

**THE NEW ENGLAND ESTUARINE RESEARCH SOCIETY
SPRING MEETING, MAY 2-4, 1996**

INSTITUTE OF ECOSYSTEM STUDIES, MILLBROOK, NEW YORK
VASSAR COLLEGE, POUGHKEEPSIE, NEW YORK

Stuart Findlay, Institute of Ecosystem Studies
Marshall Pregnall, Vassar College, Local meeting organizers
Cosponsored by the Hudson River Foundation, the Institute of Ecosystem Studies, the
Collins Research Fund in the Environmental Sciences and
the Vassar College Biology Department

MEETING PROGRAM

THURSDAY

**SPECIAL SYMPOSIUM:
THE HUDSON RIVER ESTUARY AND ESTUARINE FISHERIES**

0800-1200 Registration. Institute of Ecosystem Studies, Millbrook, New York

THE HUDSON RIVER ESTUARY

Stuart Findlay, Institute of Ecosystem Studies, Session chair

0900 Stuart Findlay, Institute of Ecosystem Studies WELCOME and INTRODUCTION

0910 Caraco, Nina, Mike Pace, Jon Cole, Karin Limburg, Dave Strayer, Stuart Findlay and David
Fischer, Institute of Ecosystem Studies
FROM THE BASE OF THE FOOD CHAIN TO FISH PRODUCTION IN THE HUDSON:
WHAT DO STABLE ISOTOPES SUGGEST ABOUT ORGANIC FLOWS?

0930 Dadswell, Mike, Acadia University
SHORT-TERM AND LONG-TERM IMPACTS OF LOW HEAD HYDROELECTRIC TIDAL
POWER GENERATION ON ESTUARINE AND ANADROMOUS FISHES

0950 Nieder, William C., Hudson River National Estuarine Research Reserve, New York State
Department of Environmental Conservation
IDENTIFICATION OF NONPOINT SOURCES OF POLLUTION IN A MULTIPLE LAND
USE WATERSHED: SAW KILL, DUTCHESS COUNTY, NY

1010 Strayer, Dave, Nina Cameo, Jon Cole, Stuart Findlay and Mike Pace, Institute of Ecosystem Studies
THE ZEBRA MUSSEL INVASION OF THE FRESHWATER, TIDAL HUDSON RIVER AND
ITS ECOLOGICAL EFFECTS

1050-1110 BREAK

1110 Templer, Pamela, Stuart Findlay and Cathleen Wigand, Institute of Ecosystem Studies
SEDIMENT CHEMISTRY ASSOCIATED WITH NATIVE AND NON-NATIVE EMERGENT
MACROPHYTES OF THE HUDSON RIVER MARSH ECOSYSTEM

1130 Wigand, Cathy ¹, Stuart Findlay ¹, Chuck Nieder², Pam Templer ¹ and David Fisher¹,
Institute of Ecosystem Studies, ²Hudson River National Estuarine Research Reserve
SUBMERSED PLANT EFFECTS ON SEDIMENT BIOGEOCHEMISTRY IN THE TIDAL
FRESHWATER HUDSON RIVER ESTUARY

1150 Bokuniewicz, Henry, SUNY Stony Brook
BUILDING THE TURBIDITY STRUCTURE OF THE HUDSON RIVER ESTUARY

1210 McGuinness, Lora and Sam Wainright, Rutgers University
THE RESUSPENSION OF PAH-CONTAMINATED SEDIMENTS AND ITS EFFECTS ON PAH
CONCENTRATIONS IN THE PARTICULATE, COLLOIDAL AND DISSOLVED PHASES

1230 Feng, Huan, J. Kirk Cochran and David J Hirschberg, SUNY Stony Brook
TRANSPORT AND DISTRIBUTION OF SEDIMENT-ASSOCIATED CONTAMINANTS IN
THE HUDSON RIVER ESTUARY

1250-1400 LUNCH

ESTUARINE FISHERIES

John Waldman, Hudson River Foundation, Session chair

1410 John Waldman, Hudson River Foundation
INTRODUCTION

1410 Boreman, John, UMass/NOAA Cooperative Marine Education and Research Program
RELATING FISH HABITAT QUALITY TO POPULATION LEVEL EFFECTS

1435 Brandt, Steven, Great Lakes Center, Buffalo State College
ACOUSTICS AND BIOENERGETIC MODELING APPROACHES TO EVALUATING FISH
HABITAT QUALITY IN CHESAPEAKE BAY

1500 Weisberg, Stephen, Versar
IMPROVEMENTS IN WATER QUALITY OF THE DELAWARE RIVER AND
RESURGENCE OF FISH POPULATIONS: DISTINGUISHING IN-RIVER EFFECTS FROM
COAST-WIDE FACTORS

1520-1540 BREAK and POSTER SESSION

Blair, Elizabeth, Dennis Mildner and Chuck Nieder, Hudson River National Estuarine
Research Reserve
RESEARCH OPPORTUNITIES AT THE HUDSON RIVER NERR

Katherine von Stackleberg and Charles Menzie, Menzie-Cura and Associates, Inc.
DEVELOPMENT OF A PROBABILISTIC PCB-BIOACCUMULATION MODEL FOR SIX
FISH SPECIES IN THE HUDSON RIVER

1540 Deegan, Linda and Melissa Weaver, The Ecosystems Center, Marine Biological Laboratory
FROM A FISH'S PERSPECTIVE: THE EFFECTS OF EUTROPHICATION IN EELGRASS
ECOSYSTEMS

1605 Schmidt, Robert E., Simon's Rock College, and Karin Limburg, Insitute of Ecosystem Studies
ASSESSING FISH HABITAT AT THE RIVER'S MARGINS: MARSHES AND TRIBUTARIES

1630 Able, Kenneth W., John P. Manderson, Rutgers University and Anne L. Studholme, National
Marine Fisheries Service
THE DISTRIBUTION AND GROWTH OF SHALLOW WATER JUVENILE FISHES IN AN
URBAN ESTUARY: THE EFFECTS OF MANMADE STRUCTURES IN THE LOWER
HUDSON RIVER

1655 Pace, Michael, Institute of Ecosystem Studies
CONCLUSION

1730 SOCIAL, sponsored by the Hudson *River* Foundation, for continued informal discussion of the
day's talks following the symposium, at the Institute of Ecosystem Studies. A short list of
restaurants between IES in Millbrook and Vassar College in Poughkeepsie will be available for
those seeking dinner.

THURSDAY EVENING

2030-2230

REGISTRATION

VASSAR COLLEGE ALUMNAE HOUSE POUGHKEEPSIE. NEW YORK

SOCIAL

Comparison of winter snowfall totals and photography competition for biggest snow drill, longest icicle.
longest driveway shoveled, worst roof damage. Prizes to be awarded on the patio, unless the snow hasn't
melted yet. Tutoring session for out-of-stale visitors on New York driving practices and hand signals.

FRIDAY
SESSIONS OF CONTRIBUTED PAPERS
VASSAR COLLEGE ALUMNAE HOUSE
POUGHKEEPSIE, NEW YORK

R indicates Rankin Prize presentations; **K** indicates Ketchum Prize presentations.

0800-1200 Meeting Registration
Vassar College Alumnae House

David Franz, Brooklyn College and NEERS President, Session Chair

0810 David Franz, Brooklyn College and NEERS President
WELCOME

0820 Balcom, Prentiss, Barbara Welsh and J. R. Jadamec, University of Connecticut
METHODS FOR MONITORING NITROGEN SPECIATION IN THE CONNECTICUT RIVER
ESTUARY

0840 Halting, L. J., Norb Jaworski, and Patrick Phillips, US Geological Survey
LONG-TERM CHANGES IN WATER QUALITY OF TRIBUTARIES TO THE HUDSON
ESTUARY

0900 ^RSteinitz, Daniel, Vassar College, Samantha Boswell, Juniata College. and Marshall
Pregnalt, Vassar College
NUTRIENT LOAD ANALYSIS ALONG THE CASPERICILL, DUTCHESS COUNTY, NY

0920 ^KSteidl, Jill, University of Connecticut
IS RETENTION OF CONNECTICUT RIVER NITROGEN WITHIN THE EASTERN BASIN
OF LONG ISLAND SOUND INDICATED BY SPATIAL AND TEMPORAL CHL a
DISTRIBUTIONS?

0940 ^KKinney, Eleanor, University of Rhode Island, and Charles Roman, National Biological Service
PRIMARY PRODUCTION OF MACROALGAE, *Ruppia maritima*, AND PHYTOPLANKTON IN
BASS HARBOR MARSH, MAINE

1000-1020 BREAK

1020 McEnroe, Maryann and Don Kroschwitz, Purchase College
BEHAVIOR OF JUVENILE WINTER FLOUNDER, *Pseudopleuronectes americans*, TO
ACUTE HYPOXIA

1040 ^RAllen, Andrew and Marshall Pregnall, Vassar College
EFFECTS OF ANOXIA ON METABOLISM OF THE GREEN MACROALGA *Ulva factual*

- 1100 ^RFinn, Melissa, Fairfield University
THE EFFECTS OF SUBMERSED AQUATIC MACROPHYTES ON SEDIMENT
POREWATER CHEMISTRY
- 1120 ^KHoven, Heidi, and Fred Short, Jackson Estuarine Laboratory, University of New Hampshire
EELGRASS, *Zostera marina* L., AS AN INDICATOR OF HEAVY METALS IN ESTUARINE
WATERS AND SEDIMENTS
- 1140 ^KSmith, Graeme and Judith Weis, Rutgers University
PREDATOR-PREY RELATIONSHIPS IN MUMMICHOGS (*Fundulus heteroclitus*)
EFFECTS OF LIVING IN A POLLUTED ENVIRONMENT
- 1200 ^RAmett, Brenda and Marie Pizzomo, Vassar College
IDENTIFICATION OF NOVEL VIRAL DNA SEQUENCES ASSOCIATED WITH GREEN
TURTLE FIBROPAPILLOMATOSIS (GTFP)

1220-1330 LUNCH. A list and map of eateries within walking distance of the Alumnae House will
be available at the registration desk.

Marshall Pregnell, Vassar College, Session Chair

- 1330 ^KHogan, Jennifer, Northeastern University
LONG-TERM EFFECTIVENESS OF SALT MARSH RESTORATION AND CREATION IN
MASSACHUSETTS
- 1350 ^RSehierer, Kevin, David Burdick, Roelof Boumans, Jackson Estuarine Laboratory, University of
New Hampshire, and Michele Dionne, Wells National Estuarine Research Reserve FISH USE OF
FOUR NEW ENGLAND SALT MARSHES FOLLOWING TIDAL RESTORATION
- 1410 ^KLinden, Ruth, University of Connecticut
OBSERVATIONS ON THE REPRODUCTIVE BIOLOGY AND POPULATION ECOLOGY OF
EELGRASS (*Zostera marina* L.) IN NANTIC BAY, LONG ISLAND SOUND
- 1430 ^RBrandt, Jamie, Ryan Davis and Fred Short, Jackson Estuarine Laboratory, University of
New Hampshire
CHANGES IN EELGRASS (*Zostera marina* L.) LEAF MORPHOLOGY FOLLOWING
TRANSPLANTATION
- 1450 ^KDavis, Ryan, and Fred Short, Jackson Estuarine Laboratory, University of New Hampshire
SURVIVAL RATES AND FUNCTIONAL CHARACTERISTICS OF TRANSPLANTED
EELGRASS (*Zostera marina* L.)

1510-1540 BREAK and POSTER SESSION

Blair, Elizabeth, Dennis Mildner and Chuck Nieder, Hudson River National Estuarine Research Reserve
RESEARCH OPPORTUNITIES AT THE HUDSON RIVER NERR

Weaver, Melissa and Linda Deegan, The Ecosystems Center, Marine Biological Laboratory
RECENT CHANGES IN THE FISH COMMUNITIES OF WAQUOIT BAY AND BUTTERMILK BAY

Mugue, Nikolai and Judith Weis, Rutgers University
MUMMICHOG (*Fundulus heteroclitus*) IN NEW JERSEY, NEW YORK AND CONNECTICUT ESTUARIES: EVIDENCE FOR FORMATION OF A THIRD, INTERMEDIATE RACE BETWEEN *Fundulus heteroclitus* AND *Fundulus heteroclitus macrolepidatus*

Thou, Tong and Judith Weis, Rutgers University
BEHAVIOR OF LARVAL MUMMICHOGS (*Fundulus heteroclitus*) FROM A POLLUTED VS A CLEANER HABITAT

McEnroe, Maryann, Lilah Brand and Hazel Mutia, Purchase College
UTILIZATION OF ALTERNATIVE MODES OF RESPIRATION BY *Fundulus heteroclitus* AND *Fundulus majulis* EXPOSED TO ENVIRONMENTAL HYPOXIA

Mazurkiewicz, Michael, University of Southern Maine
THE DISTRIBUTION OF SCALE AT DIFFERENT SCALES

Deegan, Linda, Ecosystems Center, Marine Biological Laboratory
CHARETTES FOR THE ESTUARINE ETYMOLOGIST

Buchsbaum, Robert, Massachusetts Audubon Society
HAZARDS OF SENDING UNTRANSLATABLE ABSTRACTS VIA EMAIL

- 1540 ^KRaposa, Kenneth, University of Rhode Island
A STRUCTURAL ANALYSIS OF FISH AND DECAPOD CRUSTACEAN COMMUNITIES ASSOCIATED WITH SALT MARSH AND BEACH SHORELINES AND EBLGRASS (*Zostera marina*) BEDS
- 1600 ^RBosley, Keith L. and Sam Wainright, Rutgers University
STABLE ISOTOPE TURNOVER RATE IN JUVENILE STRIPED BASS (*Morone saratilis*) AND JUVENILE TAUTOG (*Tautog onitis*)
- 1620 ^KLitvin, Steven, Sam Wainright and Ken Able, Rutgers University. E. Phelan, National Marine Fisheries Service, Highlands, NJ, J. Pereira and R. Goldberg, National Marine Fisheries Service, Milford, CT
HABITAT UTILIZATION BY JUVENILE WINTER FLOUNDER AND TAUTOG AS INDICATED BY STABLE ISOTOPE RATIOS

- 1640 ^R Koff, Wyatt, John Long and Robert Suter, Vassar College
TO JUMP A FISH: CALCULATING THRUST POWER OF AROWANA
(*Osreaglossum bicirrhosum*)
- 1700 ^K Shepherd, W. R. III and John Long, Jr. Vassar College
ANGUILLIFORM SWIMMING: A COMPARATIVE STUDY OF FORWARD AND
BACKWARD LOCOMOTION
- 1725 NEERS BUSINESS MEETING
Agenda: Secretary's report, Treasurer's report, Report on the ERF Governing Board meeting,
discussion of future NEERS meetings, including Block Island for fall '96 and Wells NERR for
spring '97, and of ERF '97, to be held in Providence, Rhode Island
- 1815-1900 Hudson Valley spring Flower appreciation, prebanquet scrubbings
- 1900-2130 AWARDS BANQUET
Vassar College Alumnae House, Poughkeepsie, New York
(SIGN UP FOR THE BANQUET WHEN YOU REGISTER!!)
- Presentation of Rankin and Ketchum Prizes
- 2130-?? POST-BANQUET FESTIVITIES

S A T U R D A Y
CONTRIBUTED PAPERS
VASSAR COLLEGE ALUMNAE HOUSE
POUGHKEEPSIE, NEW YORK

- Frederick Short, NEERS President-Elect, Jackson Estuarine Laboratory, UNH, Session chair
- 0900 Rozsa, Ron, Connecticut Department of Environmental Protection
Zostera marina: HISTORIC AND PRESENT-DAY DISTRIBUTION IN LONG ISLAND
SOUND
- 0920 Boumans, Roelof, Fred Short and David Burdick, Jackson Estuarine Laboratory, University of
New Hampshire
MODELLING THE INTERACTION OF WASTING DISEASE AND EELGRASS TO
INVESTIGATE FACTORS INFLUENCING EELGRASS LOSS IN GREAT BAY. N. H.
- 0940 Burdick, David, Roelof Boumans and Fred Short, Jackson Estuarine Laboratory. University of
New Hampshire
A COMPARISON OF TIDAL RESTORATION EFFECTIVENESS AT TWO SALT MARSHES

1000 Rozsa, Ron, Connecticut Department of Environmental Protection
SALT MARSHES: BIOPHYSICAL CHARACTERISTICS OF DRAINED SALT MARSHES AND POST-RESTORATION
BIOTIC CHANGES

1020-1050 BREAK

1050 Berounsky, Veronica¹, Marshall Pregnall², Taryn Donovan² and Steven Granger¹
¹Graduate School of Oceanography, University of Rhode Island. ²Vassar College WATER-COLUMN NITRIFICATION
RATES IN NUTRIENT-ENRICHED LAGOON MESOCOSMS WITH DIFFERENT N/P RATIOS

1110 Buchsbaum, Robert, Massachusetts Audubon Society, Linda Deegan and Robert Garritt, The Ecosystems Center, Marine
Biological Laboratory
CHANGES IN THE ESTUARINE FISH COMMUNITY OF PLUM ISLAND SOUND, MASSACHUSETTS OVER A
TWENTY-FIVE YEAR INTERVAL

1130 David Franz, Brooklyn College, NEERS President CLOSING
REMARKS

1145 LUNCH

1300 FIELD TRIPS: (Sign up when you register.)
Canoe trip on Tivoli Bay, Hudson River National Estuarine Research Reserve Tour of the Vassar College
Ecological Preserve