, RI**

9:05 (K) Brin*, Lindsay D.^{1,2}, J. J. Rich¹, A. E. Giblin²
¹Dept. of Ecology and Evolutionary Biology, Brown University, Providence, RI
²Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA
NITROGEN LOSS PATHWAYS IN COASTAL AND SHELF SEDIMENTS:
DEFINING CONTROLS IN NEW ENGLAND AS A MODEL SYSTEM

9:25 (R) Johnson, Hansen D.
Dept. of Biology, Bates College, Lewiston, ME
RESOURCE LIMITATION AFFECTS HETEROCYST FORMATION AND
PRODUCTIVITY IN NITROGEN-FIXING CYANOBACTERIA

9:45 BREAK

Nutrient and Bacterial Dynamics

Chair: Steve Hale

* Presenter; **(K)** Ketchum Prize candidate for best graduate student presentation,
(R) Rankin Prize candidate for best undergraduate student presentation

10:05 (K) Krumholz*, Jason S.¹, C. A. Oviatt¹, and L. M. Smith²
¹University of Rhode Island Graduate School of Oceanography, Narragansett, RI
²Your Ocean Consulting LLC, Knoxville TN
INVESTIGATING THE IMPACT OF ADVANCED WASTEWATER TREATMENT
ON NUTRIENT DYNAMICS IN NARRAGANSETT BAY, RI

10:25 (R) Spillane*, Tyler and S. Zeeman
University of New England, Biddeford, ME
BACTERIA IN THE SACO RIVER

10:45 (K) Watka*, Lauren¹, N. Chu², A. L. Rhyne³, and H. M. Leslie^{1,2}
¹Center for Environmental Studies, Brown University, Providence, RI
²Dept. of Ecology and Evolutionary Biology, Brown University, Providence, RI
³Roger Williams University, Dept. of Biology and Marine Biology, Bristol, RI
INFLUENCE OF PHYTOPLANKTON ABUNDANCE AND GUILD MEMBERSHIP
ON ROCKY INTERTIDAL SPECIES PERFORMANCE AND NITROGEN FLUX

Biogeochemical Signatures

11:05 (R) Olesnavage, Kathryn M. and C. Chrysostomidis
Dept. of Mechanical Engineering, Mass. Institute of Technology, Cambridge, MA
THE DESIGN AND TESTING OF A PROCEDURE TO LOCATE FRESH
SUBMARINE GROUNDWATER DISCHARGE IN CYPRUS

11:25 (K) Salacup*, Jeff M., T. D. Herbert, and W. L. Prell
Geological Sciences Dept., Brown University, Providence, RI
RECONSTRUCTING PAST SEA SURFACE TEMPERATURES IN
NARRAGANSETT BAY USING THE UK'37 SST PROXY: FROM VALIDATION TO
APPLICATION

11:45 (R) Brooks*, Ashley, W. Ambrose, and W. Locke
Dept. of Biology, Bates College, Lewiston, ME
THE GROWTH RATES OF THE SURF CLAM, *SPISULA SOLIDISSIMA*, FROM
THE MID-ATLANTIC BIGHT FOR OVER 66 YEARS

12:05 – 1:05 LUNCH

Coastal Vegetated Communities I

Chair: Sara Grady

* Presenter; **(K)** Ketchum Prize candidate for best graduate student presentation,

(R) Rankin Prize candidate for best undergraduate student presentation

1:05 (K) Simon*, Matthew, S. Travis, and G. Zogg
Dept. of Biology, University of New England, Biddeford, ME
ATLANTIC COAST SALT MARSH RESPONSE TO SEA LEVEL RISE: EFFECTS
ON SEDIMENT MICROBIAL DECOMPOSITION

1:25 (R) Ivens-Duran*, Morgan¹, S. S. Corman^{1,2}, and H. M. Leslie^{1,3}
¹Dept. of Ecology and Evolutionary Biology, Brown University, Providence RI
²Marine Biological Laboratory, Woods Hole, MA
³Center for Environmental Studies, Brown University, Providence RI
ENVIRONMENTAL DRIVERS OF *SPARTINA ALTERNIFLORA* FLOWERING
PATTERNS

1:45 (R) Barry*, Colin H. and B. J. Johnson
Dept. of Geology, Bates College, ME
A HYDROGEOLOGIC STUDY OF A DITCHPLUGGED SALT MARSH IN
PHIPPSBURG, MAINE

2:05 (K) Bayley*, Holly K.^{1,3}, F. T. Short¹, A. S. Klein², D. M. Burdick¹, and G. E. Moore²
Depts. of ¹Natural Resources and Environment., Jackson Estuarine Lab. and
²Biological Science, Univ. of New Hampshire, Durham, NH
³National Park Service, Cape Cod National Seashore, Wellfleet, MA
EELGRASS (*ZOSTERA MARINA* L.) FROM GENETICALLY DIFFERENTIATED
POPULATIONS RESPONDS DIFFERENTLY TO LOW LIGHT AND HIGH
SEDIMENT ORGANIC CONTENT

2:25 (K) Norton*, Ashley R.^{1,2}, A. C. Trembanis¹, M. Borrelli², and T. L. Brown^{2,3}
¹Dept of Geological Sciences, Univ. of Delaware, Newark, DE
²Provincetown Center for Coastal Studies, Provincetown, MA
³Environmental, Earth and Ocean Sciences, UMass-Boston, Boston, MA
ESTIMATING THE DISTRIBUTION, CANOPY HEIGHT AND CANOPY VOLUME
OF EELGRASS BEDS (*ZOSTERA MARINA*) IN EASTERN CAPE COD BAY, MA
USING AN INTERFEROMETRIC SONAR SYSTEM

2:45 BREAK

Estuarine Fauna

Chair: Pam Morgan

* Presenter; **(K)** Ketchum Prize candidate for best graduate student presentation,

(R) Rankin Prize candidate for best undergraduate student presentation

- 3:00** **(K)** Bloodsworth*, Kylie H.¹, C. E. Tilburg¹, P. O. Yund¹, and C. E. Epifanio²
¹Dept. of Marine Sciences, University of New England, Biddeford, ME
²College of Earth, Ocean, and Environment, University of Delaware, Lewes, DE
RIVER PLUME DYNAMICS INFLUENCE THE DISTRIBUTION OF DECAPOD
AND BIVALVE LARVAE WITHIN SACO BAY, ME
- 3:20** **(K)** Hanlon*, Elizabeth¹, D. P. Cheney¹, and J. M. Logan²
¹Biology Dept. and Marine Science Center, Northeastern University, Boston, MA
²Massachusetts Division of Marine Fisheries, New Bedford, MA
DIETARY CONNECTIONS BETWEEN FUNDULUS HETEROCLITUS AND A PCB-
CONTAMINATED ULVA BLOOM IN NEW BEDFORD HARBOR
- 3:40** **(R)** Smith*, Kayla M. and J. A. Sulikowski
Marine Science Dept., University of New England, Biddeford, ME
EVALUATING THE SACO BAY ESTUARY SYSTEM AS A NURSERY GROUND
FOR COMMERCIALY VALUABLE AND ECOLOGICALLY IMPORTANT FISH
SPECIES
- 4:00** **(K)** Schillaci*, Christopher^{1,2}, G. Bettencourt², J. Kennedy², and T. Shields²
¹Dept. of Natural Resources and the Environ., Univ. of New Hampshire, Durham, NH
²Massachusetts Division of Marine Fisheries, Gloucester, MA
BOSTON HARBOR SOFTSHELL CLAM (*MYA ARENARIA*) ENHANCEMENT AND
OUTREACH
- 4:20** Business meeting
- 5:00** **POSTER SESSION**
Poster titles are listed at the end of the program
- 6:00** Social and Poster Viewing
- 7:00** Awards Banquet
- Dessert Slide Show by Marshall Pregnall, Vassar College, Poughkeepsie, NY:
IN THE WAKE OF DRAKE, COOK AND DARWIN:
EXPLORING COASTAL PATAGONIA AT THE END OF THE AMERICAS
- Presentation of Awards for Best Student Papers
- 9:00** Music and dancing T-Bones Road House (22 Main Street)

Saturday, April 14th

Coastal Vegetated Communities II

Chair: John Brawley

* Presenter

- 8:00** Young, Alan M.
Biology Dept., Salem State University, Salem, MA
A COMPARATIVE STUDY OF *PHRAGMITES* CONTROL MEASURES
- 8:20** Burdick*, David^{1,2}, G. Moore^{1,3}, C. Peter¹ and R. Buchsbaum⁴
¹Jackson Estuarine Laboratory; ²Dept. of Natural Resources and the Environment; ³Dept. of Biological Sciences, UNH, Durham, NH
⁴Massachusetts Audubon, Wenham, MA
NATIVE PLANT COMMUNITIES OF THE GREAT MARSH AND INVASION BY *PHRAGMITES AUSTRALIS*
- 8:40** Rogers*, Catherine J. and T. A. Randall
Environ. Resources, U.S. Army Corps of Engineers, New England District, Concord, MA
COMPARING AND CONTRASTING TWO INTERTIDAL MUDFLAT MITIGATION PROJECTS IN RUMNEY MARSH, SAUGUS, MASSACHUSETTS.
- 9:00** Elmer, Wade H.
Dept. of Plant Pathology and Ecology, The CT Agric. Experiment Sta., New Haven, CT
DISEASE AND DROUGHT INDUCED STRESS OF *SPARTINA ALTERNIFLORA* INCREASES HERBIVORY BY MARSH CRABS
- 9:20** Moore*, Gregg E.¹, W. F. Nichols², N. Ritter, and C. R. Peter¹
¹Dept. of Biol. Sci. and Jackson Estuarine Lab., UNH, Durham, NH
²NH Natural Heritage Bureau, Division of Forests & Lands – DRED, Concord, NH
A UNIQUE COASTAL SALT POND MARSH SYSTEM AT ODIORNE POINT STATE PARK, RYE, NEW HAMPSHIRE
- 9:40** Short*, Frederick T.¹, H. K. Bayley¹, A. S. Klein², D. M. Burdick¹, and G. E. Moore²
Depts. of ¹Natural Resources and the Environment, Jackson Estuarine Lab. and ²Biological Sci., Univ. of New Hampshire, Durham, NH
THE ROLE OF GENETICS IN EELGRASS POPULATION RESILIENCE IN SOUTHERN NEW ENGLAND AND NEW YORK

10:00 BREAK

Estuarine Assessment and Management

Chair: John Brawley

* Presenter

- 10:20** Trench*, Elaine C. T. and J. R. Mullaney
U.S. Geological Survey, East Hartford, CT
STATUS AND TRENDS OF NUTRIENTS IN STREAMS OF THE NORTHEASTERN UNITED STATES, 1975-2003
- 10:40** Stacey*, Paul E.¹, T. Haze², and I. Raffa²
¹Great Bay National Estuarine Res. Reserve, NH Fish & Game Dept., Durham, NH
²Bur. of Water Prot. & Land Reuse, CT Dept. of Energy and Environ. Prot., Hartford, CT
CONNECTICUT'S NITROGEN CREDIT EXCHANGE - A COLLABORATIVE EFFORT TO ATTAIN NITROGEN REDUCTION GOALS FOR LONG ISLAND SOUND CELEBRATES 10 YEARS OF PROGRESS
- 11:00** Dettmann*, Edward H. and H. A. Walker
USEPA, NHEERL, Atlantic Ecology Division, Narragansett, RI
A SYSTEMS-BASED APPROACH TO INTEGRATED NUTRIENT MANAGEMENT IN NARRAGANSETT BAY AND ITS WATERSHED
- 11:20** Kachmar*, Jon and C. Shetterly
The Nature Conservancy, Boston, MA
CONSERVING AND RESTORING NEARSHORE COASTAL HABITATS IN MASSACHUSETTS: ENABLING CONDITIONS FOR SEAGRASS AND WILD SHELLFISH COMMUNITIES
- 11:40** Koo*, Kyung-Ah, E. Davenport, and C. S. Hopkinson
Dept. of Marine Sciences, University of Georgia, Athens, GA
EUTROPHICATION: EFFECTIVENESS OF *MYA ARENARIA* IN CONTROLLING PHYTOPLANKTON POPULATION IN PLUM ISLAND ESTUARY, MA
- 12:00** Harris*, Jennifer H. and K. Ono
Dept. of Marine Science, University of New England, ME
TWO- AND THREE-DIMENSIONAL PHOTOGRAMMETRIC MASS ESTIMATION TECHNIQUES FOR TWO PHOCID SPECIES: *HALICHOERUS GRYPUS* AND *PHOCA VITULINA CONCOLOR*
- 12:20** Closing words
- 12:30** Adjourn
- 12:45** Field trip departure – see web site for details

POSTER PRESENTATIONS

* Presenter; **(D)** Dean Prize candidate for best graduate student poster; **(W)** Warren Prize candidate for best undergraduate student poster; **§** High School Student

(W) Black, Bridgette E.

Center for Environmental Studies, Brown University
INCORPORATING ECOSYSTEM SERVICES INTO MARINE MANAGEMENT
FRAMEWORKS IN THE NORTHEAST REGION

Browne, James P.

Dept. of Conservation and Waterways, Town of Hempstead, NY, and
Dept. of Ecology and Evolution, Stony Brook University, NY
AN ANALYSIS OF SALT MARSH EDGE LOSS OVER 81 YEARS IN HEMPSTEAD BAY,
LONG ISLAND, NEW YORK

Buchsbaum, Robert B. Massachusetts Audubon Society, Wenham, MA
CHANGES OVER TIME IN BIRD POPULATIONS IN THE PLUM ISLAND SOUND
ESTUARY, MASSACHUSETTS: A PRELIMINARY ASSESSMENT

(W) Chebot*, Benjamin B.¹, W. G. Ambrose², W. L. Locke², and B. J. Bourque³
Depts. of ¹Environmental Studies, ²Biology, and ³Anthropology, Bates College, Lewiston, ME
ANNUAL TIMING OF GROWTH LINE DEPOSITION AND COMPARATIVE GROWTH
ANALYSIS OF MODERN AND ARCHAIC *MYA ARENARIA* FROM THE PEONOBSCOT
BAY REGION, MAINE

Costa, Amy S.

Provincetown Center for Coastal Studies, Provincetown, MA
ANALYZING TRENDS IN WATER QUALITY TO ASSESS THE HEALTH OF CAPE COD
BAY

Durant*, Daisy, and K. B. Raposa

Narragansett Bay National Estuarine Research Reserve, Prudence Island, RI
PRELIMINARY RESULTS FROM BENTHIC INFAUNAL MONITORING AT THE
NARRAGANSETT BAY NATIONAL ESTUARINE RESEARCH RESERVE ON
PRUDENCE ISLAND, RHODE ISLAND.

(W) Ennis*, Rosmin S., J. Krumholz, and C. Oviatt

University of Rhode Island, Narragansett, RI
NUTRIENT INPUT FROM WASTEWATER TREATMENT FACILITIES IN THE
NARRAGANSETT BAY WATERSHED, 2000 – 2010

Francoeur, L.¹, Alexandra Kanonik*², R. L. Burke³ and G. W. Frame⁴

¹The Port Authority of NY & NJ, JFK International Airport, Jamaica, NY

²Town of Hempstead Department of Conservation and Waterways, Point Lookout, NY ³Dept. of
Biology, Hofstra University, Hempstead, NY

⁴Nat. Resources Management Division, Gateway National Recreation Area, Staten Island, NY
WHY DID TERRAPINS CROSS THE RUNWAY? THE MYSTERIOUS TURTLE INVASION
OF JFK AIRPORT

Grady*, Sara P.¹, M. Kearns², and S. Woods²

¹Massachusetts Bays Program South Shore/N. & S. Rivers Watershed Assn., Norwell, MA

²N. & S. Rivers Watershed Assn., Norwell, MA

BALANCING ECOLOGICAL AND MUNICIPAL WATER DEMAND IN A
SOUTHEASTERN MASSACHUSETTS COASTAL STREAM

(D) Hill, Troy D.

School of Forestry and Environmental Studies, Yale University, New Haven, CT

SEDIMENT FLUX BETWEEN AN URBAN SALT MARSH AND LONG ISLAND SOUND

Johnson*, Beverly J.¹, C. A. Harris¹, W. G. Ambrose, Jr.¹, B. J. Bourque¹, R. S. Steneck², P. T. Dostie¹, and W. L. Lock, V.¹

¹Bates College, Lewiston, ME; ²Darling Marine Center, University of Maine, Walpole, ME

STABLE ISOTOPIC ANALYSES OF ARCHAEOLOGICAL FISH BONES REVEAL A
SIGNIFICANT SHIFT IN NEARSHORE ECOSYSTEMS AFTER EUROPEAN
SETTLEMENT, PENOBSCOT BAY, GULF OF MAINE

(W) Johnston*, Amy E., W. A. Ambrose, and W. Locke

Dept. of Biology, Bates College, Lewiston, ME

GROWTH RATE AND SHELL ANALYSIS OF *PATELLA VULGATA* (THE COMMON
LIMPET) FROM THE SANDWICK SOUTH SITE, UNST, SHETLAND ISLANDS, UK

(W) Kingston*, Ryan¹, S. Travis², and G. Zogg²

Depts. of ¹Environmental Studies and ²Biology, University of New England, ME

THE EFFECTS OF GENOTYPIC DIVERSITY ON *SPARTINA ALTERNIFLORA* RESPONSE
TO SEA LEVEL RISE AND NUTRIENT LOADING

(W) Leporacci*, Nicole¹, L. Fields², and S. Nixon²

¹University of Rhode Island, Kingston, RI

²Graduate School of Oceanography, Narragansett, RI

SEDIMENT CHLOROPHYLL A AND ORGANIC MATTER CONTENT ALONG THE
RHODE ISLAND COAST

(W) Lesneski*, Kathryn, W. Prell, and D. Murray

Brown University Dept. of Geological Sciences. Providence, RI

A SPATIAL AND TEMPORAL ANALYSIS OF LEAD IN NARRAGANSETT BAY SINCE
1850

§ Luciani*, Caroline R., C. A. Baker, M. F. Buckley, T. L. DeRosa, J. A. Hernandez, E. L. Hillis,
R. Matta, A. R. Novak, C. C. Smith, Q. Xu, and Sr. M. J. Paoletta
Sacred Heart Academy, Hamden, CT.

THE COMPARATIVE STUDY OF ACTIN AND MYOSIN GENES IN *MOLGULA*
MANHATTENSIS, *STYELA CLAVA*, AND *LIMULUS POLYPHEMUS*: IMPLICATION ON
MITOCHONDRIAL DNA MAINTENANCE

McKinney*, Richard A.¹ and K. B. Raposa²

¹US EPA, ORD, NHEERL, Atlantic Ecology Division, Narragansett, RI

²Narragansett Bay National Estuarine Research Reserve, Prudence Island, RI

FACTORS INFLUENCING EXPANDED USE OF URBAN ESTUARINE HABITATS BY
FORAGING WADING BIRDS

Morgan*, Pamela A. and R. Tamulonis
Dept. of Environmental Studies, University of New England, Biddeford, ME
PLANT COMMUNITY STRUCTURE OF TIDAL WETLANDS IN THE SACO RIVER
ESTUARY, MAINE

(W) Murphy*, Theresa¹, L. R. Heffner², and S. W. Nixon²
¹Dept. of Natural Resources Science and ²Graduate School of Oceanography, University of
Rhode Island, RI
EFFECTS OF LIGHT INTENSITY AND EUTROPHICATION ON AUTOTROPHIC
NITROGEN-FIXATION IN NARRAGANSETT BAY, RHODE ISLAND SALT MARSHES

Neckles*, Hilary A.¹, B. J. Johnson², B. S. Kopp^{1,3}, and H. K. Bayley⁴
¹USGS Patuxent Wildlife Research Center, Augusta, ME
²Dept. of Geology, Bates College, Lewiston, ME; ³Kimball Union Academy, Meriden, NH
⁴NPS Cape Cod National Seashore, Wellfleet, MA.
LONG-TERM VARIATION IN $\delta^{15}\text{N}$ OF EELGRASS IN PLEASANT BAY,
MASSACHUSETTS, SURROUNDING FORMATION OF A NEW INLET

Nelson*, Michaeline B. and J. J. Rich
Dept. of Ecology and Evolutionary Biology, Brown University, Providence, RI
INFLUENCE OF ORGANIC CARBON AVAILABILITY ON THE NITROGEN CYCLE IN
SEDIMENT FROM RHODE ISLAND COASTAL WATERS

(D) Nichols*, Owen C.
School for Marine Science and Technology, UMass - Dartmouth, Fairhaven, MA and
Provincetown Center for Coastal Studies, Provincetown, MA
LONGFIN INSHORE SQUID (*LOLIGO PEALEII*) PARALARVAL DISTRIBUTIONAL
ECOLOGY: DATA GAPS AND NOVEL FIELD STUDIES

Nightingale*, Meghan¹, W. J. Berry¹, S. E. Reinert², S. M. Lussier¹, F. C. Golet³
¹U.S. EPA, Narragansett, RI ²Barrington, RI ³Univ. Rhode Island, Kingston, RI
POPULATION STATUS OF THE SEASIDE SPARROW IN RHODE ISLAND: A 25-YEAR
ASSESSMENT

Scharf*, Tina M.¹, J. P. Browne¹, and J. E. Ciappetta²
¹Dept. of Conservation and Waterways, Town of Hempstead
²Triumvirate Environmental
TRENDS IN SALT MARSH POND AND PANNE EXTENT OVER AN 81 YEAR PERIOD IN
HEMPSTEAD BAY, LONG ISLAND, NY

(W) Short*, Meghan I.¹, D. S. Johnson², and L. A. Deegan²
¹Brown University, Providence, RI
²Marine Biological Laboratory, Woods Hole, MA
NUTRIENT EFFECTS ON SPARTINA PATENS DECOMPOSITION DYNAMICS IN A
NEW ENGLAND SALT MARSH

(W) Sonshine*, Elizabeth, B. Johnson, and P. Dostie
Dept. of Geology, Bates College, Lewiston, ME.
THE CHARACTERIZATION OF ORGANIC CARBON IN SEDIMENTARY CORE FROM
ZOSTERA MARINA BEDS, MAQUOIT BAY, GULF OF MAINE

Srisamart*, Saya, W. G. Ambrose, B. J. Bourque, and W. L. V. Locke
Bates College, Lewiston, ME
SEASONALITY OF DRINKING PLACE BROOK SITE, VINALHAVEN, ME, BASED ON
MARGIN ANALYSIS OF ARCHAEOLOGICAL MICROGADUS TOMCOD OTOLITHS

Watson*, Elizabeth B., and C. Wigand
U.S. EPA, ORD-NHEERL, Atlantic Ecology Division, Narragansett, RI
INUNDATION EFFECTS ON GROWTH AND DECOMPOSITION OF TWO TIDAL
MARSH PLANT SPECIES, *SPARTINA ALTERNIFLORA* AND *TYPHA ANGUSTIFOLIA*

(W) Zera*, Kristy¹, W. Ambrose¹, B. Johnson², W. Locke¹, B. Bourque³, and P. Dostie²
Depts. of ¹Biology, ²Geology, and ³Anthropology, Bates College, Lewiston, ME
A COMPARISON OF THE $\delta^{13}\text{C}$ STABLE ISOTOPES AND TRACE MINERAL
CONCENTRATIONS OF MODERN AND ARCHAEOLOGICAL *MYA ARENARIA* SHELLS
FROM THE TURNER FARM MIDDEN AND NEARBY MUDLFATS ON NORTH HAVEN
ISLAND, PENOBSCOT BAY, MAINE

§ Zueva*, Xenia D., K. E. Arnone, E. H. Bailey, C. J. Donohue, M. K. Ferraro, A. L.
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EVOLUTION OF THE ACTIN GENE: COMPARING DNA SEQUENCES OF *LIMULUS*
POLYPHEMUS AND *ARGOPECTEN IRRADIANS* AND THE IMPLICATION IN
MITOCHONDRIAL FUNCTION