



New England Association of Environmental Biologists  
Since 1977

**New England Association of Environmental Biologists**

**31<sup>st</sup> Annual Conference**

**Grand Summit Hotel and Conference Center  
Mount Snow, West Dover, Vermont**

## **Agenda**

March 14-16, 2007



NEAEB would like to thank the following cosponsors for their generous support:



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# NEAEB 2007 Agenda

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## Wednesday

**10:00 AM – 12:00 PM**

**Merritt-Cummins Taxonomic Key Update**

**Raponda Central**

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Overview of proposed changes to E.P.T. chapters for the 4th ed. of Merritt and Cummins

Steven K. Burian  
*Southern Connecticut State  
University*

**12:00 PM – 01:00 PM**

**Lunch (on your own)**

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**01:00 PM – 03:00 PM**

**Classification Approaches for Waters**

**Deerfield South**  
*Greg Hellyer, Moderator*

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- 1) Using BioSim2 to calculate statistically-valid sectors of indicator taxa  
Carlos F. A. Pinkham  
*Norwich University*
  - 2) The Connecticut Hydrologic Stressor Index for Stream Flow Classification  
Chris Bellucci  
*CT DEP*
  - 3) The Benefits of EPA Level IV Ecoregional Mapping in Maine....(and the rest of New England?)  
James Omernik  
*USGS and USEPA-ORD*
  - 4) Discussion of the Benefits of Level IV Ecoregional Mapping to New England States  
Greg Hellyer  
*USEPA*

**Wetland and Lake Assessments 1**

**Somerset West**  
*Kellie Merrell, Moderator*

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- 1) Prediction of Four-toed Salamander presence in shoreline microhabitat and wetlands in Maine  
Rebecca Chalmers  
*Vermont Department of  
Environmental Conservation*
  - 2) Floristic Assessment Quotients for Wetlands  
Jason T. Bried  
*The Nature Conservancy*
  - 3) Effects of lakeshore development on oligotrophic lakes in northeastern Vermont  
Eric A. Howe  
*VTDEC Lakes Management /  
Protection Program*
  - 4) Vermont Wetland Bioassessment Project: Developing an Understanding of Lake- and Stream-Associated Wetlands  
Christine Manuck  
*VTDEC Wetlands Section*

**Wednesday****01:00 PM – 03:00 PM****(continued from previous page)****Workshop - Periphyton****Deerfield North**

Goal of the workshop is to facilitate and encourage the use of periphyton in bioassessments.

Julia Kay Christensen Eichman

**Workshop - Macroinvertebrate Taxonomy****Raponda Central**

Goal of the workshop is to facilitate the accurate identification of macroinvertebrate taxa to species, with focus on the families Hydropsychidae and Baetidae

Steve Burian and Don Chandler -  
Instructors**03:00 PM – 03:20 PM****Break****Somerset Central/East****03:20 PM – 05:00 PM****Mercury and Toxic Algae****Deerfield South***Neil Kamman, Moderator*

- 1) Mercury concentrations in crayfish collected from New York streams, 1989-2001
- 2) Mercury in Stream Water and Biota in the Upper Hudson River Basin, New York
- 3) Contrasting algal bloom cycles in two shallow mesotrophic lakes: interactions between abiotic and biotic control

Stephanie L. Johnson  
*SUNY-ESF*Karen Riva-Murray  
*U.S. Geological Survey*Tara Trinko  
*University of Maine***Wetland and Lake Assessments 2****Somerset West***Jim Kellogg, Moderator*

- 1) Results of the 2005 Vermont acid lake biomonitoring program
- 2) Statistically Valid Surveys of the Nation's Waters: The National Wetland Condition Assessment
- 3) Massachusetts' First Desalination Facility: Monitoring and Mitigating for Potential Impacts

Heather Pembroke  
*State of Vermont*Michael Scozzafava  
*USEPA, Office of Water, Wetlands  
Division*Tom Touchet  
*Metcalf & Eddy, Inc.***Workshop - Macroinvertebrate Taxonomy (cont.)****Raponda Central**

## Wednesday

05:00 PM – 06:00 PM

### Business Meeting

Deerfield North

Business Meeting

Doug Burnham - Presiding

## Thursday

08:00 AM – 10:20 AM

### Technical Plenary

Somerset West

*Neil Kamman, Moderator*

- 1) The U.S. EPA Tiered Aquatic Life Use Initiative: Progress to Date with State Program Development & Implementation  
Chris Yoder  
*Midwest Biodiversity Institute*
- 2) Developing lake-specific nutrient criteria: integrating predictive modeling with biological response gradients  
Patricia A. Soranno  
*Michigan State Univ.*
- 3) River Management Trends and Issues  
Jim MacBroom  
*Milone & MacBroom Inc*

09:00 AM – 12:00 PM

### NABS Examination

Hospitality Suite

NABS Examination

Kelly Nolan - Examination Proctor

10:20 AM – 12:00 PM

### Poster Plenary - Bioassessment

Somerset Central/East

- 1) Development of target fish communities for Massachusetts river basins  
Michael Kashiwagi  
*MA Division of Fisheries and Wildlife*
- 2) Urban Stream Ecology: Impact of Wastewater Treatment Plant Chlorine Disinfection of Stream Fish Species Diversity and Water Quality  
Nicole A. Hoyceanyls  
*Bridgewater State College*
- 3) Assessment of the physical impacts of precipitate on aquatic biota  
Brian Duffy  
*VTDEC Biomonitoring Program*
- 4) Interstate assessment: Cross-calibration of the Biological Condition Gradient among state monitoring programs in New England  
Ben Jessup  
*Tetra Tech*
- 5) Long-Term Trends in Water Chemistry of New York State Rivers and Streams  
Kathie Dello  
*NYSDEC*
- 6) Conversations on the Commons  
Amos Baehr  
*UVM Gund Institute for Ecological Economics*

**Poster Plenary - Bioassessment****Somerset Central/East**

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- 7) Persistence of dragonfly exuviae on vegetation and rock substrates  
Maria Aliberti  
*URI Dept. Plant Sci. & Entomology*
- 8) Quantitative Study of the Freshwater Mussel Community Downstream of the Surry Mountain Flood Control Dam on the Ashuelot River, New Hampshire  
Ethan Nedeau  
*Biodrawversity*
- 9) Quality assurance invertebrate identification in a state monitoring program and the resolution of taxonomic disagreements.  
Larry Abele  
*NYSDEC*
- 10) Fluctuating asymmetry in *Calopteryx* sp. : a stress indicator for wetland streams in Southeastern Massachusetts  
K.D. Curry  
*Bridgewater State College*
- 11) Species Identification of New England Freshwater Calanoid and Cyclopoid Copepods Using Genetic Barcodes  
Elisha Allan  
*University of NH*
- 12) Lotic Scene Investigation™ (LSI) program for higher education: Combining intensive student training with professional stream biomonitoring assessments  
Kelly Nolan  
*Independent consultant*
- 13) Identifying high quality aquatic resources in an urbanized landscape  
Alicia J. Norris  
*Massachusetts Division of Fisheries and Wildlife*
- 14) A New Benthic Screening Approach for Field Assessment of Connecticut's Wadeable Streams.  
Guy Hoffman  
*CT DEP*
- 15) Origin of New England's Fish Species  
Rich Langdon  
*VTDEC*

**Poster Plenary - Geomorphology****Somerset Central/East**

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- 1) River Flume Demonstration  
Staci Pomeroy  
*VTDEC River Management Program*
- 2) Managing Streams Toward Equilibrium Conditions: A Case Study of the Vermont River Management Program  
Kari Dolan  
*Vermont River Management Program*
- 3) Stream Geomorphic Assessments - Tyler Branch and Trout River Watersheds  
Adam Robtoy  
*The Johnson Company, Inc.*
- 4) Linking urban land use to stream geomorphology and biotic integrity in the Lake Champlain Basin, Vermont  
Evan P. Fitzgerald  
*University of Vermont*
- 5) Evolution of the MesoHABSIM approach: 2001-2007  
Jeffrey D. Legros  
*Northeast Instream Habitat Program, UMASS*
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**Poster Plenary - Geomorphology****Somerset Central/East**

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- 6) In Stream Pond Removal - An Effective Water Quality Management Tool

Jeff Nelson

*Pioneer Environmental  
Associates, LLC.***Poster Plenary - Nutrients****Somerset Central/East**

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- 1) Maine Draft Nutrient Criteria

Tom Danielson

*Maine Department of  
Environmental Protection*

- 2) Development of nutrient criteria to protect aquatic life and aesthetic uses in Vermont lakes and wadeable streams

Neil Kamman  
*VTDEC Lakes Management /  
Protection Program*

- 3) Large River Nutrient Criteria in New York State

Alexander J. Smith  
*NYSDEC and NEIWPC*

- 4) Paleolimnology of Shelburne Pond, Vermont

Andrea Lini  
*University of VT*

- 5) Trophic History of Lake Champlain since European Settlement: A paleolimnological study

Andrea Lini  
*University of VT*

- 6) Comparison of Chlorophyll Collection and Analysis Methods

Travis Godkin  
*USEPA*

- 7) Reaching out with zooplankton: Using An Image Based Key to the Zooplankton of the Northeast (USA) and other web-based tools to extend taxonomy

Sonya Carlson  
*Univ. of NH*

- 8) Cyanobacteria Bloom on the Charles River

Joan Beskenis  
*Mass Dept. Env. Protection*

- 9) Investigating Phosphorus Internal Loading in Maine Lakes using <sup>31</sup>P Nuclear Magnetic Resonance (NMR)

Bjorn Lake  
*University of Maine*

- 10) Cyanobacterial monitoring in Vermont

Angela Shambaugh  
*VTDEC Lakes Management /  
Protection Program*

- 11) The development of a remote sensing technique to monitor New England Lakes

Shane Bradt  
*UNH Cooperative Extension*

- 12) Mapping Cyanobacteria Blooms in Lake Champlain at Multiple Scales: QuickBird and MERIS Satellite Data

Sarah Wheeler  
*VTDEC Lakes Management /  
Protection Program*



**Thursday**

**12:00 PM – 01:15 PM**

**Lunch**

**Deerfield North/South**

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**01:15 PM – 03:30 PM**

**Plenary: It's Too Late to Be a Pessimist**

**Somerset West**

*Kellie Merrell, Moderator*

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1) Mediated Modeling as a tool to Integrate Science and Democracy

Marjan van den Belt

*Mediated Modeling Partners LLC*

2) Science and Anti-Science in America: Belief and Knowing

Elizabeth Sherman

*Bennington College*

3) Legal Opportunites: Pushing the Boundaries

David Mears

*Vermont Law School*

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**03:30 PM – 06:00 PM**

**World Café: Our Desired Aquatic Environments**

**Somerset Central/East**

*Kellie Merrell and Doug Burnham, Moderators*

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Legacy and Next Generation NEAEBers will create a shared vision of a desirable future for the aquatic environments of New England and New York. 20 aquatic problems, 150 minds, 3 rounds of discussions, unlimited solutions!

Kellie Merrell - Cafe Facilitator

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**06:45 PM – 08:30 PM**

**Banquet**

**Deerfield North/South**

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**08:30 PM – 10:30 PM**

**Trivia with Top Hat Entertainment**

**Deerfield North/South**

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**08:00 AM – 10:00 AM**

**Citizen Watershed Monitoring**

**Raponda Central**  
*Neil Kamman, Moderator*

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- 1) Lessons Learned from Two Volunteer Watershed Water Quality Monitoring Programs in the Champlain Valley, Vermont Bill Hoadley  
*LaPlatte River Watershed Partnership*
  
  - 2) Water Quality of Essex (VT) Streams: Sediment, Nutrient and Salt Pollution Ashley Wright  
*Essex Waterways Association and UVM*
  
  - 3) Meeting the Challenges of Volunteer Monitoring Linda Green  
*Univ. of Rhode Island Watershed Watch*

**Panel Discussion - Protection of Biologically High Quality Waters**

**Raponda West**  
*Marie Caduto, Moderator*

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- 1) State Wildlife Action Plans: How you can help implement these comprehensive plans through your work Emily Brinkhurst  
*NH Fish and Game*
  
  - 2) Representatives from various states will summarize and discuss the following: their state's approach to identifying and protecting biologically high quality waters; what protections these waters are afforded; and the effectiveness of each approach. Open discussion will ensue. Marie Caduto - Panel Facilitator

**Stream Geomorphic Assessment**

**Somerset West**  
*Mike Kline, Moderator*

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- 1) Changes in Stream Sediment Regimes and their Aquatic Ecosystem and River Management Implications Mike Kline  
*VTDEC River Management Program*
  
  - 2) The New VT ANR Rapid Habitat Assessment: Linking Physical Processes to Aquatic Habitat in Different Stream Types Roy Schiff  
*MMI*
  
  - 3) Exploring scale dependent responses to urbanization Evan P. Fitzgerald  
*University of Vermont*

**10:00 AM – 10:20 AM**

**Break**

**Somerset Central/East**

**10:20 AM – 12:00 PM**

**Addressing the Need for Taxonomic Data Consistency: Formation of a New England Association of Taxonomists**

**Raponda West**  
*Gary Lester, Moderator*

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- 1) Addressing the Need for Taxonomic Data Consistency: Formation of a New England Association of Taxonomists

Gary T. Lester  
*EcoAnalysts, Inc.*

**Panel Discussion - Chloride**

**Somerset West**  
*Angela Shambaugh, Moderator*

Chloride panel discussion will address State's current "chloride" water quality standards, surface and ground water data and regulations to address chloride exceedances.

Angela Shambaugh - Discussion  
Facilitator

**Surveying the Nation's Rivers**

**Raponda Central**  
*Dave Neils, Moderator*

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- 1) Impact of Stormwater Discharges on Streams
- 2) Development of a Fish Assemblage Assessment Index for Non-Wadeable Large Rivers in Maine and New England: 2002-2006
- 3) Discussion of Upcoming Large Rivers National Survey

Rosemary Gatter-Evarts  
*CT DEP*

Chris Yoder  
*Midwest Biodiversity Institute*

Dave Neils