



North American
Benthological Society
2011 Annual Meeting

**Responding to the
Global Water Crisis**

Rhode Island Convention Center
Providence, Rhode Island, USA
22–26 May 2011

PROGRAM BOOK

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NABS 2011 Program Committee

Co-Chairs: Cliff Dahm and Stuart Bunn

Coordinator: Judy Li

Local Arrangements: Brian Shelley, Maria Aliberti-Lubertazzi, Henry Walker

Sessions Coordinator: Todd Royer

Committee Members: Carol Couch and Colden Baxter

NABS 2011 Elected Officers

Lucinda Johnson, President

Joe Holomuzki, President-Elect

Sue Norton, Secretary

Mike Swift, Treasurer

Acknowledgments

Grateful acknowledgments to the following members and colleagues for their help in planning and executing this meeting:

Local arrangements: Peter August, Brian Richter; Providence Warwick Convention & Visitors Bureau

Logo Design: Olivia Verdugo, Rhode Island School of Design

Field trips: Scott Comings (Block Island TNC); Sophia Fox (Cape Cod National Seashore); Rupa Datta (Save the Bay, Narragansett Bay)

ALS fundraisers: Nancy Feroldi (RI ALS Chapter); Mike Barbour; Mulholland family

T-shirt Design: Katy Dika, Rhode Island School of Design

Music makers: Fred Benfield, Sue Norton, Michael Paul and friends

Help way beyond the call of NABS committee duties: Erin Hotchkiss; Tina Mendez; Donna Kashian; Dave Feldman; Al Steinman; Sherri Johnson

SPECIAL ACKNOWLEDGMENT to artists Laura Hartsell and Henrik Soderstrom for their art installation "Intimate Immensity" and to Neil Oberstrom and the Rhode Island School of Design Nature Laboratory who generously offered their space to house the exhibit.

Our thanks for the support of Graduate Students Awards to the following sponsors:

- YSI Environmental
- Elsevier/Academic Press and NABS
- Camp, Dresser & McKee
- Frigid Units
- Hach Environmental
- Commonwealth Biomonitoring and Turner Solutions

We would like to thank Newport Vineyards for offering complimentary tour and wine tasting vouchers that are available to attendees in the conference registration area.

The following individuals are very kind to offer their expertise as part of this year's Taxonomy Fair: Gail Corkum (Acadia University), Bill Crouch (Fish and Wildlife Service), Karen Gaines

(University of New Mexico), Don Klemm (U.S. Environmental Protection Agency), Tracy Morman (North Carolina DEHNR), Dan Pickard (California Department of Fish and Game), Christopher Rogers (Kansas Biological Survey at Kansas University), Dave Ruitter, Ken Stewart (University of North Texas, Department of Biological Sciences), Rebecca Winterringer (Ecological Specialist, Inc.) and Mark Wetzel (Illinois Natural History Survey).

Meeting Sponsors

The following organizations (See also Page 18.) generously donated funds or services in support of the 2011 annual meeting of NABS:

Gift Level: \$500 to \$999

- GEI
- Hach Hydromet
- University of Minnesota - Duluth Natural Resources Research Institute

Gift Level: < \$500

- University of Maine

Support ALS Research



In honor of this year's recipient of the NABS Award of Excellence, Dr. Pat Mulholland, we are encouraging all meeting participants to make a pledge in support of the ALS Association. Amyotrophic Lateral Sclerosis (ALS), or Lou Gehrig's Disease, is

an illness that Pat has been battling for two years. By helping to support research for a cure for ALS, we, as a scientific society, can make a difference.

The option of providing pledges and sponsorship in support of ALS research is pretty simple. Visit the ALS website (<http://webri.alsa.org>). Send the link to friends, family, colleagues, who will want to support the effort. For this event, we are partnering with the Rhode Island Chapter of the ALS Association, which is very excited about working with our society on this important campaign. Together, we can make a difference.

All NABSters and other interested parties can support this great cause. You do not need to be a runner, walker, volleyball player, just someone who cares. We have a "Pat Mulholland Team" page linked through the ALS Association's Rhode Island Chapter's homepage for all who want to contribute to ALS research.

Special Events and Activities

The Great Debate

Monday, 23 May, 16:00 – 17:30, RICC – Ballroom A

Topic: Benthic Science Has Little to Contribute to the Water Crisis Debate

Mike Paul will moderate this "light-hearted event on a reasonably serious topic" on Monday afternoon. Opposing the statement, saying that "Yes, it does!" will be Gene Likens, Jen Tank, and Walter Dodds. Supporting that statement, saying that "No, it doesn't!" will be Carol Couch, Jay O'Keeffe, and Margaret Palmer.

Name Change Business Meeting

Monday, 23 May, 20:00-21:30, RICC – Ballroom A

ByLaws Information Session

Tuesday, 24 May, 12:30-13:30, RICC – Ballroom A

Public Event featuring Dr. Sandra Postel

Tuesday, 24 May, 19:30 – 20:30, RICC – Ballroom A

This lecture featuring Dr. Sandra Postel, founder and director of the Global Water Policy Project, is open to the public. A leading authority and prolific author on international water issues, Postel has been hailed for promoting the preservation and sustainable use of freshwater. As Freshwater Fellow of the National Geographic Society, she serves as lead water expert for the Society's Freshwater Initiative.

Dr. Postel is recognized as one of the world's most respected authorities on freshwater issues and hailed for her "inspiring, innovative and practical approach" to promoting the preservation and sustainable use of Earth's fresh water. A Pew Scholar in Conservation and the Environment, Postel was awarded the "Scientific American 50" for her contributions to water policy in 2002. She is the author of *Pillar of Sand: Can the Irrigation Miracle Last?* and the award-winning *Last Oasis: Facing Water Scarcity*, and co-author, with Brian Richter, of *Rivers for Life: Managing Water for People and Nature*.

Dr. Postel has served as consultant to The Nature Conservancy, the World Bank, and the U.S. National Intelligence Council, and an advisor to American Rivers. From 1988 until 1994, she was vice president for research at the Worldwatch Institute. She has served as a commentator on CNN's "Futurewatch," appeared on major U.S. television networks and on National Public Radio, as well as in numerous documentaries, including the BBC's *Planet Earth* and Leonardo DiCaprio's *The 11th Hour*. In 2010, Postel was appointed Freshwater Fellow of the National Geographic Society, where she is lead water expert for the Society's freshwater initiative.

"It's a Shore Thing: A Coastal Cabaret" – Entertainment and Mixer

Tuesday, 24 May, 21:00 – 23:30, RICC – Ballroom A

Following the presentation by Dr. Postel, enjoy a reception and musical entertainment.

Tap your feet and get down with nonpoint source pollution, invasive species, watershed management, and anthropogenic impacts on natural systems. A calypso beat meets coral reefs. Move to the rhythm of fecund ecosystems in *The Estuarine Beguine*. This is a musical treat for geeks and hipsters alike. This part of the evening was organized by Judith Swift & Charles Cofone.

5K Fun Run

Wednesday, 25 May

Participants will be transported by bus to Goddard Memorial State Park. The buses will depart promptly at 4:00. Meet in the lobby of the convention center on the Sabin Street side prior to the 4:00 p.m. departure time.

The race is planned to take place in Goddard Memorial State Park in Warwick, near the southern edge of Providence. The route includes some rolling hills, but the beautiful setting will make this an extremely pleasant little trip through the Park. Race coordination and timing services will be provided by Meredith Nelson, Organization Plus, Kingston, Rhode Island.

Water and your race t-shirt will be available at the race. Pre-registration is required. If you would like to participate in the run and have not registered to do so previously, you may sign up at the conference registration desk until noon on Monday.

Volleyball Tournament

Wednesday, 25 May

Participants will be transported by bus to the sports complex. The buses will depart promptly at 4:00. Meet in the lobby of the convention center on the Sabin Street side prior to the 4:00 p.m. departure time.

The tournament will take place at a sports complex in nearby Cranston, Rhode Island, and it should be an exciting event for all of you volleyballers out there.

Water and your t-shirt will be available at the event. Pre-registration is required. If you would like to participate in the volleyball tournament and have not registered to do so previously, you may sign up at the conference registration desk until noon on Tuesday.

NABS Business Lunch & Vote

Wednesday, 25 May. 12:00-13:30, Westin– Narragansett Ballroom

A vote on the society name and bylaws changes will take place.

Banquet

Wednesday, 25 May, 19:00 – 21:00, Westin– Narragansett Ballroom

The 2011 annual NABS banquet will take place at the Westin Hotel in the Narragansett Ballroom. This event is for all meeting attendees. Following dinner, in the Westin's Providence Ballroom, entertainment will be provided by The Benthic Balladeers, a group of NABS-member musicians led by Fred Benfield. This will be an evening of fun and lively entertainment.

Student Events and Activities

GRC Meeting

Monday, 23 May, 12:15 – 13:45, RICC Room 557

Graduate students interested in GRC activities are invited to attend this meeting. The meeting will take place at the same time as other NABS committee meetings. Box lunches will be available on a first come, first served basis.

GRC Student Mixer

Monday, 23 May, 18:30 – 20:00, RICC - Rotunda

This event is for students only. The NABS Annual Student-Mentor Mixer is designed to facilitate interactions between students and experienced professionals from a variety of benthos-related careers. Students were asked to register online with their conference registration.

Live & Silent Auctions

All funds raised from the live and silent auctions will go into the NABS Endowment that serves as the source for research and travel awards presented to graduate students. A silent auction of books donated by publishers will start on Monday, 23 May, and will close on Wednesday, 25 May. Silent auction items will be located in the RICC 5th Floor Prefunction Area near the registration desk. A live auction featuring an assortment of items provided by society members, vendors, and others will take place at the banquet on Wednesday evening.

Meeting Souvenirs

Profits from these items support Graduate Student activities and awards. The GRC merchandise booth is located in the RICC 5th Floor Prefunction Area near the registration desk. Attendees are encouraged to buy the following items that will bear the meeting logo:

- T-shirt: \$15, sizes S, M, L, XL
- Long-sleeved shirt: \$17, sizes S, M, L, XL
- Hoodie: \$30, sizes S, M, L, XL
- Ceramic mug: \$8

If you purchased an item prior to the meeting, you can pick it up in the GRC merchandise booth during the meeting.

Post-Meeting Field Trip Excursions

Attendance of the field trips is limited and advance reservations are required. Depending upon space availability, if you did not sign up prior to the meeting, you may do so on-site by noon on Wednesday, 25 May.

Block Island, Rhode Island

Friday, 27 May

Participants will be transported by bus to the Block Island Ferry landing. The buses will depart promptly at 7:30 a.m. Meet in the lobby of the convention center on the Sabin Street side prior to the 7:30 a.m. departure time.

Block Island is a small island lying just over 19 km off the coast of Rhode Island, only 6,200 acres in size, but 40% of the island is preserved. There are over 40 km of walking trails open to the public, 27 km of free, public beaches, dramatic bluffs and many preserved open spaces including Clay Head Preserve, Fresh Swamp Preserve, the Hodge Family Wildlife Preserve, Rodman's Hollow, and more. We plan to visit a couple of reserves, with an expert from the Rhode Island Chapter of The Nature Conservancy. The diverse array of habitats on the island support over 40 state and federally listed rare or endangered species, including the globally endangered American burying beetle (very cool "bug"). Because of the incredible natural, and cultural history of this small island, the Nature Conservancy has designated Block Island as "One of the 12 last great places in the Western Hemisphere." The island is easily accessible by ferry for day (or overnight) trips from either Newport or Point Judith (both of which are a half-hour drive from Providence), and the best way to explore the island is by bike or moped. There are easily seven or eight places to rent bikes (or mopeds) on the island, some of which are within easy walking distance from the ferry landing.

The trip includes transportation and the cost of the ferry to Block Island (same-day, round-trip service from Point Judith, RI). If par-

ticipants choose to explore the island by bike or moped, they should anticipate added cost for rental. Lunch will be on your own.

Cape Cod National Seashore

Friday, 27 May

Participants will be transported by bus to the Cape Cod National Seashore in nearby Massachusetts. The buses will depart promptly at 8:00 a.m. Meet in the lobby of the convention center on the Sabin Street side prior to the 8:00 a.m. departure time.

A day-trip from Providence to Cape Cod National Seashore will offer guided walks and drives through spectacular coastal scenery and fascinating ecosystems. Like Block Island, the Cape includes a diverse array of habitats, terrestrial, marine and freshwater, including coastal plain ponds and dune swales, and the visit will be at the height of the spring season. There are also many marine habitats, including tidal flats, salt marshes, and soft-bottomed benthos. Cape Cod was a terminal moraine at the end of the last glacial period, and the sandy soils and strong winds provide a unique setting for stunted coastal forests, pitch pine-scrub oak barrens and kettle ponds, among other things. With the major stress of human development over the last century, the National Seashore is a treasure for both research and recreation in New England. This trip provides the opportunity to visit what is truly a national treasure, a "can't miss" trip for all.

The cost of the trip includes transportation and a box lunch.

Open House and Tour of Edna W. Lawrence Nature Lab at RISD

Wednesday, 25 May, 15:00 – 18:00

Founded in 1937, the Nature Lab of the Rhode Island School of Design houses a hands-on natural history collection and studio environment that offers opportunities to explore the patterns, structures and interactions of the natural world. Students at the Nature Lab explore the connections among art, design, science, and nature through laboratory and library resources, living specimens and digital imaging.

Particularly for our NABS 2011 conference the Nature Lab is hosting "Intimate Immensity," a collaborative exhibit by Lauren Hartsell and Henrik Söderström. It features a small house out of reclaimed materials (8' wide x 16' long x 9' tall), in which two walls are large paintings celebrating the beautiful properties of water in natural environments. The house is "inhabited" by self-supported garments which are portraits of people in South Africa affected by lack of water access. The garments, made by Lauren, are constructed from fabrics and beads made by South African artists; the piece includes written stories about these individuals. Lauren, a RISD graduate with a BFA in Textiles, has worked with NGOs in South Africa. Henrik is a RISD graduate, an artist, teacher, and idea enthusiast.

The Nature Lab will hold an open house for NABS attendees on Wednesday from 15:00 to 18:00, with an informal tour of the Nature Lab at 16:00. The exhibit will also be accessible during the Nature Lab's hours Sunday (12:00 – 18:00) and Monday through Thursday (07:45 – 22:00); visitors can ring the bell, or wait for a student to come through the door! Directions to the Lab are available at the conference registration desk. Participation is free.

Information About Providence

The Providence Warwick Convention & Visitors Bureau (www.Go-Providence.com) will have a table set up near registration throughout the conference. The table will be manned by representatives of the CVB during the following hours.

Sunday, 22 May.....	16:00 – 19:00
Monday, 23 May	11:00 – 13:00 and 16:30 – 18:00
Tuesday, 24 May.....	11:00 – 13:00 and 17:00 – 18:30
Wednesday, 25 May	11:00 – 13:00
Thursday, 26 May.....	11:00 – 13:00

A full-service Visitor Center will be open Monday – Saturday, 09:00 – 17:00 at the convention center as well.

Opening Session Agenda

Sunday, 22 May 2011, 19:00 – RICC Ballroom A

- Welcome and Presidential Address – Lucinda Johnson
- Distinguished Service Award – Dr. Fred Benfield
- Environmental Stewardship Award – Dr. Susan Davies
- Award of Excellence – Dr. Pat Mulholland
- Hynes Award – Dr. Debra Finn



Welcome & Presidential Address Lucinda B. Johnson

The Benefits and Challenges of Using Multiple Approaches and Multiple Scales for Answering Complex Questions

As we struggle to understand the causes and consequences of widespread and interacting disturbances it is increasingly clear that

no single approach can provide the knowledge needed to propose appropriate solutions. Regulatory and management agencies and researchers studying fundamental ecosystem processes are benefiting from studies that combine laboratory and field experiments, small to large scale empirical studies, mechanistic models informed by empirical data. Studies of complex processes benefit from multiple lines of evidence, but require new ways of thinking and new analytical approaches to be well understood and accepted. Examples from studies of impacts of mountain top removal mining on stream ecosystems, mussel biodiversity and conservation, lyme disease ecology, and amphibian conservation and health will be presented to illustrate some of the benefits and drawbacks of using these approaches.



2011 Distinguished Service Award Fred Benfield

The Award of Excellence and Distinguished Service Award Subcommittee is pleased to announce that Dr. Fred Benfield is the 2011 recipient of the NABS Distinguished Service Award. Fred is a Professor of Ecology at Virginia Tech

University. He has been unselfishly committed to serving NABS and its members for over 30 years. His service contributions include the

NABS Presidency from 1994 to 1995, member and Chairperson of the Executive Committee for two terms, and member and Chairperson of the Board of Trustees of the Endowment Fund. In addition, he has served as program chair for two meetings (Roanoke and Blacksburg). Fred has also contributed significantly to our journal. He played a major role establishing *J-NABS* and was a member of the first Editorial Board and chaired the Editorial Policy Committee. From 1989–1990 he served as Interim Managing Editor, then served another three-year term (1993–1996) on the Editorial Board. Since 1996 he has served as the *J-NABS* Book Review Editor. We are sincerely grateful for Fred’s long and diverse service to the NABS.



2011 Environmental Stewardship Award

Susan P. Davies

Susan Davies has a bachelor’s degree from Columbia University and a master’s degree in aquatic entomology from the University of Maine. She has long been dedicated to finding new ways to evaluate, monitor, and protect

aquatic ecosystems. From 1983 to 2003 she was manager of the Maine Department of Environmental Protection (MDEP) Biological Monitoring Program and is now water quality standards coordinator for the Department. In 1997-1998 she was invited to work with the EPA National Biocriteria Program in Washington, D.C. on large river bioassessment and national biocriteria implementation issues. From 1998 to 2003 she and Susan Jackson of the EPA National Biocriteria Program co-chaired the EPA Tiered Aquatic Life Uses (TALU) National Workgroup that developed the Biological Condition Gradient model. In 2003, Susan, David Courtemanch and Leon Tsomides, from the MDEP Biomonitoring Program were recognized with an Environmental Merit Award for Lifetime Achievement from Region 1 EPA, in recognition of the State of Maine’s innovative and effective use of biological information in water quality management.

Susan also has a long, distinguished NABS service record. In 1987 she served on the Local Arrangements Committee for the Orono, Maine meeting. She served as the NABS secretary from 1995-1996, and created, then chaired, the Technical Issues Committee from 1999-2004.



2011 Award of Excellence Pat Mulholland

The Award of Excellence and Distinguished Service Award Subcommittee is pleased to announce that Dr. Patrick Mulholland is the 2011 recipient of the NABS Award of Excellence in Benthic Science. Pat has been on the leading edge of benthological research for over

30 years and his scientific accomplishments are unquestionably profound and transformative. During much of his career, Pat’s research has focused on stream structure and function. In particular, he is considered the leading expert on nutrient dynamics in stream ecosystems and has made significant contributions to our understanding on how watershed hydrology influences stream nutrient and organic carbon concentrations. Much of Pat’s research in the past 10 years has focused on nitrogen dynamics in streams. He has been an inspirational leader and mentor in several large multi-collaborator

projects, including the Lotic Intersite Nitrogen Experiments (LINX I and LINX II). More recently, Pat has served as team manager for the National Observatory Network's (NEON) aquatic experiment (STREON). Pat also has served on multiple review panels and advisory boards (EPA, Coweeta LTER and Everglades National Park), and has been named a fellow of the American Association for the Advancement of Science and the American Geophysical Union. This recognition speaks to his national and international reputation. A long time member of NABS, Pat has served the society in a number of capacities, including member and chair of the Executive Committee and of the Board of the Endowment Trust Committee, and as an Associate Editor of *J-NABS*. Pat is a distinguished research staff member in the Environmental Sciences Division at Oak Ridge National Laboratory.



2011 Hynes Award for New Investigators

Debra S. Finn

The Hynes Award for New Investigators is given to a benthic scientist, recently graduated with their final degree, who was senior author of an outstanding primary publication in benthic science published within the last three years. The

2011 award goes to Dr. Debra S. Finn for her paper: "Demographic stability metrics for conservation prioritization of isolated populations", published in *Conservation Biology* in 2009 (23: 1185–1194).

The paper draws on population genetic theory to derive a composite metric of "demographic stability", which relates observed patterns of mtDNA sequences to a population's recent history in terms of connectivity, expansion, and bottlenecking. Dr. Finn tested the theory with empirical data from streams and found that habitat measurement was a robust predictor of observed genetic patterns. The Hynes Award subcommittee agreed the paper was an excellent example of how benthic ecology can be fertile ground for identifying fundamental processes in ecology and evolution. Moreover, the combination of theory and empirical work made for a powerful approach, the first using population genetics to gain the Hynes Award.

Dr. Finn is currently a Marie Curie International Fellow at the University of Birmingham. Since finishing her PhD at Colorado State University in 2006, she has also held post-doctoral positions at EAWAG (the Swiss Federal Institute of Aquatic Sciences and Technology), Oregon State University, and the Australian Rivers Institute.

Plenary Sessions

Monday, 23 May

RICC - Ballroom A, 8:00 – 10:15

8:00 – 8:15

Student Awards - **Lucinda Johnson**

8:15 – 8:25

Rhode Island Lieutenant Governor Elizabeth Roberts

8:25 – 8:45

Introduction to NABS 2011 "Responding to the Global Water Crisis" - **Cliff Dahm and Stuart Bunn**



8:45 – 9:30

Charles J. Vörösmarty, Director, The City University of New York's Environmental Crossroads Initiative, The City College of New York

Presentation Title: Global Water Crisis? Yes... and Closer Than You Think

Charles J. Vörösmarty is a professor of civil engineering, a Distinguished Scientist with NOAA-Cooperative Remote Sensing Science and Technology Center and director of The City University of New York's Environmental Crossroads Initiative at The City College of New York. His research focuses on the development of computer models and geospatial data sets used in synthesis studies of the interactions among the water cycle, climate, biogeochemistry and anthropogenic activities. His studies are built around local, regional and continental to global-scale modeling of water balance, discharge, constituent fluxes in river systems and the analysis of the impacts of large-scale water engineering on the terrestrial water cycle. Before he came to The City College of New York, he was a research full professor at the Institute for the Study of Earth, Oceans and Space at the University of New Hampshire, where he was founder and director of its Water Systems Analysis Group (<http://www.wsag.unh.edu>).

Dr. Vörösmarty is a founding member of the Global Water System Project that represents the input of more than 200 international scientists under the International Council for Science's Global Environmental Change Programs. He is spearheading efforts to develop global-scale indicators of water stress, to develop and apply databases of reservoir construction worldwide and to analyze coastal zone risks associated with water diversion. He recently won one of two national awards through the National Science Foundation to execute studies on hydrologic synthesis.

Dr. Vörösmarty also is on several national and international panels, including the U.S. Arctic Research Commission, the NASA Earth Science Subcommittee, the National Research Council Committee on Hydrologic Science, the National Science Foundation's Arctic System Science Program Committee and the Arctic HYDRA International Polar Year Planning Team. He also was on a National Research Council panel that reviewed NASA's polar geophysical data sets, the decadal study on earth observations, and is co-chair of the National Science Foundation's Arctic CHAMP hydrology initiative. He has assembled regional and continental-scale hydro-meteorological data compendia, including the largest single collection, Arctic-RIMS (covering northern Eurasia and North America). He was a consultant to the 24-agency United Nations World Water Assessment Programme and represented the International Council of Scientific Unions at the recent UN Commission on Sustainable Development meetings.



9:30 – 10:15

Gene Likens, Distinguished Senior Scientist, Founding Director and President Emeritus of the Institute of Ecosystem Studies, Cary Institute of Ecosystem Studies

Presentation Title: Water: The Challenging Interface between Scientific Understanding and Policy

Gene E. Likens is a limnologist best known for his discovery of acid rain in North America with colleagues, for co-founding of the Hubbard Brook Ecosystem Study and for founding

the Institute of Ecosystem Studies, an international ecological research and education center. Dr. Likens is an educator and advisor at state, national, and international levels. He has been an advisor to two governors in New York State and one in New Hampshire, as well as one U.S. President. He holds faculty positions at Yale, Cornell, Rutgers, SUNY Albany, Jinan University (Guangzhou) and the University of Connecticut, and has been awarded nine honorary doctoral degrees.

In addition to being elected a member of the National Academy of Sciences and the American Philosophical Society, Dr. Likens has been elected to membership in the American Academy of Arts and Sciences, the Royal Swedish Academy of Sciences, Royal Danish Academy of Sciences and Letters, Austrian Academy of Sciences, and an Honorary Member of the British Ecological Society.

In June 2002, Dr. Likens was awarded the 2001 National Medal of Science, presented at The White House; and In 2003 was awarded the Blue Planet Prize (with F. H. Bormann) from the Asahi Glass Foundation. Among other awards, in 1993 Dr. Likens, with F. H. Bormann, was awarded the Tyler Prize, The World Prize for Environmental Achievement, and in 1994, he was the sole recipient of the Australia Prize for Science and Technology. In 2009, he was awarded the Einstein Professorship from the Chinese Academy of Sciences.

Dr. Likens is past President of the International Society of Theoretical and Applied Limnology, the American Institute of Biological Sciences, the Ecological Society of America, and the American Society of Limnology and Oceanography. Dr. Likens is the author, co-author or editor of 23 books and more than 550 scientific papers.

Tuesday, 24 May

RICC - Ballroom A, 8:00 – 10:15



08:00 – 08:40

Curt Spalding, EPA Region 1 Administrator, and Former Director, Rhode Island "Save the Bay" Program

Presentation Title: Managing Water in a Changing Climate: A New England Perspective

Curt Spalding, EPA Region 1 Administrator, and former director of the Rhode Island "Save the Bay" program will discuss water issues critical to Rhode Island and the surrounding New England region.

H. Curtis "Curt" Spalding has extensive experience in the environmental protection field as an advocate, policy analyst and administrator. For almost 20 years, he served as executive director of Save The Bay in Rhode Island, a nationally recognized, 20,000-member environmental advocacy and education organization. He established the Narragansett BayKeeper and Habitat Restoration programs, which reconnected Save The Bay to ecologically important bay issues, and he oversaw the successful completion of the \$9 million Explore The Bay Campaign and construction of the Save The Bay Center at Fields Point in Providence, Rhode Island.

Prior to joining Save The Bay, Spalding was an environmental protection specialist and presidential management intern at EPA's offices in Boston and Washington, D.C. Spalding received his bachelor's degree from Hobart College and an M.P.A. from SUNY at Albany in Albany, NY.



08:40 – 09:20

Carol Couch, Senior Public Service Associate, University of Georgia, College of Environment and Design, Program in Environmental Planning

Presentation Title: Southeastern Water Resources: Scarcity in the Midst of Abundance?

Carol A. Couch is senior public service associate in the University of Georgia College of Environment and Design, Program in Environmental Planning. Her sixteen-year public service career has combined ecological research with scientific and executive leadership at state, regional and national levels. From 2003 through 2009 she was the Director of the Georgia Environmental Protection Division and Chairperson of the Georgia Water Council which developed Georgia's first Statewide Comprehensive Water Resources Conservation and Development Plan. As EPD Director she was responsible for administering 26 state and 4 federal laws to protect, conserve or restore Georgia's air, land and water resources. These responsibilities included implementing Georgia's Drought Response Plan and directing the Interagency Drought Emergency Response Team. From 1992-2002, she was a member of the United States Geological Survey, U.S. Department of Interior, serving as Southeastern Regional Biologist and as Chief of Ecological Synthesis for the National Water Quality Assessment Program.

Awards and recognitions include the Superior Service Award of the U.S. Department of Interior, the Ivan Allen Legacy Award for Civic Leadership from Georgia Tech, and recognition in 2008 and 2009 by Georgia Trend as one the 100 most influential Georgians.

Carol Couch currently serves as the Chairperson of the Governor's Georgia-South Carolina Savannah River Advisory Team, and on the Executive Council of the NOAA National Integrated Drought Information System. She teaches landscape ecology and interacts with planners and designers as the "ecologist at the design table" in the creation or regeneration of resilient landscapes and watersheds. Her current focus is the development of ecologically-based climate change vulnerability and risk assessment tools for local government application. She earned a PhD in Ecology from the University of Georgia, a MS from the University of South Carolina and a BS from the Georgia Institute of Technology.



09:20 – 10:00

Jay O'Keeffe, Freshwater Ecologist, Environmental Learning Research Centre, Rhodes University, Grahamstown, South Africa

Presentation Title: Balancing Use and Protection: IWRM for Rivers

Professor Jay O'Keeffe is currently back in South Africa (where he will be contributing to a number of research and consultancy projects) after 6 years as WWF Professor of Freshwater Ecosystems in the Department of Environmental Resources at UNESCO-IHE, Institute for Water Education, Delft, the Netherlands.

Professor O'Keeffe's main research interests are in rivers and in catchment management planning, with a particular focus on flow requirements to maintain the ecological functioning of rivers, and the resulting goods and services which they provide for people. He was involved in the development of the environmental principles which were included in the 1998 South African Water Act. He is a strong advocate of inte-

grated water resource management and, as the former Director of the Institute for Water Research (IWR) in South Africa, he facilitated multi-disciplinary teams to solve problems at a catchment scale.

As WWF Professor, O'Keeffe initiated a series of training and capacity building projects to assess environmental flows in river basins where WWF has teams working. To date, as well as post-graduate courses in Delft, research and training courses have been completed, or are in progress, in South Africa, Kenya, Tanzania, South Africa, Bosnia, Turkey, India, Pakistan, China, Brazil, Ecuador, Peru and Mexico.

Student Awards

One hundred fifty nine oral presentations and 117 posters were evaluated by judges at the 2010 NABS conference in Sante Fe, New Mexico. In addition to the awards, each recipient received a book donated by the University of California Press. Many thanks to Chuck Crumley for organizing the UC Press book award

Best oral presentation in basic research

Sponsored by YSI Environmental.

Lauren E. Koenig University of California Santa Barbara, Ecology, Evolution and Marine Biology. DOES DROUGHT ALTER THE RELATIVE IMPORTANCE OF TOP-DOWN VS. BOTTOM-UP CONTROL IN STREAMS? Coauthored by B J Cardinale.

Runner up oral presentation in basic research

Sponsored by Elsevier/Academic Press and NABS.

Eric R. Larson University of Washington, School of Aquatic and Fishery Sciences, NICHE CONSERVATISM BY SIGNAL CRAY-FISH PACIFASTACUS LENIUSCULUS BETWEEN NATIVE AND INVADDED LAKES Coauthored by J D Olden and N Usio.

Best oral presentation in applied research

Sponsored by Camp, Dresser & McKee.

Lindsey Albertson UC Santa Barbara. IMPACTS OF BIOLOGICAL DIVERSITY ON SEDIMENT TRANSPORT IN STREAMS Co-authored by B J Cardinale

Runner up oral presentation in applied research

Sponsored by Elsevier/Academic Press and NABS.

Kathryn Vallis Loyola University Chicago, Department of Biology. PAST AND PRESENT AQUATIC INVERTEBRATE DIETS AS INDICATORS OF CLIMATE CHANGE: THE RIVER CONTINUUM REDUX Co-authored by E J Rosi-Marshall, C V Baxter and J M Davis.

Best presentation emphasizing methodology

Sponsored by Frigid Units.

Adam S. Ward Pennsylvania State University Civil & Environmental Engineering HYPORHEIC RESPONSE TO STREAMBED CLOGGING: A FIELD AND NUMERICAL STUDY Co-authored by M N Gooseff, M P Miller, E W Boyer and C P Ferreri.

Best poster presentation in basic research

Sponsored by Hach Environmental.

Marc Peipoch Centre d'Estudis Avançats de Blanes, Departament de Limnologia. VARIABILITY IN 15N NATURAL ABUNDANCE OF DISSOLVED INORGANIC NITROGEN AND PRIMARY

UPTAKE COMPARTMENTS IN STREAMS: A META-ANALYSIS APPROACH Co-authored by E Marti and E Gacia.

Best poster presentation in applied research

Sponsored by Commonwealth Biomonitoring and Turner Solutions.

Josette M. La Hée Florida International University, Biological Sciences THE USE OF PERIPHYTON DIATOM COMMUNITIES AS INDICATORS OF WATER QUALITY IN THE EVERGLADES AND THREE TROPICAL KARSTIC WETLAND SYSTEMS Co-authored by E E Gaiser.

Meeting Exhibitors

CUAHSI

Consortium of Universities for the Advancement of Hydrologic Science, Inc.
2000 Florida Ave, N.W., Washington, DC 20009
Contact: Conrad Matiuk
Phone: 202-731-0122, Fax: 202-777-7308, cmatiuk@cuahsi.org

EcoAnalysts, Inc.

1420 S Blaine St, Suite 14, Moscow, ID 83843
Contact: Gary Lester
Phone: 208-882-2588, Fax: 208-883-4288, tderrick@ecoanalysts.com

Elsevier

7 High St, #10, Clinton, MA 01510,
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Phone: 978-368-3293, k.boulter@elsevier.com

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Hach Hydromet

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H. Stevan Logsdon

Wildlife Artist
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University of California Press

2120 Berkeley Way, Berkeley, CA 94704
Contact: Mr. Ramon L Smith
Phone: 510-642-2035, Fax: 510-643-7127, ramon.smith@ucpress.edu

General Schedule

Saturday, 21 May

08:00–17:00	Causal Analysis Meeting	Westin– Waterplace II
15:00–17:00	NABS Finance Committee Meeting	Westin–Executive Boardroom
17:00–19:30	NABS Endowment Committee Meeting	Westin–Rotunda

Sunday, 22 May

07:00–09:00	JNABS Editorial Board Committee Meeting	Westin–Blackstone
09:00–16:00	NABS Executive Committee Meeting	Westin–South County
09:00–16:00	Workshop: An Introduction to a Graphical Analysis of Feedback (AKA “Loop Analysis”)	RICC–5th Floor Prefunction
09:00–16:00	Workshop/GRC Career- Development: Systematic Evaluation of Ecological Literature to Support Causal Inference: Tools & Methods	RICC–550 A
09:00–17:00	Workshop: Climate Change and NABS	RICC–552 A/B
09:00–17:00	Workshop: Introduction to Freshwater Taxonomy and Applications for Biological Assessment	Westin– Waterplace I
12:30–16:00	Field Trip: Save the Bay! Narragansett Bay Boat Tour	Buses depart from RICC (Sabin St.)
13:00–17:00	Workshop: Orientation Workshop for Undergraduates in the INSTARS Mentoring Program	RICC–554 A/B
13:30–19:00	Registration	RICC–5th Floor Prefunction
13:00–21:00	Presentation Room Open	RICC– Ballroom C
16:00–17:00	Student Volunteer Training	RICC–5th Floor Prefunction
16:00–21:00	Speaker Ready Room Open	RICC– Ballroom E
19:00–21:15	NABS Meeting Opening, Presidential Address and Award Presentations	RICC– Ballroom A
21:15–23:30	Welcoming Mixer Reception (Cash Bar)	Westin–Narragan- sett Ballroom

Monday, 23 May

07:00–19:00	Presentation Room Open	RICC– Ballroom C
07:00–19:00	Speaker Ready Room Open	RICC–Ballroom E

07:30–16:00	Registration	RICC–5th Floor Prefunction
08:00–10:00	Exhibitor Set-up	RICC–5th Floor Prefunction
08:00–10:15	Plenary Session	RICC–Ballroom A
08:00–16:30	Taxonomic Certification Testing	RICC–550 A
07:00 – 17:30	Silent Auction Open	RICC–5th Floor Prefunction
10:00–17:30	Exhibits Open	RICC–5th Floor Prefunction
10:15–10:45	Coffee Break	RICC–5th Floor Prefunction
10:45–12:15	Concurrent Sessions	RICC–Various
12:15–13:45	NABS GRC Meeting	RICC–557
12:15–13:45	NABS Committee Meetings	RICC– Ballroom B
12:15–13:45	NSF Presentation	RICC–554 A/B
14:00–15:30	Concurrent Sessions	RICC–Various
15:30–16:00	Coffee Break	RICC–5th Floor Prefunction
16:00–17:30	Great Debate with Plenary Speakers	RICC– Ballroom A
18:30–20:00	GRC Mixer	RICC–Rotunda
20:00–21:30	Name Change Business Meeting	RICC– Ballroom A
21:00–23:30	NABS Mixer	RICC–Ballroom A Prefunction

Tuesday, 24 May

07:00–19:00	Presentation Room Open	RICC– Ballroom C
07:00–19:00	Speaker Ready Room Open	RICC– Ballroom E
07:30–16:00	Registration	RICC–5th Floor Prefunction
08:00–10:00	Plenary Session	RICC–Ballroom A
08:00–17:00	Silent Auction Open	RICC–5th Floor Prefunction
08:00–19:30	Exhibits Open	RICC–5th Floor Prefunction
10:00–10:30	Coffee Break	RICC–5th Floor Prefunction
10:30–12:15	Concurrent Sessions	RICC–Various

12:30–13:30	By-Laws Information Session	RICC–Ballroom A	19:00–21:00	Banquet	Westin–Narragansett Ballroom
13:30–15:00	Concurrent Sessions	RICC–Various	21:00–22:00	Live Auction	Westin–Providence Ballroom Prefunction
15:00–15:30	Coffee Break	RICC–5th Floor Prefunction	21:00–23:30	Musicians and Mixer featuring the Benthic Balladeers	Westin–Providence Ballroom
15:30–17:00	Concurrent Sessions	RICC–Various			
17:00–18:30	Endowment Contributors and Beneficiaries Reception (by invitation only)	Westin–South County			
19:30–20:30	Public Event featuring Dr. Sandra Postel	RICC–Ballroom A			
20:30–21:00	Intermission	RICC–Ballroom A			
21:00–23:30	Coastal Cabaret–Entertainment & Mixer	RICC–Ballroom A			

Wednesday, 25 May

07:00–19:00	Presentation Room Open	RICC–Ballroom C
07:00–19:00	Speaker Ready Room Open	RICC–Ballroom E
07:30–16:00	Registration	RICC–5th Floor Prefunction
08:00–17:00	Silent Auction Open	RICC–5th Floor Prefunction
08:00–17:00	Exhibits Open	RICC–5th Floor Prefunction
08:00–09:00	Poster Set Up	RICC–Exhibit Hall D
08:00–10:30	Concurrent Sessions	RICC–Various
10:00–10:30	Coffee Break	RICC–5th Floor Prefunction
10:30–12:00	Concurrent Sessions	RICC–Various
12:00–13:30	NABS Membership Lunch	Westin–Narragansett Ballroom
13:45–16:00	Poster Session and Taxonomy Fair	RICC–Exhibit Hall D
14:30–15:30	J-NABS Workshop: A Peer Review Primer–Tips and Advice	RICC–557
15:00–18:00	Open House and Tour of Lawrence Nature Laboratory (RISD) with “Intimate Immensity” art exhibit	Rhode Island School of Design
16:00–20:00	Poster Tear Down	RICC–Exhibit Hall D
16:00–18:30	Fun Run	Buses depart from RICC
16:00–18:30	Volleyball Tournament	Buses depart from RICC

Thursday, 26 May

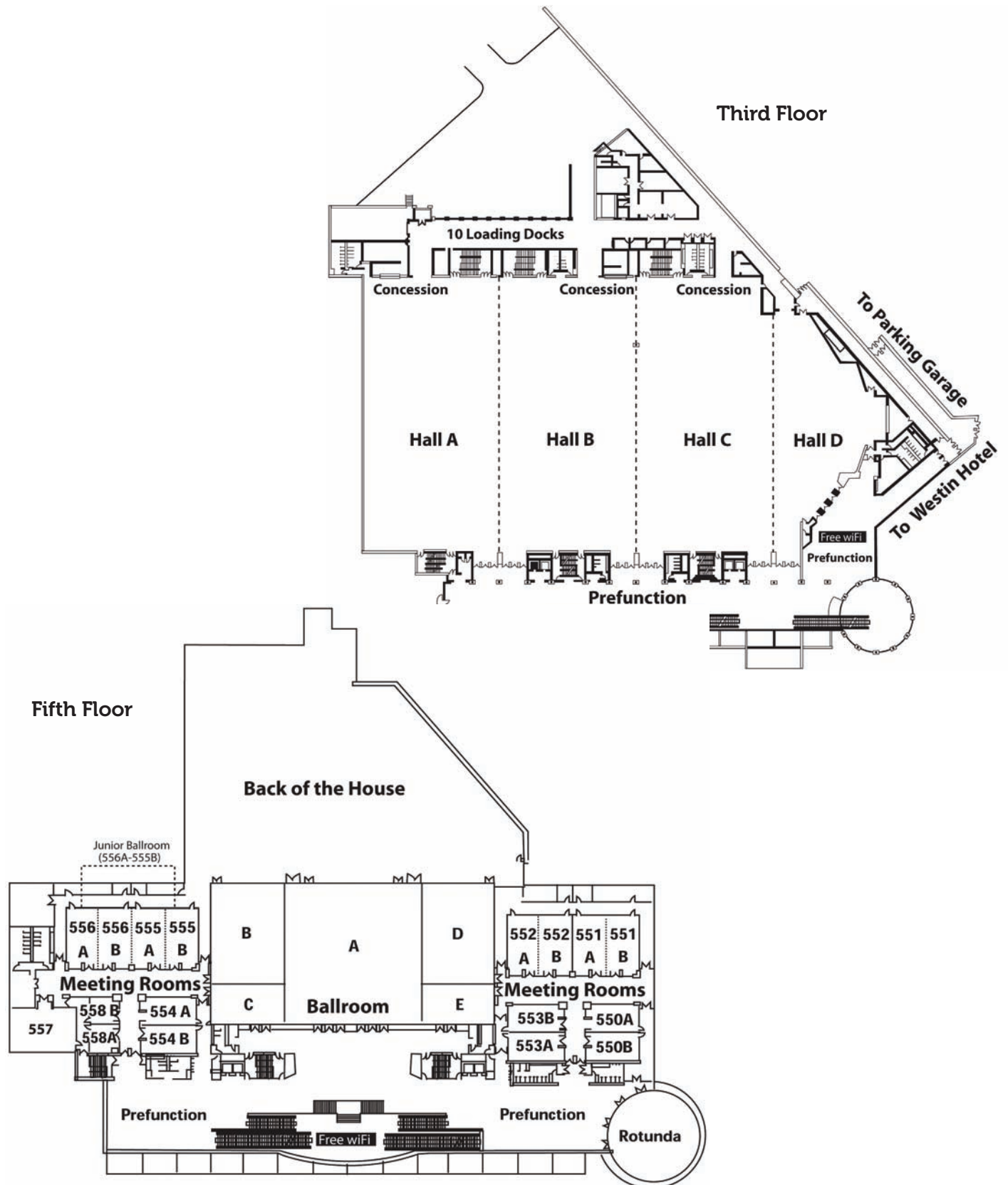
07:00–08:30	New Executive Committee Breakfast	Westin–Newport Room
07:00–17:00	Presentation Room Open	RICC–Ballroom C
07:00–17:00	Speaker Ready Room Open	RICC–Ballroom E
08:00–16:00	Registration	RICC–5th Floor Prefunction
08:00–15:30	Exhibits Open	RICC–5th Floor Prefunction
08:00–10:00	Concurrent Sessions	RICC–Various
10:00–10:30	Coffee Break	RICC–5th Floor Prefunction
10:30–12:00	Concurrent Sessions	RICC–Various
12:00–13:30	2011–2012 Planning Meeting	Westin–Washington Room
13:30–15:00	Concurrent Sessions	RICC–Various
15:00–15:30	Coffee Break	RICC–5th Floor Prefunction
15:30–17:00	Concurrent Sessions	RICC–Various
15:30–17:30	Exhibitor Tear Down	RICC–5th Floor Prefunction

Friday, 27 May

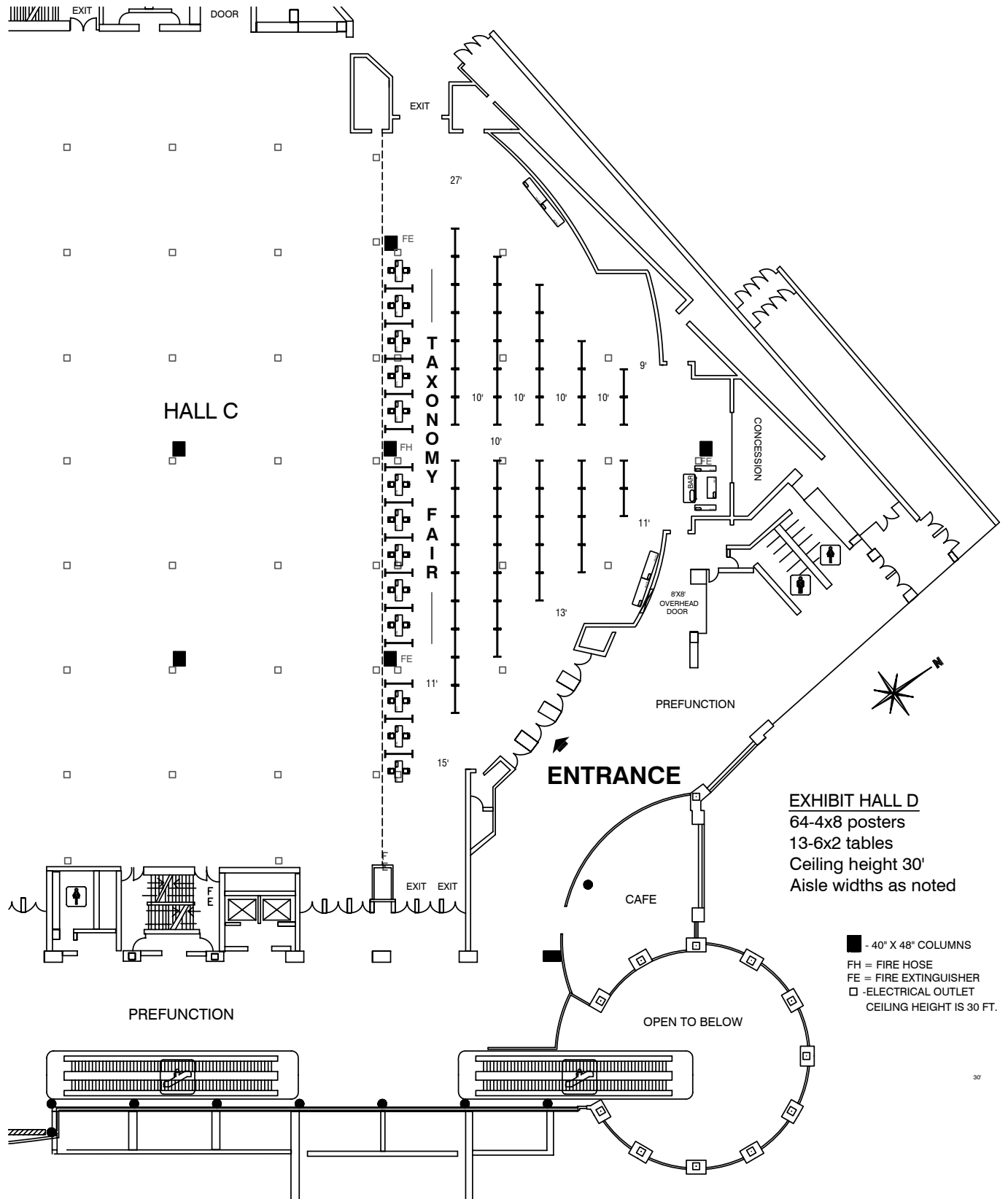
07:30–18:00	Field Trip: Block Island, RI	Buses depart from RICC (Sabin St.)
08:00–18:00	Field Trip: Cape Cod National Sea Shore, MA	Buses depart from RICC (Sabin St.)

Return times are approximate.

Rhode Island Convention Center Map

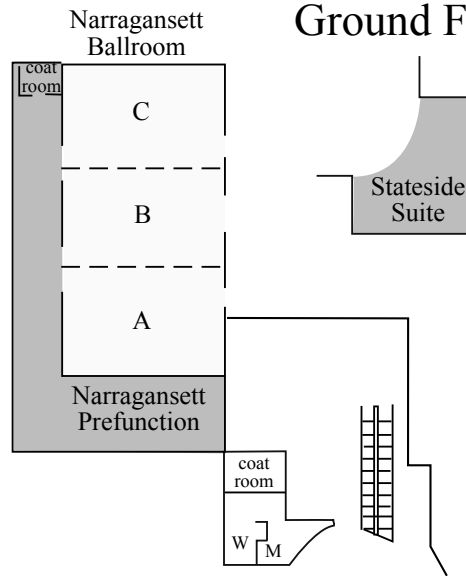


Posters & Taxonomy Fair Map

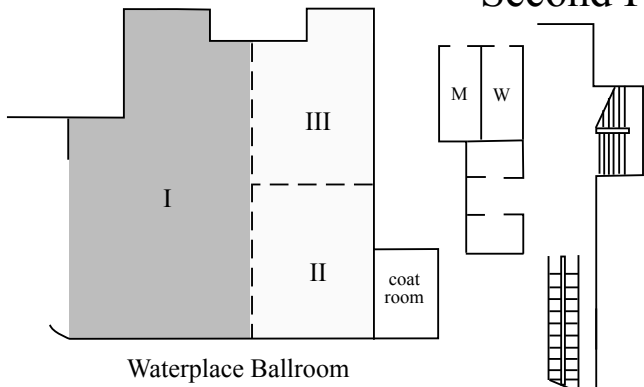


Westin Meeting Spaces Maps

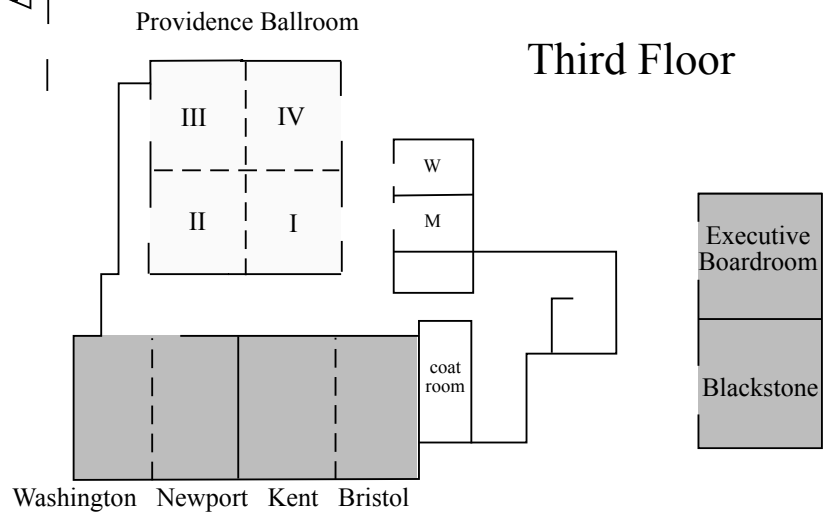
Ground Floor



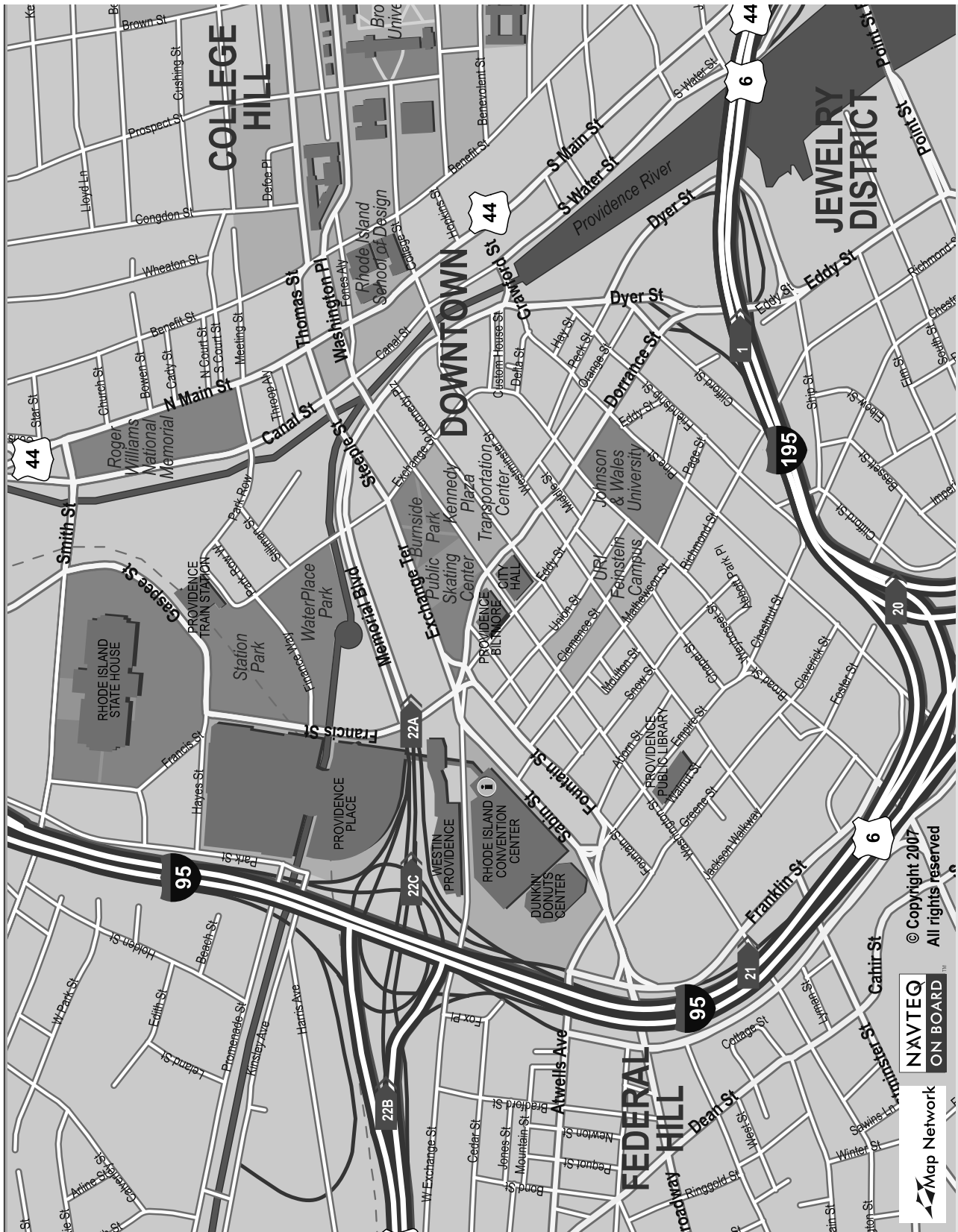
Second Floor



Third Floor



Providence Area Map



Monday, 23 May 2011 Scientific Program At-A-Glance

Room	Ballroom B	Ballroom D	551 A/B	552 A/B	553	554	555 A/B	556	Room								
Capacity	360 Theater	360 Theater	198 Theater	198 Theater	160 Theater	160 Theater	210 Theater	210 Theater	Capacity								
08:00	<p style="text-align: center;">PLENARY SESSION 8:00 to 10:15 AM BALLROOM A</p>								08:00								
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08:30									08:30								
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09:00									09:00								
09:15									09:15								
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10:15									10:15								
10:30	<p style="text-align: center;">BREAK - 10:15 to 10:45 AM - 5TH FLOOR PREFUNCTION AREA</p>								10:30								
10:45									10:45								
11:00									S05 - Human impacts, stream biogeochemistry, and water quality	T17 - Invasive Species (Session A)	T39 - Wetlands	S16 - Experimental tests of local vs. regional mechanisms of community assembly in stream ecosystems	S03 - Sustaining Freshwater Biodiversity and Ecosystem Services: Global Patterns, Processes & Planning	T13 - Food Webs (Session A)	11:00		
11:15															11:15		
11:30															11:30		
11:45															11:45		
12:00															12:00		
12:15									<p style="text-align: center;">12:15 to 1:45 PM NABS COMMITTEE MEETINGS - BALLROOM B NABS GRC MEETING - ROOM 557 NSF PRESENTATION & DISCUSSION - ROOM 554 A/B</p>								12:15
12:30																	12:30
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1:30	1:30																
1:45	1:45																
2:00	2:00																
2:15	2:15																
2:30	2:30																
2:45	S05 - Human impacts, stream biogeochemistry, and water quality	T17 - Invasive Species (Session B)	S07 - Linking Landscapes: Watersheds to the Ocean	T18 - Land Use and Non-Point Source Effects on Streams (Session A)	S03 - Sustaining Freshwater Biodiversity and Ecosystem Services: Global Patterns, Processes & Planning	T13 - Food Webs (Session B)	2:45										
3:00							3:00										
3:15							3:15										
3:30	<p style="text-align: center;">BREAK - 3:30 to 4:00 PM - 5TH FLOOR PREFUNCTION AREA</p>								3:30								
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5:45									<p style="text-align: center;">GREAT DEBATE 4:00 to 5:30 PM BALLROOM A</p>								5:45
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8:00	8:00																

Tuesday, 24 May 2011 Scientific Program At-A-Glance

Room Capacity	Ballroom B 360 Theater	Ballroom D 360 Theater	551 A/B 198 Theater	552 A/B 198 Theater	553 160 Theater	554 160 Theater	555 A/B 210 Theater	556 210 Theater	Room Capacity
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PLENARY SESSION 8:00 to 10:00 AM BALLROOM A									
BREAK - 10:00 to 10:30 AM - 5TH FLOOR PREFUNCTION AREA									
	S01 - Water Scarcity: Innovations in Policy, Politics and Science	S05 - Human impacts, stream biogeochemistry and water quality	S07 - Linking Landscapes: Watersheds to the Ocean	T42 - Molecular Ecology	T28 Periphyton	S03 - Sustaining Freshwater Biodiversity and Ecosystem Services: Global Patterns, Processes & Planning	T04 - Climate Change (Session A)		
NABS Bylaws Information Session 12:30 - 1:30 PM BALLROOM A									
	S19 - A Bug's Life. Stream macroinvertebrates as mediators of stream ecosystem processes	S05 - Human impacts, stream biogeochemistry and water quality	S02 - Human and Associated Health Issues Associated with Benthic Organisms and their Environment	S15 - Advancing exuviae as a research and conservation tool	S11 - Recent advances in hyporheic and parafluvial zone science	T01 Bioassessment (Session A)	S17 - Global Bioassessment Methods		
BREAK - 3:00 to 3:30 PM - 5TH FLOOR PREFUNCTION AREA									
	S19 - A Bug's Life... Insights Gained from the Work of J. Bruce Wallace	T21 - Large River Ecology	S02 - Human and Associated Health Issues Associated with Benthic Organisms and their Environment	S15 - Advancing exuviae as a research and conservation tool	S11 - Recent advances in hyporheic and parafluvial zone science	T01 Bioassessment (Session B)	S17 - Global Bioassessment Methods		

Wednesday, 25 May 2011 Scientific Program At-A-Glance

Room Capacity	Ballroom B 360 Theater	Ballroom D 360 Theater	551 A/B 198 Theater	552 A/B 198 Theater	553 160 Theater	554 160 Theater	555 A/B 210 Theater	556 210 Theater	Room Capacity
08:00		T03 Biogeochemistry (Session A)	T18 - Land Use and Non-Point Source Effects on Streams (Session B)	S10 - Improving ecological understanding of multi-channel river ecosystems	S08 - The influence of macroinvertebrates on nitrogen cycling in multiple biomes and ecosystems	T06 - Community Ecology (Session A)	S14 - Ecological Flows and Biological Indicators	T04 - Climate Change (Session B)	08:00
08:15	08:15								
08:30	08:30								
08:45	08:45								
09:00	09:00								
09:15	09:15								
09:30	09:30								
09:45	09:45								
10:00	BREAK - 10:00 to 10:30 AM - 5TH FLOOR PREFUNCTION AREA								10:00
10:15									10:15
10:30		T01 Bioassessment (Session C)		T11 Eutrophication	T41 - Influences of invertebrate Life Histories	T06 - Community Ecology (Session B)	T33 - Restoration Ecology (Session A)	T24 Management of Aquatic Systems Session (Session A)	10:30
10:45	10:45								
11:00	11:00								
11:15	11:15								
11:30	11:30								
11:45	11:45								
12:00	NABS MEMBERSHIP LUNCH AND BUSINESS MEETING- WESTIN - NARRAGANSETT BALLROOM								12:00
12:15	12:00 to 1:30 PM								12:15
12:30	12:00 to 1:30 PM								12:30
12:45	12:00 to 1:30 PM								12:45
1:00	12:00 to 1:30 PM								1:00
1:15	12:00 to 1:30 PM								1:15
1:30	12:00 to 1:30 PM								1:30
1:45	POSTER SESSION AND TAXONOMY FAIR - EXHIBIT HALL D								1:45
2:00	1:45 to 4:00 PM								2:00
2:15	1:45 to 4:00 PM								2:15
2:30	JNABS WORKSHOP: A PEER REVIEW PRIMER - TIPS AND ADVICE - RICC-557								2:30
2:45	2:30 to 3:30 PM								2:45
3:00	2:30 to 3:30 PM								3:00
3:15	2:30 to 3:30 PM								3:15
3:30	2:30 to 3:30 PM								3:30
3:45	2:30 to 3:30 PM								3:45

Meeting Sponsors



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Monday, 23 May 2011 - Orals

S03 Sustaining Freshwater Biodiversity and Ecosystem Services: Global Patterns, Processes, and Planning

Chair(s): John Kominoski, jkominoski@gmail.com

Location: 555 A/B

- 10:45 Auerbach, D. A.; Poff, N. L.; McShane, R. R.; McCluney, K. E.; Pyne, M. I.; Wilding, T. K.: ECOSYSTEM SERVICES AND FRESHWATER CONSERVATION: PROSPECTS AND PITFALLS
- 11:00 McGarvey, D. J.: CAPITALIZING ON THE NATURAL HERITAGE OF CENTRAL APPALACHIA: 'FISHING' FOR ALTERNATIVES IN MOUNTAINTOP MINING COUNTRY
- 11:15 Finn, D. S.; Khamis, K.; Milner, A. M.: NEGATIVE BIODIVERSITY TRENDS EXPECTED IN STREAMS FOLLOWING LOSS OF SMALL GLACIERS IN THE FRENCH PYRENEES
- 11:30 Stendera, S.; Hering, D.: RESPONSE SIGNATURES OF FRESHWATER BIODIVERSITY
- 11:45 Vaughn, C. C.; Julian, J.; Atkinson, C. L.; Allen, D. C.: HOW DO WE QUANTIFY ECOSYSTEM SERVICES PROVIDED BY FRESHWATER MUSSELS?
- 12:00 Allen, D. C.; Vaughn, C. C.: FRESHWATER MUSSEL BIODIVERSITY INCREASES AQUATIC RESOURCE SUBSIDIES TO TERRESTRIAL ECOSYSTEMS
- 13:45 Lamberti, G. A.; Janetski, D. J.; Chaloner, D. T.; Moerke, A. H.; Tiegs, S. D.; Campbell, E. Y.; Rüegg, J.; Merritt, R. W.: BIODIVERSITY OF PACIFIC SALMON STREAMS IN NATIVE AND INTRODUCED RANGES
- 14:00 Crowl, T. A.; Covich, A. P.: THE IMPORTANCE OF SCALE IN TROPICAL HEADWATER STREAM FOOD WEBS: TROPHIC DIVERSITY AND DETRITAL PROCESSING BY DECAPOD CRUSTACEANS.
- 14:15 Atkinson, C. L.; Vaughn, C. C.: MODIFICATION OF NUTRIENT LIMITATION BY UNIONID MUSSELS
- 14:30 Atwood, T. B.; Richardson, J. S.: STREAM CO₂ DYNAMICS INFLUENCED BY FUNCTIONALLY DOMINANT CONSUMERS: SPECIES IDENTITY AND TROPHIC POSITION MATTER
- 14:45 Brua, R. B.; Culp, J. M.; Luiker, E. A.; Curry, R. A.: PERIPHYTON BIODIVERSITY IN RIVERS ALONG A LATITUDINAL GRADIENT IN CANADA'S EASTERN ARCTIC
- 15:00 Cantonati, M.: WATER CRISIS: SPRING HABITATS AS HOTSPOTS OF FRESHWATER BIODIVERSITY, AND THEIR POTENTIAL ROLE FOR ITS CONSERVATION
- 15:15 Sokol, E. R.; Belicka, L. L.; Hoch, J. M.; Trexler, J. C.: USING THEORETICAL COMMUNITY ECOLOGY TO ASSESS RESTORATION IN THE EVERGLADES

S05 Human impacts, stream biogeochemistry, and water quality

Chair(s): Todd Royer, troyer@indiana.edu
Alba Argerich, Alba.Argerich@oregonstate.edu
Laura Johnson, latjohn@indiana.edu

Location: Ballroom D

- 10:45 McDowell, W. H.; Daley, M. L.; Potter, J. D.: DISSOLVED ORGANIC MATTER DYNAMICS IN A SUBURBAN BASIN: WETLANDS AND PEOPLE DRIVE QUANTITY AND QUALITY
- 11:00 Kaushal, S. S.; Findlay, S.; Belt, K. T.; Duan, S.; Fischer, D. T.; Groffman, P. M.; Mayer, P. M.: LAND-USE CHANGE AND ORGANIC CARBON IN STREAMS
- 11:15 Tesoriero, A. J.; Duff, J. H.; Wolock, D. M.; Spahr, N. E.: INFLUENCE OF HYDROLOGY AND REDOX REACTION RATES ON NUTRIENT PATHWAYS TO STREAMS
- 11:30 Beyer-Robson, J.; Vink, S.; Bond, P.; Moran, C.: DENITRIFICATION, METHANOGENESIS AND MICROBIAL COMMUNITY RESPONSE TO INCREASED SALINITY IN THE HYPOHEIC ZONE IN A FRESHWATER EPHEMERAL RIVER SYSTEM
- 11:45 Pastor Oliveras, A.; Sabater, F.; Riera, J. L.; Martí, E.; Gacia, E.; Cañas, L.; Gomà, J.; Peipoch, M.; Ribot, M.; Chappuis, E.: RELATIONSHIPS BETWEEN ¹⁵N NATURAL ABUNDANCE OF DIN AND PRIMARY UPTAKE COMPARTMENTS ACROSS STREAMS DIFFERING IN DIN AVAILABILITY

- 12:00 Royer, T. V.; Johnson, L. T.; Manis, E.; Ghosh, S.; Leff, L. G.: PATTERNS IN DENITRIFICATION, MICROBIAL COMMUNITY STRUCTURE, AND DISSOLVED ORGANIC CARBON IN AN AGRICULTURAL STREAM NETWORK
- 13:45 Mehring, A. S.; Davie, S. R.; Vellidis, G.; Bosch, D. D.; Pringle, C. M.; Lowrance, R. R.: MODELING DISSOLVED OXYGEN DYNAMICS IN BLACKWATER RIVERS: THE IMPORTANCE OF SITE-SPECIFIC DATA AND CARBON FLUX PARAMETER COMPLEXITY
- 14:00 Roley, S. S.; Tank, J. L.; Griffiths, N. A.; Stephen, M. L.; Johnson, L. T.; Beaulieu, J. J.: THE INFLUENCE OF FLOODPLAIN RESTORATION ON WHOLE-STREAM METABOLISM IN AN AGRICULTURAL STREAM
- 14:15 Kominoski, J. S.; Benstead, J. P.; Manning, D. W.; Rosemond, A. D.: BASELINE TROPHIC STATE AND STREAM ECOSYSTEM METABOLISM: PREDICTING HETEROTROPHIC RESPONSE TO NUTRIENT ENRICHMENT
- 14:30 Baker, C. L.; Hagler, M. M.; Freeman, M. C.; Freeman, B. J.: USING STABLE ISOTOPES TO INVESTIGATE SPATIAL AND TEMPORAL VARIATION IN AGRICULTURAL NUTRIENT LOADING IN THE CONASAUGA RIVER
- 14:45 Johnson, L. T.; Royer, T. V.; Oviedo-Vargas, D.; Leff, L. G.: EFFECT OF A LABILE CARBON ADDITION ON NITROGEN CYCLING IN A NITRATE-RICH STREAM IN INDIANA, USA
- 15:00 Oviedo-Vargas, D.; Johnson, L. T.; Royer, T. V.: COUPLING BETWEEN CARBON AND PHOSPHORUS CYCLING IN A NITRATE-RICH STREAM IN INDIANA, USA
- 15:15 Rancatti, R. L.; Simon, K. S.; Anderson, D.; Fernandez, I. J.; Norton, S. A.; Valett, H. M.: EFFECTS OF WATERSHED ACIDIFICATION ON ABIOTIC AND BIOTIC PHOSPHORUS UPTAKE BY DOMINANT STREAMBED COMPARTMENTS

S07 Linking Landscapes: Watersheds to the Ocean

Chair(s): David Johnson, dsjohnson@mbledu
Treda Grayson, Grayson.Treda@epamail.epa.gov
Marguerite Pelletier, Pelletier.Peg@epamail.epa.gov

Location: 552 A/B

- 13:45 Nixon, S.: NARRAGANSETT BAY – AN OVERVIEW OF SOME HISTORY AND CHANGING ECOLOGY IN AN URBAN ESTUARY
- 14:15 Wollheim, W. M.; Stewart, R. J.; Peterson, B. J.; Vorosmarty, C. J.: NITROGEN EFFICIENCY LOSS AT GLOBAL SCALES: LIMITS TO THE EFFECTIVENESS OF FRESHWATER AQUATIC ECOSYSTEMS AS REGULATORS OF N FLUX TO COASTAL ZONES
- 14:30 Arscott, D. B.; Kaplan, L. A.; Sweeney, B. W.; Newbold, J. D.; Jackson, J. K.; Eldridge, W. H.; Aufdenkampe, A. K.; Bott, T. L.: CHARACTERIZING THE PHYSICAL, CHEMICAL, AND BIOLOGICAL CONNECTIONS BETWEEN A HEADWATER WETLAND COMPLEX AND DOWNSTREAM NAVIGABLE WATERS
- 14:45 Fulweiler, R. W.; White, J. R.; Twilley, R. R.: THE IMPACT OF FLOOD-PULSE DISTURBANCE ON LAKE PONCHARTRAIN SEDIMENT BIOGEOCHEMISTRY
- 15:00 Roberts, B. J.; Semmler, C. M.; Doty, S. M.; Rabalais, N. N.; Turner, R. E.: BIOGEOCHEMICAL PROCESSING AND HYPOXIA DEVELOPMENT IN THE LOWER ATCHAFALAYA RIVER AND ATCHAFALAYA RIVER DELTA ESTUARY
- 15:15 Bruesewitz, D. A.; Gardner, W. S.; McClelland, J. W.; Mooney, R.; Buskey, E. J.: SEASONAL NITROGEN DYNAMICS ALONG A RIVER-ESTUARY CONTINUUM IN THE WESTERN GULF OF MEXICO (COPANO BAY, TEXAS)

S16 Experimental tests of local vs. regional mechanisms of community assembly in stream ecosystems

Chair(s): Chris Swan, cmswan@umbc.edu
Bryan Brown, bbrown3@CLEMSON.EDU

Location: 554

- 10:45 Brown, B. L.; Lawson, R. L.: INTERACTIVE EFFECTS OF EARLY COLONIZATION (PRIORITY EFFECTS) AND DISTURBANCE ON DIVERSITY, COMPOSITION, AND VARIABILITY OF BENTHIC MACRINVERTEBRATE COMMUNITIES

- 11:00 Freimann, R.; Robinson, C. T.; Buergmann, H.; Findlay, S. E.: RECIPROCAL TRANSPLANT EXPERIMENTS FOR EXAMINING MICROBIAL COMMUNITY ASSEMBLY IN ALPINE FLOODPLAINS
- 11:15 Boersma, K. S.; Bogan, M. T.; Lytle, D. A.: TOP PREDATORS VERSUS THE ABIOTIC ENVIRONMENT: WHAT DETERMINES COMMUNITY STRUCTURE IN ARID-LAND STREAMS?
- 11:30 Grönroos, M.; Heino, J.: THE LOCAL-REGIONAL RICHNESS RELATIONSHIP IN STREAM MACROINVERTEBRATE GUILDS
- 11:45 Patrick, C. J.; Fernandez, D. P.: THE EFFECT OF STREAM INSECT EETA-RICHNESS ON NETWORK SCALE DECOMPOSITION AND PARTICLE EXPORT
- 12:00 Swan, C. M.: PRESENCE OF A DOMINANT CONSUMER INTERACTS WITH DISTURBANCE REGIME TO REGULATE VARIABILITY IN A STREAM DETRITIVORE COMMUNITY

T13A Food Webs - Session A

Chair(s): Scott Miller, scott.miller@usu.edu

Location: Room 556

- 10:45 Winkelman, C.; Worischka, S.; Hellmann, C.; Benndorf, J.: IMPACT OF FISH PREDATION ON COMMUNITY STRUCTURE IN A NATURAL BENTHIC COMMUNITY
- 11:00 Worischka, S.; Winkelman, C.; Hellmann, C.; Benndorf, J.: A MATTER OF SEASON? PREDATION IMPACT OF BENTHIVOROUS FISHES IN TEMPERATE STREAMS
- 11:15 Cattaneo, A.; Hudon, C.; Tourville Poirier, A. M.; Brodeur, P.; Dumont, P.; Mailhot, Y.; Amyot, J. P.; Despatie, S. P.; de Lafontaine, Y.: WETLAND OLIGOTROPHICATION ALTERS THE RIVERINE TROPHIC NETWORK AND CARRYING CAPACITY FOR FISH
- 11:30 Jones, J. L.; Lauridsen, R. B.; Edwards, F. K.; Montoya, J. M.; Ibbotson, A. T.; Woodward, G.; Hildrew, A. G.: LARGE SCALE MANIPULATIONS OF A QUANTIFIED FOOD WEB
- 11:45 Whitney, J. E.; Gido, K. B.: LONGITUDINAL VARIATION IN PREDATOR CONSUMPTIVE DEMAND IN THE UPPER GILA RIVER, NEW MEXICO, USA
- 12:00 Miler, S. W.; Dinger, E. C.: EFFECTS OF WATER DIVERSIONS AND LAND USE PATTERNS ON FOOD WEBS OF THE CUB RIVER, ID

T13B Food Webs - Session B

Chair(s): Anne Hershey, aehershe@uncg.edu

Location: Room 556

- 13:45 Hershey, A. E.; Rublee, P. A.; Gentzel, T.; Bullard, A. E.; Whalen, S. C.: EVALUATION OF HYDROPSYCHID CADDISFLY UTILIZATION OF METHANE-DERIVED CARBON IN AN URBAN STREAM
- 14:00 Compson, Z. G.; Hungate, B. A.; Whitham, T. G.; Wymore, A. S.; Adams, K. J.; Edwards, J. A.; Wojtowicz, T.; Marks, J. C.: TOWARDS A NEW LEAF QUALITY PARADIGM IN AQUATIC ECOLOGY
- 14:15 Collins, S. M.; Thomas, S. A.; Flecker, A. S.: INCREASED LIGHT AVAILABILITY INFLUENCES THE ROLE OF BACTERIA IN STREAM FOOD WEBS: A DUAL CARBON AND NITROGEN ISOTOPE TRACER APPROACH
- 14:30 Sayer, C. K.; Compson, Z. G.; Marks, J. C.: DETERMINING HOW COTTONWOOD LEAF QUALITY INFLUENCES *LIMNEPHILUS SP.* GROWTH RATES
- 14:45 Jesse Maestas, J. M.; Zachaeus Compson, Z. G.; Jane Marks, J. C.: LEAF QUALITY ALTERS STOICHIOMETRY IN INSECTS
- 15:00 Frauendorf, T. C.; Colon-Gaud, J. C.; Whiles, M. R.; Lips, K. R.; Pringle, C. M.; Kilham, S. S.: TROPHIC BASIS OF PRODUCTION IN A NEOTROPICAL HEADWATER STREAM
- 15:15 Brannin, M. T.; Mead, J. V.; Klein, S. L.: A META-ANALYSIS OF INVERTEBRATE BIOENERGETICS

T17A Invasive Species - Session A

Chair(s): Lori Tolley-Jordan, ljordan@jsu.edu

Location: Room 551 A/B

- 10:45 Larson, E. J.; Taylor, B. W.: NUTRIENT LIMITATION OF THE BLOOM-FORMING DIATOM, *DIDYMOSPHEA GEMINATA*, IN TEN ROCKY MOUNTAIN STREAMS

- 11:00 Tolley-Jordan, L. R.; Chadwick, M. A.: ZOOGEOGRAPHY OF THE INVASIVE SNAIL, *MELANOIDES TUBERCULATA*, AND ITS CONCOMITANT TREMATODE PATHOGEN, *CENTROCESTUS FORMOSANUS*

- 11:15 Strayer, D. L.; Malcom, H. M.: LONG-TERM CHANGES IN BODY CONDITION OF NATIVE MUSSELS (UNIONIDAE) IN THE HUDSON RIVER

- 11:30 Schwab, A. N.; Bocaniov, S. A.; Leon, L. F.; Molot, L. A.; Smith, R. E.: ASSESSING DIRECT AND INDIRECT EFFECTS OF INVASIVE BENTHIC FILTER FEEDERS IN A LARGE LAKE - 3 D-MODELLING OF PROCESSES IN A LAKE INVADED BY DREISSENID MUSSELS

- 11:45 McDowell, W. G.; Byers, J. E.: USING NATIONWIDE DATA TO MODEL ABUNDANCE OF AN INVASIVE SPECIES, THE ASIAN CLAM *CORBICULA FLUMINEA*

T17B Invasive Species - Session B

Chair(s): Lori Tolley-Jordan, ljordan@jsu.edu

Location: Room 551 A/B

- 13:45 Laske, S. M.; Niekum, T. E.; Hotchkiss, E. R.; Hays, R. J.; Hall, R. O.: MULTIPLE AQUARIUM INVADERS IMPACT NATIVE STREAM SPECIES

- 14:00 Kornis, M. S.; Weidel, B. C.; Harding, L.; Vander Zanden, M. J.: DIFFERENCES IN LIFE HISTORY AND IMPACT OF AN INVASIVE FISH, ROUND GOBY, IN THE GREAT LAKES AND THEIR TRIBUTARIES

- 14:15 Capps, K. A.; Flecker, A. S.: CHANGING NUTRIENT DYNAMICS IN RESPONSE TO INVASION: THE EFFECTS OF NON-NATIVE FISHES IN A TROPICAL STREAM

- 14:30 Adams, K. J.; Marks, J. C.: CAN THE NEGATIVE IMPACT OF EXOTIC CRAYFISH EXTEND INTO THE RIPARIAN ENVIRONMENT?

T18A Land Use and Non-Point Source Effects on Streams - Session A

Chair(s): Matthew S. Wooten, mwooten@sdl.org

Location: 554

- 13:45 Hill, R. A.; Hawkins, C. P.: EFFECTS OF NATURAL AND ALTERED CATCHMENT ATTRIBUTES ON STREAM TEMPERATURES OF THE WESTERN USA

- 14:00 Wooten, M. S.; Hawley, R. J.; Lee, B. D.; Wilson, C. L.: BIOLOGICAL COMMUNITY RESPONSE TO LAND USE AND STREAM CHANNEL DYNAMICS

- 14:15 Stewardson, M. J.: A BASIN SCALE INVESTIGATION OF NATURAL AND ANTHROPOGENIC INFLUENCES ON RIVER CHANNEL MORPHOLOGY

- 14:30 Benoy, G.; Brua, B.; Culp, J.; Graye, L.: ASSESSMENT OF HEADWATER STREAMS TO ISOLATE THE INFLUENCE OF CULTIVATED LAND ON AQUATIC BIOTA

- 14:45 Bhattacharai, S.; Jones, R. C.: INFLUENCE OF WATERSHED BMP COVERAGE ON PHYSICO-CHEMICAL PROPERTIES AND BENTHIC MACROINVERTEBRATES IN SUBURBAN STREAMS

- 15:00 Smith, R. E.; Lamp, W. O.: URBANIZATION IMPACTS ADULT CADDISFLIES (TRICHOPTERA) TO REDUCE RICHNESS OF IN-STREAM, LARVAL ASSEMBLAGES

- 15:15 O'Brien, J. M.; Burdon, F. J.; Greenwood, M. J.; Harding, J. S.; Niyogi, D. K.; McIntosh, A. R.: RIPARIAN MANAGEMENT PROTECTS STRUCTURE AND FUNCTION OF NEW ZEALAND URBAN STREAM ECOSYSTEMS

T39 Wetlands

Chair(s): Michael Grace, mike.grace@monash.edu

Location: 552 A/B

- 10:45 Steinman, A. D.; Ogdahl, M.; Uzarski, D. G.; Cooper, M.; Weinert, M.: THE INFLUENCE OF GREAT LAKES WATER LEVELS ON NUTRIENT RELEASE

- 11:00 Grace, M. R.; Findlay, S. E.: NUTRIENT DYNAMICS AND GREEN-HOUSE GAS GENERATION IN TIDAL, FRESHWATER WETLANDS ON THE HUDSON RIVER

- 11:15 Fuell, A. K.; Entekin, S. A.; Owen, S.; Owen, S.: DIFFERENCES IN LEAF DECOMPOSITION RATES AND DRIVING MECHANISMS BASED ON WETLAND TYPE AND SURROUNDING LAND USE

- 11:30 Parys, K. A.; Johnson, S. J.: FACTORS IMPACTING THE ESTABLISHMENT AND SURVIVORSHIP OF *CYRTOBAGOUS SALVINIAE* FOR THE BIOLOGICAL CONTROL OF *SALVINIA MINIMA*
- 11:45 Ning, N. S.; Nielsen, D. L.: ASSESSING THE POTENTIAL FOR ZOOPLANKTON AND AQUATIC PLANT COMMUNITIES TO RECOLONISE WETLANDS IMPACTED BY THE PRESENCE OF SULFIDIC SEDIMENTS
- 12:00 Golladay, S. W.; Martin, G.; Kirkman, K.; Hepinstall-Cymerman, J.: USING LANDSCAPE DEVELOPMENT INDEX (LDI) TO ASSESS ISOLATED WETLAND CONDITION IN AGRICULTURAL LANDSCAPES OF THE US GULF COASTAL PLAIN

Tuesday, 24 May 2011 - Orals

S01 Water Scarcity: Innovations in Policy, Politics and Science

Chair(s): Carol Couch, cacouch@uga.edu
Jerry Mead, mead@ansp.org
Christy Jo Geraci, cgeraci@nsf.gov

Location: Ballroom D

- 10:30 Magadza, C. H.: LAKE CHIVERO: A CASE STUDY OF GOVERNANCE
- 11:00 Walsh, C. J.; Fletcher, T. D.; Gosling, S. N.: BALANCING URBAN STORMWATER AS AN ENVIRONMENTAL FLOW PROBLEM AND AS AN UNREALIZED GLOBAL WATER RESOURCE
- 11:15 Alexander, L. C.; Fertik, R.; Kwok, R.; Pollard, A. I.: TRANSLATING BETWEEN SCIENCE AND POLICY: A PRACTICAL EXAMPLE FROM CLEAN WATER ACT IMPLEMENTATION AFTER SWANCC AND RAPANOS
- 11:30 Bowden, A. A.; Horsley, S. W.; Baker, E. S.: LINKING SCIENCE, PLANNING, AND POLICY: THE TAUNTON RIVER WATERSHED MANAGEMENT PLAN
- 11:45 Mead, J. V.: ECONOMIC GROWTH, SOLUTION OR CAUSE FOR WATER SCARCITY ISSUES: A CASE-STUDY OF 60 YEARS OF ECONOMIC ACTIVITY IN THE DELAWARE RIVER BASIN.
- 12:00 Goulden, C. E.: CLIMATE CHANGE AND POTENTIAL WATER SCARCITY IN NORTHERN MONGOLIA

S02 Human and Associated Health Issues Associated with Benthic Organisms and their Environment

Chair(s): Richard Merritt, merrittr@msu.edu
John Wallace, john.wallace@millersville.edu

Location: 552 A/B

- 13:30 Merritt, R. W.: BURULI ULCER DISEASE: A NEGLECTED EMERGING DISEASE WHERE TRANSMISSION REMAINS A MYSTERY
- 13:45 Benbow, M. E.; van Ravensway, J.; Tsonis, A. A.; Campbell, L. P.; Merritt, R. W.; Fyfe, J.; Haymen, J. A.; Johnson, P. D.; Qi, J.: CLIMATE, LANDSCAPE AND OCCUPATION INTERACTIONS FOR PREDICTING AN AQUATIC MYCOBACTERIAL DISEASE
- 14:00 Resh, V. H.: RIVER BLINDNESS: A DISEASE OF BIODIVERSITY
- 14:15 Knight, M.; Miller, A. N.; Ittiprasert, W.: SNAILS, SCHISTOSOMIASIS, AND THERMAL STRESS
- 14:30 Kaufman, M. G.: MOSQUITOES AND THE URBAN LANDSCAPE
- 14:45 Schott, R. J.: CRASH OF A CLASS FISHERY: IS THE SUSQUEHANNA RIVER SMALLMOUTH BASS FISHERY THE CANARY IN THE "COAL MINE"?
- 15:30 Brightbill, R. A.; Crawford, J. K.: EMERGING CONTAMINANTS IN PENNSYLVANIA WATERS
- 15:45 Stevenson, R. J.: SCALE OF OBSERVATIONS IS KEY FOR RESOLVING ALGAL RELATIONSHIPS, POLLUTANTS, AND HUMAN WELL BEING
- 16:00 Stout, B. M.: IMPACTS OF MOUNTAINTOP REMOVAL MINING ON THE ENVIRONMENT AND COMMUNITY HEALTH IN THE CENTRAL APPALACHIAN MOUNTAINS, USA
- 16:15 Wallace, J. R.: MARCELLUS SHALE GAS MINING: HOW WILL THIS 'CALIFORNIA GOLD RUSH' IN PENNSYLVANIA IMPACT THE ENVIRONMENT AND HUMAN HEALTH?
- 16:30 Kashian, D. R.; Vijayavel, K.: DETERMINING THE ROLE OF BENTHIC ALGAE BEACH DEPOSITS ON NEAR SHORE WATER QUALITY

- 16:45 Kincaid, D. W.; Rosi-Marshall, E. J.; Royer, T. V.; Bechtold, H. A.: CHRONIC EXPOSURE TO PHARMACEUTICAL COMPOUNDS SUPPRESSES IN-SITU ALGAL GROWTH AND MICROBIAL RESPIRATION

S03 Sustaining Freshwater Biodiversity and Ecosystem Services: Global Patterns, Processes, and Planning

Chair(s): John Kominoski, jkominoski@gmail.com

Location: 555 A/B

- 10:30 Marks, J. C.; Compson, Z.; Wymore, A.; Oneil, M.: RESTORING BIODIVERSITY AND ECOSYSTEM FUNCTION: COSTS AND BENEFITS
- 10:45 Milner, A. M.; Brown, L.; Hannah, D. M.; Beniston, M.: THE EFFECTS OF CHANGING WATER QUANTITY AND QUALITY IN A WARMING CLIMATE ON STREAM BIODIVERSITY AND ECOSYSTEM SERVICES WITHIN THE EUROPEAN ALPS.
- 11:00 Zhang, Y. X.: THE GLOBAL RELATIONSHIP OF FRESHWATER BIODIVERSITY, ECOSYSTEM SERVICES AND PEOPLE IN THE WORLD'S TROPICAL WATERSHEDS
- 11:15 Richter, B. D.: DAM IMPACTS ON DOWNSTREAM ECOSYSTEM SERVICES AND BIODIVERSITY
- 11:30 McIntyre, P. B.; Reidy Liermann, C.; Revenga, C.: QUANTIFYING THE RELATIONSHIP BETWEEN FISH SPECIES RICHNESS AND FISHERIES YIELDS IN THE WORLD'S RIVERS
- 11:45 Dodds, W. K.; Gerken, J. E.; Perkin, J. S.: GLOBAL HUMAN IMPACTS ON FRESHWATERS SCALED BY RELATIVE INFLUENCE ON ECOSYSTEM GOODS AND SERVICES
- 12:00 Palmer, M. A.; Tockner, K.: INTERNATIONAL CONSORTIUM TO PROMOTE FRESHWATER RESEARCH AND CONSERVATION

S05 Human impacts, stream biogeochemistry, and water quality

Chair(s): Todd Royer, troyer@indiana.edu
Alba Argerich, Alba.Argerich@oregonstate.edu
Laura Johnson, latjohn@indiana.edu

Location: 551 A/B

- 10:30 Sobota, D. J.; Compton, J. E.; Harrison, J. A.: TOWARD AN INVENTORY OF NITROGEN INPUTS TO THE UNITED STATES
- 10:45 Miller, M. P.; Wiele, S. M.; Brasher, A. M.: TRENDS IN CONCENTRATIONS OF TOTAL NITROGEN IN STREAMS AND RIVERS OF THE WESTERN UNITED STATES, 1990-2006
- 11:00 Argerich, A.; Johnson, S. L.; Sebestyen, S. D.; Rhoades, C. C.; Knoepf, J. D.; Greathouse, E. A.; Adams, M. B.; Campbell, J.; McDowell, W. H.; Likens, G. E.: TRENDS IN STREAM NITRATE CONCENTRATION AND RESPONSES TO DISTURBANCES IN HUMAN-IMPACTED BASINS ACROSS US
- 11:15 Cak, A. D.; Moran, E. F.: THE CHANGING THE AMAZON LANDSCAPE: DYNAMICS OF LAND USE AND LAND COVER IN SMALL WATERSHEDS OF THE BRAZILIAN AMAZON
- 11:30 Riis, T.; Dodds, W. K.; Kristensen, P. B.; Baisner, A.: NITROGEN CYCLING IN A LOWLAND MACROPHYTE STREAM
- 11:45 Arango, C. P.; Hatch, K.: RAPID ECOSYSTEM RESPONSE TO STREAM RESTORATION
- 13:30 Hale, R. L.; Turnbull, L.; Earl, S.; Grimm, N. B.: EFFECTS OF URBAN STORMWATER INFRASTRUCTURE AND SPATIAL SCALE ON NUTRIENT EXPORT AND RUNOFF FROM SEMI-ARID URBAN CATCHMENTS
- 13:45 Morse, N. B.; Wollheim, W. M.: INFLUENCE OF SUBURBANIZATION ON C, N AND P FLUXES IN RIVERS DRAINING TO THE PLUM ISLAND ESTUARY
- 14:00 Cornell, J. P.; Baxter, C. V.; Walker, M. J.; Bechtold, H. A.: IMPACTS OF RECREATIONAL LAND USE ON STREAM ECOSYSTEM STRUCTURE AND FUNCTION IN A SMALL URBAN FRINGE WATERSHED IN SOUTHEAST IDAHO, USA.
- 14:15 Costello, D. M.; Burton, G. A.: BIOFILM RESPONSE TO METAL-CONTAMINATED SEDIMENTS IS STREAM DEPENDENT
- 14:30 Veach, A. V.; Bernot, M. J.: TEMPORAL VARIATION OF PHARMACEUTICALS IN INDIANA STREAMS

S07 Linking Landscapes: Watersheds to the Ocean

Chair(s): David Johnson, dsjohnson@mbl.edu
Treda Grayson, Grayson.Treda@epamail.epa.gov
Marguerite Pelletier, Pelletier.Peg@epamail.epa.gov

Location: 552 A/B

- 10:30 Meyerson, L. A.: HYBRIDIZATION OF *PHRAGMITES AUSTRALIS* IN NORTH AMERICA
- 10:45 Dibble, K. L.; Meyerson, L. A.: PLANT INVASIONS IN COASTAL SALT MARSHES: QUANTIFYING THE EFFECT OF *PHRAGMITES AUSTRALIS* ON AQUATIC FOOD WEBS AND THE HEALTH OF FISH POPULATIONS
- 11:00 Fleeger, J.; Johnson, D. S.; Lockfield, K.; Pascal, P. Y.; Galvan, K.: DO GRASS SHRIMP EXERT TOP-DOWN CONTROL OVER BENTHIC MICROALGAE IN SALT MARSH ECOSYSTEMS?
- 11:15 Johnson, D. S.; Deegan, L. A.; Short, M. I.; Mui, A.: CONSUMING THE DEAD: IMPACTS OF DETRITIVORES AND NUTRIENT ENRICHMENT ON SALT MARSH LITTER
- 11:30 Wigand, C.: LINKS BETWEEN WATERSHED ACTIVITIES AND THE DEGRADATION OF COASTAL, TIDAL SALT MARSHES IN SOUTHERN NEW ENGLAND USA
- 11:45 Cole Ekberg, M. L.: EELGRASS IN NARRAGANSETT BAY: HISTORY, IMPACTS AND RESTORATION
- 12:00 Mather, M. E.: MIGRATORY FISH IN ESTUARINE LANDSCAPES: CAN ANADROMOUS FISH PROVIDE A GENERAL ECOLOGICAL FRAMEWORK FOR UNDERSTANDING DISTRIBUTION, HABITAT USE, AND MOVEMENT?

S11 Recent advances in hyporheic and parafluvial zone science

Chair(s): Thibault Detry, detry@lyon.cemagref.fr
Scott Larned, s.larned@niwa.co.nz

Location: 554

- 13:30 Duncombe, M. P.; Robertson, A.; Shaw, P.; Brierley, B.: INFLUENCE OF GRANULOMETRY ON MEIOFAUNAL/MACROFAUNAL COLONISATION IN A KARST STREAM HYPORHEIC ZONE: AN EXPERIMENTAL APPROACH
- 13:45 Detry, T.; Philippe, M.; Corti, R.; Larned, S. T.: COMPARISON OF INTERMITTENCE-HYPORHEIC INVERTEBRATE BIODIVERSITY MODELS BETWEEN FRANCE AND NEW ZEALAND
- 14:00 Larned, S. T.; Detry, T.: EFFECTS OF FLOW VARIABILITY ON PARAFLUVIAL ECOSYSTEM DYNAMICS
- 14:15 Rugel, K.; Golladay, S. W.; Jackson, C. R.: COMBINING ISOTOPIC AND PHYSIOCHEMICAL ANALYSES WITH REMOTE SENSING IMAGERY TO IDENTIFY GROUNDWATER/STREAM INTERACTION IN A KARST REGION
- 14:30 Ward, A. S.; Gooseff, M. N.; Binley, A. M.; Fitzgerald, M.; Voltz, T. J.; Singha, K.: HOW DO SOLUTES MOVE THROUGH HYPORHEIC ZONES? USING 3-DIMENSIONAL GEOPHYSICAL IMAGING TO QUANTIFY TRANSPORT PROCESSES IN HEADWATER STREAMS
- 14:45 Poole, G. C.; Helton, A. M.; Stanford, J. A.: FLOWPATHS, LAGRANGIAN HYDROLOGY, AND HYPORHEIC DYNAMICS; OR, WHY YOUR HYPORHEIC MONITORING DATA MIGHT NOT MAKE SENSE
- 15:30 Aubeneau, A. E.; Drummond, J. D.; Basu, N.; Schumer, R.; Tank, J. L.; Packman, A. I.: USING A STOCHASTIC MODELING FRAMEWORK TO DETERMINE THE IMPORTANCE OF EXTENDED HYPORHEIC TRAVEL TIMES FOR BIOGEOPROCESSING
- 15:45 Covino, T. P.; McGlynn, B. L.; Mallard, J.: MEASURING AND MODELING NUTRIENT UPTAKE KINETICS FROM AMBIENT TO SATURATION ACROSS A STREAM NETWORK: IMPLICATIONS FOR WATERSHED SCALE NITROGEN EXPORT
- 16:00 Packman, A. I.; Tank, J. L.; Schumer, R.; Covino, T. P.; McGlynn, B. L.; Drummond, J. D.; Aubeneau, A. E.; Simonson, K.; Patil, S.; Leong, D. N.: SYNTHESIS OF OBSERVATIONS AND MODELS TO IMPROVE CHARACTERIZATION OF LINKAGES BETWEEN RIVER FLOW, HYPORHEIC EXCHANGE, AND BIOGEOCHEMICAL TRANSFORMATIONS
- 16:15 Briggs, M. A.; Lautz, L. K.; McKenzie, J. M.: DISTRIBUTED TEMPERATURE SENSING OF SPATIAL AND TEMPORAL PATTERNS OF HYPORHEIC FLUX AND ASSOCIATED BIOGEOCHEMICAL CYCLING AROUND BEAVER DAMS

- 16:30 Mendoza-Lera, C.; Gerull, L.; Mutz, M.: ALGAL AND MICROBIAL ACTIVITY DISRUPT VERTICAL WATER FLUX IN SAND BED FLUMES
- 16:45 Lansdown, K.; Heppell, C. M.; Trimmer, M.; Ullah, S.; Heathwaite, A. L.; Binley, A.; Zhang, H.: QUANTIFYING DENITRIFICATION IN THE HYPORHEIC ZONE: AN *IN SITU* APPROACH

S15 Advancing exuviae as a research and conservation tool

Chair(s): Maria Aliberti Lubertazzi, mariaaaa@aol.com
Jason Bried, jbried@albanypinebush.org

Location: 553

- 13:30 Hunt, P. D.: USE OF EXUVIAE TO DETERMINE DRAGONFLY SPECIES DISTRIBUTIONS ALONG NEW HAMPSHIRE'S MAJOR RIVERS
- 13:45 White, E. L.; Diehl, S.; Zaremba, V.: THE SIGNIFICANCE OF EXUVIAL RECORDS TO THE NEW YORK DRAGONFLY AND DAMSELFLY SURVEY 2005-2009
- 14:00 Frost, K. A.; Morrison, F.; Martin, K.: MONITORING RARE DRAGONFLY SPECIES THROUGH EXUVIAE COLLECTIONS, CONNECTICUT RIVER, MA
- 14:15 Martin, K. H.: BARRIERS AT THE BANK: INFLUENCE OF RIVERBANKS ON EMERGENCE DISTANCE
- 14:30 Aliberti Lubertazzi, M. A.: THE USE OF EXUVIAL COLLECTION FOR ANALYZING SEASONAL EMERGENCE TRENDS OF *ANAX JUNIUS*
- 14:45 Kranzfelder, P.; Miller, J.; Ferrington, J. C.: EMERGENCE COMPOSITION AND TAXONOMIC RICHNESS OF CHIRONOMIDAE (INSECTA: DIPTERA) IN LAGUNA DEL TORTUGUERO AND QUEBRADA, TORTUGUERO NATIONAL PARK, COSTA RICA
- 15:30 Ferrington, L. C.: ASSESSMENTS OF CHIRONOMIDAE WITH COLLECTIONS OF SURFACE-FLOATING PUPAL EXUVIAE
- 15:45 Trybula, J.: THE UTILITY OF EXUVIAE IN POPULATION GENETIC ANALYSIS OF RIVERINE ODONATE SPECIES
- 16:00 Suluk, D. A.; Britten, H. B.; Monroe, E. M.: THE SKINNY ON THE USEFULNESS OF EXUVIAE FOR ASSESSING POPULATION SIZE, DEMOGRAPHICS, AND GENETIC STRUCTURE OF THE ENDANGERED HINE'S EMERALD DRAGONFLY
- 16:15 Bried, J. T.; D'Amico, F.; Samways, M. J.: THE DRAGONFLY DELUSION REVISITED: THE ROLE OF FALSE ABSENCES IN COMPARING ADULT AND EXUVIAL SURVEYS
- 16:30 Gaines, K. H.: BABY DRAGONFLIES SLEEP IN NESTS AND LEAVE THEIR PJS ON THE GROUND: EXUVIAL DIVERSITY REVEALS HIGHLY ORDERED LARVAL ODONATE COMMUNITIES

S17 Global Bioassessment Methods

Chair(s): Bob Hughes, Hughes.Bob@epamail.epa.gov
Daniel Buss, dbuss@ioc.fiocruz.br

Location: 556

- 13:30 Gurtz, M. E.; Carlisle, D. M.; Moulton II, S. R.: THE USE OF STANDARDIZED PROTOCOLS FOR COLLECTING AND PROCESSING BENTHIC MACROINVERTEBRATES IN THE NATIONAL WATER-QUALITY ASSESSMENT PROGRAM
- 13:45 Hughes, R. M.; Herlihy, A. T.: DEVELOPING A BENTHIC MACROINVERTEBRATE SAMPLING PROTOCOL FOR THE USEPA'S ENVIRONMENTAL MONITORING & ASSESSMENT PROGRAM
- 14:00 Strachan, S. A.; Armellin, A.; Baird, D.; Bibeault, J. E.; Carter, L.; Culp, J.; Glozier, N.; Grapentine, L.; McIvor, E.; Pascoe, T.: CANADIAN AQUATIC BIOMONITORING NETWORK (CABIN): ENVIRONMENT CANADA'S PROGRAM FOR NATIONALLY CONSISTENT AND COMPARABLE BIOMONITORING DATA
- 14:15 Keizer-Vlek, H. E.; Verdonschot, P.; Verdonschot, R.: HOW STANDARDIZED SHOULD BENTHIC MACROINVERTEBRATE SAMPLING PROTOCOLS BE?
- 14:30 Robinson, W. A.; Davies, P. E.; Nicholls, S. J.; Norris, R. H.: PROTOCOLS FOR LARGE SCALE BIOASSESSMENTS USING MACROINVERTEBRATES IN AUSTRALIA
- 14:45 Harding, J. S.: BENTHIC INVERTEBRATE SAMPLING PROTOCOLS FOR WADEABLE STREAMS IN NEW ZEALAND

- 15:30 Thirion, C.: BENTHIC MACROINVERTEBRATE SAMPLING AND ASSESSMENT PROCEDURES FOR THE SOUTH AFRICAN NATIONAL AQUATIC ECOSYSTEM HEALTH MONITORING PROGRAMME
- 15:45 Chon, T.; Bae, Y.: ECOLOGICAL INFORMATICS APPLIED TO EVALUATION OF METRICS BASED ON BENTHIC MACROINVERTEBRATE COMMUNITIES COLLECTED IN STREAMS AND LAKES
- 16:00 Buss, D. F.: LET THE RIVER CARRY AWAY: CHALLENGES AND PERSPECTIVES OF A BIOMONITORING PROGRAM TO ASSESS ECOLOGICAL CONDITION OF STREAMS AND RIVERS IN BRAZIL
- 16:15 Cover, M. R.: COMPARABILITY OF TARGETED-RIFFLE AND MULTI-HABITAT SAMPLING APPROACHES FOR ALGAE BIOASSESSMENT
- 16:30 Kroll, S. A.; Hallock, Jr., J. L.; Cano, M. C.; De las Heras, J.; Ringler, N. H.: THE EFFECTS OF HYDROPOWER DAMS ON THE MACROINVERTEBRATE COMMUNITY IN STREAMS IN TEMPERATE AND MEDITERRANEAN CLIMATES: SALMON RIVER, USA AND SEGURA RIVER, SPAIN

S19 A Bug's Life. Stream macroinvertebrates as mediators of stream ecosystem processes: insights gained from the work of J. Bruce Wallace

Chair(s): Amy Rosemond, rosemond@uga.edu
Jack Webster
Susan Eggert

Location: Ballroom D

- 13:30 Huryn, A. D.: THE MAKING OF A MAN: THE ROLE OF THE STUDY OF NATURAL HISTORY IN THE DEVELOPMENT OF THE ECOSYSTEM PERSPECTIVE OF J. BRUCE WALLACE
- 14:00 Benke, A. C.: SECONDARY PRODUCTION, QUANTITATIVE FOOD WEBS AND TROPHIC POSITION
- 14:15 Rosi-Marshall, E. J.; Hall, R. O.: EXAMINING THE RIVER CONTINUUM CONCEPT THROUGH THE LENS OF J. B. WALLACE
- 14:30 Whiles, M. R.; Lugthart, G. J.; Cuffney, T. F.: SANS BUGS: INVERTEBRATE REMOVAL MANIPULATIONS DEMONSTRATE THE SIGNIFICANCE OF INVERTEBRATES TO ECOSYSTEM FUNCTIONING OF HEADWATER STREAMS
- 14:45 Webster, J. R.; Eggert, S. L.: J. BRUCE WALLACE: FORTY-FOUR YEARS OF INVERTEBRATE RESEARCH AT COWEETA
- 15:30 Rosemond, A. D.; Davis, J. D.; Eggert, S. L.; Cross, W. F.; Wallace, J. B.: STEALING THE CRACKERS AND SPREADING THE PEANUT BUTTER: INSIGHTS INTO CARBON VS. NUTRIENT LIMITATION OF MACROINVERTEBRATES FROM WHOLE-STREAM EXPERIMENTS
- 15:45 Meyer, J. L.; Eggert, S. L.: FROM OBSERVATION, EXPERIMENT AND UNDERSTANDING TO APPLICATION AND ACTION
- 16:00 Wallace, J. B.: APPRECIATION, CORRECTION, AND REFLECTION

T01A Bioassessment - Session A

Chair(s): John Van Sickle, vansickle.john@epa.gov

Location: 555 A/B

- 13:30 Bailey, R. C.; Bailey, J. L.; Reynoldson, T. B.: USING WADEABLE STREAM SAMPLING PROTOCOLS IN LARGE RIVERS: IN OVER YOUR HEAD?
- 13:45 Mazor, R. D.; Stein, E.; Schiff, K.; Ode, P.: BIOASSESSMENT IN NONPERENNIAL STREAMS: DO TRADITIONAL ASSESSMENT TOOLS WORK IN TEMPORARY STREAMS?
- 14:00 Van Sickle, J.; Weber, M.: PREDICTING MACROINVERTEBRATE MMI FOR GEOGRAPHIC TARGETING
- 14:15 Moore, M. J.; Langrehr, H. A.; Angradi, T. R.: A SUBMERSED MACROPHYTE INDEX OF CONDITION FOR THE UPPER MISSISSIPPI RIVER
- 14:30 Mitchell, R.; Herlihy, A.; Peck, D.; Stoddard, J.; VanSickle, J.: DEVELOPMENT OF LITTORAL BENTHIC MACROINVERTEBRATE MULTI-METRIC INDEX (MMI) ACROSS MULTIPLE REGIONS FOR LAKES FROM THE NATIONAL LAKES ASSESSMENT
- 14:45 Jensen, N.; Entrekin, S.; Inlander, E.; Millican, D.: MACROINVERTEBRATE DIVERSITY AND DENSITY ALONG A GRADIENT OF GAS WELL DENSITIES IN ARKANSAS STREAMS

T01B Bioassessment - Session B

Chair(s): Katie Stammer, kstammle@uwo.ca

Location: 555 A/B

- 15:30 Qian, S. S.; Cuffney, T. F.: CHOOSING MODELS TO ESTIMATE UNCERTAINTY IN THE RESPONSE OF MACROINVERTEBRATE ASSEMBLAGES TO URBANIZATION
- 15:45 Bowman, M. E.: THE NEED FOR A STATISTICAL PARADIGM SHIFT IN ECOLOGY
- 16:00 Reynoldson, T. B.; Bailey, J. L.: RCA PREDICTIVE MODELLING 25 YEARS ON: TIME FOR A CHANGE?
- 16:15 Busse, L.; Gibson, D.; Ode, P.; Fleming, T.: MAKING THE TRANSITION FROM BIOASSESSMENT TO IMPROVING ECOLOGICAL CONDITIONS IN STREAMS: A RESOURCE MANAGEMENT PERSPECTIVE FROM THE SAN DIEGO WATER BOARD
- 16:30 Pretty, J. L.; Gunn, R. J.; Blackburn, J. H.; Jones, J. I.: ON THE AUDIT TRAIL: THE IMPORTANCE OF QUALITY ASSURANCE IN BIOASSESSMENT
- 16:45 Stammer, K. L.; Bailey, R. C.: ASSESSING THE EFFECTS OF HEADWATER ENCLOSURE ON FISH AND BENTHIC MACROINVERTEBRATES BY SAMPLING ONCE AT A LARGE SCALE AND REPEATEDLY AT A SMALL SCALE

T04A Climate Change - Session A

Chair(s): Anna Hamilton, Anna.Hamilton@tetrattech.com

Location: 556

- 10:30 Follstad Shah, J. J.; Bernhardt, E. S.; Roberts, B. J.; Mulholland, P. J.; Sinsabaugh, R. L.: FORECASTING EFFECTS OF INCREASED TEMPERATURE ON WHOLE-STREAM METABOLISM
- 10:45 Olafsson, O. P.; Gudbergsson, G.; Gislason, G. M.: POPULATION DENSITIES AND MOVEMENTS OF BROWN TROUT IN RELATION TO TEMPERATURE IN GEOTHERMAL STREAM SYSTEMS
- 11:00 Butler, M. G.; McEwen, D. C.: TUNDRA POND CHIRONOMIDS REDUCE LIFE CYCLE DURATION AS ARCTIC CLIMATE WARMS
- 11:15 Galbraith, H. S.; Blakeslee, C. J.; Lellis, W. A.: IDENTIFYING SPECIES HABITAT CONSTRAINTS IN RESPONSE TO A CHANGING ENVIRONMENT: PHYSIOLOGICAL TOLERANCE AND BEHAVIORAL PREFERENCES OF FRESHWATER MUSSELS
- 11:30 Robinson, C. T.; Thompson, C.; Freestone, M.; David, E.; Reyes, M.: GLACIAL RECESSION AND THE COLONIZATION OF NEWLY EMERGENT STREAMS BY MACROINVERTEBRATES
- 11:45 Dehedin, A.; Piscart, C.; Olivier, M. J.; Mimoun, D.; Marmonier, P.: GLOBAL CHANGE AND EFFECTS OF DROUGHT ON INTERSTITIAL COMMUNITIES OF ALLUVIAL WETLANDS
- 12:00 McShane, R. R.; Auerbach, D. A.; Poff, N. L.; Friedman, J. M.; Auble, G. T.: MULTI-SCALED ENVIRONMENTAL CONTROLS AND ECOLOGICAL RESPONSE OF RIPARIAN VEGETATION TO CLIMATE CHANGE IN THE WESTERN UNITED STATES

T21 Large River Ecology

Chair(s): Nels H. Troelstrup, Nels.Troelstrup@sdstate.edu

Location: 551 A/B

- 15:30 Beaulieu, J. J.; Shuster, W. D.; Rebolz, J. A.: WIND SPEED, WATER VELOCITY, AND RISING BUBBLES CONTROL GAS TRANSFER VELOCITY IN A LARGE RIVER
- 15:45 Cross, W. C.; Baxter, C. V.; Hall, Jr., R. O.; Kennedy, T. A.; Rosi-Marshall, E. J.; Wellard Kelly, H. A.: SPATIAL AND TEMPORAL PATTERNS OF RESOURCE STOICHIOMETRY IN THE COLORADO RIVER, GRAND CANYON: IMPLICATIONS FOR INVERTEBRATE PRODUCTION
- 16:00 Findlay, S.; Strayer, D.; Smith, S.; Curri, N.: CHANGE ANALYSIS FOR SUBMERGED AQUATIC VEGETATION IN THE TIDAL FRESHWATER HUDSON RIVER
- 16:15 Spear, R. M.; Counahan, D. F.; Kenderes, G. J.: PROBABILITY BASED LARGE RIVER MACROINVERTEBRATE SAMPLING IN PENNSYLVANIA
- 16:30 Troelstrup, N. H.; Kopp, A. A.; Kenner, S. J.; Foreman, C. S.: LONGITUDINAL PATTERNS IN CHEYENNE RIVER BENTHIC INVERTEBRATE COMMUNITIES: DO THE SOUTH DAKOTA BADLANDS CREATE A NATURAL DISCONTINUITY?

- 16:45 Taylor, D. L.; Bolgrien, D. W.; Pearson, M. S.; Angradi, T. R.; Hill, B. H.: HABITAT AND HYDROLOGICAL EFFECTS OF LOW-HEAD DAMS ON THE MISSISSIPPI AND OHIO RIVERS

T28 Periphyton

Chair(s): Paula C. Furey, pcfurey@hotmail.com

Location: 554

- 10:30 DeNicola, D. M.; Stapleton, M. G.: PERIPHYTON AS AN INDICATOR OF LONG-TERM CHANGES IN A WATERSHED RECEIVING PASSIVE TREATMENT FOR ACID MINE DRAINAGE
- 10:45 Furey, P. C.; Rosendahl, A. J.; Welter, J. R.: NUTRIENT CONSTRAINTS ON NITROGEN FIXATION AND ALGAL SPECIES ASSEMBLAGES IN AN N-LIMITED NORTHERN CALIFORNIA RIVER
- 11:00 White, J. Y.; Walsh, C. J.: RIPARIAN SHADING REDUCES ALGAL BIOMASS IN URBAN STREAMS, BUT STORMWATER RUNOFF IS LIKELY A STRONGER DRIVER OF ALGAL BIOMASS AND COMPOSITION
- 11:15 Mori, T.; Onoda, Y.; Kayaba, Y.: EFFECTS OF TURBID WATER ON PERIPHYTON VARY WITH VELOCITY
- 11:30 Parker, S. M.; Benstead, J. P.; Huryn, A. D.: SEASONAL PATTERNS OF EPILITHON AND EPIPHYTON COMMUNITY STRUCTURE IN AN ARCTIC SPRING STREAM
- 11:45 Liebowitz, D. M.; Cohen, M. J.; Heffernan, J. B.; Frazer, T. K.: ENVIRONMENTALLY MEDIATED TOP-DOWN CONTROL OF ALGAL PROLIFERATION IN FLORIDA'S SPRINGS
- 12:00 Tsoi, W. Y.; Sheldon, F.; Hadwen, W. L.: STRUCTURAL COMPLEXITY IN BENTHIC ALGAL COMMUNITIES IN SUBTROPICAL STREAMS

T42 Molecular Ecology

Chair(s): R. Edward DeWalt, edewalt@inhs.uiuc.edu

Location: 553

- 10:30 Heilveil, J. S.; Salvino, J. R.; Stevenson, R. M.: COMPARISON OF MITOCHONDRIAL DNA AND MICROSATELLITE MARKERS FOR DETERMINING FINE-SCALE GENETIC STRUCTURE IN THE MEGALOPTERAN *NIGRONIA SERRICORNIS* (SAY)
- 10:45 Stevenson, R. M.; Heilveil, J. S.: IDENTIFICATION OF MICROSATELLITE LOCI FOR *NIGRONIA SERRICORNIS* (SAY) AND THEIR UTILITY IN THE ORDER MEGALOPTERA
- 11:00 Yaegashi, S.; Watanabe, K.; Omura, T.: DISPERSAL PATTERN AND GENETIC STRUCTURE OF THE CADDISFLY *STENOPSYCHE MARMORATA* AT THE CATCHMENT SCALE REVEALED BY MICROSATELLITE MARKERS
- 11:15 DeWalt, R. E.; Giordano, R.: GLACIAL REFUGIA AND POST-GLACIAL DISPERSION OF THE WINTER STONEFLY *ALLOCAPNIA GRANULATA* (CLAASSEN)
- 11:30 Pessino, M.; Chabot, E. T.; Giordano, R.; DeWalt, R. E.: REFUGIUM USAGE AND POSTGLACIAL DISPERSION OF AN EASTERN NORTH AMERICAN AQUATIC INSECT, *ACRONEURIA FRISONI* STARK & BROWN (PLECOPTERA: PERLIDAE)
- 11:45 Bergner, J. L.; Bailey, J. P.; Collins, B. L.; Woolnough, D. A.; Zanatta, D. T.: DOES SCALE MATTER? A LANDSCAPE GENETICS INVESTIGATION OF TWO UNIONID SPECIES (BIVALVIA: UNIONOIDA)
- 12:00 Laumer, C. E.; Gray, D. P.; Giribet, G.: PHYLOGEOGRAPHIC STRUCTURE OF A STYGOPHILE FLATWORM PREDATOR AND THE LONG-TERM FUNCTIONAL STABILITY OF ALPINE GROUNDWATER ECOSYSTEMS

Wednesday, 25 May 2011 - Orals

S08 The influence of macroinvertebrates on nitrogen cycling in multiple biomes and ecosystems

Chair(s): Tim Hoellein, thoellein@luc.edu
Denise Bruesewitz, dbruesew@mail.utexas.edu

Location: 553

- 08:00 Levi, P. S.; Tank, J. L.: SEDIMENT NITRIFICATION RATES MAY ALTER THE NUTRIENT SUBSIDY PROVIDED BY PACIFIC SALMON IN GREAT LAKES' STREAMS

- 08:15 Rugenski, A. T.; Whiles, M. R.; Vanni, M. J.; Lips, K. R.; Pringle, C. M.; Kilham, S. S.: ECOLOGICAL STOICHIOMETRY OF MACROINVERTEBRATES IN NEOTROPICAL STREAMS BEFORE & AFTER AMPHIBIAN DECLINES: ARE BIODIVERSITY LOSSES ALTERING STREAM ECOSYSTEM PRO
- 08:30 Heisterkamp, I. M.; Larsen, L. H.; Schramm, A.; de Beer, D.; Stief, P.: NITROUS OXIDE EMISSION BY MARINE INVERTEBRATES: ANIMAL-ASSOCIATED BIOFILMS AS PRODUCTION SITES OF A GREENHOUSE GAS
- 08:45 Bullard, A. E.; Hershey, A. E.: CORBICULA FLUMINAE (ASIAN CLAM) FEEDING BEHAVIOR SERVICES IN AN URBAN STREAM DOWNSTREAM OF A WASTEWATER TREATMENT PLANT AND IMPLICATIONS FOR ECOSYSTEM SERVICES
- 09:00 Higgins, C. B.; Stephenson, K.; Tobias, C.; Piehler, M. F.; Smyth, A.; Dame, R.; Brown, B. L.: QUANTIFYING NUTRIENT REMOVAL THROUGH OYSTER, *CRASSOSTREA VIRGINICA*, AQUACULTURE IN CHESAPEAKE BAY, USA
- 09:15 Hoellein, T. J.; Zarnoch, C. B.; Mass, A.; Paramananda, N.; Mummini, S.; Law, D.; David, A.; Morgan, S.; Polaskey, S.: THE INFLUENCE OF THE EASTERN OYSTER, *CRASSOSTREA VIRGINICA*, ON SEDIMENT NITROGEN CYCLING ACROSS A NUTRIENT GRADIENT IN EUTROPHIC JAMAICA BAY, NEW YORK CITY

S10 Improving ecological understanding of multi-channel river ecosystems

Chair(s): Michelle Greenwood, m.greewood@niwa.co.nz
Gray, duncan.p.gray@gmail.com

Location: 552 A/B

- 08:00 Greenwood, M. J.: AQUATIC AND TERRESTRIAL COMMUNITIES IN A BRAIDED NEW ZEALAND RIVER: FLOODPLAIN HABITATS AND RESOURCE SUBSIDIES
- 08:15 Gray, D. P.: THE INFLUENCE OF DISPERSAL ON INVERTEBRATE RICHNESS IN BRAIDED RIVER FLOODPLAINS
- 08:30 Salgado, J.; Sayer, C. D.; Davidson, T. A.; Brooks, S. J.; Okamura, B.: DO FLOOD EVENTS OVERRIDE EUTROPHICATION EFFECTS IN A RIVERINE SYSTEM?
- 08:45 Capderrey, C.; Malard, F.; Douady, C.; Detry, T.: TESTING THE EFFECT OF HYPORHEIC FLOW PATHS ON THE DISTRIBUTION OF HYPORHEOS IN BRAIDED RIVERS
- 09:00 Valett, H. M.; Lorang, M. S.; Anderson, M. S.; Bansak, T. S.; Stanford, J. A.: LOCATION, LINKAGE, AND DISTURBANCE ON A FLOODPLAIN LANDSCAPE: SPATIAL INFLUENCES ON ECOSYSTEM FUNCTION
- 09:15 Hauer, F. R.; Valett, H. M.; Stanford, J. A.: A MULTISCALE ASSESSMENT OF REMOTE SENSING IMAGERY FOR FLOOD PLAINS (MARSIF)
- 09:30 Celi, J. E.; Hamilton, S. K.: HYDROLOGICAL CONTROLS OF RIVERINE ECOSYSTEMS OF THE NAPO RIVER (AMAZON BASIN): IMPLICATIONS FOR THE MANAGEMENT AND CONSERVATION OF BIODIVERSITY
- 09:45 Stanford, J. A.; Poole, G. C.; Helton, A. M.; Lorang, M. S.; Whited, D. C.; Hauer, F. R.; Ellis, B. K.: INTEGRATING EMPIRICAL, REMOTE SENSING AND SIMULATION SCIENCE TO INVESTIGATE DYNAMIC ECOSYSTEM PROCESSES OF LARGE, MULTI-CHANNEL FLOODPLAIN RIVERS

S14 Ecological Flows and Biological Indicators

Chair(s): Shann Stringer, shann.stringer@tetratech.com
Rebecca Tharme, rtharme@TNC.org

Location: Room 555 A/B

- 08:00 Poff, N. L.: THE NATURAL FLOW REGIME REVISITED: WHAT CAN THE PAST TELL US ABOUT THE FUTURE?
- 08:15 Carlisle, D. M.; Eng, K.; Wolock, D. M.: INDICATORS THAT MEAN SOMETHING: PREDICTABILITY AND BIOLOGICAL RELEVANCE OF HYDROLOGIC METRICS USED TO CHARACTERIZE STREAMFLOW
- 08:30 Vande Kamp, K. L.; Troelstrup, N. H.; Reitsma, K. D.; Smart, A.; Burckhard, S. R.: USING A QUANTITATIVE APPROACH TO EXPLAIN DIFFERENCES IN STREAM POWER AMONG ROSGEN'S STREAM CLASSES
- 08:45 Eng, K.; Carlisle, D. M.; Falcone, J.; Wolock, D. M.: ESTIMATING ANTHROPOGENIC ALTERATION OF HYDROLOGIC METRICS AT UNGAGED BASINS ACROSS THE CONTERMINOUS UNITED STATES

- 09:00 Doering, M.; Blaurock, M.; Robinson, C. T.: QUANTIFYING HISTORICAL CHANGES OF HABITAT HETEROGENEITY AND RESPIRATION IN AN ALPINE FLOODPLAIN USING AERIAL IMAGES
- 09:15 Kenner, J. G.; Riskin, M. L.; Charles, E. G.: ENVIRONMENTAL FLOW: LINKING GROUNDWATER USE AND FLOW-ECOLOGY RESPONSE RELATIONS
- 09:30 Alonso-EguíaLis, P. E.; Estrada-Carbajal, A. C.; Campbell, W. B.; González-Valencia, L.: ECOLOGICAL ANALYSIS OF THE MACROBENTHIC FAUNA DOWNSTREAM AREA OF PASO DE REINA HYDRO PROJECT IN THE ROO VERDE, OAXACA, MEXICO
- 09:45 Barrett, P. G.; Bilger, M. D.; Wells, S. W.; Lester, G.: EFFECTS OF A SIGNIFICANT, SHORT-TERM, FLOW REDUCTION ON THE KOOTENAI RIVER BENTHIC MACROINVERTEBRATE COMMUNITY, JULY-AUGUST 2008-2009

T01C Bioassessment - Session C

Chair(s): John Bailey, jbailey@northwestel.net

Location: Ballroom D

- 10:30 Johnson, R. K.: ASYMMETRIC PATTERNS OF STREAM DIVERSITY AND ASSEMBLAGE COMPLEXITY TO RESOURCE AND HABITAT CHARACTERISTICS
- 10:45 Zheng, L.; Jessup, B.: DIATOMS AND BUGS TELL DIFFERENT STORIES: DIAGNOSIS OF IMPAIRMENT
- 11:00 Waite, I. R.; Munn, M. D.; Black, R. W.: APPLICATIONS OF AN AGRICULTURAL INTENSITY INDEX (NATIONAL AND REGIONAL) TO WATER QUALITY, INVERTEBRATE AND ALGAL METRICS FROM SMALL STREAMS IN THE U.S.
- 11:15 Gillett, N. D.; Pan, Y.; Manoylov, K. M.; Stevenson, R. J.: THE ROLE OF LIVE DIATOMS IN BIOASSESSMENT: A LARGE-SCALE STUDY OF WESTERN US STREAMS
- 11:30 Bailey, J. L.: HYDRACHNIDIA MIGHT BE EFFECTIVE INDICATORS OF PLACER GOLD MINING EFFECTS.
- 11:45 Lewis, G. D.; Washington, V.; Lear, G.; Neale, M.; Curran, J.; Fan, V.: A BIOFILM BASED BACTERIAL COMMUNITY INDEX FOR ECOSYSTEM MONITORING

T03A Biogeochemistry - Session A

Chair(s): Alison P. Appling, apa3@duke.edu

Location: Ballroom D

- 08:00 Appling, A. P.; Bernhardt, E. S.; Stanford, J. A.: PATTERNS AND DRIVERS OF NITROGEN AVAILABILITY IN FLOODPLAIN SOILS
- 08:15 Kinsman-Costello, L. E.; O'Brien, J. M.; Hamilton, S. K.: EFFECTS OF SEDIMENT DRYING AND REWETTING ON PHOSPHORUS BINDING WITH IRON IN WETLAND SEDIMENTS: RECONCILING APPARENT CONTRADICTIONS
- 08:30 Woodward, K. B.; Fellows, C. S.; Sheldon, F.; Mitrovic, S.: INUNDATION FREQUENCY AFFECTS TERMINAL ELECTRON ACCEPTING PROCESSES OCCURRING IN INUNDATED FLOODPLAIN SOILS
- 08:45 Brian Grebliunas, B. D.; William Perry, W. L.: ENHANCING DENITRIFICATION IN CONSTRUCTED WETLANDS THROUGH MANIPULATION OF NUTRIENT STOICHIOMETRY
- 09:00 Stelzer, R. S.; Bartsch, L. A.: NITRATE PROCESSING IN DEEP SEDIMENTS OF A CENTRAL WISCONSIN RIVER NETWORK
- 09:15 Kunza, L. A.; Hall, R. O.: NUTRIENT ADDITIONS ALTER NITROGEN FIXATION RATES IN WYOMING STREAMS
- 09:30 Tall, L.; Maranger, R.: NET N₂ FLUXES IN CYANOBACTERIAL MATS: RATES AND CONTROLS IN A LARGE RIVER ECOSYSTEM
- 09:45 Simon, K. S.; Rigsby, C. M.; Ely, D. T.; Mineau, M. M.; Ohno, T.; Fernandez, I. J.; Norton, S. A.; Valett, H. M.: MICROBIAL RESPONSE TO ALTERED DISSOLVED ORGANIC MATTER CHEMISTRY ARISING FROM WATERSHED NITROGEN ENRICHMENT AND ACIDIFICATION

T04B Climate Change - Session B

Chair(s): Chris T. Robinson, robinson@eawag.ch

Location: 556

- 08:00 Simpson, J. C.: SALT MARSHES AND CLIMATE CHANGE: PLANNING FOR THE FUTURE

- 08:15 Stamp, J. D.; Hamilton, A.; Bierwagen, B.; Zheng, L.; Gerritsen, J.: THE NUTS AND BOLTS OF THE NEW ENGLAND/NEW YORK CLIMATE CHANGE MONITORING NETWORK – WHAT WILL IT LOOK LIKE?
- 08:30 Bierwagen, B. G.; Hamilton, A.; Stamp, J.: MONITORING TO DETECT CLIMATE CHANGE EFFECTS IN RIVERS AND STREAMS: A FRAMEWORK FOR NEW ENGLAND
- 08:45 Hamilton, A. T.; Bierwagen, B. G.; Stamp, J. D.: CLIMATE CHANGE VULNERABILITY ASSESSMENT FRAMEWORK FOR BIOMONITORING – NEW ENGLAND EXAMPLE
- 09:00 Davis, J. M.; Minshall, G. W.; Baxter, C. V.; Olson, N. E.; Tang, C.; Crosby, B. T.: PREDICTING EFFECTS OF EARLIER RUNOFF ON PERIPHYTON: IMPLICATIONS OF CLIMATE CHANGE FROM A 20-YEAR STUDY OF WILDERNESS STREAMS IN IDAHO
- 09:15 Arismendi, I. D.; Johnson, S.; Dunham, J.; Haggerty, R.: LACK OF COHERENCE IN LONG-TERM TRENDS OF STREAM TEMPERATURES IN LEAST-DISTURBED WATERSHEDS OF WESTERN NORTH AMERICA
- 09:30 Jaehnig, S. C.; Gies, M.; Domisch, S.; Frueh, D.; Hering, D.; Haase, P.: A TRAIT-BASED APPROACH TO ASSESS CLIMATE CHANGE EFFECTS ON STREAM BIOTA
- 09:45 Pyne, M. L.; Poff, N. L.: PROJECTING CHANGES IN BENTHIC COMMUNITY STRUCTURE TO RAPID CLIMATE CHANGE: A TRAITS-BASED APPROACH

T06A Community Ecology - Session A

Chair(s): Ayesha S. Burdett, aburdett@unm.edu

Location: 554

- 08:00 Lento, J.; Monk, W. A.; Culp, J. M.; Curry, R. A.; Cote, D.; Luiker, E.: THE RESPONSE OF ARCTIC STREAM BENTHIC MACROINVERTEBRATE COMMUNITIES TO ENVIRONMENTAL DRIVERS AT NESTED SPATIAL SCALES
- 08:15 Starr, S. M.; Sponseller, R. A.; Benstead, J. P.: SPATIAL AND TEMPORAL PATTERNS OF INVERTEBRATE COMMUNITY STRUCTURE IN AN UNREGULATED RIVER FLOODPLAIN.
- 08:30 Rios-Touma, B.; Encalada, A. C.; Gonzalez, F.; Rieradevall, M.; Prat, N.: IS FLOW SHAPING THE STRUCTURE AND FUNCTION OF MACROINVERTEBRATE COMMUNITIES AT AN ANDEAN STREAM?
- 08:45 Heatherly II, T.; Thomas, S. A.; Flecker, A. S.; Pringle, C. M.; El Sabaawi, R.; Marshall, M. C.; Reznick, D.: TEMPORAL DYNAMICS OF NEOTROPICAL STREAM MACROINVERTEBRATES: QUANTIFYING THE INFLUENCE OF FREQUENT DISTURBANCE
- 09:00 Mykrä, H.; Hawkins, C. P.: THE INFLUENCE OF HUMAN DISTURBANCE ON BETA DIVERSITY OF STREAM MACROINVERTEBRATES: DOES ENVIRONMENTAL DEGRADATION HOMOGENIZE ASSEMBLAGES?
- 09:15 Barker, J. E.; Luken, J. O.; Hutchens, J. J.: INVERTEBRATE ASSEMBLAGES ASSOCIATED WITH WATER HYACINTH ROOTS IN THE WACCAMAW RIVER, SOUTH CAROLINA
- 09:30 Bergey, E. A.; Cooper, J. T.: WHEN ROCKS ARE ROUGH, THE ALGAE ARE THERE; MAYFLIES WANDER, AND STONEFLIES HARDLY CARE
- 09:45 Warburton, H. J.; McIntosh, A. R.; McHugh, P. A.; Jellyman, P. G.: ENVIRONMENTAL DETERMINANTS OF BODY MASS-ABUNDANCE RELATIONSHIPS IN STREAM ECOSYSTEMS: THE INFLUENCE OF HABITAT SIZE ON COMMUNITY STRUCTURE AND STABILITY

T06B Community Ecology - Session B

Chair(s): Rebecca Bixby, bbixby@unm.edu

Location: 554

- 10:30 Smith, N. D.; Golladay, S. W.: WETLAND HYDROLOGY AND AQUATIC MACROINVERTEBRATE ASSEMBLAGES IN THREE TYPES OF SEASONALLY INUNDATED WETLANDS
- 10:45 Sheldon, A. L.: TRAIT CONSERVATISM, FLEXIBILITY AND ENDEMISM IN OUACHITA STONEFLIES
- 11:00 Burdett, A. S.; Turner, T. F.: OF DROUGHTS AND FLOODING RAINS: AQUATIC INVERTEBRATE COMMUNITY ECOLOGY IN A DRYLAND RIVER (RIO GRANDE, NEW MEXICO)
- 11:15 Bixby, R. J.; Lopez-Brody, N.: ROLE OF DESICCATION PERIODICITY IN SHAPING ALGAL COMMUNITY HETEROGENEITY IN AN ARIDLAND RIVER

- 11:30 Verdonschot, R.; Verdonschot, P.: WING LENGTH PLAYS A ROLE IN SHAPING LENTIC INSECT ASSEMBLAGES
- 11:45 Larson, E. R.; Wood, K. A.; Olden, J. D.: MORPHOLOGICAL VARIATION IN SIGNAL CRAYFISH *PACIFASTACUS LENIUSCULLUS* POPULATIONS ACROSS THE PACIFIC NORTHWEST

T11 Eutrophication

Chair(s): Mark D. Munn, mdmunn@usgs.gov

Location: 552 A/B

- 10:30 Frey, J. W.; Bell, A. H.; Hambrook Berkman, J. A.; Lorenz, D. L.: ASSESSMENT OF NUTRIENT ENRICHMENT USING BIOLOGICAL RESPONSES IN WADABLE STREAMS IN ECOREGIONS SURROUNDING THE GREAT LAKES
- 10:45 Munn, M. D.; Bales, J. D.: ASSESSING STREAM METABOLISM IN AGRICULTURALLY DOMINATED LANDSCAPES
- 11:00 Bouchard, Jr., R. W.; Heiskary, S.; Markus, H.: DEVELOPMENT OF NUTRIENT CRITERIA FOR THE PROTECTION OF AQUATIC LIFE IN MINNESOTA RIVERS USING A MULTIPLE LINES OF EVIDENCE APPROACH
- 11:30 Swanson, J. L.; Holz, J. C.: BENTHIC MACROINVERTEBRATE RESPONSE TO THE RESTORATION OF A HYPEREUTROPHIC MIDWESTERN RESERVOIR
- 11:45 Nogaro, G.; Hammerschmidt, C. R.; Burgin, A. J.: INFLUENCE OF ALUM ADDITION ON METAL AND NUTRIENT CYCLING IN GRAND LAKE SAINT MARY'S, OHIO

T18B Land Use and Non-Point Source Effects on Streams - Session B

Chair(s): Sally A. Entrekin, sentrekin@uca.edu

Location: 551 A/B

- 08:00 Vander Laan, J. J.; Hawkins, C. P.: RELATIVE AND CUMULATIVE EFFECTS OF STRESSORS ON MACROINVERTEBRATE ASSEMBLAGES IN NEVADA STREAMS
- 08:15 Yates, A. G.; Corriveau, J.; Culp, J. M.; Chambers, P. A.: IMPORTANCE OF FLOW-PATHS AND VEGETATED BUFFER STRIPS IN DETERMINING FERTILIZER CONTRIBUTION TO IN-STREAM NUTRIENT LOADS
- 08:30 Detenbeck, N. E.; Hayes, L.; Rosiu, C.; Legros, J.; Sherman, A.: DISTINGUISHING THE EFFECTS OF LOCAL POINT SOURCES FROM THOSE CAUSED BY UPSTREAM NONPOINT SOURCE (NPS) INPUTS
- 08:45 Burdon, F. J.; Harding, J. S.; McIntosh, A. R.: FINE SEDIMENT POLLUTION IN AN AGRO-ECOLOGICAL NETWORK: YOU DON'T GET TO FARM INTENSIVELY WITHOUT HARMING A FEW STREAMS
- 09:00 Sobczak, W. V.: URBAN STREAM SYNDROME AND THE IMPAIRMENT OF ECOSYSTEM SERVICES: NEW ENGLAND'S BLACKSTONE RIVER CONTINUUM
- 09:15 Entrekin, S. A.; Adams, G. L.; Adams, S. R.; Evans-White, M. A.; Johnson, B. R.; Austin, B. J.; Hagenbuch, E.; Jensen, E. J.; Stearman, L. W.: POTENTIAL THREATS OF SHALE GAS DEVELOPMENT TO SURFACE WATERS
- 09:30 Lynch, J. S.; De Jong, G. D.; Canton, S. P.; Gensemer, R. W.; Wolf, C.: LONGITUDINAL EFFECTS OF COAL MINING/VALLEY FILLS ON BENTHIC INVERTEBRATE COMMUNITIES OF STREAMS IN SOUTHERN WEST VIRGINIA
- 09:45 Mlambo, M. C.; Paavola, R.; Muotka, T.: THE EFFECTS OF INTENSIVE FOREST BIOMASS REMOVAL ON STREAM BIOTIC COMMUNITIES

T24A Management of Aquatic Systems - Session A

Chair(s): Mary Ogdahl, ogdahlm@gvsu.edu

Location: 556

- 10:30 Paul, M. J.; Hicks, M. B.: USING DISSOLVED OXYGEN DYNAMICS TO DERIVE NUTRIENT CRITERIA: TRIED, TRUE, AND TROUBLESOME
- 10:45 Schuwirth, N.; Stamm, C.; Reichert, P.: AN ATTEMPT TO PREDICT THE COMPOSITION OF THE BENTHIC INVERTEBRATE COMMUNITY IN STREAMS

- 11:00 Nielsen, C. D.; Ladewig, M. D.: MARINE BENTHIC ANALYSIS NEEDED FOR OFFSHORE PERMITTING IN THE U.S.
- 11:15 Geraci, C. J.: HOW CYBERINFRASTRUCTURE & COLLECTIONS INVESTMENTS EMPOWER BENTHIC SCIENCE
- 11:30 Ogdahl, M. E.; Steinman, A. D.: LONG-TERM ECOLOGICAL RESPONSES TO ALUM TREATMENT IN SPRING LAKE, MICHIGAN

T33A Restoration Ecology - Session A

Chair(s): Jack Williams, jwilliams@tu.org

Location: Room 555 A/B

- 10:30 Costigan, K. H.; Daniels, M. D.: STREAM RESTORATION: USING LANDSCAPE ECOLOGY CONCEPTS TO DEVELOP A NEW PRIORITIZATION FRAMEWORK
- 10:45 Williams, J. E.; Hatch, J.; Henery, R.; Purdy, S. E.: FINDING COMMON GROUND: TROUT RESTORATION TO IMPROVE HYDROLOGIC FUNCTION
- 11:00 Sagawa, S.; Negishi, J. N.; Kayaba, Y.; Ikeya, K.; Kume, M.; Kitamura, J.; Shirae, K.: RESTORATION STRATEGIES OF FLOODPLAIN WATER BODIES FOR CONSERVATION OF ENDANGERED DEEPBODY BITTERLING FISH
- 11:15 Scholl, E. A.; Rantala, H. M.; Whiles, M. R.; Wilkerson, G. V.: INFLUENCE OF WATER VELOCITY ON SNAG-DWELLING MACROINVERTEBRATES IN A SOUTHERN ILLINOIS RIVER
- 11:30 McCormick, M. A.; Gangloff, M. M.: EFFECTS OF SMALL DAMS ON NORTH CAROLINA MUSSEL ASSEMBLAGES

T41 Influences on Invertebrate Life Histories

Chair(s): Jill Lancaster, jill.lancaster@monash.edu

Location: 553

- 10:30 Lob, D. W.; Silver, P.: INTERACTIVE EFFECTS OF SALINITY AND TEMPERATURE ON LIFE-HISTORY TRAITS OF *CHIRONOMUS RIPARIUS*
- 10:45 Narr, C. E.; Krist, A. C.: DIET QUALITY INFLUENCES TREMATODE PARASITE REPLICATION AND STOICHIOMETRY IN A SNAIL HOST
- 11:00 Funk, D. H.; Sweeney, B. S.; Jackson, J. K.: DOES A GIVEN TEMPERATURE STIMULATE THE SAME MAYFLY GROWTH AND DEVELOPMENT IN STATIC VERSUS FLUCTUATING TEMPERATURE REGIMES?
- 11:15 Lancaster, J.; Downes, B. J.; Arnold, A.: LASTING EFFECTS OF MATERNAL BEHAVIOUR ON THE DISTRIBUTION OF A DRIFTING STREAM INSECT

Wednesday, 25 May 2011 - Posters

All poster sessions take place in Exhibit Hall D of the Rhode Island Convention Center from 13:45–16:00.

S03 Sustaining Freshwater Biodiversity and Ecosystem Services: Global Patterns, Processes, and Planning

- Villalobos, L. M.; Gibson, A. M.; Caldwell, C.; Snyder, E. B.: ECOSYSTEM RESPONSES TO LOW-HEAD DAM REMOVAL: ASSESSMENT OF PHYSICAL HABITAT, WATER CHEMISTRY, AND MACROINVERTEBRATES
- Van Oosten-Siedlecka, A. M.; Besse-Lototskaya, A.; Verdonschot, P. E.: THE EFFECTS OF SHADE ON WATER TEMPERATURE AND INVERTEBRATES IN LOWLAND STREAMS
- Dew, B. J.; Sobczak, W. V.; Jones, J. M.: ORGANIC MATTER RETENTION AND METABOLISM IN THE URBANIZED HEADWATERS OF NEW ENGLAND'S BLACKSTONE RIVER
- Shragge, B.; Wooley, S.; Antolak, B.; Cover, M.: THE ROLE OF MISTLETOE IN LEAF LITTER DECOMPOSITION IN A LOWLAND RIVER
- Jones, J. M.; Sobczak, W. V.; Dew, B. J.: IMPACT ON REGIONAL CARBON CYCLING: PREFERENTIAL BREAKDOWN OF SPECIES-SPECIFIC DETRITUS IN SMALL NEW-ENGLAND STREAMS

S05 Human impacts, stream biogeochemistry, and water quality

- 6 [Hood, J. L.](#); Anderson, M.; Taylor, W. D.: THE INFLUENCE OF WEATHER ON THE INTER-ANNUAL VARIATION IN RIVERINE MACROPHYTE BIOMASS AT THE REACH SCALE
- 7 [Paul, J. S.](#); Kennedy, J. H.: LIFE HISTORY, SECONDARY PRODUCTION, AND ECOLOGY OF CHEUMATOPSYCHE LASIA ROSS (TRICHOPTERA: HYDROPSYCHIDAE) WITH RESPECT TO A WASTEWATER TREATMENT FACILITY
- 8 [Bechtold, H. A.](#); Rosi-Marshall, E. J.; Warren, D. R.; Cole, J. J.: SPATIALLY EXPLICIT MEASURES OF INCOMING SOLAR RADIATION USING RHODAMINE WT
- 9 [Hinsey, J. A.](#); Bowles, D. E.; Dodd, H. R.; Cribbs, J. T.: GEOLOGIC INFLUENCE ON AQUATIC INVERTEBRATE COMMUNITY STRUCTURE AND INTEGRITY IN OZARK TRIBUTARIES AT BUFFALO NATIONAL RIVER AND OZARK NATIONAL SCENIC RIVERWAYS
- 10 [Manning, D. W.](#); Kominoski, J. S.; Rosemond, A. D.: SUBSTRATE CARBON TO NUTRIENT STOICHIOMETRY AS A DRIVER OF MICROBIAL RESPIRATION IN STREAMS
- 11 [Anderson, F. W.](#); Mead, J. V.: MARCELLUS SHALE: EFFECTS OF NATURAL GAS WELL DENSITY ON STREAM HEALTH INDICATORS
- 12 [Farrar, D. B.](#); Norton, S.: CAUSAL DIAGRAMS AND GEOSPATIAL ANALYSES IN EVALUATION OF STRESSOR-RESPONSE RELATIONSHIPS BASED ON FIELD DATA
- 13 [Raffel, A. E.](#); Bernot, M. J.: FREQUENCY AND ABUNDANCE OF METOLACHLOR IN CENTRAL INDIANA FRESHWATERS
- 14 [Hanley, K. W.](#); Wollheim, W. M.; Salisbury, J.; Aiken, G. R.: UNDERSTANDING CONTROLS ON DOC FLUX AND LABILITY IN UNITED STATES WATERSHEDS
- 15 [Canesi, K. L.](#); Henderson, N. D.; Christian, A. D.: AQUATIC MACROINVERTEBRATES AS AN INDICATOR OF WATER QUALITY IN THE NEPONSET RIVER WATERSHED
- 16 [Sobotka, M. J.](#); Bukaveckas, P. A.: NUTRIENT PARTITIONING BETWEEN DISSOLVED AND PARTICULATE PHASES DURING SIMULATED SEDIMENT RE-SUSPENSION EVENTS.
- 17 [Kenney, M. M.](#); O'Reilly, C. M.: THE IMPACT OF DAMS ON THE QUANTITY AND QUALITY OF SUSPENDED ORGANIC MATERIAL IN STREAMS
- 18 [Smith, L. R.](#); Frey, J. W.; Bernot, M. J.: PHARMACEUTICAL TRANSPORT AND PERSISTENCE IN A CAFO-INFLUENCED CENTRAL INDIANA STREAM
- 19 [Douglass, R. L.](#); Cohen, M. J.: DEGREE OF STOICHIOMETRIC HOMEOSTATIC REGULATION BY ALGAL AND VASCULAR PLANT SPECIES ACROSS A N:P GRADIENT
- 20 [Stewart, R. J.](#); Wollheim, W. M.; Polsky, C.; Pontius, R. G.; Hopkinson, C. S.: MODELING THE IMPACT OF LAND COVER CHANGE AND WATER WITHDRAWALS ON RUNOFF AND N RETENTION IN THE IPSWICH RIVER, MASSACHUSETTS
- 21 [Davis, R. T.](#); Tank, J. L.; Roley, S. S.; Stephen, M. L.: THE INFLUENCE OF FLOODPLAIN RESTORATION ON WATER COLUMN TURBIDITY IN MIDWESTERN AGRICULTURAL STREAMS
- 22 [Parr, T. B.](#); Cronan, C.; Ohno, T.; Simon, K.: PATTERNS OF DISSOLVED ORGANIC MATTER COMPOSITION ALONG AN URBANIZATION GRADIENT IN MAINE

S11 Recent advances in hyporheic and parafluvial zone science

- 23 [Drummond, J. D.](#); Aubeneau, A. F.; Harvey, J. W.; Packman, A. I.; Herberg, E. R.: PREDICTING FINE PARTICLE MIGRATION IN STREAMS THROUGH DIRECT MEASUREMENTS OF DEPOSITION AND RESUSPENSION RATES
- 24 [Hamidi, J. C.](#); McGrath, K. E.: IMPACT OF STREAM RESTORATION STRUCTURES ON HYPORHEIC MACROINVERTEBRATE COMMUNITIES IN NEW YORK STREAMS
- 25 [Amerson, B. E.](#); Poole, G. C.: PRELIMINARY SIMULATION OF HYPORHEIC HYDROLOGY SUGGESTS SYSTEMATIC CHANGES IN HYPORHEIC FLOW PATH RESIDENCE TIME IN RESPONSE TO REACH-SCALE CHANNEL RESTORATION

S12 Promoting evidence-based methods in environmental research and management

- 26 [Norton, S. B.](#); Schofield, K. S.; Griffith, M. B.; Alexander, L. C.; Pollard, A. I.; Suter, G. W.; LeDuc, S. D.: USING CONCEPTUAL DIAGRAMS TO SYNTHESIZE AND COMMUNICATE EVIDENCE OF THE EFFECTS OF MOUNTAINTOP MINES AND VALLEY FILLS ON AQUATIC ECOSYSTEMS

S14 Ecological Flows and Biological Indicators

- 27 [Orlofske, J. M.](#); Baird, D. J.: AQUATIC INSECT COMMUNITY TRAIT AND TAXONOMIC COMPOSITION IN MESOSCALE FLOW HABITATS
- 28 [Julie, J. E.](#); Entekin, S. E.: DOES REFUGE AFFECT MACROINVERTEBRATE COMMUNITIES IN INTERMITTENT OZARK STREAMS?
- 29 [Weaver, P. C.](#); Hammer, K. A.; Lazorchak, J. M.; Funk, D. H.; Buchwalter, D. B.; Johnson, B. R.: LABORATORY CULTURE OF CENTROPTILUM TRIANGULIFER (EPHEMEROPTERA: BAETIDAE) USING A MIXTURE OF THREE DIATOMS AND SENSITIVITY TO STANDARD REFERENCE TOXICANTS.

S18 Shifting Baselines: Historical Analysis of Lotic Ecosystems

- 30 [Russell, D. M.](#); Dodds, W. K.; Grudzinski, B.; Daniels, M. D.: SEDIMENT QUANTITY IN PRISTINE PRAIRIE STREAMS: DO BURNING AND BISON HAVE AN EFFECT?

T01 Bioassessment

- 31 [Snyder, C. D.](#); Hitt, N. P.; Smith, D. R.; Daily, J. P.: WHEN IS THE BEST SEASON TO SAMPLE BENTHIC MACROINVERTEBRATES IN ORDER TO MAXIMIZE THE SENSITIVITY OF MULTI-METRIC STREAM CONDITION INDICES?
- 32 [Vinke, K. M.](#): CHALLENGES IN NORTHERN AQUATIC SAMPLING: AN INVESTIGATION INTO PROTOCOLS FOR A SUSTAINABLE STREAM BIOMONITORING PROGRAM IN THE SAHTU, NWT
- 33 [Smucker, N. J.](#); Detenbeck, N. E.: WATERSHED ALTERATION IMPACTS TO BENTHIC DIATOM ASSEMBLAGES IN STREAMS
- 34 [Flotemersch, J. E.](#); [North, S. H.](#); Blocksom, K. A.; Tarquinio, E.; Grayson, T.: SAMPLING BENTHIC MACROINVERTEBRATES IN LOW-GRADIENT STREAMS: DOES METHOD MAKE A DIFFERENCE?
- 35 [Pilgrim, E. M.](#); Miller, P.; Sweeney, B.: IMPROVING SUCCESS OF DNA BARCODING FOR MIXED AQUATIC INSECT
- 36 [Gray, J. B.](#); Vis, M. L.: RESPONSE OF A DIATOM ASSEMBLAGE TO TRANSPLANTATION FROM AN UNIMPAIRED STREAM TO ONE RECEIVING TREATMENT FOR ACID MINE DRAINAGE
- 37 [Kosnicki, E.](#); Prusha, B. A.; Sterrett, S. C.; Grosse, A. M.; Sefick, S. A.; Jerrell, M. S.; Tuberville, T. D.; Paller, M. H.; Feminella, J. W.: PRELIMINARY FISH OBSERVED TO EXPECTED (O/E) MODELS FOR THE SAND HILLS SUBCOREGION OF THE SOUTHEASTERN UNITED STATES
- 38 [Boward, D. M.](#); Kashiwagi, M. T.; Herron, K.: SAMPLING FRESHWATER STREAM BENTHIC MACROINVERTEBRATES: DOES HABITAT SELECTION REALLY MATTER?
- 39 [Schneid, B. P.](#); Helms, B. S.; Feminella, J. W.: ASSESSMENT OF BENTHIC MACROINVERTEBRATE TRAIT DIVERSITY ALONG A GRADIENT OF LAND USE IN PIEDMONT STREAMS OF WESTERN GEORGIA, USA.

T02 Biodiversity

- 40 [Adams, N. E.](#); Inoue, K.; Seidel (deceased), R. A.; Lang, B. K.; Berg, D. J.: DNA BARCODING REVEALS TWO DIVERSIFICATIONS OF *GAMMARUS* AMPHIPODS (CRUSTACEA: GAMMARIDAE) IN CHIHUAHUAN DESERT SPRINGS
- 41 [Lamb, R. D.](#); Kerans, B. L.; Bischoff, J. R.; Stevens, L.: DIVERSITY AND DISEASE: A MECHANISM BY WHICH TUBIFICID DIVERSITY MAY INFLUENCE THE TRANSMISSION OF THE MYXOZOAN PARASITE THAT CAUSES SALMONID WHIRLING DISEASE
- 42 [Mihuc, T. B.](#); Myers, L. W.; Kondratieff, B. C.; Ruitter, D. E.: AN INVENTORY OF THE MAYFLIES (EPHEMEROPTERA), STONEFLIES (PLECOPTERA), AND CADDISFLIES (TRICHOPTERA) OF THE ADIRONDACK PARK (NEW YORK STATE).

- 43 Knysch, K. M.; Giberson, D. J.; van den Heuvel, M. R.: AQUATIC INSECT DIVERSITY IN COLD SPRINGS IN EASTERN PRINCE EDWARD ISLAND, CANADA.
- 44 Wilson, M. E.; Hury, A. D.: MACROINVERTEBRATE COMMUNITIES OF EXPOSED RIVERINE SEDIMENTS ALONG THE SIPSEY RIVER IN BUHL, ALABAMA
- 45 Sugita, M. G.; Inoue, K.; Lang, B. K.; Sei, M.; Berg, D. J.: DNA BARCODING REVEALS MULTIPLE CRYPTIC SPECIES OF PHYSA (GASTROPODA: PHYSIDAE) IN SPRINGS OF THE NORTHERN CHIHUAHUAN DESERT

T03 Biogeochemistry

- 46 Dong, X.; Grimm, N. B.: HYDROLOGIC REGIMES DRIVE SHIFTS IN VEGETATION DYNAMICS AND BIOGEOCHEMICAL CONSEQUENCES AT TWO SCALES
- 47 Olsson, A. K.; Jones, J. B.: IMPACT OF WILDFIRE ON THE EXPORT OF DISSOLVED ORGANIC MATTER AND NUTRIENTS IN A BOREAL FOREST STREAM IN INTERIOR ALASKA
- 48 Abbott, B. W.; Jones, J. B.; Larouche, J. R.; Bowden, W. B.: THE EFFECTS OF THERMOKARST ON TERRESTRIAL-AQUATIC LINKAGES AND STREAM CHEMISTRY IN ARCTIC ALASKA
- 49 Snyder, L. E.; Bowden, W. B.: ASSESSMENT OF IN-SITU STREAM NUTRIENT MONITORING USING THE AUTONOMOUS PROFILING NUTRIENT ANALYZER
- 50 Mineau, M. M.; Simon, K. S.; Ely, D. T.; Rancatti, R. L.; Fernandez, I. J.; Norton, S. A.; Valett, H. M.: EFFECTS OF CHRONIC NITROGEN ENRICHMENT AND ACIDIFICATION ON COUPLED NITROGEN AND PHOSPHORUS CYCLING IN STREAMS: INSIGHTS FROM MULTIPLE SPIRALING TECHNIQUES.

T04 Climate Change

- 51 Blackadar, R. J.; Baxter, C. V.; Davis, J. M.: EFFECTS OF WINTER ICE DYNAMICS ON PERIPHYTON AND SESTON IN A CENTRAL IDAHO RIVER ECOSYSTEM
- 52 MacKenzie, R. A.; Giardina, C. P.; Bruland, G. L.; Heider, C.; Strauch, A. M.; Tingley, R. W.; Infante, D.: CLIMATE CHANGE AND PACIFIC ISLAND WATER RESOURCES
- 53 Egan, A. T.; Ferrington, L. C.: EARLY SEASON EMERGENCE OF CHIRONOMIDAE FROM COASTAL ROCK POOLS AT ISLE ROYALE NATIONAL PARK, MICHIGAN

T06 Community Ecology

- 54 Paseka, R. E.; Heatherly, T.; Thomas, S. A.: SHREDDER ABUNDANCE AND COLONIZATION RATE IN TRINIDADIAN HEADWATER STREAMS
- 55 Gutiérrez-Fonseca, P. E.; Ramirez, A. L.: TEMPORAL VARIATION IN BENTHIC MACROINVERTEBRATE ASSEMBLAGES IN TWO TROPICAL HEADWATER STREAMS IN COSTA RICA
- 56 Kohler, S. L.; Cooper, E. R.: DISTRIBUTION AND PREVALENCE OF A KEYSTONE PARASITE IN THE EASTERN UNITED STATES
- 57 Mount, S. J.; O'Reilly, C. M.: THE INFLUENCE OF A CATADROMOUS FISH SPECIES (AMERICAN EEL) ON FISH AND CRAYFISH POPULATIONS IN STREAMS
- 58 Ramberg Pihl, N. C.; Yurewicz, K. L.: THE INFLUENCE OF PREDATORY SMALLMOUTH BASS ON NORTHERN CRAYFISH: FIELD DISTRIBUTION PATTERNS AND LABORATORY BEHAVIORAL RESPONSES
- 59 Contador, T. A.; Kennedy, J. H.; Anderson, C. A.; Rozzi, R.: BENTHIC MACROINVERTEBRATE DISTRIBUTION ALONG THE ALTITUDINAL GRADIENT OF A SUBANTARCTIC STREAM IN THE CAPE HORN BIOSPHERE RESERVE, CHILE (55OS).
- 60 Smith, E. R.; De Jong, G. D.; Canton, S. P.: LIFE HISTORY STRATEGY OF LONG-LIVED TAXA AIDS IN DETERMINATION OF HYDROLOGIC PERMANENCY
- 61 Ames, C. W.; Helms, B. S.; Stoeckel, J. A.: EFFECTS OF ECTOSYMBIONT DENSITY ON THE SYMBIOTIC RELATIONSHIP BETWEEN BRANCHIOBELLELLID WORMS AND BURROWING CRAYFISH
- 62 Burress, E. D.; Gangloff, M. M.; Siefferman, L. M.; Duarte, A.; Loureiro, M.: INTRA- AND INTERSPECIFIC NICHE PARTITIONING BY FIVE SYMPATRIC MESOPREDATORY *CRENICICHLA* (TELEOSTEI: CICHLIDAE)

- 63 Bates, A. L.; Nix, K.; Entekin, S. A.: DO CRAYFISH-INSECT INTERACTIONS ALTER LEAF BREAKDOWN RATES IN INTERMITTENT STREAMS?
- 64 Alberto, E. C.; Ney, S.; Slunt, K. M.; Tomba, A. M.: ANALYSIS OF ALARM CUE COMPOSITION IN THE CRAYFISH *ORCONECTES RUSTICUS*
- 65 Shelley, B. C.: DISTRIBUTION OF MACROINVERTEBRATES IN HIGH-GRADIENT STREAMS IN THE WHITE MOUNTAINS NATIONAL FOREST, MAINE AND NEW HAMPSHIRE: A CASE OF COMMUNITY DIS-SIMILARITY
- 66 Church, J. O.: IN DEFENSE OF LUMPING AND SPLITTING: THE ROLE OF TAXONOMIC RESOLUTION IN ASSESSING COMMUNITY STRUCTURE

T07 Conservation Ecology

- 67 Monroe, E. M.; Soluk, D. A.; Britten, H. B.: CONSERVATION GENETICS OF THE HINE'S EMERALD DRAGONFLY (*SOMATOCHLORA HINEANA*) IN HEAVILY URBANIZED IMPACTED AND MINIMALLY AFFECTED AREAS OF ITS RANGE

T08 Disturbance Ecology

- 68 Kosiara, J. M.; Moerke, A. H.; Janetski, D. J.; Chaloner, D. T.; Lamberti, G. A.: INTRODUCED PACIFIC SALMON SPAWNERS DISTURB BENTHIC ALGAE IN A MICHIGAN STREAM
- 69 Kampman, J. R.; Flinn, M. B.: THERMOKARST IMPACTS ON SEDIMENTATION RATES AND MACROINVERTEBRATE COMMUNITY DYNAMICS IN TWO ARCTIC HEADWATER STREAMS

T09 Ecotoxicology

- 70 Gibson, A. M.; Nikitin, A. G.; McDonald, N.; Morgan, R. M.: ISOLATION OF A CAFFEINE UTILIZING PSEUDOMONAS PUTIDA SPP FROM AN AQUATIC ENVIRONMENT
- 71 Ferguson, P. J.; Bernot, M. J.; Lauer, T. E.: ABUNDANCE OF PHARMACEUTICALS IN NEAR-SHORE HABITATS OF LAKE MICHIGAN

T10 Education

- 72 Bouldin, J. L.; Yanowitz, K. L.; Miller, C. A.; Grippo, A. A.; Kennon, J. T.: ENHANCED ENVIRONMENTAL EDUCATION IN MIDDLE SCHOOL CLASSROOMS BY GRADUATE STUDENTS IN THE ARKANSAS DELTA

T11 Eutrophication

- 73 Greene, M.; Cattaneo, A.; Carignan, R.; Oberhaus, L.: CAN MACROPHYTES BUFFER THE EFFECTS OF NUTRIENT INPUTS IN LAKES EXPERIENCING RESIDENTIAL DEVELOPMENT?
- 74 Tyrell, C. D.; Chambers, P. A.; Culp, J. M.: MACROPHYTE GROWTH FORM AS A PREDICTOR OF RIVERINE TROPHIC STATUS: RESULTS FROM TWO CONTINENTS

T12 Fish Ecology

- 75 Moerke, A. H.; Cross, R. L.: BARRIERS PRESERVE UPSTREAM FISH COMMUNITIES FROM NON-NATIVE SALMONID INVASIONS IN GREAT LAKES TRIBUTARIES
- 76 Holcomb, J. M.; Nichols, R. B.; Gangloff, M. M.: EFFECT OF SMALL DAMS ON NORTH CAROLINA ATLANTIC SLOPE FISH ASSEMBLAGES

T13 Food Webs

- 78 Hutchins, B. T.; Schwartz, B. F.; Engel, A. E.: LINKING HYDROGEOLOGY, GEOCHEMISTRY, AND MICROBIOLOGY TO FOOD WEB DYNAMICS IN THE BIODIVERSE PHREATIC KARSTIC EDWARDS AQUIFER, TX, USA.
- 79 Tsacogiannis, T. N.; Fallon, N. M.; Christian, A. D.: ONTOGENIC, SPATIAL, AND TEMPORAL VARIABILITY IN FRESHWATER MUSSEL [ELLIPTIC COMPLANATA (LIGHTFOOT, 1786)] STABLE ISOTOPES IN A NORTHEASTERN COASTAL ZONE POND

T14 Geomorphology

- 80 Thomas, R. L.; Mead, J. V.; Horwitz, R. J.; Brannin, M.; Klein, S. L.; Babcock-Stiner, J.: LAND COVER AND GEOMORPHOLOGY OF TWO DRAINAGES IN WESTERN NEW YORK STATE
- 81 Sefick, S. A.; Jarrell, M. S.; Kosnicki, E.; Paller, M. H.; Feminella, J. W.: PRELIMINARY HYDROGEOMORPHIC CLASSIFICATION OF STREAM REFERENCE CONDITION FOR THE ATLANTIC COASTAL PLAIN AND SANDHILLS ECOREGIONS
- 82 Jones, K. L.; O'Connor, J. E.; Mangano, J. F.; Keith, M. K.; Wallick, J. R.; Anderson, S. W.: BED-MATERIAL, CHANNEL STABILITY, AND REGIONAL GRAVEL PRODUCTION DYNAMICS IN OREGON COASTAL RIVERS

T15 Human Health

- 83 Miller, S. A.; Williamson, H.; Benbow, M. E.; McIntosh, M. D.; Kimbirauskas, R.; Quaye, C.; Boakye, D.; Stevenson, R. J.; Small, P.; Merritt, R. W.: CONNECTING ECOSYSTEM ALTERATION TO THE EMERGENCE OF A TROPICAL INFECTIOUS DISEASE: STEPS TOWARDS LINKING BURULI ULCER TO INORGANIC NUTRIENT LOADING

T16 Hyporheic Processes

- 84 Nelson, S. M.; Reed, G.: STUDY OF SALMON SPAWNING ENVIRONMENTS IN THE SAN JOAQUIN RIVER, CALIFORNIA

T17 Invasive Species

- 85 Root, S. M.; O'Reilly, C. M.: AN ASSESSMENT OF THREE COMMON DECONTAMINATION PRODUCTS ON THE INVASIVE DIATOM *DIDYMOSPHEHIA GEMINATA* (ROCK SNOT)
- 86 Desianti, N.; Cooper, J. T.; Bergey, E. A.: SPATIAL AND TEMPORAL VARIATION OF DIATOMS IN THE LOWER MOUNTAIN FORK, OKLAHOMA
- 87 Achterberg, L. A.; Redfield, M. R.; Richardson, D. C.; Hoellein, T. J.; Root, S.; Arscott, D. B.; Gibson, C.: MACRO AND MICRONUTRIENT INFLUENCES ON *DIDYMOSPHEHIA GEMINATA* (DIDYMO) GROWTH IN THE NEWLY INVADDED STREAM, ESOPUS CREEK, NY
- 88 Marczak, L. B.; Sepulveda, A. J.: ACTIVE DISPERSAL OF AN AQUATIC INVADER DETERMINED BY RESOURCE AND FLOW CONDITIONS
- 89 Folino-Rorem, N. C.; Papp, E. M.; Lee, N.: LIFE HISTORY FEATURES OF THE INVASIVE HYDROID, *CORDYLOPHORA*
- 90 Richardson, D. C.; Achterberg, L. A.; Redfield, M. R.; Root, S.; Arscott, D. B.; Gibson, C.; Hoellein, T. J.: ROCK SNOT IN A SICK RIVER: *DIDYMOSPHEHIA GEMINATA* (DIDYMO) BLOOMS AND WATER CHEMISTRY IN ESOPUS CREEK, CATSKILL MOUNTAINS, NY
- 91 Perry, W. L.; Jacks, A. M.; Jonas, M. A.; Lovgren, M. D.: RUSTY CRAYFISH INVASIONS FROM LAKES TO STREAMS: EFFECTS OF SIZE AND SHAPE ON PERFORMANCE IN FLOW

T18 Land Use and Non-Point Source Effects on Streams

- 92 Cross, A. M.; Mead, J. V.; Velinsky, D. J.; Brannin, M. T.; Horwitz, R. J.; Babcock-Stiner, J.: LAND COVER, NUTRIENT LOADING, AND STREAM QUALITY IN THE LAKE CHAUTAUQUA WATERSHED (NY)
- 93 Hogsden, K. L.; Harding, J. S.: FOOD WEB CHANGE ALONG AN ACID MINE DRAINAGE IMPACT GRADIENT
- 94 DiFalco, S.; Richardson, D. C.: SPATIAL AND TEMPORAL VARIABILITY OF WATER QUALITY IN AN ANTHROPOGENICALLY AFFECTED RIVER, WALLKILL RIVER AND ITS TRIBUTARY, NEW PALTZ, NY
- 95 Jarrell, M. S.; Kosnicki, E.; Prusha, B. A.; Sefick, S. A.; Feminella, J. A.; Paller, M. H.: RIPARIAN-AQUATIC RESPONSE TO TIMBER HARVEST IN A COASTAL PLAINS STREAM FOOD WEB
- 96 Goddard, K. A.; Wadsworth, S. A.; Much, K. R.: USING MACROINVERTEBRATES AND FISH TO ASSESS THE EFFECTS OF ITHAN CREEK RESTORATION THROUGH A GOLF COURSE IN SUBURBAN PENNSYLVANIA
- 97 Battle, J. M.; Jackson, J. K.; Sweeney, B. W.: LONG-TERM WATER QUALITY MONITORING OF WHITE CLAY CREEK: EXCEPTIONAL VALUE HEADWATERS CAN NOT DILUTE DOWNSTREAM IMPACTS

- 98 Simon, T. N.; Travis, J.: THE CONTRIBUTION OF MAN-MADE DITCHES TO THE REGIONAL STREAM BIODIVERSITY OF THE NEW RIVER WATERSHED IN THE FLORIDA PANHANDLE
- 141 Guardado, R. B.; Cover, M. R.: THE EFFECTS OF HYDROMODIFICATION ON STREAM MACROINVERTEBRATES IN THE LOS ANGELES BASIN, CALIFORNIA
- 142 Vazquez, S.; Ramirez, A.: EFFECT OF RIVER GOBIES ON BENTHIC PERIPHYTON IN TROPICAL URBAN STREAMS, PUERTO RICO
- 143 Schofield, K. A.; Paul, M. J.: ADDRESSING URBANIZATION IN USEPA'S CAUSAL ANALYSIS/DIAGNOSIS DECISION INFORMATION SYSTEM (CADDIS)
- 144 Roy, A. H.; Wilgruber, N. A.: FISH RECOVERY FOLLOWING EXPERIMENTAL DEFAUNATION: A USEFUL INDICATOR OF ECOSYSTEM HEALTH?

T20 Land/Water Interfaces

- 99 Vallis, K. L.; Rosi-Marshall, E. J.; Baxter, C. V.; Davis, J. M.: USING PAST AND PRESENT AQUATIC INSECT DIETS TO COMPARE RESOURCE USE ACROSS SEASONS AND DECADES

T21 Large River Ecology

- 100 Strauss, E. A.; Symmank, S. D.; Mooney, R. J.: ABIOTIC CONTROLS OF ALGAL DYNAMICS IN A BACKWATER LAKE OF THE UPPER MISSISSIPPI RIVER
- 101 McTammany, M. E.; Cooper, B. L.; Freeman, J. W.; Nordstrom, H. R.: USE OF LONG-TERM HIGH-RESOLUTION UNATTENDED MONITORING TO DETERMINE RESPONSE OF ALGAE TO HYDROLOGIC FLUCTUATIONS IN THE SUSQUEHANNA RIVER

T22 Lentic Ecology

- 102 Demi, L. M.; Simon, K. S.; Coghlan, S. M.; Saunders, R.; Anderson, D.: TOP-DOWN TROPHIC CASCADES AND THEIR INFLUENCE ON PHYTOPLANKTON BIOMASS IN LAKES ALONG A TROPHIC GRADIENT
- 103 Panzarino, J. H.; Natel, H.; Zhu, J.; Fallon, N. M.; Christian, A. D.: SEDIMENTATION RATES AND C, N, AND P ANALYSIS OF A NORTHEASTERN COASTAL ZONE POND SEDIMENTS
- 104 Jin, H.; Ramsey, J. B.; White, D. S.: COMMUNITY METABOLISM IN A SMALL, SHALLOW IMPOUNDED SYSTEM IN THE LAND BETWEEN THE LAKES

T23 Life Histories

- 105 Louwsma, J. E.; Anderson, A. M.; Kranzfelder, P.; Bouchard, Jr., R. W.; Ferrington, Jr., L. C.: LONG-TERM SURVIVORSHIP OF ADULT *DIAMESA MENDOTAE* (DIPTERA: CHIRONOMIDAE) AT SUB-FREEZING TEMPERATURES

T24 Management of Aquatic Systems

- 106 Chaloner, D.; Entekin, S.; Fuller, C.; Johnson, C.; Adams, G.; Adans, R.: STABLE ISOTOPES REVEAL THE INFLUENCE OF LAND USE ON AQUATIC FOOD WEBS IN AGRICULTURAL WATERSHEDS OF THE MISSISSIPPI ALLUVIAL PLAIN
- 107 Weaver, M. C.; Miner, J. G.; Farver, J. R.: EFFECT OF SEASONAL COPPER SULFATE APPLICATION ON BENTHIC MACROINVERTEBRATE AND ZOOPLANKTON COMMUNITIES IN UPGROUND RESERVOIRS
- 108 Murdock, J. N.; Shields, F. D.; Lizotte, R. E.: SPATIAL VARIATION IN MICROBIAL NUTRIENT LIMITATION IN LOW GRADIENT, AGRICULTURAL STREAMS

T25 Microbial Ecology

- 109 Edmonds, J. W.; Dotson, S. J.; Gee, K. N.: WETLAND LEGACIES IN COASTAL PLAIN STREAM NETWORKS: DETERMINANT OF MICROBIAL COMMUNITY FUNCTION?
- 110 Rier, S. T.; Shirvinski, J. M.: BIOFILM EXTRACELLULAR ENZYME RESPONSE TO LIGHT AND PHOSPHORUS MANIPULATIONS IN STREAMS WITH HIGH AND LOW DISSOLVED ORGANIC CARBON

- 111 Su, R.; Phipps, S.; Kuehn, K. A.: ECOSYSTEM SCALE ANNUAL PRODUCTIVITY OF FUNGI ASSOCIATED WITH STANDING-DEAD LITTER IN A FRESHWATER *CLADIUM/JUNCUS* MARSH OF WEEKS BAY, ALABAMA.

T26 Organic Matter Processing

- 112 Hanrahan, B. R.; Fuller, R.; Cardelús, C.: LEAF DECOMPOSITION AND PHOSPHORUS UPTAKE IN ADIRONDACK MOUNTAIN STREAMS DIFFERENTIALLY AFFECTED BY ACID DEPOSITION
- 113 Reidl, H.; Marczak, L. B.; McLenaghan, N.: HYDROGRAPHIC CONTROL OF ECOSYSTEM FUNCTION IN STREAM FOOD WEBS – STRANDING EFFECTS ON LEAF LITTER DECOMPOSITION
- 114 Ness, J. H.; Conine, A. L.: DOES MAST GAIN INFLUENCE MASS LOSS?
- 115 Gregory, S. A.; Hotchkiss, E. R.; Hall, R. O.; Baker, M. A.; Rosi-Marshall, E. J.; Tank, J. L.: LIGHT EXPOSURE AND NUTRIENTS INCREASE MICROBIAL UPTAKE OF ALLOCHTHONOUS DISSOLVED ORGANIC CARBON IN WYOMING RIVERS
- 116 Northington, R. M.; Webster, J. R.: ORGANIC MATTER BREAKDOWN IN A PERENNIAL STREAM UNDER EXPERIMENTALLY REDUCED FLOW

T28 Periphyton

- 117 Whorley, S. B.; Wehr, J. D.: PERIPHYTON COLONIZATION PATTERNS IN A SUBURBAN STREAM AFFECTED BY GRAZING PRESSURE
- 118 Manoylov, K. M.; Kocielek, J. P.; Dominy, J. D.; Smith, M. E.: REVIEW OF NORTH AMERICAN NITZSCHIA TAXA
- 119 Zalack, J. T.; Stevenson, R. J.: CONTINENTAL SCALE PATTERNS IN LOTIC BENTHIC ALGAL ASSEMBLAGES: STRUCTURE, DIVERSITY AND RELATIONSHIPS WITH HUMAN DISTURBANCE GRADIENTS/ENVIRONMENTAL GRADIENTS
- 120 Lang, J. M.; Benbow, M. E.: GRAZING, FLOW AND LIGHT EFFECTS ON EPILITHIC BIOFILM SUCCESSION DURING A LARGE PULSE OF ORGANIC LEAF LITTER
- 121 Kohler, T. J.; Stanish, L. F.; Esposito, R. M.; Simmons, B.; McKnight, D. M.: DIATOM COMMUNITY DYNAMICS IN A REACTIVATED ANTARCTIC DRY VALLEY STREAM.
- 122 Yuichi kayaba, Y.; Tomoko Minagawa, T.; Yukio Onoda, Y.: EFFECTS OF BED LOAD ON PRIMARY PRODUCTION IN STREAMS

T29 Population Dynamics

- 123 Galatowitsch, M. L.; Goldstein, S. J.; McIntosh, A. R.: ROLE OF FITNESS TRADE-OFFS AND DISPERSAL IN PERSISTENCE OF GENERALISTS ACROSS A WETLAND PREDATOR-PERMANENCE GRADIENT
- 124 Macias, N. A.; Colon-Gaud, C.; Ramirez, A.; Torres, P. J.: POTENTIAL DIRECT AND INDIRECT EFFECTS OF OMNIVOROUS SHRIMPS ON MAYFLY NAIADS IN TROPICAL ISLAND STREAMS: A LABORATORY STUDY

T30 Production Ecology

- 125 Krynak, E. M.; Snyder, E. B.: MESOHABITAT MACROINVERTEBRATE SECONDARY PRODUCTION IN A LOW GRADIENT SAND-DOMINATED STREAM

T32 Remote Sensing

- 126 Novitski, L. N.; Stevenson, R. J.; Qi, J.; Wangwang, N.: IDENTIFYING SPATIAL TRENDS BY REMOTE SENSING SATELLITE TO BETTER DETERMINE ALGAL BLOOM RISK IN INLAND LAKES OF THE UNITED STATES
- 127 Schmidt, S. J.; Williams, B. S.; Thorp, J. H.: USE OF SMALL FORMAT AERIAL PHOTOGRAPHY TO DETECT TEMPORAL CHANGE IN DYNAMIC AQUATIC HABITATS

T33 Restoration Ecology

- 128 Barker, R. E.; McEwan, R. W.; Benbow, M. E.: RRESTORATION OF A RIPARIAN ZONE HEAVILY INVADED BY *LONICERA MAACKII* ALTERS ALLOCHTHONOUS INPUTS AND IN-STREAM ORGANIC MATTER PROCESSING
- 129 O'Brion, K. M.; Douglas, E. M.; Christian, A. D.: FRESHWATER FISH AND AQUATIC MACROINVERTEBRATE BIOMONITORING OF THE EEL RIVER HEADWATERS RESTORATION SITES IN PLYMOUTH, MASSACHUSETTS
- 130 Ebel, J. D.; Marcarelli, A. M.; Kohler, A. E.: BIOFILM RESPONSE TO NUTRIENT MITIGATION USING SALMON CARCASS ANALOG IN CENTRAL IDAHO STREAMS
- 131 Fowler, A. D.; Hamilton, S. W.: EFFECTS OF THE INVASIVE SUBMERSED MACROPHYTE, *HYDRILLA VERTICILLATA*, ON AQUATIC MACROINVERTEBRATE COMMUNITIES IN A HIGH-GRADIENT RIVERINE SYSTEM
- 132 Snyder, E. B.; Gibson, A. M.; Villalobos, L. M.; Caldwell, C.: MANAGEMENT IMPLICATIONS AND FUNCTIONAL RESPONSES TO MILL DAM REMOVAL: A CASE STUDY ON THE THORNAPPLE RIVER, MI.
- 133 Mosley, T. L.; Anderson, C.; Brantley, E.; Helms, B.; Jennings, G.; Price, Z.; Roberts, J.; Shaw, J.; Stoeckel, J.; Werneke, D.: DEVELOPMENT OF AN ECO-MORPHOLOGICAL STREAM DESIGN AND ASSESSMENT TOOL IN THE ALABAMA PIEDMONT.

T35 Systematics and Taxonomy

- 134 Bailey, J. P.; Bergner, J. L.; Zanatta, D. T.: MEASURING GENETIC VARIATION AND DIFFERENTIATION IN *LASMIGONA COSTATA* (FLUTEDSHELL, BIVALVIA: UNIONOIDA) IN A RECENTLY GLACIATED LANDSCAPE

T36 Unionid Ecology

- 135 Hegeman, E. E.; Miller, S. W.; Mock, K. E.; Torgersen, C. E.: MODELING FRESHWATER MUSSEL DISTRIBUTION IN RELATION TO BIOTIC AND ABIOTIC FACTORS IN THE MIDDLE FORK JOHN DAY RIVER, OREGON
- 136 Abernethy, E. E.; Gangloff, M. M.; Siefferman, L. M.; Singer, E. E.: EFFECT OF A SMALL DAM ON ELLIPTIO ARCA POPULATION GENETICS IN AN ALABAMA STREAM
- 137 Hornbach, D. J.; Hove, M. C.; Sansom, B. J.: WHERE HAVE ALL THE DEERTOES GONE? THE DECLINE OF A SINGLE SPECIES WITHIN A MULTI-SPECIES MUSSEL ASSEMBLAGE.
- 138 Sansom, B. J.; Hornbach, D. J.; Hove, M. C.: THE INFLUENCE OF WATER TEMPERATURE AND HOST ABUNDANCE ON *TRUNCILLA TRUNCATA* AND *ACTINONAIAS LIGAMENTINA* MUSSELS IN THE ST. CROIX RIVER, MN
- 139 Hoch, R. A.; Gangloff, M. M.: EFFECTS OF BEAVER AND MILL DAMS ON SUSPENDED ORGANIC MATTER AND FRESHWATER MUSSELS IN NORTH CAROLINA PIEDMONT STREAMS
- 140 Connelly, R. A.; Lewis, C. E.: A UNIONID MUSSEL COMMUNITY IN A UNIQUE BACKWATER HABITAT IN THE OHIO RIVER

T39 Wetlands

- 145 Bright, E. G.; Bergey, E. A.: TERRESTRIAL INVERTEBRATE ABUNDANCE AND COMMUNITY STRUCTURE IN DRY PLAYA LAKE BASINS IN OKLAHOMA, USA
- 146 Roberts, A. R.; Wyatt, K. H.; Turetsky, M. R.; Stevenson, R. J.: ALGAL COMMUNITY RESPONSES TO EXPERIMENTAL AND INTERANNUAL VARIATION IN HYDROLOGY IN AN ALASKAN BOREAL FEN
- 147 McIntosh, M. D.; Benbow, M. E.; Gansel, A.; Ballew, B.: AN ASSESSMENT OF INVERTEBRATE STRUCTURE AND FUNCTION WITHIN VERNAL POOLS OF SOUTHWESTERN OHIO
- 148 Wyatt, K. H.; Davison, I. R.; Uzarski, D. G.: ANNUAL PRODUCTIVITY AND EXTRACELLULAR RELEASE OF DISSOLVED ORGANIC CARBON BY THE ALGAL COMMUNITY OF A GREAT LAKES COASTAL WETLAND

LBP Late Breaking Posters

- 149 Yadamsuren, O.; Gelhaus, J. K.; Podenas, S.; Boldgiv, B.; Hayford, B.: TRENDS IN DIVERSITY OF CRANE FLIES (DIPTERA: TIPULOIDAE) IN LAKE HVVSGLL REGION, MONGOLIA
- 150 Macqueen, A.; Downes, B.: OVIPOSITION SUBSTRATE AVAILABILITY LIMITS EGG SUPPLY INTO AUSTRALIAN LOWLAND STREAMS
- 151 Reed, J. D.; Baker, M. A.; Hall, Jr., R. O.; Rosi-Marshall, E. J.; Tank, J. L.: INORGANIC NUTRIENTS INCREASE OXYGEN DEMAND IN FIVE WESTERN RIVERS
- 152 Baker, M. A.: LINKING NUTRIENTS TO ALGAL PRODUCTION IN A EUTROPHIC RIVER IN UTAH
- 153 Fritz, K. A.; Harris, S. C.; Edenborn, H. M.; Sams, J. I.: IMPACTS OF SEDIMENTATION FROM OIL AND GAS DEVELOPMENT ON STREAM MACROINVERTEBRATES IN TWO ADJACENT WATERSHEDS
- 154 Pecor, K. W.; Badin, C.; Bartling, S.; Pierre, J.; Roque, X.: THE EFFECTS OF EXOTIC CRAYFISH ON ARTHROPOD COMMUNITY STRUCTURE IN A NEW JERSEY STREAM: A PILOT STUDY
- 155 Martinez, J.; Walsh, E. J.: EFFECTS OF SELECTED PHARMACEUTICALS AND PERSONAL CARE PRODUCTS (PPCPs) ON THE CHIRONOMIDS OF RIO BOSQUE
- 156 Sprague, M.; Wolf, C.: RELATIONSHIP BETWEEN NUTRIENTS AND MACROINVERTEBRATE COMPOSITION ON A TRANSITIONAL STREAM IN MONUMENT, COLORADO
- 157 Rosero, D.; Encalada, A. C.: INVERTEBRATE RESPONSE TO IMPACTS OF WATER INTAKE AND FLOW REGULATION IN HIGH ALTITUDE PARAMO STREAMS

Thursday, 26 May 2011 - Orals**S04 Ecosystem Service Concepts in the Management of Freshwater Habitats**

Chair(s): David Bolgrien, bolgrien.dave@epa.gov
Ted Angradi, angradi.theodore@epa.gov

Location: 555 A/B

- 13:30 Bolgrien, D. W.; Starry, M.; Bellinger, B.; Mazzotta, M.; Angradi, T.; Taylor, D.; Hollenhorst, T.: INTERPRETING THE VALUE OF ECOSYSTEM SERVICES IN A GREAT LAKES ESTUARY FROM THE BEHAVIOR OF INDIVIDUALS AND COMMUNITIES
- 13:45 Davis, J. A.: CAN UNDERSTANDING RELATIONSHIPS AMONG MULTIPLE ECOSYSTEM SERVICES ENHANCE THE BIODIVERSITY SUPPORT FUNCTION OF URBAN WETLANDS?
- 14:00 Lorenz, S.; Dobra, N.; Pusch, M. T.: HYDRAULIC DISTURBANCE BY BOATS AFFECT FILTRATION ACTIVITY OF EUROPEAN MUSSELS IN LOWLAND RIVERS
- 14:15 Yetter, S. E.; Hychka, K. C.; Wardrop, D. H.: LINKING ECOSYSTEM SERVICES OF BIOLOGICAL AND HABITAT DIVERSITY WITH RIVERINE HYDROLOGICAL PROCESSES ACROSS A LAND USE GRADIENT IN THE SUSQUEHANNA RIVER BASIN
- 14:30 Hychka, K. C.; Yetter, S.; Wardrop, D. H.: TOWARDS MAPPING THE PROVISION OF ECOSYSTEM SERVICES FROM HEADWATER WETLANDS IN THE SUSQUEHANNA RIVER BASIN
- 14:45 Mazzotta, M. J.; Berry, W. J.; Wainger, L. A.: A SIMPLIFIED DECISION SUPPORT APPROACH FOR EVALUATING WETLANDS ECOSYSTEM SERVICES
- 15:30 Milstead, W. B.; Hollister, J. W.; Walker, H. A.; Moore, R. B.: ECOSYSTEM SERVICES IN LAKES OF THE NORTHEASTERN UNITED STATES: UPSTREAM BENEFITS FROM ESTUARINE NITROGEN REDUCTION SCENARIOS
- 15:45 Hill, B. H.; Kolkka, R. K.; McCormick, F. H.: ECOSYSTEM SERVICES DERIVED FROM HEADWATER CATCHMENTS
- 16:00 Kovalenko, K. E.; Ciborowski, J. J.; Baker, L.; Barr, L.; Farwell, A. J.; Foote, A. L.; Kennedy, K.; Roy, M. C.; Wytrykush, C. M.: AQUATIC INVERTEBRATE FOOD WEB STRUCTURE IN OIL SANDS-AFFECTED WETLANDS

- 16:15 Newman, S.; Hagerthey, S.; Cook, M.; Bellinger, B.; Kobza, R.; Manna, M.; Seitz, K.; Shuford, R.: ENHANCEMENT OF ECOSYSTEM SERVICES THROUGH ACTIVE MANAGEMENT OF A EUTROPHIC AREA OF THE FLORIDA EVERGLADES
- 16:30 Hollister, J. W.; Hychka, K. C.; Milstead, W. B.; Walker, H. A.: ECOSYSTEM SERVICES IN LAKES OF THE NORTHEASTERN UNITED STATES: AN ASSESSMENT OF LAKES ECOSYSTEM SERVICES BENEFICIARIES

S12 Promoting evidence-based methods in environmental research and management

Chair(s): J. Angus Webb, angus.webb@unimelb.edu.au

Michael Griffith
Andreas Melcher
C. Richard Ziegler
Susan Nichols

Location: 552 A/B

- 10:30 Dahm, C. N.: THE USE AND COMMUNICATION OF SCIENCE FOR MANAGEMENT AND PLANNING IN THE CALIFORNIA DELTA
- 10:45 Keene, M.; Pullin, A. S.: THE COLLABORATION FOR ENVIRONMENTAL EVIDENCE: BUILDING AN EVIDENCE-BASE FOR ENVIRONMENTAL MANAGEMENT
- 11:00 Zitek, A. E.; Noble, R. A.; Poppe, M.; Stelzhammer, M.; Muhar, S.; Bredeweg, B.: ENABLING CAUSAL SYSTEMS UNDERSTANDING USING A CONCEPTUAL MODELLING WORKBENCH
- 11:15 Shorthouse, D. P.; Patterson, D. J.; Thessen, A. E.: APPLYING A NAMES-BASED CYBERINFRASTRUCTURE TO SUPPORT ENVIRONMENTAL IMPACT ASSESSMENTS
- 11:30 Webb, J. A.; Wealands, S. R.; Lea, P.; Norris, R. H.; Nichols, S. J.; Stewardson, M. J.: ECOEVIDENCE: USING THE LITERATURE TO ASSESS CAUSE-EFFECT RELATIONSHIPS IN AQUATIC SYSTEMS
- 11:45 Harrison, E. T.; Nichols, S. J.; Norris, R. H.; Wilkinson, S. N.: EVIDENCE OF MACROINVERTEBRATE COMMUNITY RESPONSES TO FINE SEDIMENT ACCUMULATION AND TRANSPORT: A CAUSAL ANALYSIS REVIEW
- 13:30 Hawkins, C. P.; Wakeley, E. F.: STRESSOR-SPECIFIC, DIAGNOSTIC RESPONSE SIGNALS BASED ON ESTIMATES OF NICHE OPTIMA ARE A MESS
- 13:45 Wakeley, E. F.; Hawkins, C. P.: DIFFERENCES IN SURVEY DATA CAN AFFECT ESTIMATES OF MACROINVERTEBRATE TOLERANCE VALUES
- 14:00 Monk, W. A.; Armanini, D. G.; Baird, D. J.: TOWARDS THE DEVELOPMENT OF A FLOW-SPECIFIC DIAGNOSTIC USING BIOMONITORING DATA: ARE WE HUNTING THE SNARK?
- 14:15 Clements, W. H.; Schmidt, T. S.: AN EVIDENCE-BASED APPROACH TO DEMONSTRATE CAUSAL RELATIONSHIPS BETWEEN ANTHROPOGENIC STRESSORS AND MACROINVERTEBRATE COMMUNITY RESPONSES
- 14:30 Nichols, S. J.; Norris, R. H.: ENVIRONMENTAL FLOW MANAGEMENT: USING SCIENCE TO ACHIEVE ECOLOGICAL OUTCOMES
- 14:45 Wilding, T. K.; Poff, N. L.: IMPROVING A REGIONAL FLOW EVALUATION TOOL FOR COLORADO USING ELOHA
- 15:30 Reckhow, K. H.: BAYES NETWORKS MODELS FOR AQUATIC ECOSYSTEMS
- 15:45 Quinn, J. M.; Monaghan, R. M.; Harris, S.; Bidwell, V.: A BAYESIAN BELIEF NETWORK SYNTHESISES COMPLEX INTERACTIONS BETWEEN ABSTRACTION, LAND DEVELOPMENT, AND LAND AND WATER VALUES IN A NEW ZEALAND WATERSHED
- 16:00 van de Bund, W. J.: THE EU WATER FRAMEWORK DIRECTIVE APPROACH TO ECOLOGICAL ASSESSMENT AND MANAGEMENT
- 16:15 Craig, L. S.: BARRIERS TO EFFECTIVE RESTORATION: WHY WE NEED TO BETTER CONNECT SCIENCE AND PRACTICE
- 16:30 Melcher, A. H.; Kremser, H.; Schulze, T.; Muhar, S.; Schmutz, S.; Wolter, C.: META-ANALYSES OF REHABILITATION PROJECTS TO IMPROVE STREAM FISH POPULATIONS

THURSDAY

S13 Conservation challenges for organisms with complex life-cycles

Chair(s): Liz Perkin, liz.perkin@igb-berlin.de
John Richardson, john.richardson@ubc.ca

Location: 552 A/B

- 08:15 Malone, P. M.: "POOR SHAD": LOWELL'S PAWTUCKET DAM AND ITS IMPACT ON FISH
- 08:30 Hughes, J. M.; Schmidt, D.; Crook, D. A.; McDonald, J. I.: HOW WILL INCREASING DROUGHT AFFECT VIABILITY OF TWO AMPHIDROMOUS FISH SPECIES IN SOUTH-EASTERN AUSTRALIA?
- 08:45 Gump, R. B.; Resh, V. H.: LIFE ON OCEANIC ISLANDS: DIADROMOUS SPECIES
- 09:00 Helms, B.; Kosnicki, E.; Budnick, W.; Skipper, J.; Stoeckel, J.: FACTORS INFLUENCING THE TERRESTRIAL DISTRIBUTION OF THE DEVIL CRAYFISH (*CAMBARUS DIOGENES GIRARD*): A CASE FOR THE IMPORTANCE OF FLOODPLAIN CONNECTIVITY
- 09:15 Skelly, D. K.; Bolden, S. R.; Smits, A.: AMPHIBIA OF SUBURBIA: ORIGIN AND MEANING OF BACKYARD HERMAPHRODITES
- 09:30 Lamp, W. O.; Smith, R. F.: AQUATIC INSECTS ARE TERRESTRIAL: LIFE HISTORY CONSTRAINTS AND OPPORTUNITIES
- 09:45 Perkin, E. K.; Hoelker, F.; Tockner, K.: ARTIFICIAL LIGHT INTERFERES WITH THE DISPERSAL OF ADULT AQUATIC INSECTS ACROSS THE TERRESTRIAL LANDSCAPE

S14 Ecological Flows and Biological Indicators

Chair(s): Shann Stringer, shann.stringer@tetrattech.com
Rebecca Tharme, rtharme@TNC.org

Location: Room 555 A/B

- 08:00 Stringer, S. M.; Hamilton, A. T.: ECOLOGICAL FLOWS AND THE CLEAN WATER ACT
- 08:15 Courtemanch, D. L.; Danielson, T. J.; Jain, S.: ESTABLISHING REGULATORY FLOWS INCORPORATING A NATURAL FLOW REGIME AND AQUATIC LIFE REQUIREMENTS.
- 08:30 McManamay, R. A.; Orth, D. J.; Dolloff, C. A.: DO DAMS AFFECT STREAMS THE SAME? A STEP TOWARDS GENERALIZING REGULATED STREAM FLOW PATTERNS.
- 08:45 Rankin, E. T.; Stark, J.; Mueller, R. F.; Yoder, C. O.: ECOLOGICAL LOW FLOW PROTECTION PROCESS FOR OHIO STREAMS AND RIVERS OF THE LAKE ERIE BASIN
- 09:00 Apse, C. D.; DePhilipp, M. M.; Zimmerman, J. K.; Bowden, A. A.: PROGRESS ON APPLIED ENVIRONMENTAL FLOW SCIENCE AND ITS APPLICATION TO WATER POLICY REFORM IN THE EASTERN U.S.
- 09:15 Phillips, I. D.; Davies, J. M.; O'Neill, K.; Chivers, D. P.; Bowman, M. F.: FLOW-BASED ECOSYSTEM HEALTH MODELS IN MANAGED NORTHERN GREAT PLAINS RIVERS
- 09:30 Jain, S.; Courtemanch, D.; Hart, D.: EXAMINING THE SENSITIVE LINKAGES BETWEEN CLIMATE AND ECOLOGICALLY-RELEVANT METRICS OF STREAMFLOW WITHIN THE CONTEXT OF MAINE'S INSTREAM FLOW STANDARDS
- 09:45 Tharme, R.; Téllez, P.; Guerrero, F.; Ramírez, A.; Cardona, C.; Moreno, J.; González, F.; Walschburger, T.; Petry, P.; Yunis, J.: COLOMBIAN WATER POLICY STIMULATES A WHOLE SYSTEM PERSPECTIVE ON ENVIRONMENTAL FLOWS

T01D Bioassessment - Session D

Chair(s): Travis Schmidt, tschmidt@usgs.gov

Location: 551 A/B

- 10:30 Jessup, B. K.: ESTABLISHING SEDIMENT THRESHOLDS FOR NEW MEXICO STREAMS USING MACROINVERTEBRATE RESPONSES
- 10:45 Canton, S. P.; Gensemer, R. W.; De Jong, G. D.; Wolf, C. F.; Clayton, C. A.: SHOULD WATER QUALITY CRITERIA BE DERIVED FROM FIELD DATA? CONDUCTIVITY AS A CASE STUDY

- 11:00 Schmidt, T. S.; Clements, W. H.; Cade, B. S.: IDENTIFYING LIMITS ON STREAM INSECT DENSITY EXPOSED TO METALS IN THE PRESENCE OF CO-LIMITING FACTORS
- 11:15 Collins, C. J.; Kashian, D. R.; van Hees, E. H.: COMPARATIVE EFFECTS OF PCB CONTAMINATION ON BENTHIC AND PLANKTONIC INVERTEBRATE SURVIVAL
- 11:30 Conley, J. M.; Funk, D. H.; Buchwalter, D. B.: CENTROPTILUM, SELENIUM, AND TDS – UNDERSTANDING THE RELATIVE TOXICITIES OF CHEMICAL STRESSORS ASSOCIATED WITH MOUNTAINTOP REMOVAL TO MAYFLIES
- 11:45 Nelson, W. A.; Steinman, A. D.: COMPOSITION AND TOXIC SENSITIVITY OF BENTHIC INVERTEBRATE ASSEMBLAGES IN MUSKEGON LAKE, A GREAT LAKES AREA OF CONCERN

T01E Bioassessment - Session E

Chair(s): Thomas J. Danielson, thomas.j.danielson@maine.gov

Location: Ballroom D

- 13:30 Prusha, B. A.; Paller, M. H.; Farrow, C. S.; Freeman, M. C.; Fletcher, D. E.; Tuberville, T. D.; Grosse, A. M.; Sterrett, S. C.; Kosnicki, E. K.; Feminella, J. W.: SELECTING SCIENTIFICALLY RIGOROUS FISH IBI METRICS: CREATING A SANDHILLS STREAM ASSESSMENT PROGRAM
- 13:45 Childress, E. S.; McIntyre, P. B.; Blum, M. J.; Gilliam, J. E.; Hain, E. F.: AN ARCHIPELAGO-WIDE ASSESSMENT OF HAWAIIAN STREAM CONDITION
- 14:00 Kurtenbach, J. P.: MACROINVERTEBRATE INTEGRITY INDEX DEVELOPMENT FOR PUERTO RICO HIGH GRADIENT STREAMS
- 14:15 Edwards, P. E.: EVALUATION OF A NON-LETHAL MACROINVERTEBRATE BIOASSESSMENT TECHNIQUE FOR USE IN VOLUNTEER STREAM MONITORING
- 14:30 Danielson, T. J.; Loftin, C. S.; Francis, D.: COMPARISON OF BENTHIC DIATOM MODELS FOR ESTIMATING NUTRIENT CONCENTRATIONS IN MAINE STREAMS AND RIVERS
- 14:45 Lavoie, L.; Lavoie, M.; Fortin, C.: A MINE OF INFORMATION: BENTHIC ALGAL COMMUNITIES AS BIOMONITORS OF METAL POLLUTION LEACHING FROM ABANDONED TAILINGS

T02 Biodiversity

Chair(s): Michael B. Griffith, griffith.michael@epa.gov

Location: 556

- 08:00 Bogan, M. T.; Boersma, K.; Lytle, D. A.: PATTERNS OF DIVERSITY AND COMMUNITY STRUCTURE IN A NETWORK OF INTERMITTENT AND PERENNIAL STREAMS
- 08:15 De Jong, G. D.; Canton, S. P.; Gensemer, R. W.; Lynch, J. S.; Wolf, C. F.: BIODIVERSITY PATTERNS OF INVERTEBRATE HEADWATERS COMMUNITIES IN SOUTHERN WEST VIRGINIA
- 08:30 Myers, L. W.; Kondratieff, B. C.; Mihuc, T. B.: THE DISTRIBUTION AND DIVERSITY OF STONEFLIES (PLECOPTERA) IN NEW YORK STATE
- 08:45 Cao, Y.; DeWalt, R. E.; Hinz, L.; Tweddle, T.; Pessino, M.; Grubbs, S. A.: MODELING THE NATURAL DISTRIBUTIONS OF STONEFLY SPECIES (PLECOPTERA) IN ILLINOIS STREAMS
- 09:00 Sweeney, B. W.; Jackson, J. K.; Battle, J. M.: DNA BARCODING OF STREAM MACROINVERTEBRATES: HOW MANY SPECIES ARE THERE IN EACH PATCH OF STREAM BOTTOM?
- 09:15 Farahi, A. C.; Brasher, A. D.; Jones, T.: LONG-TERM MONITORING OF NATIVE FISH AND SNAILS IN WAIKOLU STREAM, KALAUPAPA NATIONAL HISTORICAL PARK, MOLOKAI, HAWAII
- 09:30 Gangloff, M. M.; Herrington, K. J.; Pursifull, S. C.; Zettle, B.: ABUNDANCE, DEPTH DISTRIBUTION AND MOVEMENT OF ENDANGERED FAT THREERIDGE (*AMBLEMA NEISLERII*) MUSSELS IN THE APALACHICOLA AND LOWER CHIPOLA RIVERS, FL
- 09:45 Griffith, M. B.; Cormier, S. M.: EFFECTS OF ACIDITY, ELEVATED CONDUCTIVITY, AND DISSOLVED TOXIC METALS ON STREAM MACROINVERTEBRATE ASSEMBLAGES: COMMON MECHANISM OR JUST SENSITIVE SPECIES?

T03B Biogeochemistry - Session B

Chair(s): Robert Hall, bhall@uwyo.edu

Location: Ballroom D

- 08:00 Griffiths, N. A.; Mulholland, P. J.: QUANTIFYING SEASONAL VARIABILITY IN NUTRIENT UPTAKE KINETICS IN A FORESTED HEADWATER STREAM USING PULSE NUTRIENT ADDITIONS
- 08:15 Crenshaw, C. L.; Grimm, N. B.; Olsen, N.; Dong, X.: BIOGEOGRAPHIC STRUCTURE AND ECOSYSTEM FUNCTIONING IN A DESERT STREAM AFTER A LARGE FLOOD
- 08:30 Marti, E.; Sabater, F.; Feijó, C.; Gantes, P.; Giorgi, A.; Vilches, C.; Ferreira, N.; Torremorell, A.; Rodriguez, C.; Ranieri, C.: DAILY VARIATION OF N AND P UPTAKE IN A HIGHLY PRODUCTIVE PAMPEAN STREAM (ARGENTINA)
- 08:45 Cheever, B. M.; Kratzer, E. B.; Webster, J. R.; Hart, A. M.; Thomas, S. A.: DO HETEROTROPHIC MICROBES GET THEIR NITROGEN FROM WATER OR LEAVES?
- 09:00 Gibson, C. A.; Superak, C. M.; O'Reilly, C. M.: RELATIVE UPTAKE OF NITROGEN AND PHOSPHORUS IN FORESTED ADIRONDACK STREAMS
- 09:15 Piper, L. R.; Cross, W. F.; McGlynn, B. L.: THE STOICHIOMETRY OF UPTAKE: DUAL NUTRIENT UPTAKE KINETICS FROM AMBIENT TO SATURATION
- 09:30 Cohen, M. J.; Hensley, R.; Foster, C. R.; Heffernan, J. B.: SPATIALLY DISSAGGREGATED BENTHIC NITROGEN REMOVAL RATES FROM HIGH RESOLUTION LONGITUDINAL NITRATE PROFILES
- 09:45 Tatariw, C.; Chapman, E. L.; Jarnigan, J. R.; Sponseller, R. A.; Edmonds, J. W.: EXPLORING COMMUNITY DYNAMICS OF DENITRIFYING AND ANAEROBIC AMMONIUM OXIDIZING BACTERIA IN THE CAHABA RIVER, AL

T03C Biogeochemistry - Session C

Chair(s): Natalie Griffiths, griffithsna@ornl.gov

Location: Ballroom D

- 10:30 Bernot, M. J.; Wilson, K. P.: DISSOLVED OXYGEN DYNAMICS AND METABOLISM IN DEVILS HOLE
- 10:45 Rantala, H. M.; Whiles, M. R.; Wilkerson, G. V.: EFFECTS OF STREAM DIVERSION ON ECOSYSTEM METABOLISM IN A SOUTHERN ILLINOIS AGRICULTURAL WATERSHED
- 11:00 Payn, R. A.; Hall, Jr., R. O.; Poole, G. C.; Marshall, L. A.; Kennedy, T. A.: ASSESSING RIVER METABOLISM BELOW DAMS: ACCOUNTING FOR HYDROLOGIC DISCONTINUITY AND UNSTEADY FLOW
- 11:15 Hall, R. O.; Tank, J. L.; Baker, M. A.; Rosi-Marshall, E. J.; Grace, M. R.; Hotchkiss, E. R.; Beaulieu, J. J.: HIGH RATES OF ECOSYSTEM METABOLISM IN 5 WESTERN RIVERS
- 11:30 Tank, J. L.; Rosi-Marshall, E. J.; Baker, M. A.; Hall, R. O.; Reisinger, A. J.: USING EMPIRICAL APPROACHES TO QUANTIFY NUTRIENT SPIRALING IN 5 WESTERN RIVERS
- 11:45 Reisinger, A. J.; Tank, J. L.; Rosi-Marshall, E. J.; Taylor-Salmon, E.; Hall, R. O.; Baker, M. A.; Kincaid, D.; Mahl, U. H.: THE IMPORTANCE OF WATER COLUMN NUTRIENT UPTAKE RELATIVE TO WHOLE RIVER UPTAKE IN FIVE WESTERN RIVERS

T06C Community Ecology - Session C

Chair(s): Ross M. Thompson, ross.thompson@monash.edu

Location: 554

- 08:00 Houghton, D. C.: ABRUPT CHANGES IN THE BIOLOGICAL CONTINUITY OF A FIRST-ORDER MICHIGAN STREAM DUE TO TERRESTRIAL HABITAT LOSS
- 08:15 Gorbach, K. R.; McIntosh, M. D.; Burky, A. J.; Benbow, M. E.: INITIAL DISPERSAL AND UPSTREAM MIGRATION OF A TROPICAL NERITID SNAIL: IMPLICATIONS FOR RESTORING MIGRATORY PATHWAYS IN TROPICAL STREAMS
- 08:30 Yenarsky, M. P.; Huntsman, B. M.; Benstead, J. P.; Hurny, A.: TESTING CARBON LIMITATION OF CAVE STREAM ECOSYSTEMS WITH A WHOLE-REACH DETRITUS ADDITION
- 09:00 Guyette, M. O.; Loftin, C.; Zydlewski, J.: MARINE-DERIVED NUTRIENT UPTAKE IN ATLANTIC SALMON NURSERY STREAM COMMUNITIES
- 09:15 Griffiths, R. W.: WHY DO STREAMS GO GREEN?

- 09:30 Thompson, R. M.: DOES DIVERSITY BEGET STABILITY IN STREAM FOOD WEBS?

T06D Community Ecology - Session D

Chair(s): Margaret Guyette, margaret.guyette@umit.maine.edu

Location: 554

- 10:30 Koch, B. J.; Hall, R. O.: A COMMON CURRENCY FOR CONSUMPTIVE AND NONCONSUMPTIVE PREDATOR EFFECTS
- 10:45 Ryan, J. A.; Kohler, S. L.: THE EFFECT OF PARASITISM ON THE FUNCTIONAL RESPONSE OF A FISH PREDATOR
- 11:00 Skelton, J.; Brown, B. L.; Creed, R. P.: VARIABLE OUTCOMES IN THE CLEANING SYMBIOSIS BETWEEN CRAYFISH AND BRANCHIOBELLELLID ANNELIDS
- 11:15 Farrell, K. J.; Creed, R. P.; Brown, B. L.; Young, D. A.; Lomonaco, J. D.: PARTNER CONTROL IN CRAYFISH/BRANCHIOBELLELLID SYMBIOSES: WHO'S IN CHARGE?
- 11:30 Binggeli, C. A.; Mihuc, T. B.: THE EFFECT OF INVASIVE MACROPHYTES ON MACROINVERTEBRATE AND ZOOPLANKTON COMMUNITIES IN LAKE CHAMPLAIN
- 11:45 Gates, K. K.; Kerans, B. L.: FROM COMPETITION TO FACILITATION: THE DENSITY OF AN INVASIVE AQUATIC GASTROPOD AFFECTS THE DIRECTION OF INTERACTION WITH A NATIVE GASTROPOD

T08A Disturbance Ecology - Session A

Chair(s): Amy Marcarelli, ammarcar@mtu.edu

Location: 556

- 13:30 Eggert, S. L.; Huckins, C. J.; Marcarelli, A. M.: EFFECTS OF SAND ACCUMULATION ON INVERTEBRATE COMMUNITIES OF THE SALMON TROUT RIVER, MICHIGAN
- 13:45 Marcarelli, A. M.; Eggert, S. L.; Huckins, C. J.: VARIATION IN ORGANIC MATTER PRODUCTION, STORAGE AND PROCESSING ASSOCIATED WITH SAND ACCUMULATION IN THE SALMON TROUT RIVER, MICHIGAN
- 14:00 Huckins, C.; Marcarelli, A.; Eggert, S.; Baker, E.; Matthys, T.: MULTI-SCALE VARIATION IN SALMONID ABUNDANCE IN THE SALMON TROUT RIVER, MICHIGAN AND ASSOCIATIONS WITH SAND ACCUMULATION
- 14:15 Laub, B. G.: EFFECTS OF CHANNEL STABILITY RESTORATION ON BED SEDIMENT MOVEMENT PATTERNS
- 14:30 Rüegg, J.; Lamberti, G. A.; Chaloner, D. T.; Tiegs, S. D.; Levi, P. S.; Tank, J. L.: CONSTRAINTS ON SALMON NUTRIENT ENRICHMENT OF STREAM BIOFILMS BY ENVIRONMENTAL HETEROGENEITY
- 14:45 Campbell, E. Y.; Merritt, R. W.; Cummins, K. W.; Benbow, M. E.: STREAM HABITAT HETEROGENEITY MEDIATES SPAWNING SALMON DISTURBANCE IMPACTS ON MACROINVERTEBRATES IN A SOUTHEAST ALASKA STREAM

T08B Disturbance Ecology - Session B

Chair(s): Bob Danehy, Bob.Danehy@weyerhaeuser.com

Location: 556

- 15:30 Danehy, R. J.; Parker, C. A.; Merritt, G.; Justice, T. E.; Heffner, J. T.: RESPONSES OF PHYSICAL HABITAT AND MACROINVERTEBRATES TO LARGE FLOOD DISTURBANCES IN MOUNTAIN STREAMS
- 15:45 Parker, C. A.; Danehy, R. J.; Pan, Y.: RESPONSE OF PERIPHYTON COMMUNITIES TO AN EXTREME PRECIPITATION EVENT: EFFECT OF NUTRIENTS, LIGHT AND NATURAL VARIABILITY
- 16:00 Miyake, Y.; Sugihara, T.: EFFECTS OF LIGHT INTENSITY AND PERIPHYTON BIOMASS ON COLONIZATION PATTERNS OF STREAM INVERTEBRATES
- 16:15 Harris, H. E.; Baxter, C. V.; Davis, J. M.: EFFECTS OF WILDFIRE AND DEBRIS FLOWS ON DOWNSTREAM AND LATERAL FLUXES AND CONSEQUENCES FOR RECIPIENT PREDATORS
- 16:30 Macneale, K. H.; Spromberg, J. A.; Baldwin, D. H.; Scholz, N. L.: MODELING THE RESISTANCE AND RESILIENCE OF INVERTEBRATE COMMUNITIES TO ASSESS INDIRECT IMPACTS OF PESTICIDES ON ENDANGERED PACIFIC SALMON

- 16:45 Desotelle, M. D.; Hamilton, S. K.: IMPACTS OF A MAJOR OIL SPILL ON RIVERINE BENTHIC COMMUNITIES (KALAMAZOO RIVER, MICHIGAN)

T12A Fish Ecology - Session A

Chair(s): Jeff Wesner, jeffwesner@gmail.com

Location: Room 551 A/B

- 13:30 Booth, M. T.; Flecker, A. S.; Hairston, N. G.: SEMPER FIDELIS? SITE FIDELITY AND POPULATION TURNOVER IN SUCKERS OF THE SOUTHWEST USING PIT TELEMETRY
- 13:45 Wesner, J. S.; Belk, M. C.: AQUATIC AND TERRESTRIAL FACTORS AFFECTING NORTHERN LEATHERSIDE CHUB (*LEPIDOMEDA COPEI*) IN THE BEAR RIVER DRAINAGE, WY AND UT
- 14:00 Tuckett, Q. M.; Simon, K. S.; Kinnison, M. T.; Saros, J. E.: POPULATION LEVEL VARIATION IN FISH EXCRETION OF NUTRIENTS ALONG A TROPIC GRADIENT
- 14:15 Grossman, G. D.; Ratajczak, B.: POPULATION REGULATION OF SOME SOUTHERN APPALACHIAN STREAM FISHES
- 14:30 Eldridge, W.; Gurarie, E.: MOVEMENT AND SURVIVAL OF STREAM FISH ACROSS A HABITAT GRADIENT
- 14:45 Troia, M. J.; Gido, K. B.: TRANSFERABILITY AND ENVIRONMENTAL CORRELATION STRUCTURE OF NICHE MODELS FOR GREAT PLAINS FISHES

T12B Fish Ecology - Session B

Chair(s): Keith Gido, kgido@ksu.edu

Location: 551 A/B

- 15:30 Collins, S. E.; Baxter, C. V.; Marcarelli, A. M.; Wipfli, M. S.: EFFECTS OF SALMON CARCASS AND ANALOG ADDITIONS ON RESIDENT TROUT IN IDAHO
- 15:45 Barkstedt, J. M.: THE IMPORTANCE OF FISH-MEDIATED DOWNSTREAM TRANSPORTS ON ECOSYSTEM STRUCTURE AND FUNCTION
- 16:00 Martin, E. C.; Gido, K. B.: EFFECTS OF PRAIRIE STREAM FISH ASSEMBLAGE STRUCTURE AND DIVERSITY ON ECOSYSTEM PROPERTIES
- 16:15 Gido, K. B.; Propst, D. L.: LONG-TERM DYNAMICS OF A NON-COEVOLVED RIVER FISH ASSEMBLAGES UNDER A MANAGED FLOW REGIME
- 16:30 Dalton, C. M.; El-Sabaawi, R. W.; Auer, S. K.; Honeyfield, D. C.; Reznick, D. N.; Flecker, A. S.: RAPID EVOLUTION AND PHENOTYPIC PLASTICITY DRIVE SUBSTANTIAL INTRASPECIFIC VARIATION IN NUTRIENT EXCRETION BY TRINIDADIAN GUPPIES (*POECILIA RETICULATA*)

T20 Land/Water Interfaces

Chair(s): Hamish Greig, hamish.greig@ubc.ca

Location: 551 A/B

- 08:00 Vandermyde, J. M.; Whiles, M. R.: IMPACT OF WOODY VEGETATION REMOVAL ON TALLGRASS PRAIRIE STREAM MACROINVERTEBRATE COMMUNITIES.
- 08:15 Riley, A. J.; Dodds, W. K.; Gido, K. B.: PRAIRIE STREAM ECOSYSTEM RESPONSE TO RESTORATION THROUGH RIPARIAN WOODY VEGETATION REMOVAL
- 08:30 Junker, J. R.; Cross, W. E.: TROPIC BASIS OF INVERTEBRATE PRODUCTION IN A NORTHERN ROCKIES STREAM WITH RECENT WILLOW RECOVERY
- 08:45 Merkley, S. S.; Rader, R. B.: THE EFFECT ON INVASIVE SPECIES ON ECOSYSTEM FUNCTION UNDER ALTERNATIVE COMMUNITY STATES

- 09:00 Klemmer, A. J.; Richardson, J. S.: THE INFLUENCE OF LOTIC RESOURCE SUBSIDIES ON LAKE BENTHIC COMMUNITY COMPOSITION AND TROPIC INTERACTIONS

- 09:15 Muehlbauer, J. D.; Tockner, K.; Doyle, M. W.: "STREAM SIGNATURES." AQUATIC SUBSIDY IMPORTANCE TO TERRESTRIAL FOODWEBS WITH DISTANCE FROM THE STREAM

- 09:30 Greig, H. S.; Kratina, P.; Thompson, P.; Shurin, J. B.; Richardson, J. S.: INTERACTIVE EFFECTS OF GLOBAL CHANGE ON RESOURCE SUBSIDIES BETWEEN AQUATIC AND TERRESTRIAL HABITATS

- 09:45 Bukaveckas, P. A.; Schlegel, A.; Razinkovas, A.; Spuriene, R.: COMPOSITION AND SETTLING VELOCITIES OF SUSPENDED PARTICULATE MATTER IN COASTAL ENVIRONMENTS SUBJECT TO WIND- AND TIDAL-DRIVEN MIXING.

T24B Management of Aquatic Systems - Session B

Chair(s): Sarah W. Judson, sarah.judson@usu.edu

Location: 556

- 10:30 Judson, S. W.; Miller, S. W.: RESPONSE OF INVERTEBRATE DRIFT AND FISH DIET TO HYDROPEAKING BELOW FLAMING GORGE DAM, UT
- 10:45 Gabanski, L. A.; Kline, M.: EPA'S HEALTHY WATERHEDS PROGRAM: A SYSTEMS-BASED CONSTRUCT FOR PROTECTING AQUATIC ECOSYSTEMS
- 11:00 Ray, H. L.: NORTH AMERICAN INDIGENOUS COMMUNITIES AND THEIR ROLE IN THE WATER CRISIS; EXAMPLES FROM THE COLUMBIA RIVER BASIN
- 11:15 Prat, N.; Rieradevall, M.: THE LOWER LLOBREGAT RIVER: IS THE RESORATION OF GOOD ECOLOGICAL STATUS POSSIBLE?.

T26A Organic Matter Processing - Session A

Chair(s): Erin R. Hotchkiss, ehotchki@uwyo.edu

Location: 554

- 13:30 Hotchkiss, E. R.; Gregory, S. A.; Hall, R. O.; Baker, M. A.; Rosi-Marshall, E. J.; Tank, J. L.: DRIVERS OF DISSOLVED ORGANIC CARBON UPTAKE IN RIVERS OF THE WESTERN UNITED STATES
- 13:45 Rinehart, A. J.; Jones, J. B.: CARBON UPTAKE IN STREAMS DRAINING CATCHMENTS UNDERLAIN BY DISCONTINUOUS PERMAFROST
- 14:00 Walker, M. E.; Luttenton, M. R.: SEASONAL BENTHIC METABOLISM IN SIX WESTERN MICHIGAN HEADWATER STREAMS
- 14:15 Newbold, J. D.; Geleskie, S. R.; Anderson, W.; Hudson, C. T.: BIOFILMS ENHANCE DEPOSITION OF STREAM SESTON
- 14:30 Hood, J. M.; Finlay, J. C.; Gallagher, B.; Schade, J. D.; Stark, R.: LONGITUDINAL VARIATION IN FINE PARTICULATE ORGANIC MATTER (FPOM) STOICHIOMETRY AND METABOLISM

T26B Organic Matter Processing - Session B

Chair(s): Seth Hunt, huntseth@msu.edu

Location: 554

- 15:30 Hunt, S. W.; Stevenson, R. J.: EFFECTS OF WATER COLUMN AND TISSUE NUTRIENTS ON THE DECOMPOSITION OF CLADOPHORA SP.
- 15:45 Wymore, A. S.; Compson, Z. G.; Liu, C.; Price, L. B.; Keim, P.; Marks, J. C.: FUNGI AND BACTERIA SHOW OPPOSITE RESPONSES TO LEAF LITTER QUALITY: INSIGHTS FROM REAL TIME - PCR.
- 16:00 Tornwall, B. M.; Creed, R. P.: THE EFFECT OF A DAM ON DETRITIVORES AND DETRITAL PROCESSING IN A SOUTHERN APPALACHIAN STREAM.
- 16:15 Creed, R. P.; Tornwall, B. M.; Cherry, R. P.; Arnold, J.; Harrington, R. A.: DISTRIBUTION OF A DOMINANT DETRITIVORE ACROSS A LANDSCAPE: CONSEQUENCES FOR DETRITAL PROCESSING

T33B Restoration Ecology - Session B

Chair(s): Catherine O'Reilly, oreilly@bard.edu

Location: Room 555 A/B

- 10:30 Hopfensperger, K. N.: ASSESSING THE INFLUENCE OF WETLAND RESTORATION METHODS ON NITROGEN REMOVAL
- 10:45 O'Reilly, C. M.; Schmidt, R. S.; Miller, D. E.: RESTORATION OF AMERICAN EELS: MIGRATION PATTERNS UPSTREAM AND CONSEQUENCES FOR STREAM COMMUNITY STRUCTURE
- 11:00 Black, J. E.; Poole, G. C.: FISH AND ANGLER USE OF INSTREAM HABITAT ENHANCEMENT STRUCTURES IN 'RESTORED' STREAM REACHES
- 11:15 Heinrich, K. K.; Whiles, M. R.; Roy, C.: IN-STREAM RESTORATION ENHANCES AQUATIC SUBSIDIES TO RIPARIAN FOOD WEBS: INSECT EMERGENCE PRODUCTION AND RIPARIAN BIRD RESPONSES TO ROCK WEIR CONSTRUCTION
- 11:30 OGBOGU, S. S.; Williams, B.: INVESTIGATION INTO THE EMERGENCE PATTERN OF CHEUMATOPSYCHE DIGITATA BELOW A RESERVOIR SPILLWAY IN SOUTHWESTERN NIGERIA

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