



**BRIDGING GENES TO ECOSYSTEMS:
AQUATIC SCIENCE AT
A TIME OF RAPID CHANGE**

MAY 18-23 / OREGON CONVENTION CENTER
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PROGRAM BOOK

“Bridging Genes to Ecosystems: Aquatic Science at a Time of Rapid Change” is the theme for this historic joint meeting of four of the leading aquatic scientific societies: Society for Freshwater Science (SFS), Association for the Sciences of Limnology and Oceanography (ASLO), Phycological Society of America (PSA), and Society of Wetland Scientists (SWS). For this one week in May of 2014, these four societies will build a bridge across the disciplines within the field of aquatic science and will explore many exciting opportunities for collaboration among scientists.





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Changes to the scientific program will also be published on an addendum that will be posted on message boards.

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Welcome to the 2014 Joint Aquatic Sciences Meeting

Humans rely on water – for our wellbeing, our livelihoods, and our recreation. Fresh and estuarine waters are precious, renewable resources that provide many valuable services, including drinking water, fish production, and irrigation supply. With increasing human population and accelerating climate change, social and scientific concerns over sustainable water resources is growing. Scientists are challenged with understanding how natural biological and chemical processes support the health and integrity of aquatic ecosystems. But to be effective, this knowledge must also be communicated with the public and policy makers.

In response to this challenge, this ground-breaking meeting of four leading aquatic science societies is convening in Portland, Oregon, from 18-23 May 2014. The Joint Aquatic Sciences Meeting (JASM) is themed “Bridging Genes to Ecosystems: Aquatic Science at a Time of Rapid Change.” This meeting is designed to stimulate new collaborations among participants to advance discovery in many interlinked areas: genetic diversity, energy flow through ecosystems, recycling nutrients and carbon, and understanding landscape connections with aquatic ecosystems.

We hope that you find the meeting exciting, informative and relevant.

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Society Sponsors

Society for Freshwater Science

SFS is an international scientific organization founded in 1953, whose purpose is to promote further understanding of freshwater ecosystems (rivers, streams, lakes, reservoirs, and estuaries) and ecosystems at the interface between aquatic and terrestrial habitats (wetlands, bogs, fens, riparian forests and grasslands). The society fosters exchange of scientific information among the membership, and with other professional societies, resource managers, policy makers, educators, and the public, sponsoring the journal *Freshwater Science*. Members come from 26 nations worldwide. Society members study the genetics to community structure of freshwater organisms, freshwater ecosystem function, physical processes that affect freshwaters, and linkages between freshwater ecosystems and surrounding landscapes. Applied aspects of their science include habitat and water quality assessment, conservation, fisheries and invasive species management, integrated water resource management, and restoration. Further information can be found at: <http://www.freshwater-science.org/>.

Association for the Sciences of Limnology and Oceanography

ASLO is an international aquatic sciences society that was founded in 1936. For more than 50 years, it has been the leading professional organization for researchers and educators in the field of aquatic science. The purpose of ASLO is to foster a diverse, international scientific community that creates, integrates and communicates knowledge across the full spectrum of aquatic sciences, advances public awareness and education

Mobile App & Social Media

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Recording Policy

Please! No recording of individual talks or sessions (oral or poster).

Audio taping, videotaping, or photographing of presentations is not allowed at the meeting.

Thank you for your cooperation.

about aquatic resources and research, and promotes scientific stewardship of aquatic resources for the public interest. Its products and activities are directed toward these ends. With more than 4500 members worldwide, the society has earned an outstanding reputation and is best known for its journals, its interdisciplinary meetings, and its special symposia. Further information can be found at: <http://www.aslo.org/>.

Phycological Society of America

The Phycological Society of America (PSA) was founded in 1946 to promote research and teaching in all fields of Phycology. The society publishes the *Journal of Phycology* and the *Phycological Newsletter*. Annual meetings are held, often jointly with other national or international societies of mutual member interest. PSA awards include the Bold Award for the best student paper at the annual meeting, the Lewin Award for the best student poster at the annual meeting, the Provasoli Award for outstanding papers published in the *Journal of Phycology*, The PSA Award of Excellence (given to an eminent phycologist to recognize career excellence) and the Prescott Award for the best Phycology book published within the previous two years. The society provides financial aid to graduate student members through Croasdale Fellowships for enrollment in phycology courses, Hoshaw Travel Awards for travel to the annual meeting and Grants-In-Aid for supporting research. To join PSA, contact the membership director or visit the website: www.psaalgae.org

Society of Wetland Scientists

The Society of Wetland Scientists (SWS) is an international organization of nearly 3,000 members dedicated to the conservation, management and scientific understanding of the world's wetlands. SWS brings to the meeting the perspective of scientists, managers and practitioners who focus on those areas at the interface of aquatic and terrestrial ecosystems. Since its founding in 1980, the Society has worked to promote wetland research, education and public awareness, as well as provide a forum for exchanging ideas and the latest scientific research. SWS is the society for wetland professionals; further information can be found at: <http://www.sws.org/>.

Keynote, Presidential, Plenary, and Award Lectures

Sunday 18 May 2014

7:00 – 8:00pm, Oregon Ballroom



Keynote: Randy Olson, Scientist & Filmmaker

With opening remarks by Lucinda Johnson, former president of the Society for Freshwater Science, and welcome by Paul Lumley, the Executive Director for the Columbia River Inter-Tribal Fish Commission (CRITFC) and a citizen of the Yakama Nation.

Randy Olson, is the writer/director of the feature films, "Flock of Dodos: The

Evolution-Intelligent Design Circus," (Tribeca '06, Showtime '07), "Sizzle: A Global Warming Comedy" (Outfest '08), and author of "Don't Be Such a Scientist: Talking Substance in an Age of Style" (Island Press '09). His

work focuses on the challenges involved in communicating science to the general public, and the current attacks on mainstream science in fields such as evolution and climate science. He is a former marine biologist (Ph.D. Harvard University) who achieved tenure at the University of New Hampshire before changing careers to filmmaking by obtaining an M.F.A. in Cinema from the University of Southern California. In addition to writing and directing his own feature films about major issues in science, he has worked with a variety of clients to assist them with the use of visual media in communicating science to the general public. Through his writings he has both related his journey, and continues his exploration into the role of storytelling in the mass communication of science.

Opening Reception follows Keynote Presentation in Portland Ballroom. Light Hors d'oeuvres served and refreshment available.

Monday, 19 May 2014

8:00 – 9:30am, Oregon Ballroom

Presidential Address: Society for Freshwater Science - Randy Fuller, Colgate University



Plenary Speaker: Stuart Bunn, Griffith University – Australian Rivers Institute

The Global Water Crisis: Is freshwater ecology effectively informing the debate?

Abstract: There is no question that freshwater ecosystems around the world are in trouble and that the situation will worsen as human demands for water, food and energy rise. These impacts are compounded by climate change, which is also affecting

freshwater ecosystems in regions that are relatively unimpaired by human development. Although freshwater ecosystem science has struggled to keep pace with the increasing problems caused by past approaches to water resource management, significant advances have been made; for example, in addressing environmental water needs, tackling diffuse pollution and systematic conservation planning. Despite these achievements, there is limited evidence of adoption at the appropriate scale to address existing problems, or to inform catchment and water resource planning to minimize future impacts. The global water debate remains firmly focused on safe supply and sanitation, and the natural environment is largely missing from water-energy-food discussions. It is timely for freshwater science societies like ours to question why this is so and to explore opportunities to become more engaged in these debates, and to better communicate our knowledge to decision makers and the broader community.

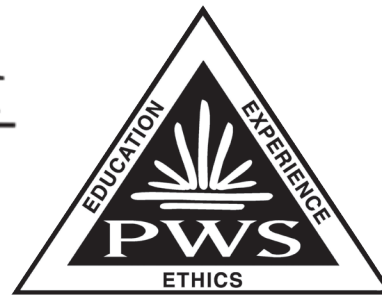
Speaker Biography: Professor Bunn is the Director of the Australian Rivers Institute at Griffith University in Brisbane, Australia. His major research interests are in the ecology of river and wetland systems with a particular focus on the science to underpin river management, and he has published widely in this field. Stuart has extensive experience working with international and Australian government agencies on water resource management issues. From 2008-2012, he was appointed as an Australian National Water Commissioner and has previously served as Chair of the Scientific Advisory Panel for the Lake Eyre Basin Ministerial Forum and as a Director of Land and Water Australia. He is currently Chair of the Executive Scientific Expert Panel for the South-east Queensland Healthy Waterways Partnership and a member of the

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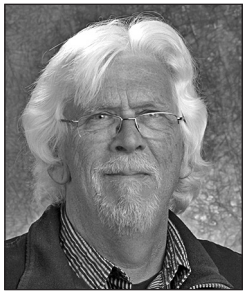
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We thank the organizations above for their support.

Advisory Committee for Social, Economic and Environment Science for the Murray-Darling Basin Authority. He is also a member of the Scientific Steering Committee for the Global Water System Project.



Award Lecture - Society for Freshwater Science: SFS 2014 Award of Excellence - Colin R. Townsend

Speaker Biography: Professor Colin Townsend of the University of Otago, New Zealand, has been chosen to receive the Award of Excellence from the Society for Freshwater Science for 2014. We can think of few freshwater ecologists with Colin's breadth of accomplishments, experience,

and influence on our field. From his early work in Broadstone Stream in Sussex, UK, with Alan Hildrew, to his later work in the Taieri River catchment of New Zealand with many collaborators, Colin has always been at the cutting edge of aquatic ecology. Even after more than 40 years of research, he is as active in research and publication as ever. The letters in support of his nomination describe an extraordinarily broad scope of research topics, the seamless integration of theory and empirical tests of questions of general interest in ecology, a strong focus on applied questions of great merit, and the indelible mark that his research has made on his colleagues in the field. As if this were not enough, his co-authorship of three of the definitive textbooks in ecology, and three decades of co-editing a leading journal in freshwater ecology are profound achievements to have added to a stellar research career. And yet, each person close to Colin speaks as highly about his remarkable ability to mentor a large number of other scientists, from undergraduates in courses, to graduate students, postdocs, and visiting scientists from many countries. Through his scholarship, collaborations, teaching, textbook writing, journal editing, and mentoring, his influence in freshwater ecology spans the globe.

Most enduring of all, Colin Townsend is one of the kindest and most encouraging colleagues and friends any of us could hope to have. Discussions with him always result in sound advice, a newly inspired confidence in one's work, and the feeling that one could actually make a difference as a scientist and a person. Given this rich record of more than four decades of teaching, mentoring, research, and publication in aquatic ecology in particular, and ecology in general. This award could not go to a more deserving person.

Tuesday, 20 May 2014

8:00 – 9:30am, Oregon Ballroom

Presidential Address: Society of Wetland Scientists - Stephen Faulkner, USGS, Leetown Science Center



Plenary Speaker: Laurel Larsen, University of California – Berkeley
Pattern from Process and Process from Pattern: Simple strategies for understanding complex dynamics in aquatic landscapes

Abstract: Understanding and predicting the dynamics of complex environmental systems, which include catastrophic

shifts between alternate stable states and the development of patchiness in vegetation and resources, is a great need for environmental managers. Some of the most salient advances have come from studies of lakes and wetlands, which exhibit strong bidirectional feedback between biotic and abiotic variables. Collectively, these studies portray a systematic approach for understanding environmental complexity. It involves integrated field studies and modeling, and a coupled inductive-deductive cycle of analysis. In the Everglades, deductive exploratory modeling, tightly coupled to field work, has improved understanding of the dominant drivers of landscape patterning and their sensitivities and contributed to new management strategies. Important frontiers in this area of study lie in the induction of process from pattern using novel data-driven techniques to interpret sensor network or remote sensing data. Other frontiers include improving understanding and classification of the role of different types of connectivity in landscape dynamics and improving strategies for tractably modeling the coupled dynamics of fluvial processes over large spatial and long temporal scales.

Speaker Biography: Laurel Larsen is an Assistant Professor in the Geography Department at the University of California, Berkeley. Her work focuses primarily on how flowing water structures the form and function of landscapes, with emphases on the Florida Everglades, wet meadows across the US, and intermittent streams in coastal California. Larsen's Environmental Systems Dynamics Laboratory takes a complex-systems approach to environmental problems, seeking to understand the set of interactions and feedbacks that produce emergent phenomena. The lab's approach to problems integrates field work and numerical modeling to identify the most critical drivers of landscape-scale change and generate predictions about how landscapes will respond to climate change or changes in management.

Larsen attributes many of her current research interests to a childhood spent exploring the wetlands and forests of Florida. Her educational background is broad, with an undergraduate degree in Systems Science and Mathematics and Masters in Earth and Planetary Science from Washington University in St. Louis, and a PhD in Civil Engineering from the University of Colorado at Boulder. Subsequently, she was employed as a Research Ecologist in the National Research Program of the USGS in Reston, Virginia before moving to Berkeley in January 2013.



Award Lecture – Society of Wetland Scientists: SWS 2014 International Fellow Award - Jared Bosire

Speaker Biography: Dr. Jared Bosire is an internationally leading wetland scientist with a focus on wetland biodiversity conservation to support livelihoods, specifically mangrove forest ecology and conservation. Dr. Bosire is a renowned mangrove scientist and conservationist in

Kenya, an extremely understudied region of the world. He was a scientist and staff manager in charge of a large research division at the Kenya Marine and Fisheries Research Institute, and is currently the Conservation Manager for the WWF Kenya Country Office. Dr. Bosire is a dedicated mangrove scientist with impressive scientific contributions on mangrove ecology as well as mangrove conservation, restoration, and policy. His research and publications have been on a diverse range of topics from restoration ecology and mangrove forest regeneration to sustainable forest management and poverty alleviation. He has worked

for many international organizations as lead technical expert and has played a very important role in wetland science capacity building in East Africa and the western Indian Ocean. Dr. Bosire is now engaged in policy development and conservation in a multi-stakeholder environment at national, regional and/or international levels. Dr. Bosire has shown his commitment to the conservation, management and understanding of mangrove forests both in Kenya and in the rest of Africa. In summary, Dr. Bosire is being awarded the International Fellow Award for distinguished contributions to the field of wetland science and for fostering the aims of the SWS within Kenya and abroad.

Wednesday, 21 May 2014

8:00 – 9:30am, Oregon Ballroom

Presidential Address: Phycological Society of America - John Stiller, East Carolina University



Plenary Speaker: Virginia Armbrust, University of Washington *Genomic Insights in Microbial Ecosystems*

Abstract: Every drop of seawater contains hundreds of fantastically diverse groups of microbes that together control key biogeochemical processes in the ocean. Our work focuses on marine diatoms, which are responsible for about one-fifth of global photosynthesis. Because diatoms are never free

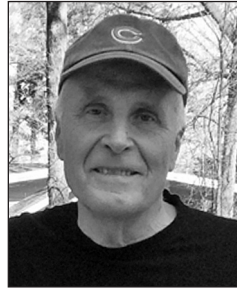
from the influences of other microbes, we examine a variety of microbial interactions in the sea. In the lab we co-culture laboratory isolates and use transcriptional and metabolomic approaches to examine the interplay between diatoms and bacteria. In the field we use metagenomics and metatranscriptomics to understand how natural communities respond to the highly variable environmental conditions. I will provide examples of how we iterate between laboratory and field studies to understand the role of diatoms and other microbes in natural communities.

Speaker Biography: Dr. Armbrust earned her PhD from Massachusetts Institute of Technology and Woods Hole Oceanographic Institution; in Biological Oceanography, and her B.A., Stanford University, in Human Biology. Dr. Armbrust is currently the Director, of the School of Oceanography, at the University of Washington. She is also a Gordon and Betty Moore Foundation Marine Microbiology Investigator 2012-2017. She was elected a member of the Washington State Academy of Science in 2012 and a Fellow of the American Association for the Advancement of Science (AAAS) in 2012 as well.

Phytoplankton are the main focus of the Armbrust Lab's research. These organisms are responsible for about 50% of the total amount of photosynthesis that occurs on our planet. They play a critical role in the global carbon cycle and ultimately in global climate. Because much of the organic carbon generated by phytoplankton is used by bacteria and archaea, we also study phytoplankton interactions with other microbes.

Award Lectures - Phycological Society of America: PSA Awards for Excellence - Rex Lowe and Christine Maggs

Speaker Biography: Rex Lowe, professor in the Department of Biological Sciences at Bowling Green State University, Ohio, received his PhD at



Iowa State University. His current research includes aquatic community ecology of benthic algae. He is currently conducting research on algal biodiversity in the Great Smoky Mountains National Park and on the South Island of New Zealand. His more ecologically oriented research focuses on the implications of exotic species invasions in aquatic ecosystems in the Great Lakes watershed. Dr. Lowe is being honored by The Phycological Society of America's Award for Excellence to recognize him as a phycologist who has demonstrated sustained scholarly contributions in, and impact upon, the field of phycology over his career; and for his distinguished service to PSA and other phycological societies.



Speaker Biography: Christine Maggs, is currently the head of the School of Biological Sciences at Queen's University Belfast. She is also the associate Editor of the Journal of Biogeography, a Past-President of the International Phycological Society and the President elect of the British Phycological Society. Her research interest include, Phycology: taxonomy and ecology of marine macroalgae, molecular systematics, phylogenetics and population genetics of the red and green algae, particularly members of the large order Ceramiales, using morphological, life-history and molecular data, ecology and utilization of coralline algae, especially maerl, alien algae and marine invasions marine conservation, and Biogeography including phylogeography. Dr. Maggs is being honored by The Phycological Society of America's Award for Excellence to recognize her as a phycologist who has demonstrated sustained scholarly contributions in, and impact upon, the field of phycology over her career; and for her distinguished service to PSA and other phycological societies.

Thursday, 22 May 2014

8:00 – 9:30am, Oregon Ballroom

Presidential Address: Association for the Sciences of Limnology and Oceanography - John Downing, Iowa State University



Plenary Speaker: Patricia Soranno, Michigan State University

Landscape Limnology: Understanding freshwaters at regional to continental scales

Abstract: Freshwater scientists are increasingly being asked to help answer environmental questions that operate at broad spatial and temporal scales. Such questions include, how to predict invasive species spread, to how to quantify the contributions of freshwaters to the global carbon cycle. To answer such questions, freshwaters should be viewed from a broad perspective, and as hierarchical systems that interact with each other at multiple spatial and temporal scales. Unfortunately, we lack

many well-developed concepts and theories at this wide range of scales because the majority of limnological concepts and theories have been developed for single systems, watersheds, or multiple systems within individual regions; and because landscape ecology concepts and theories have been primarily developed for terrestrial systems. Landscape limnology attempts to fill these gaps by integrating landscape ecology and limnology. It emphasizes the spatial relationships among lakes, streams, and wetlands, and their interactions with the surrounding land and air from local to continental scales. She will describe how many research questions related to lake eutrophication can be addressed using this perspective that is coupled with the analysis of large, integrated geospatial databases. She will also discuss how a data-intensive analytical approach can inform a wide range of problems facing local, regional and continental freshwaters.

Speaker Biography: Dr. Patricia A. Soranno is a professor at Michigan State University in the Department of Fisheries and Wildlife. She is a freshwater ecologist who conducts both basic and applied research that integrates freshwater ecosystems into a landscape perspective. She has spent the last 20 years conducting collaborative research on lakes to build a more formal conceptualization of landscape limnology based on a foundation of landscape ecology and limnology. She has also conducted work for several state and tribal natural resource agencies to apply these principles to problems facing freshwater ecosystems, including nutrient criteria and ground-water withdrawal. She is currently leading an interdisciplinary NSF-funded project to integrate lake nutrient datasets from 17 US states into a multi-scaled geospatial database to further develop the conceptual foundation of landscape limnology that can ultimately be applied to freshwater policy and management at local to continental scales.



Award Lecture - Association for the Sciences of Limnology and Oceanography: Ruth Patrick Award-
Daniel J. Conley, Lund University
Is "Geoengineering" an Acceptable Solution for Baltic Sea Eutrophication?

Abstract: Over the last decade, an average of 60,000 km² of the Baltic Sea bottom has suffered from hypoxia. In addition, 115 sites in the coastal zone have experienced

hypoxia. Several geoengineering interventions have been proposed as solutions to this problem. Such radical remediation measures promise impressive improvements in water quality on short timescales. They are popular in the media and politically attractive, but are likely to irrevocably change the ecosystem. Yet geo-engineering schemes are moving forwards. For example, mixing projects have been carried out in the coastal zone to add oxygen to bottom waters and plans are on the table to build a demonstration wind-turbine-driven pump to add oxygen in open waters. In addition, chemicals are being added to coastal ecosystems to sequester phosphorus in sediments. While these efforts are a significant departure from current policy to reduce nutrients to the Baltic Sea, should our failure to reduce nutrients adequately be the reason for implementing alternative approaches? Are there other geoengineering ideas that could be tested? Should we use the Baltic Sea as an ecosystem for experimental large-scale geoengineering?

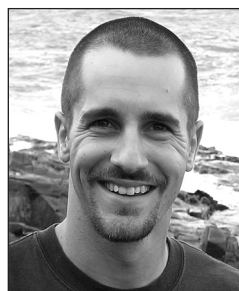
Speaker Biography: Professor Daniel Conley has been a leading figure in bridging aquatic science and ecosystem management. He has devoted his scientific career to identification, analysis and solution of the most

significant problems in aquatic environments: nutrient enrichment, eutrophication and the drastic expansion of hypoxia in coastal waters during the 20th century. Over the last four decades Daniel has been a strong proponent for nutrient management. Without his active involvement in scientific and public discussions, current management plans may have been less effective.

Daniel has studied many lakes and coastal ecosystems in North America and Europe. Daniel received his PhD in 1987 from the University of Michigan and worked at Horn Point Laboratory, University of Maryland and Stockholm University before moving to Denmark in 1995 for a position as senior scientist at the National Environmental Research Institute. In 2007 Daniel was appointed professor in the Dept. of Geology, Lund University in Sweden. Daniel has always had a strong interest in making science 'matter', and he has addressed policy-relevant issues such as eutrophication and climate change with the aim to improve the scientific foundations for environmental policy decisions. He has engaged the U.S. COMPASS program, a team of science-based communication professionals who help his program train scientists to develop the skills they need to engage journalists, policymakers and other non-scientist audiences. This fledgling program of few years has become popular, useful and tangible evidence of Daniel's commitment to putting his science to work for the betterment of the environment and the society that depends on it. Daniel Conley is an international leader in the field of environmental science, and he is an excellent mentor of applied aquatic science to the next generation of scientists. His work has profoundly impacted our conceptual and technical understanding of biogeochemical cycling in freshwater, estuarine and coastal environments. Just like Ruth Patrick, his commitment to linking science and society is exemplary.

Friday, 23 May 2014

8:00 – 9:30am, Oregon Ballroom



Plenary Speaker: Julian Olden, University of Washington - School of Aquatic and Fishery Sciences

Running out of River: Will freshwater fishes keep pace with climate change?

Abstract: Climate change is poised to challenge the future persistence of plants and animals across the globe, and many uncertainties remain to whether, and if so how, species will cope. Species will be forced

to shift their distributions either in space or time to maintain appropriate climate conditions or populations adapt to their new environment, otherwise they may be doomed to eventual extinction. My seminar will address the seemingly simple, yet deceptively complex, question of whether freshwater fishes will be able to keep pace in a warming world. I'll explore this question at the national scale by evaluating for the first time whether the rapidity of projected climate change will exceed the dispersal ability of freshwater fishes. This investigation will highlight challenges to fish movement in contemporary riverscapes where dams and diversions represent ubiquitous barriers to dispersal and habitat may simply run out at watershed divides. Next, I'll zoom to the regional scale and examine how native and non-native species may differ in their response to future climate change. I'll explore how considerable opportunities exist to slow the pace of climate-induced stream warming

and facilitate (or inhibit) species movement across the landscape by deploying both traditional and emerging conservation strategies.

Speaker Biography: Julian Olden is an Associate Professor at the University of Washington and spends his time studying invasive species, ecohydrology, biogeography, and food web ecology of freshwater ecosystems. Growing up on a sailboat on the waters of Lake Ontario, Julian conducted his undergraduate studies in the Department of Zoology at the University of Toronto. It was during this time that his passion for freshwater conservation was first sparked; specifically while hauling nets choked with squirming white suckers. Next, Julian received his Master's Degree in Zoology at the University of Toronto, his doctorate in the Ecology Program at Colorado State University, and then was awarded a David H. Smith Conservation Post-doctoral Fellowship to work in the Center for Limnology at the University of Wisconsin. Nowadays, Julian and his students are working hard to save the world, one fish at a time.

President's Panel – "The State of the Scientific Societies Address"

Panel:

Society for Freshwater Science (SFS) President – Randy Fuller, Colgate University

Association for the Sciences of Limnology and Oceanography (ASLO) President- John Downing, Iowa State University

Psychological Society of America (PSA) President - John Stiller , East Carolina University

Society of Wetland Scientists (SWS) President – Stephen Faulkner, USGS, Leetown Science Center

Society Officers and Information

Society for Freshwater Science (SFS)

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Brian Shelley, Assistant to the President
Dave Penrose, Past-President
Jerry Jacobi, Assistant to the Past-President
David Strayer, President-Elect
Michelle Baker, Assistant to the President-Elect
Sue Norton, Secretary
Mike Swift, Treasurer
Al Steinman, Academic Delegate
David Costello, Early Career Delegate
Mike Paul – Non, Academic Delegate
Chris Robinson, International Delegate
Jack Feminella Chair, Publications Committee
Kim Haag, Chair, Finance Committee
Paul Wagner
Checo Colon-Gaud

2014 Award Recipients

Distinguished Service Award: Dr. Mark J. Wetzel

Environmental Stewardship Award: Dr. Michael T. Barbour

SFS 2014 Award of Excellence: Colin R. Townsend

*Hynes Award for New Investigators: Dr. Daniel C. Allen – "Freshwaters as a model system to better integrate ecology and the earth sciences"

**This award will be presented Monday, 19 May, 2014 at 6:00 pm at the SFS Business Meeting.*

2014 Student Presentation Awards

Best oral presentation in basic research: Nicholas Rasmussen

Runner-up for best oral presentation in basic research: Amanda Subalusky

Best oral presentation in applied research: Elizabeth Perkin

Runner-up for best oral presentation in applied research: Sami Domisch

Best presentation emphasizing methodology: Lauren Koenig

Best poster presentation in basic research: Robert J. Mooney

Best poster presentation in applied research: Brandon Sansom

Best undergraduate presentation: Shelby Servais

Future Meetings

The 2015 Society for Freshwater Science Meeting will be held May 17-22 at the Wisconsin Center in Milwaukee, Wisconsin at the Convention Center. Please visit the SFS booth and speak directly with representatives from Visit Milwaukee for further details concerning the meeting or visit the SFS website.

Association for the Sciences of Limnology and Oceanography (ASLO)

Officers/Executive Committee

John Downing, President
Deborah Bronk, Past-President
James Elser, President-Elect
Lisa Campbell, Secretary
Patricia Matrai, Treasurer

Members-at-Large

Claudia Benitez-Nelson
Howard Browman
Paul del Giorgio
Robinson "Wally" Fulweiler
Peter Leavitt
Susanne Menden-Deuer
Gillian Stewart
Anya Waite

Student Board Members

Amy Burgess
Allison Fong

Staff

Joe Ackerman, Editor, *Limnology and Oceanography: Fluids and Environments*
Jennifer Cherrier, Editor, *Limnology and Oceanography e-Lectures*
Teresa Curto, Executive Director
John Dolan, Co-editor, *Limnology and Oceanography: Bulletin*
Lucille Doucette, Journals Manager

Everett Fee, Editor, *Limnology and Oceanography*
 Susana Feng, Managing Editor, *Limnology and Oceanography: Methods*
 Paul Kemp, Web Editor and Editor, *Limnology and Oceanography: Methods*
 Helen Schneider Lemay, ASLO Business Manager
 Adrienne Sponberg, Director of Public Affairs; Co-editor, *Limnology and Oceanography: Bulletin*

2014 Award Recipients

Ruth Patrick Award: Daniel J. Conley
 G. Evelyn Hutchinson Award: Gerhard J. Herndl
 Raymond L. Lindeman Award: Daniel J. Madigan
 Margalef Award for Excellence in Education: Stanley Dodson
 John H. Martin Award: William K. W. Li
 A.C. Redfield Award for Career Achievement in Aquatic Sciences:
 Gene E. Likens
 Yentsch-Schindler Early Career Award: Andrew J. Pershing
 Citation for Scientific Excellence Award: Victoria Bertics

Many of the ASLO Award Recipients will be presenting in Integrative Session 009: Exceptional achievements in aquatic sciences: the ASLO Awards presentations, on Monday afternoon, 19 May 2014.

Future Meetings

2015 Aquatic Sciences Meeting, February 22 – 27, 2015, Granada, Spain
 2016 Ocean Sciences Meeting, February 21-26, 2016, New Orleans, Louisiana
 2016 ASLO Summer Meeting, June 5-10, 2016, Santa Fe, New Mexico

Phycological Society of America (PSA)

Officers / Members of the Executive Committee

John Stiller, President
 Linda Graham, Past-President
 Rick Zechman, Vice-President/President-Elect
 Juliet Brodie, International Vice-President
 Alison Sherwood, Secretary
 Eric Linton, Treasurer
 Dale Casamatta, Program Director
 Deborah Robertson, Membership Director
 Richard McCourt, Chair, Board of Trustees
 Tim Nelson, Endowment Fund Manager
 Michael Graham, Managing Editor, Journal of Phycology
 Kirsten Müller, Communications Director
 Kate Schoenrock, Student Member Representative

Board of Trustees

Rick McCourt, Chair
 Tim Nelson, Fund Manager
 Morgan Vis, Member
 Michelle Wood, Member
 Jeanine Olsen, Member
 Eric Linton, PSA Treasurer
 John Stiller, PSA President
 Rick Zechman, PSA Vice-President/President Elect
 Juliet Brodie, International Member

2014 Award Recipients

PSA Awards for Excellence: Christine Maggs
 PSA Awards for Excellence: Rex Lowe

Student Awards, 2014

Hannah T. Croasdale Fellowships

Emily Johnston
 Nicholas Schulte
 Margaret Christie
 Viviana Mazzei
 Robin Taylor

Grants-in-Aid of Research

Thomas Sauvage
 Olga Camacho
 Kyra Janot
 Holly Sweat
 Kate Schoenrock
 Dawn DeColibus
 Katie Dobkowski
 Cyprien Verseux

Hoshaw Travel Awards

Heather Hunsperger
 Rebecca Guenther
 Kylla Benes
 Elena Jovanovska
 Ana Morales
 I-Shuo Huang
 Sarah Tepler
 Thea Popolizio
 Rachael Wade
 Kaytee Pokryzwinski
 Thomas Sauvage
 Chris Main
 Sam Starko
 Sean O'Mara
 Sherry Kravesky

Society of Wetland Scientists (SWS)

Executive Board

Stephen Faulkner, President
 Jim Perry, President-Elect
 George Lukacs, Past-President
 Julia Cherry, Treasurer
 Kimberli Ponzio, Secretary-General

Chapter Presidents

Jeffrey Mason, Alaska
 Wei-Ta Fang, Asia
 Patricia Chow-Fraser, Canada
 Luke Eggering, Central
 Jos Verhoeven, Europe
 Elijah Ohimain, International
 David Merkey, Mid-Atlantic
 Gillian Davies, New England
 Arnold Van der Valk, North Central
 Samantha Capon, Oceania
 Colin MacLaren, Pacific Northwest
 Andy Herb, Rocky Mountain
 Kelly Reiss, South Atlantic

ElierTabilo Valdivieso, South America
Robert Kroger, South Central
Richard Beck, Western

Committee Chairs

Gregory Noe, Awards
Bill Morgante, Education & Outreach
Ralph Garono, Human Diversity
Linda Lee, IT & Communications
William Conner, Meetings
Kimberli Ponzio, Membership
George Lukacs, Nominations
Beth Middleton, Publications
Max Finlayson, Wetland Concerns

Representatives

Dennis Whigham, AIBS
Rob McInnes, STRP & Ramsar
Christine VanZomeren, Student
Scott Jecker, SWSPCP

Section Chairs

Brian Bencotter, Biogeochemistry
Amy Burgin, Global Change Ecology
Judy Drexler, Peatlands
Rob McInnes, Ramsar
Andy Herb, Wetland Restoration
James Anderson, Wildlife
Lisa Gardner Chambers, Women in Wetlands

Editors

Marinus Otte, *Wetlands Journal*
Ralph Tiner, *Wetland Science & Practice*

2014 Award Recipients

International Fellow Award: Jared Bosire
Doug Wilcox Award: Diane De Steven
President's Service Award: Ted Burger
2013 Mark Brinson Best Student Oral Presentation Award: Emily Graham
2013 Best Student Poster Presentation Award: Anita Arenas
International Travel Award: Dr. Wahid M. Moufaddal
International Travel Award: Tatiana Chuzhekova
International Travel Award: Rajiv Das Kangabam
International Travel Award: Monalisa Silva-Araujo

Undergraduate Mentoring Program

Undergraduate students from underrepresented groups who are considering environmental careers are eligible for travel awards funded by the National Science Foundation and SWS regional chapters. The SWS student mentoring program provides career guidance and networking opportunities.

Kyra Barboza
Philip Bellamy
Christin Carter
Mia Dawson
Randi Jackson

Khem Marriott
Maite Martin
Nemesis Ortiz
Julio Pachon
Keith Perkins
Elizabeth Preza

2014 Student Research Grants

Matthew Abbott
Jennifer Bell
Joshua Daskin
Christopher Kaase
Jessica Lee
Phillip Lee
Jason Mercer
Sara Nedrich
Elizabeth Paulson
Shelby Rinehart
Elanor Spadaford
Elizabeth Waring

2014 Section & Chapter Student Research Grants

Ramsar Section: Bruna Oliveira
South Atlantic Chapter: Joshua Daskin and Christopher Kaase
Pacific Northwest Chapter: Matthew MacDonald
North Central Chapter: Kathryn Swanson and Adam Janke

Future Meetings

Save the date: May 31 – June 4, 2015!



Annual Meeting 2015

SOCIETY OF WETLAND SCIENTISTS
Changing climate. Changing wetlands. Providence, Rhode Island, May 31 - June 4

Meeting Site Information

The Oregon Convention Center

The Oregon Convention Center (OCC) is the largest convention center in the Pacific Northwest; built with sustainability in mind, the Oregon Convention Center (OCC) has long held a leadership role in green building and other environmentally responsible business practices. In 2004, the OCC was the first convention center to earn LEED® for Existing Buildings certification by the U.S. Green Building Council. In 2008, the facility was recertified at the Silver level and operates with a pledge to continually reduce its environmental footprint, and to educate its staff, clients and visitors on the importance of working together toward a sustainable future. Along with Travel Portland, Metro, and the people and City of Portland, the OCC has helped to establish Portland, Oregon's national reputation as a premier destination for green meetings and events.

Concessions

Various concessions with food for purchase will be open throughout the meeting.

Breaks and Refreshments

Breaks with coffee service will be available Monday through Friday mornings from 9:30 - 10:00am and afternoons from 3:30– 4:00pm in Exhibit Hall A1, A, B. Friday's breaks will be held in the Oregon Ballroom Foyer.

Electronic Photo Gallery

Various images contributed by members of the sponsoring societies will be shown throughout the meeting.

Oregon Convention Center Business Center

The business center is unstaffed and open 7:00am -11:00pm. It is located on the 2nd floor (same floor as the Ballrooms) just above Stir Lounge in the MLK Lobby. Access to a full computer system, scanning, faxing and copying are available here.

Internet Service

Complimentary wireless service will be available from noon on Sunday, 19 May, through the conclusion of the meeting on Friday. This service will be available throughout the convention center. There will be adequate service for all participants via multiple access points but, access may be limited at times due to the number of users on the Internet at any one point. To access the internet from your device simply select "JASM WiFi" from the list of available Wi-Fi networks in the settings of a laptop, phone, or tablet. No Password or ID required.

ATM Machines at Oregon Convention Center

The official currency of the United States is the dollar, denoted by USD (\$). There are three ATMs in the building: Pre-function A Lobby, MLK Lobby, and the Ginkberry Concourse near where the elevators from the parking garage dropoff.

Additional ATM locations throughout Portland may be found at <http://visa.via.infonow.net/locator/global/jsp/SearchPage.jsp> for Visa and www.mastercard.us/cardholder-services/atm-locator.html for MasterCard.

Visitor Information

Visitor information is always out and available to attendees in the MLK Lobby. A concierge service is available Sunday – Friday from 8:00am – 5:00pm at the OCC to assist you with information about Portland.

Oregon Convention Center Parking

In addition to the ample street and bus parking in the surrounding area, the Oregon Convention Center provides on-site parking in its clean and secure underground parking garage. 800 spaces are available on the garage's two levels. The maximum daily rate to park is \$10. Enter the garage via its First Avenue or Lloyd Boulevard entrances. Clearance on the P1 level is 7 feet; clearance on the P2 level is 9 feet. Overnight parking in the garage is prohibited.

Emergencies/First Aid

An EMT will be stationed in the med tech office that is closest to Hall A and A1 in the Pre-Function A area.

Transportation

MAX (Metropolitan Area Express) Light Rail

The new Portland Streetcar Central Loop runs alongside the main entrance on NE Martin Luther King (MLK) Boulevard. The OCC stop is located on MLK at NE Hoyt Street.

Getting around Portland

<http://www.travelportland.com/article/max-light-rail/>

MAX trains run about every 15 minutes most of the day, every day. Service is less frequent in the early morning, midday and evening.

How to ride MAX

You must have a validated ticket, bus transfer receipt or pass before boarding MAX. Ticket machines and validators are located at the station. There are no fare boxes onboard MAX. Before boarding, buy your ticket from a ticket machine or with the mobile ticketing app — or validate your previously purchased ticket in the validator located near the ticket machine. A validated ticket is your proof of payment, good for two hours on MAX, buses and the Portland Streetcar. (Full-day tickets are also available.) Keep your ticket until you have completed your trip. Note: MAX ticket machines return change in coins, so small bills are recommended. If you have a TriMet pass or bus transfer receipt, just board MAX and have a seat. (Check the expiration time at the top of your transfer; you may board until that time.)

Signs at the station indicate where to wait and when the next train is due. Signs on the front of each train identify the line (Blue, Green, Red or Yellow) and destination.

MAX stops at every station, so you don't need to signal the operator to get on or off. The station name is announced before each stop and appears on a reader board overhead.

TriMet Passes for Conference Attendees

Travel Portland will be providing all registered attendees of 2014 JASM with one TriMet MAX light rail pass at the JASM registration desk located at the Oregon Convention Center. Your MAX Light Rail pass will be valid through the dates of the convention plus one extra day to allow you to travel back to the airport. MAX light rail is Portland's efficient rail system that connects the metro area, Portland International Airport and the central city. To get to the Oregon Convention Center using MAX Light Rail prior to picking up your pass, you will need to purchase an adult ticket. Current rates are \$2.50 for a 2 hour ticket and \$5 for an all-day ticket.

Ground Transportation Center at Portland Int'l Airport

The pickup area for taxis, town cars, long-haul shuttles, hotel vans and parking lot shuttle buses is located in the center section of the airport terminal's lower roadway on the baggage claim and departure level. Airport shuttles, off-airport rental car shuttles and reserved vehicles are found in the section of the lower roadway closest to the garage. Most transportation providers serve downtown Portland, which is approximately nine miles and 25-40 minutes from Portland International Airport.

Meeting Schedule

All events are at the Oregon Convention Center unless noted otherwise.

Friday, 16 May 2014

2:00-6:00 pm SWS Executive Board Meeting-Room VIP B

Saturday, 17 May 2014

8:00 am-5:00 pm ASLO Board Meeting-Hilton Hotel- Broadway One & Two
 8:00 am-4:00 pm SWS Full Board of Directors Meeting-Room A107
 9:00 am-4:00 pm Stream Invertebrate Workshops for Teachers-Offsite
 1:00-5:00 pm PSA Board of Trustees Meeting-Room A109
 1:00-7:00 pm SWSPCP Board of Directors Meeting-Room A108
 3:00-5:00 pm SFS Finance Committee Meeting-Room C127

Sunday, 18 May 2014

7:00 -9:00 am SFS Editorial Committee-Room A107
 8:00 am-5:00 pm ASLO Board Meeting-Hilton Hotel- Broadway One & Two
 8:00 am-5:00 pm PSA Executive Meeting-Room A109
 9:00 am-5:00 pm Clean Water Act-Room B115
 9:00 am-5:00 pm Beginner's R for Analysis and Graphics Workshop-Room B116
 9:00 am-5:00 pm Identification of Ephemeroptera Larvae Workshop-Room B113
 9:00 am-4:00 pm SFS Board of Directors-Room D133-D134
 10:00 am-3:00 pm Quantifying transient storage using OTIS-Room B117-B119
 12 noon-5:00 pm Stream Resiliency Research Coordination Network-Room B114
 12 noon-5:00 pm Exhibitor Set-up-Exhibit Hall A, A1, B
 12 noon-5:00 pm Poster Set-up by presenters-Exhibit Hall A, A1, B
 1:00-4:00 pm INSTARS Mentoring-Room B110-B112
 1:00-5:00 pm Tools and Techniques for Communicating Research-Room A106
 1:00-9:00 pm Presentation Room-Room D131
 1:00-9:00 pm Speaker Ready Room-Room D132
 3:00-7:00 pm Registration-Prefunction C
 4:00-5:00 pm Freshwater Illustrated Film-Room C123 - C124
 4:00-5:00 pm Student Worker Training-Room C120
 4:30-5:15 pm SWS Chapter Meetings-Rooms A107, A108, C125, C126, C127, D130
 5:15-6:00 pm SWS Section Meetings-Rooms A107, A108, C125, C126, C127, D130
 6:30-7:00 pm SWS Student Mentoring Orientation-Room A105
 7:00-8:00 pm Welcome/Opening Keynote-Oregon Ballroom
 8:00-10:00 pm Welcoming Reception-Portland Ballroom

Monday, 19 May 2014

7:00 am-7:00 pm Presentation Room-Room D131
 7:00 am-7:00 pm Speaker Ready Room-Room D132
 7:00 am-5:00 pm Registration-Prefunction C
 7:00-8:00 am SWS/SWSPCP Presidents Breakfast-Room A107
 7:00-9:30 am Exhibitor and Poster Presentation Set-up-Exhibit Hall A, A1, B
 8:00-9:30 am Welcome, Plenary, SFS Award Lecture-Oregon Ballroom
 8:30 am-5:00 pm SFS Taxonomy Certification- Room C126
 9:30-10:00 am Coffee Break-Exhibit Hall A, A1, B
 9:30 am-5:00 pm Exhibits/Posters Open-Exhibit Hall A, A1, B
 10:00 am-Noon Concurrent Sessions-Variou Rooms
 10:30 am-Noon SWS Mentoring Workshop #1-Room D133 - D134
 Noon-1:30 pm Lunch on your own
 Noon-1:30 pm SFS Student Resource Committee Meeting-Portland Ballroom Section-251
 Noon-1:30 pm SFS Committees Meeting-Portland Ballroom Section-252
 12:15-1:15 pm SWS PCP Information Session-Room A105
 12:15-1:15 pm NSF Town Hall-Room B114
 12:15-1:15 pm Pitch Slam!-Room B113
 12:15-1:15 pm WETLANDS Editorial Board Meeting-Room C125
 12:15-1:15 pm Communicating with Policymakers 101-Room A106
 1:30-3:30 pm Concurrent Sessions-Variou Rooms
 3:30-4:00 pm Coffee Break-Exhibit Hall A, A1, B
 4:00-6:00 pm Concurrent Sessions-Variou Rooms
 6:00-7:00 pm PSA Business Meeting-Room B110 - B112
 6:00-8:00 pm ASLO Membership Fair-Portland Ballroom 251
 6:00-8:00 pm SFS Business Meeting - Room C123-C124
 6:00-8:00 pm SWS Awards / Business Meeting-Room D135-D136
 8:00-9:00 pm Student Mixer - Portland Ballroom 253 - 254
 8:00-9:00 pm Post-Doc Mixer - Portland Ballroom 252

Tuesday, 20 May 2014

7:00-8:30 am SFS Communications Committee-Room C126
 7:00 am-7:00 pm Presentation Room-Room D131
 7:00 am-7:00 pm Speaker Ready Room-Room D132
 7:00 am-5:00 pm Registration-Prefunction C
 8:00-9:30 am Plenary Session, SWS Award Lecture-Oregon Ballroom
 9:30-10:00 am Coffee Break-Exhibit Hall A, A1, B
 9:30-8:00 pm Exhibits/Posters Open-Exhibit Hall A, A1, B
 10:00 am-Noon Concurrent Sessions-Variou Rooms
 10:30 am-Noon SWS Mentoring Workshop #2-Room D133 - D134
 Noon-1:30 pm Lunch on your own
 Noon-2:00 pm Journal of Phycology Editorial Luncheon-Room C125
 12:15-1:15 pm SWSPCP Ethics Workshop #1- Room A105
 12:15-1:15 pm SWS Oceania Chapter meeting- Room B114

12:15-1:15 pm	Working Towards Interoperability Standards for Networks and Observatories-Room B113
12:15-1:15 pm	Aquatic Sciences Career Panel: One Degree, Many Paths-Room A106
12:15-1:15 pm	Nutrient and Long Term Monitoring Workshop-Room C120- C122
12:15-1:15 pm	Science Communication: Delivering a Clear Message-Room D135-D136
12:15-1:15 pm	Freshwater Illustrated Film - Room C123-C124
1:30-3:30 pm	Concurrent Sessions-Variou Rooms
3:30-4:00 pm	Coffee Break-Exhibit Hall A, A1, B
4:00-5:00 pm	Groundwater/Wetlands Study Group Mixer-Room D130
4:00-6:00 pm	Concurrent Sessions-Variou Rooms
5:00-6:00 pm	Presidents Meeting-Room A109
5:30-7:00 pm	Utah State Alumni and Friends Social-Room A108
6:00 - 8:00 pm	Taxonomy Fair - Exhibit Hall A, A1, B
6:00-8:00 pm	SFS Endowment & Awards Reception-Room A107
6:00 - 8:00 pm	Poster Session/Happy Hour- Exhibit Hall A, A1, B
6:00-8:00 pm	Tipping Points Town Hall-Room A106
6:00-9:00 pm	Large-Scale Cultivation of Microalgae w/ Commercial Potential- Room A105
7:00-9:00 pm	Science Pub Mission Theater-Offsite at Mission Theater
8:00-10:00 pm	Mentor/Mentee Dinner, Dessert, or Drinks-Off-site
8:00 pm-12:00 am	Jam Session - Offsite at Paddy's
9:00 pm	Science Hop -Offsite, meet at the bell sculpture outside the convention center

Wednesday, 21 May 2014

7:00 am-7:00 pm	Presentation Room-Room D131
7:00 am-7:00 pm	Speaker Ready Room-Room D132
7:00 am-5:00 pm	Registration-Prefunction C
8:00-9:30 am	Plenary Session, PSA Award Lecture-Oregon Ballroom
8:00 am-Noon	The USDA Conservation Effects and Assessment Project (CEAP)-Wetlands - Room-D130
9:30-10:00 am	Coffee Break-Exhibit Hall A, A1, B
9:30 am-7:00 pm	Exhibits/Posters Open-Exhibit Hall A, A1, B
10:00 am-Noon	Concurrent Sessions-Variou Rooms
10:30 am-Noon	SWS Mentoring Workshop #3-Room D133 - D134
Noon-1:30 pm	Lunch on your own
12:15-1:15 pm	SWSPCP Ethics Workshop 02- Room A109
12:15-1:15 pm	Status, Updates, and Remaining Questions in the STREON Experimental Program-Room A105
12:15-1:15 pm	Student Workshop-Room C123-C124
12:15-1:15 pm	Early Career Workshop-Room-A106
1:00-5:00 pm	Waters of US Workshop /Technical Workshop on Freshwater Landscape-Room D130
1:30-3:30 pm	Concurrent Sessions-Variou Rooms
3:30-4:00 pm	Coffee Break-Exhibit Hall A, A1, B

4:00-6:00 pm	Concurrent Sessions-Variou Rooms
6:00-9:00 pm	Isolated Wetlands Research Group- Room A107 & A108
6:15-7:30 pm	Fun Run-Offsite
7:00-10:00 pm	All Society Social and Mixer- Offsite at Pioneer Courthouse Square
10:00 pm	Science Hop-Offsite, meet at Pioneer Courthouse Square (corner of 6th and Morrison)

Thursday, 22 May 2014

7:00 am-7:00 pm	Presentation Room-Room D131
7:00 am-7:00 pm	Speaker Ready Room-Room D132
7:00 am-5:00 pm	Registration-Prefunction C
8:00-9:30 am	Plenary Session, ASLO Award Lecture-Oregon Ballroom
8:30-11:30 am	The Cascades to Coast GK-12 Student Poster Conference - Exhibit Hall A, A1, B
9:30-10:00 am	Coffee Break-Exhibit Hall A, A1, B
9:30-8:00 pm	Exhibits/Posters Open-Exhibit Hall A, A1, B
10:00 am-Noon	Concurrent Sessions-Variou Rooms
Noon-1:30 pm	Lunch on your own
12:15-1:15 pm	Introductory Environmental, Ocean & Aquatic Science Workshop- Room A105
1:30-3:30 pm	Concurrent Sessions-Variou Rooms
3:30-4:00 pm	Coffee Break-Exhibit Hall A, A1, B
4:00-6:00 pm	Concurrent Sessions-Variou Rooms
4:00 - 6:00 pm	SFS Chapter Meeting-Room A108
6:00 - 8:00 pm	Poster Session/Happy Hour- Exhibit Hall A, A1, B
7:00-8:00 pm	Editorial Board Meeting for the Journal Freshwater Biology-Room D130
8:00-10:00 pm	Poster & Exhibit Teardown - Exhibit Hall A, A1, B
9:00 pm	Science Hop -Offsite, meet at the bell sculpture outside the convention center

Friday, 23 May 2014

7:00-8:00 am	SFS New Board Member Breakfast-Room A107
7:00 am-5:00 pm	Presentation Room-Room D131
7:00 am-7:00 pm	Speaker Ready Room-Room D132
7:00 am-5:00 pm	Registration-Prefunction C
8:00-9:30 am	Plenary Session, Presidents' Panel-Oregon Ballroom
8:00 am-Noon	Poster & Exhibit Teardown - Exhibit Hall A, A1, B
9:30-10:00 am	Coffee Break-Oregon Ballroom Foyer
10:00 am-Noon	Concurrent Sessions-Variou Rooms
Noon-1:30 pm	Lunch on your own
12:15-2:00 pm	SWS Student Mentor Program Luncheon-Room D133 -D134
1:30-3:30 pm	Concurrent Sessions-Variou Rooms
3:30-4:00 pm	Coffee Break-Oregon Ballroom Foyer
4:00-6:00 pm	Concurrent Sessions-Variou Rooms

Airport Shuttle Service

Blue Star Airport Express, phone: 503-493-7278, has service from the Portland International Airport to the Portland Convention Center area. Exit the airport terminal from baggage claim and go to the second concrete island(#2), marked "Scheduled Busses & Vans" near the information booth and look for the Blue Star Airport Express. The fare is \$11 one way and \$22 round trip. Service is every half-hour from 7:00am -12:30am. Just mention "JASM" to the driver to receive the discount. Reservations are not required for trips leaving from the airport but are necessary for return trips returning to the Airport.

PDX Airport Service

The trip to/from downtown Portland takes about 38 minutes and requires a valid ticket (\$2.50 Adult, \$1 Honored Citizen or \$1.65 Youth/Student). The first train of the day arrives at PDX at 4:58am on weekdays and 5:04am on weekends. The last Red Line train departs PDX at 11:49pm. The MAX station and ticket machines are located near baggage claim on the lower level. (flypdx.com) To return to PDX, you can take the MAX Red Line train from several locations in the downtown area as well as the Lloyd Center/Convention Center area. A two-hour ticket is \$2.50, an All Day ticket is \$5.

For additional information on local transportation, go to the web site: <http://www.travelportland.com/transportation/getting-around/trains-buses/max-light-rail-getting-around-portland-2013-travel-portland>.

Registration and Check-In Information

Registration and check in for the meeting will be available all week in the Pre-function C area of the Oregon Convention Center. Please check in upon your arrival at the meeting in order to receive your name badge and other important materials and information.

Registration Hours

Sunday, 18 May 2014 – 3:00 to 7:00pm

Monday, 19 May through Friday, 23 May 2014 - 7:00am to 5:00pm

In order to facilitate easier check in at the meeting, it is very helpful that you bring a copy of the email confirmation that you received when you registered. This will allow us to locate your name badge quickly and efficiently.

Online Registration Open

Avoid the line at the On-site Registration kiosk! Register on-line anytime before or during the meeting.

Once you receive your registration confirmation, bring your device or printed registration confirmation up to the On-Site Registration kiosk and show your confirmation to receive your badge and meeting materials.

Meeting Addendum

Keep up to date with changes by downloading the meeting addendum from the meetings website. Changes to the program will automatically appear in the meeting agenda and meeting app each morning.

Receipts and Letters of Participation

Your registration confirmation that was emailed to you when you reg-

istered for the meeting will serve as your receipt. In keeping with our conservation efforts, we will not provide printed receipts to attendees on site at the meeting. If you have misplaced your original receipt and need another copy, you may print your own receipt by going to: <https://www.sgmeet.com/jasm2014/userlogon.asp>.

Messages

Message boards will be located near registration. Feel free to post messages, CVs, job opportunities, as well as to check these boards if you are expecting a message during the meeting.

Special Needs

If you have a disability or limitation that may require special consideration in order to fully participate in the meeting, please contact the JASM Business Office to see how we can accommodate your needs. Call 254-776-3550 or contact us via e-mail at jasm2014@sgmeet.com. You may also go to the conference registration desk at the Oregon Convention Center during the meeting as well.

Child Care

On-site child care will not be provided at the meeting. As a convenience to attendees we have created a list of child care options available in the downtown Portland area.

By providing you with this information, neither JASM 2014 nor the conference management organization is endorsing or guaranteeing any agency or service. Conference management is not able to assist in the process beyond providing this information.

Care.com

Website: <http://www.care.com/>

Care is a global need without geographic or demographic boundaries. At some point, every person and every family will have care needs, be it for children, seniors, pets or even homes. Our mission is to improve the lives of families and caregivers by helping them connect in a reliable and easy way. Our solutions help families make informed decisions in one of the most important and highly considered aspects of their family life: finding and managing quality care for their loved ones. In providing families a comprehensive marketplace for care, we are also building the largest global destination for quality caregivers to find fulfilling employment and career opportunities. We strive to help our members - families and caregivers - pursue their passions and fulfill the basic human need of caring for each other.

WeVillage - Drop 'n Go Childcare

424 N.W. 11th Ave.

Portland, OR 97209-2904

Contact: Karen Beninati

Phone: (503) 935-5590

Email: karen@wevillage.com

Website: www.wevillage.com

WeVillage is a safe, fun and happy place away from home. So, whether your children spend an hour a month with us or 25 hours a week, they will leave with some new tidbit of knowledge that bolsters what they are learning in school or home. Of course, they'll leave with a big 'ol smile too.

A+ Child Care to You, Inc.

Contact: Amie Pico
 Phone: (971) 255-0440
 Email: apluschildcaretoyou@hotmail.com
 Website: www.apchildcare.com

Let us come to you! A+ Child Care to You is committed to providing a safe and engaging environment for children on-site at your home or business! We are qualified as Eco-Healthy Child Care provider. Eco-Healthy Child Care is a national program that ensures child care settings are as happy, healthy, safe and green as possible by reducing children's exposure to toxics. Throughout Multnomah County we refer highly qualified child care providers, supply age appropriate activities, crafts and games at events such as weddings, conferences, business meetings, holiday parties and more. At events, the host or the family provides the room, tables, chairs and food. We also offer on-call, temporary child care provider referrals on an individual basis.

Creative Childcare Solutions, Inc.

Portland, OR
 Contact: Michelle Davenport
 Phone: 503.518.2274
 Email: michelle@munchkincare.com
 Website: www.munchkincare.com

At Creative Childcare Solutions, we believe children should be allowed to be children — not act like “little adults.” That's why we offer on-site childcare for your special event or your out-of-town hotel guests. We go wherever you are. Creative Childcare Solutions will customize each special event to meet your unique needs. We provide safe, fun care for children of all ages and group sizes: from one child in a hotel room to several hundred children at a corporate picnic. We provide everything from toys to baby equipment. We send you only qualified caregivers (au pair, nanny's) who bring with them many years of childcare expertise, CPR and First Aid Certification, and an element of fun and professionalism. No teenage babysitters!

Pre- and Post-meeting Field Trips

On Sunday, 18 May 2014, a variety of field trips are planned. These trips focus on aquatic resources in the Portland area and are led by local researchers. Advanced registration is required for the following field trips. If you are registered to participate and have questions about the trip, please contact the organizer listed. Field trips are subject to cancellation if the minimum number of participants is not met.

Columbia River Gorge Exploration

Led by Dale A. McCullough, Seth White, and Blaine Parker, Columbia River Intertribal Fish Commission

This Columbia River Gorge Exploration will focus on tribal fisheries, Columbia River floodplains, small streams and a dam in the lower 30 miles of the Gorge. We will visit waterfalls, pristine streams and beautiful vistas of the Columbia River and have several opportunities for short (0.5mi-1mi) walks. We will tour Bonneville Dam, with its fish viewing windows, and discuss dam impacts on lamprey, sturgeon and salmonid life histories and tribal fisheries. We will hike briefly along pristine Eagle Creek and visit a hatchery at its mouth. We will visit the Bridge of the Gods, site of a landslide that blocked the river in prehistoric times, and

an active Indian fishing site. Gorton Creek enters the Columbia River in this area and provides a good example of habitat restoration projects at its mouth. We will travel across the Columbia to see an example of a cluster of lakes in the river floodplain and go to Beacon Rock, to see this landmark noted in Lewis and Clark's diaries. The viewpoint at the top of this monolith accessed by a spiral staircase.

Departs Oregon Convention Center at 8:30am return at 5:00pm. Maximum number of participants 25. Cost: \$50 includes transportation and a box lunch.

Floods, fire and ice that created the Columbia River Gorge

Led by Steve Carlson, Portland State University

Come see firsthand how the unique and beautiful landscape of the Columbia River Gorge was formed from a combination of flood basalts, tectonic activity, recent lava flows and catastrophic ice-age floods. The gorge offers an unusual opportunity to see incredible geomorphic features, a cross section of the Cascade Mountains, and evidence of repeated glacial floods. Stops along the Columbia will include: Rocky Butte, the mouth of the Sandy River, Crown Point, Latourell falls, Multnomah falls, Oneonta Gorge, Hood River valley and delta and Eliot Creek mudflow, Rowena overlook, Cascade Locks, The Dalles and the Bonneville landslide.

Departs Oregon Convention Center at 9:00am, return at 5:00pm. Max number of participants 20. Cost: \$60, includes transportation and a box lunch.

Destruction and Rebirth: Exploring novel landscapes at Mount St. Helens

Led by John Bishop, Washington State University

We will visit Mount St. Helens Volcano on the 34th anniversary of the spectacular 18 May 1980 eruption that completely reset this landscape. Learn about the volcano and the biological, hydrologic, and geologic forces that have shaped the recovery of this incredible ecosystem. We will drive up to the Johnston Ridge Volcano Observatory from the west, stopping to look at disturbance features, newly formed lakes and ponds, and a look straight into the crater, weather permitting. We will also plan for one or two short hikes.

Depart Oregon Convention Center at 8:00am return at 5:00pm. Maximum number of participants 20, Cost \$55 includes transportation and a box lunch – admission to the Monument is free for the anniversary!

Messages From the Mountain: Reflections on 33 years of Ecosystem Responses following the 1980 Eruption of Mount St. Helens

Led by Charlie Crisafulli and Fred Swanson

On May 18, 1980 Mount St. Helens underwent a sensational explosive eruption that dramatically disturbed a 600 km² area containing diverse forest, meadow, riverine, and lake habitats. Scientists representing numerous disciplines arrived on the scene within days of the eruption and established a network of studies aimed at understanding initial and long-term responses of the biota and processes to this remarkable event. In the 33 years since the 1980 eruption, Mount St. Helens has become one of the most thoroughly studied large infrequent disturbances in the world.

Field trip participants will travel up the Toutle River, a drainage that was severely altered by the largest debris avalanche in recorded history. Along the way, there will be several stops or short hikes to locations where trip leaders will discuss their research on hydrology and sediment transport, impacts and subsequent colonization and management of fish populations, patterns and rates of plant succession, including the role of invasive species, the invasion and reassembly of amphibian, mammal and arthropod assemblages, and general natural history of the area. Participants will need to be able hike 2.2 miles on gravel trails that have occasional short steep areas. The trip offers spectacular views of the volcano and close inspection of the unusual hummocky landscape and ponds created during the eruption. Participants will also stop at the Johnson ridge Observatory, where they can purchase books and maps of the area and learn more about Cascade Range volcanic ecosystems.

Depart Portland Convention Center at 7:00am, return 6:00pm. Maximum number of participants 24. Cost \$60 includes transportation and a box lunch.

Portland Brewery Tour

Led by Bob Hall, University of Wyoming

This brewery tour, led by an expert, will introduce participants to 3 Portland breweries and their brewmasters. The breweries will include large operations (Widmer and Deschutes or Bridgetown) as well as small (Cascade or Hair of the Dog).

Tour will last 4 hours and start at 1:00pm, and participants will travel to other breweries at 2:30pm, and at 4:00pm. Transport will be DIY via public transportation or walking, with a map and how to guide provided.

Depart Oregon Convention Center at 1:00pm, returns at 5:00pm, Maximum number of participants 35. Cost: participants will buy their own tastings at each stop.

Restoring Crystal Spring Creek and Returning Wetlands to Westmoreland Park

Led by Emily Roth, Natural Resource Planner, Portland Parks & Recreation.

The City of Portland and the US Army Corps of Engineers are partnering to restore Crystal Springs, a tributary to Johnson Creek in SE Portland. A series of projects are planned and already constructed including culvert replacement, wetland restoration in Westmoreland Park, and green streets. <http://www.portlandoregon.gov/bes/61844>. Participants in the workshop will learn about planning to construction of an urban stream restoration project from the planner, landscape architect, fish biologist and construction inspector perspectives. An additional focus has been on integrating passive recreation into the restored wetland area in Westmoreland Park. Small group rotations will include culvert replacement, wetland restoration, and stream restorations. They will tour the site from the headwaters at Reed College to the culverts downstream of the park.

Depart Oregon Convention Center at 9:00am, returns at 2:30pm, Maximum number of participants 28. Cost \$70 includes transportation, workshop fee and a box lunch.

Marmot Dam Removal Site Field Trip

Led by Mackenzie Keith

The Marmot Dam on the Sandy River was decommissioned and removed in October 2007. The reservoir behind Marmot Dam contained approximately 900,000 cubic yards of sediment in a wedge extending upstream from the 47-foot concrete dam. Dam removal has resulted in the suspension and transport of this sediment, and the near-term effects on habitat are difficult to predict. In the long term, the streambed will return to its natural state, and summertime stream temperatures below the dam site are expected to decrease. The Sandy and Little Sandy Rivers provide access and habitat for anadromous fish and other aquatic organisms, so there is a great interest in documenting the impacts of sediment released from these dams. This field trip will provide a tour of the dam removal site. Discussions will center on effects of dam removal to river ecology.

Depart Oregon Convention Center at 1:00pm and returns at 6:00pm, Maximum number of participants 20. Cost: \$45 includes transportation.

North Portland Wetland Mitigation Tour

Led by Carrie Butler

This tour will look at Port of Portland wetland mitigation sites located in North Portland. We will start at Vanport Wetlands for a bit of birding then head west to see the Rivergate Enhancement Sites adjacent to the Bybee Wetland and the Columbia Slough. The tour will end nicely at Smith & Bybee Wetlands Natural Area where will enjoy our lunch and attendees will have an opportunity to view wildlife and interesting public art features.

Depart Portland Convention Center 9:00am, return 1:30pm. Maximum number of participants 11. Cost \$60 includes transportation.

Society-Related Meetings

All meetings are at the Oregon Convention Center unless otherwise noted.

SWS Executive Board Meeting

Friday, 16 May 2014, 2:00 – 6:00pm
Location: VIP B

SWS Full Board of Directors Meeting

Saturday, 17 May 2014, 8:00am – 4:00pm
Location: A107

ASLO Board Meeting

Saturday, 17 May 2014, 8:00am – 5:00pm
Location: Hilton- Broadway One & Two

SWSPCP Board of Directors Meeting

Saturday, 17 May 2014, 1:00 – 7:00pm
Location: A108

PSA Board of Trustees Meeting

Saturday, 17 May 2014, 1:00 – 5:00pm
Location: A109

SFS Finance Committee Meeting

Saturday, 17 May 2014, 3:00 – 5:00pm
Location: C127

SFS Editorial Committee Meeting

Sunday, 18 May 2014, 7:00 – 9:00am
Location: A107

ASLO Board Meeting

Sunday, 18 May 2014, 8:00am – 5:00pm
Location: Hilton - Broadway One & Two

PSA Executive Committee Meeting

Sunday, 18 May 2014, 8:00am – 5:00pm
Location: A109

SFS Board of Directors Meeting

Sunday, 18 May 2014, 9:00am – 4:00pm
Location: D133 – 134

SFS Instars Mentoring Workshop Orientation

Sunday, 18 May 2014, 1:00 – 4:00pm
Location: B110 - B112

SWS Asian Chapter Meeting

Sunday, 18 May 2014, 4:30 – 5:15pm
Location: D130

SWS North Central Chapter Meeting

Sunday, 18 May 2014, 4:30 – 5:15pm
Location: C125

SWS Pacific Northwest Chapter Meeting

Sunday, 18 May 2014, 4:30 – 5:15pm
Location: A107

SWS Rocky Mountain Chapter Meeting

Sunday, 18 May 2014, 4:30 – 5:15pm
Location: C127

SWS South Atlantic Chapter Meeting

Sunday, 18 May 2014, 4:30 – 5:15pm
Location: A108

SWS South Central Chapter Meeting

Sunday, 18 May 2014, 4:30 – 5:15pm
Location: C126

SWS Western Chapter Meeting

Sunday, 18 May 2014, 4:30 – 5:15pm
Location: A103

SWS Biogeochemistry Section Meeting

Sunday, 18 May 2014, 5:15 – 6:00pm
Location: C127

SWS Global Change Ecology Section Meeting

Sunday, 18 May 2014, 5:15 – 6:00pm
Location: C126

SWS Ramsar Section Meeting

Sunday, 18 May 2014, 5:15 – 6:00pm
Location: C125

SWS Wetland Restoration Section Meeting

Sunday, 18 May 2014, 5:15 – 6:00pm
Location: A107

SWS Wildlife Section Meeting

Sunday, 18 May 2014, 5:15 – 6:00pm
Location: D130

SWS Women in Wetlands Section Meeting

Sunday, 18 May 2014, 5:15 – 6:00pm
Location: A108

SWS Student Mentoring Program Orientation (invitation only)

Sunday, 18 May 2014, 6:30 – 7:00pm
Location: A105

SWS/SWPCP Past President's Breakfast

Monday, 19 May 2014, 7:00 - 8:00am
Location: A107

SFS Committees

Monday, 19 May 2014, 12:00 – 1:30pm
Location: Portland Ballroom 252

SFS Student Resource Committee Meeting

Monday, 19 May 2014, 12:00 – 1:30pm
Location: Portland Ballroom 251

SWS PCP Information Session

Monday, 19 May 2014, 12:15 – 1:15pm
Location: A105

WETLANDS Editorial Board Meeting

Monday, 19 May 2014, 12:15 – 1:15pm
Location: C125

PSA Business Meeting

Monday, 19 May 2014, 6:00 – 7:00pm
Location: B110 - B112

ASLO Membership Fair

Monday 19 May, 2014, 6:00 – 8:00pm
Location: Portland Ballroom 251

SFS Business Meeting

Monday, 19 May 2014, 6:00 – 8:00pm
Location: C123 - C124

SWS Business Meeting & Awards Presentation

Monday, 19 May 2014, 6:00 – 8:00pm
Location: D135- 136

SFS Publications Committee Meeting

Tuesday, 20 May 2014, 7:00 – 8:30am
Location: C126

Journal of Phycology Editorial Luncheon

Tuesday, 20 May 2014, 12:00 – 2:00pm
Location: C125

SWS Oceania Chapter meeting

Tuesday, 20 May 2014, 12:15 – 1:15pm
Location: B114

Presidents Meeting

Tuesday, 20 May 2014, 5:00 – 6:00pm
Location: A109

SFS Endowment & Awards Reception

Tuesday, 20 May 2014, 6:00 – 8:00pm
Location: A107

SFS Chapter Meeting

Thursday, 22 May 2014, 4:00 – 6:00pm
Location: A108

Editorial Board Meeting for the Journal Freshwater Biology

Thursday, 22 May 2014, 7:00 – 8:00pm
Location: D130

SFS New Board Member Breakfast

Friday, 23 May 2014, 7:00 – 8:00am
Location: A107

Workshops, Town Halls and Miscellaneous Meetings**The Leaf Pack Experiment**

Saturday, 17 May 2014, 9:00am – 4:00pm
Location: Hyla Woods, 30151 NW Timber Road, Timber, OR 97144

How can a clump of in-stream slimy leaves provide the basis for stream ecology exploration? Come and learn how to create leaf packs, a method used by scientists, to collect macroinvertebrates and examine the health of a stream. During this workshop participants will be given the most up-to-date information on streams within a watershed context based on research done at Stroud Water Research Center, followed by a game, and a hands-on examination of a leaf pack with live macroinvertebrates. With this unique tool, your students will be able to conduct their own experiments, investigate food webs, learn classification skills, and share data on the Leaf Pack Network® website. And, it all starts with an onion bag! For more information visit :<http://www.stroudcenter.org/lpn/> . Lunch will be provided, pre-registration required.

Beginner's R for Analysis and Graphics

Sunday, 18 May 2014, 9:00am – 5:00pm
Location: B116

This workshop will help those who are interested in using R for statistical analysis. It is intended for those who are just beginning or have limited exposure to R, but basic knowledge of statistics. R has many advantages over statistical software packages: it is freeware, it is commonly used by freshwater scientists, it is flexible, it has many highly qualified and specialized contributors, it allows repetitive analyses and graphic presentations, it is excellent documentation of analyses, and it is fun (aahh, the thrill of executing code without errors). However, without a patient mentor, R can be difficult to pick up. This workshop will get you started with formatting data, basic data structure, downloading libraries/packages, and running analyses that provide output for interim interpretation and for final presentation. We will begin with the fundamental building blocks of R: the data structure, language conventions, and program resources. Through hands-on exercises, we will be formatting and loading data, accessing and incorporating existing code, and writing small pieces of code for customized analyses and graphics. Complex statistical analyses will be attempted if the whole class is engaged and time allows. This is the third year that Ben Jessup and Lei Zheng have instructed R workshops at SFS. Advanced registration and fees required.

Presenters:

Ben Jessup has been working with Tetra Tech for 16 years as an ecologist focusing on biomonitoring program support. Many of the routine statistical analyses for biomonitoring can be performed in R, including interpretation of stressor-response relationships, site classification, multimetric and predictive index development, indicator performance characterization, and criteria establishment. Because Mr. Jessup has recently converted to using R for statistical analyses and graphic displays, he is sympathetic to the frustrations of learning a new language. Mr. Jessup has facilitated training workshops on a variety of biomonitoring topics including biomonitoring basics, database applications, criteria development for biological and physical indicators, field protocols, and specific state and tribal index assessment issues.

Lei Zheng is a senior aquatic ecologist of Tetra Tech's Center for Ecological Science. He has been an algal ecologist for 21 years and uses R daily in his statistical analyses. He has extensive experience working on biological monitoring and assessment, statistical modeling, and water quality standards/criteria for both marine and freshwater systems. He supports Nutrient-Scientific Technical Exchange Partnership and Support (N-STEPS) to help numerous states develop scientifically defensible nutrient criteria for lakes, streams, and estuaries. He is also actively involved in a number of high profile projects, such as BP oil spill analysis, mountain top coal mining/conductivity benchmark development in the Western Appalachian region, and Florida nutrient criteria development. Dr. Zheng was a firm fan of Systat® and SAS before 2003, but became a true believer and a loyal daily user of R since. He has been helping many others to use R for bioassessment related topics.

The Clean Water Act Puzzle: Where do wetland and aquatic resources science fit?

Sunday, 18 May 2014, 9:00am – 5:00pm

Location: B115

What is the Clean Water Act (CWA)? What types of wetlands and aquatic resources are protected by the CWA, and how do these policies work? Can the role of science in policy be enhanced, and if so how? In this workshop, U.S. Environmental Protection Agency (EPA) lawyers and scientists will address these questions and many others, to provide aquatic scientists a working knowledge of the CWA, its strengths and weaknesses, and the relationship between freshwater science and CWA policy. Topics covered will include: statutory, regulatory, and judicial interpretations of the CWA (and what they mean), permitting and pollutant management under the CWA, CWA enforcement, and how science is (and can be) used to inform questions regarding CWA interpretation and implementation, such as “how clean is clean.” Advanced registration and fees required.

Presenters:

Donna M. Downing is Jurisdiction Team Leader and an attorney in the U.S. EPA's Office of Water in Washington, D.C. She works on a variety of issues, with a recent focus on the geographic scope of the CWA in light of the U.S. Supreme Court's decisions in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC)* and *Rapanos v. United States (Rapanos)*. Much of her time is spent chairing the federal interagency staff workgroup for implementing SWANCC and Rapanos. Ms. Downing has been with EPA since 1998. She previously worked for the U.S. Congress Office of Technology Assessment and in private law practice. She has a B.A. from Harvard University, an M.P.P. from the University of California, Berkeley, a J.D. from Georgetown University, and an L.L.M. in environmental law from George Washington University. Ms. Downing teaches as an adjunct professor at George Washington University Law School, and at EPA's Water Quality Standards Academy.

Rose Kwok is an Environmental Scientist in the U.S. EPA's Office of Water in Washington, D.C. She has worked for the wetlands program for almost nine years, where she focuses on Clean Water Act jurisdiction issues, including GIS mapping and support tools. She has a B.A. from Cornell University and a Master of Environmental Management from Duke University.

Laurie Alexander is a research ecologist in the U.S. EPA's Office of Research and Development in Washington, D.C. Her current research

is focused on landscape analysis of stream-wetland connectivity. She received her Ph.D. in Entomology from the University of Maryland in 2007, where she studied the dispersal ecology and population genetics of mayflies in headwater streams. She has a B.A. from St. John's College and an M.S. in Computer Science from The Johns Hopkins University Whiting School of Engineering. Before returning to graduate school to pursue a second career in entomology, Laurie was a software engineer with 18 years in radar avionics and satellite telecommunications systems design and development. She has been with the U.S. EPA since 2008.

Hadas Raanan Kiperwas is a post-doctoral ORISE Fellow with the U.S. EPA's Office of Water in Washington, D.C. She works on science questions underlying Clean Water Act policies, and works towards developing knowledge and tools to better inform policy makers and enforcers. She has a B.Sc. in Geology from Ben Gurion University in Israel which she received summa cum laude, and a Ph.D. in Hydrology and Geochemistry from Duke University, where she studied the use of natural tracers to identify and quantify groundwater inputs into streams and lakes.

Identification of Ephemeroptera Larvae from Western North America, North of Mexico

Sunday, 18 May 2014, 9:00am – 5:00pm

Location: B113

This workshop will provide resources and strategies to use when identifying mayfly larvae from the western United States and Canada, with some attention given also to extralimital species. We will suggest appropriate levels of taxonomic resolution for all groups. Current taxonomy of the western Nearctic fauna will be presented with discussion of recent changes, and we will look ahead to future directions of systematics research in all of North America. Advanced registration and fees required.

Presenter:

Jeff Webb Ph.D has studied the systematics of mayflies (Ephemeroptera) for over 15 years and has published nearly 40 papers on the subject. He began his research into mayflies while an undergraduate student at the University of Saskatchewan and continued with mayfly taxonomy for his M.Sc. (University of Saskatchewan) and Ph.D. (Purdue University). Jeff spent three years at La Trobe University (Australia) as part of the Taxonomic Research Information Network revising the Baetidae of Australia using morphological and molecular methods. Following this, he returned to Canada for a postdoctoral fellowship at the Biodiversity Institute of Ontario (University of Guelph) coordinating the DNA barcoding of the mayflies, stoneflies, and caddisflies of the world. He is currently a taxonomist with Rhithron Associates, Inc., in Montana.

Quantifying Transient Storage Using OTIS

Sunday, 18 May 2014, 10:00am – 3:00pm

Location: B117 - B119

Tracer techniques and solute transport models are frequently used to quantify the temporary detainment of solutes in hyporheic and surface storage zones. The physical process of “transient storage” has implications for nutrient cycling as the storage process affects residence time and the extent of biogeochemical processing. This 4-hour workshop provides an overview of OTIS (One-dimensional Transport with Inflow and Storage),

a solute transport model that is often used to quantify transient storage. The workshop will provide a step-by-step “how-to” on the use of OTIS to estimate transient storage parameters based on tracer data. Emphasis will be placed on fundamental concepts such as experimental design, data evaluation, transport processes, and parameter estimation (due to time constraints, “hands on” computer exercises will not be part of the workshop). Beginner and intermediate model users are encouraged to attend. Participants should read the OTIS documentation and have a conceptual understanding of transient storage prior to the workshop. The workshop will be presented by Rob Runkel, a Research Hydrologist at the U.S. Geological Survey in Denver Colorado. Pre-registration required by contacting Rob Runkel at runkel@usgs.gov.

Stream Resiliency Research Coordination Network

Sunday, 18 May 2014, 12:00 – 5:00pm

Location: B114

The workshop will be a planning meeting for the newly created Stream Resiliency Research Coordination Network. The Stream Resiliency Research Coordination Network was created for the scientific community and we are seeking network participation by researchers from a breadth of disciplines and career stages. Please join us for the afternoon workshop to learn about planned activities of the network, and how to become involved. We are actively seeking community involvement. Presented by Jay Jones.

Tools and Techniques for Giving Compelling Talks

Sunday, 18 May 2014, 1:00 – 5:00pm

Location: A106

Drawing on research about how people perceive and process information, this workshop, given by Dennis Meredith, will give participants the tools and techniques they need to give compelling, informative talks to both lay and professional audiences. Topics covered will include understanding audiences’ needs, the talk as a distinctive medium, using a “visual vernacular,” designing effective slides, developing presentation skills, and how to obtain and create engaging visuals.

SFS Taxonomy Certification - EPT Image testing

Sunday, 19 May 2014, 1:30 – 5:00pm

Location: Portland University computer lab

Voluntary Validation Experiment--Taxonomic Certification Testing for Eastern Group 2 or Western Group 2 (eastern or western EPT) only. Volunteers must agree to attempt both an on-line, image-based exam and a microscopic, specimen-based exam. The image-based test will be administered on Sunday, May 18th from 1:30pm - 5:00pm, at the Portland University computer lab (7 miles from the Oregon Convention Center (OCC)). The specimen-based test will be administered on Monday, May 19th (either morning 8:30-12:00am or afternoon 12:30-4:00pm sessions) at the OCC. At the conclusion of the specimen-based exam, each volunteer will critique the two types of exam by responding to a short questionnaire. As incentives, volunteers will pay only \$100 (half the usual registration fee) and can be certified by passing either the image-based exam or the specimen-based exam for the same group of genera (either Eastern Group 2 or Western Group 2). Pre-registration is required and must be done through the TCP site: <http://www.sfstcp.com/NABSTCPHome/UpcomingTests/tabid/94/Default.aspx>.

SFS Taxonomy Certification

Monday, 19 May 2014, 8:30am – 5:00pm

Location: C126

Voluntary Validation Experiment--Taxonomic Certification Testing for Eastern Group 2 or Western Group 2 (eastern or western EPT) only. Volunteers must agree to attempt both an on-line, image-based exam and a microscopic, specimen-based exam. The image-based test will be administered on Sunday, May 18th from 1:30pm - 5:00pm, at the Portland University computer lab (7 miles from the Oregon Convention Center (OCC)). The specimen-based test will be administered on Monday, May 19th (either morning 8:30-12:00am or afternoon 12:30-4:00pm sessions) at the OCC. At the conclusion of the specimen-based exam, each volunteer will critique the two types of exam by responding to a short questionnaire. As incentives, volunteers will pay only \$100 (half the usual registration fee) and can be certified by passing either the image-based exam or the specimen-based exam for the same group of genera (either Eastern Group 2 or Western Group 2). Pre-registration is required and must be done through the TCP site: <http://www.sfstcp.com/NABSTCPHome/UpcomingTests/tabid/94/Default.aspx>.

Communicating with Policymakers 101

Monday, 19 May 2014, 12:15 – 1:15pm

Location: A106

Aquatic habitats are frequently at the center of significant policy debates. While most scientists are aware of these policy issues – and often frame their research to answer policy questions – few have formal training in policy making. Join ASLO Director of Public Affairs Adrienne Sponberg for a crash course on how U.S. federal policy is formulated and how scientists can provide input to policymakers.

SWS PCP Information Session

Monday, 19 May 2014, 12:15 – 1:15pm

Location: A105

Learn the ins and outs of the SWS Professional Certification Program and how certification may advance your professional career.

Pitch Slam!! How to Pitch--and Land--Science News

Monday, 19 May 2014, 12:15 – 1:15pm

Location: B113

Bring news of your research and give it an audience! Participants in this workshop will learn how to present science in an interesting way while retaining factual accuracy--the key to good science communication and science journalism. Attendees will have the opportunity to engage in a “pitch slam,” in which a jargon-free news or feature story idea is presented in one minute, then everyone joins in with feedback. Put engaging storytelling into science news! Presented by Cheryl Dybas with opening remarks by Deborah Bronk, NSF Acting Division Director for Ocean Sciences. Pitch “slammees” include Alan Tessier, NSF Acting Deputy Division Director for Environmental Biology.

NSF Town Hall

Monday, 19 May 2014, 12:15 – 1:15pm

Location: B114

A town hall to update the community on recent news from the National Science Foundation organized by Deborah Bronk.

SWSPCP Ethics Workshop 01

Tuesday, 20 May 2014, 12:15 – 1:15pm

Location: A105

Receive training on the ethical dilemmas that Professional Wetland Scientists, Consultants and Regulators face during this two-day training session held on Tuesday, May 20 and Wednesday, May 21 from 12:15 – 1:15pm. This workshop is open to all JASM registrants and includes lunch. Pre-registration required.

Aquatic Sciences Career Panel: One Degree, Many Paths

Tuesday, 20 May 2014, 12:15 – 1:15pm

Location: A106

The scientific workforce is changing. New data indicate the majority of ecology and oceanography graduate degree holders pursue careers outside academia. Graduate advisors are by default academics and often unable to provide information about other career options. Learn about some of the careers available to aquatic PhD's through first-hand accounts in this panel conversation. Presented by Adreinne Sponberg.

Nutrient and Long Term Monitoring Workshop

Tuesday, 20 May 2014, 12:15 – 1:15pm

Location: C120 – C122

Join Hach Hydromet and Sea-Bird Coastal for a free workshop on in situ nutrient monitoring technology and long term monitoring solutions for challenging environments! This workshop is the perfect opportunity to learn about this exciting technology as well as real life applications. The session will be led by two of our technical/scientific experts who will be available to answer all of your questions.

Science Communication: Delivering a Clear Message

Tuesday, 20 May 2014, 12:15 – 1:15pm

Location: D135 – D136

In this one-hour workshop, you will learn how to talk about your science - and why it matters - in clear, lively terms. Using a tool called the Message Box, we'll help you replace unnecessary details with an accurate message that will resonate with your audience and leave them wanting more. COMPASS has over a decade of experience helping scientists share their research with journalists, policymakers, and the wider world. Presented by Heather Galindo.

Working Towards Interoperability Standards for Networks and Observatories

Tuesday, 20 May 2014, 12:15 – 1:15pm

Location: B113

Town Hall to discuss interoperability standards for projects, networks and observatories. Identify and define specific issues currently faced by the community, and identify gaps across the community that can be used as opportunities for further development and resource focus.

Discuss the structure, scope and path forwards for the establishment of an Interoperability working group.

In an era of large scale, interdisciplinary science access to interoperable infrastructure and long-term data sets are integral in advancing science. Interoperability is the ability of two or more systems or components to exchange and use information. In order to provide and promote efficient access to and open sharing of data, a global framework is needed across freshwater, marine and other sciences. Interoperability is focused on three infrastructure components within a global scale system of systems: information infrastructure, physical infrastructure and support infrastructure. The components of interoperability include linking joint science questions to requirements, data quality and provenance traceability of measurements to known standards or best community practices, uncertainties in respective data products, and broadly defined informatics. The degree to which Networks and Observatories are interoperable is dependent on the degree to which these components are adopted. At a higher level, interoperability can contribute to better detailing of infrastructure interfaces, data systems, and workflows that describe instrument integration, their operation and observational databases. In this session, we welcome contributions that address approaches towards building interoperability frameworks that enhance the global access to data and integrate planned standards, and interfaces within and across networks and observatories. Presented by Charlotte Roehm.

Large-Scale Cultivation of Microalgae with Commercial Potential: Products and Processes

Tuesday, 20 May 2014, 6:00 – 9:00pm

Location: A105

This workshop is designed to introduce attendees to the principles of cultivating microalgae at production scale for biomass and diverse natural products, including fuels and specialty chemicals. Presentations will discuss the emergent properties of growing microalgae at increasingly larger volumes and the challenges of managing cultures for commercial applications. Instructors will include Drs. Jerry Brand (UTEX), Milton Sommerfeld (AzCATI), Thomas Dempster (AzCATI), and Schonna Manning (UTEX).

Tipping Points Town Hall

Tuesday, 20 May 2014, 6:00 – 8:00pm

Location: A106

This town hall will follow and expand upon some of the ideas from the plenary session 002: Tipping Points Science: From global theories to local tools and session 083: Restoration of European wetlands: thresholds and tipping points and integrate them around climate impacts. We will explore how the themes introduced in these sessions could improve efforts to detect impacts of climate change on coastal ecosystems and provide information and tools for the management of changing aquatic ecosystems. Presented by Carolyn Currin.

Taxonomy Fair 2014: Talk to the Experts!

Tuesday, 20 May 2014, 6:00 – 8:00pm

Location: Exhibit Hall

The Taxonomy Fair is a long-standing tradition at SFS meetings and we are delighted to be organizing this year's joint taxonomy fair on

behalf of all of the societies! It is an annual event where members can bring specimens to the meeting and interact with experts in various groups to get feedback and assistance in identifications. This year's Fair will include experts in most of the freshwater invertebrate taxa (including Ephemeroptera, Plecoptera, Trichoptera, Chironomidae, and Oligochaeta), algae (reds, greens, and browns, as well as a couple of diatomists), as well as specialists in kelp, lichen, wetland plants, mycology, and soil classification. Meeting attendees are encouraged to bring specimens to the meetings and take advantage of this opportunity of having a distinguished group of taxonomists all in one room.

The USDA Conservation Effects and Assessment Project (CEAP) – Wetlands (invitation only)

Wednesday, 21 May 2014, 8:00am – 12:00pm
Location: D130

The goal of the Wetlands Component of the Conservation Effects Assessment Project (CEAP) National Assessment is to develop a broad collaborative foundation that facilitates the production and delivery of scientific data, results, and information related to effects of conservation programs and practices on the provisioning of ecosystem services valued by society. This meeting brings together researchers from several CEAP-Wetlands Regional Assessment Teams to discuss project progress and set future directions and timelines. Organized by David Mushet. This meeting is by invitation only.

Status, Updates, and Remaining Questions in the STREON Experimental Program

Wednesday, 21 May 2014, 12:15 – 1:15pm
Location: A105

The STREON Experimental Observatory Network (STREON) is a continent-spanning, open-access experimental initiative that will be executed by the National Ecological Observatory Network. STREON will manipulate nutrient concentrations and the presence/absence of large-bodied consumers in ten NEON wadable streams across North America, from the Arctic to Puerto Rico. Organized by Jen Degrosa.

SWSPCP Ethics Workshop 02

Wednesday, 21 May 2014, 12:15 – 1:15pm
Location: A109

Receive training on the ethical dilemmas that Professional Wetland Scientists, Consultants and Regulators face during this two-day training session held on Tuesday, May 20 and Wednesday, May 21 from 12:15 – 1:15pm. This workshop is open to all JASM registrants and includes lunch. Pre-registration required.

Waters of US Workshop /Technical Workshop on Freshwater Landscape (invitation only)

Wednesday, 21 May 2014, 1:00 – 5:00pm
Location: D130

This meeting is by invitation only.

Isolated Wetlands Research Group

Wednesday, 21 May 2014, 6:00 – 9:00pm
Location: A107 – A108

This workgroup is a continuation from a recent workshop and established research collaborative on the science, function, and connectivity of isolated wetlands. Research scientists from across North America will meet to focus on manuscripts and project proposal development. Presented by Heather Golden

Introductory Environmental, Ocean & Aquatic Science Workshop

Thursday, 22 May 2014, 12:15 – 1:15pm
Location: A105

This workshop will be led by Bob Chen, University of Massachusetts, Boston. Introductory environmental, ocean, and aquatic science courses provide an excellent opportunity to prepare majors and non-majors for thinking about some of the largest issues facing society such as climate change and energy needs. Large courses can also serve to attract students into the field. This workshop will provide some strategies to overcome some of the challenges of teaching large courses while making your teaching engaging, relevant, and effective. Open to all attendees.

Special Events and Social Activities

Freshwater Illustrated Film

Sunday, 18 May, 4:00 – 5:00pm and Tuesday, 20 May 2014, 12:15 – 1:15pm
Location: C123 – C124

Willamette Futures: Short Film Showcase.

Opening Reception

Sunday, 18 May 2014, 8:00 – 10:00pm
Location: Portland Ballroom

A welcoming reception to the 2014 Joint Aquatic Sciences Meetings will be held on Sunday, 18 May 2014 in the Portland Ballroom immediately following the Keynote Presentation (8:00 – 10:00pm). Conference registration will be open prior to the reception to allow you to pick up your conference materials. Light hors d'oeuvres and a cash bar will be available.

Science Pub Hillsboro

Monday, May 19, 2014
7:00 – 9:00pm
Venetian Theater and Bistro, 253 E. Main St., Hillsboro

Science pubs are an opportunity for general public to learn about science in an informal pub atmosphere. During JASM, several pubs will occur in the evenings with a theme of aquatic sciences.

Beth Middleton, PhD, research ecologist, GS14, National Wetlands Research Center, USGS, *Conservation of Natural Wetlands*

Science Pub Hillsboro is a monthly event open to anyone aged 21+ (or minor with adult). No RSVP or scientific background required. Just bring your curiosity, sense of humor, and appetite for food, drinks, and knowledge! \$5.00 suggested cover charge. Tell your friends. We hope to see you there!

Utah State Alumni and Friends Social

Tuesday, 20 May 2014, 5:30 – 7:00pm
Location: A108

A social with complimentary hors d'oeuvres and cash bar for alumni and friends of the Quinney College of Natural Resources at Utah State University.

Groundwater/Wetlands Study Group Mixer

Tuesday, 20 May 2014, 4:00 – 5:00pm
Location: D130

Organized by Dave Penrose.

Science Pub Mission Theater

Tuesday, 20 May 2014, 7:00 – 9:00pm
Location: McMenamins Mission Theater, 1624 NW Glisan, Portland

Science pubs are an opportunity for general public to learn about science in an informal pub atmosphere. During JASM, several pubs will occur in the evenings with a theme of aquatic sciences.

Jennifer Cherrier, PhD, associate professor, Environmental Sciences Institute, Florida A&M University, *The Green Horizon: Can Green Infrastructure Address Runoff & Climate Change Challenges?*

Science Pub-Mission Theater is a monthly event, open to anyone aged 21+ (or minor with adult). No RSVP or scientific background required. Just bring your curiosity, sense of humor, and appetite for food, drinks, and knowledge! \$5.00 suggested cover charge. Tell your friends. We hope to see you there!

Jam Session

Tuesday, 20 May 2014, 8:00pm
Location: Paddy's Bar & Grill - 65 SW Yamhill St, Portland, OR 97204

Come join fellow attendees turned musician for a fun and lively evening. No need to sign up. Watch for more details to be released at the meeting.

Science Hops

Tuesday, 20 May 2014, 9:00pm, Wednesday, 21 May 2014, 10:00pm
Thursday, 22 May 2014, 9:00pm

A chance to meet, mix, and mingle with other scientists while exploring a few of Portland's treasures, including art, breweries, fountains, and unique eateries!

Tuesday and Thursday: Meet at the bell sculpture outside the convention center at 9pm

Wednesday: Meet at Pioneer Courthouse Square (corner of SW 6th and Morrison) at 10pm.

Once assembled, choose a route (Route 1 on front, Route 2 on back) and enjoy some of the secrets of Portland together

Fun Run

Wednesday, 21 May 2014, 6:15 – 8:00pm
Location: West-end of the Steel Bridge

The JASM 5k Fun Run will be held on Wednesday, May 21st, from 6:15pm to 8:00pm. This year's route is down and back along the west bank of the Willamette River using the Waterfront Park trail. The start and finish are across the Steel Bridge, walking distance from the Portland Convention Center, so your friends and colleagues can cheer you on. Look for the pedestrian walkway underneath the bridge. The start/finish-line is on the south side of the west-end of the Steel bridge. Runners must be pre-registered and should pick-up their race packet (with assigned bib and chip number) at the run table near the conference registration desk, Sunday 3:00 - 7:00pm or Monday and Wednesday 7:00 - 10:00am. If you are interested in helping with the run, we need volunteers to assist with water stations, setup, and cleanup. Please contact Shannon Claeson (sclaeson@fs.fed.us).

All Society Social and Informal Banquet

Wednesday, 21 May 2014, 7:00 – 10:00pm
Location: Pioneer Courthouse Square

A social and informal banquet for all meeting participants will occur on Wednesday, May 21, 7:00-10:00 pm, at Pioneer Courthouse Square. This is a great opportunity to celebrate with colleagues and meet new ones in a beautiful downtown, open air location. All you need is your nametag to enter and to eat, no other ticket is required. Doors open at 6:30 and a nice buffet, catered by Fork, Knife & Spoon, will begin at 7:00pm. Local beers and wines will be available for purchase at a cash bar. Live music will be provided by Benthic Blues from Corvallis, featuring Dave Plaehn- harmonica, Creighton Lindsay- guitar and mandolin, Jeff Hino- dobro, guitar, lap steel, Bill Foss- bass and Gary Nolde- drums.

Pioneer Courthouse Square (<http://thesquarepdx.org>) is on the corner of 6th and Morrison, and can be reached on the Max green and yellow lines (<http://ride.trimet.org>). We will have covered areas and portable heaters if needed, so the eating, drinking and dancing will continue rain or sun. Bring your nametags!

The Cascades to Coast GK-12 Student Poster Conference

Thursday, 22 May 2014, 8:30 - 11:30am
Location: Exhibit Hall

The Cascades to Coast GK-12 Graduate Program is supported by funding from the National Science Foundation. The goal of the program is to establish mutually beneficial partnerships between Portland State University's School of the Environment and three Oregon school districts. The project will establish partnerships between Portland State University's School of the Environment (SOE) and three Oregon school districts toward the goals of enhancing middle, high school and graduate STEM education around the theme of environmental sustainability. The project will support fifty GK-12 doctoral Fellowships for advanced graduate students to work directly with teachers to engage over 1500 sixth through ninth grade students in inquiry and field studies designed to increase understanding of key concepts in the physical and biological sciences and environmental sustainability. The project's geographic breadth, from Oregon's Cascade Mountains to the Pacific Ocean, will provide an opportunity to create a learning community across diverse school districts and ecosystems. Project activities include a summer training institute,

the development of a required yearlong graduate seminar "Public Communication, Education and Careers", teacher professional development workshops, and end-of-year student poster conference.

Special Opportunities and Information for Students and Post-Docs

Student-Post Doc Lounge/Career Center

Fostering communication among students and providing information about career opportunities is an important part of this meeting. An area of the exhibit hall will be reserved for a Student Lounge/Career Center, allowing students to meet each other in a fun, relaxed setting. This center will also host the Career Bulletin Board, where prospective employers are invited to post job announcements and students are invited to post a one-page resumé.

Outstanding Student Presentation Awards

Each society will provide its own recognition and awards for outstanding student presentations at the 2014 Joint Aquatics Sciences Meeting. All eligible presentations will be evaluated in consideration of each society's awards' criteria.

Mentor/Mentee Dinner, Dessert or Drinks

The purpose of the Mentor/Mentee Dinner is to create a casual meeting experience in which professionals and students can share academic and career goals and get to know each other. Time is reserved on Tuesday evening at 8pm for this event. Mentors will be assigned 1-3 students and individual mentor-mentee groups will coordinate specific plans for their evening. While the event is on-your-own, look for a meet up table near the registration desk on Tuesday evening for more information about local restaurants, mass transit, and to resolve last minute kinks in planning with your mentor or mentee.

4th Annual Instars Program

Instars is a program sponsored by the Society for Freshwater Science for undergraduates from under-represented groups interested in the study of freshwater. This program teaches undergraduate students about the many disciplines of freshwater science through interactions with other undergraduates, graduate student mentors, and professional SFS members. The core of the program is attending the Joint Aquatic Sciences Meeting (JASM). Instars activities include:

- A half-day, pre-meeting Instars orientation workshop open only to SFS Instar Fellows.
- A special Instars session open to all attendees, on "The future of aquatic science: an educational session particularly for undergraduates" featuring some of the leading professionals on the study of freshwater ecosystems.
- Networking activities with peers and mentors during the meeting.
- Attending plenary sessions and a wide choice of special, technical, and poster sessions.
- Opportunities to present undergraduate research in general sessions with friendly review from professional aquatic ecologists.
- Post-meeting networking and linking to research and educational opportunities in aquatic science.

SFS sponsors about 10 Instars Fellows by providing meeting registration fees, travel, and lodging for the pre-meeting activities and the annual meeting.

This will be the fourth Instars class! Several previous Fellows are presently in graduate school and will participate as mentors. This is an especially exciting year for the program as Fellows will have the opportunity to network with faculty, professionals and undergraduate fellows from other organizations devoted to the study of aquatic ecosystems. Photos of previous classes, details of Instars activities, application materials and additional web communications are posted regularly on the SFS web site.

Instars workshops, with the exception of the orientation workshop on Sunday, are open to all students or mentors attending the meeting; however, pre-registration is encouraged for planning purposes.

More info:

- <https://www.freshwater-science.org/Education-and-Outreach/Instars-Program.aspx>
- <https://www.facebook.com/pages/Instars/>

Faculty and students are encouraged to contact any members of the organizing committee for other information:

Dr. Checo Colón-Gaud, Georgia Southern University
jccolonga@georgiasouthern.edu

Dr. Tamara Sluss, Kentucky State University
tamara.sluss@ksu.edu

Dr. Patina Mendez, University of California, Berkeley
patina.mendez@berkeley.edu

Dr. Judy Li, Oregon State University
judyli@comcast.net

Dr. Marcelo Ardón-Sayao, East Carolina University
ardonsayaom@ecu.edu

Dr. Krista Capps, University of Maine
krista.capps@maine.edu

SFS Instars Mentoring Workshop Orientation (invitation only)

Sunday, 18 May 2014, 1:00 – 4:00pm

Location: B110 - B112

This is the fourth year that the Society for Freshwater Science (SFS) is sponsoring the Instars Mentoring Program for undergraduates from under-represented groups who are interested in the study of freshwaters. The program is open to students sponsored through Instars Fellowships and others from under-represented minorities. During the annual meeting opportunities for networking among graduate students, faculty and professionals will be promoted as we strive to encourage diversity in our discipline. This workshop is only to Instar Fellows.

Student Worker Training

Sunday, 18 May 2014, 4:00 – 5:00pm

Location: C120

SWS Student Mentoring Orientation (invitation only)

Sunday, 18 May 2014, 6:30 – 7:00pm

Location: A105

SWS Student Mentoring Program Workshop #1 - Career Development: Graduate School & Academic Careers

Monday, 19 May 2014, 10:30am – 12:00pm

Location: D133 - D134

A panel of wetland professionals and PhD students will describe their areas of expertise and offer advice to undergraduate students. The panelists will also summarize their top suggestions for graduate school preparation and admission and preparation for academic careers. This interactive and informal workshop is open to all.

SFS Student Resource Committee Meeting

Monday, 19 May 2014, 12:15 – 1:30pm

Location: Portland Ballroom 251

If you are an undergraduate or graduate student in SFS, please join the Student Resource Committee (SRC) for our annual luncheon meeting. Learn about the SRC's activities and how you can become more involved in the society. We will also be electing leadership positions for the coming year.

Student Mixer

Monday, 19 May 2014, 8:00 – 9:00pm

Location: Portland Ballroom 253-254

An informal student social mixer will be held Monday evening; beverages and snacks will be available and drink tickets will be available at the door (soda and alcoholic beverages). Photos and videos of student-submitted study organism, field/lab work and more will be presented throughout the mixer with minimal audio. All students are welcome and encouraged to attend.

Post-Doc Social Mixer

Monday, 19 May 2014, 8:00 – 9:00pm

Location: Portland Ballroom 252

An informal Post-Doc social mixer will be held. Beverages and snacks will be available. All young professionals are encouraged to attend.

SWS Student Mentoring Program Workshop #2 - Career Development: Government & Private Sector Careers

Tuesday, 20 May 2014, 10:30am – 12:00pm

Location: D133 – D134

A panel of wetland professional will describe the structure of their respective organizations, describe their areas of expertise, offer advice, and summarize top suggestions for undergraduate students to consider when positioning themselves for careers in the government and private sectors. Student interaction and Q&A are encouraged throughout the informal workshop. This interactive workshop is open to all.

SWS Student Mentoring Program Workshop #3 - Leadership (invitation only)

Wednesday, 21 May 2014, 10:30am – 12:00pm

Location: D133 – D134

Students will utilize personal reflection regarding their own unique strengths and weaknesses in a discussion about the meaning and requirements of leadership in the sciences and throughout life. A Myers-Briggs personality test will kick off the session followed by a short personal reflection period regarding each student's personality classification. Facilitators will then explain how personality types might influence leadership strengths and weaknesses. The Myers-Briggs test results and reflection will be incorporated into a group discussion regarding the balance between leadership and management skills necessary for an individual to facilitate group level success. Fully understanding one's own strengths and weaknesses is essential in developing the skills necessary for leadership and a career in science. Open only to participants in the SWS Student Mentoring Program.

Professional Application Workshop for Students

Wednesday, 21 May 2014, 12:15 – 1:15pm

Location: C123 – C124

This will be a forum style question and answer workshop on Wednesday in room C123-124 from 12:15-1:15 PM. Lunch will be provided for the first 400 attendees. Participants in the workshop will be from a variety of backgrounds and cover topics centered around career development (e.g., grant writing, applications, CVs, different career paths, etc...).

Early Career Workshop - 'Let's Talk About Sex': The Role of Scientific Societies in Communicating Sound Science & Supporting Early Career Professionals

Wednesday, 21 May 2014, 12:15 – 1:15pm

Location: A106

Nobel laureate Randy Schekman recently denounced high-tier journals like Science and Nature as contributing to the 'disfigurement of science' by advancing sex over rigor and quality. What role do our societies play in ensuring that the best science makes its way to publication, advancing scientific understanding? What role should scientific societies play in communicating sound science to an increasing scientifically illiterate public? How can scientific societies help Early Career professionals balance the demands to publish in the highest-tier journals without losing them from our society journals? This workshop will address how we can best contribute to preserving sound science that fosters quality, innovation, engages public scientific awareness, and supports the career needs of our societies' members.

Topics of discussion:

1. 'Tragedy of the Review Commons': elevating peer-review standards, journal impact factors, and self-expectations of publications
2. Service: journal editorial boards and our responsibility to support them
3. Free(dom) to Publish: page charges drive decision-making
4. Early Career Reality-Check: pressures and publication expectations
5. 'Putting Out' the Message: reaching the public after publication
6. Societal Niche: guiding the career paths of next generation scientists

A panel of editorial board members from within and outside our societies' journals as well as Early Career scientists will give their perspectives on 1) the state and future of science discourse, 2) the role that individual scientists and scientific societies should play in formulating what makes it to print, 3) how to navigate career accolades (e.g., tenure) through publishing by using your professional society for guidance.

SWS Student Mentoring Program Luncheon (invitation only)

Friday, 23 May 2014, 12:15 – 1:30pm

Location: D133 - D134

Open only to participants in the SWS Student Mentoring Program.

Oral Presenter Instructions

Talks will be scheduled in 15-minute time slots. We strongly encourage a presentation of no more than 12 minutes to allow three minutes for discussion and to entertain questions from those in the audience. The time limit will be strictly enforced to facilitate movement between sessions.

Audio taping, videotaping, or photographing of presentations is not allowed at the meeting.

Preparing Your Electronic Presentation

On site all presentations can be previewed and edited by their authors at the Presentation Room before they are downloaded to the respective computers in the session rooms.

Acceptable format for presentations: PowerPoint (.ppt) or (.pptx)

Apple Macintosh Users

Please make sure that all inserted pictures are either JPEG or PNG file-types. Presenters using Apple Keynote files can export their file to a powerpoint file (.ppt or .pptx) and upload to the Submission Site. QuickTime (.mov) files are also an accepted video format. Individuals using Apple Keynote can also bring their files directly to the speaker ready room to have them correctly transferred.

On-site Submission

Check in with the OCC A/V Technician in the Presentation Room preferably the day before your session to submit your files and to preview your presentation. The technicians will assist with the upload of your files and provide the opportunity to pre view and/or edit the presentation as necessary. Acceptable media include: USB Flash Drive (Thumbdrive/Jumpdrive), Data DVD or CD discs,

Presenters will be responsible for replacing files as they are updated, or giving them version numbers, so OCC A/V can easily identify the final version. Only final version files will be available onsite. Speakers who want to pre-submit their presentations should email: JASMPresentations@oregoncc.org.

Presentation Room

All presenters are required to check in to the Presentation Room, Room D131, preferably the day before. An OCC A/V technician will be avail-

able to assist. If you are unavoidably delayed, you must still go directly to the Presentation Room. Do not bring a laptop or other media device to the session room.

When reviewing your presentation in the Presentation Room, make sure all fonts, images, and animations appear as expected and that all audio or video clips are working properly. The computers in the meeting rooms are the same as the computers in the Presentation Room, therefore:

IF THE PRESENTATION DOES NOT PLAY PROPERLY IN THE PRESENTATION ROOM, IT WILL NOT PLAY PROPERLY IN THE MEETING ROOM.

Presentation Room (Room D131) Hours of Operation:

Sunday, 18 May 2014: 1:00 to 9:00 pm
 Monday, 19 May 2014: 7:00 am to 7:00 pm
 Tuesday, 20 May 2014: 7:00 am to 7:00 pm
 Wednesday, 21 May 2014: 7:00 am to 7:00 pm
 Thursday, 22 May 2014: 7:00 am to 7:00 pm
 Friday, 23 May 2014: 7:00 am to 5:00 pm

If you are checking in on the day of your session, please come by at least 4 hours prior to the start of your session. PSAV technicians will assist with the upload of your files and provide the opportunity to preview and/or edit the presentation as necessary. If you are unavoidably delayed, you must still go directly to the Presentation Room. Do not bring a laptop or other media device to the session room.

You may edit your presentation up to 4 hours prior to the session start time. When you are finished reviewing and/or making changes to your presentation, you must tell the OCC A/V technician you have finalized your presentation file before you leave the Presentation Room.

Speaker Ready Room

A speaker ready/practice room is available in D132. It will be open during all hours of the meeting including Sunday from 1:00 to 9:00pm, Monday through Friday from 7:00am to 7:00pm. You may practice or review your presentation in this room.

Bring a Backup

Be sure to bring a backup copy of your presentation with you to the meeting. If you plan to upload files on-site, bring two copies. USB/Flash drives are preferred.

Computer Equipment

The computers in the session rooms will be Windows 7 based PC with Microsoft PowerPoint 2007. Please note that Internet access will not be available during your presentation.

Laptops

Personal laptops cannot be used in the session rooms. You must load your files via the Presentation Room. Support is available in the Presentation Room for file transfers from your laptop. You should still bring a backup of the presentation on alternate media (see list of acceptable formats above). Please make sure you have all power, video, and networking adapters with you.

During Your Presentation

Each meeting room will have a LCD projector, screen, laptop audio, lectern, hardwired lapel microphone and laser pointer. There will be technicians on site to assist with starting each presentation. Once the presentation is launched, the speaker will control the program from the lectern using a computer mouse or the up/down/right/left keys on a keyboard.

Additional Information

Security: Speakers are required to provide identification in order to submit their presentation as well as to access it in the Presentation Room. Recording devices such as cameras are not permitted in the Presentation Room. All presentation files are deleted at the end of the conference, unless permission has been granted to the conference association to retain the presentation files.

Poster Presentations

Poster Sessions

Poster sessions will take place Tuesday, 20 May, and Thursday, 22 May from 6:00 – 8:00pm in the Exhibit Hall.

There will be four posters per board (two per side), therefore posters must be no larger than 45 inches high by 45.5 inches wide. If your poster exceeds these specifications, it may be subject to removal. Posters will adhere to the boards using push pins that will be provided.

Posters can go up on Sunday and stay up until Friday morning. All posters will be on display while the Exhibit Hall is open. Refreshments and snacks will be available during the poster sessions.

Posters will be displayed in session groupings for the entire meeting to maximize opportunities for viewing. Specific times for interactions with the presenters will be assigned at times not in conflict with oral presentations.

Each poster presenter will be scheduled to stand for two hours by his/her poster to be available for questions and discussion by participants. Past experience has shown that this at-poster interaction time is a highly valued way to describe one's work and to meet face-to-face with those interested in it. Of course, a presenter can also discuss his/her poster with interested individuals whenever the exhibit hall is open. Each poster's abstract will be in the meeting program and app.

Poster Set-up: Sunday, 18 May, 12:00 to 5:00pm
and Monday, 19 May, 7:00 to 9:30am

Poster Sessions: Tuesday, 20 May and Thursday, 22 May
from 6:00 – 8:00pm

Posters on Display: Monday, 19 May, 9:30am to 5:00pm.,
Tuesday, 20 May and Thursday, 22 May, 9:30am to 8:00pm,
Wednesday, 21 May from 9:30am – 7:00pm

Poster Teardown (Exhibit Hall): Thursday, 22 May from 8:00 to 10:00pm
or Friday, 23 May, from 8:00am to 12:00pm.

Important note regarding poster presentations: The convention decorator may discard posters if the presenting author does not dismantle them according to tear-down instructions and times.

2014 JASM Exhibits

Exhibits will be open in the Exhibit Hall on the following days and times:

Monday, 19 May, 9:30am to 5:00pm

Tuesday, 20 May, 9:30am to 8:00pm

Wednesday, 21 May from 9:30am to 7:00pm

Thursday, 22 May, 9:30am to 8:00pm

Association for the Sciences of Limnology and Oceanography (Booth A)

5400 Bosque Blvd., Suite 680

Waco, TX 76710

Contact: Helen Schneider Lemay

Phone: 1-800-929-ASLO

Email: business@aslo.org

Website: www.aslo.org

Cambridge University Press (Booth #E11)

Exhibits Marketing Associate

32 Avenue of the Americas

New York City, NY 10013

Contact: Jonathan A Picco

Phone: 2123375041

E-Mail: jpizzo@cambridge.org

Campbell Scientific (Booth #E58)

815 W 1800 N

Logan, UT 84321

Contact: Lynne Ruiz

Phone: 435-227-9000, Fax: 435-227-9001

Email: lruiz@campbellsci.com

Website: www.campbellsci.com

Department of Fisheries and Wildlife (Booth #E30)

Oregon State University

104 Nash Hall

Corvallis, OR 97331-3803

Contact: Dr. W. Daniel Edge

Office: (541) 737-4531, Fax: (541) 737-3590

Email: daniel.edge@oregonstate.edu

Website: <http://fw.oregonstate.edu/>

EcoAnalysts, Inc. (Booth #E57)

1420 South Blaine Street, Suite 14

Moscow, ID 83843

Contact: Gary Lester

Phone: 208-882-2588

Email: tderrick@ecoanalysts.com

Website: www.ecoanalysts.com

Electronic Data Solutions (Booth #E10)

PO Box 31

Jerome, ID 83338

Contact: Steve Combe

Phone: 208-324-8006, Fax: 208-324-8015

Email: elecdata@elecdata.com

Website: www.elecdata.com

Elsevier (Booth #E14)

360 Park Avenue South
 New York, NY 10010
 Contact: Sandra Pierre-Lys
 Phone: 631-665-1833, Fax: 631-665-1355
 Email: s.pierre-lys@elsevier.com
 Website: www.elsevier.com

Environmental Proteomics (Booth #E26)

22 Bickerton Avenue
 Sackville, New Brunswick E4L 3M7
 Canada
 Contact: Natalie Donaher
 Phone: 506-364-2233
 Email: natalie@environmentalproteomics.ca
 Website: <http://environmentalproteomics.ca>

Fluid Imaging Technologies (Booth #E46)

200 Enterprise Drive
 Scarborough, ME 04074
 Contact: Harry Nelson
 Phone: 207-289-3247
 Email: harry@fluidimaging.com
 Website: www.fluidimaging.com

Frigid Units, Inc. (Booth #E55)

5072 Lewis Avenue
 Toledo, OH 43612
 Contact: Dawn Heilman
 Phone: 419-478-4000, Fax: 419-478-4019
 Email: frigidunits@toast.net

Hach Hydromet (Booth #E56)

5600 Lindbergh Drive
 Loveland, CO 80539
 Contact: TJ Sisson
 Phone: 208-543-6697
 E-Mail: tsisson@hach.com

Liquid (Booth #E4)

6876 Esther Ln
 Cincinnati, OH 45243
 Contact: Jacob B. Shidler
 Phone: 513-886-1450
 E-Mail: jacob@getliquid.io
 Website: <https://getliquid.io/>

Loligo Systems (Booth #E28)

Niels Pedersen Allé 2
 8830 Tjele
 Denmark
 Contact: Jannik Herskin
 Phone: + 45 8999 2545 (office); +45 6166 6929 (cell), Fax: + 45 8999 2599
 Email: jh@loligosystems.com
 Website: www.loligosystems.com

Macroscopic Solutions, LLC (Booth #E1)

125 Edgewater Drive
 Coventry, CT 06238
 Contact: Daniel Saftner
 Phone: 724-825-9426
 Email: Daniel@macroscopicsolutions.com
 Website: macroscopicsolutions.com

McLane Research Labs (Booth #E27)

121 Bernard Street
 Jean Dr
 East Falmouth, MA 02536
 Contact: Ivory Engstrom
 Phone: 508-495-4000, Fax: 508-495-4000
 Email: mclane@mclanelabs.com
 Website: www.mclanelabs.com

Martin Microscope Company (Booth #E50)

207 South Pendleton Street
 Easley, SC 29640
 Contact: Robert H. Martin, Jr.
 Phone: 864-242-3424, Fax: 864-859-3332
 Email: bob@martinmicroscope.com
 Website: www.martinmicroscope.com

Oxford University Press (Booth #E17 & E18)

198 Madison Avenue
 New York, NY 10016
 Contact: Meagan Garvin
 Phone: 919-677-0977, ext. 5465
 Email: gab.exhibitions.us@oup.com
 Website: www.oup.com

PP Systems/bbe Moldaenke (Booth #E16)

1100 Haverhill Road, Suite 301
 Amesbury, MA 01913
 Contact: Tim Doyle
 Phone: 978-834-0505, Fax: 978-834-0545
 Email: td@ppsystems.com
 Website: www.ppsystems.com

Pacific Northwest Chapter SWS/The Wetlands Conservancy (Booth #E5)

805 SW Broadway, Suite 500
 Portland, OR 97239
 Contact: Yvonne Vallette
 Phone: 503-326-2716
 Email: vallette.yvonne@epa.gov
 Website: www.sws.org/regional/pacificnw

Phycological Society of America (Booth B)

Department of Biology, University of North Florida
 1 UNF Dr.
 Jacksonville, FL 32224
 Contact: Dr. Dale Casamatta
 Phone: 904-620-1936, Fax: 904-620-3885
 Email: dcasamat@unf.edu
 Website: <http://www.psaalgae.org/>

Precision Measurement Engineering (Booth #E12)

1487 Poinsettia Ave., Suite 129
 Vista, CA 92081
 Contact: Kristin Elliott
 Phone: 760-727-0300, Fax: 760-727-0333
 Email: kristinhead@pme.com
 Website: www.pme.com

S.J. and Jessie E. Quinney College of Natural Resources (Booth #E15)

5200 Old Main
 Logan, UT 84322
 Contact: Chris Luecke
 Phone: 435-797-2452
 Email: chris.luecke@gmail.com
 Website: www.qcnr.usu.edu

RBR Ltd. (Booth #E2)

95 Hines Rd, Unit 5
 Ottawa, Ontario K2K2H5
 Canada
 Contact: Mark Vist
 Phone: 613-599-8900, Fax: 613-599-8929
 Email: info@rbr-global.com
 Website: rbr-global.com

Rockland Scientific (Booth #E48)

520 Dupplin Road
 Victoria, British Columbia V8Z1C1
 Canada
 Contact: Fabian Wolk
 Phone: 250-370-1688
 Email: fabian@rocklandscientific.com
 Website: www.rocklandscientific.com

Scientists and Environmentalists for Population Stabilization (Booth #E51)

13913 Recuerdo Dr
 Del Mar, CA 92014
 Contact: Stuart Hurlbert
 Phone: 619-594-5409
 Email: hurlbert@mail.sdsu.edu
 Website: <http://www.populationstabilization.org>

Sequoia Scientific, Inc. (Booth #E49)

2700 Richards Road, Suite 107
 Bellevue, WA 98005
 Contact: Chuck Pottsmith
 Phone: 425-641-0944
 Email: cpottsmith@sequoiasci.com
 Website: www.SequoiaSci.com

SFS/SFS 2015 Annual Meeting – Milwaukee (Booth C)

Utah State University Conference Services
 5005 Old Main Hill
 Logan, UT 84322-5005
 Contact: Joy Brisighella
 Phone: 435-797-9270
 Email: joy.brisighella@usu.edu
 Contact: Dr. Randy Fuller
 Email: rfuller@colgate.edu
 Phone: 315-228-7393
 Website: <http://www.freshwater-science.org/annual-meeting.aspx>

Freshwater Science/University of Chicago Press (Booth #E24 & E25)

3206 Maple Leaf Drive
 Glenview, IL 60026
 Contact: Irwin Polls
 Phone: 254-399-9636
 Email: ipolls@comcast.net
 Website: <http://www.freshwater-science.org/>

Society of Wetland Scientists (Booth D)

22 N. Carroll Street, Suite 300
 Madison, WI 53703
 Contact: Brittany Marsala Olson
 Phone: 608-310-7855
 Email: bolson@sws.org
 Website: <http://www.sws.org/>

Society of Wetland Scientists Professional Certification Program (Booth #E59)

1901 North Roselle Road, Suite 920
 Schaumburg, IL 60014
 Contact: Dhrumal Bhatt
 Phone: 877-226-9902, Fax: 847-885-8393
 Email: dbhatt@association-resources.com
 Website: www.wetlandcert.org

Taylor & Francis (Booth #E3)

4 Park Square, Milton Park
 Abingdon, Oxford OX144RN
 United Kingdom
 Contact: Sara Kehoe
 Phone: 02 07 017 6178, Email: sara.kehoe@tandf.co.uk
 Website: www.tandfonline.com

Turner Designs (Booth #E60)

845 W. Maude Ave.
 Sunnyvale, CA 94085
 Contact: Jenifer Sluga
 Phone: 408-749-0994, Fax: 408-749-0998
 Email: marketing@turnerdesigns.com
 Website: www.turnerdesigns.com

University of California Press (Booth #E29)

2120 Berkeley Way
Berkeley, CA 94704
Contact: Ramón Smith
Phone: 510-642-2035, Fax: 510-643-7127
Email: rsmith@ucpress.edu
Website: www.ucpress.edu

WildScape (Booth #E52)

11914 Tanton Lane
Charlotte, NC 28273
Contact: Kathy Stout
Phone: 304-280-5428
Email: kathy@wildscape.com
Website: www.wildscape.com

Wiley (Booth #E13)

350 Main Street
Commerce Place
Malden, MA 02148
Contact: Daisy Guerrero
Phone: 781-388-8200, Fax: 781-388-8210
Email: dguerrero@wiley.com
Website: www.wiley.com

Xylem (Booth #E47)

95 West 100 South, Suite 150
Logan, UT 84321
Contact: Peter Bornhorst
Phone: 435-753-2212, Fax: 435-753-7669
Email: sales@waterlog.com
Website: www.waterlog.com

Media/Press

Media Contact:

Lacy Kelley-Croft
Office Phone: 254-776-3550
Email: lacykc@sgmeet.com

For More Information

For more information on the 2014 Joint Aquatic Sciences Meeting, address all correspondence and questions regarding registration, conference logistics, and hotel accommodations to:

2014 Joint Aquatic Sciences Meeting
5400 Bosque Boulevard, Suite 680
Waco, Texas 76710-4446
Phone: 254-776-3550
Fax: 254-776-3767
E-mail: jasm2012@sgmeet.com

If your questions pertain to the program, please contact one of the meeting chairs. If you need information regarding content of a particular session, please contact the appropriate session organizer.

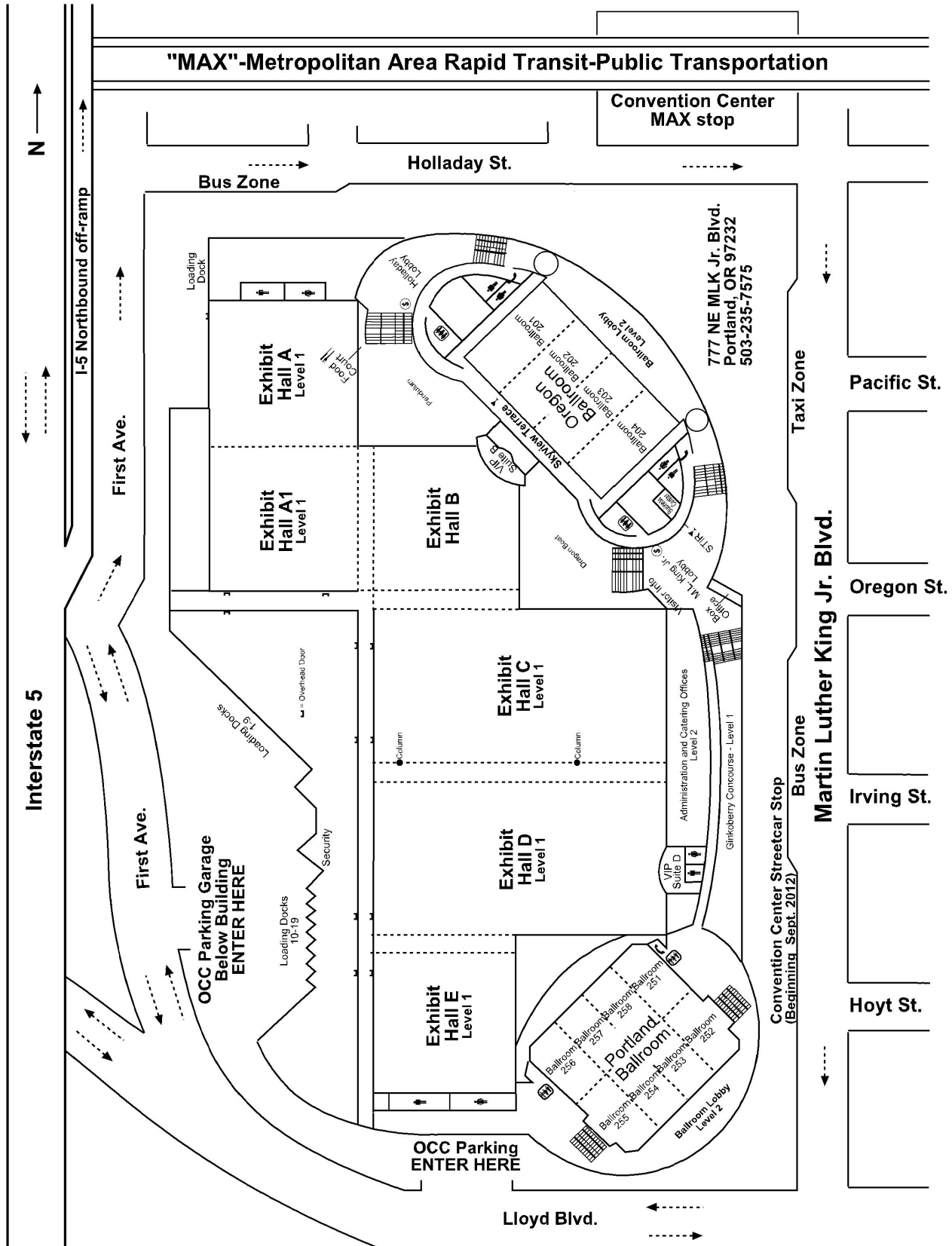
JASM 2014

JOINT AQUATIC SCIENCES MEETING • PORTLAND, OREGON

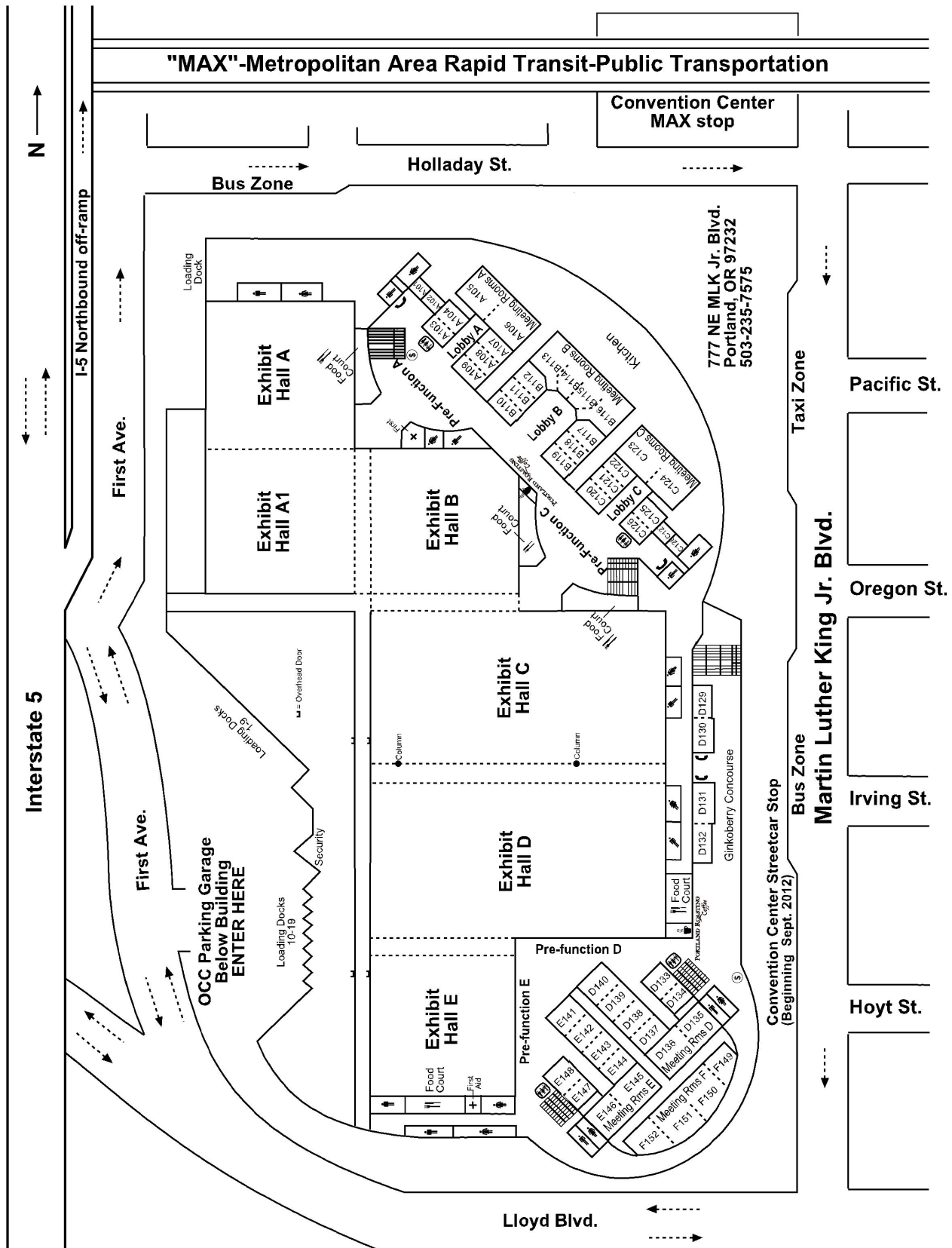
Downtown Portland Map



Oregon Convention Center Map - Level 1



Oregon Convention Center Map - Level 2



Schedule At A Glance - Monday

Room	Oregon Ballroom	A 105	A 106	B 110-112	B 113	B 114	B 115	B 116
08:00 - 09:30	Presidential Address: Society for Freshwater Science - Randy Fuller Award Lecture: Society for Freshwater Science 2014 Award of Excellence - Colin R. Townsend Plenary Presentation: Stuart Bunn							
09:30 - 10:00	Morning Break							
10:00 - 12:00	001: Communicating the Value of Aquatic and Wetland Ecosystems to the Public and Policy Makers	026: From the Bottom Up: Stable Isotopes as Tools for Exploring Aquatic Food Web Dynamics	073: Biomarker research in aquatic food webs at times of global change - Constraints & opportunities	025: Interactive effects of climate change & other anthropogenic drivers on aquatic ecosystems	046: Understanding Aquatic Ecological Processes Across Spatial Scales	057: Stream microbial ecology: where are we now and where are we going	045: An azocentric look at the world, from genes to ecosystems	
12:00 - 13:30	Lunch on your own							
13:30 - 15:30	001: Communicating the Value of Aquatic and Wetland Ecosystems to the Public and Policy Makers	026: From the Bottom Up: Stable Isotopes as Tools for Exploring Aquatic Food Web Dynamics	073: Biomarker research in aquatic food webs at times of global change - Constraints & opportunities	025: Interactive effects of climate change & other anthropogenic drivers on aquatic ecosystems	046: Understanding Aquatic Ecological Processes Across Spatial Scales	057: Stream microbial ecology: where are we now and where are we going	078: The future of aquatic science: an educational session particularly for undergraduates	087: If you remove it, will they come? Evaluating the response of biotic communities to dam removal
15:30 - 16:00	Afternoon Break							
16:00 - 18:00	009: Exceptional achievements in aquatic sciences: the ASLO Awards presentations	026: From the Bottom Up: Stable Isotopes as Tools for Exploring Aquatic Food Web Dynamics	099: Linking the genetics, toxicity, and physiology of bloom-forming cyanobacteria in large lakes	025: Interactive effects of climate change & other anthropogenic drivers on aquatic ecosystems	133: Aquatic Ecosystem Management and Policy	062: Meta-communities in the Built Environment	078: The future of aquatic science: an educational session particularly for undergraduates	087: If you remove it, will they come? Evaluating the response of biotic communities to dam removal
18:00 - 20:00	Meetings, Workshops & Town Halls. See complete details beginning on Page 17.							
20:00 - 21:00	Student Mixer - Portland Ballroom 253 - 254							

B 117 - 119	C 120-122	C 123-124	D 135-136	D 137-139	E 142-144	E 145-146	F 150-151	Room
Oregon Ballroom								08:00 - 09:30
Exhibit Hall A, A1, B								09:30 - 10:00
142 A: Food Webs (Part 1)	053: International Society for River Science: Physical, Chemical, and Biological Changes in Modified Rivers	118: Lakes and Freshwater Wetlands	047: Biogeochemistry across aquatic ecosystems: Challenges to and opportunities for integrating research	081: Emerging Issues in Freshwater Ecology	022: Advances in understanding the impacts of aquatic invasions: Integrating knowledge from freshwater and marine systems	051: Spring- habitats and spring-fed headwaters: biology fifty years after the definition of crenobiology	132A: Population and Community Ecology (Part 1)	10:00 - 12:00
Meetings, Workshops & Town Halls. See complete details beginning on Page 17.								12:00 - 13:30
142 B: Food Webs (Part 2)	053: International Society for River Science: Physical, Chemical, and Biological Changes in Modified Rivers	141 A: Wetlands (Part 1)	047: Biogeochemistry across aquatic ecosystems: Challenges to and opportunities for integrating research	081: Emerging Issues in Freshwater Ecology	022: Advances in understanding the impacts of aquatic invasions: Integrating knowledge from freshwater and marine systems	051: Spring- habitats and spring-fed headwaters: biology fifty years after the definition of crenobiology	131 A: Landuse and Non-point Source Impacts (Part 1)	13:30 - 15:30
Exhibit Hall A, A1, B								15:30 - 16:00
142 C: Food Webs (Part 3)	115: Structural and functional connectivity in dryland aquatic habitats: from genes to communities	141 B: Wetlands (Part 2)	094: Geospatial Data Applications for Aquatic Resources	019: Hydrodynamics and Biogeochemistry of the Stream - Bed Interface	022: Advances in understanding the impacts of aquatic invasions: Integrating knowledge from freshwater and marine systems	048: Highly permeable benthic habitats in a time of environmental change	131: B Landuse and Non-point Source Impacts (Part 2)	16:00 - 18:00
Meetings, Workshops & Town Halls. See complete details beginning on Page 17.								18:00 - 20:00
Post-Doc Mixer - Portland Ballroom 252								20:00 - 21:00

Schedule At A Glance - Tuesday

Room	Oregon Ballroom	A 105	A 106	B 110-112	B 113	B 114	B 115	B 116
08:00 - 09:30	Presidential Address: Society of Wetland Scientists - Stephen Faulkner Award Lecture – Society of Wetland Scientists: 2014 International Fellow Award - Jared Bosire Plenary Presentation: Laurel Larsen							
09:30 - 10:00	Morning Break							
10:00 - 12:00	002: Tipping Points Science: From global theories to local tools	077: Ecological targets for water quality management	117: The Effects of Acid Deposition and Acid Remediation Strategies on Aquatic Ecosystems	028: Trace Gas Emissions and Carbon Sequestration in Wetlands and Lakes	018: The Effects of Fire on Freshwater Ecosystems	136 A: Biodiversity and Ecosystem Function (Part 1)	056: Linking anthropogenic stressors with coastal and freshwater plankton community dynamics in a changing world	140 A: Invasive and Non-native Species (Part 1)
12:00 - 13:30	Lunch on your own							
13:30 - 15:30	002: Tipping Points Science: From global theories to local tools	077: Ecological targets for water quality management	064: The science and management of environmental flows: recent developments and remaining challenges	028: Trace Gas Emissions and Carbon Sequestration in Wetlands and Lakes	018: The Effects of Fire on Freshwater Ecosystems	136 B: Biodiversity and Ecosystem Function (Part 2)	050: Emergent insects as focal taxa for bridging ecological understanding across ecosystems	140 B: Invasive and Non-native Species (Part 2)
15:30 - 16:00	Afternoon Break							
16:00 - 18:00	091: Resilience of future wetlands to climate change	077: Ecological targets for water quality management	064: The science and management of environmental flows: recent developments and remaining challenges	132 B: Population and Community Ecology (Part 2)	018: The Effects of Fire on Freshwater Ecosystems	086: What have we learned about tropical streams? How will they be affected by climate change?	050: Emergent insects as focal taxa for bridging ecological understanding across ecosystems	040: Ecological processes of aquatic systems in winter
18:00 - 20:00	Poster Session and Happy Hour							
18:00 - 20:00	Meetings, Workshops & Town Halls. See complete details beginning on Page 17.							
19:00 - 23:00	Mentor/Mentee Dinner, Dessert, or Drinks (Optional and Dinner On Your Own) (20:00 - 22:00) Jam Session- Offsite at Paddy's (20:00 - 23:00)							

B 117 - 119	C 120-122	C 123-124	D 135-136	D 137-139	E 142-144	E 145-146	F 150-151	Room
Oregon Ballroom								08:00 - 09:30
Exhibit Hall A, A1, B								09:30 - 10:00
016: Effects of climate change on species interactions in aquatic ecosystems	141 C:Wetlands (Part 3)	039: From individuals to ecosystems: Consumer driven nutrient recycling across aquatic ecosystems	011: Ecosystem Dynamics on a Changing Playing Field	013: The Changing Inland Water Carbon Cycle-Special Session Dedicated to Career of Jonathan J. Cole	008: Groundwater Wetlands Special Session	084: Beyond Graduate Research: Disseminating Scientific Knowledge	200: PSA Bold Award Session	10:00 - 12:00
Meetings, Workshops & Town Halls. See complete details beginning on Page 17.								12:00 - 13:30
016: Effects of climate change on species interactions in aquatic ecosystems	141 D:Wetlands (Part 4)	039: From individuals to ecosystems: Consumer driven nutrient recycling across aquatic ecosystems	011: Ecosystem Dynamics on a Changing Playing Field	013: The Changing Inland Water Carbon Cycle-Special Session Dedicated to Career of Jonathan J. Cole	106: Assessing Effects of Conservation Practices and Programs on Wetland Ecosystem Services	021: Modeling for ecological assessments and conservation planning	200: PSA Bold Award Session	13:30 - 15:30
Exhibit Hall A, A1, B								15:30 - 16:00
016: Effects of climate change on species interactions in aquatic ecosystems	066: Integrated analyses of terminal lakes and wetlands: physics to phragmites	039: From individuals to ecosystems: Consumer driven nutrient recycling across aquatic ecosystems	032: As Above, So Below: integrating aquatic ecosystem observation systems from satellites to genes	013: The Changing Inland Water Carbon Cycle-Special Session Dedicated to Career of Jonathan J. Cole	102: Assessing the ecologic condition of wetlands at national, regional, and state scales	021: Modeling for ecological assessments and conservation planning	200: PSA Bold Award Session	16:00 - 18:00
Exhibit Hall A, A1, B								18:00 - 20:00
Meetings, Workshops & Town Halls. See complete details beginning on Page 17.								18:00 - 20:00
Science Pub Mission Theater – Offsite at Mission Theater (19:00 - 21:00) Science Hop –Offsite, meet at the bell sculpture outside the convention center (21:00)								19:00 - 23:00

Schedule At A Glance - Wednesday

Room	Oregon Ballroom	A 105	A 106	B 110-112	B 113	B 114	B 115	B 116
08:00 - 09:30	Presidential Address: Phycological Society of America - John Stiller Award Lectures: Phycological Society of America - PSA Awards for Excellence - Rex Lowe and Christine Maggs Plenary Presentation: Virginia Armbrust							
09:30 - 10:00	Morning Break							
10:00 - 12:00	003: Putting Microbial Genomes to Work in Ecosystem Science	012: Diversity and ecological function of fungi in freshwater and marine environments	017: Understanding linkages between terrestrial and aquatic organic matter across ecosystems	147: Applied Phycology	088: Advancing the science and management of mountain peatlands	015: Seaweed Blooms in a Changing World: Understanding their Causes, Dynamics and Consequences	097: Calibration and Verification of Rapid Wetland and Stream Assessment Methods	130 A: Ecotoxicology (Part 1)
12:00 - 13:30	Lunch on your own							
13:30 - 15:30	003: Putting Microbial Genomes to Work in Ecosystem Science	121: Does Nutrient Pollution Jeopardize Tidal Wetland Viability? A Controversy Revisited	017: Understanding linkages between terrestrial and aquatic organic matter across ecosystems	146 A: General Phycology (Part 1)	071: Impacts of climate change on the ecological function of tropical aquatic ecosystems	061: Linking Reservoir Management to Aquatic Biogeochemistry	105: Wetland restoration: delivering multiple benefits and recreating lost services	130 B: Ecotoxicology (Part 2)
15:30 - 16:00	Afternoon Break							
16:00 - 18:00	044: Microbially-mediated ecosystem services: The good, the bad and the ugly	067: The Las Vegas Wash and Lake Mead: Aquatic Ecosystem Management and Restoration in an Arid, Urban Region	017: Understanding linkages between terrestrial and aquatic organic matter across ecosystems	146 B: General Phycology (Part 2)	071: Impacts of climate change on the ecological function of tropical aquatic ecosystems	061: Linking Reservoir Management to Aquatic Biogeochemistry	105: Wetland restoration: delivering multiple benefits and recreating lost services	130 C: Ecotoxicology (Part 3)
18:00 - 20:00	Meetings, Workshops & Town Halls. See complete details beginning on Page 17.							
18:15 - 20:00	Fun Run							
19:00 - 22:00	All Society Social and Informal Banquet							
22:00	Science Hop							

B 117 - 119	C 120-122	C 123-124	D 135-136	D 137-139	E 142-144	E 145-146	F 150-151	Room
Oregon Ballroom								08:00 - 09:30
Exhibit Hall A, A1, B								09:30 - 10:00
127 A: Climate Change (Part 1)	079: Recognizing the Multiple Values of Aquatic Ecosystems to People	076: Water Resource Sustainability and Resilience: Assessments, Approaches, and Communication	123 A: Large River Ecology (Part 1)	108: Impacts of Global Change on Aquatic Biodiversity and Ecosystem Processes in Mountains	027: Feeding a hungry planet: how is agriculture affecting aquatic ecosystems and what role will global change play?	029: Aquatic Species Investigation: Environmental DNA applications for aquatic ecosystems	128 A: Biogeochemistry (Part 1)	10:00 - 12:00
Meetings, Workshops & Town Halls. See complete details beginning on Page 17.								12:00 - 13:30
127 B: Climate Change (Part 2)	079: Recognizing the Multiple Values of Aquatic Ecosystems to People	076: Water Resource Sustainability and Resilience: Assessments, Approaches, and Communication	123 B: Large River Ecology (Part 2)	108: Impacts of Global Change on Aquatic Biodiversity and Ecosystem Processes in Mountains	027: Feeding a hungry planet: how is agriculture affecting aquatic ecosystems and what role will global change play?	029: Aquatic Species Investigation: Environmental DNA applications for aquatic ecosystems	128 B: Biogeochemistry (Part 2)	13:30 - 15:30
Exhibit Hall A, A1, B								15:30 - 16:00
104: Ecosystem-scale experimental and modeling approaches to investigate effects of environmental drivers	042: Functioning of salt marsh and mangrove wetland ecosystems across ecological and spatial scales	135: Land-Water Interfaces	138: Zooplankton Dynamics	132 C: Population and Community Ecology (Part 3)	036: Interactions between non-native flora and native fauna in submerged, wetland, and riparian systems	029: Aquatic Species Investigation: Environmental DNA applications for aquatic ecosystems	101: Carbon in aquatic ecosystems: Recent advances ...	16:00 - 18:00
Meetings, Workshops & Town Halls. See complete details beginning on Page 17.								18:00 - 20:00
Offsite - Meet at the West-end of the Steel Bridge								18:15 - 20:00
Offsite - Pioneer Courthouse Square								19:00 - 22:00
Offsite - Meet at Pioneer Courthouse Square (Corner of 6th and Morrison)								22:00

Schedule At A Glance - Thursday

Room	Oregon Ballroom	A 105	A 106	B 110-112	B 113	B 114	B 115	B 116
08:00 - 09:30	Presidential Address: Association for the Sciences of Limnology and Oceanography - John Downing Award Lecture: ASLO Ruth Patrick Award- Daniel J. Conley Plenary Presentation: Patricia Soranno							
09:30 - 10:00	Morning Break							
10:00 - 12:00	004: Large-scale limnology – Integrating across landscapes to understand regional controls on biodiversity	033: Bridging the gap: Using high-frequency sensor-derived data and networks in education, training and outreach	122 A: Molecular Ecology (Part 1)	111: Dissolved organic tracers of aquatic biogeochemistry	113: Exploring the role of macrophytes in mediating biodiversity and functional processes across aquatic ecosystems	092: Frontiers in Algal Evolution: a case study from the Rhodophyta	034: Metapopulation and metacommunity approaches to research and management	114: Wetlands: getting to a science based approach
12:00 - 13:30	Lunch on your own							
13:30 - 15:30	004: Large-scale limnology – Integrating across landscapes to understand regional controls on biodiversity	031: A city is a city? Comparative analyses in urban aquatic ecosystems	122 B: Molecular Ecology (Part 2)	111: Dissolved organic tracers of aquatic biogeochemistry	055: Carbon Cycling and Fluxes in Coastal Vegetated Wetlands	092: Frontiers in Algal Evolution: a case study from the Rhodophyta	035: Population Genetic and Genomic Advances in Understanding the Evolution of Plankton	145 A: Systematics and Taxonomy (Part 1)
15:30 - 16:00	Afternoon Break							
16:00 - 18:00	004: Large-scale limnology – Integrating across landscapes to understand regional controls on biodiversity	031: A city is a city? Comparative analyses in urban aquatic ecosystems	137 A: Ecology of Fish and Other Aquatic Vertebrates (Part 1)	030: Insights into the Molecular Ecology of Phosphorus Biogeochemistry From Diverse Aquatic Ecosystems	055: Carbon Cycling and Fluxes in Coastal Vegetated Wetlands	143: Invertebrate Biology and Life History	035: Population Genetic and Genomic Advances in Understanding the Evolution of Plankton	145 B: Systematics and Taxonomy (Part 2)
18:00 - 20:00	Poster Session and Happy Hour							
18:00 - 20:00	Meetings, Workshops & Town Halls. See complete details beginning on Page 17.							
19:00 - 23:00	Science Hop							
20:00 - 22:00	Poster & Exhibit Teardown							

B 117 - 119	C 120-122	C 123-124	D 135-136	D 137-139	E 142-144	E 145-146	F 150-151	Room
Oregon Ballroom								08:00 - 09:30
Exhibit Hall A, A1, B								09:30 - 10:00
132 D: Population and Community Ecology (Part 4)	116: The role of microbial and algal communities in stressed aquatic systems	070: River- Floodplain Connectivity as a Geomorphic, Biogeochemical and Organismal Driver	139 A: Benthic Communities and Function (Part 1)	124 A: Bioassessment (Part 1)	074: Environmental Flow Science in the WaterSMART Program	110:Ghosts of land-use past: Do land-use legacy effects constrain the restoration of aquatic ecosystems?	134 A:Aquatic Conservation and Restoration (Part 1)	10:00 - 12:00
Meetings, Workshops & Town Halls. See complete details beginning on Page 17.								12:00 - 13:30
090: How does the Ramsar Convention respond to changing wetlands	069: Life at Low Nutrients	070: River- Floodplain Connectivity as a Geomorphic, Biogeochemical and Organismal Driver	139 B: Benthic Communities and Function (Part 2)	124 B: Bioassessment (Part 2)	074: Environmental Flow Science in the WaterSMART Program	024:We've got a nitrogen fixation! Exploring, integrating, and understanding N fixation	134 B:Aquatic Conservation and Restoration (Part 2)	13:30 - 15:30
Exhibit Hall A, A1, B								15:30 - 16:00
083: Restoration of European wetlands: thresholds and tipping points	069: Life at Low Nutrients	070: River- Floodplain Connectivity as a Geomorphic, Biogeochemical and Organismal Driver	054: Understanding and managing legacy contaminants in freshwater ecosystems	124 C: Bioassessment (Part 3)	074: Environmental Flow Science in the WaterSMART Program	024:We've got a nitrogen fixation! Exploring, integrating, and understanding N fixation	134 C:Aquatic Conservation and Restoration (Part 3)	16:00 - 18:00
Exhibit Hall A, A1, B								18:00 - 20:00
Meetings, Workshops & Town Halls. See complete details beginning on Page 17.								18:00 - 20:00
Offsite (Meet at the bell sculpture outside the convention center)								19:00 - 23:00
Exhibit Hall A, A1, B								20:00 - 22:00

Schedule At A Glance - Friday

Room	Oregon Ballroom	A 105	A 106	B 110-112	B 113	B 114	B 115	B 116
08:00 - 09:30	President's Panel – "The State of the Scientific Societies Address" Plenary Presentation: Julian Olden							
08:00 - 12:00	Poster & Exhibit Teardown							
09:30 - 10:00	Morning Break							
10:00 - 12:00	005: Robust restoration of freshwater ecosystems in the face of uncertainty	144 A: Hydro-ecology (Part 1)	137 B: Ecology of Fish & Other Aquatic Vertebrates (Part 2)	060: Nitrogen transformation mechanisms at the sediment-water-interface in aquatic ecosystems over a range of latitudes	065: Connectivity within watersheds: effects, functions & values of headwaters & isolated aquatic features	006: Advancing the science and management of temporary aquatic habitats	010: Eco-evolutionary dynamics in aquatic ecosystems	129 A: Organic Matter Processing (Part 1)
12:00 - 13:30	Lunch on your own							
13:30 - 15:30	005: Robust restoration of freshwater ecosystems in the face of uncertainty	144 B: Hydro-ecology (Part 2)	038: Ecological and social problems related to eutrophication of aquatic ecosystems in developing countries	060: Nitrogen transformation mechanisms at the sediment-water-interface in aquatic ecosystems over a range of latitudes	065: Connectivity within watersheds: effects, functions & values of headwaters & isolated aquatic features	006: Advancing the science and management of temporary aquatic habitats	010: Eco-evolutionary dynamics in aquatic ecosystems	129 B: Organic Matter Processing (Part 2)
15:30 - 16:00	Afternoon Break							
16:00 - 18:00	089: Wildlife Response to Restoration	144 C: Hydro-ecology (Part 3)	038: Ecological and social problems related to eutrophication of aquatic ecosystems in developing countries	112: Emerging technologies and integrative data analysis approaches for microbiological studies in aquatic environments	059: Biogeography and speciation in the northeast Pacific	006: Advancing the science and management of temporary aquatic habitats	107: Characteristics and management of aquatic systems in agricultural landscapes	129 C: Organic Matter Processing (Part 3)

B 117 - 119	C 120-122	C 123-124	D 135-136	D 137-139	E 142-144	E 145-146	F 150-151	Room
Oregon Ballroom								08:00 - 09:30
Exhibit Hall A, A1, B								08:00 - 12:00
Oregon Ballroom Foyer								09:30 - 10:00
095: Remote sensing optically shallow aquatic ecosystems: methods and applications	126 A: Algae and Primary Production (Part 1)	014: Ecological Change in Arctic and Alpine Freshwaters	043: Distributions in aquatic ecosystems: predictors, models & communities	124 D: Bioassessment (Part 4)	007: Distributed long-term, high frequency networks for ecological data collection: advantages, hurdles, and applications	037: Rapid Changes in Water Temperature: Quantifying, Understanding, and Managing Heterogeneity	075: Aquatic Ecosystem Services	10:00 - 12:00
Meetings, Workshops & Town Halls. See complete details beginning on Page 17.								12:00 - 13:30
093:Anthropogenic Influences on Watershed Biogeochemistry: New Findings and Methods	126 B: Algae and Primary Production (Part 2)	014: Ecological Change in Arctic and Alpine Freshwaters	043: Distributions in aquatic ecosystems: predictors, models & communities	140 C: Invasive and Exotic Species (Part 1)	007: Distributed long-term, high frequency networks for ecological data collection: advantages, hurdles, and applications	037: Rapid Changes in Water Temperature: Quantifying, Understanding, and Managing Heterogeneity	075: Aquatic Ecosystem Services	13:30 - 15:30
Oregon Ballroom Foyer								15:30 - 16:00
093:Anthropogenic Influences on Watershed Biogeochemistry: New Findings and Methods	132 E: Population and Community Ecology (Part 5)	014: Ecological Change in Arctic and Alpine Freshwaters	043: Distributions in aquatic ecosystems: predictors, models & communities	140 D: Invasive and Exotic Species (Part 2)	103: Lakes and streams as engines in global processes: Insights from technical advances in limnology	037: Rapid Changes in Water Temperature: Quantifying, Understanding, and Managing Heterogeneity	075: Aquatic Ecosystem Services	16:00 - 18:00

Monday, 5/19/2014 Orals

001 Communicating The Value Of Aquatic And Wetland Ecosystems To The Public And Policy Makers

Chair(s): Kurt D. Fausch, kurtf@cnr.colostate.edu
 Michael P. Nelson, mpnelson@oregonstate.edu
 Jeremy Monroe, jeremy@freshwatersillustrated.org
 Stephanie Hampton, s.hampton@wsu.edu

Location: Oregon Ballroom

- 10:00 **Meredith, D.:** EFFECTIVELY REACHING LAY AUDIENCES[†]
- 10:30 **Davies, S. P.:** CONTAINERS FOR COMPLEXITY: HOW GRADIENT MODELS DELIVER THE "SO WHAT?" OUT OF A BLIZZARD OF DATA*
- 10:45 **Bernhardt, E. S.:** FROM THE IVORY TOWER TO THE HALLS OF JUSTICE: SCIENCE IN THE COURTROOM*
- 11:00 **Naiman, R. J.;** Merrill, E. N.: INCORPORATING SCIENCE INTO FISHERIES MANAGEMENT: SCIENTIFIC ADVICE, DECISION-MAKING AND THE COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM*
- 11:15 **Weathers, K. C.;** Hanson, P. C.: COMMUNICATING LAKE SCIENCE: LESSONS FROM THE GLOBAL LAKE ECOLOGICAL OBSERVATORY NETWORK*
- 11:30 **Borre, L.:** COMMUNICATING ABOUT LAKE CONSERVATION AND SCIENCE THROUGH THE NATIONAL GEOGRAPHIC WATER CURRENTS BLOG
- 11:45 Hohman, B.; Wicks, C.; Elmer, H.; Lopez, F.; Dymond, C.; Woloszyn, M.; **Arend, K.:** WATERSHED HEALTH REPORT CARDS: AN EFFECTIVE TOOL FOR COMMUNICATING ENVIRONMENTAL DATA TO THE PUBLIC AND FOSTERING STEWARDSHIP
- 13:30 **Douglas, M. M.;** Bunn, S. E.; Davies, P. M.; Jackson, S.; Olley, J.; Pantus, E.; Morrison, J.: THE VALUE OF MULTIPLE VALUES: A CASE STUDY FROM AUSTRALIA'S TROPICAL RIVERS*
- 13:45 **Richter, B.:** CHASING WATER: TEACHING THE WORLD TO CARE FOR ITS MOST PRECIOUS RESOURCE*
- 14:00 **Forsberg, M.;** Farrell, M.; Harner, M.; Speicher, S.; Brinley Buckley, E.: THE PLATTE BASIN TIMELAPSE PROJECT—SEEING A WATERSHED IN MOTION
- 14:15 **Arbuckle, C. A.:** BLUE GOLD, WHITE GOLD, GREEN GUILT: TRUSTING COLLABORATION TO MANAGE WATER QUALITY DECLINE IN THE FACE OF SIGNIFICANT LAND USE INTENSIFICATION IN NZ.
- 14:30 **Nelson, M. P.:** INFORMATION, WONDER, AND LOVE: COMMUNICATING THE VALUE OF THE WORLD THROUGH SCIENCE*
- 14:45 **Gregory, S.:** BUILDING A GUIDING VISION THROUGH RESEARCH AND PUBLIC PARTICIPATION IN THE RESTORATION OF THE WILLAMETTE RIVER*
- 15:00 **Monroe, J. B.:** GETTING DEEPER: HOW IMMERSIVE IMAGERY AND PERSONAL NARRATIVES CAN INVITE BROADER AUDIENCES TO FRESHWATER STEWARDSHIP*
- 15:15 **Fausch, K. D.:** FOR THE LOVE OF RIVERS: A PERSONAL JOURNEY TO COMMUNICATE THE ESSENTIAL VALUES OF STREAM ECOSYSTEMS TO A PUBLIC AUDIENCE*

009 Exceptional Achievements In Aquatic Sciences: The ASLO Awards Presentations

Chair(s): Peter R. Leavitt, Peter.Leavitt@uregina.ca
 Deborah A. Bronk, bronk@vims.edu

Location: Oregon Ballroom

- 16:00 **Peckarsky, B. L.:** 2014 RAMON MARGALEF AWARD FOR EXCELLENCE IN EDUCATION: STANLEY I. DODSON[†]
- 16:30 **Pershing, A. J.;** Greene, C. H.; Maps, F.; Mills, K. E.; Record, N. R.; Stamieszkin, K. S.: 2014 YENTSCH-SCHINDLER EARLY CAREER AWARD: ANDREW PERSHING
- 16:45 **Li, W. K.:** 2014 JOHN H. MARTIN AWARD: WILLIAM K. W. LI*
- 17:00 **Madigan, D. J.:** 2014 RAYMOND L. LINDEMAN AWARD: DANIEL J. MADIGAN*
- 17:15 **Bertics, S.:** 2014 CITATION FOR SCIENTIFIC EXCELLENCE AWARD: VICTORIA BERTICS*
- 17:30 **Likens, G. E.:** 2014 ALFRED C. REDFIELD LIFETIME ACHIEVEMENT AWARD: GENE LIKENS[†]

019 Hydrodynamics And Biogeochemistry Of The Stream - Bed Interface

Chair(s): Roy Haggerty, roy.haggerty@oregonstate.edu
 Sourabh Apte, sva@engr.orst.edu
 Aaron Packman, a-packman@northwestern.edu
 Bayani Cardenas, cardenas@jsg.utexas.edu

Location: D 137 - 139

- 16:00 **Raymond, P.;** Saiers, J.; Sobczak, W.: THE PULSE-SHUNT CONCEPT: EXPLORING THE IMPORTANCE OF SMALL STREAMS VERSUS LARGE RIVERS AS REACTION SITES FOR TERRESTRIAL DISSOLVED ORGANIC MATTER
- 16:15 **Packman, A. I.;** Drummond, J. D.; Aubeneau, A. E.: UPSCALING OF CARBON AND NUTRIENT DYNAMICS IN RIVERS
- 16:30 **Tank, J. L.;** Aubeneau, A.; Reisinger, A. J.; Baker, M. A.; Hall, R. O.; Levi, P. S.; Riis, T.; Rosi-Marshall, E. J.: LINKING BIOGEOCHEMISTRY AND HYDRODYNAMICS IN RIVERS
- 16:45 **Harvey, J. W.:** HYDRODYNAMICALLY-DRIVEN FLOW PATHS IN SHALLOW STREAMBEDS ARE OFTEN THE DOMINANT LOCATION FOR HYPORHEIC-ZONE BIOGEOCHEMICAL REACTIONS
- 17:00 **Anderson, C. W.;** Haggerty, R. D.; Bloom, J. R.: SCALING UP STREAM BENTHIC RESEARCH FOR WATER QUALITY MANAGEMENT
- 17:15 **Goodman, K.;** Bohall, C.; Fitzgerald, M.; Parker, S.; Roehm, C.; Utz, R.; Vance, J.: THE NEON RESEARCH PLATFORM: JOINING PHYSICAL, CHEMICAL AND BIOLOGICAL MEASUREMENTS TO BETTER UNDERSTAND STREAMBED INTERFACE DYNAMICS ACROSS SCALES.
- 17:30 **Berg, P.;** Koopmans, D.; Huettel, M.; Li, H.; Mori, K.; Wueest, A.: A NEW ROBUST OXYGEN SENSOR FOR EDDY CORRELATION MEASUREMENTS
- 17:45 **Schmidt, C.;** Vieweg, M.; Trauth, N.; Jan Fleckenstein, J. H.: VARIABILITY OF TRANSPORT AND REACTION CONTROLS OF OXYGEN UPTAKE IN THE STREAMBED

022 Advances In Understanding The Impacts Of Aquatic Invasions: Integrating Knowledge From Freshwater And Marine Systems

Chair(s): Henry A. Vanderploeg, henry.vanderploeg@noaa.gov
 Anthony Ricciardi, tony.ricciardi@mcgill.ca
 Doran Mason, doran.mason@noaa.gov
 Edward Rutherford, ed.rutherford@noaa.gov

Location: E 142 - 144

- 10:00 **Lodge, D. M.**: FORECASTING IMPACTS OF INVASIVE SPECIES: DELIVERING SCIENCE THAT DECISION-MAKERS CAN USE[†]
- 10:30 **Vanderploeg, H. A.**; Rutherford, E. S.; Liebig, J. R.; Cavaletto, J. F.; Johengen, T. H.; Carrick, H. J.; Pothoven, S. A.; Fahnenstiel, G. L.; Mason, D. M.; Constant, S.: IMPACTS OF INVASIVE MUSSELS IN THE GREAT LAKES: UNIVERSAL PARADIGMS OR CONTEXT-DEPENDENT RESULTS?
- 10:45 Kerfoot, W. C.; **Yousef, F.**; Hobmeier, M. M.; Green, S. A.; Vanderploeg, H. A.: PRODUCTIVITY LOSSES IN LAKE MICHIGAN: TWO EXOTICS COMBINE TO INFLUENCE ENERGY FLOW AND SPECIES DIVERSITY
- 11:00 **Bratton, J. E.**; Stow, C. A.; Baskaran, M.; Johengen, T. H.; Morehead, N. R.: POST-MUSSEL PHOSPHORUS SIGNALS IN POREWATER OF LAKE HURON SEDIMENT CORES
- 11:15 **Mosley, C. M.**; Bootsma, H. A.; Wilcox, E. M.: PHOSPHORUS RECYCLING BY PROFUNDAL QUAGGA MUSSELS IN LAKE MICHIGAN
- 11:30 **Rowe, M. D.**; Vanderploeg, H. A.; Anderson, E. J.; Wang, J.; Pothoven, J. R.; Liebig, J. R.; Nalepa, T. F.; Johengen, T. H.: MODELING THE EFFECTS OF STRATIFICATION AND BATHYMETRY ON THE INTERACTION OF PHYTOPLANKTON AND INVASIVE QUAGGA MUSSELS IN NEARSHORE LAKE MICHIGAN
- 11:45 **Carrick, H. J.**; Butts, E.; Fehring, M.; Frazier, C.; Lavrentyev, P.; Vanderploeg, H.: A CHANGING PELAGIC FOOD WEB IN LAKE MICHIGAN: A BIGGER ROLE FOR SMALLER PLAYERS
- 13:30 **Hambright, K. D.**: THE NICHE OF AN INVASIVE MARINE HARMFUL ALGA IN A SOUTHERN US FRESHWATER IMPOUNDMENT
- 13:45 **Tyner, E. H.**; Bootsma, H. A.; Lafrancois, B. M.: OXYGEN CONSUMPTION BY QUAGGA MUSSELS (*DREISSENA ROSTRIFORMIS BUGENSIS*) IN RESPONSE TO ENVIRONMENTAL VARIABLES.
- 14:00 **Girdner, S. F.**; Ray, A.; Buktenica, M.; Hering, D.: THE IMPACT OF CRAYFISH INVASION ON THE ENDEMIC VERTEBRATE PREDATOR (ROUGH-SKINNED NEWT) IN CRATER LAKE OREGON, USA
- 14:15 **Umek, J.**; Chandra, S.; Buktenica, M.; Girdner, S.; Henery, R.: EXPANSION OF INVASIVE CRAYFISH AND THE IMPACTS ON NATIVE BENTHIC INVERTEBRATES IN CRATER LAKE OREGON, USA
- 14:30 **Cimino, S. A.**; Brenneis, V. E.; Strecker, A. L.: INVESTIGATING SHIFTS IN FOOD WEB POSITION OF BENTHIC INVERTEBRATES DUE TO NEW ZEALAND MUDSNAIL INVASION IN FRESHWATER LAKES AND BRACKISH ESTUARIES
- 14:45 **Richins, E. H.**; Heinrich, K. K.; Baxter, C. V.; Eby, L.; Marczak, L.: AN INVESTIGATION OF NEW ZEALAND MUDSNAIL INVASION AND RIPARIAN HABITAT STRUCTURE EFFECTS ON WEB-BUILDING SPIDERS

- 15:00 **Walawender, R. J.**; Horth, L.: POPULATION STRUCTURE OF GAMBUSIA SURROUNDING THE GULF OF MEXICO
- 15:15 **Detmer, T. M.**; McCutchan, J. H.; Lewis, W. M.: INVASIVE FISH IN LAKES AT HIGH ELEVATIONS: A MODEL SYSTEM FOR UNDERSTANDING MECHANISMS CONTROLLING CASCADING TROPHIC INTERACTIONS
- 16:00 **Zhang, H.**; Rutherford, E. S.; Mason, D. M.; Ivan, L. N.; Hoff, M.; Beletsky, D.; Fulton, E. A.; Barbiero, R. P.; Adamack, A. T.; Gorton, R. J.: POTENTIAL IMPACTS OF ASIAN CARP ON LAKE MICHIGAN'S FOOD WEB – AN ECOSYSTEM LEVEL ASSESSMENT
- 16:15 **Wittmann, M. E.**; Cooke, R. M.; Rothlisberger, J. D.; Rutherford, E. S.; Zhang, H.; Mason, D. M.; Lodge, D. M.: STRUCTURED EXPERT JUDGMENT FORECASTS BIGHEAD AND SILVER CARP IN LAKE ERIE WITH LITTLE EFFECT ON SPORT AND COMMERCIAL FISH POPULATIONS
- 16:30 **Sanderson, B. L.**; Carey, M. P.; Barnas, K. A.: A TASTE FOR ENDANGERED PREY? THE BIOENERGETICS OF NONNATIVE SPORT FISHES THE PACIFIC NORTHWEST
- 16:45 **Simonin, P. W.**; Rudstam, L. G.; Sullivan, P. J.; Parrish, D. L.; Pientka, B.: FORECASTING NATIVE RAINBOW SMELT AND NONNATIVE ALEWIFE DISTRIBUTION PATTERNS, CANNIBALISM, AND LONG-TERM COMMUNITY DYNAMICS
- 17:00 **Wilson, K. L.**; Allen, M. S.; Ahrens, R. N.; Netherland, M. D.: REEVALUATING PERCEPTIONS: EFFECTS OF INVASIVE MACROPHYTES ON FISH DEPEND ON HABITAT SELECTION PROCESSES
- 17:15 **Rutherford, E. S.**; Zhang, H.; Mason, D. M.; Lodge, D. M.; Wittmann, M. E.; Cooke, R. M.; Breck, J. T.; Vanderploeg, H. A.: RELATIVE IMPORTANCE OF TIMING, LIFE HISTORY, AND HABITAT OF NON-INDIGENOUS SPECIES FOR PREDICTING INVASION SUCCESS AND IMPACT IN GREAT LAKES ECOSYSTEMS
- 17:30 **Latzka, A. W.**; Hansen, G. J.; Kornis, M. S.; Vander Zanden, M. J.: DISTRIBUTIONS OF INVASIVE SPECIES' IMPACTS: HETEROGENEITY DRIVEN BY ABUNDANCE AND THE ABUNDANCE-IMPACT CURVE
- 17:45 **Fusaro, A. J.**; Davidson, A. D.; Sperone, F. G.; Kashian, D. R.: MAPPING INVASION LIKELIHOOD AND PREDICTED IMPACT: INTEGRATING DIVERSE TAXA AND VECTOR ASSESSMENTS INTO A SPATIAL MODEL OF INVASION RISK

025 Double Trouble: Interactive Effects Of Climate Change And Other Anthropogenic Drivers On Aquatic Ecosystems

Chair(s): Lesley Knoll, lesley.knoll@lacawac.org
 Nicole Hayes, hayesnm@miamioh.edu
 Weston Nowlin, wnowlin@txstate.edu
 Michael Vanni, vannimj@miamioh.edu

Location: B 110 - 112

- 10:00 **Carey, C. C.**; Cottingham, K. L.; Hanson, P. C.: INCREASING NUTRIENTS AND TEMPERATURE DO NOT ALWAYS SYNERGISTICALLY INTERACT TO STIMULATE CYANOBACTERIAL BLOOMS: INSIGHTS FROM LAKE SURVEYS AND LONG-TERM DATA*

(* represents Invited presentations)

- 10:15 **Hayes, N. M.;** Vanni, M. J.; Gonzalez, M. J.; Renwick, W. H.; Horgan, M. J.: AGRICULTURAL LAND USE CHANGE AND CLIMATE INFLUENCE PHYTOPLANKTON COMMUNITY AND PHYTOPLANKTON TRAITS IN A EUTROPHIC RESERVOIR
- 10:30 **Bouma-Gregson, K.;** Lowe, R. L.; Power, M. E.; Furey, P. C.; Welter, J. R.; Kudela, R. M.: FLOW AND CLIMATE THRESHOLDS FOR ALGAL ASSEMBLAGES IN AN N-LIMITED RIVER IN A MEDITERRANEAN CLIMATE: TIPPING TOWARDS TOXICITY?
- 10:45 **Doubek, J. P.;** Carey, C. C.: PHYTOPLANKTON COMMUNITIES ARE MORE LIKELY TO POSITIVELY RESPOND TO INCREASED TEMPERATURES AND NUTRIENTS IN NATURAL LAKES THAN IN MAN-MADE RESERVOIRS
- 11:00 **Piggott, J. J.;** Romana, S.; Townsend, C. R.; Matthei, C. D.: INTERACTIONS AMONG CLIMATE-CHANGE INDUCED WARMING AND MULTIPLE AGRICULTURAL STRESSORS: A STREAM MESOCOSM EXPERIMENT INVOLVING PERIPHYTON
- 11:15 **Ball-Damerow, J. E.;** M'Gonigle, L. K.; Resh, V. H.: A RESURVEY OF ODONATA ASSEMBLAGES AFTER 98 YEARS OF ENVIRONMENTAL CHANGE
- 11:30 **Wissel, B.;** Cooper, R. N.; Starks, E. R.; Nanayakkara, L.: CLIMATE VS. LAND-USE: DIVERGING FOOD-WEB EFFECTS ON FISH AND INVERTEBRATE COMMUNITIES IN PRAIRIE LAKES
- 11:45 **Johnson, W. C.:** MODELING TIME AND SPACE DYNAMICS OF COMPLEX WETLAND ECOSYSTEMS UNDER A CHANGING CLIMATE AND INTENSIFIED LAND USE*
- 13:30 **Caplan, J. S.;** Hager, R. N.; Megonigal, J. P.; Mozdzer, T. J.: SEASONAL CARBON FIXATION BY AN INVASIVE WETLAND GRASS UNDER GLOBAL CHANGE
- 13:45 **Ellis, B. K.;** Stanford, J. A.: TROPHIC CASCADES, A WARMING CLIMATE AND NUTRIENT LOADING AS STRONG INTERACTIONS IN A LARGE OLIGOTROPHIC LAKE
- 14:00 **Woodward, N. E.;** Schindler, D. E.: TROPHIC STATUS REGULATES THE INTERNAL RESPONSE OF OXYGEN AND PHOSPHORUS TO CLIMATE CHANGE IN LAKES
- 14:15 **Laseter, S. H.;** Miniati, C. F.; Ripken, M.; Swift, L.: TITLE: A COMPARISON OF STREAM TEMPERATURE ACROSS SPATIAL AND LAND USE HISTORY DIFFERENCES IN TWO FIRST-ORDER SOUTHERN APPALACHIAN STREAMS
- 14:30 **Xenopoulos, M. A.;** Vogt, R. J.; Williams, C. J.; Wilson, H. F.: SYNCHRONOUS DISSOLVED ORGANIC MATTER DYNAMICS IN STREAMS ACROSS AN AGRICULTURE LAND USE GRADIENT AND CLIMATE SETTING*
- 14:45 **Rose, K. C.;** Hansen, G.; Read, J. S.; Winslow, L.: MODELING THE EFFECTS OF LONG TERM CHANGES IN WATER CLARITY ON WATER TEMPERATURE CHARACTERISTICS IN NORTH TEMPERATE LAKES.*
- 15:00 **Roberts, M. L.;** Mohamedali, T.; Khangaonkar, T.; Long, W.; Cope, B.; Sackmann, B.: HUMAN ACTIVITIES, CLIMATE CHANGE, AND PACIFIC OCEAN TRENDS INFLUENCE OXYGEN IN PUGET SOUND AND THE SALISH SEA
- 15:15 **Takagi, K. K.;** Hunter, K. S.; Joye, S. B.: DRIVERS OF CHANGE: HOW CLIMATE AND PEOPLE ARE INFLUENCING THE ALTAMAHA RIVER WATERSHED BIOGEOCHEMICAL DYNAMICS
- 16:00 **Strock, K. E.;** Saros, J. E.; Nelson, S. J.; Birkel, S. D.: INTERACTIVE EFFECTS OF EXTREME WEATHER AND REDUCED SULFATE DEPOSITION: ACCELERATED RECOVERY FROM ACIDIFICATION AND BROWNIFICATION IN LAKES OF THE NORTHEAST US*
- 16:15 **Kaushal, S. S.;** Mayer, P. M.; Vidon, P. G.; Smith, R. M.; Pennino, M. J.; Newcomer Johnson, T. A.; Duan, S. W.; Welty, C.; Belt, K. T.; Yepsen, M.: LAND USE AND CLIMATE VARIABILITY AMPLIFY CARBON, NUTRIENT, AND CONTAMINANT PULSES*
- 16:30 **Galic, N.;** Forbes, V.: MODELLING THE COMBINED EFFECTS OF TEMPERATURE AND TOXICANT EXPOSURE – FROM INDIVIDUAL METABOLISM TO ECOSYSTEM PROCESSING
- 16:45 **Laetz, C. A.;** Baldwin, D. H.; Scholz, N. L.; Stark, J.: ELEVATED WATER TEMPERATURE INCREASES THE TOXICITY OF PESTICIDE MIXTURES TO JUVENILE COHO SALMON
- 17:00 **Winston, B. A.;** Scott, J. T.: ELEVATED CO₂ MAY ALTER NUTRIENT CONTENT OF A NATURAL PHYTOPLANKTON POPULATION.
- 17:15 Zhu, Z.; **Mazumder, A.:** CLIMATE VARIABILITY INDUCED SHIFTS IN NITROGEN LOADING FROM TERRESTRIAL TO AQUATIC ECOSYSTEMS
- 17:30 **Johnson, L. B.;** Herb, W. R.; Jacobson, P. C.; Stefan, H. G.: PREDICTING DISTRIBUTION OF COLDWATER FISH HABITAT UNDER CHANGING LAND USE AND CLIMATE REGIMES
- 17:45 **Ayllón, D.;** Nicola, G. G.; Elvira, B.; Parra, I.; Grimm, V.; Railsback, S. F.; Vincenzi, S.; Almodóvar, A.: SYNERGIES AMONG ANTHROPOGENIC DRIVERS HASTEN ECOLOGICAL CHANGE IN MEDITERRANEAN TROUT STREAMS UNDER GLOBAL WARMING

026 From The Bottom Up: Stable Isotopes As Tools For Exploring Aquatic Food Web Dynamics And How They Influence Ecosystems

Chair(s): Scot Peterson, speterson1@murraystate.edu
Beth Cheever, bethcheever@trentu.ca

Location: A 105

- 10:00 **Dodds, W. K.;** Collins, S. M.; Hamilton, S. K.; Tank, J. L.; Johnson, S.; Webster, J. R.; Simon, K. S.; Whiles, M. R.; Rantla, H. M.; McDowell, W. H.: YOU ARE NOT ALWAYS WHAT WE THINK YOU EAT: SELECTIVE ASSIMILATION ACROSS MULTIPLE WHOLE-STREAM ISOTOPIC TRACER STUDIES*
- 10:15 **Cheever, B. M.;** Whiles, M. R.; Collins, S. M.; Flecker, A. S.; Hamilton, S. K.; Johnson, S. L.; Rosi-Marshall, E. J.; Dodds, W. K.: CONTINENT-SCALE PATTERNS OF NITROGEN CYCLING EFFICIENCIES IN HEADWATER STREAM FOOD WEBS*
- 10:30 **Simon, K. S.;** El-Sabaawi, R. W.; Dodds, W. K.: NITROGEN TURNOVER RATES IN CONSUMERS DETERMINED FROM WHOLE STREAM 15-N TRACER ADDITIONS*
- 10:45 **Mohan, J. A.;** Smith, S. D.; Walther, B. D.: TURNOVER AND FRACTIONATION OF 113C AND 115N IN MUSCLE AND LIVER TISSUES OF ATLANTIC CROAKER AFTER A DIET SWITCH
- 11:00 **Bowes, R. E.;** Thorp, J. H.: COSTS AND BENEFITS OF AMINO-ACID VS BULK-TISSUE ISOTOPE ANALYSIS: A LABORATORY FOOD WEB EXPERIMENT

^(*) represents Tutorial presentations

- 11:15 **Hannides, C. C.;** Popp, B. N.; Drazen, J. C.; Choy, C. A.: COMPOUND-SPECIFIC STABLE ISOTOPE ANALYSIS OF MIDWATER ZOOPLANKTON AND IMPLICATIONS FOR EXPORT FLUX
- 11:30 **Ghosh, P.;** Findlay, R. H.: CORRELATING METHYLMERCURY CONTENT AND TROPHIC POSITION OF LARGEMOUTH BASS BY COMPOUND SPECIFIC ISOTOPIC ANALYSIS OF AMINO ACIDS AND PHOSPHOLIPID FATTY ACIDS
- 11:45 **Thomas, S. A.;** Flecker, A. S.; MacNeill, K.; Collins, S.; El-Sabaawi, R.; Heatherly, T.; Marshall, M. C.; Pringle, C. M.: USING NITROGEN ISOTOPE ADDITIONS TO ASSESS THE ECOSYSTEM EFFECTS OF BOTTOM-UP AND TOP-DOWN MANIPULATIONS IN STREAMS*
- 13:30 **Sansom, B. J.;** Vaughn, C. C.: USING $\delta^{15}\text{N}$ TO TRACE BOTTOM-UP TRANSFER OF MUSSEL DERIVED NUTRIENTS
- 13:45 **Wilkinson, G. M.;** Carpenter, S. R.; Cole, J. J.; Pace, M. L.: RESULTS OF A WHOLE LAKE METALIMNETIC ^{13}C ADDITION TO TEST HABITAT SPECIFIC RESOURCE USE BY ZOOPLANKTON
- 14:00 **Sierszen, M. E.:** DEPTH GRADIENTS IN FOOD WEB PROCESSES LINKING LARGE LAKE HABITATS*
- 14:15 **Alp, M.;** Lecerf, A.; Cucherousset, J.: IS FOOD WEB STRUCTURE RELATED TO ECOSYSTEM FUNCTION IN FRESHWATER ECOSYSTEMS?
- 14:30 **Atwood, M. A.:** BIOGEOCHEMISTRY INFLUENCES CARBON SOURCES IN SMALL TEMPORARY POND FOOD WEBS
- 14:45 **Kelley, C. A.;** Bebout, B. M.; Beaudoin, C. S.; Chanton, J. P.; Detweiler, A. M.; Davila, A. E.; Frisbee, A. E.; Nicholson, B. E.; Poole, J. A.; Tazaz, A. M.: METHANE PRODUCTION FROM NON-COMPETITIVE SUBSTRATES IN HYPERSALINE ENVIRONMENTS
- 15:00 **Lange, K.;** Townsend, C. R.; Matthaei, C. D.: PRIMARY CONSUMER STABLE ISOTOPE RATIOS IN STREAMS AS INDICATORS OF CATCHMENT LAND-USE INTENSITY: STRENGTHS AND CAVEATS
- 15:15 **Mitchell, L. R.;** Fremier, A. K.; Kennedy, B. P.: ISOTOPIC VARIABILITY OF AQUATIC BIOTA IN A WILDERNESS WATERSHED: WHICH ENVIRONMENTAL CONDITIONS DRIVE REGIONAL ISOSCAPE PATTERNS?
- 16:00 **Bukaveckas, P. A.;** Wood, J. D.: AUTOCHTHONY, ALLOCHTHONY AND THE SPREAD OF CYANOTOXINS THROUGH FOOD WEBS – INSIGHTS FROM STABLE ISOTOPE ANALYSIS.
- 16:15 **Hertz, E.;** Trudel, M.; Brodeur, R.; Eisner, L.; Farley Jr., E.; Moss, J.; Murphy, J.; MacFarlane, R. B.; Harding, J.; Mazumder, A.: CONTINENTAL-SCALE VARIABILITY IN THE FEEDING ECOLOGY OF JUVENILE CHINOOK SALMON ALONG THE COASTAL NORTH PACIFIC
- 16:30 **Twardochleb, L. A.;** Olden, J. D.: EFFECTS OF NON-NATIVE CHINESE MYSTERY SNAIL (*BELLAMYA CHINENSIS*) ON FOOD WEBS OF URBAN LAKES: PREY RESOURCE OR TROPHIC CUL-DE-SAC?
- 16:45 **Hean, J. W.;** Richoux, N. B.; Craig, A. J.: THE ROLE OF WADING BIRDS IN LINKING TERRESTRIAL AND ESTUARINE HABITATS
- 17:00 **Olin, J. A.;** Hooper-Bui, L.; Bergeon Burns, C. M.; Bam, W.; Taylor, S. S.; Stouffer, P. C.: STABLE ISOTOPES REVEAL INTRA-SPECIFIC DIFFERENCES IN THE FOOD WEBS UTILIZED BY SEASIDE SPARROW (*AMMODRAMUS MARITIMUS*)
- 17:15 **Temple, W. B.;** Piatt, D. R.: JUVENILE SALMON FOOD WEBS, PRIMARY PRODUCTION, AND WATER QUALITY IN TIDAL EMERGENT WETLANDS IN THE LOWER COLUMBIA RIVER AND ESTUARY
- 17:30 **Mazumder, A.;** Evans, D. O.: SIZE-SELECTIVE SPORT FISHING REGULATION AND RELATED CHANGES IN TROPHIC POSITION AND ACCUMULATION OF MERCURY IN LAKE TROUT.
- 17:45 **Barrett, A. M.;** Bauer, J. E.; Watters, G. T.: ASSESSMENT OF FRESHWATER MUSSEL NUTRITIONAL SUBSIDIES: A MULTI-ISOTOPE APPROACH

045 An Azocentric Look At The World, From Genes To Ecosystems

Chair(s): Deborah Robertson, debrobertson@clarku.edu
Erica Young, ebyoung@umw.edu

Location: B 115

- 10:00 **Glibert, P. M.:** CONSEQUENCES OF INCREASINGLY ELEVATED N:P LOADS^T
- 10:30 **Jones, B. M.;** Halsey, K. H.: UNRAVELING NITROGEN-DEPENDENT PATTERNS OF CARBON ALLOCATION IN MARINE EUKARYOTIC PHYTOPLANKTON
- 10:45 **Bender, S. J.;** Parker, M. S.; Durham, B. P.; Groussman, R.; Armbrust, E. V.: TRANSCRIPTIONAL RESPONSES OF DIATOM ASSEMBLAGES TO NITROGEN AVAILABILITY IN THE NORTHEAST PACIFIC OCEAN
- 11:00 **Worden, A. Z.:** NITROGEN UTILIZATION IN PHOTOSYNTHETIC PICOEUKARYOTES*
- 11:15 **Marino, R.;** McGlathery, K. J.; Hayn, M.; Howarth, R. W.: THE IMPORTANCE OF NITROGEN FIXATION BY EPIPHYTES ON SEAGRASSES IN A SHALLOW ESTUARINE SYSTEM AND FEEDBACKS WITH EUTROPHICATION*
- 11:30 **Waring, E. F.;** Moore-Kucera, J.; Holaday, A. S.: EXAMINING THE RELATIONSHIP BETWEEN SEASONAL VARIATION IN SOIL NITROGEN AND NITROGEN-USE STRATEGIES IN NATIVE AND INVASIVE WETLAND PLANTS
- 11:45 **Maranger, R. J.;** Massé, S.; Soued, C.; Botrel, B.; Walsh, D.; Galipeau, P.: AMMONIUM OXIDATION IN SMALL STRATIFIED LAKES: WHEN, WHERE, WHO AND WHAT?*

046 Understanding Aquatic Ecological Processes Across Spatial Scales

Chair(s): Ken Sheehan, ken.r.sheehan@gmail.com
John Kominoski, jkominos@fui.edu
Samuel Parker, Samuel.Parker@uvm.edu
Ford Ballantyne, fb4@uga.edu

Location: B 113

- 10:00 **Dong, X.;** Grimm, N. B.: COMPARISON OF LARGE-SCALE SPATIAL HETEROGENEITY IN NUTRIENT CONCENTRATION IN A DESERT STREAM BEFORE (1995) AND AFTER (2013) WETLANDS ESTABLISHMENT
- 10:15 **Marti, E.;** Meipoch, M.; Gacia, E.; Bastias, E.; Serra, A.; Proia, L.; Ribot, M.; Merbt, S. N.: SPATIAL HETEROGENEITY IN MICROBIAL NITROGEN UPTAKE AT THE MICROHABITAT SCALE AND IMPLICATIONS FOR REACH-SCALE NITROGEN CYCLING
- 10:30 **Kominoski, J. S.;** Brock, J. T.; McVoy, C. W.: AQUATIC ECOSYSTEM METABOLISM IN RIDGE AND SLOUGH WETLANDS OF THE EVERGLADES: CHARACTERIZING SPATIOTEMPORAL VARIATION IN WATER COLUMN HETEROTROPHY

(*) represents Invited presentations

- 10:45 **Siders, A. C.;** Larson, D. M.; Dodds, W. K.; Rüegg, J.: PROBING WHOLE-STREAM METABOLISM: SPATIAL HETEROGENEITY INFLUENCES ESTIMATES
- 11:00 **Rüegg, J.;** Trentman, M.; Larson, D. M.; Gido, K. B.; Dodds, W. K.: MACRO-CONSUMER EFFECTS ON STREAMS: STRUCTURE, FUNCTION AND SCALE
- 11:15 **Sheehan, K. R.;** Wollheim, W. W.; Reugg, J.; Farrell, K.: NETWORK SCALE MODELING OF DISSOLVED OXYGEN IN RIVERS FROM FINE SCALE DATA: IS THE WHOLE A SUM OF ITS PARTS?
- 11:30 **Song, C.;** Ballantyne, F.: LINKING STREAM ECOSYSTEM RATES ACROSS SCALES
- 11:45 **Justus, B. G.;** John, F.; Wentz, N.; Wise, J.; Carlisle, D. M.; Waite, I. R.: AN EVALUATION OF MACROINVERTEBRATE DATA COLLECTED BY THREE AGENCIES IN THE OZARK HIGHLANDS ECOREGION FOR AN INDEX OF BIOTIC INTEGRITY
- 13:30 **Ulseth, A. J.;** Singer, G. A.; Battin, T. J.: ECOSYSTEM METABOLISM ACROSS A STREAM NETWORK
- 13:45 **Flinders, C. A.;** Beebe, J. A.: ARE BROAD SCALE ENVIRONMENTAL CHARACTERISTICS PREDICTIVE OF LOCAL-SCALE BIOTIC COMMUNITIES: EVALUATION OF BIOLOGICAL SIMILARITY WITH ENVIRONMENTAL SIMILARITY
- 14:00 **Schoepfer, V. A.;** Schlafke, K. E.; Loecke, T. D.; Burgin, A. J.: SCALING THE SPATIAL AND TEMPORAL HETEROGENEITY OF IRON-SULFUR INTERACTIONS IN A COASTAL FRESHWATER WETLAND
- 14:15 **Vaughn, C. C.;** Atkinson, C. L.: SCALING UP NUTRIENT REGENERATION HOTSPOTS: TWO APPROACHES WITH FRESHWATER MUSSELS
- 14:30 **Walter, J. K.;** Torgersen, C.; Bilby, R.; Giovanini, J.; Fransen, B.: VARIABILITY OF COASTAL CUTTHROAT TROUT DISTRIBUTION AND ABUNDANCE WITHIN HEADWATER CATCHMENTS ACROSS MULTIPLE SPATIAL SCALES
- 14:45 **Cai, M.;** Reavie, E. D.: SPATIAL PATTERNS OF WATER QUALITY AND PHYTOPLANKTON IN THE GREAT LAKES
- 15:00 **Reynolds, K. N.;** Loecke, T. D.; Riveros-Iregui, D.; Burgin, A. J.; Thomas, S. A.; Ward, A. S.; Davis, C. A.; St. Clair, M. A.: USING A HIGH-FREQUENCY MONITORING NETWORK TO QUANTIFY OPTIMAL SAMPLING STRATEGIES IN AGRICULTURAL WATERSHEDS
- 10:30 **Stecher, H. A.;** McKane, R. B.; Brookes, A.; Djang, K.; Moon, J. B.; DeWitt, T.; Brown, C.; Kaldy, J.: BOUNDING SALT MARSH NITROGEN FLUXES: DEVELOPMENT OF AN ECOHYDROLOGICAL SALT MARSH MODEL
- 10:45 **Loken, L. C.;** Finlay, J. C.; Small, G. E.; Sterner, R. W.; Stanley, E. H.: SEDIMENT PROPERTIES CONTROL DENITRIFICATION RATES IN A LAKE SUPERIOR FRESHWATER ESTUARY
- 11:00 **Jarecke, K. M.;** Loecke, T. D.; Burgin, A. J.: COUPLING SOIL OXYGEN AND GREENHOUSE GAS DYNAMICS AT THE AQUATIC-TERRESTRIAL INTERFACE
- 11:30 **Brooks, J. R.;** Compton, J.; Herlihy, A.; Sobota, D.; Stoddard, J.; Weber, M.: USING $\delta^{15}\text{N}$ OF *CHIRONOMIDAE* TO HELP ASSESS CONDITION AND STRESSORS IN LAKES, RIVERS AND STREAMS OF THE UNITED STATES
- 11:45 **Sobota, D. J.;** Compton, J. E.; McCrackin, M.; Singh, S.: DAMAGE COSTS OF ANTHROPOGENIC NITROGEN LOADING TO AQUATIC ECOSYSTEMS ACROSS THE UNITED STATES
- 13:30 **Harms, T. K.;** Jones, J. B.; Cook, C. L.; Wlostowski, A. N.; Gooseff, M. N.: NUTRIENT UPTAKE AND TRANSIENT STORAGE IN ZERO-ORDER ARCTIC CHANNELS*
- 13:45 **Ribot Bermejo, M.;** Pollard, L.; Grimm, N. B.; Martí, E.; Dong, X.; Hale, R.; Handler, A.; von Schiller, D.: CONSEQUENCES OF AN ECOSYSTEM TRANSITION FOR NITROGEN PROCESSING IN A DESERT STREAM
- 14:00 **Betts-Ng, C. M.;** Power, M. E.: THE IMPORTANCE OF RIVERINE ALGAE IN ORGANIC MATTER EXPORT TO THE EEL RIVER ESTUARY, NORTHERN CALIFORNIA
- 14:15 **Blackburn, M. R.;** Ågren, A.; Bergström, A. K.; Laudon, H.; Sponseller, R. A.: LANDSCAPE HETEROGENEITY AND SEASONAL PATTERNS OF HYDROLOGIC EXPORT OF INORGANIC NITROGEN FROM BOREAL CATCHMENTS.
- 14:30 **McCrackin, M. L.;** Jones, H. P.: SLOW RECOVERY OF LAKES, WETLANDS, AND COASTAL AREAS FROM EUTROPHICATION
- 14:45 Beusen, A. H.; Van Beek, R.; **Bouwman, L.;** Middelburg, J. J.: BIOGEOCHEMISTRY ACROSS AQUATIC ECOSYSTEMS: CHALLENGES TO AND OPPORTUNITIES FOR INTEGRATING RESEARCH IN WETLANDS, STREAMS, LAKES, RIVERS, AND COASTAL ZONES*
- 047 Biogeochemistry Across Aquatic Ecosystems: Challenges To And Opportunities For Integrating Research In Wetlands, Streams, Lakes, Rivers, And Coastal Zones**
- Chair(s): Daniel Sobota, Sobota.Dan@epa.gov
Michelle McCrackin, michelle.mccrackin@vancouver.wsu.edu
Amanda Nahlik, nahlik.amanda@epa.gov
- Location: D 135 - 136
- 10:00 **Stanley, E. H.;** Lotting, N. R.; Powers, S. M.; Crawford, J. T.: INTEGRATING LAKES INTO STREAM BIOGEOCHEMISTRY: WHEN DO LAKES MATTER?*
- 10:15 **Larson, J. H.;** Frost, P. C.; Xenopoulos, M. A.; Williams, C. J.; Morales-Williams, A. M.; Vallazza, J. M.; Nelson, J. C.; Richardson, W. B.: TRANSITIONS IN DISSOLVED ORGANIC MATTER PROPERTIES FROM RIVER TO RIVERMOUTH TO NEARSHORE ZONE IN THE LAURENTIAN GREAT LAKES
- 048 Highly Permeable Benthic Habitats In A Time Of Environmental Change**
- Chair(s): Angelos K. Hannides, hannides@hawaii.edu
Alexandra Rao, alexandra_rao@uqar.ca
Martin A. Briggs, mbriggs@usgs.gov
William B. Bowden, breck.bowden@uvm.edu
- Location: E 145 - 146
- 16:00 **Koopmans, D.;** Berg, P.: OXYGEN FLUX IN A COASTAL STREAM CALCULATED WITH THE OPEN WATER AND EDDY CORRELATION TECHNIQUES
- 16:15 **Griffiths, N. A.;** Sebestyen, S. D.: VERTICAL PROFILES OF PEAT PORE WATER CHEMISTRY IN AN OMBROTROPHIC PEATLAND AND EXPECTED VULNERABILITIES TO CLIMATE CHANGE
- 16:30 **Briggs, M. A.;** Lautz, L. K.; Buckley, S. F.; Lane, J. W.: PRACTICAL LIMITATIONS ON QUANTIFYING GROUNDWATER UPWELLING USING VERTICAL TEMPERATURE PROFILES

- 16:45 **Buckley, S. F.**; Briggs, M. A.; Rupert, Y. K.; Lane, J. W.: DEVELOPMENT OF A PAIRED HEAT-PULSE AND HIGH-RESOLUTION FIBER OPTIC TEMPERATURE TRACING TECHNIQUE TO QUANTIFY GROUNDWATER UPWELLING IN STRONGLY GAINING STREAMS
- 17:00 **Gomez-Velez, J. D.**; Harvey, J.: TYPOLOGY FOR RIVERINE HYPORHEIC FLOW AND ESTIMATION OF EXCHANGE FLUXES FOR APPLICATION ACROSS LARGE DRAINAGE BASINS^T
- 17:30 **Hannides, A. K.**; Fram, J. P.; Glazer, B. T.; Pawlak, E. R.; Sansone, F. J.; Fogaren, K. E.; Williams, A. R.: OBSERVATION, SAMPLING AND MODELING OF HIGHLY DYNAMIC CALCAREOUS PERMEABLE SAND HABITATS
- 17:45 **McGinnis, D. F.**; Sommer, S.; Lorke, A.; Glud, R. N.; Linke, P.: TIDALLY-DRIVEN TURBULENT BENTHIC OXYGEN EXCHANGE IN PERMEABLE COASTAL SEDIMENTS: AN EDDY CORRELATION STUDY

051 Spring-Habitats And Spring-Fed Headwaters: Biology Fifty Years After The Definition Of Crenobiology

Chair(s): Marco Cantonati, marco.cantonati@muse.it
Timo Muotka, timo.muotka@oulu.fi
John Richardson, John.Richardson@ubc.ca
Morgan Vis, vis-chia@ohio.edu

Location: E 145 - 146

- 10:00 **Cantonati, M.**; Gerecke, R.: SPRING RESEARCH 50 YEARS AFTER THE DEFINITION OF CRENOBIOLOGY^T
- 10:30 **Rader, R. B.**; Christensen, W.: FACTORS EFFECTING METACOMMUNITY DYNAMICS IN DESERT SPRINGS*
- 10:45 **Wehr, J. D.**; Kociolek, J. P.; Sheath, R. G.; Vis, M. L.: ALGAL ASSEMBLAGES IN NORTH AMERICAN SPRINGS: DISTRIBUTION PATTERNS AND RESEARCH CHALLENGES. *
- 11:00 **Schweiger, A. H.**; Beierkuhnlein, C.: TEMPERATURE AN ACIDITY REGIME AS MAJOR DRIVER OF HELOCRENIC PLANT COMMUNITY STRUCTURE IN CENTRAL GERMANY'S LOWER MOUNTAIN RANGES*
- 11:15 **Szafraniec, M. L.**: EFFECTS OF THE UNDERWATER SPECTRAL LIGHT ENVIRONMENT ON PRIMARY PRODUCERS AND ECOSYSTEM METABOLISM ALONG AN OPTICAL WATER QUALITY GRADIENT
- 11:30 **Nifong, R. L.**; Cohen, M. J.: FROM NUTRIENTS TO METABOLISM: LINKING AUTOTROPHIC STOICHIOMETRY TO ECOSYSTEM FUNCTION
- 11:45 **Ramos, J.**; Corman, J. R.; Childers, D. L.; Elser, J. J.: WATER ISOTOPES UNCOVER SPATIAL AND TEMPORAL HYDROLOGIC CONNECTIVITY IN SPRING-FED WATER BODIES AND WETLANDS OF THE CUATRO CIENEGAS BASIN, MEXICO
- 13:30 **Gerecke, R.**; Haseke, H.; Cantonati, M.: STABILITY AND CHANGE IN SPRING-DWELLING INVERTEBRATE COMMUNITIES - A CENTRAL-EUROPEAN PERSPECTIVE*
- 13:45 **Jyväsjärvi, J.**; Marttila, H.; Nisell, J.; Rossi, P.; Ala-aho, P.; Muotka, T.; Klove, B.: CLIMATE-INDUCED WARMING OF NORTHERN EUROPEAN SPRINGS*
- 14:00 **Ferrington Jr., L. C.**: A PREDICTIVE MODEL RELATING VARIABLE THERMAL REGIMES OF SPRINGS AND SPRING-RUNS TO VOLTINISM OF A COLD STENTHERMIC CHIRONOMID, DIAMESA MENDOTAE MUTTKOWSKI*

- 14:15 **Sada, D. W.**; Thomas, J. M.: AQUIFER PROVENANCE, FLOW PATHWAYS, LANDSCAPE SETTING, AND BENTHIC MACROINVERTEBRATE COMMUNITY RELATIONSHIPS IN GREAT BASIN AND MOJAVE DESERT SPRING SYSTEMS*
- 14:30 **Ilmonen, J.**: MINORITY IS BETTER OFF THAN MAJORITY: THE CONSERVATION STATUS OF BOREAL HARDWATER SPRINGS IN FINLAND
- 14:45 **Rasmussen, A. K.**; Heupel, A. M.; Harris, S. C.; Pescador, M. L.: AQUATIC INSECT COMMUNITIES OF STEPHEAD SPRING RUNS IN NORTH FLORIDA (USA): BIOLOGICAL DIVERSITY AND EFFECTS OF IMPOUNDMENT
- 15:00 **Deas, M. L.**; Jeffres, C. A.; Nichols, A. L.; Mount, J. F.; Moyle, P. B.; Dahlgren, R. A.: SPRING-FED STREAMS – MORE THAN JUST A COLD WATER SOURCE: SHASTA RIVER BASIN, CALIFORNIA
- 15:15 **Chuzhekova, T.**; Polyakova, N.: LONG TERM BENTHIC COMMUNITY DYNAMICS IN URBAN SPRING BROOKS OF MIDDLE VOLGA BASIN

053 International Society For River Science: Physical, Chemical, And Biological Changes In Modified Rivers

Chair(s): Martin Thoms, mthoms2@une.edu.au
Thomas Hein, thomas.hein@boku.ac.at
Michael Delong, mdlong@winona.edu

Location: C 120 - 122

- 10:00 **Leibowitz, S. G.**; Comeleo, R. L.; Wigington, Jr, P. J.; Weaver, C. P.; Morefield, P. E.; Sproles, E. A.; Ebersole, J. L.: VULNERABILITY OF OREGON HYDROLOGIC LANDSCAPES AND STREAMFLOW TO CLIMATE CHANGE
- 10:15 **Thoms, M.**: THE DISTRIBUTION OF HEAVY METALS IN A HIGHLY REGULATED RIVER
- 10:30 **Baustian, M. M.**; Moss, L. C.: DIVERTING MORE THAN JUST SEDIMENT AND WATER: NUTRIENT EFFECTS FROM PROPOSED MISSISSIPPI RIVER SEDIMENT DIVERSIONS
- 10:45 **Asaeda, T.**; Rashid, H.; Sanjaya, K.: RESERVOIR SEDIMENT FLUSHING AND DOWNSTREAM VEGETATION ENCROACHMENT IN THE KUROBE RIVER, JAPAN
- 11:00 **Dibble, K. L.**; Yackulic, C. B.; Kennedy, T.; Budy, P.: FACTORS INFLUENCING THE SIZE OF SALMONIDS IN REGULATED RIVER SYSTEMS: A SYNTHESIS OF DATA FROM THE WESTERN UNITED STATES
- 11:15 **Jardine, T.**; Lindenschmidt, K. E.; Reed, M.; Hobson, K.; Belcher, K.; Natcher, D.; Steelman, T.; Wheeler, H.; Clark, D.: LONG-TERM CHANGES IN HYDRO-ECOLOGY AND SOCIO-ECONOMY IN THE SASKATCHEWAN RIVER DELTA, CANADA
- 11:30 **Schwab, A. N.**; Alexander, A. C.; Chambers, P. A.; Rasmussen, J. B.: CHANGES IN HYDROLOGY, WATER CHEMISTRY, AND FISH COMMUNITIES IN THE LOWER ATHABASCA REGION: A REVIEW OF HISTORICAL AND CURRENT DATA
- 11:45 **Dorobek, A. C.**; Sullivan, S. M.; Kautza, A.: SHORT-TERM CONSEQUENCES OF LOWHEAD DAM REMOVAL FOR RIVER FISH ASSEMBLAGES IN AN URBAN LANDSCAPE
- 13:30 **Volke, M. A.**; Johnson, W. C.: THE EMERGENCE OF NOVEL DELTAS IN REGULATED RIVERS: OPPORTUNITIES FOR BIODIVERSITY

(*) represents Invited presentations

- 13:45 **Flotemersch, J. E.:** DEFINING WATERSHED INTEGRITY
- 14:00 **Hamilton, S. G.;** King, S. L.; Dello Russo, G.: EFFECT OF HYDROLOGIC, GEOMORPHIC, AND VEGETATIVE CONDITIONS ON AVIAN COMMUNITIES IN THE MIDDLE RIO GRANDE
- 14:15 **Casper, A. F.;** Thorp, J. H.; Wehr, J. D.; Perrone, A. A.: PATTERNS OF RIVER PLANKTON DISTRIBUTION AND COMMUNITY STRUCTURE ARE LINKED TO MESO- AND MACRO-SCALE HYDROGEOMORPHIC ATTRIBUTES
- 14:30 **Peterson, T. D.;** Maier, M. A.; Tausz, C. E.; Needoba, J. A.; Temple, W. B.; Morace, J.; Sagar, J.; Corbett, C.: HYDROGEOMORPHOLOGY AS A DRIVER OF PLANKTON ABUNDANCE, SPECIES COMPOSITION, AND WATER QUALITY IN THE LOWER COLUMBIA RIVER, USA
- 14:45 **Wu, N.;** Faber, C.; Ulrich, U.; Fohrer, N.: DIATOMS AS AN INDICATOR FOR TILE DRAINAGE FLOW IN A GERMAN LOWLAND CATCHMENT
- 15:00 **Fischer, H.;** Hardenbicker, P.: THE TROPHIC STATE OF GERMANY'S LARGE RIVERS
- 15:15 **Kautza, A.;** Suiivan, S. P.: SHIFTS IN FISH-CENTERED FOOD WEBS ALONG AN URBAN-RURAL GRADIENT IN A MIDWEST US RIVER SYSTEM

057 Stream Microbial Ecology: Where Are We Now And Where Are We Going

Chair(s): Lydia Zeglin, lzeglin@ksu.edu
 Jennifer Edmonds, jwedmonds@as.ua.edu
 Mark Gessner, gessner@igb-berlin.de
 Laura Leff, lleff@kent.edu

Location: B 114

- 10:00 **Crump, B. C.;** Kling, G. W.: BIOGEOGRAPHY OF BACTERIA IN STREAMS AND RIVERS: INFLUENCE OF ENVIRONMENTAL CONDITIONS AND DISPERSAL*
- 10:15 **Drummond, J. D.;** Packman, A. I.; Aubeneau, A. F.; Davies-Colley, R.; Stott, R.: MICROBIAL TRANSPORT DYNAMICS IN STREAMS: ACCUMULATION AND TRANSMISSION*
- 10:30 **Kovatch, J. J.;** Schultz, G. E.: RAPID DOWNSTREAM SHIFT IN PLANKTONIC BACTERIAL COMMUNITY COMPOSITION TO AUTOCHTHONOUS SPECIES DOMINANCE IN A SMALL TEMPERATURE STREAM
- 10:45 **Schultz, G. E.;** Kovatch, J. J.: BACTERIAL DIVERSITY, POTENTIAL GROWTH RATES, AND CORE BACTERIAL COMMUNITY OF A LARGE, HEAVILY MODIFIED RIVER
- 11:00 **Hoellein, T. J.;** McCormick, A.; Kelly, J. J.: RIVERINE MICROPLASTIC: ABUNDANCE AND BACTERIAL COMMUNITY COLONIZATION
- 11:15 **Veach, A. M.;** Dodds, W. K.; Brown, S. P.; Jumpponen, A.: MICROBIAL COMMUNITY SUCCESSION IN A TALLGRASS PRAIRIE STREAM
- 11:30 **Lang, J. M.;** McEwan, R. W.; Benbow, M. E.: DO GRAZERS RESPOND TO AND INFLUENCE EPILITHIC BIOFILM SUCCESSIONAL TRAJECTORIES?
- 11:45 **Zeglin, L. H.:** STREAM MICROBIAL STRUCTURE AND FUNCTION- DO WE KNOW MORE THAN WE THINK?
- 13:30 **Kaplan, L. A.;** Mosher, J. J.; Findlay, R. H.: PLACING MICROBIAL COMMUNITIES WITHIN THE RIVER CONTINUUM*

- 13:45 **Hosen, J. D.;** Febria, C. M.; Doherty, M.; Crump, B. C.; Palmer, M. A.: SPATIAL PATTERNS OF HEADWATER STREAM COMMUNITY COMPOSITION AND ENZYME ACTIVITY
- 14:00 **Ghosh, S.;** **Leff, L. G.:** BACTERIAL COMMUNITY COMPOSITION AND FUNCTION IN AN AGRICULTURALLY IMPACTED STREAM: IMPACTS OF SEASONAL CHANGES IN THE DISSOLVED ORGANIC MATTER POOL
- 14:15 **Romani, A. M.;** Freixa, A.; Ejarque, E.; Crognale, S.; Fazi, S.; Amalfitano, S.; Guarch, A.; Butturini, A.: SEDIMENT VERSUS WATER COLUMN MICROBIAL ECOLOGY IN A MEDITERRANEAN RIVER
- 14:30 **Stiles, L. M.;** Compson, Z.; Siders, A.; Dijkstra, P.; Hungate, B.; Marks, J.: FLUXES OF C AND N FROM LEAF LITTER AND THE WATER COLUMN TO AQUATIC MICROBIAL COMMUNITIES
- 14:45 **Smith, H. J.;** Tigges, M.; Bothner, B.; Foreman, C. M.: UNDERSTANDING MICROBIALLY MEDIATED TRANSFORMATIONS OF DISSOLVED ORGANIC MATTER IN A SUPRAGLACIAL STREAM: A SYSTEMS APPROACH
- 15:00 **Fetscher, A. E.;** Howard, M. D.; Stancheva, R.; Kudela, R.; Stein, E. D.; Sutula, M. A.; Busse, L. B.: SMALL STREAMS AS WIDESPREAD SOURCES OF BENTHIC CYANOTOXIN PRODUCTION IN CALIFORNIA
- 15:15 **Royer, T. V.;** Johnson, L. T.; Leff, L. G.: MICROBIAL COMMUNITY STRUCTURE, DENITRIFICATION, AND NITROGEN RETENTION IN AN AGRICULTURAL STREAM*

062 Metacommunities In The Built Environment

Chair(s): Bryan L. Brown, stonefly@vt.edu
 Christopher Swan, cmswan@umbc.edu
 Cayelan Carey, cayelan@vt.edu
 Eric Sokol, sokole@vt.edu

Location: B 114

- 16:00 **Swan, C. M.;** Brown, B.: ISOLATION IN RIVER NETWORKS MEDIATES HOW ECOLOGICAL COMMUNITIES RESPOND TO STREAM RESTORATION
- 16:15 **Isherwood, E.;** Heffernan, J. B.: THE EFFECT OF CONTEMPORARY HYDROLOGIC MODIFICATION ON VEGETATION COMMUNITY DISTINCTNESS IN THE FLORIDA EVERGLADES
- 16:30 **Sokol, E. R.;** Brown, B. L.; Carey, C. C.; Tornwall, B.; Swan, C. M.: LINKING MANAGEMENT TO BIODIVERSITY IN BUILT PONDS BY COUPLING FIELD SURVEYS WITH METACOMMUNITY SIMULATIONS
- 16:45 **Trexler, J. C.:** EDGE EFFECTS AND CONNECTIVITY IN WETLAND RESTORATION
- 17:00 **Tyler, A. C.;** Burkett, M. B.; Kinlock, N. L.: BIODIVERSITY AND ECOSYSTEM PROCESSES IN SMALL URBAN AND SUBURBAN PONDS
- 17:15 **Bush, M.;** Trexler, J.: VARIABLE MOVEMENT STRATEGIES OF FISHES IN A DYNAMIC WETLAND
- 17:30 **Lee, S. S.;** Gaiser, E. E.; Sokol, E. R.; Bramburger, A. J.; Trexler, J. C.: BENTHIC DIATOM METACOMMUNITY SPATIAL AND TEMPORAL BETA DIVERSITY ARE RELATED TO HABITAT AVAILABILITY IN A HYDROLOGICALLY-MANAGED WETLAND

^(*) represents Tutorial presentations

17:45 **Stanish, L. E.**; Hull, N. M.; Pace, N. R.: SPATIAL AND ENVIRONMENTAL GRADIENTS INFLUENCE MICROBIAL COMMUNITIES IN DRINKING WATER DISTRIBUTION SYSTEMS

073 Biomarker Research In Aquatic Food Webs At Times Of Global Change - Constraints And Opportunities

Chair(s): Martin Kainz, martin.kainz@donau-uni.ac.at
Michael T. Brett, mtbrett@uw.edu
Sami J. Taipale, samit@u.washington.edu

Location: A 106

10:00 **Brett, M. T.**: RESOURCE POLYGON GEOMETRY PREDICTS BAYESIAN MIXING MODEL BIAS

10:15 **Galloway, A. W.**; Taipale, S.; Hiltunen, M.; Strandberg, U.; Kankaala, P.; Brett, M. T.; Winder, M.: FOOD WEB CONSEQUENCES OF SEASONAL AND DECADAL CHANGES IN PHYTOPLANKTON FATTY ACID PRODUCTION

10:30 Woods, R.; Marshall, J.; Fawcett, J.; Lobegeiger, J.; Valdez, D.; Kainz, M.; **Jardine, T.**: COMBINED STABLE ISOTOPE AND FATTY ACID BIOMARKERS REVEAL FOOD WEB CONNECTIVITY IN A DRYLAND RIVER

10:45 **Smith, S. D.**; Mohan, J. A.; Connelly, T. L.; McClelland, J. W.; Walther, B. D.: DIETARY SHIFTS IN FATTY ACID COMPOSITION OF A MARINE FISH IN A CONTROLLED FEEDING EXPERIMENT

11:00 **Hiltunen, M.**; Strandberg, U.; Keinänen, M.; Taipale, S.; Kankaala, P.: VERY-LONG-CHAIN POLYUNSATURATED FATTY ACIDS AS BIOMARKERS OF LIMNOCALANUS MACRURUS

11:15 **Strandberg, U.**; Taipale, S. J.; Hiltunen, M.; Galloway, A. W.; Brett, M. T.; Kankaala, P.: FATTY ACIDS AS CHEMOTAXONOMIC MARKERS FOR PHYTOPLANKTON COMMUNITY COMPOSITION

11:30 **Eisenlord, M. E.**; Dethier, M. N.; Holtgrieve, G. W.; Brett, M. T.; Galloway, A. W.: QUANTITATIVE ESTIMATES OF RESOURCE UTILIZATION BY AN HERBIVOROUS ISOPOD USING A BAYESIAN FATTY ACID MIXING MODEL

11:45 **Taipale, S. J.**; Hiltunen, M.: THE IMPACT OF BACTERIAL, TERRESTRIAL AND ALGAL DIET ON FATTY ACID COMPOSITION OF DAPHNIA AND EUDIAPTOMUS

13:30 **Kainz, M. J.**; Arts, M. T.; Brett, M. T.; Koussoroplis, A. M.; McMeans, B. C.; Murray, D. S.; Rasconi, S.; Taipale, S. J.: REASSESSING FATTY ACIDS AS DIET BIOMARKERS IN FRESHWATER CONSUMERS – LESSONS FROM DIFFERENT ECOSYSTEMS

13:45 **Wagner, N. W.**; Lankadurai, B. P.; Yang, Z.; Stock, N. L.; March, R. E.; Simpson, A.; Simpson, M. J.; Frost, P. C.: THE METABOLIC CONSEQUENCES OF NUTRITIONAL STRESS IN AQUATIC CONSUMERS

14:00 **Gearhart, T. A.**; Stockwell, J. D.; Kraft, J.: DO CYANOBACTERIA BLOOMS SHIFT FOOD-WEB PATHWAYS IN FRESHWATER LAKES?

14:15 **Sakai, M.**; Gomi, T.; Nunokawa, M.; Negishi, J. N.: RADIOCESIUM TRANSFER IN FOREST-STREAM ECOSYSTEM OF A HEADWATER OF FUKUSHIMA, JAPAN

14:30 **Rowan, D. J.**: BIOACCUMULATION OF RADIONUCLIDES IN AQUATIC ECOSYSTEMS FOLLOWING NUCLEAR ACCIDENTS

14:45 **Gomi, T.**; Sakai, M.; Okada, K.; Iwamoto, I.; Negishi, J. N.; Nunokawa, M.: RADIOCESIUM CONCENTRATIONS IN *SALVELINUS LEUCOMAENIS* VIA RESOURCE SUBSIDY IN A HEADWATER STREAM

15:00 **Ruedig, E.**; Higley, K.; Johansen, M.: RADIATION DOSIMETRY AND THE USE OF VOXELIZED MODELS FOR IMPROVED UNDERSTANDING OF THE IMPACTS OF INTERNALLY DEPOSITED RADIONUCLIDES ON AQUATIC BIOTA

15:15 **Ndimele, P. E.**; Owodeinde, F. G.; Kumolu-Johnson, C. A.: HEAVY METAL CONTENT OF WATER, SEDIMENT AND FISH (*OREOCHROMIS NILOTICUS*, LINNAEUS, 1758) FROM INDUSTRIAL EFFLUENT-POLLUTED AQUATIC ECOSYSTEM IN LAGOS, NIGERIA

078 The Future Of Aquatic Science: An Educational Session Particularly For Undergraduates

Chair(s): Krista Capps, kac98@cornell.edu
Marcelo Ardon-Sayao, ardonsayaom@ecu.edu
Tamara Sluss, tamara.sluss@kysu.edu

Location: B 115

13:30 **Vanni, M. J.**; Knoll, L. B.: OUR EVOLVING VIEW OF THE ROLE OF ANIMALS IN BIOGEOCHEMICAL CYCLING IN AQUATIC ECOSYSTEMS

13:45 **Knoll, L. B.**; Vanni, M. J.: BIOLOGICAL FIELD STATIONS: OPPORTUNITIES AND THE FUTURE

14:00 **Rosemond, A. D.**: NON-POINT SOURCE POLLUTANTS IN AQUATIC ECOSYSTEMS: INVESTIGATIONS THAT CAN DRIVE CYCLES OF INQUIRY, RESEARCH, TEACHING, AND TRAINING

14:15 **Manning, D. W.**: NON-POINT SOURCE POLLUTANTS IN AQUATIC ECOSYSTEMS: POSITIVE EFFECTS OF COLLABORATIVE ECOSYSTEM-SCALE EXPERIMENTS

14:30 **Wurtsbaugh, W. A.**: INLAND SEAS: OUR SALT LAKES ARE IMPORTANT AND IN TROUBLE

14:45 **Jones, E. F.**: SALINE LAKE PROBLEMS: MERCURY AND EUTROPHICATION IN UTAH'S GREAT SALT LAKE

15:00 **Power, M. E.**: LIFE IN RIVER WEBS

15:15 **Kupferberg, S. J.**: FROM ALGAL FOOD WEB ECOLOGY TO DAM MANAGEMENT: CONNECTING THE DOTS ONE TADPOLE AT A TIME

16:00 **Hall, R. O.**; Ulseth, A. J.: AQUATIC METABOLISM: HISTORY, METHODS, AND THE CARBON BALANCE OF RIVERS

16:15 **Cottingham, K. L.**; Chaves-Ulloa, R.; Fey, S. B.; Culler, L. E.; Trout-Haney, J. V.: FEEDBACKS BETWEEN AQUATIC ECOSYSTEMS AND THE SURROUNDING LAND: BEYOND PASSIVE INTEGRATION OF WATERSHED ACTIVITIES

16:30 **Fey, S. B.**; Chaves-Ulloa, R.; Trout-Haney, J. V.; Culler, L. E.; Cottingham, K. L.: TERRESTRIAL-AQUATIC LINKAGES IN THE ANTHROPOCENE: HUMAN INFLUENCE ON THE MOVEMENT OF ENERGY, NUTRIENTS, AND CONTAMINANTS BETWEEN ECOSYSTEMS

16:45 **Kentula, M. E.**; Nahlik, A. M.: CRITICAL QUESTIONS IN WETLAND SCIENCE

17:00 **Nahlik, A. M.**; Kentula, M. E.: CHOOSING A CAREER PATH IN WETLAND SCIENCE: ADVICE FROM A YOUNG SCIENTIST

- 17:15 **Douglas, M. M.:** RESEARCH TO SUPPORT THE SUSTAINABLE MANAGEMENT OF AUSTRALIA'S TROPICAL RIVERS.
- 17:30 **Novak, P. A.:** CROCODILES, FLOODS AND PRAWNS: PHD RESEARCH IN TROPICAL AUSTRALIA
- 17:45 **Nakamura, F.:** ECOSYSTEM RESTORATION IN KUSHIRO MARSH, THE LARGEST WETLAND IN JAPAN

081 Emerging Issues In Freshwater Ecology

Chair(s): Elizabeth K. Perkin, eperkin@mail.ubc.ca
John S. Richardson, john.richardson@ubc.ca

Location: D 137 - 139

- 10:00 **Ledger, M. E.;** Milner, A. M.: EXTREME CLIMATIC EVENTS IN FRESHWATER ECOSYSTEMS: RECENT ADVANCES AND FUTURE DIRECTIONS*
- 10:15 **Perkin, E. K.;** Richardson, J. S.: THE POTENTIAL FOR ARTIFICIAL LIGHT AT NIGHT TO ALTER FRESHWATER ECOSYSTEMS*
- 10:30 **Benbow, M. E.;** Pechal, J. L.: ANIMAL-MICROBE INTERACTIONS OF WATER-RELATED DISEASES: THE POTENTIAL OF AQUATIC ECOLOGICAL THEORY AND NEXT-GENERATION METAGENOMIC TOOLS IN DISEASE PREVENTION*
- 10:45 **Rosi-Marshall, E. J.;** Kelly, J. J.: PHARMACEUTICAL AND PERSONAL CARE PRODUCTS AS AGENTS OF ECOLOGICAL CHANGE IN AQUATIC ECOSYSTEMS*
- 11:00 **Colman, B. P.;** Schwab, F.; Richardson, C.; Stegemeier, J.; Lowry, G. V.; Wiesner, M.; Bernhardt, E. S.: KEEPIN' IT REAL: THE REALITIES OF ENGINEERED NANOPARTICLES IN AQUATIC ECOSYSTEMS
- 11:15 **Stout, B. M.:** WHEELING, WEST VIRGINIA EXPERIENCE WITH FRACKWATER: WHAT "BRINewater" AND "RESIDUAL WASTE" TRUCKS ARE REALLY CARRYING
- 11:30 **Walters, A.;** Girad, C.: DIFFERENTIAL VULNERABILITY OF FISH TO ENERGY DEVELOPMENT
- 11:45 **Matthaei, C. D.;** Lange, K.: MULTIPLE STRESSORS AND FRESHWATER FISH: LOOKING BACK AND INTO THE FUTURE*
- 13:30 **Lamb, R. D.;** Kerans, B. L.; Fytillis, N.; Stevens, L.; Rizzo, D. M.; Fogg, S. K.: SPECIES AND FUNCTIONAL COMPOSITION OF AQUATIC OLIGOCHAETE COMMUNITIES INFLUENCE SLAMONID DISEASE RISK: A SYNTHESIS OF LAB AND FIELD RESULTS
- 13:45 **Hall, S. R.;** Penczykowski, R. M.; Housley Ochs, J.; Shocket, M. S.; Duffy, M. A.: TRAIT-MEDIATED INDIRECT EFFECTS CAN EXPLAIN WHY PARASITES INCREASE POPULATIONS OF ZOOPLANKTON HOSTS
- 14:00 **Cromwell, K. J.;** Peckarsky, B. L.: FEEDING WITH THE ENEMY: PARASITES AND PREDATORS ALTER GRAZING BEHAVIOR OF MAYFLIES
- 14:15 **Hamilton, J. D.;** Peckarsky, B. L.; Cromwell, K. J.: THE EFFECT OF LONG-TERM METAL EXPOSURE AND MERMITHID PARASITISM ON BEHAVIOR AND PREDATION OF LARVAL MAYFLIES BY STONEFLY LARVAE
- 14:30 **Drenner, R. W.;** Chumchal, M. M.; Adams, K. J.; Donato, D. I.: EFFECTS OF MERCURY DEPOSITION, CONIFEROUS FORESTS, AND FISH SIZE ON MERCURY CONTAMINATION OF GAMEFISH IN THE SOUTH CENTRAL UNITED STATES

- 14:45 **Furness, A. N.;** Soluk, D. A.: YOU SHALL NOT PASS: THE IMPACT OF BRIDGES ON MOVEMENT OF ADULT AQUATIC INSECTS
- 15:00 **Smith, V. H.;** Crews, T.: APPLYING ECOLOGICAL PRINCIPLES IN LARGE-SCALE ALGAL BIOMASS PRODUCTION

087 If You Remove It, Will They Come? Evaluating The Response Of Biotic Communities To Dam Removal

Chair(s): Ryan Bellmore, jbellmore@usgs.gov
Chauncey Anderson, chauncey@usgs.gov

Location: B 116

- 13:30 **Stanford, J. A.:** DAM REMOVALS AS TESTS OF ECOLOGICAL THEORY[†]
- 14:00 **Baxter, C. V.;** Cross, W. F.; Bellmore, J. R.; Rosi-Marshall, E. J.; Hall, R. O.; Kennedy, T. E.: ANTICIPATING RESPONSES OF FOOD WEBS TO DAM REMOVAL: INSIGHTS FROM THEORY AND EMPIRICAL STUDIES OF DAMMED AND FREE-FLOWING RIVERS*
- 14:15 **Chang, H.;** Lin, H.: ECOSYSTEM EFFECTS OF FLOOD EVENTS AND DAM REMOVAL ON STREAM ECOSYSTEMS
- 14:30 **Fuller, M. R.;** Doyle, M. W.: SPATIAL AND TEMPORAL ECOSYSTEM METABOLISM CHANGE ALONG A RIVER-IMPOUNDMENT-RIVER SYSTEM
- 14:45 **Chuang, Y. L.;** Chang, H. Y.; Lin, H. J.: SPATIAL-TEMPORAL VARIATIONS OF EPILITHIC ALGAE BEFORE AND AFTER A CHECK DAM REMOVAL IN A SUBTROPICAL MOUNTAIN STREAM
- 15:00 **Tullos, D. D.;** Finn, D.; **Walter, C.:** EVIDENCE AGAINST DAM SMALL DAM REMOVAL AS AN ECOLOGICAL DISTURBANCE: BENTHIC MACROINVERTEBRATE AND CHANNEL RESPONSES TO DAM REMOVALS IN OREGON, USA
- 15:15 **Geist, J. A.;** Vaara, A. M.; Tieggs, S. D.: EFFECTS OF DAM REMOVAL ON THE EMERGING INSECT COMMUNITY FROM A SOUTHEAST MICHIGAN STREAM
- 16:00 **Duda, J. J.;** Pess, G. R.; Magirl, C. S.; Curran, C. A.; McHenry, M. L.; Brenkman, S. J.; Beirne, M. M.; Denton, K.; McMillan, J.; Peters, R.: EVALUATING ECOSYSTEM RESTORATION DURING AND FOLLOWING DAM REMOVAL ON THE ELWHA RIVER
- 16:15 **Foley, M. M.;** Beirne, M. M.; Paradis, R.; Duda, J. J.; Warrick, J. A.: THE ONLY CONSTANT IS CHANGE: TRACKING THE EVOLUTION OF TWO COASTAL ESTUARIES FOLLOWING DAM REMOVAL ON THE ELWHA RIVER
- 16:30 **Dunham, J. B.:** THERMAL REGIMES AND THE DISTRIBUTION AND ABUNDANCE OF NATIVE BULL TROUT AND NONNATIVE BROOK TROUT PRIOR TO DAM REMOVAL IN THE ELWHA RIVER ECOSYSTEM
- 16:45 **Shafroth, P. B.;** Brown, R. L.; Clausen, A. J.; Perry, L. G.: EARLY RESPONSES OF RIPARIAN VEGETATION TO DAM REMOVAL ON THE ELWHA RIVER, WASHINGTON
- 17:00 **Morley, S. A.;** Duda, J. J.; Stefankiv, O. M.; McMillan, J. R.; McHenry, M. L.; Pess, G. R.: FOODWEB DYNAMICS DURING ACTIVE DAM REMOVAL: EARLY RESULTS FROM THE ELWHA RIVER OF WASHINGTON STATE
- 17:15 **Claesson, S. M.;** Coffin, B.: HEMLOCK DAM REMOVAL: GEOMORPHIC AND MACROINVERTEBRATE RESPONSE

[†] represents Tutorial presentations

- 17:30 Connolly, P. J.; **Buehrens, T.**; Jezorek, I. G.; Cochran, P. C.; Rawding, D.: ASSESSMENT OF WILD STEELHEAD RESPONSE TO THE REMOVAL OF HEMLOCK DAM FROM TROUT CREEK OF THE WIND RIVER, SOUTHWESTERN WASHINGTON, USA
- 17:45 **Lando, J. B.**; Engel, R.; Anderson, C.; O'Connor, J. E.; DeKrey, D. C.: SWIMMING UP THE WHITE SALMON: PHYSICAL, CHEMICAL AND BIOLOGICAL CONSEQUENCES OF BREACHING CONDIT DAM

094 Geospatial Data Applications For Aquatic Resources

Chair(s): Thomas E. Dahl, thomasedahl@gmail.com
Susan-Marie Stedman - NOAA Federal
Mitch Bergeson, mitch_bergeson@fws.gov

Location: D 135 - 136

- 16:00 **Bergeson, M. T.**; Griffin, R. K.: WETLANDS AS LANDSCAPE FEATURES IN BASE MAPS
- 16:15 **Dahl, T. E.**: INTEGRATING SPATIAL WATER RESOURCE INFORMATION AT THE LANDSCAPE LEVEL
- 16:30 **Macleod, R. D.**; Coluccy, J.: DEVELOPING GEOSPATIAL INFORMATION FOR LANDSCAPE LEVEL WATERFOWL MODELING AND MONITORING EFFORTS
- 16:45 **Pearson, W. J.**; O'Neil, P. E.; Johnson, P. D.; Powell, J. R.: MAINTAINING AND RESTORING HEALTHY WATERSHEDS FOR THE CONSERVATION, RESTORATION, AND RECOVERY OF ALABAMA'S AQUATIC FAUNA
- 17:00 **Paroulek, M.**: LEVEL I LANDSCAPE ASSESSMENT: GIS ANALYSIS OF WETLAND CONDITION, FUNCTION AND ECOSYSTEM SERVICES IN OREGON
- 17:15 **Rains, K. C.**; Rains, M. C.; Landry, S. M.; Seidel, V.; Crisman, T. L.: USING NET WETLAND LOSS, CURRENT WETLAND CONDITION, AND PLANNED FUTURE WATERSHED CONDITION FOR WETLAND CONSERVATION PRIORITIZATION, TAMPA BAY WATERSHED, FLORIDA
- 17:30 **Vandermyde, J. M.**; Metzke, B. A.; Hulin, A. C.; Hinz, L. C.: USING GEOREFERENCED PHYSIOGRAPHIC AND BIOLOGICAL DATA TO FORMALIZE A HIERARCHICAL CLASSIFICATION FOR WADEABLE STREAM MANAGEMENT AND CONSERVATION IN ILLINOIS
- 17:45 **Stedman, S.**: FROM SATELLITES TO SOIL PITS - A MULTI-SCALE APPROACH TO DEVELOPING WETLAND POLICY IN THE USA

099 Linking The Genetics, Toxicity, And Physiology Of Bloom-Forming Cyanobacteria In Large Lakes In Response To A Changing Environment

Chair(s): Timothy Davis, timothy.davis@noaa.gov
Paul Zimba, paul.zimba@tamucc.edu
Michele Burford, m.burford@griffith.edu.au

Location: A 106

- 16:00 **Otten, T. G.**; Dreher, T. W.: A LONG TERM PATTERN OF DECREASING GENETIC DIVERSITY IN *MICROCYSTIS* POPULATIONS WITHIN KLAMATH RIVER RESERVOIRS (CA)
- 16:15 **Hamilton, D. P.**; Wood, S. A.; Borges, H.; Puddick, J.; Dietrich, D. R.; Hawes, I.: WHERE HAS THE BLOOM GONE? SEASONAL DYNAMICS OF TOXIN-PRODUCING *MICROCYSTIS* SP.

- 16:30 **Pal, S.**; Zastepa, A.; Blais, J. M.; Gregory-Eaves, I.; Poulain, A. J.; Pick, F. R.: HISTORIES OF TOXIC CYANOBACTERIAL BLOOMS BASED ON DNA IN THE SEDIMENT RECORD
- 16:45 **Harke, M. J.**; Gobler, C. J.: TRANSCRIPTOMIC ANALYSIS OF TOXIN PRODUCTION BY *MICROCYSTIS* UNDER DIFFERING NITROGEN CONDITIONS.
- 17:00 **Bullerjahn, G. S.**; Davis, T. W.; Watson, S. B.; Rozmarynowycz, M. J.; McKay, R. M.: LINKING THE GENETICS, TOXICITY AND PHYSIOLOGY OF PLANKTOTHRIX BLOOMS TO INCREASED NITROGEN AND PHOSPHORUS CONCENTRATIONS IN AN EUTROPHIC EMBAYMENT OF LAKE ERIE
- 17:15 **Kurmayer, R.**; Ostermaier, V.; Christiansen, G.; Schanz, E.: INTEGRATING PHYLOGENETICS INTO ECOLOGICAL RESEARCH OF HARMFUL ALGAL BLOOM FORMATION
- 17:30 **Chiu, A. S.**; Gutierrez, D. B.; Davis, T. W.; Watson, S. B.; Westrick, J. A.; Zimba, P. V.: MOLECULAR AND ANALYTICAL ASSESSMENT OF CYANOTOXIN DISTRIBUTION IN LAKE WINNIPEG DURING SUMMER 2013
- 17:45 **Burford, M. A.**; Willis, A.; Davis, T. W.; Orr, P. T.; Sinha, R.; Neilan, B. A.: HOW ECOTYPE DOMINANCE AFFECTS TOXIN PRODUCTION OF THE FRESHWATER CYANOBACTERIUM *CYLINDROSPERMOPSIS RACIBORSKII*

115 Structural And Functional Connectivity In Dryland Aquatic Habitats: From Genes To Communities

Chair(s): Meryl C. Mims, mmims@uw.edu
Emily Hartfield Kirk, hartfieee@science.oregonstate.edu
Julian D. Olden, olden@uw.edu
David A. Lytle, lytlea@oregonstate.edu

Location: C 120 - 122

- 16:00 **Konrad, C. P.**: A HYDROLOGIC FRAMEWORK LINKING SPATIAL PATTERN AND TEMPORAL DYNAMICS OF NON-PERENNIAL LOTIC HABITATS
- 16:15 **Hartfield Kirk, E. E.**; Phillipsen, I. C.; Mims, M. C.; Olden, J. D.; Lytle, D. A.: GENETIC CONSEQUENCES OF CLIMATE CHANGE IN AQUATIC, ARID-LAND POPULATIONS
- 16:30 **Galatowitsch, M. L.**; Goldstien, S.; McIntosh, A. R.: WILL GENERALIST LIFE-HISTORY STRATEGIES TO PERSIST IN UNPREDICTABLE PONDS BE AN ASSET UNDER CLIMATE WARMING?
- 16:45 **Lytle, D. A.**; Phillipsen, I. C.; Canedo-Arguelles, M.; Schriever, T. A.; Hartfield Kirk, E.; Bogan, M. T.; Boersma, K. S.; Mims, M. E.; Olden, J. D.: A COMMON CAUSE FOR GENETIC AND COMMUNITY PATTERNS ACROSS DESERT LANDSCAPES
- 17:00 **Mims, M. C.**; Phillipsen, I. C.; Olden, J. D.; Kirk, E. H.; Lytle, D. A.: LINKS BETWEEN AQUATIC AND GENETIC CONNECTIVITY ARE PREDICTED BY AMPHIBIAN ECOLOGY IN DRYLAND ENVIRONMENTS
- 17:15 **Gido, K. B.**; Whitney, J. E.; Propst, D. L.; Pilger, T. J.; Turner, T. F.: STRUCTURAL AND FUNCTIONAL CONNECTIVITY OF STREAM FISHES IN AN UNREGULATED DESERT STREAM
- 17:30 **Whitney, J. E.**; Gido, K. B.; Pilger, T. J.; Propst, D. L.; Turner, T. F.: THE INFLUENCE OF ECOLOGICAL TRAITS AND SPATIOTEMPORAL VARIABILITY ON METAPOPULATION PARAMETERS IN AN UNFRAGMENTED ARID-LAND RIVERSCAPE

17:45 **Perkin, J. S.;** Gido, K. B.; Turner, T. F.; Osborne, M. J.: MULTI-SCALE EFFECTS OF STREAM FRAGMENTATION AND DEWATERING ON GREAT PLAINS FISHES: COMMUNITY DYNAMICS, SPECIES DISTRIBUTIONS, AND GENETIC DIVERSITY

118 Lakes And Freshwater Wetlands

Chair(s): Gordon Goldsborough, gordon.goldsborough@umanitoba.ca
Dale Wrubleski, d_wrubleski@ducks.ca

Location: C 123 - 124

10:00 **Riley, J. B.;** Moerke, A. H.; Tiegs, S. D.: FACTORS INFLUENCING FISH AND INVERTEBRATE COMMUNITIES ALONG AN ENVIRONMENTAL GRADIENT IN ST. MARYS RIVER COASTAL WETLANDS

10:15 **Herrmann, J.;** Ekstam, B.: TENCH (TINCA TINCA) POPULATION SIZE AFFECTING INVERTEBRATE NUMBERS IN A SMALL BIRD-LAKE IN SWEDEN; A CONSERVATION MANAGEMENT TOOL?

10:30 **Wrubleski, D. A.;** Emery, R. B.: LARGE SCALE EXCLUSION OF COMMON CARP (*CYPRINUS CARPIO*) FROM DELTA MARSH, A LARGE COASTAL WETLAND: FIRST YEAR OPERATION OF EXCLUSION SCREENS*

10:45 **Goldsborough, G.;** Wrubleski, D.: LARGE-SCALE EXCLUSION OF COMMON CARP (*CYPRINUS CARPIO*) IMPROVES WATER CLARITY IN DELTA MARSH*

11:00 **Page, B.;** Wrubleski, D. A.; Badiou, P.: LARGE-SCALE EXCLUSION OF COMMON CARP (*CYPRINUS CARPIO*) FROM DELTA MARSH: NUTRIENT LOADING, PHOSPHORUS FLUX AND SUBMERSED AQUATIC VEGETATION COMMUNITY*

11:15 **Polzer, E. L.;** Wilcox, D. A.; Akios, C.; Unghire, J. M.; Bateman, J. A.; Forgette, C. M.; O'Connell, C. M.: DEVELOPMENT OF WETLAND RESTORATION PLANS FOR BRADDOCK BAY OF LAKE ONTARIO*

11:30 **Ross, M. S.;** Sah, J. P.; Meeder, J. F.; Ruiz, P. L.; Telesnicki, G.: COMPOSITIONAL EFFECTS OF SEA-LEVEL RISE IN A PATCHY LANDSCAPE: THE DYNAMICS OF TREE ISLANDS IN THE SOUTHEASTERN COASTAL EVERGLADES

11:45 **Compte, J.;** Montenegro, M.; Ruhí, A.; Gascón, S.; **Sala, J.;** Boix, D.: DIEL PATTERNS AND MICRODISTRIBUTION OF ZOOPLANKTON IN A MEDITERRANEAN TEMPORARY WETLAND

131 A Landuse And Non-Point Source Impacts (Part 1)

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

Location: F 150 - 151

13:30 **Munn, M. D.;** Waite, I.; Zelt, R. B.: THE INFLUENCE OF RIPARIAN COVER ON STREAMS: NUTRIENTS AND BIOLOGICAL CONDITION IN AGRICULTURALLY DOMINATED LANDSCAPES

13:45 **Lemke, A. M.;** Kirkham, K. G.; Perry, W. L.; Wallace, M. P.; Kovacic, D. A.; Bohnhoff, K. L.: EVALUATING CONSERVATION PRACTICE EFFECTIVENESS AND APPLICATION TO IMPROVE WATER QUALITY IN TILE-DRAINED SUBWATERSHEDS OF THE MACKINAW RIVER, ILLINOIS, USA

14:00 **Kirkham, K. G.;** Lemke, A. M.; Maybanks, A. R.; Thayne, J. B.; Kovacic, D. A.; Bohnhoff, K. L.; Kraft, J.; Noto, T.; Chapman, K.; Twait, R. M.: INNOVATIVE CONSERVATION PLANNING AND IMPLEMENTATION IN TILE-DRAINED DRINKING WATER SUPPLY SUBWATERSHEDS OF THE MACKINAW RIVER, ILLINOIS, USA

14:15 **Chandrakiran, S.;** Thomas, S.: HARMFUL CYANOBACTERIAL BLOOMS IN NEBRASKA RESERVOIRS IN RELATION TO LANDSCAPE CONTROLS AND WITHIN RESERVOIR MECHANISMS

14:30 **Wood, J. L.;** Rosemond, A. D.; Kineck, K.: AUTOTROPHIC AND HETEROTROPHIC RESPONSES TO NUTRIENTS AND LANDUSE GRADIENTS IN SOUTHEASTERN MONTANE STREAMS

14:45 **Austin, B. J.;** Bucci, A.; Haggard, B.; Entrekun, S.; Evans-White, M. A.: INFLUENCE OF NATURAL GAS ACTIVITY AND LOGGING ON STREAM SEDIMENTS, NUTRIENTS AND PRIMARY PRODUCTION IN THE SOUTH FORK LITTLE RED RIVER IN ARKANSAS.

15:00 **Ford, T. B.;** Spivey, D.: METABOLIC DIVERSITY OF MICROBIAL COMMUNITIES IN STREAMS IMPAIRED AND UNIMPAIRED BY COAL MINING IN WEST VIRGINIA

15:15 **Feijó de Lima, R.;** Silva-Junior, E.; Lourenço Amorim Pereira, C.; Silva-Araújo, M.; Tromboni, F.; Thomas, S. A.; Zandonà, E.; Moulton, T. P.: THE EFFECTS OF LAND COVER AND RIPARIAN FOREST LOSS ON ECOSYSTEM PROCESSES IN ATLANTIC RAIN FOREST STREAMS IN BRAZIL

131 B Landuse And Non-Point Source Impacts (Part 2)

Chair(s): Robert P. Brooks, rpb2@psu.edu

Location: F 150 - 151

16:15 **Brooks, R. P.;** Wardrop, D. H.; Chamberlain, S.; Yetter, S.; Moon, J. B.; Hychka, K.; Bishop, J. A.; Rocco, G.; Britson, A.: RIPARIAN DISTURBANCE HYPOTHESIS: TOWARD UNDERSTANDING AND TESTING

16:30 **Sulikowski, T.;** **Wu, M.;** EFFECTS OF LAND USE AND LAND COVER ON MACROINVERTEBRATE COMMUNITIES

16:45 **Timpano, A. J.;** Schoenholtz, S. H.; Soucek, D. J.; Zipper, C. E.: EFFECTS OF LONG-TERM SALINIZATION: A MULTI-YEAR STUDY OF INVERTEBRATE COMMUNITY STRUCTURE IN COAL MINE-INFLUENCED STREAMS

17:00 **Suzanne, C. L.;** Wrona, F. J.: MEASURING NON-POINT SOURCE IMPACTS FROM ANTHROPOGENIC AND NATURAL LANDUSE PERTURBATIONS ON BENTHIC MACROINVERTEBRATE COMMUNITY DYNAMICS

17:15 **Muller, K. M.;** Benfield, E. F.: IMPACTS OF LAND USE ON LEAF BREAKDOWN AND MACROINVERTEBRATE ASSEMBLAGES IN SOUTHERN APPALACHIAN STREAMS

17:30 **Glover, J. B.;** MERCURY IN FISH AND SMALL-POND HEALTH (MYFISH); A STATISTICAL MODEL THAT PROVIDES FISH TISSUE HG ESTIMATES FROM SMALL FRESHWATER PONDS IN SOUTH CAROLINA, USA.

17:45 **Bumpers, P. M.;** Rosemond, A. D.; Maerz, J. C.; Benstead, J. P.: LARVAL SALAMANDERS SHIFT DIET IN RESPONSE TO EXPERIMENTAL NUTRIENT ENRICHMENT

132 A Population And Community Ecology (Part 1)

Chair(s): David G. Armanini, d.armanini@protheagroup.com

Location: F 150 - 151

- 10:00 **Muotka, T.**; Huttunen, K.; Mykrä, H.; Astorga, A.; Paavola, R.: HABITAT COMPLEXITY ENHANCES THE STABILITY OF STREAM MACROINVERTEBRATE COMMUNITIES
- 10:15 **Armanini, D. G.**; Idígoras Chaumel, A.; Rogers, M.; Monk, W. A.; Curry, C.; Schwindt, J. A.; Yates, A. G.: QUANTIFICATION OF LONG-TERM VARIATION OF BIOLOGICAL COMMUNITIES OF RIVERS IN ONTARIO, CANADA
- 10:30 **Huttunen, K. L.**; Mykrä, H.; Muotka, T.: COMPARING SNAPSHOT VS. TRAJECTORY APPROACHES IN STUDYING TEMPORAL VARIATION OF BENTHIC MACROINVERTEBRATE COMMUNITIES
- 10:45 **McIntosh, M.**; Perkins, K.; Milanovich, J.; Hopton, M.: A TEMPORAL ASSESSMENT OF MOSQUITO AND MACROINVERTEBRATE COMMUNITY DYNAMICS IN WETLANDS OF SOUTHWESTERN OHIO
- 11:00 **Venarsky, M. P.**; Walters, D.; Wohl, E. E.; Hall, R. O.; Poole, G. C.; Winkelman, D.; Livers, B.; Day, N.; Madinger, H.; Herdrich, A.: WESTERN MOUNTAIN STREAMS PAST AND PRESENT: THE INFLUENCE OF FOREST STAND AGE AND LOGJAM DENSITY ON AQUATIC COMMUNITY STRUCTURE AND FUNCTION
- 11:15 **Pilotto, F.**; Pusch, M. T.: DIVERSIFICATION OF STREAM INVERTEBRATE COMMUNITIES BY LARGE WOOD
- 11:30 **Back, J. A.**; King, R. S.; Taylor, J. T.: THE INFLUENCE AND INTERACTION OF FLOW AND NUTRIENT ENRICHMENT ON AQUATIC MACROINVERTEBRATE ABUNDANCE AND COMMUNITY COMPOSITION
- 11:45 **Holt, C. R.**; Batzer, D. P.: IMPACTS OF FLOW REGULATION ON POPULATION DYNAMICS OF *NEOPORUS* SP. (COLEOPTERA: DYTISCIDAE), A POTENTIAL BIOINDICATOR ORGANISM FOR FLOODPLAINS

133 Aquatic Ecosystem Management And Policy

Chair(s): Tom L. Arsuffi, tom.arsuffi@ttu.edu

Location: B 113

- 16:00 **Arsuffi, T. L.**; Seldomridge, E.; Groeger, A.; Holomuzki, J.: TRANSDISCIPLINARY APPROACHES TO BRIDGING LATERAL AND VERTICAL DIMENSIONS IN THE STRUCTURE AND FUNCTION OF WATERSHED SCIENCE AND HUMAN SYSTEMS: OVERVIEW
- 16:15 **Lebednik, P. A.**: WETLAND VALUATION: SERVICES, MITIGATION, RESTORATION, AND MANAGEMENT IN A DYNAMIC LANDSCAPE
- 16:30 **Bartsch, W. M.**; Kelly, J. R.: EFFECTS OF SPATIAL ALLOCATION AND PARAMETER VARIABILITY ON LAKEWIDE ESTIMATES FROM SURVEYS OF LAKE SUPERIOR, NORTH AMERICA'S LARGEST LAKE
- 16:45 **Gabanski, L.**; McDonough, O.: HARVESTING SILOED DATA TO IDENTIFY AND PROTECT HEALTHY WATERSHEDS
- 17:00 **XU, Y.**; Schroth, A. W.; Jones, J. R.; Isles, P.; Giles, C.; Stockwell, J. D.; Gearhart, T.: LAW OF THE MINIMUM, CHLOROPHYLL-NUTRIENT MODEL AND EUTROPHICATION MANAGEMENT UNDER CHANGING CLIMATE

- 17:15 **Ngai, K. L.**; Chandra, S.; Thomas, K.; Rowan, J.: IMPLEMENTATION OF LARGE-SCALE NONNATIVE FISH CONTROL USING MECHANICAL REMOVAL METHOD IN A LARGE, SUBALPINE LAKE
- 17:30 **Richardson, J. S.**: AN EXAMPLE OF A HOLISTIC WATER QUALITY PROGRAM; LEON COUNTY FLORIDA'S WATER RESOURCES PROGRAM
- 17:45 **Seldomridge, E.**; Arsuffi, T. L.; Rainwater, K.; Wagner, K.; Garrett, G.: HEALTHY WATERSHED APPROACH TO MANAGING STREAMS: ROLE OF SCIENCE, STAKEHOLDERS, EDUCATION AND PARTNERSHIPS

141 A Wetlands (Part 1)

Chair(s): Thomas Hruby, thru461@ecy.wa.gov

Location: C 123 - 124

- 13:30 **Hruby, T.**: CHANGING PERFORMANCE STANDARDS IN WETLAND MITIGATION: CATCHING UP WITH ECOLOGY
- 13:45 **Charles, S. P.**; Perry, J. E.; DeBerry, D. A.: THE DEVELOPMENT OF ECOSYSTEM FUNCTIONS IN CREATED FORESTED WETLANDS: IF YOU BUILD IT WILL THEY COME?
- 14:00 **Chapman, E. J.**; Childers, D. L.: AN EMPIRICAL TEST OF THE MAXIMUM POWER PRINCIPLE USING RATES OF ATP PRODUCTION FOR POWER IN BOREAL WETLANDS
- 14:15 **Stein, E. D.**; Brown, J.; Fetscher, A. E.; Lunde, K.; Busse, L.: INTEGRATIVE ASSESSMENT OF FRESHWATER DEPRESSIONAL WETLAND CONDITION IN CALIFORNIA
- 14:30 **O'Neill, B. J.**; Rogers, D. C.; Thorp, J. H.: FLEXIBILITY OF EPHEMERAL WETLANDS: ENVIRONMENTAL CONSTRAINTS AND ANTHROPOGENIC IMPACTS
- 14:45 **Mudrzyński, B. M.**; Wilcox, D. A.: EFFECT OF COEFFICIENT OF CONSERVATISM LIST CHOICE AND HYDROGEOMORPHIC TYPE ON FLORISTIC QUALITY ASSESSMENT OF LAKE ONTARIO WETLANDS
- 15:00 **Weishar, L.**; Teal, J.: A NOVEL APPROACH TO ENCOURAGING SEDIMENTATION IN A LARGE-SCALE MARSH RESTORATION PROJECT
- 15:15 **Creuzer, J. C.**; Hargiss, C. L.; Norland, J. E.; DeSutter, T.; DeKeyser, E. S.: ENERGY DEVELOPMENT AND INCREASED TRAVEL IN NORTH DAKOTA: WHAT IS THE EFFECT ON WETLANDS?

141 B Wetlands (Part 2)

Chair(s): Dennis Whigham, whighamd@si.edu

Location: C 123 - 124

- 16:00 Laanbroek, H. J.; Verhoeven, J. T.; **Whigham, D. E.**; Rains, M. C.: SEASONAL FLOODING OF A MANGROVE DOMINATED IMPOUNDMENT – EFFECTS ON N CYCLING
- 16:15 **van der Valk, A. G.**; Crumpton, W. G.; Dittman, B.: RESTORED WETLANDS AS POTENTIAL NUTRIENT SINKS FOR NON-POINT AGRICULTURAL RUNOFF
- 16:30 **Nogle, J. M.**; Wolf, C. E.; Love, N. Y.: THE EFFICIENCY OF CONSTRUCTED WETLANDS AND STREAM RECLAMATION IN REDUCING NUTRIENT INPUT INTO CHERRY CREEK RESERVOIR, AURORA, COLORADO

(*) represents Invited presentations

- 16:45 **VanZomerem, C. M.**; Tfaily, M. M.; Osborne, T. Z.; Cooper, W. T.; Reddy, K. R.: INFLUENCE OF NUTRIENT LOADING ON SOIL ORGANIC NITROGEN COMPOSITION AND MINERALIZATION IN SUBTROPICAL WETLANDS
- 17:00 **Kang, H.**; Kwon, M.; Kim, S.; Lee, S.: ENZYMATIC MECHANISM OF DOC RELEASE FROM PEATLANDS EXPOSED TO ACID DEPOSITION
- 17:15 **Berkowitz, J. F.**; White, J. R.: APPLYING BIOGEOCHEMICAL PROXY MEASURES TO THE VALIDATION OF RAPID ECOLOGICAL ASSESSMENTS
- 17:30 **Arancibia-Avila, P. E.**; Vera, J.; Jara, P.; Valenzuela, F.; Toledo, F.; Jeldres, J.: INFLUENCE OF NITROGEN EXCESS AVAILABILITY IN CHITINASE ACTIVITY FROM SPHAGNUM BOGS OF SOUTHERN CHILE.
- 17:45 Bell, J. L.; **Koning, C. O.**: IMPACT OF RAPID FILTRATION BEDS ON HYDROLOGY, CHEMISTRY AND VEGETATION OF A FORESTED WETLAND

142 A Food Webs (Part 1)

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

Location: B 117 - 119

- 10:00 **Barbosa, C.**; Davis, J.; Brim Box, J.; McBurnie, G.; Thompson, R.: DO FRESHWATER METACOMMUNITIES IN THE AUSTRALIAN ARID ZONE FUNCTION AS META-FOOD WEBS?
- 10:15 **Thompson, R. M.**: FOOD WEB STABILITY: AN EMERGENT PROPERTY OR A SUM OF THE PARTS?
- 10:30 **Burdett, A. S.**; Bixby, R. J.; Tave, D.; Hutson, A. M.; Toya, L. A.: FOOD CONSUMPTION BY THE ENDANGERED RIO GRANDE SILVERY MINNOW (HYBOGNATHUS AMARUS) IN THE LOS LUNAS SILVERY MINNOW REFUGIUM – A STUDY OF AVAILABILITY AND USE
- 10:45 **Francis, T. B.**; Carey, M. P.; Harvey, C. J.: CAN WE HAVE OUR HERRING AND EAT OUR SALMON TOO? A QUALITATIVE APPROACH TO MODELING TRADE-OFFS IN THE PELAGIC FOOD WEB OF THE PUGET SOUND, WA
- 11:00 **Rantala, H. M.**; Bonjour, S. M.; Bennett, M. G.; Whiles, M. R.: EFFECTS OF WATERSHED FRAGMENTATION ON FISH ASSEMBLAGES AND DIETS IN A LOW GRADIENT RIVER
- 11:15 **Bonjour, S. M.**; Rantala, H. M.; Bennett, M. G.; Whiles, M. R.: EFFECTS OF AN IN-STREAM RESTORATION PROJECT ON FISH COMMUNITY STRUCTURE AND DIETS
- 11:30 **Laske, S. M.**; Rosenberger, A. E.; Wipfli, M. S.; Zimmerman, C. E.: FEEDING FRENZY: EXPLORING THE ROLE OF NINESPINE STICKLEBACK IN ARCTIC FRESHWATER FOOD WEBS
- 11:45 **Taylor, B. W.**: ALGAL BLOOMS AFFECT DISEASE PREVALENCE IN SALMONIDS

142 B Food Webs (Part 2)

Chair(s): Peter Kiffney, peter.kiffney@noaa.gov

Location: B 117 - 119

- 13:30 **Desotelle, M. D.**; Hamilton, S. K.: SUBSIDY OF A RIVER FOOD WEB BY ALGAL GROWTH IN A RUN-OF-RIVER RESERVOIR UNDER VARYING LEVELS OF HYDROLOGY
- 13:45 **Fey, S. B.**; Mertens, A. N.; Cottingham, K. L.: INTER-ANNUAL RESPONSE OF FRESHWATER PLANKTON COMMUNITIES TO LEAF ADDITIONS: DO AUTUMN SUBSIDIES IMPACT SPRING DYNAMICS?

- 14:00 **Klemmer, A. J.**; McIntosh, A. R.: SUBSIDIES FROM MULTIPLE TROPHIC LEVELS INTERACT TO MODIFY TOP-DOWN AND BOTTOM-UP PROCESSES IN FRESHWATER FOOD WEBS
- 14:15 **Kiffney, P.**; Buhle, E.; Naman, S.; Pess, G.; Klett, R.: LINKING RESOURCE AVAILABILITY AND HABITAT STRUCTURE TO STREAM ORGANISMS: AN EXPERIMENTAL AND OBSERVATIONAL ASSESSMENT
- 14:30 **Smits, A. P.**; Schindler, D. E.: WATERSHED GEOMORPHOLOGY INFLUENCES DOMINANT CARBON SOURCES ASSIMILATED BY STREAM CONSUMERS
- 14:45 **Burdon, F. J.**; McIntosh, A. R.; Harding, J. S.: STABLE ISOTOPES REVEAL THE INFLUENCE OF SEDIMENTATION ON REDUCED TROPHIC DIVERSITY IN AGRICULTURAL STREAM FOOD WEBS
- 15:00 **Sullivan, S. M.**; Hossler, K.; Cianfrani, C. M.: INFLUENCE OF ECOSYSTEM STRUCTURE ON FOOD-CHAIN LENGTH IN LINKED STREAM-RIPARIAN ECOSYSTEMS
- 15:15 **Yuen, Y. L.**; Dudgeon, D.: HOW IMPORTANT ARE AQUATIC SUBSIDIES TO RIPARIAN PREDATORS IN THE TROPICS? THE DISTRIBUTION PATTERNS AND DIETS OF RIPARIAN SPIDERS ALONG HONG KONG STREAMS

142 C Food Webs (Part 3)

Chair(s): Alan Hildrew, a.hildrew@qmul.ac.uk

Location: B 117 - 119

- 16:00 **Hildrew, A. G.**; Woodward, G.; Jenkins, G.; Layer, K.: RECOVERY AND NON-RECOVERY IN THE ECOLOGY OF ACIDIFIED STREAMS
- 16:15 **Rock, A. M.**; Hayes, N. M.; Downs, K. N.; Vanni, M. J.; González, M. J.: INTERACTIVE EFFECTS OF LIGHT, PHOSPHORUS, AND N:P SUPPLY RATIO ON AQUATIC FOOD CHAIN EFFICIENCY
- 16:30 **Gonzalez, M. J.**; Bobson, J. M.; Downs, K. N.; Hall, M. R.; Hayes, N. M.; Mette, E. M.; Rock, A. M.; Rowland, F. E.; Vanni, M. J.: EXPLORING THE GENERALITY OF LIGHT AND NUTRIENT EFFECTS IN AQUATIC FOOD CHAIN EFFICIENCY
- 16:45 **Leibold, M. A.**; Hall, S. P.; Smith, V. H.; Lytle, D. A.: HERBIVORE ENHANCES PHYTOPLANKTON DIVERSITY TWOFOLD IN PONDS
- 17:00 **Sarnelle, O.**; White, J. D.; Geelhoed, T. E.; Kozel, C.: DISTINGUISHING BETWEEN TYPE I AND TYPE III FUNCTIONAL RESPONSES AND EVIDENCE FOR A TYPE III RESPONSE IN THE ZEBRA MUSSEL, *DREISSENA POLYMORPHA*
- 17:15 **Reid, A. H.**; Sprules, W. G.: *DAPHNIA PULEX* BEHAVIORAL RESPONSES TO PREY PATCHES
- 17:30 **Tronstad, L. M.**; Estes-Zumpf, W. A.; Farag, A.: BIOACCUMULATION OF MERCURY AND SELENIUM IN A SOUTHERN WYOMING WATERSHED: FROM FOOD SOURCES TO FISH AND BIRDS
- 17:45 Yeager-Armstead, M. M.; Keller, L. R.; **Wilson, A. L.**: AN EVALUATION OF THE SEASONAL CONCENTRATIONS OF SELENIUM IN AN AQUATIC FOOD CHAIN

Tuesday, 5/20/2014 Orals

002 Tipping Points Science: From Global Theories To Local Tools

Chair(s): Sherry Martin, marti686@msu.edu
 Bryan Pijanowski, bpijanow@purdue.edu
 Ed Rutherford, ed.rutherford@noaa.gov

Location: Oregon Ballroom

- 10:00 **Kendall, A. D.**; Martin, S. L.; Luszcz, E. C.; Hyndman, D. W.: IDENTIFYING STREAM NUTRIENT TIPPING POINTS FROM SPATIALLY EXPLICIT SOURCE MAPPING IN THE US GREAT LAKES BASIN
- 10:15 **Mallin, M. A.**; Burkholder, J. M.; Cahoon, L. B.; Strangman, W. K.; Wright, J. L.; McIver, M. R.; Metheny, J. D.; Isaacs, J. D.; Zimba, P. V.: UNPRECEDENTED TOXIN-PRODUCING CYANOBACTERIAL BLOOMS IN THE CAPE FEAR RIVER: A NUTRIENT-OVERLOAD TIPPING POINT?
- 10:30 **Obenour, D. R.**; Gronewold, A. D.; Scavia, D.: EXPLORING LAKE ERIE'S INCREASING SUSCEPTIBILITY TO CYANOBACTERIA BLOOMS THROUGH PROBABILISTIC MODELING
- 10:45 **Verhougstraete, M.**; Martin, S.; Kendall, A.; Hyndman, D.; Rose, J.: MICROBIAL TIPPING POINTS OF *ESCHERICHIA COLI* AND HUMAN SPECIFIC BACTERIA IN GREAT LAKES RIVER SYSTEMS
- 11:00 **Northrop, A. C.**; Brooks, R. K.; Ellison, A. M.; Ballif, B. A.; Gotelli, N. J.: THE NORTHERN PITCHER PLANT, *SARRACENIA PURPUREA*, AS A MODEL ECOSYSTEM FOR IDENTIFYING NOVEL PROTEOMIC PREDICTORS OF AQUATIC ECOSYSTEM TIPPING POINTS
- 11:15 **Lebret, K.**; Langenheder, S.; Östman, Ö.; Lindström, E.: BROWNIFICATION AND TIPPING POINTS IN PLANKTON COMMUNITIES IN SCANDINAVIAN LAKES
- 11:30 **Heffernan, J. B.**; Isherwood, E.; Ross, M. S.; Cohen, M. J.: EMPIRICAL EVIDENCE FOR ALTERNATIVE STABLE STATES IN THE DEGRADATION OF EVERGLADES PATTERNED PEATLANDS
- 11:45 **Kovalenko, K. E.**; Johnson, L. B.; Gathman, J. P.; Ciborowski, J. J.; Brady, V. J.: WHAT'S TIPPING AT THE TIPPING POINT: EXAMINING FUNCTIONAL CHANGES IN BIOTA
- 13:30 **McCann, M. J.**: SPECIES OCCURRENCE AND ECOSYSTEM SIZE LIMIT AN ALTERNATIVE STATE IN FRESHWATER LAKES AND PONDS
- 13:45 **Angeler, D. G.**; Allen, C. R.; Johnson, R. K.: DEGRADED LAKES IN HYSTERESIS: VULNERABLE TO GLOBAL CHANGE?
- 14:00 **Wiley, M. J.**; Riseng, C. M.; Rutherford, E. S.; Pijanowski, B. C.; Waite, I. R.; Munn, M. D.: MULTIPLE LAND USE TIPPING POINTS IN MIDWESTERN STREAMS: ANALYSIS AND NATIONAL-SCALE VALIDATION TEST
- 14:15 **Bittler, K. M.**; Scheef, L. P.; Buskey, E. J.: FRESHWATER INFLOWS AND BLUE CRABS: CAN TEXAS MEGALOPAE FIND THE ESTUARY?
- 14:30 **Demes, K. W.**; Salomon, A. K.; Keeling, B.; Burt, J.: DETECTING TIPPING POINTS IN NORTHERN LATITUDE KELP FORESTS
- 14:45 **Lovejoy, C.**: SELECTING MICROBIAL BIODIVERSITY INDICATORS TO MONITOR CHANGE IN THE OCEAN

- 15:00 **Cline, T. J.**; Schindler, D. E.; Hilborn, R.: WHAT MAKES FISHING COMMUNITIES RESILIENT TO OCEAN TIPPING POINTS?
- 15:15 **Pijanowski, B. C.**; Miller, B. K.; Doucette, J. S.; Salazar, K. A.; TePas, K. S.: AN ONLINE DECISION SUPPORT SYSTEM TO ENGAGE GREAT LAKES COMMUNITIES IN DEVELOPING TIPPING POINT ACTION PLANS.

008 Groundwater Wetlands Special Session

Chair(s): Tom Baugh, springmountain1@att.net
 Dave Penrose, penrose.watershed.science@gmail.com

Location: E 142 - 144

- 10:00 **Serov, P. A.**: TOWARDS A GLOBAL GROUNDWATER ECOSYSTEM CLASSIFICATION
- 10:15 **LaBaugh, J. W.**: STATUS AND TRENDS IN GROUNDWATER-DEPENDENT WETLANDS AND GROUNDWATER DEPLETION: A GLOBAL PERSPECTIVE
- 10:30 **Tufford, D. L.**: DISTRIBUTION AND VARIABILITY OF SEEPAGE WETLANDS: A GLOBAL PERSPECTIVE
- 10:45 **Springer, A. E.**; Stevens, L. E.; Ledbetter, J. D.; Hendrie, M.: THE GLOBAL DISTRIBUTION OF SPRINGS ECOSYSTEMS
- 11:00 **Stevens, L. E.**; Barr, C.; Hendrickson, D. A.; Rink, G.; Sada, D. W.; Serov, P.; Shepard, W.: BIODIVERSITY OF GROUNDWATER-DEPENDENT SPECIES WITH A FOCUS ON SPRINGS:
- 11:15 **Sparks, K. D.**; Stevens, L. E.; Springer, A. E.: A MULTIVARIATE ANALYSIS OF THE INFLUENCE OF GEOMORPHOLOGIC DIVERSITY ON FLORA SPECIES RICHNESS AROUND SPRINGS
- 11:30 **Aldous, A. R.**; Gurrieri, J. T.; Carlson, C.; Blevins, E.; Bach, L. B.: A GROUNDWATER BALANCING ACT: USING THE GROUNDWATER REQUIREMENTS OF WETLANDS TO SET LIMITS TO GROUNDWATER ALTERATION
- 11:45 **Wieder, R. K.**; Vile, M. A.; Vitt, D. H.; Hartsock, J. A.; Quinn, J. C.: DOC AND DON IN PEATLAND WATERS - A GLOBAL PERSPECTIVE

011 Ecosystem Dynamics On A Changing Playing Field

Chair(s): Marjorie Brooks, mlbrooks@siu.edu
 Matt Whiles, mwhiles@zoology.siu.edu

Location: D 135 - 136

- 10:00 **Brooks, M. L.**; Hallman, T. A.; Grandrath, C. C.; Frieling, E. A.: SILENT STRESSORS: CONTAMINANT-MEDIATED ENERGY BALANCE, TEMPERATURE TOLERANCE, AND BODY CONDITION ON A WARMING PLANET [†]
- 10:30 **Junker, J. R.**; Cross, W. F.; Benstead, J. P.; Huryn, A. D.; Hood, J. M.; Nelson, D.; Gíslason, G. M.; Ólafsson, J. S.: EFFECTS OF TEMPERATURE ON ENERGY AND ELEMENT STORAGE IN STREAM ECOSYSTEMS
- 10:45 **Murdock, J. N.**; Locke, M. A.; Lizotte, R. E.; Shields, F. D.; Henderson, K. A.: ALGAL REGULATION OF DISSOLVED OXYGEN DYNAMICS IN TURBID, HIGH NUTRIENT AGRICULTURAL LAKES
- 11:00 **Button, D. K.**; Grover, E. S.; Robertson, B. R.; Zhao, X.: BACTERIOPLANKTON NUTRITION AND DYNAMICS IN A HIGH-LATITUDE LAKE: THEORY, METHODS, AND THE EFFECT OF TEMPERATURE .

- 11:15 **Payn, R. A.**; Hall, R. O.; Marshall, L. A.; Kennedy, T. A.; Poole, G. C.: GROSS PRIMARY PRODUCTION IS A PRIMARY CONTROL ON THE CREDIBILITY OF GAS EXCHANGE RATES INFERRED DIRECTLY FROM DISSOLVED OXYGEN DATA
- 11:30 Vanden Byllaardt, J.; **Ackerman, J. D.**: THE INFLUENCE OF ALGAL FLUX ON SUSPENSION FEEDING UNIONID MUSSELS
- 11:45 **Findlay, S.**: PERSISTENT EFFECTS OF HURRICANES ON THE TIDAL FRESHWATER HUDSON RIVER.
- 13:30 **Paul, J. S.**; Brooks, M. L.; Csányi, B.; Pinter, N.: CHRONIC METAL POLLUTION IN THE TISZA RIVER, EASTERN EUROPE: WATER QUALITY, CONTAMINANTS, AND ECOLOGY
- 13:45 **Costello, D. M.**; Harrison, A. M.; Burton, G. A.; Hammerschmidt, C. R.: VARIATION IN SEDIMENT REDOX POTENTIAL INFLUENCES METAL BIOGEOCHEMISTRY AND TOXICITY
- 14:00 **Bernot, M. J.**; Jarvis, A.; Bernot, R. J.: AQUATIC NEUROSES: THE EFFECTS OF THE PHARMACEUTICAL CARBAMAZEPINE ON AQUATIC ECOSYSTEM DYNAMICS*
- 14:15 **Kangabam, R. D.**; Petersen, E.; Munisamy, G.: ENVIRONMENTAL IMPACT OF ANTHROPOGENIC ACTIVITY ON LOKTAK LAKE- A CASE STUDY, INDIA
- 14:30 **Elbrecht, V.**; Piggott, J. J.; Beermann, A.; Goessler, G.; Matthaei, C. D.; Neumann, J.; Tollrian, R.; Wagner, R.; Wlecklik, A.; Leese, F.: IMPACT OF SINGLE AND MULTIPLE AGRICULTURAL STRESSORS ON MACROZOOBENTHIC FRESHWATER COMMUNITIES: A MESOCOSM STUDY.
- 14:45 **Salis, R.**; Bruder, A.; Matthaei, C. D.; Leese, F.: MULTIPLE-STRESSOR EFFECTS ON THE DISTRIBUTION OF THE MAYFLY DELEATIDIUM: USING GENETIC TOOLS TO COMPLEMENT ECOLOGICAL RESEARCH
- 15:00 **Hager, R. N.**; McCormick, M. K.; Slette, I.; Megonigal, J. P.; Mozdzer, T. J.: RAPID CHANGES IN GENOTYPE FREQUENCY BY AN INVASIVE SPECIES IN RESPONSE TO ELEVATED CO₂ AND NITROGEN
- 11:00 **Solomon, C. T.**; del Giorgio, P. A.; Jones, S. E.; Prairie, Y. T.; Vachon, D.; Zwart, J.: CONSTRAINING CARBON CYCLE STOCKS AND FLUXES BY FUSING PROCESS MODELS WITH MULTIPLE DATA STREAMS: SHOULD AQUATIC SCIENTISTS FOLLOW THE TERRESTRIAL LEAD?*
- 11:15 **Zwart, J. A.**; Solomon, C. T.; Weidel, B. C.; Jones, S. E.: LAKE HETEROTROPHY SUPPORTED BY LABILE TERRESTRIAL CARBON: COUPLING HIGH FREQUENCY CARBON LOADS AND LAKE METABOLISM ESTIMATES
- 11:30 **Downing, J. A.**; Striegl, R. G.: THE SIZE, AGE, AND EXCHANGE OF THE GLOBAL GROUNDWATER CARBON POOL*
- 11:45 **Urban, N. R.**; McKinley, G. A.: WINDS OF CHANGE: WHICH WAY ARE THEY BLOWING WITH REGARDS TO CARBON CYCLING AND PH CONTROL IN LAKES?
- 13:30 **Roland, F.**; Huszar, V.; Barros, N.; Almeida, R. M.; Cole, J. J.: TROPICAL HYDROELECTRIC RESERVOIRS METABOLISM AND THE CARBON CYCLE*
- 13:45 **Crawford, J. T.**; Stanley, E. H.; Dornblaser, M. M.; Shanley, J.; Striegl, R. G.: CONTRASTING ORIGINS OF INORGANIC CARBON FLUX FROM HEADWATER STREAMS TO THE ATMOSPHERE
- 14:00 **Karlsson, J.**; Giesler, R.; Rocher, G.; Salimi, S.; Lundin, E.: THE ROLE OF INLAND WATERS IN THE CARBON CYCLE AT HIGH LATITUDES: ASSESSMENT FROM INTEGRATED TERRESTRIAL-AQUATIC C BALANCES OF SUBARCTIC CATCHMENTS*
- 14:15 **Bellamy, A. R.**; Bauer, J. E.; Barrett, A. M.: NATURAL ¹⁴C AS A TRACER OF NUTRITIONAL SUBSIDIES TO AQUATIC FOOD WEBS
- 14:30 **Dugan, H. A.**; Santoso, A. B.; Cormann, J. R.; Jaimes, A.; Nodine, E. R.; Woolway, R. I.; Winslow, L. A.; Hanson, P. C.; Weathers, K.: CONSEQUENCES OF GAS FLUX MODEL CHOICE ON THE INTERPRETATION OF METABOLIC BALANCE ACROSS 15 LAKES
- 14:45 **Butman, D. E.**; Wilson, H. F.; Barnes, R. T.; Raymond, P. A.; Xenopoulos, M. A.: HUMAN INDUCED MOBILIZATION OF AGED ORGANIC CARBON IN RIVERS
- 15:00 **Leech, D. M.**; Ensign, S. A.; Piehler, M. F.: OLD BLACK WATER, KEEP ON ROLLIN': ORGANIC CARBON EXPORTS FROM THE CHOWAN RIVER, NORTH CAROLINA, USA
- 15:15 **Brothers, S. M.**; Köhler, J.; Attermeyer, K.; Grossart, H. P.; Meyer, N.; Hilt, S.: A FEEDBACK LOOP LINKED BROWNIFICATION TO ANOXIC CONDITIONS IN A SHALLOW, TEMPERATE LAKE
- 16:00 **Sobczak, W. V.**; Raymond, P. A.: HOW WAS THE GLOBAL CARBON CYCLE PLUMBED?: HISTORICAL BENCHMARKS IN METHODS, THEORY, SCALING, AND SERENDIPITY*
- 16:15 **Bauer, J. E.**; Hossler, K.: AGED CARBON IN MAJOR GLOBAL RIVERS: IMPLICATIONS FOR GLOBAL CARBON BUDGETS*
- 16:30 **Heathcote, A. J.**; Prairie, Y. T.; del Giorgio, P. A.: REGIONAL DRIVERS OF CARBON BURIAL EFFICIENCY IN TEMPERATE AND BOREAL LAKES
- 16:45 **Dietz, R. D.**; Engstrom, D. R.; Anderson, N. J.: EVALUATING THE IMPORTANCE OF LAKE CARBON BURIAL IN A LANDSCAPE CONTEXT (CASE STUDY: MINNESOTA, USA)

013 An Apparent Wind: The Changing Inland Water Carbon Cycle - A Special Session Dedicated To The Career Of Jonathan J. Cole

Chair(s): Michael Pace, pacem@virginia.edu
 Peter Raymond, peter.raymond@yale.edu
 Emma Kritzberg, emma.kritzberg@bio.lu.se

Location: D 137 - 139

- 10:00 **Pace, M. L.**; Raymond, P. A.; Kritzberg, E. S.: KEY CONTRIBUTIONS OF JONATHAN COLE TO AQUATIC ECOSYSTEM CARBON CYCLE STUDIES*
- 10:15 **Williamson, C. E.**; Brentrup, J. A.; Zhang, J.; Renwick, W.; Hargreaves, B. R.; Knoll, L. B.; Overholt, E. P.; Rose, K. C.: LAKES AS SENSORS IN THE LANDSCAPE: OPTICAL METRICS AS SCALABLE SENTINEL RESPONSES TO CLIMATE CHANGE
- 10:30 **Sadro, S.**; Holtgrieve, G. W.; Solomon, C. T.; Koch, G. R.: CARBON CYCLING AT SHORT TIMES SCALES: OVERNIGHT PATTERNS IN ECOSYSTEM RESPIRATION FROM A GLOBAL SET OF LAKES
- 10:45 **del Giorgio, P. A.**: BACTERIAL GROWTH EFFICIENCY REVISITED*

- 17:00 **Prairie, Y. T.**; del Giorgio, P. A.: THE RELATIVE IMPORTANCE OF TURBULENCE AND CONVECTION ON CO₂ EXCHANGE IN L. CROCHE, OR HOW JON COLE INSPIRED OUR VIEW OF GAS EXCHANGE IN LAKES*
- 17:15 **Hall, R. O.**; Wohl, E. E.; Venarsky, M.; Sutfin, N.; Livers, B.; Walters, D. M.; Poole, G. C.; Carson, S.: THE CAPACITY FOR RIVERS TO STORE CARBON: COMBINING GEOMORPHIC AND ECOLOGICAL PERSPECTIVES*
- 17:30 **Cole, J. J.**: TERRESTRIAL SUPPORT OF LAKE FOOD WEBS: A WEIGHT OF EVIDENCE ARGUMENT.[†]

016 Effects Of Climate Change On Species Interactions In Aquatic Ecosystems

Chair(s): Gretchen Hansen, gretchen.hansen@wisconsin.gov
Christopher Patrick, cjpatster@gmail.com

Location: B 117 - 119

- 10:00 **Peckarsky, B. L.**; Cromwell, K. J.; Taylor, B. W.: EFFECTS OF CLIMATE CHANGE ON PARASITE-HOST INTERACTIONS AMONG STREAM ORGANISMS *
- 10:15 **Helland, I. P.**; Englund, G.; Finstad, A. G.; Hendrichsen, D. K.; Ugedal, O.; Forseth, T.: EFFECTS OF CLIMATE ON COMPETITION BETWEEN ARCTIC CHAR AND BROWN TROUT
- 10:30 **Symons, C. C.**; Shurin, J. B.: TEMPERATURE ALTERS TROPHIC CASCADES IN CALIFORNIA MOUNTAIN LAKES*
- 10:45 **Culler, L. E.**; Ayres, M. P.: TEMPERATURE-ALTERED PREDATOR-PREY INTERACTIONS IN SNOWMELT PONDS IN ARCTIC GREENLAND*
- 11:00 **Foote, D.**; Tango, L.; Hobbelen, P.; Hart, G.; Orr, K. E.; Romo, C.; Brinck, K.; LaPointe, D. A.; Samuels, M. D.: BIOTIC RESISTANCE FROM ENDEMIC INVERTEBRATE PREDATORS: HAWAIIAN DAMSELFLIES AND INVASIVE MOSQUITOES UNDER CLIMATE CHANGE
- 11:15 **Hunt, S. K.**; McIntosh, A. R.: CLIMATE- AND HABITAT-MEDIATION OF PREDATOR-PREY INTERACTIONS
- 11:30 **Tomas, F.**; Cerezo, E.; Becerro, M. A.; Romero, J.: WARMING MAY RELEASE SEA URCHIN TOP-DOWN CONTROL ON A SEAGRASS
- 11:45 **Sutter, L. A.**; Perry, J. E.; Chambers, R. M.: A TEST OF TOP-DOWN CONTROL ON PLANT PRODUCTION AND TISSUE QUALITY IN LOW-SALINITY TIDAL MARSHES
- 13:30 **Power, M. E.**; Bouma-Gregson, K.; Sculley, J. B.; Lowe, R.; Carlson, S. M.; Thompson, S. E.; Nittrouer, C.: SPECIES INTERACTIONS IN THIRSTY RIVERS: FLOW-MEDIATED THRESHOLDS BETWEEN SALMONID-SUPPORTING AND CYANOBACTERIALLY-DOMINATED ALGAL-BASED FOOD WEBS *
- 13:45 **Greig, H. S.**: UNDERSTANDING THE CONTINGENCIES: HOW ENVIRONMENTAL CONTEXT ALTERS THE EFFECTS OF WARMING ON FRESHWATER FOOD WEBS*
- 14:00 Paver, S. F.; **Kent, A. D.**: CHANGES IN TEMPERATURE AND LIGHT AVAILABILITY AFFECT PHYTOPLANKTON-BACTERIAL INTERACTIONS IN HUMIC LAKES
- 14:15 **Griiffiths, J. R.**; Winder, M.; Larsson, U.; Hajdu, S.; Hjerne, O.; Downing, A.: EFFECTS OF CLIMATE AND ANTHROPOGENIC DRIVERS ON BALTIC SEA PLANKTON INTERACTIONS

- 14:30 **Risenhoover, K. A.**; Olson, M. B.; Love, B. A.; Kendall, K. A.: HIGER MICROZOOPLANKTON GRAZING AND GROWTH WHEN FEEDING ON PHYTOPLANKTON CULTURED UNDER ELEVATED PCO₂ CONDITIONS
- 14:45 **Hendrichsen, D. K.**; Finstad, A. G.; Nilsen, E. B.; Schmidt, N. M.: SPATIO-TEMPORAL VARIATION IN TROPHIC INTERACTIONS OF PLANKTON COMMUNITIES DURING A HIGH ARCTIC SUMMER
- 15:00 **Alofs, K. M.**; Jackson, D. A.: CHANGING SPECIES DISTRIBUTIONS AND FISH SPECIES INTERACTIONS IN ONTARIO LAKES
- 15:15 **Vander Zanden, M. J.**; Carpenter, S. R.; Gaeta, J.; Hrabik, T.; Kratz, T.; Lawson, Z.; Read, J.; Smith, C.; Tunney, T.: PUSHING THE ENVELOPE: A WHOLE-LAKE EXPERIMENTAL TEST OF THE THERMAL LIMIT OF THE INVASIVE COLDWATER FISH, RAINBOW SMELT
- 16:00 **Schindler, D. E.**; Armstrong, J. B.; Lisi, P. J.: HYDROLOGIC VARIATION, RESOURCE WAVES, AND POTENTIAL EFFECTS OF CHANGING CLIMATE ON MOBILE CONSUMERS IN RIVER BASINS*
- 16:15 **Grossman, G. D.**: CLIMATE CHANGE AND DISTURBANCE MEDIATED ASSEMBLAGES IN THE SOUTHEASTERN UNITED STATES
- 16:30 **Mullen, C.**; Edwards, F. K.; Ledger, M.; Milner, A.: RESISTANCE AND RESILIENCE TO DROUGHT IN CHALK STREAMS IN SOUTHERN ENGLAND - A STUDY OF INVERTEBRATE GRAZERS
- 16:45 **O'Gorman, E. J.**; Pichler, D. E.; Petchey, O. L.; Woodward, G. W.: CHANGES IN FOOD WEB STRUCTURE ALONG A GEOTHERMAL GRADIENT
- 17:00 **Nelson, D.**; Benstead, J. P.; Cross, W. F.; Huryn, A. D.; Hood, J. M.; Johnson, P. W.; Junker, J. R.; Gislason, G. M.; Ólafsson, J. S.: EFFECTS OF EXPERIMENTAL WHOLE-STREAM WARMING ON BENTHIC INVERTEBRATE COMMUNITY STRUCTURE
- 17:15 **Bruce, S.**; Tavsanoglu, U. N.; Özen, A.; Levi, E.; Bezirci, G.; Çakiroglu, A. I.; Jeppesen, E.; Svenning, J. C.; Beklioglu, M.: SIZE DIVERSITY OF AQUATIC ASSEMBLAGES RESPONDS TO GRADIENTS IN TROPHIC INTERACTIONS, PRODUCTIVITY AND CLIMATE IN SHALLOW MEDITERRANEAN LAKES
- 17:30 **O'Connor, M. I.**: SYNTHESIZING THEORY AND EXPERIMENTS TO UNDERSTAND HOW WARMING AFFECTS TROPHIC INTERACTIONS IN AQUATIC FOOD WEBS*

018 The Effects Of Fire On Freshwater Ecosystems

Chair(s): Scott D. Cooper, scott.cooper@lifesci.ucsb.edu
Rebecca Bixby, bbixby@unm.edu

Location: B 113

- 10:00 **Gresswell, R. E.**: FIRE RELATED DISTURBANCE IN HEADWATER STREAMS[†]
- 10:30 **May, C. L.**; Gresswell, R. E.: POST-FIRE SEDIMENT FLUXES IN STEEP MOUNTAIN LANDSCAPES: THE INTERTWINING OF SALMONID HABITAT AND GEOMORPHIC PROCESS DOMAINS*
- 10:45 **Reale, J. K.**; Van Horn, D. J.; Reale, C. S.; Candelaria-Ley, R.; Condon, K. E.; Compton, S. T.; Summers, B. S.; Parmenter, R. R.; Dahm, C. N.: FIRST THROUGH FIFTH ORDER STREAM NETWORK RESPONSES OF WATER QUALITY FROM RUNOFF EVENTS DERIVED FROM BURN SCARS AFTER CATASTROPHIC FOREST FIRE*

(*) represents Invited presentations

- 11:00 **Murphy, S. F.**; Writer, J. H.; McCleskey, R. B.; Martin, D. A.: TEMPORAL AND SPATIAL CONTROLS ON POST-WILDFIRE WATER QUALITY IN THE COLORADO FRONT RANGE*
- 11:15 **Goodridge, B. M.**; Melack, J. M.: TIMESCALE OF STREAM NUTRIENT RECOVERY FOLLOWING WILDFIRE IN AN UPLAND CHAPARRAL WATERSHED IN SANTA BARBARA, CALIFORNIA*
- 11:30 **Cawley, K. M.**; Hohner, A.; Rosario-Ortiz, F.: CONCENTRATION AND CHARACTER OF PARTICULATE AND DISSOLVED ORGANIC MATTER MOBILIZED FOLLOWING A WILDFIRE*
- 11:45 **Loftin, C. S.**; Guyette, M. Q.: A BAYESIAN BELIEF NETWORK ASSESSMENT OF VEGETATION SPATIAL DYNAMICS IN RESPONSE TO FIRE IN THE OKEFENOKEE NATIONAL WILDLIFE REFUGE, GEORGIA, USA*
- 13:30 **Dudley, T.**; Drus, G.: RIPARIAN WILDFIRE REGIMES ASSOCIATED WITH TAMARIX INVASION
- 13:45 **Bixby, R. J.**; Hamilton, A. T.; Jacobi, G. Z.; Dahm, C. N.: RESISTANCE AND RESILIENCE OF BIOLOGICAL ORGANISMS IN RESPONSE TO FIRE DISTURBANCE*
- 14:00 **Johnston, K.**; Chester, E. T.: IMPACTS OF LARGE-SCALE BUSHFIRE ON THE FRESHWATER CRAYFISH OF THE GRAMPPIANS NATIONAL PARK*
- 14:15 **Prat, N.**; Rodriguez-Lozano, P.; Verkaik, I.; Rieradevall, M.: BECAUSE OF THE PRESENCE OF DROUGHTS, MEDITERRANEAN STREAMS RECOVER MORE QUICKLY FROM BUSH FIRES THAN OTHER STREAMS.*
- 14:30 **Minshall, G.**; Rugenski, A.: CLIMATE-MODERATED RESPONSES TO WILDFIRE BY MACROINVERTEBRATES AND BASAL FOOD RESOURCES IN MONTANE WILDERNESS STREAMS*
- 14:45 **Schenk, M. V.**; Baxter, C. V.; Minshall, G. W.: CLIMATE AND TRAJECTORY OF RIPARIAN REGROWTH MEDIATE MID-TERM PATTERNS OF PRIMARY AND SECONDARY PRODUCTIVITY IN WILDERNESS STREAMS OF IDAHO*
- 15:00 **Sedell, E. R.**; Gresswell, R. E.; McMahon, T. E.: PREDICTING THE SPATIAL DISTRIBUTION OF POSTFIRE DEBRIS FLOWS AND POTENTIAL CONSEQUENCES TO NATIVE TROUT IN HEADWATER STREAM NETWORKS*
- 15:15 **Hossack, B. R.**: IMPLICATIONS OF LARGE WILDFIRES FOR AMPHIBIANS IN THE NORTHERN ROCKIES: FROM PARASITES TO POPULATIONS*
- 16:00 **Rodríguez-Lozano, P.**; Rieradevall, M.; Rau, M. A.; Prat, N.: WILDFIRE LONG-TERM CONSEQUENCES ON LEAF LITTER BREAKDOWN IN STREAMS*
- 16:15 **Davis, E. A.**; Schindler, D. E.; Baxter, C. V.; Jankowski, K.: WILDFIRE EFFECTS ON STREAM METABOLISM ACROSS GRADIENTS OF TIME AND FIRE SEVERITY IN AN IDAHO WILDERNESS WATERSHED*
- 16:30 **Beakes, M. P.**; Moore, J. W.; Hayes, S. A.; Sogard, S. M.: SEASONALITY, WILDFIRE, AND SHIFTING SUBSIDIES FOR STREAM FOOD WEBS*
- 16:45 **Jackson, B. K.**; Sullivan, S. M.: TWO DECADES OF WILDFIRE IN YOSEMITE: PATTERNS IN AQUATIC-TERRESTRIAL FOOD WEB CONNECTIVITY*
- 17:00 **Cooper, S. D.**; Peterson, S. H.; Bookhagen, B.; Wiseman, S. W.; Klose, K.; Bennett, D.; Page, H. M.; Even, T.; Sadro, S.; Nelson, C. E.: WILDFIRE IMPACTS FROM WATERSHEDS TO STREAM FOOD WEBS*
- 17:15 **Arkle, R. S.**; Pilliod, D. S.: STREAM AND RIPARIAN RESPONSE TO WILDFIRE: THE INFLUENCE OF PRE-FIRE MANAGEMENT, BURN SEVERITY, AND POST-FIRE DISTURBANCE*
- 021 Modeling For Ecological Assessments And Conservation Planning: Where Have We Been And Where Are We Going?**
- Chair(s): Charles P. Hawkins, chuck.hawkins@usu.edu
Richard Johnson, richard.johnson@slu.se
- Location: E 145 - 146
- 13:30 **Peterson, E. E.**; Ver Hoef, J. M.; Isaak, D. J.: MODELING DENDRITIC ECOLOGICAL NETWORKS IN SPACE AND TIME*
- 13:45 **Bellmore, R.**; Newsom, M.; Fremier, A.; Connolly, P.: INCORPORATING FOOD WEBS INTO SALMON RECOVERY SCIENCE: A MODELING APPROACH
- 14:00 **Crozier, L. G.**; Zabel, R. W.: EVALUATING SOURCES OF UNCERTAINTY FOR POPULATION VIABILITY ANALYSIS UNDER CLIMATE CHANGE SCENARIOS: A CASE STUDY OF THREATENED CHINOOK SALMON
- 14:15 **Wenger, S. J.**: REALISTIC ASSESSMENT OF UNCERTAINTY IN ECOLOGICAL MODELS AND PREDICTIONS*
- 14:30 **Van Sickle, J.**: VISUALIZING PARTIAL DEPENDENCIES IN STRESSOR-RESPONSE MODELS*
- 14:45 **Aroviita, J.**: EXPLORING THE POTENTIAL OF RIVPACS-TYPE MODELLING TO ESTIMATE BIOTIC CONDITION IN UNSAMPLED RIVER REACHES*
- 15:00 **DeWalt, R. E.**; Cao, Y.; Robinson, J. L.; Grubbs, S. A.; Tweddale, T.; Hinz, L.: RECONSTRUCTING THE PAST: PRE-EUROPEAN SETTLEMENT DISTRIBUTIONS OF STONEFLIES (PLECOPTERA) IN THE MIDWEST, USA
- 15:15 **Hawkins, C. P.**; Vander Laan, J. J.: CAN SPECIES ARCHETYPE MODELS IMPROVE THE PERFORMANCE AND INTERPRETATION OF BIODIVERSITY ASSESSMENTS?*
- 16:00 **Miller, S. W.**; Al-Chokhachy, R.; Courtwright, J.; Hawkins, C. P.; Roper, B. B.: TEMPORAL DYNAMICS OF REFERENCE MACROINVERTEBRATE ASSEMBLAGES: IMPLICATIONS FOR THE PRECISION AND ACCURACY OF BIOLOGICAL INDICES
- 16:15 **Jones, J. I.**; Murphy, J. F.; Anthony, S.; Naden, P. S.; Arnold, A.; Duerdoth, C. P.; Hawczak, A.; Pretty, J. L.; Scarlett, P.; Skates, J.: DO AGRI-ENVIRONMENT SCHEMES PROTECT AND IMPROVE FRESHWATER ECOSYSTEMS?*
- 16:30 **Collins, S. D.**; McIntyre, N. E.: ODONATA AS BIOINDICATORS OF RIVERINE DIVERSITY IN CURRENT AND PROJECTED FUTURE CLIMATES
- 16:45 **Witt, J. W.**; Stamp, J.; Passmore, M.; Bierwagen, B.; Hamilton, A.: STREAM CLASSIFICATION AND VULNERABILITY OF MACROINVERTEBRATE COMMUNITIES TO CLIMATE CHANGE IN THE EASTERN UNITED STATES
- 17:00 **Vander Laan, J. J.**; Hawkins, C. P.: MODELING THERMAL AND BIOLOGICAL RESPONSES OF USA LAKES TO CLIMATE CHANGE: VULNERABILITY OF LAKE SURFACE TEMPERATURES AND BENTHIC INVERTEBRATE ASSEMBLAGES

- 17:15 **Viers, J. H.**; Peek, R. A.: HYDROCLIMATIC VULNERABILITY ASSESSMENT OF SIERRA NEVADA MONTANE MEADOWS*
- 17:30 **Norman Buccola, L.**; John Risley, ; Stewart Rounds, A.: SIMULATING LAKE LEVEL AND WATER TEMPERATURE RESPONSE TO CLIMATE CHANGE AT DETROIT LAKE, OREGON
- 17:45 **Olson, J. R.**; Hawkins, C. P.: AN EMPIRICAL APPROACH TO PREDICTING EFFECTS OF CLIMATE CHANGE ON STREAM WATER CHEMISTRY

028 Trace Gas Emissions And Carbon Sequestration In Wetlands And Lakes

Chair(s): Scott Bridgman, bridgman@uoregon.edu
Nigel Roulet, Nigel.roulet@mcgill.ca
J. Patrick Megonigal, megonigalp@si.edu

Location: B 110 - 112

- 10:00 **Neubauer, S. C.**; Megonigal, J. P.: DETERMINING THE CLIMATIC ROLE OF WETLAND AND SHALLOW FRESHWATER ECOSYSTEMS: ARE WE MISUSING GLOBAL WARMING POTENTIALS?*
- 10:15 **Bridgman, S. D.**; Megonigal, J. P.: RADIATIVE FORCING AND BALANCE OF THE WORLD'S WETLANDS*
- 10:30 **Drexler, J. Z.**; Fuller, C. C.: PEAT FORMATION PROCESSES AND CARBON SEQUESTRATION RATES IN ALPINE FENS OF YOSEMITE NATIONAL PARK, CALIFORNIA, USA*
- 10:45 Malhotra, A.; **Roulet, N. T.**: PERMAFROST THAW STRENGTHENS C FLUX RELATIONSHIPS WITH ENVIRONMENTAL VARIABLES IN A SUB-ARCTIC PEATLAND
- 11:00 **Wang, H.**; Ho, M.; Flanagan, N.; Richardson, C.: PHENOLICS BUILDUP INHIBITS CARBON LOSS IN UNSATURATED PEATLANDS
- 11:15 **Cadieux, S. B.**; Goldman, A. E.; White, J. R.; Young, S. E.; Peng, Y.; Pratt, L. M.: SEASONAL AND SPATIAL VARIATIONS IN CYCLING OF DISSOLVED METHANE FROM SMALL GREENLANDIC LAKES: IMPLICATIONS FOR EMISSIONS*
- 11:30 **Strauss, E. A.**; Soballe, D. M.; Richardson, W. B.; Nelson, J. C.: RAPID, LARGE-SCALE ESTIMATES OF CARBON SEQUESTRATION IN THE SEDIMENTS OF RESERVOIRS*
- 11:45 **Sturtevant, C.**; Ruddell, B.; Knox, S.; Verfaillie, J.; Baldocchi, D.: EXPLORING THE TIME SCALES OF INTERACTION BETWEEN ENVIRONMENTAL DRIVERS AND GREENHOUSE GAS EXCHANGE IN PEATLAND ECOSYSTEMS*
- 13:30 **Winton, R. S.**; Richardson, C. J.: THE EFFECTS OF WATERFOWL HERBIVORY AND NUTRIENT SUBSIDY ON METHANE EMISSIONS FROM A MANAGED FRESHWATER IMPOUNDMENT IN EASTERN NORTH CAROLINA*
- 13:45 **DelVecchia, A. G.**; Stanford, J. A.: METHANE: ELUSIVE SOURCE OF CARBON FOR THE HYPORHEIC FOOD WEB?*
- 14:00 **McNicol, G.**; Guilderson, T. P.; LaFranchi, B. W.; Silver, W. L.: OLD CARBON CONTRIBUTES TO METHANE FLUXES IN A RESTORED WETLAND*
- 14:15 **Medvedeff, C. A.**; Pfeifer-Meister, L.; Bridgman, S. D.; Keller, J. K.: CONTROL OF *SPHAGNUM*-DERIVED DISSOLVED ORGANIC MATTER ON METHANE PRODUCTION IN PEATLAND SOILS.*
- 14:30 **Theroux, S. M.**; Hartman, W. H.; He, S.; Tringe, S. G.: MICROBIAL DIVERSITY AND CARBON CYCLING IN SAN FRANCISCO BAY WETLANDS*
- 14:45 **White, J. R.**; DeLaune, R. D.; Roy, E. D.; Corstanje, R.: UNCERTAINTY IN GREENHOUSE GAS EMISSIONS ON NET CARBON SEQUESTRATION IN COASTAL AND FRESHWATER WETLANDS IN THE MISSISSIPPI RIVER DELTA*
- 15:00 **Needelman, B. A.**; Emmer, I.; Emmett-Mattox, S.; Crooks, S.; Megonigal, J. P.; Myers, D.; Oreska, M.; McGlathery, K.: INTERNATIONAL TIDAL WETLAND AND SEAGRASS RESTORATION ACCOUNTING METHODOLOGY FOR THE VERIFIED CARBON STANDARD*
- 15:15 **Troxler, T. G.**; Kennedy, H. A.: NEW IPCC METHODOLOGY FOR NATIONAL GREENHOUSE GAS INVENTORIES OF MANAGED WETLANDS: A FOCUS ON COASTAL ECOSYSTEMS*

032 As Above, So Below: Integrating Aquatic Ecosystem Observation Systems From Satellites To Genes Using Big Data.

Chair(s): Donald J Baird, djbaird@unb.ca
Max Finlayson, mfinlayson@csu.edu.au
Guy Woodward, guy.woodward@imperial.ac.uk

Location: D 135 - 136

- 16:00 **Hajibabaei, M.**; Baird, D.; Chariton, A.; Eaton, W.; Finlayson, M.; Pilgrim, E.; Stein, E.: WETLANDS ECOLOGICAL GENOMICS ANALYSIS NETWORK (WEGAN)^T
- 16:30 **King, I.**; Monk, W. A.; Shokralla, S.; Porter, T. M.; Nikbaht, H.; Gibson, J. E.; Curry, C. J.; Baird, D. J.; Hajibabaei, M.: COMPARING TRADITIONAL AND DNA-BASED BIOMONITORING BY EXPLORING DATA PROPERTIES IN MATCHED ENVIRONMENTAL SAMPLES*
- 16:45 **Currens, K. K.**; McKay, J. E.; Sprague, S. J.: DIGITAL MAPPING OF RESOURCE BOUNDARIES: GLOBAL POSITIONING SYSTEM (GPS) LIMITATIONS AND SOLUTIONS*
- 17:00 **Olmanson, L. G.**; Brezonik, P. L.; Finlay, J. C.; Bauer, M. E.: REGIONAL LAKE WATER QUALITY MEASUREMENTS BY SATELLITE REMOTE SENSING: BIG DATA - GETTING BIGGER AND BETTER*
- 17:15 **Shupryt, M. P.**; Ruesch, A.: USING A SPATIAL STREAM NETWORK (SSN) GEOSTATISTICAL MODEL TO PREDICT NATURAL PHOSPHORUS CONCENTRATIONS IN WISCONSIN STREAMS. *
- 17:30 **Tuggle, T. S.**; Kovatch, J. J.; Axel, A. C.: MODELING CYANOBACTERIA CONCENTRATIONS ON THE OHIO RIVER USING REMOTELY SENSED DATA*
- 17:45 **Ribalet, F.**; Swalwell, J.; Clayton, S.; Jimenez, V.; Sudek, S.; Yajuan, L.; Johnson, Z.; Worden, A.; Armbrust, E. V.: COUPLING OF GROWTH AND LOSS DYNAMICS OF PROCHLOROCOCCUS IN THE NORTHEAST PACIFIC OCEAN*

(*) represents Invited presentations

039 From Individuals To Ecosystems: Consumer Driven Nutrient Recycling Across Aquatic Ecosystems

Chair(s): Amanda Rugenski, rugenski@siu.edu
 Carla Atkinson, carlatatkinson@gmail.com
 Eric Moody, eric.k.moody@gmail.com
 Matt Trentman, mtrentman@k-state.edu

Location: C 123 - 124

- 10:00 **Leach, T. H.**; Knoll, L. B.; Vanni, M. J.: ZOOPLANKTON MIGRATION: CAN DIEL VERTICAL MOVEMENT PROVIDE A BIOLOGICALLY RELEVANT NUTRIENT SOURCE TO THE SURFACE WATERS IN LAKES?^T
- 10:15 **Bergström, A.**; Karlsson, D.; Karlsson, J.; Vrede, T.: NITROGEN-LIMITED HERBIVORE CONSUMERS REGENERATE SUBSTANCES WITH LOW RATIOS OF N:P SUSTAINING N LIMITATION IN NUTRIENT POOR SWEDISH LAKES
- 10:30 **Vanni, M. J.**; McIntyre, P. B.: EVERYONE PEES, BUT HOW MUCH? METABOLIC SCALING AND STOICHIOMETRY INFLUENCE NUTRIENT EXCRETION BY AQUATIC ANIMALS*
- 10:45 **Dalton, C. M.**; Flecker, A. S.: PREDATORS ALTER NUTRIENT RECYCLING OF PREY BY REDUCING FEEDING RATES AND METABOLISM*
- 11:00 **Moody, E. K.**; Corman, J. R.; Elser, J. J.; Sabo, J. L.: DO YOU EXCRETE WHAT YOU EAT? NEW INSIGHTS FROM A META-ANALYSIS OF DIET MANIPULATIONS*
- 11:15 **Hébert, M.**; Beisner, B. E.; Maranger, R.: CRUSTACEAN ZOOPLANKTON FUNCTIONAL TRAITS: LINKING ORGANISMS TO ECOSYSTEMS^T
- 11:30 **Atkinson, C. L.**; Vaughn, C. C.; Flecker, A. S.: SPECIES TRAITS: ARE STOICHIOMETRIC AND THERMAL TRAITS LINKED?
- 11:45 **Rugenski, A. T.**; Whiles, M. R.; Vanni, M. J.: VARIATION IN INVERTEBRATE COMMUNITY STRUCTURE AND STOICHIOMETRIC HOMEOSTASIS IN PRE- AND POST-AMPHIBIAN DECLINE TROPICAL STREAMS*
- 13:30 Golembieski, M.; Stephens, J. P.; **Stoler, A. B.**; Raffle, T. R.: DIFFERENTIAL ASSIMILATION OF LEAF LITTER RESOURCES BY COMMON WETLAND CONSUMERS^T
- 13:45 **Capps, K. A.**; Berven, K. A.; Tiegs, S. D.: MODELING NUTRIENT TRANSPORT AND TRANSFORMATION BY VERNAL POOL-BREEDING AMPHIBIANS IN FORESTED LANDSCAPES
- 14:00 **Moore, J. W.**; Olden, J. D.: RESPONSE DIVERSITY AND NON-NATIVE SPECIES BUFFER STREAM ECOSYSTEMS FROM ANTHROPOGENIC CHANGE*
- 14:15 **Hebert, A. S.**; Scott, D. C.; Harris, S. L.; Weir, T.: A MULTI-STEP APPROACH TO RESTORING ANADROMY IN ALOUETTE RESERVOIR (BRITISH COLUMBIA): UNDERSTANDING NUTRIENT FLUXES OF OUR MANAGEMENT ACTIVITIES^T
- 14:30 **Spooner, D. E.**; Hamilton, D.: CONSUMER RESOURCE PROVISIONING ACROSS NITROGEN GRADIENTS: THE MICROBIAL CONNECTION.
- 14:45 **Caceres-Velazquez, H.**; Jones, S.: RESOURCE RECYCLING BY PREDATORS BENEFITS DEFENSE SPECIALISTS IN MICROBIAL COMPETITION^T
- 15:00 **Narr, C. F.**; Frost, P. C.: DISEASE INDUCED CHANGES IN CONSUMER NUTRIENT RELEASE

- 15:15 **Ginger, L. J.**; Rock, A. M.; Vanni, M. J.; González, M. J.: ONTOGENETIC CHANGES IN THE STOICHIOMETRY OF BLUEGILL UNDER CONTRASTING NUTRIENT AND LIGHT REGIMES*
- 16:00 **Trentman, M. T.**; Dodds, W. K.; Gido, K.; Rueegg, J.; Ruffing, C.: WATERSHED POSITION, HABITAT HETEROGENEITY, AND MACRO CONSUMERS AFFECT ECOSYSTEM RATES AT PATCH SCALES.*
- 16:15 **Childress, E. S.**; McIntyre, P. B.: ECOSYSTEM EFFECTS OF ITEROPAROUS SUCKER MIGRATIONS IN STREAMS*
- 16:30 **Villéger, S.**; Argenty, J.; Bouvier, C.; Carré, C.; Bouvier, T.: NUTRIENT RECYCLING BY MARINE FISHES AFFECTS ABUNDANCE AND DIVERSITY OF BACTERIO- AND PHYTOPLANKTON*
- 16:45 **Zandona, E.**; Thomas, S. A.; Pereira, C. L.; Tromboni, E.; Cunha, P. O.; Moulton, T. P.: CONSUMER-MEDIATED NUTRIENT RECYCLING IN BRAZILIAN COASTAL STREAMS*
- 17:00 **McLeod, A. M.**; Drouillard, K. G.; Haffner, G. D.: THE OFF-SHORE SHUNT: THE INFLUENCE OF LAKE TROUT ON NUTRIENT RECYCLING^T
- 17:15 **Subalusky, A. L.**; Dutton, C. L.; Rosi-Marshall, E. J.; Post, D. M.: WILDEBEE ST MASS DROWNINGS AFFECT NUTRIENT DYNAMICS AND METABOLISM IN THE MARA RIVER
- 17:30 **Nowlin, W. H.**; Loney, L. L.; Hutchins, B. T.; Schwartz, B. F.: STOICHIOMETRY, CONSUMER DRIVEN NUTRIENT RECYCLING, AND FOOD WEB STRUCTURE IN A SUBTERRANEAN AQUIFER STYGOBIONT COMMUNITY*
- 17:45 **Schroer, M. A.**; Baker, M. A.; Hall, R. O.; Rosi-Marshall, E. J.; Tank, J. L.: INVERTEBRATE-DRIVEN NUTRIENT CYCLING IN FOUR LARGE RIVERS^T

040 Ecological Processes Of Aquatic Systems In Winter

Chair(s): Cailin Huyck Orr, chorr@wsu.edu
 Alexander K. Fremier, alex.fremier@wsu.edu

Location: B 116

- 16:00 **Blackadar, R. J.**; Baxter, C. V.; Davis, J. M.: RIVER ICE DISTURBANCE: EFFECTS ON ORGANIC-MATTER DYNAMICS AND FEEDING ECOLOGY OF AQUATIC INSECTS*
- 16:15 **Mazack, J. E.**; Vondracek, B.; Ferrington, Jr., L. C.: OVERWINTER EMERGENCE DYNAMICS OF ADULT CHIRONOMIDAE (INSECTA: DIPTERA) IN GROUNDWATER-FED STREAMS OF SOUTHEASTERN MINNESOTA
- 16:30 Cochran-Biederman, J.; French, W.; Mazack, J.; **Vondracek, B.**: SEASONAL ECOLOGY OF BROWN TROUT AND AQUATIC INVERTEBRATE COMMUNITIES IN GROUNDWATER DOMINATED STREAMS OF SOUTHEASTERN MINNESOTA
- 16:45 **White, J. R.**; Cadieux, S. B.; Schütte, U. M.; Young, S. A.; Peng, Y.; Pratt, L. M.: PHOTOTROPHIC PURPLE SULFUR BACTERIA IN A DILUTE DIMICTIC ARCTIC LAKE UNDER ICE COVER WITH SUB-MICROMOLAR SULFIDE
- 17:00 **Mejia, F. H.**; Baxter, C. V.; Fremier, A. K.; Bellmore, J. R.; Berntsen, E. K.: EFFECTS OF HYPORHEIC EXCHANGE ON THE GROWTH OF POST-EMERGENT CHINOOK SALMON IN WINTER AND EARLY SPRING

^(T) represents Tutorial presentations

- 17:15 **Anderson, A. M.**; Bouchard, R. W.; Mazack, J. E.; Kranzfelder, P.; Ferrington, L. C.: DYNAMICS OF WINTER EMERGING CHIRONOMIDAE (DIPTERA) IN MIDWESTERN TROUT STREAMS: A SUMMARY OF OVER 15 YEARS OF RESEARCH
- 17:30 **North, R. L.**; Baulch, H.; Vandergucht, D.; Sereda, J.; Lindenschmidt, K. E.; Guildford, S.; Davies, J. M.; Hudson, J.: THE INTERACTING EFFECTS OF LIGHT AND NUTRIENTS ON UNDER-ICE PHYTOPLANKTON POPULATIONS
- 17:45 **Baulch, H. M.**; North, R. L.; Cavaliere, E.; Hudson, J.: BIOGEOCHEMICAL UNDER ICE IN PRAIRIE POTHOLES

050 Emergent Insects As Focal Taxa For Bridging Ecological Understanding Across Ecosystems: A Synthesis Of Current Knowledge And Novel Applications

Chair(s): Jeffrey D. Muehlbauer, jmuehlbauer@usgs.gov
Theodore A. Kennedy, tkennedy@usgs.gov

Location: B 115

- 13:30 **Collins, S. F.**; Baxter, C. V.; Marcarelli, A. M.; Wipfli, M. S.; Florin, S.; Felicetti, L.; Servheen, G.: DIRECT AND INDIRECT RESPONSES OF STREAM AND RIPARIAN ORGANISMS TO EXPERIMENTAL SUBSIDIES OF SALMON *
- 13:45 **Uno, H.**; Power, M. E.: RESOURCE SUBSIDY FROM PRODUCTIVE MAINSTEMS TO UNPRODUCTIVE TRIBUTARIES BY MIGRATORY MAYFLIES SUSTAIN SALMONID JUVENILES REARING IN COOL TRIBUTARIES *
- 14:00 **Richardson, W. B.**; Knights, B. C.; Kelly, P. T.; Haro, R. J.: LIPID FLUX FROM THE UPPER MISSISSIPPI (UMR) AND ILLINOIS RIVERS (IR) BY INSECT EMERGENCE: EFFECT OF ASIAN CARP AND USE BY TREE SWALLOWS
- 14:15 **Walters, D. M.**; Zuellig, R. E.; Kowalski, D. A.; Wesner, J. S.: QUANTIFYING THE EMERGENCE OF GIANT STONEFLY (PTERONARCYS CALIFORNICA) AND ITS IMPORTANCE TO TERRESTRIAL FOODWEBS IN THE U.S. WESTERN RIVERS*
- 14:30 **Muehlbauer, J. D.**; Kennedy, T. A.; Smith, J. T.; Sankey, J. B.; Kortenhoeven, E. W.: ADVANCES IN EMERGENT INSECT SAMPLING: NEW STICKY TRAP DESIGNS AND AUTOMATED SAMPLE PROCESSING
- 14:45 **Compson, Z. G.**; Ford, A. C.; Wojtowicz, T.; Adams, K. J.; Meneses, N.; Whitham, T. G.; Marks, J. C.: AQUATIC EMERGENT INSECT COMMUNITIES ARE MORE SIMILAR ON GENETICALLY SIMILAR TREE GENOTYPES: SUPPORT FOR THE GENETIC SIMILARITY RULE
- 15:00 **Li, J.**; Gerth, W.; Johnson, S.; Schulze, M.: A FIVE-YEAR STUDY OF TEMPORAL AND SPATIAL DIFFERENCES IN AQUATIC EMERGENCE AT H. J. ANDREWS EXPERIMENTAL FOREST HEADWATER STREAMS*
- 15:15 **Kennedy, T. A.**; Muehlbauer, J. D.; Yackulic, C. B.; Kortenhoeven, E. W.; Metcalfe, A. N.: FLOW MANAGEMENT IS A PRIMARY CONTROL ON INSECT EMERGENCE IN THE COLORADO RIVER IN GRAND CANYON
- 16:00 **Wesner, J. S.**; Kraus, J. M.; Schmidt, T. S.; Walters, D. M.; Clements, W. H.: THE EFFECTS OF AQUEOUS ZINC EXPOSURE ARE ENHANCED DURING MAYFLY METAMORPHOSIS IN THE LAB*

- 16:15 **Schmidt, T. S.**; Mebane, C. A.; Balistrieri, L. S.: EMERGENCE DYNAMICS ALTERED BY DISSOLVED CADMIUM AND ZINC IN A 30-DAY MESOCOSM EXPERIMENT*
- 16:30 **Smith, J. G.**; Baker, T. E.; Jett, R. T.: CROSS-ECOSYSTEM FLUX OF SELENIUM BY EMERGING MAYFLIES DOWNSTREAM OF A COAL ASH SPILL
- 16:45 **Speir, S. L.**; Chumchal, M.; Drenner, R.; Cocke, G.; Lewis, M.; Whitt, H.: METHYL MERCURY IN EMERGENT AQUATIC INSECTS AND TERRESTRIAL SPIDERS REVEALS LINKAGE BETWEEN AQUATIC AND TERRESTRIAL ECOSYSTEMS
- 17:00 **Chumchal, M. M.**; Drenner, R. W.; Adams, K.: EMERGENT INSECT-MEDIATED MERCURY FLUX FROM ARTIFICIAL PONDS OF THE GREAT PLAINS IN A CHANGING CLIMATE
- 17:15 **Kraus, J. M.**; Walters, D. M.; Wesner, J. S.; Stricker, C. A.; Schmidt, T. S.: METAMORPHOSIS IN INSECTS ALTERS RISK OF CONTAMINANT EXPOSURE IN FOOD WEBS*

056 Linking Anthropogenic Stressors With Coastal And Freshwater Plankton Community Dynamics In A Changing World

Chair(s): Dianne I. Greenfield, dgreenfield@belle.baruch.sc.edu
Gillian M. Stewart, Gillian.Stewart@qc.cuny.edu
Tawnya Peterson, peterson@stccmop.org
Julie E. Keister, jkeister@u.washington.edu

Location: B 115

- 10:00 **Rogalski, M. A.**; Skelly, D. K.; Leavitt, P. R.: POLLUTION IMPACTED *DAPHNIA* COMMUNITIES BECAME MORE SIMILAR AND MORE DIVERSE DURING THE ANTHROPOCENE
- 10:15 **Callieri, C.**; Bertoni, R.; Contesini, M.; Bertoni, F.: LAKE LEVEL FLUCTUATIONS BOOST TOXIC CYANOBACTERIA "OLIGOTROPHIC BLOOM"
- 10:30 **Wisniewski, N. L.**; Keppler, C.; Reed, M.; Greenfield, D. I.: THE INFLUENCE OF NITROGEN FORM ON THE COMMUNITY COMPOSITION OF HARMFUL CYANOBACTERIA IN MANAGED COASTAL SYSTEMS
- 10:45 **McLaskey, A. K.**; Keister, J. E.; Winans, A. K.; McElhany, P.; Busch, D. S.; Maher, M.; Lambert, J. E.: THE EFFECTS OF ELEVATED PCO2 ON THE HATCHING AND EARLY DEVELOPMENT OF EUPHAUSIA PACIFICA AND CALANUS PACIFICUS
- 11:00 **Evans, M. A.**; Greene, K.: THERMAL AND CHEMICAL CAUSES OF HARMFUL ALGAL BLOOM (HAB) INITIATION
- 11:15 **Greenfield, D. I.**; Reed, M.; Maldonado, D.; Keppler, C.: RELATING LAND USE PATTERNS WITH PHYTOPLANKTON RESPONSES TO NITROGEN AND PHOSPHORUS ALONG A DEVELOPING COASTLINE: CASE STUDY OF FOUR SOUTH CAROLINA SYSTEMS
- 11:30 Jochimsen, M. C.; Kümmerlin, R.; **Straille, D.**: EFFECTS OF CHANGES IN LAKE TROPHY AND CLIMATE VARIABILITY ON PHYTOPLANKTON SEASONALITY IN A DEEP LAKE
- 11:45 **Webber, C. M.**; Chizinski, C. J.; Alexander, R. J.; Burgin, A. J.: PHYTOPLANKTON COMMUNITY RESPONSE TO ALUM LAKE RESTORATIONS IN THE MIDWESTERN U.S.

064 The Science And Management Of Environmental Flows: Recent Developments And Remaining Challenges

Chair(s): Siobhan C de Little, siobhan.delittle@unimelb.edu.au
J Angus Webb, angus.webb@unimelb.edu.au
Leslie Bach, lbach@tnc.org
Mike Acerman, man@ceh.ac.uk

Location: A 106

- 13:30 **Apse, C. D.**; Kendy, E.; Smith, M. P.; Blann, K.: CAN GOOD SCIENCE GET IN THE WAY OF EFFECTIVE POLICY? IMPLEMENTATION OF ENVIRONMENTAL FLOW PROTECTION IN THE UNITED STATES *
- 13:45 **Ashworth, B.**: JUSTIFYING ENVIRONMENTAL WATER RECOVERY THROUGH EFFICIENT AND EFFECTIVE USE – PRACTICAL LESSONS FROM SOUTH-EASTERN AUSTRALIA*
- 14:00 **Bach, L.**; Aldous, A.: ADVANCING ENVIRONMENTAL FLOWS AND LEVELS PROTECTIONS: FROM SCIENCE TO POLICY TO IMPLEMENTATION
- 14:15 **Lay, P.**: ENVIRONMENTAL OUTCOMES – CAN WE SUBSTITUTE INFRASTRUCTURE FOR ENVIRONMENTAL WATER?*
- 14:30 **Peat, M. S.**; Nicols, S. J.; Johnson, B.; Dyer, F.; Briggs, S.; Moon, K.: EMBRACING AN EVIDENCE-BASED APPROACH TO INFORM ENVIRONMENTAL WATER POLICY: CAN IT WORK?
- 14:45 **Martin, D. M.**; Poff, N. L.: AN INTEGRATIVE FRAMEWORK TO SUPPORT ENVIRONMENTAL FLOW ASSESSMENT AND DECISION-MAKING*
- 15:00 **Powell, S. J.**; Nichols, S. J.; de Little, S. C.; Webb, J. A.; Adams, G.: MULTI-OBJECTIVE OPTIMISATION FOR ENVIRONMENTAL FLOW DELIVERY.*
- 15:15 **Webb, J. A.**; Stewardson, M. J.; Miller, K. A.; de Little, S. C.: PREDICTIONS OF ECOLOGICAL RESPONSES TO ENVIRONMENTAL FLOWS: EVALUATION OF A METHOD THAT SYNTHESIZES LITERATURE EVIDENCE, EXPERT OPINION AND MONITORING DATA
- 16:00 **Morrison, R. R.**; Stone, M. C.: COUPLING TWO-DIMENSIONAL HYDRODYNAMIC AND BAYESIAN NETWORK MODELING TO ASSESS ENVIRONMENTAL IMPACTS OF RIVER MANAGEMENT ALTERNATIVES*
- 16:15 **de Little, S. C.**; Webb, J. A.; Miller, K. A.; Stewardson, M. J.; Rutherford, I. D.; Poff, N. L.: USING BAYESIAN HIERARCHICAL MODELS TO MAXIMISE DETECTION OF ECOLOGICAL RESPONSES TO ENVIRONMENTAL FLOWS.
- 16:30 **Wagner, B. J.**; Gannett, M. W.: GROUNDWATER MANAGEMENT IN THE UPPER KLAMATH BASIN, OREGON AND CALIFORNIA: BALANCING THE BENEFITS OF GROUNDWATER FOR AGRICULTURE AND AQUATIC WILDLIFE*
- 16:45 **Stewart-Koster, B.**; Olden, J. D.; Gido, K. B.: BEYOND HYDROLOGIC METRICS: USING FUNCTIONAL DATA ANALYSIS TO MODEL FLOW-ECOLOGY RELATIONSHIPS
- 17:00 **Koster, W.**: THE IMPORTANCE OF SCIENCE AND RESEARCH IN DEVELOPING EFFECTIVE ENVIRONMENTAL FLOW REGIMES FOR NATIVE FISH IN REGULATED RIVERS*

- 17:15 **Jähnig, S. C.**; Kuemmerlen, M.; Domisch, S.; Portmann, F.; Pauls, S. U.; Haase, P.; Döll, P.: QUANTIFYING HYDROLOGICAL DISCHARGE CHARACTERISTICS FOR BENTHIC INVERTEBRATES IN EUROPE
- 17:30 **Nichols, S. J.**; Robinson, W. A.; Powell, S. J.: DEVELOPMENT OF FLOW-INVERTEBRATE RESPONSE FUNCTIONS FOR MULTI-OBJECTIVE OPTIMIZATION: MODELLING ECO-HYDROLOGY AND CONSUMPTIVE WATER ALLOCATION
- 17:45 **Lynch, D. T.**; Magoulick, D. D.: ECOLOGICAL FLOW-RESPONSE RELATIONSHIPS IN THE OZARK HIGHLANDS

066 Integrated Analyses Of Terminal Lakes And Wetlands: Physics To Phragmites

Chair(s): Wayne Wurtsbaugh, wayne.wurtsbaugh@usu.edu
Karin Kettenring, karin.kettenring@usu.edu
Sudeep Chandra, limnosudeep@me.com
Sarah Null, sarah.null@usu.edu

Location: C 120 - 122

- 16:00 **Kettenring, K. M.**; Long, A. L.; Rohal, C. B.; Cranney, C.; Hazelton, E. L.; Mock, K. E.: RESTORATION OF PHRAGMITES-DOMINATED WETLANDS OF THE GREAT SALT LAKE*
- 16:15 **Null, S. E.**; Wurtsbaugh, W. A.; Miller, C.; White, J.; Tarboton, D. G.: FLOW AND SALT MANAGEMENT ALTERNATIVES FOR UTAH'S GREAT SALT LAKE *
- 16:30 **Wurtsbaugh, W. A.**; Jones, E. F.: A TOXIC AND DYNAMIC DEEP BRINE LAYER (MONIMOLIMNION) IN THE GREAT SALT LAKE*
- 16:45 **Barnes, B. D.**; Wurtsbaugh, W. A.: SALINITY-INDUCED CHANGES IN PLANKTONIC AND BENTHIC COMMUNITIES OF THE GREAT SALT LAKE, UTAH: A MESOCOSM EXPERIMENT*
- 17:00 **Herbst, D. B.**; Medhurst, R. B.; Bell, I. D.: TRANSITIONS IN BENTHIC INVERTEBRATE COMMUNITIES OF TERMINAL LAKES IN RELATION TO RISING SALINITY CAUSED BY WATER DIVERSIONS AND DROUGHT*
- 17:15 **Barnes, J. R.**; Chandra, S.; Cowan, W. F.: REVIEW OF LIFE HISTORY AND ECOSYSTEM CHARACTERISTICS OF LACUSTRINE LAHONTAN CUTTHROAT TROUT POPULATIONS *
- 17:30 **Bright, E. G.**; Bergery, E. A.: THE SPATIAL DISTRIBUTION AND SOIL DEPTH OF RESTING STAGES OF AQUATIC INVERTEBRATES IN PLAYAS*
- 17:45 **Kuo, P. H.**; Wang, H. W.; Kuo, P. H.; Yang, C. Y.: OPPORTUNITY FOR ENHANCING WATERFOWL POPULATION BY GATE OPERATION AT BUDAI SALT PAN WETLAND*

077 Ecological Targets For Water Quality Management

Chair(s): Michael Paul, Michael.Paul@tetrattech.com
R. Jan Stevenson, rjstev@cns.msu.edu
Jeroen Gerritsen, Jeroen.Gerritsen@tetrattech.com
Scot Hagerthey, hagerthey.scot@epa.gov

Location: A 105

- 10:00 **Jackson, S. K.**; Hagerthey, S. E.: ECOLOGICAL TARGETS FOR WATER QUALITY MANAGEMENT
- 10:15 **Charles, D. F.**; Hausmann, S.; Belton, T. J.: A BIOLOGICAL CONDITION GRADIENT APPROACH FOR USING DIATOMS TO DEVELOP NUTRIENT CRITERIA OPTIONS: NEW JERSEY STREAMS

^(*) represents Tutorial presentations

- 10:30 **Santavy, D. L.**; Bradley, P.; Gerritsen, J.; Jackson, S. K.; Fisher, W. S.: USING A BIOLOGICAL CONDITION GRADIENT FRAMEWORK TO ASSESS ECOSYSTEM
- 10:45 Qian, S. S.; Cuffney, T. F.; **Becker, R. H.**; Jackson, S. K.; Cousino, L. K.: A HIERARCHICAL MODELING APPROACH FOR SCREENING STREAM BIOLOGICAL CONDITIONS
- 11:00 **Poikane, S.**: INTERCALIBRATION OF LAKE ECOLOGICAL ASSESSMENT METHODS: COMPARING THE INCOMPARABLE?
- 11:15 **Yuan, L. L.**; Linke, S.; Jackson, S. K.: CONSIDERING REGIONAL BIODIVERSITY WHEN SELECTING REFERENCE SITES
- 11:30 **Pather, S.**; Shumchenia, E.; Cicchetti, G.; Pelletier, M.; Bradley, P.; Santavy, D.; Jackson, S.: THE EFFECTS OF STRESSORS ON ECOSYSTEM FUNCTION AND CONNECTIVITY IN CORAL REEF AND ESTUARINE SYSTEMS: A REVIEW
- 13:30 **Stevenson, R. J.**: AN EFFECTS-BASED AND RISK-BASED APPROACH FOR ESTABLISHING BIOLOGICAL CRITERIA FOR TIERED AQUATIC LIFE USES
- 13:45 **Qian, S. S.**: STATISTICS CONSIDERATIONS IN DETECTING AND QUANTIFYING ECOLOGICAL THRESHOLDS
- 14:00 **Wagenhoff, A.**; Clappcott, J. E.; Goodwin, E. O.; Young, R. G.: IN SEARCH OF ECOLOGICAL THRESHOLDS – WHAT CAN WE LEARN FROM STRESSOR-RESPONSE RELATIONSHIPS TO INFORM LIMIT SETTING IN STREAMS?
- 14:15 **Smucker, N. J.**; Detenbeck, N. E.: LANDSCAPE SOURCES, ECOLOGICAL EFFECTS, AND MANAGEMENT OF NUTRIENTS IN LAKES OF NORTHEASTERN USA
- 14:30 **Carpenter, S.**: CHANGING FREQUENCY OF EXTREME P LOADS AND THRESHOLDS OF EUTROPHICATION
- 14:45 **Grantz, E. M.**; Haggard, B. E.; Scott, J. T.: CENSORED DATA MAY OBSCURE LOW-RANGE NUTRIENT THRESHOLDS IN RESERVOIRS
- 15:00 **Newman, S.**; Hagerthey, S. E.; Osborne, T. Z.; Rutchey, K.; Reddy, K. R.: THE MANY REGIMES OF THE EVERGLADES: PUTTING CONTEXT TO PHOSPHORUS THRESHOLDS AND MANAGEMENT GOALS
- 15:15 **Hagerthey, S. E.**; Newman, S.; Black, K.: EVERGLADES NUTRIENT AND ECOHYDROLOGIC MANAGEMENT: AN ALGAL-BASED NUMERICAL METHOD TO SIMULTANEOUSLY ASSESS MULTIPLE STRESSORS, TARGETS, AND THRESHOLDS
- 16:00 **Gaiser, E.**; Lee, S.; Trexler, J.: ESTABLISHING ECOLOGICAL TARGETS IN ECOSYSTEMS WITH CASCADING THRESHOLD RESPONSES TO NUTRIENT POLLUTION
- 16:15 **Fennessy, M. S.**; Wardrop, D. H.; Moon, J. B.; Britson, A.: DETERMINING THRESHOLDS IN THE PROVISION OF WETLAND ECOSYSTEM SERVICES: THE UTILITY OF LANDSCAPE AND SITE-LEVEL MEASURES OF CONDITION AND STRESSORS
- 16:30 **Paul, M. J.**; Rosemond, A. D.; Davis, J.: BROWN IS THE NEW GREEN: ENRICHMENT EFFECTS ON INVERTEBRATES THROUGH DETRITAL PATHWAYS
- 16:45 **Rosemond, A. D.**; Benstead, J. P.; Maerz, J. C.; Gulis, V.; Kominoski, J. S.; Manning, D. W.; Norris, K. G.: WHOLE-STREAM CARBON RETENTION DECREASES WITH NITROGEN AND PHOSPHORUS CONCENTRATIONS
- 17:00 **Viggiano, M. V.**; Sotomayor, D.; Martinez, G. A.: TEMPORAL VARIATION OF PERIPHYTON BIOMASS AS INDICATOR OF TROPHIC STATUS
- 17:15 **Baker, M. E.**; King, R. S.: UNDERSTANDING COMMUNITY RESPONSE TO NOVEL ENVIRONMENTS THROUGH TAXON-SPECIFIC CHANGE: UPDATES TO THRESHOLD INDICATOR TAXA ANALYSIS
- 17:30 **Voss, K. A.**; King, R. S.; Bernhardt, E. S.: FROM A LINE IN THE SAND TO A LANDSCAPE OF DECISIONS: ESTIMATING BIODIVERSITY LOSS IN CENTRAL APPALACHIAN STREAMS
- 17:45 **Roark, S. A.**; Lynch, J. S.; Smith, E. R.; De Jong, G. D.; Kovach, A. K.; Canton, S. P.: THE USE OF FINE SEDIMENT TOLERANCE VALUES TO ASSESS SEDIMENT EFFECTS IN COLORADO STREAMS: EVALUATION OF COUNFOUNDING FACTORS
- 18:00 **Hubler, S. L.**; Michie, R.: MODELING MACROINVERTEBRATE OPTIMA TO IDENTIFY FINE SEDIMENT AS A CAUSE OF IMPAIRMENT IN OREGON'S MID-COAST BASIN
- 18:15 **Huff, L. F.**; Linton, T.; Delos, C.; Beaman, J.; Taulbee, K.: AQUATIC LIFE AMBIENT WATER QUALITY CRITERIA FOR AMMONIA TO PROTECT FRESHWATER ECOSYSTEMS
- 084 Beyond Graduate Research: Disseminating Scientific Knowledge**
 Chair(s): Christine M. VanZomeren, cvanzomeren@ufl.edu
 Lisa G. Chambers, chamberslg@slu.edu
 Location: E 145 - 146
- 10:00 **Otte, M. L.**: THE CHANGING LANDSCAPE OF PUBLISHING IN SCIENCE*
- 10:15 **Brown, B. N.**: DATASETS FOR AQUATIC SCIENCE: A PRELIMINARY INVESTIGATION OF USE, CITATION, AND REPOSITORIES
- 10:30 **Connolly, K. D.**: TALKING THE TALK TO LAWYERS AND POLICYMAKERS: FRAMING SCIENTIFIC WORK TO INFORM LAW AND POLICY DEVELOPMENT*
- 10:45 **Leyda, J. D.**: INFLUENCING POLICY THROUGH THE JUDICIAL SYSTEM – EXPERT WITNESSING*
- 11:00 **Mason, C.**; McGarvey, D. J.: EESP 2.0 – AN INTERDISCIPLINARY EFFORT TO MERGE ECOLOGICAL AND ENVIRONMENTAL SCIENCE WITH ART IN THE CITY OF TATTOOS
- 11:15 **Baker, L. J.**; Kemp, P. F.: ECO-DAS: ACCELERATED COLLABORATION AND CAREER PREP FOR NEW SCIENTISTS
- 11:30 Irvine, K.; **Van Dam, A. A.**; Kipkemboi, J.; Okeyo-Owuor, J. B.; Zaal, A. M.; Gettel, G. M.: COLLABORATIVE RESEARCH AND CAPACITY DEVELOPMENT FOR WETLAND MANAGEMENT IN AFRICA
- 11:45 **Bergey, E.**: AN AQUATIC SCIENCE FULBRIGHT EXPERIENCE IN THAILAND

086 What Have We Learned About Tropical Streams? How Will They Be Affected By Climate Change?

Chair(s): Alan Covich, alanc@uga.edu
Alonso Ramirez, aramirez@ites.upr.edu,

Location: B 114

- 16:00 **Moulton, T. P.**; Sato, C. Y.; Lima, V. N.; Pereira, C. L.; Heatherly, T.; Zandonà, E.: IS TROPICAL PERIPHYTON DIFFERENT, AND IF SO, WHAT DOES THIS MEAN FOR CLIMATE WARMING?
- 16:15 **Encalada, A. C.**; Salgado, C. A.; Celinscak, M.; Graca, M. A.; Guayasamin, J. M.; Flecker, A.; Poff, L. N.: LITTER DECOMPOSITION ALONG LATITUDINAL AND ALTITUDINAL GRADIENTS: THE ROLE OF TEMPERATURE AND ECOLOGICAL PLAYERS
- 16:30 **Gill, B. A.**; Kondratieff, B. C.; Encalada, A. C.; Poff, N. L.; Funk, W. C.: HAS HISTORICAL CLIMATIC VARIABILITY IMPACTED CONTEMPORARY ELEVATIONAL DISTRIBUTIONS OF MOUNTAIN STREAM INSECTS?
- 16:45 **Perez-Reyes, O.**; Crowl, T. A.; Covich, A. P.: CLIMATE CHANGE IMPACTS ON CARIBBEAN TROPICAL STREAMS: IMPLICATIONS ON THE AMPHIDROMOUS LIFE CYCLE
- 17:00 **Torres, P. J.**; Chappell, J. C.; Pringle, C. M.: CARIBBEAN ISLAND STREAMS AMONG THE BIGGEST LOSERS IN THE CLIMATE CHANGE GAME: LESSONS FROM PUERTO RICO
- 17:15 **Novak, P. A.**; Douglas, M. M.; Garcia, E. A.; Bayliss, P.: THE IMPORTANCE OF NATURAL FLOW TO THE RECRUITMENT SUCCESS OF AN AMPHIDROMOUS SHRIMP IN TROPICAL NORTHERN AUSTRALIA
- 17:30 **Rosas, K. G.**; Colón-Gaud, J. C.; Ramírez, A.: A CASE FOR DEVELOPING LONG-TERM MACROINVERTEBRATE ASSEMBLAGE DATASETS IN HEADWATER STREAMS AT THE LUQ-LTER, PUERTO RICO
- 17:45 **Terra, B.**; McGarvey, D. J.: SPECIES-DISCHARGE RELATIONSHIPS FOR TROPICAL AND TEMPERATE FISHES OF THE WESTERN HEMISPHERE

091 Resilience Of Future Wetlands To Climate Change

Chair(s): Beth Middleton, middletonb@usgs.gov
Christopher Joyce, CB.Joyce@brighton.ac.uk

Location: Oregon Ballroom

- 16:00 **Middleton, B. A.**: MONSOONAL WETLAND SPECIES IN A FUTURE OF DROUGHT, FLOODING AND LAND USE INTENSIFICATION: A RETROSPECTIVE
- 16:15 **Murphy, C. J.**: ADAPTING TO A DRIER FUTURE: EMBRACING CHANGES IN THE FUNCTIONS OF IRRIGATION-SUPPORTED MANAGED WETLANDS
- 16:30 **Nassry, M. Q.**; Wardrop, D. H.; Hamilton, A. T.; Duffy, C. J.; Yu, X.; West, J. M.: RELATIVE WETLAND VULNERABILITY TO CLIMATE CHANGE ACROSS ECOREGIONS AND HGM CLASSES
- 16:45 **Normand, A. E.**; Smith, A. N.; Clark, M. W.; Reddy, K. R.: CHEMICAL COMPOSITION OF SOIL ORGANIC MATTER IN A SUBARCTIC PEATLAND: INFLUENCE OF SHIFTING VEGETATION COMMUNITIES DUE TO INCREASED INUNDATION
- 17:00 **Cherry, J. A.**; Ramseur, G. S.; Sparks, E. L.; Cebrian, J.: TESTING SEA-LEVEL RISE IMPACTS IN TIDAL WETLANDS: A NEW EXPERIMENTAL APPROACH

- 17:15 **Poppe, K. L.**; Rybczyk, J. M.: SIMULATING THE RESPONSE OF PADILLA BAY'S EELGRASS HABITAT TO RISING SEA LEVELS USING AN INTEGRATED FIELD AND MODELING APPROACH
- 17:30 **Currin, C. A.**; Davis, J. L.; Morris, J. T.: IN ADDITION INCREASES NET SURFACE ELEVATION CHANGE IN A NORTH CAROLINA ESTUARY
- 17:45 **Janousek, C. N.**; Mayo, C.; Thorne, K. M.; Takekawa, J. Y.: INTERSPECIFIC AND GEOGRAPHIC VARIABILITY IN ELEVATION-PRODUCTIVITY RELATIONSHIPS IN NORTHEAST PACIFIC TIDAL MARSHES

102 Assessing The Ecologic Condition Of Wetlands At National, Regional, And State Scales: Results From The National Wetland Condition Assessment And Associated Studies

Chair(s): Gregg Serenbetz, serenbetz.gregg@epa.gov
Mary Kentula, kentula.mary@epa.gov

Location: E 142 - 144

- 16:00 **Kentula, M. E.**: ANALYSIS AND REPORTING FOR THE 2011 NATIONAL WETLAND CONDITION ASSESSMENT*
- 16:15 **Magee, T. K.**; Fennesy, M. S.; Blocksom, K. A.; Sullivan, R. L.; Kirchner, N. M.: EVALUATING VEGETATION IN THE NATIONAL WETLAND CONDITION ASSESSMENT*
- 16:30 **Nahlik, A. M.**; Kentula, M. E.; Herlihy, A. T.; Magee, T. K.: NATIONAL RESULTS FROM THE 2011 NATIONAL WETLAND CONDITION ASSESSMENT (NWCA) SOILS ANALYSIS*
- 16:45 **Treibitz, A.**; Nestlerode, J.; Blocksom, K.; Serenbetz, G.: NATIONAL PATTERNS IN WETLAND WATER QUALITY FROM THE 2011 NWCA*
- 17:00 **Herlihy, A. T.**; Sifneos, J. C.: ASSESSING STRESSOR RELATIVE RISK FROM REGIONAL WETLAND PROBABILITY SURVEY DATA*
- 17:15 **Meyers, L. M.**; DeKeyser, E. S.; Norland, J. E.; Hargiss, C. L.; DeSutter, T.: THE NWCA INTENSIFICATION IN NORTH DAKOTA*
- 17:30 **Clark, C.**: ASSESSING CALIFORNIA'S WETLANDS: RESULTS FROM THE 2011 NATIONAL WETLAND CONDITION ASSESSMENT*
- 17:45 **Smeenk, N. A.**; Allen, C. R.; LaGrange, T.: THE ECOLOGICAL CONDITION OF NEBRASKA'S WETLANDS: AN INTENSIFICATION OF THE ENVIRONMENTAL PROTECTION AGENCY'S 2011 NATIONAL WETLAND CONDITION ASSESSMENT*

106 Assessing Effects Of Conservation Practices And Programs On Wetland Ecosystem Services

Chair(s): David M. Mushet, dmushet@usgs.gov
Sharon N. Kahara, Sharon.Kahara@humboldt.edu
William R. Effland, William.Effland@wdc.usda.gov

Location: E 142 - 144

- 13:30 **Johnson, M. V.**; Effland, W. R.: OPPORTUNITIES AT THE NEXUS BETWEEN THE CROPLAND AND WETLAND COMPONENTS OF THE USDA-NRCS CONSERVATION EFFECTS ASSESSMENT PROJECT (CEAP)
- 13:45 **Kahara, S. N.**; Duffy, W. G.; DiGaudio, R.; Records, R.: MANAGEMENT VERSUS LANDSCAPE IMPACTS ON AVIAN OCCURRENCE IN RESTORED WETLANDS IN CALIFORNIA'S CENTRAL VALLEY

- 14:00 **Daniel, D. W.**; Smith, L. M.; McMurry, S. T.; Tangen, B. A.; Dahl, C. F.: EFFECTS OF LAND USE ON GREENHOUSE GAS FLUXES IN PLAYA WETLANDS AND ASSOCIATED WATERSHEDS
- 14:15 **De Steven, D.**; Keeland, B. D.; Faulkner, S. P.; Baldwin, M.; McCoy, J.: EVALUATING UNDERSTORY PLANT DIVERSITY OF WETLANDS RESERVE PROGRAM RESTORATIONS IN THE MISSISSIPPI ALLUVIAL VALLEY
- 14:30 **Lang, M. W.**; Weber, K. J.; Strano, S. V.; McCarty, G. W.; Rizzo, A. D.: QUANTIFYING THE EFFECTS OF WETLAND RESTORATION USING SYNTHETIC APERTURE RADAR
- 14:45 **Kiniry, J. K.**; Williams, A. S.; Johnson, M. V.: ENABLING PROCESS-BASED SIMULATION MODELING OF WETLANDS VIA DEVELOPMENT OF PHYSIOLOGICAL PARAMETERS FOR WETLAND PLANTS.
- 15:00 **McFarland, E. K.**; Baldwin, A. H.; Whigham, D. H.; Lang, M.: A COMPARISON OF SEED BANK AND VEGETATION-ONLY SURVEYS FOR EFFICACY IN EVALUATING PLANT BIODIVERSITY IN RESTORED AND NATURAL WETLANDS
- 15:15 **Bakker, J. D.**; Whigham, D. F.: IDENTIFYING REFERENCE CONDITIONS AND EXPLORING TRAIT-BASED VEGETATION DYNAMICS IN FRESHWATER DEPRESSIONAL WETLANDS

117 The Effects Of Acid Deposition And Acid Remediation Strategies On Aquatic Ecosystems

Chair(s): Theo Light, tsligh@ship.edu
Natasha Wingerter, nw2945@ship.edu

Location: A 106

- 10:00 **Pound, K. L.**; Lawrence, G. B.; Passy, S. I.: GREATER BETA DIVERSITY IN ORGANICALLY VS. INORGANICALLY ACIDIFIED STREAMS IN A REGION IMPACTED BY ACID DEPOSITION
- 10:15 **Wingerter, N. Y.**; Light, T. S.: EFFICACY OF DIRECT APPLICATION MITIGATIVE LIMING IN THE CENTRAL APPALACHIAN REGION
- 10:30 **Light, T.**; Helfrick, A.; Smith, T.: TROPHIC ROLE OF CRAYFISH IN ACIDIC, LIMESTONE-TREATED, AND NEUTRAL STREAMS IN THE CENTRAL APPALACHIANS
- 10:45 **Appling, A. P.**; McDowell, W. H.; Potter, J. D.; Nelson, S. J.; Kahl, J. S.: FROM THE FRYING PAN INTO THE FIRE? LAKE GREENHOUSE GAS RESPONSES TO ACID RAIN RECOVERY
- 11:00 **Kopacek, J.**: EFFECTS OF ACID DEPOSITION AND RECOVERY FROM ACIDIFICATION ON TERRESTRIAL PHOSPHORUS EXPORT AND IN-LAKE AVAILABILITY
- 11:15 **Casson, N. J.**; Sebestyen, S. D.; Stanley, E. H.; Kolka, R. K.: LANDSCAPE CONTROLS ON THE SENSITIVITY OF SEEPAGE LAKE CHEMISTRY TO ENVIRONMENTAL CHANGE
- 11:30 **Abdulghani, L. J.**: PUTTING SHELLS BACK IN THE WATER: UNDERSTANDING SHELL DISSOLUTION FOR OCEAN ACIDIFICATION REMEDIATION

132 B Population And Community Ecology (Part 2)

Chair(s): Mark Pyron, mpyron@bsu.edu

Location: B 110 - 112

- 16:00 **Pyron, M.**; Etchison, L.: GASTROPOD RESPONSES TO PREDATION ARE CONTINGENT ON TRAITS
- 16:15 **Inoue, K.**; Levine, T. D.; Lang, B. K.; Berg, D. J.: LONG-TERM MARK-AND-RECAPTURE STUDY OF A FRESHWATER MUSSEL REVEALS PATTERNS OF HABITAT USE AND AN ASSOCIATION BETWEEN SURVIVAL AND RIVER DISCHARGE
- 16:30 **Triece, K.**; Sherwood, N.; Wu, M.; Fowles, G.; Zarate, B.: INFLUENCE OF LANDSCAPE CHARACTERISTICS ON WILDLIFE MORTALITY HOTSPOTS
- 16:45 **Thomas, M. J.**; Creed, R. P.; Brown, B. L.: ONTOGENETIC SHIFTS IN A FRESHWATER CLEANING SYMBIOSIS MUTUALISM
- 17:00 **Williams, B. W.**; Larson, E. R.: HOST STRUCTURE AND BETA DIVERSITY OF CRAYFISH ECTOSYMBIONT ASSEMBLAGES IN WESTERN NORTH AMERICA
- 17:15 **Mausbach, W. E.**; Dzialowski, A. R.: IMPACTS OF SALINITY ON CRUSTACEAN COMMUNITIES IN THE NEBRASKA SANDHILLS
- 17:30 **Harrington, R. A.**; Poff, N. L.; Kondratieff, B. C.: AQUATIC INSECT B-DIVERSITY WITHIN AND ACROSS DRAINAGES IS INDEPENDENT OF ELEVATION IN SMALL HEADWATER STREAMS ALONG COLORADO'S FRONT RANGE

136 A Biodiversity And Ecosystem Function (Part 1)

Chair(s): Sophia Passy, sophia.passy@uta.edu

Location: B 114

- 10:00 **Passy, S. I.**: THE DISTRIBUTION OF WEALTH IN BIOLOGICAL COMMUNITIES—A PRODUCT OF STATISTICAL, NEUTRAL, OR NICHE MECHANISMS?
- 10:15 **Hood, G. A.**; Larson, D. G.: BEAVERS ENGINEER UNEXPECTED HABITATS FOR AQUATIC INVERTEBRATES
- 10:30 **Mullis, D. L.**; Colon-Gaud, J. C.: THE EFFECTS OF BEAVER DAMS ON MACROINVERTEBRATE COMMUNITIES OF A SOUTHEASTERN COASTAL PLAIN STREAM DURING DROUGHT CONDITIONS
- 10:45 **Benbow, M. E.**; Pechal, J. L.: BACTERIAL COMMUNITY STRUCTURE OF SOUTHEAST ALASKAN MAYFLIES: AN INITIAL ASSESSMENT OF AQUATIC INSECT MICROBIOMES FROM SALMON BEARING STREAMS
- 11:00 **Rios-Touma, B.**; Holzenthal, R. W.: DIVERSITY AND ENDEMISM OF ECUADORIAN CADDISFLIES (TRICHOPTERA)
- 11:15 **Fritschie, K. J.**; Olden, J. D.: FUNCTIONAL TRAIT DIVERSITY AND THE TEMPORAL STABILITY OF RIVERINE FISH COMMUNITIES
- 11:30 **Mustonen, K.**; Mykrä, H.; Louhi, P.; Muotka, T.: EXPERIMENTAL MANIPULATION OF FLOW AND SEDIMENTATION: EFFECTS ON STREAM COMMUNITIES AND ECOSYSTEM PROCESSES
- 11:45 **Allen, D. C.**; Cardinale, B. J.; Wynn-Thompson, T.: RIPARIAN PLANT BIODIVERSITY REDUCES STREAMBANK EROSION

136 B Biodiversity And Ecosystem Function (Part 2)

Chair(s): Christopher Jerde, cjerde@nd.edu

Location: B 114

- 13:30 **Jerde, C. L.**; Olds, B. P.; Renshaw, M. A.; Turner, C. R.; Evans, N.; Shogren, A.; Mahon, A. R.; Tank, J. L.; Bolster, D.: ESTIMATING SPECIES RICHNESS WITH ENVIRONMENTAL DNA
- 13:45 **Mykrä, H.**; Tolkkinen, M.; Markkola, A.; Muotka, T.: PHYLOGENETIC CLUSTERING OF FUNGAL COMMUNITIES IN ANTHROPOGENICALLY ALTERED STREAMS
- 14:00 **Muijsers, F.**; Mentges, A.; Mintenig, S.; Hillebrand, H.: DIFFERENT STABILITY MEASURES RESULT IN CONTRADICTORY EVENNESS-STABILITY RELATIONSHIPS
- 14:15 **Morales-Williams, A. M.**; Wanamaker, Jr., A. D.; Downing, J. A.: BICARBONATE UPTAKE COULD MAINTAIN *MICROCYSTIS* DOMINANCE IN EUTROPHIC LAKES
- 14:30 **Kim, S.**; Kang, H.: EFFECTS OF PLANT SPECIES RICHNESS ON MICROBIAL DIVERSITY AND ACTIVITIES IN MESOCOSM WETLAND
- 14:45 **Allred, M.**; Baines, S. B.; Findlay, S.: IMPACTS OF INVASIVE-PLANT MANAGEMENT ON NITROGEN-REMOVAL SERVICES IN FRESHWATER TIDAL MARSHES
- 15:00 **Bentley, K. T.**; Schindler, D. E.; Cline, T. J.; Armstrong, J. B.; Hilborn, R.: PREDATOR AVOIDANCE DURING REPRODUCTION: DIEL MOVEMENTS BY SPAWNING SOCKEYE SALMON BETWEEN STREAM AND LAKE HABITATS
- 15:15 **Rackliffe, D. R.**; Rader, R. B.: ESTIMATES OF ECOSYSTEM METABOLISM IN SHALLOW RIPARIAN WETLANDS

140 A Invasive And Non-Native Species (Part 1)

Chair(s): Eric Ahern Sawyer, eahernsawyer@antioch.edu

Location: B 116

- 10:00 **AhernSawyer, E. K.**: STORYTELLING AS AN AGENT OF CHANGE: A NOVEL APPROACH TO COMMUNICATING ECOLOGY OF AQUATIC INVASION BIOLOGY
- 10:15 Sepulveda, A. J.; **Layhee, M.**; Stagliano, D.; Chaffin, J.; Begley, A.; Maxell, B.: THE SPREAD AND OCCUPANCY OF AMERICAN BULLFROGS IN THE YELLOWSTONE RIVER FLOODPLAIN
- 10:30 **Sargent, L. W.**; Lodge, D. M.: EVOLUTION OF INVASIVE TRAITS IN NONINDIGENOUS SPECIES: INCREASED SURVIVAL AND FASTER GROWTH IN INVASIVE POPULATIONS OF RUSTY CRAYFISH (*ORCONECTES RUSTICUS*)
- 10:45 **Tuckett, Q. M.**; Ritch, J. R.; Dowling, K. M.; Lawson Jr., L. L.; Hill, J. E.: LOCAL ADAPTATION OF CHRONIC LETHAL MINIMUM TEMPERATURE IN NATURALIZED AND FARM RAISED NON-NATIVE GREEN SWORDTAILS
- 11:00 **Hazelton, E. L.**; Kettnering, K. M.; McFarland, L. K.; McCormick, M. K.; Whigham, D. F.: PHRAGMITES REMOVAL RESULTS IN A NOVEL STATE THAT DOES NOT RESEMBLE NATIVE WETLAND PLANT COMMUNITIES
- 11:15 **Krings, B. D.**; Battaglia, L. L.: THE PTERIDOPHYTE FIGHTS BACK!

- 11:30 **Kowalski, K. P.**; Bickford, W. A.; Braun, H. A.: *PHRAGMITES* SYMBIOSIS COLLABORATIVE: MAXIMIZING THE COLLECTIVE IMPACT OF RESEARCH

- 11:45 **Hunt, V. M.**; Fant, J. B.; Hartzog, P.; Jacobi, S. K.; Larkin, D. J.: MANAGEMENT PRACTICES AND THE STATE OF INVASION OF *PHRAGMITES AUSTRALIS* IN NORTH AMERICA

140 B Invasive And Non-Native Species (Part 2)

Chair(s): Neal Flanagan, nflanaga@duke.edu

Location: B 116

- 13:30 **Duxbury, C.**; Auter, T.; DeBusk, T.: NATIVE AND INVASIVE TREE LEAF BREAKDOWN RATES AND POTENTIAL IMPACT ON NUTRIENT CYCLING IN A SUBTROPICAL LOTIC ECOSYSTEM
- 13:45 **Flanagan, N. E.**; Richardson, C. J.; Ho, M.: DIFFERENTIAL RESPONSES OF NATIVE AND INVASIVE RIPARIAN PLANTS TO ALTERED WATER TEMPERATURE, FLOW AND LAND USE
- 14:00 **Wasko, J. D.**; McGonigle, T. P.; Goldsborough, L. G.: *TYPHA* SPECIES AND HYBRID DISTRIBUTION AND GENERALIZED LINEAR MODEL OF *T. X GLAUCA* AND ENVIRONMENT IN CANADA'S PRAIRIE POT HOLE REGION
- 14:15 **Ruggeri, L. R.**; Wu, M. S.; Bologna, P. A.: ANALYSIS OF HERBICIDE TREATMENT EFFECTIVENESS ON COMMON REED (*PHRAGMITES AUSTRALIS*) OF DELAWARE BAY SALT MARSHES
- 14:30 **Setterfield, S. A.**; Douglas, M. M.: THE INVASION OF KAKADU NATIONAL PARK'S WETLANDS BY AQUATIC INVASIVE GRASSES
- 14:45 **Thum, R. A.**; Grimm, D.; McNair, J. N.: HYBRIDIZATION AND RAPID EVOLUTION OF INVASIVENESS IN A HEAVILY MANAGED INVASIVE AQUATIC PLANT SPECIES

141 C Wetlands (Part 3)

Chair(s): Jessica L. Franks, jessielee07@gmail.com

Location: C 120 - 122

- 10:00 **Shrestha, S.**; Chen, Y.; Farrelly, J.: INFLUENCES OF WATERSHED LAND USES ON STREAM BIOTIC AND ABIOTIC CONDITIONS IN SOUTHEAST ARKANSAS
- 10:15 **Huang, J. C.**: DEVELOPMENT OF A CONSTRUCTED WETLAND WATER TREATMENT SYSTEM FOR SELENIUM REMOVAL: USE OF MESOCOSMS TO EVALUATE EFFECTS OF PLANT LITTER ON SE REMOVAL EFFICIENCY
- 10:30 **Howie, S. A.**: RESTORING BURNS BOG: HOW MUCH IS ENOUGH?
- 10:45 **Franks, J. L.**; Boughton, E. H.: IS IT IN THE BANK? THE ROLE OF THE SEEDBANK IN ABOVE GROUND VEGETATION PATTERNS IN RANCLAND WETLANDS
- 11:00 **Childers, D. L.**; Tallman, D. J.; Weller, N. A.: SERENDIPITOUS EFFICIENCIES IN ECOSYSTEM SERVICE PROVISION BY A CONSTRUCTED TREATMENT WETLAND IN A HOT, DRY CITY
- 11:15 **Vymazal, J.**; Brezinová, T.: SEASONAL GROWTH PATTERN OF *PHRAGMITES AUSTRALIS* AND *PHALARIS ARUNDINACEA* IN CONSTRUCTED WETLANDS FOR WASTEWATER TREATMENT

11:30 **Furlan, N. E.**; Berg, M. B.: DIETS AND SECONDARY PRODUCTION OF ODONATA IN COASTAL WETLAND PONDS OF THE COPPER RIVER DELTA, ALASKA

141 D Wetlands (Part 4)

Chair(s): Jay Christensen, christensen.jay@epa.gov

Location: C 120 - 122

13:30 **Christensen, J.**; Nash, M.; Chaloud, D.; Pitchford, A.: SPATIAL DISTRIBUTION OF SMALL WATER BODY TYPES IN INDIANA ECOREGIONS

13:45 **Weihls, B. J.**; Haukos, D. A.: SPATIO-TEMPORAL INUNDATION PATTERNS OF PLAYA WETLANDS AND SALINE LAKES IN THE SOUTHERN HIGH PLAINS, USA

14:00 **Moon, J. B.**; Naithani, K.; Wardrop, D. H.; Fennessy, M. S.: MAPPING AND ASSESSING THE SPATIAL HETEROGENEITY OF MICROBIAL COMMUNITIES IN HEADWATER WETLANDS USING FRAGSTATS

14:15 **Johnson, E. L.**; Colon-Gaud, C.: TEMPORAL PATTERNS OF BENTHIC INVERTEBRATE COMMUNITY STRUCTURE AND FUNCTION IN A FORESTED RIVER-FLOODPLAIN OF THE SOUTHEASTERN US (ALTAMAHA RIVER, GA)

14:30 **Bennett, M. G.**; Fritz, K. A.; Hayden-Lesmeister, A.; Kozak, J. P.; Nickolotsky, A.: AN ESTIMATE OF BASIN-WIDE DENITRIFICATION BASED ON FLOODPLAIN INUNDATION IN THE NATION'S LARGEST RIVER SWAMP

14:45 **Dronova, I.**: STRATEGIES AND CHALLENGES OF ASSESSING WETLAND CANOPY PROPERTIES WITH FIELD AND REMOTE SENSING APPROACHES: THE CASE OF CALIFORNIA DELTA, USA

15:00 **Bernthal, T. W.**; Trochlell, P. A.; O'Connor, R.; Hlina, P.; Haber, E.: ESTABLISHING REFERENCE CONDITION FOR WISCONSIN WETLAND PLANT COMMUNITIES

15:15 **Cressey, R. L.**; Austin, J. E.; Stafford, J. D.: CHANGES IN WETLAND PLANT COMMUNITIES AND WETLAND CONDITIONS IN THE PRAIRIE POTHOLE REGION AFTER 50 YEARS

200 PSA Bold Award Session

Chair(s): Paul Gabrielson, drseaweed@hotmail.com

Location: F 150 - 151

10:00 **Huang, I.**: THE CYANOBACTERIA *LEPTOLYNGBYA* SP. PRODUCES A NOVEL MARINE TOXIN

10:15 **Schoenrock, K. M.**; Schram, J. B.; Amsler, C. D.; McClintock, J. B.; Angus, R. A.: ANTARCTIC ALGAE IN THE ANTHROPOCENE

10:30 **Hunsperger, H. M.**; Ford, C. J.; Randhawa, T.; Cattolico, R. A.: MANY PATHS TO CHLOROPHYLL: THE EVOLUTION OF PROTOCHLOROPHYLLIDE OXIDOREDUCTASES IN THE ALGAE

10:45 **Pokrzywinski, K. L.**; Tilney, C. L.; Warner, M. E.; Coyne, K. J.: CHARACTERIZATION OF AUTOCATALYTIC CELL DEATH PATHWAYS IN DINOFLAGELLATES EXPOSED TO A BACTERIAL ALGICIDE

11:00 **Wade, R. M.**; Sherwood, A. R.: MOLECULAR DETERMINATION OF KLEPTOPLAST ORIGINS OF THE SEA SLUG *PLAKOBRANCHUS OCELLATUS* SUPPORTS CRYPTIC BRYOPSISIDALEAN DIVERSITY IN THE HAWAIIAN ISLANDS

11:15 **Benes, K. M.**; Bracken, M.: INTRASPECIFIC VARIATION IN THE NUTRIENT PHYSIOLOGY OF THE INTERTIDAL SEAWEED *FUCUS VESICULOSUS* LINNAEUS

11:30 **Filloramo, G. V.**; Saunders, G. W.: USING MULTIGENE PHYLOGENETICS AND NOVEL RECONSTRUCTION TECHNIQUES TO IMPROVE SUPRAGENERIC RESOLUTION IN RHODYMENIALES

13:30 **Hargarten, H. L.**; Johansson, M. L.; Alberto, F. A.; Graham, M. H.; Coelho, N.: SPECIES DIVERGENCE AS A RESULT OF ENVIRONMENTALLY INDUCED PHENOTYPIC PLASTICITY IN MATING SYSTEM TRAITS: A POTENTIAL CASE STUDY IN GIANT KELP

13:45 **Nakov, T.**; Ashworth, M. P.; Theriot, E. C.: EVOLUTIONARY HISTORY OF HABITAT PREFERENCE AND GROWTH FORM ACROSS THE DIATOM PHYLOGENY

14:00 **Self-Krayesky, S. L.**; Fredericq, S.: MARINE DINOFLAGELLATES FOUND INSIDE RHODOLITHS: IDENTIFYING ONE PARTICIPANT IN A NEWLY FOUND ENDOLITHIC ASSOCIATION

14:15 **Stepien, C. C.**; Wootton, J. T.; Pfister, C. A.: CHANGES IN SEAWATER TOTAL ALKALINITY ASSOCIATED WITH INTERTIDAL MACROALGAE INCREASE AVAILABILITY OF BICARBONATE AND CARBON DIOXIDE

14:30 **Yeager, A. D.**; Doyle, R. D.; Robbins, C. J.; Walker, C. M.; King, R. S.: LOW-LEVEL DISSOLVED ORGANIC CARBON ADDITIONS INFLUENCE PERIPHYTON ENZYME ACTIVITY, METABOLISM AND BIOMASS ACCRUAL IN AN ALASKAN HEADWATER STREAM

14:45 **O'Mara, S. P.**; Southard, G.; Gutierrez, D.; Zimba, P. V.: EVALUATION OF *PRYMNESILUM PARVUM* FATTY ACID AMIDE ACCUMULATION AND THEIR CONTRIBUTION TO FISH MORTALITY EVENTS

15:00 **Yu, M.**; Ashworth, M. P.; Theriot, E. T.; Sabir, J. S.; Baeshen, N. A.; Baeshen, M. N.; Jansen, R. K.: INSIGHTS ON THE THALASSIOSIRALES EVOLUTION FROM COMPLETE PLASTID GENOMES

15:15 **Main, C. R.**; Coyne, K. J.: THE *VIBRIO*-HAB CONNECTION: INTERACTIONS BETWEEN *VIBRIO* AND *HETEROSIGMA AKASHIWO*

16:00 **Bruce, M. R.**; Saunders, G. W.: A MOLECULAR-ASSISTED INVESTIGATION OF *NEOPTILOTA* AND *PTILOTA* (WRANGELIACEAE, RHODOPHYTA) SPECIES REPORTED FOR CANADIAN WATERS

16:15 **Popolizio, T. R.**; Schneider, C. W.; Lane, C. E.: MOLECULAR AND MORPHOLOGICAL SURVEY OF THE NEMALIALES (RHODOPHYTA) IN BERMUDA SUBSTANTIATES FURTHER REVISION AND EXPANSION OF THE ISLANDS' SEAWEED BIODIVERSITY.

16:30 **Janot, K. G.**; Martone, P. T.: CONVERGENT CORALLINES: BENDING BEHAVIOUR OF INDEPENDENTLY EVOLVING GENICULATE LINEAGES IN WAVE-SWEPT HABITATS

16:45 **Holm, J. B.**; Caron, D. A.; Ziebis, W.; Webster, P.; Heidelberg, K. B.: A MULTIDISCIPLINARY DESCRIPTION OF MICROBIAL DIVERSITY OF TWO SPECIES OF OCTOCORAL FROM SOUTHERN CALIFORNIA

17:00 **Guenther, R. J.**; Miklasz, K.; Carrington, E. C.; Martone, P. T.: IT'S A STICKY SITUATION: THE EFFECT OF PH ON THE ADHESION OF RED ALGAL SPORES

- 17:15 **Traggis, H. M.:** MONODEHYDROASCORBATE REDUCTASE SERVES AS ALTERNATE ELECTRON DONOR FOR THE ASCORBATE GLUTATHIONE CYCLE IN IRON LIMITED *DUNALIELLA TERTIOLECTA*.
- 17:30 **Starko, S.:** ONTOGENIC STRATEGIES OF KELP SPECIES TO MITIGATE DISLODGE MENT RISK

TUESDAY

Tuesday, 5/20/2014 Posters

001 Communicating The Value Of Aquatic And Wetland Ecosystems To The Public And Policy Makers

Chair(s): Kurt D. Fausch, kurtf@cnr.colostate.edu
Michael P. Nelson, mpnelson@oregonstate.edu
Jeremy Monroe, jeremy@freshwatersillustrated.org
Stephanie Hampton, s.hampton@wsu.edu

Location: Exhibit Hall

- 1 Burres, E. D.; **Hsiao, J.**: THE USE OF WEB-BASED AND DIGITAL TOOLS FOR DEVELOPING AND SUPPORTING CITIZEN MONITORING PROGRAMS CONDUCTING BIOASSESSMENTS
- 2 **Reville, E. G.**; Bruesewitz, D. A.: THE IMPORTANCE OF HEADWATER STREAMS IN PRESERVING WATER QUALITY: A CASE STUDY FOR THE KENNEBEC HIGHLANDS AND LONG POND (BELGRADE LAKES, ME)

002 Tipping Points Science: From Global Theories To Local Tools

Chair(s): Sherry Martin, marti686@msu.edu
Bryan Pijanowski, bpijanow@purdue.edu
Ed Rutherford, ed.rutherford@noaa.gov

Location: Exhibit Hall

- 3 **White, R. S.**; McHugh, P. A.; Glover, C. N.; McIntosh, A. R.: CRITICAL HABITAT SIZE THRESHOLDS OF DROUGHT RESISTANCE IN POPULATIONS OF A FOREST-DWELLING, EXTREMOPHILE FISH, THE BROWN MUDDFISH
- 4 **Smith, S. D.**; Allan, J. D.; Spooner, E.: BUILDING A FRAMEWORK FOR INTERACTIONS BETWEEN ENVIRONMENTAL STRESSORS IN THE LAURENTIAN GREAT LAKES
- 5 **Kao, Y. C.**; Adlerstein-Gonzalez, S.; Rutherford, E. S.; Zhang, H.: IDENTIFYING ECOLOGICAL TIPPING POINTS FOR A GREAT LAKES FOOD WEB: AN ECOPATH WITH ECOSIM ANALYSIS
- 6 Nielsen, N.; **Whitehead, K.**; Sackmann, B.; Revelas, G.: DETERMINATION OF COMMUNITY IMPAIRMENT DUE TO MULTIPLE STRESSORS USING LIKELIHOOD ANALYSIS.
- 7 **Burt, J. M.**; Salomon, A. K.: PATTERNS AND PROCESSES: UNDERSTANDING MULTI-SCALE DYNAMICS IN HIGH LATITUDE KELP FORESTS

008 Groundwater Wetlands Special Session

Chair(s): Tom Baugh, springmountain1@att.net
Dave Penrose, penrose.watershed.science@gmail.com

Location: Exhibit Hall

- 52 **Plankell, E. T.**; Miner, J. J.: WATER-QUALITY IMPACTS TO A FORESTED FEN AS A RESULT OF ROADWAY DEICING ACTIVITIES
- 53 **Gilmer, J. H.**; Keller, T. A.: CHARACTERIZING WETLAND GROUNDWATER HYDROLOGY FOR AN ENDANGERED CRAYFISH, THE PIEDMONT BLUE BURROWER
- 54 **Stott, J. K.**; Godwin, K. S.; Koepfler, E. T.; Luken, J. O.: QUANTIFYING DIFFERENCES IN GROUNDWATER HYDROCHEMISTRY AND THE POSSIBLE INFLUENCE ON PLANT PRODUCTIVITY BETWEEN DEVELOPED AND UNDEVELOPED SALT MARSHES

011 Ecosystem Dynamics On A Changing Playing Field.

Chair(s): Marjorie Brooks, mlbrooks@siu.edu
Matt Whiles, mwhiles@zoology.siu.edu

Location: Exhibit Hall

- 55 **Arango, C. P.**: CAN SPRUCE BUDWORMS MEDIATE ECOLOGICAL CONNECTIVITY BETWEEN FORESTS AND STREAMS?
- 56 **Rojas, M.**; Rosi-Marshall, E. J.; Wellard Kelly, H. A.; Bechtold, H. A.; Iqbal, S.; Kelly, J. J.: COMPOSITION AND ACTIVITY OF BENTHIC MICROBIAL COMMUNITIES IN URBAN STREAMS WITH VARIED ANTHROPOGENIC INPUTS

013 An Apparent Wind: The Changing Inland Water Carbon Cycle - A Special Session Dedicated To The Career Of Jonathan J. Cole

Chair(s): Michael Pace, pacem@virginia.edu
Peter Raymond, peter.raymond@yale.edu
Emma Kritzberg, emma.kritzberg@bio.lu.se

Location: Exhibit Hall

- 64 **Taub, F. B.**; McLaskey, A. K.; Tran, C. H.: CONVERSION OF CELLULOSE TO ZOOPLANKTON BIOMASS VIA ALGAL PROCESSES?
- 65 **Brantley, A. A.**; Chandra, S.: HETEROTROPHIC BACTERIAL RESPIRATION RATES IN LAKES ACROSS A TROPHIC GRADIENT: RELATIVE CONTRIBUTIONS FROM PELAGIC AND LITTORAL HABITATS
- 66 **Herlache, L. M.**; Bade, D. L.: SMALL LAKES CONTRIBUTE TO GREENHOUSE GAS EMISSIONS: N₂O, CH₄, CO₂

016 "Effects Of Climate Change On Species Interactions In Aquatic Ecosystems

Chair(s): Gretchen Hansen, gretchen.hansen@wisconsin.gov
Christopher Patrick, cjpater@gmail.com

Location: Exhibit Hall

- 77 **Perkins, K. A.**; Tietzel, I.: DETECTION OF OIL SPILL MICROBES AND COLONIZATION OF SHRIMP SPECIES OF THE GULF OF MEXICO
- 78 **Reddy, T. E.**: HOW IS CLIMATE CHANGE ALTERING PHYTOPLANKTON SPECIES INTERACTIONS IN THE ARCTIC OCEAN?
- 79 **Gochfeld, D. J.**; Easson, C. G.; Olson, J. B.; Lee, S. J.; Williams, C.; Slattery, M.: IMPACTS OF MULTIPLE CLIMATE CHANGE STRESSORS ON A CARIBBEAN SPONGE DISEASE
- 80 **Martell, E. M.**; Lougheed, V. L.: THE IMPACT OF DROUGHT ON BENTHIC MACROINVERTEBRATE COMMUNITIES IN THE SACRAMENTO MOUNTAINS, NM

018 The Effects Of Fire On Freshwater Ecosystems

Chair(s): Scott D. Cooper, scott.cooper@lifesci.ucsb.edu
Rebecca Bixby, bbixby@unm.edu

Location: Exhibit Hall

- 86 **Olsson, A. K.**; Jones, J. B.: WILDFIRE EFFECTS ON NUTRIENT UPTAKE IN A BOREAL FOREST STREAM IN INTERIOR ALASKA
- 87 **Diemer, L. A.**; McDowell, W. H.; Prokushkin, A. S.: NUTRIENT UPTAKE DECREASES ALONG A GRADIENT OF DOC:NO₃ IN ARCTIC STREAMS OF CENTRAL SIBERIA

- 88 **Clark, A. L.**; Bixby, R. J.; Thompson, V. E.; Dahm, C. N.: DOES MACROPHYTE AVAILABILITY AND HABITAT SHAPE DIATOM COMMUNITY RESPONSE TO FIRE IMPACTS?

019 Hydrodynamics And Biogeochemistry Of The Stream - Bed Interface

Chair(s): Roy Haggerty, roy.haggerty@oregonstate.edu
Sourabh Apte, sva@engr.orst.edu
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Location: Exhibit Hall

- 89 **Hensley, R. T.**; Cohen, M. J.: HYDRAULIC CONTROLS ON THE EVOLUTION OF DIEL SIGNALS IN FLOWING WATERS
- 90 **Morgan, J. A.**; White, J. R.; Royer, T. V.: SILT REMOVAL ALTERS HYPORHEIC CONNECTIVITY AND METABOLIC BALANCE IN FAWN RIVER (IN)
- 91 **Aubeneau, A. F.**; Tank, J. L.; Reisinger, A. J.; Riis, T.; Levi, P.; Bolster, D.: NEW TAKE ON OLD QUESTIONS: THE INTERSECTION OF NUTRIENT SPIRALING AND TRANSIENT STORAGE IN FLUVIAL SYSTEMS.
- 92 **Li, C. Y.**; White, J. R.; Roberts, H. H.; DeLaune, R.; Bargu, S.; Weeks, E.: FLUXES OF WATER, SEDIMENT, AND NUTRIENTS THROUGH THE EVOLVING WAX LAKE DELTA

021 Modeling For Ecological Assessments And Conservation Planning: Where Have We Been And Where Are We Going?

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Location: Exhibit Hall

- 93 **Takashina, N.**; Baskett, M. L.: DETERMINING THE APPROPRIATE SPATIAL SCALE OF MANAGEMENT FOR FISHERIES
- 94 **Lee, J.**; Chon, J.; Ahn, C.: PLANNING ECOLOGICAL INFRASTRUCTURE USING A LEAST-COST-PATH METHOD BASED ON ECOSYSTEM SERVICE VALUES: THE CASE OF A SMALL URBAN AREA IN KOREA
- 95 **Monk, W. A.**; **Armanini, D. G.**; Idigoras Chaumel, A.; Armellin, A.; Mercier, V.; Baird, D. J.: INTEGRATING TAXON RELATIVE ABUNDANCE-BASED DIAGNOSTICS IN A RIVPACS BIOMONITORING MODEL
- 96 **Darmody, R. G.**: A REVIEW OF THE ASSESSMENT OF THE CHARACTERISTIC OF THE MARSHES OF THE CHESAPEAKE BAY REGION

022 Advances In Understanding The Impacts Of Aquatic Invasions: Integrating Knowledge From Freshwater And Marine Systems

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Location: Exhibit Hall

- 97 **Larson, M. D.**; Black, A. R.: ASSESSMENT OF INTERACTIONS AMONG NATIVE SNAILS AND THE NEW ZEALAND MUD SNAIL, POTAMOPYRGUS ANTIPODARUM, USING GRAZING EXPERIMENTS AND STABLE ISOTOPE ANALYSIS

- 98 **Naddafi, R.**; **Rudstam, L.**: PREDATOR-INDUCED MORPHOLOGICAL DEFENSES IN TWO INVASIVE DREISSENID MUSSELS: IMPLICATION FOR SPECIES REPLACEMENT

- 99 **Seitz, K.**; Herfort, L.; Xu, M.; Smith, M.; Simon, H.: POTENTIAL CORRELATION BETWEEN POTAMOPYRGUS ANTIPODARUM AND THE AMMONIUM OXIDIZING ARCHAEA IN THE COLUMBIA RIVER ESTUARY

- 100 **Ivan, L. N.**; **Mason, D. M.**; Hoff, M.; Rutherford, E. S.; Zhang, H.: POTENTIAL IMPACT OF ASIAN CARPS ON RECREATIONAL SPECIES IN SAGINAW BAY, LAKE HURON: AN INDIVIDUAL-BASED MODELING APPROACH

025 Double Trouble: Interactive Effects Of Climate Change And Other Anthropogenic Drivers On Aquatic Ecosystems

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Location: Exhibit Hall

- 108 **Verberk, W.**; Durance, I.; Vaughan, I. P.; Ormerod, S. J.: HYPOXIA AND WARMING INTERACTIVELY IMPACT SURVIVAL AND ABUNDANCE OF STREAM MACROINVERTEBRATES
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- 120 **Jordan, M. P.**; Strecker, A.: THE EFFECTS OF ANTHROPOGENIC STRESSORS ON MERCURY CONCENTRATIONS AND ECOLOGICAL PROCESSES IN FRESHWATER ZOOPLANKTON
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026 From The Bottom Up: Stable Isotopes As Tools For Exploring Aquatic Food Web Dynamics And How They Influence Ecosystems

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Location: Exhibit Hall

- 122 **Lafferty, M. H.**; Bowes, R. E.; Thorp, J. H.: HUNGER GAMES: ISOTOPE RATIOS IN NUTRIENT STRESSED FISH

028 Trace Gas Emissions And Carbon Sequestration In Wetlands And Lakes

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- 125 **Silvey, C. L.**; Jarecke, K. J.; Loecke, T. D.; Burgin, A. J.: SPECIES SPECIFIC PLANT-MEDIATED GREENHOUSE GAS TRANSPORT FROM WETLAND MESOCOSMS
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- 129 **Jong, A. E.**; Medvedeff, C. A.; Keller, J. K.; Brown, V.; Pfeifer-Meister, L.; Bridgham, S. D.: POTENTIAL ANAEROBIC CARBON DIOXIDE AND METHANE PRODUCTION IN THREE PEATLAND SOIL PROFILES

032 As Above, So Below: Integrating Aquatic Ecosystem Observation Systems From Satellites To Genes Using Big Data.

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- 148 **Chen, L.**; Barnes, M. D.; Kuo, M.: LONG-TERM INVESTIGATION OF BENTHIC FAUNA AND THE INFLUENCE OF ACIDIC MINERAL WASTE WATER POLLUTION IN THE BAY OF SHUEI-NAN DON, TAIWAN

- 149 **Kirkpatrick, G. J.**; Kirkpatrick, B. A.; Schofield, O. M.: INTEGRATING 3-DIMENSIONAL PHYTOPLANKTON COMMUNITY STRUCTURE WITH HYDROGRAPHIC STRUCTURE UTILIZING AUTONOMOUS UNDERWATER VEHICLES
- 150 **Fahner, N.**; **Hajibabaei, M.**; Baird, D. J.: ASSESSMENT OF BELOW-GROUND PLANT DIVERSITY IN WETLAND SOIL THROUGH ENVIRONMENTAL DNA

039 From Individuals To Ecosystems: Consumer Driven Nutrient Recycling Across Aquatic Ecosystems

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- 161 **Marklund, M.**; Eklöv, P.; Svanbäck, R.: EFFECTS OF HABITAT SWITCHING ON MORPHOLOGY AND DIET SPECIALISATION OF EURASIAN PERCH (*PERCA FLUVIATILIS*)
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040 Ecological Processes Of Aquatic Systems In Winter

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Location: Exhibit Hall

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- 169 **Butts, E. B.**; Carrick, H. J.: THE OCCURRENCE OF PHYTOPLANKTON BLOOMS AMONG TEMPERATE LAKES; DOES MIXOTROPHY SUSTAIN POPULATIONS DURING ICE COVER?

045 An Azocentric Look At The World, From Genes To Ecosystems

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Location: Exhibit Hall

- 184 **Grubbaugh, C. R.**; Wehr, J. D.: PERIPHYTON PROTEIN CONTENT IN AQUATIC ECOSYSTEMS WITH CONTRASTING N & P SUPPLIES.

- 185 **Perera, M.**; Ghoshroy, S.; Robertson, D.: COORDINATED POST-TRANSCRIPTIONAL REGULATION OF NITROGEN ASSIMILATION IN MARINE DIATOMS

046 Understanding Aquatic Ecological Processes Across Spatial Scales

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Location: Exhibit Hall

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- 187 **Copp, A. J.**; Kennedy, T. A.; Muehlbauer, J. D.: DON'T GET CLOGGED UP: USING NET FILTRATION EFFICIENCY TO INFORM DEPLOYMENT LENGTH IN DRIFT STUDIES
- 188 **Parker, S. P.**; Bowden, W. B.; Flinn, M. B.: THE EFFECTS OF HYDROLOGY AND LAND COVER CHARACTERISTICS ON NUTRIENT LOADING IN A HETEROGENOUS WATERSHED

047 Biogeochemistry Across Aquatic Ecosystems: Challenges To And Opportunities For Integrating Research In Wetlands, Streams, Lakes, Rivers, And Coastal Zones

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Location: Exhibit Hall

- 189 **Wierck, A. L.**; Kinnear, J.: THE DESIGN OF FERNHILL NATURAL TREATMENT WETLANDS; BIOGEOCHEMISTRY AND TRANSITION OF THE LANDSCAPE FOR THE TUALATIN RIVER WATERSHED-BASED NPDES PERMIT

050 Emergent Insects As Focal Taxa For Bridging Ecological Understanding Across Ecosystems: A Synthesis Of Current Knowledge And Novel Applications

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Location: Exhibit Hall

- 190 Scharnweber, K.; Vanni, M. J.; Hilt, S.; Syväranta, J.; **Mehner, T.**: BOOMERANG RECYCLING OF TERRESTRIAL ORGANIC CARBON BY AQUATIC INSECTS
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- 192 **Woller-Skar, M. M.**; Russell, A. L.; Luttenton, M. R.: MICROCYSTIN IN LITTLE BROWN BATS (MYOTIS LUCIFUGUS) FOLLOWING CONSUMPTION OF ADULT MAYFLIES OF THE GENUS HEXAGENIA
- 193 **Cheney, K. N.**; Roy, A. H.; Smith, R. F.: SPATIAL AND TEMPORAL VARIATION IN PLECOPTERA AND TRICHOPTERA EMERGENCE FROM HEADWATER STREAMS
- 194 **Smith, J. T.**; Muehlbauer, J. D.; Kennedy, T. A.: DETERMINING THE EFFECTS OF INSECT PHEROMONE RELEASE ON STICKY TRAP CATCH RATES.

053 International Society For River Science: Physical, Chemical, And Biological Changes In Modified Rivers

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Location: Exhibit Hall

- 195 **Gerrish, A. G.**; Belby, C. S.; Perez, C. R.: UNDERSTANDING ECOSYSTEM CHANGE IN UPPER MISSISSIPPI RIVER BACKWATERS THROUGH GEOCHEMICAL AND BIOLOGICAL ANALYSES OF SEDIMENT CORES

056 Linking Anthropogenic Stressors With Coastal And Freshwater Plankton Community Dynamics In A Changing World

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Location: Exhibit Hall

- 202 **Paul, C.**; Sommer, U.; Matthiessen, B.: WARMING BUT NOT ENHANCED CO₂ QUANTITATIVELY AND QUALITATIVELY AFFECTS PHYTOPLANKTON BIOMASS
- 203 **Kang, L. K.**; Feng, C. C.; Chang, J.: DIVERSITY OF DIATOM SILICON TRANSPORTER SEQUENCES AND THEIR EXPRESSIONS DURING A CHANGJIANG RIVER FLOODING EVENT IN THE EAST CHINA SEA
- 204 **Ortiz, J. E.**; Marcarelli, A. M.; Fahnenstiel, G. L.; Smith, R. A.: IMPACT OF NUTRIENT LOADING AND EURASIAN WATERMILFOIL ON PHYTOPLANKTON COMMUNITIES AMONG CHANNELS OF THE LES CHENEUX ISLANDS, LAKE HURON

057 Stream Microbial Ecology: Where Are We Now And Where Are We Going

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Location: Exhibit Hall

- 205 **Zhao, X.**; Hicks, R. E.: RELATIONSHIPS BETWEEN BACTERIAL BIODIVERSITY AND ENVIRONMENTAL PARAMETERS ALONG AN ESTUARINE TRANSECT FROM THE LOWER ST. LOUIS RIVER TO NEARSHORE LAKE SUPERIOR
- 206 **Taura, J. D.**; Gray, J. G.; Leff, L. G.: THE EFFECTS OF COMPOUNDED PERTURBATIONS ON THE TRAJECTORY OF STREAM BIOFILM RECOVERY
- 207 **Payne, H. E.**; Moitra, M.; Gray, J. B.; Leff, L. G.: RESPONSE OF STREAM BACTERIAL HETEROTROPHIC COMMUNITIES TO DIFFERENCES IN CHEMISTRY AND MOLECULAR HETEROGENEITY OF DISSOLVED ORGANIC CARBON SOURCES
- 208 **Roberto, A. A.**; Leff, L. G.: URBANIZATION EFFECTS ON COMMUNITY COMPOSITION OF STREAM SEDIMENT BACTERIA
- 209 **Edmonds, J. W.**; Chapman, E. L.; Tatariw, C.; Davis, L.; Vaughn, R.: EVALUATING NUTRIENT RETENTION THROUGH CONSIDERATION OF GEOMORPHIC CONTROLS ON PLANT-MICROBE INTERACTIONS

- 210 **Jones, E. F.**; Aanderud, Z. T.: TEMPORAL AND SPATIAL VARIABILITY OF *ESCHERICHIA COLI* IN STREAMS ACROSS MOUNTAIN-TO-URBAN TRANSITIONS IN THREE UTAH, USA WATERSHEDS
- 211 **Bennett, M. C.**; Coolen, M. J.; Peucker-Ehrenbrink, B.; Voss, B.; Gillies, S.; Marsh, S.; Luymes, R.; Epp, A.: SPATIAL VARIATION OF THE GEOCHEMISTRY AND THE EFFECTS ON THE COMPOSITION IN MICROBIAL COMMUNITIES ATTACHED TO SUSPENDED SEDIMENTS IN THE FRASER RIVER BASIN

064 The Science And Management Of Environmental Flows: Recent Developments And Remaining Challenges

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- 217 **Cashman, M. J.**; Bruno, M. C.; Maiolini, B.; Harvey, G. L.; Wharton, G.: EFFECTS OF HYDROPEAKING AND SUBSTRATE TYPE ON PERIPHYTON NUTRITIONAL QUALITY IN AN ALPINE STREAM

066 Integrated Analyses Of Terminal Lakes And Wetlands: Physics To Phragmites

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- 223 **Peake, C. S.**; **Lenters, J. D.**; Riveros-Iregui, D.; Ong, J. B.; Healey, N. C.; Zlotnik, V.: CLIMATIC CONTROLS ON OPEN-WATER EVAPORATION FOR A SHALLOW, SALINE LAKE IN THE WESTERN SAND HILLS OF NEBRASKA, USA

077 Ecological Targets For Water Quality Management

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- 239 **Saari, G. N.**; Brooks, B. W.: AQUATIC HAZARDS OF FRESHWATER HYPOXIA: REVISITING DISSOLVED OXYGEN THRESHOLDS FOR AQUATIC LIFE

078 The Future Of Aquatic Science: An Educational Session Particularly For Undergraduates

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- 240 **Wright, K. K.**; Rawling, J. E.: NOTHING BEATS BEING THERE: A SHORT-COURSE TEMPLATE THAT INTEGRATES UNDERGRADUATE EDUCATION AND ECOLOGICAL RESEARCH STATIONS

- 241 **Brown, M. E.**: TEACHING UNDERGRADUATE STUDENTS HOW TO READ AND APPLY PRIMARY LITERATURE IN THE AQUATIC SCIENCES
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- 244 **Schiebel, H. N.**; Chen, R. F.: THE ROLE OF SALT MARSHES IN THE GLOBAL CARBON CYCLE
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- 246 **Wu, M.**; Galster, J.; Pope, G.; Feng, H.: IMPACTS OF URBANIZATION ON ENVIRONMENTAL CHARACTERISTICS OF RIVERS AND WATERSHEDS ACROSS NORTHERN NEW JERSEY
- 247 **Planas, D.**; Mauffette, Y.; Prairie, Y.: USING PROBLEM-BASED LEARNING (PBL) IN TEACHING LIMNOLOGY : A STUDENT CENTERED APPROACH
- 248 **Laterza, K. J.**: REMOTE SENSING OF AQUATIC RESOURCES IN THE USDA/NRCS REMOTE SENSING LABORATORIES
- 249 **Drewes, A. L.**; Eggert, S. L.; Maas, P.; Goggeley, S.; Johnson, A. M.; Staples, J. L.: POND WATCH: A RESEARCH AND EDUCATIONAL PARTNERSHIP BETWEEN LEECH LAKE TRIBAL COLLEGE AND THE USDA FOREST SERVICE NORTHERN RESEARCH STATION
- 250 **Colon-Gaud, C.**; Day, F. P.; Li, J.; Mendez, P.; Garono, R. J.; Lougheed, V. L.; Capps, K. A.; Sluss, T. D.; Ardon-Sayao, M.: UNDERGRADUATE MENTORING AT SFS AND SWS: INCREASING DIVERSITY IN THE NEXT GENERATION OF AQUATIC SCIENTISTS
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- 253 **Cromwell, K. J.**; Osvatic, J. T.; Weinkauf, E. N.; Peckarsky, B. L.: UNDERGRADUATE RESEARCH FOR COMMUNITY ENGAGEMENT
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- 256 **Cover, M. R.**; Rosales, M.; Campos, E.; Wooley, S.: INTENSIVE FIELD-BASED STREAM ECOLOGY RESEARCH FOR ENGAGING UNDERGRADUATE STUDENTS UNDER-REPRESENTED IN THE SCIENCES

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081 Emerging Issues In Freshwater Ecology

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- 266 **Weissinger, R.;** Thoma, D.; Keteles, K.; Dahlin, K.: EMERGING CONTAMINANTS ARE PRESENT IN NATIONAL PARK WATERS IN THE UPPER COLORADO RIVER BASIN, USA
- 267 **Chu, B. T.;** Peterson, C.; Tong, T.; Kim, G. A.; Jean-François, G.; Kelly, J. J.: FRESHWATER PHOTOTROPHIC MICROBES VARY IN THEIR ACUTE RESPONSES TO TITANIUM-DIOXIDE NANOMATERIALS
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- 269 **Adams, K.;** Drenner, R.; Chumchal, M.; Donato, D.: DO FISH CONSUMPTION ADVISORIES FOR MERCURY ADEQUATELY PROTECT THE PUBLIC?

086 What Have We Learned About Tropical Streams? How Will They Be Affected By Climate Change?

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Location: Exhibit Hall

- 270 **Kranzfelder, P.;** Ferrington, L. C.: VARIABILITY OF CHIRONOMIDAE (INSECTA: DIPTERA) EMERGENCE AND SPECIES RICHNESS IN A NEOTROPICAL ESTUARY
- 271 **Taniwaki, R. H.;** Ferraz, S. F.; Cardoso, T. K.; Bezerra, M. O.; Cassiano, C. C.; Martinelli, L. A.: RELATIONSHIPS BETWEEN RIPARIAN FORESTS AND PERIPHYTIC ALGAE BIOMASS IN TROPICAL HEADWATER STREAMS ON DRY PERIODS
- 272 **Covich, A. P.;** Crowl, T. A.; Perez-Reyes, O.; Hein, K. L.: PREDATOR-PREY INTERACTIONS AND SPATIAL REFUGIA IN TROPICAL STREAMS, LUQUILLO MOUNTAINS, PUERTO RICO

087 If You Remove It, Will They Come? Evaluating The Response Of Biotic Communities To Dam Removal

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Chauncey Anderson, chauncey@usgs.gov

Location: Exhibit Hall

- 273 **Short, T. M.;** Hornberger, M. I.; Cain, D. J.: INVERTEBRATE COMMUNITY RESPONSES TO DAM REMOVAL ON A METAL-IMPACTED RIVER
- 274 **Layman, A. J.;** Wiley, M. J.: MODELING THE IMPACTS OF LAKE LEVEL CONTROL STRUCTURE MANAGEMENT SCENARIOS ON LACUSTRINE FISH HABITAT

091 Resilience Of Future Wetlands To Climate Change

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Location: Exhibit Hall

- 278 **Chen, L.;** Barnes, M. D.; Hsu, C.; Kuo, M.: CONSERVATION IMPLICATIONS OF ANTHROPOGENIC WETLANDS AS WINTERING HABITATS FOR WATERBIRD COMMUNITIES IN I-LAN COUNTY, TAIWAN
- 279 **Braswell, A. E.;** Heffernan, J. B.: UNDERSTANDING THE BROAD-SCALE AND LOCAL DRIVERS OF COASTAL WETLAND EXTENT AND PERSISTENCE: A MACROSCALE GIS STUDY
- 280 **Korn, P. R.;** Ardon, M.: LEAF LITTER BREAKDOWN RATES ACROSS A SALINITY GRADIENT IN NATURAL AND RESTORED WETLANDS.
- 281 **Cahoon, D. R.:** A METHOD FOR DETERMINING RELATIVE SEA-LEVEL RISE AND SUBMERGENCE POTENTIAL AT A COASTAL WETLAND
- 282 **Pollard, L. D.;** Sampson, M. E.; Palta, M. M.; Hale, R. L.; Grimm, N. B.: GREENHOUSE GAS EMISSIONS FROM URBAN AQUATIC ENVIRONMENTS

094 Geospatial Data Applications For Aquatic Resources

Chair(s): Thomas E. Dahl, thomasedahl@gmail.com
Susan-Marie Stedman - NOAA Federal
Mitch Bergeson, mitch_bergeson@fws.gov

Location: Exhibit Hall

- 288 **Fluet-Chouinard, E.;** McIntyre, P. B.; Lehner, B.: MAPPING THE NATURAL EXTENT OF WETLANDS GLOBALLY, AND ESTIMATING LOSS OVER TWO CENTURIES
- 289 **Bulit, C.:** WHY TO PUT CILIATES ON THE MAP?
- 290 **Davias, L. A.;** Hunt, W.; Zubek, S.; Weaver, J.: ASSESSING SEDIMENTATION RISK TO HEADWATER STREAMS FROM PROPOSED NATURAL GAS PIPELINES – A GIS ANALYSIS IN TIOGA COUNTY PENNSYLVANIA

097 Calibration And Verification Of Rapid Wetland And Stream Assessment Methods

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Location: Exhibit Hall

- 292 **Young, D. R.;** Clinton, P.; Specht, D. T.; Caldwell, R.; Lamberson, J.: MACROALGAL ABUNDANCE IN A PACIFIC NORTHWEST ESTUARY – EVIDENCE OF POOR EUTROPHIC CONDITION?

099 Linking The Genetics, Toxicity, And Physiology Of Bloom-Forming Cyanobacteria In Large Lakes In Response To A Changing Environment

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Location: Exhibit Hall

- 293 **Pereira, D. A.;** Giani, A.: DOES QUORUM SENSING EXIST IN CYANOBACTERIA?
- 294 **Stamann, S. N.:** BLOOMS OF DOOM: THE EFFECT OF GLOBAL CLIMATE CHANGE ON CYANOBACTERIA BLOOMS IN SHALLOW EUTROPHIC LAKES

101 Carbon In Aquatic Ecosystems: Recent Advances In Understanding The Transport Of Carbon To Streams And Its Fate In Stream Ecosystems

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Roy Haggerty, haggertr@geo.oregonstate.edu

Location: Exhibit Hall

- 295 **Lin, H. J.**; Chen, H. W.; Liu, B. H.; Li, S. B.; Lin, T. P.: INFLUENCE OF LAND USE ON CARBON SEQUESTRATION IN A TROPICAL COASTAL ZONE
- 296 **Oviedo-Vargas, D.**; Genereux, D. P.; Osburn, C. L.; Oberbauer, S. F.: CONTRIBUTION OF STREAM CO₂ AND METHANE EMISSIONS TO CARBON BUDGETS IN LOW-LAND TROPICAL WATERSHEDS WITH AND WITHOUT CONNECTIONS TO CARBON-RICH DEEP GROUNDWATER
- 297 **Halbedel, S.**; Büttner, O.: MECA, A TOOLBOX FOR THE CALCULATION OF METABOLISM IN HETEROGENEOUS STREAMS
- 298 **Yeung, A.**; Richardson, J. S.: A PROCESS-BASED META-ANALYSIS AND MODELLING OF THE LONG-TERM RESPONSE OF STREAM ORGANIC MATTER DYNAMICS TO FOREST HARVESTING
- 299 **Mitre, S. K.**; Giani, A.: BIOGEOCHEMICAL FLOWS IN THE TERRESTRIAL-AQUATIC INTERFACE IN HEADWATER STREAM BEDSIDE DUE TO CHANGES IN LAND USE OF A TROPICAL SAVANNAH
- 300 **Dosch, N. T.**; Haggerty, R.: DYNAMICS OF STREAM AND HYPORHEIC PCO₂ IN A FORESTED CATCHMENT IN WESTERN OREGON, USA
- 301 **Corson-Rikert, H. A.**; Wondzell, S.; Santelmann, M.; Haggerty, R.: CARBON DYNAMICS IN THE HYPORHEIC ZONE OF A HEADWATER MOUNTAIN STREAM IN THE CASCADE MOUNTAINS, OREGON

104 Ecosystem-Scale Experimental And Modeling Approaches To Investigate Effects Of Environmental Drivers On Freshwater And Marine Planktonic And Benthic Systems

Chair(s): Jens C Nejtgaard, jens.nejtgaard@skio.uga.edu
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Marc E Frischer, marc.frischer@skio.uga.edu

Location: Exhibit Hall

- 308 **Berger, S. A.**; Diehl, S.; Stibor, H.: SEPARATING EFFECTS OF CLIMATIC DRIVERS AND BIOTIC FEEDBACKS ON SEASONAL PLANKTON DYNAMICS: NO SIGN OF TROPHIC MISMATCH
- 309 **Nejtgaard, J. C.**; Berger, S. A.; Casper, P.; Engelhardt, C.; Grossart, H. P.; Hintze, T.; Kasprzak, P.; Kirillin, G.; Penske, A.; Gessner, M. O.: THE LAKELAB, A LARGE EXPERIMENTAL PLATFORM TO STUDY CLIMATE-CHANGE EFFECTS ON AQUATIC ECOSYSTEMS
- 310 **Nierzwicki-Bauer, S. A.**; Berger, S. A.; Nejtgaard, J. C.; Ahrens, L. E.; Farrell, J. L.; Tenenbaum, N.; Frischer, M. E.: A MESOCOSM EXPERIMENT TO TEST ORGANIC VS. INORGANIC NUTRIENT LOADING EFFECTS ON THE PELAGIC MICROBIAL FOOD WEB OF LAKE GEORGE, NEW YORK

105 Wetland Restoration: Delivering Multiple Benefits And Recreating Lost Services

Chair(s): Nathaniel Hough-Snee, nate@natehough-snee.org
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Rob McInnes, rob@rmwe.co.uk

Location: Exhibit Hall

- 311 **Boegehold, A. G.**; White, T. J.; Kashian, D. R.: COASTAL WETLAND RESTORATION ANALYSIS AND THE EFFECTS OF *PHRAGMITES AUSTRALIS* LITTER COVER ON SEED GERMINATION
- 312 **Cole, C. A.**: MICROCLIMATIC COMPARISON BETWEEN A NATURAL AND CREATED SCHOOLYARD WETLAND
- 313 **Geatz, G. W.**; Matthews, J. W.: APPLICATION OF REGIONAL SCALE WETLAND VEGETATION DATA TO ASSESS RESTORATION SUCCESS: A CASE STUDY OF THE SUGAR CAMP CREEK WETLAND MITIGATION SITE
- 314 **Crumpton, W. G.**; Stenback, G. A.; Green, D.: WATER QUALITY PERFORMANCE OF WETLANDS RECEIVING NON-POINT SOURCE LOADS: N REMOVAL EFFICIENCY AND CONTROLLING FACTORS
- 315 **Rohal, C. B.**; Kettenring, K. M.; Hazelton, E. L.: EFFECTIVE CONTROL OF SMALL, DENSE *PHRAGMITES AUSTRALIS* PATCHES IN GREAT SALT LAKE WETLANDS
- 316 **Wang, H. W.**; Yang, C. Y.; Kuo, P. H.; Kuo, P. H.; Chang, C. H.: BUIDAI WETLAND RESTORATION FROM A HYDROLOGY POINT OF VIEW

108 Impacts Of Global Change On Aquatic Biodiversity And Ecosystem Processes In Mountains

Chair(s): Rolf Vinebrooke, rolf@ualberta.ca
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Jeff Brittain, jbritt2@pdx.edu

Location: Exhibit Hall

- 323 **Zheng, L.**; Stamp, J.; Hamilton, A.; Biewagen, B.; Witt, J.: CLIMATE CHANGE IMPACT TO STREAM INVERTEBRATE COMPOSITION IN NEW ENGLAND STREAMS

115 Structural And Functional Connectivity In Dryland Aquatic Habitats: From Genes To Communities

Chair(s): Meryl C. Mims, mmims@uw.edu
Emily Hartfield Kirk, hartfree@science.oregonstate.edu
Julian D. Olden, olden@uw.edu
David A. Lytle, lytle@oregonstate.edu

Location: Exhibit Hall

- 347 **Martin, M.**; Walsh, E. J.; Moody, M. L.; Rivas, J. A.; Hinson, K. I.: GENETIC PROFILING OF WIND-DISPERSED ROTIFER SPECIES IN THE SOUTHWESTERN UNITED STATES
- 348 **Behn, K. E.**; Baxter, C. V.: A NATIVE FISH CAPITALIZES ON ALLOCHTHONOUS RESOURCES DELIVERED BY SEASONAL, SCOURING FLOODS IN A DESERT RIVER

117 The Effects Of Acid Deposition And Acid Remediation Strategies On Aquatic Ecosystems

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Location: Exhibit Hall

- 354 **Gunn, J. M.;** Keller, B.; Bailey, J.; Beckett, P.; Spiers, G.; Yan, N.: RESTORING ECOSYSTEM SERVICES IN MINING IMPACTED REGIONS: THE SUDBURY, CANADA CASE HISTORY
- 355 **Johnson, K. S.;** Thrush, M.; Bowman, J. R.; Kruse, N.: STABILITY AND PERSISTENCE OF MACROINVERTEBRATE COMMUNITIES IN RELATION TO YEARLY VARIATION IN PRECIPITATION, FLOW AND ACID MINE DRAINAGE INTENSITY

118 Lakes And Freshwater Wetlands

Chair(s): Gordon Goldsborough, gordon.goldsborough@umanitoba.ca
Dale Wrubleski, d_wrubleski@ducks.ca

Location: Exhibit Hall

- 356 **Looi, A.;** Bachman, C.; Schulz, K.; Farrell, J.: ALGAL AND ZOOPLANKTON RESPONSE TO A FLOOD PULSE IN A DROWNED RIVER MOUTH WETLAND
- 357 **Bachman, C. E.;** Mitchell, M. J.; Farrell, J. M.; Schulz, K. L.: DROWNED RIVER MOUTH WETLANDS AND WATER LEVEL REGULATION: EFFECTS ON WATER CHEMISTRY AND PLANKTON COMMUNITIES
- 358 **Russell, J. M.;** Bachman, C. E.; Looi, A. H.; Farrell, J. M.; Mitchell, M. J.; Schulz, K.: SEDIMENT-WATER NUTRIENT ANALYSIS IN THE ST. LAWRENCE RIVER WETLANDS
- 359 **Schile, L. M.;** Pitz, S. L.; Megonigal, J. P.: TREE-MEDIATED EMISSIONS OF METHANE FROM BALD CYPRESS TRUNKS

121 Does Nutrient Pollution Jeopardize Tidal Wetland Viability? A Controversy Revisited

Chair(s): Thomas J. Mozdzer, tmozdzer@brynmawr.edu
Adam Langley, adam.langley@villanova.edu

Location: Exhibit Hall

- 360 **Herbert, E. R.;** Trice, L.; Hopple, A.; Schubauer-Berigan, J. P.; Craft, C. B.: LONG-TERM NITROGEN AND PHOSPHORUS FERTILIZATION ALTER THE ECOLOGICAL AND BIOGEOCHEMICAL FUNCTIONS OF A TIDAL FRESHWATER MARSH, ALTAMAHA RIVER, GEORGIA, USA
- 361 **Chapman, S. K.;** White, H. K.; Palanivel, R. U.; Curran, C.; Langley, J. A.: MARSH PLANTS MEDIATE THE EFFECTIVENESS OF NITROGEN FERTILIZATION ON THE DEGRADATION OF OIL FROM THE DEEPWATER HORIZON OIL SPILL
- 362 **Sullivan, H. L.;** Friedman, K. A.; Robertson, D. L.: THE EFFECT OF NITRATE FERTILIZATION ON THE PHOTOSYNTHETIC PERFORMANCE OF *SPARTINA ALTERNIFLORA*
- 363 **Brundage, M.;** Corman, J.; Moody, E.; Elser, J.: A STUDY OF NUTRIENT LIMITATION TO THE DECOMPOSITION OF MAPLE LEAVES IN TRAVERTINE FORMING STREAMS
- 364 **Mozdzer, T. J.;** Megonigal, J. P.: INCREASED ROOT PRODUCTIVITY BY INVASIVE PLANTS INCREASE TIDAL WETLAND VIABILITY UNDER NUTRIENT POLLUTION AND ELEVATED CO₂

- 365 **Langley, J. A.;** Cahoon, D. R.; Megonigal, J. P.: MARSH SOIL ELEVATION GAIN IN RESPONSE TO ELEVATED CO₂ AND N ADDITION

123 P Large River Ecology - Poster Session

Chair(s): Gaston E. Small, gaston.small@stthomas.edu
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Location: Exhibit Hall

- 380 **Busch, D. E.:** MULTI-DECADAL CHANGE IN LOWER COLORADO RIVER RIPARIAN VEGETATION
- 381 **Zhu, W.;** You, Q.; Pang, W.; Pan, Y.; Wang, Y.; Wang, Q.: PHYTOPLANKTON COMMUNITY COMPOSITION AND THEIR CORRELATIONS WITH ENVIRONMENTAL VARIABLES IN THE HUIAIHE RIVER BASIN, CHINA
- 382 **Sackreiter, J. R.;** Ochs, C. A.: ZOOPLANKTON ASSEMBLAGES OF THE LOWER MISSISSIPPI RIVER IN RELATION TO CONNECTIVITY
- 383 **Bartsch, L. A.;** Bartsch, M. R.; Richardson, W. B.; Vallazza, J. M.: JUVENILE UNIONID MUSSEL SURVIVAL AND GROWTH IN A SYSTEM INCREASINGLY DOMINATED BY CYANOBACTERIA: THE ST. CROIX NATIONAL SCENIC RIVERWAY
- 384 **Bartsch, M. R.;** Bartsch, L. A.; Richardson, W. B.; Zigler, S. J.; Karns, B.; Moraska Lafrancois, B.: EFFECTS OF ZEBRA MUSSELS (*DREISSENA POLYMORPHA*) ON NATIVE JUVENILE BIVALVES AND THEIR FOOD RESOURCES
- 385 **McTammany, M. E.;** Bruno, A. E.; Rapp, C. C.; Reilly, M. E.: BENTHIC INVERTEBRATE COMMUNITIES FROM SHOAL AND BACKWATER HABITATS OF A LARGE RIVER
- 386 **Danielski, L. C.;** Fodrea, J.: COLUMBIA RIVER TREATY REVIEW: COLLABORATIONS IN WILDLIFE IMPACT ASSESSMENTS
- 387 **Valdez, I. C.;** Loughheed, V. L.: SPATIAL AND TEMPORAL PATTERNS IN WATER QUALITY ALONG THE RIO GRANDE ON THE US-MEXICO BORDER
- 388 **Fleenor, A. H.;** Cover, M. R.: REMOTE SENSING REVEALS LIMITED HIGH WATER REFUGIA FOR THE ENDANGERED CENTRAL CALIFORNIA COHO SALMON, LAGUNITAS CREEK, MARIN COUNTY
- 389 **Scholl, E. A.;** Guy, C. S.; Treanor, H. B.; Kappenman, K. M.; Webb, M. A.: SEDIMENT MICROBIAL RESPIRATION IN THE HEADWATERS OF A LARGE RIVER RESERVOIR: A MECHANISM FOR LOW DISSOLVED OXYGEN CONCENTRATIONS

127 P Climate Change - Poster Session

Chair(s): James Hood, hoodx008@umn.edu
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Location: Exhibit Hall

- 431 **Ortiz, N. A.;** Hart, P. J.: THE EFFECT OF TEMPERATURE CHANGES ON BIRD SONG INTERACTIONS IN TWO DIFFERENT ENVIRONMENTS
- 432 **Boeff, K.;** Saros, J. E.: EVALUATING THE EFFECT OF A CHANGING CLIMATE ON THERMOCLINE DEPTH IN MAINE'S GREAT PONDS
- 433 **Macias, D.;** Garcia-Gorritz, E.; Dosio, A.; Keuler, K.; Stips, A.: ASSESSING THE IMPORTANCE OF NATURAL MULTIDECADAL VARIABILITY FOR CLIMATIC PROJECTIONS OF COUPLED ATMOSPHERIC-OCEANIC SIMULATIONS. MEDITERRANEAN SEA CASE STUDY

- 434 **Yeates, A. G.**; Olker, J. H.; Guntenspergen, G. R.; Cahoon, D. R.: SURFACE ELEVATION TABLE-MARKER HORIZON STATIONS IN THE NORTHEAST U.S.: LOCATION AND USE FOR ASSESSING COASTAL WETLAND RESILIENCE TO CLIMATE CHANGE CHALLENGES
- 435 **Bodmin, K. A.**; Ausseil, A.; Zammit, C.: VULNERABILITY OF NEW ZEALAND FRESHWATER WETLANDS UNDER CLIMATE CHANGE
- 436 **Northington, R. M.**; Malik, H.; Saros, J. E.: MULTIPLE INFLUENCES OF CLIMATE CHANGE ON ARCTIC LAKE ECOSYSTEMS IN SOUTHWESTERN GREENLAND
- 437 Won, J. I.; Lee, G. S.; **Kang, S.**: RESPONSE OF FRESHWATER CYANOBACTERIAL HARMFUL ALGAL BLOOM (CYANOHAB) UNDER CLIMATE CHANGE SCHEME (MICROCOSM STUDY)
- 438 **Butitta, V. L.**; Rypel, A. L.; Stanley, E. H.: LINKING FRESHWATER MUSSEL GROWTH DYNAMICS TO ENVIRONMENTAL DRIVERS IN A NORTHERN WISCONSIN LAKE
- 439 **Gray, D. K.**; Read, J.; Hook, S.; Schneider, P.; Lenters, J.; Rupert, J.; O'Reilly, C.; Sharma, S.; Hampton, S.; GLTC Contributors: IMPACT OF MEASUREMENT FREQUENCY AND DATA GAPS ON THE CALCULATION OF SUMMER-MEAN LAKE TEMPERATURES AND WARMING TRENDS
- 440 **Marinos, R. E.**; Bernhardt, E. S.; Rosi-Marshall, E. J.; Likens, G. E.: ALGAE BLOOM WHERE NO ALGAE GREW BEFORE: WHY HUBBARD BROOK STREAMS ARE TURNING GREEN
- 441 **Hertel, S. D.**; Berg, M. B.: AQUATIC INSECT COMMUNITY STRUCTURE IN SOUTH CENTRAL ALASKA STREAMS WITH CONTRASTING THERMAL AND HYDROLOGIC REGIMES
- 442 **Koch, C.**; Barnard, A.: HOURLY MONITORING OF ESTUARINE BIOGEOCHEMICAL PARAMETERS NEAR-CONTINUOUSLY FOR FIVE YEARS: EXAMINATION OF ANNUAL SHIFTS IN EVENTS.
- 443 **Fradkin, S. C.**: TRENDS IN INTERTIDAL PH ON THE OPEN COAST OF WASHINGTON STATE: IMPLICATIONS FOR OCEAN ACIDIFICATION
- 444 **Osborne, T. Z.**; Ellis, L. R.; Harris, W.: SALT WATER TRANSGRESSION AND SOIL CARBON STABILITY IN SPodosols
- 128 P Biogeochemistry - Poster Session**
Chair(s): Erin Hotchkiss, ehotchkiss@gmail.com
Ryan Burrows, ryan.burrows@slu.se
Location: Exhibit Hall
- 445 **Sheibley, R. W.**; Enache, M.; Swarzenski, P. W.; Moran, P. W.; Foreman, J. R.: NITROGEN DEPOSITION EFFECTS ON DIATOM COMMUNITIES IN LAKES FROM THREE NATIONAL PARKS IN WASHINGTON STATE
- 446 **Marti, A. M.**; Bernot, M. J.; Rober, A. R.: NUTRIENT LIMITATION OF EURASIAN WATERMILFOIL (*MYRIOPHYLLUM SPICATUM* L.)
- 447 **Stelzer, R. S.**: A LONG-TERM RECORD OF NITRATE RETENTION IN A MESIC GROUNDWATER STREAM
- 448 **Adams, C. J.**; Loecke, T. D.; Thomas, S. A.; St. Clair, M. A.; Davis, C. D.; Reynolds, K. N.; Ward, A. S.; Riveros-Iregui, D.; Burgin, A. J.: THE EFFECT OF DISCHARGE ON PHOSPHORUS LOADING TO THE IOWA-CEDAR RIVER BASINS
- 449 **Douglas, R. W.**; Donald, N. M.; Doe, S. G.: A REMOTE ACCESS SAMPLER TO COLLECT HIGH RESOLUTION WATER SAMPLES FOR METALS, NUTRIENTS, AND PHYTOPLANKTON IN LAKES.
- 450 **Jackson, T.**; Bearden, D.; Lee, P.; Watanabe, M.: "METABOTYPING" DIATOMS USING NMR-BASED METABOLOMICS
- 451 **Forgrave, R. K.**; Bruesewitz, D. A.: IMPACT OF DAMS ON NITROGEN PROCESSING IN THE MESSALONSKEE STREAM
- 452 **Day, N. K.**; Hall, R. O.; Wohl, E.; Livers, B.: GEOMORPHOLOGICAL CONTROLS ON NITRATE UPTAKE IN 3 ROCKY MOUNTAIN STREAMS
- 453 **Gibson, C. A.**; O'Reilly, C. M.; Conine, A. L.: VARIATION IN THE C:N:P OF EPILITHIC BIOFILMS IN CATSKILL, NY HEADWATER STREAMS
- 454 **Bechtold, H. A.**; Rosi-Marshall, E. J.; Warren, D. R.; Keeton, W.; Cole, J. J.: STREAM ECOSYSTEM FUNCTION IS LINKED TO CHANGES IN RIPARIAN FOREST STRUCTURE
- 455 **Rodriguez-Cardona, B.**; McDowell, W. H.: NITRATE UPTAKE KINETICS IN SUBURBAN STREAMS OF NEW HAMPSHIRE
- 456 **Earley, S. M.**; Waters, M. N.; Thieme, D. M.; Brenner, M.; Curtis, J. H.: LONGTERM PHOTOSYNTHETIC PIGMENT TRENDS SHOW SIMILAR PRIMARY PRODUCER COMMUNITIES IN TIMES OF HIGH AND LOW ANTHROPOGENIC IMPACTS ON A MESOTROPHIC, SINKHOLE LAKE
- 457 **Novita, N.**; Hergoualch, K.; Kauffman, B.: CH₄ AND CO₂ EMISSIONS ASSOCIATED WITH LAND USE CHANGE OF TROPICAL PEAT ECOSYSTEM IN TANJUNG PUTING, CENTRAL KALIMANTAN
- 458 **Boston, J. E.**; Waters, M. N.; Golladay, S.: ALTERATIONS TO BIOGEOCHEMICAL PROCESSES AND SEDIMENT TRANSPORT BY THE INVASIVE MACROPHYTE, HYDRILLA VERTICALLATA, IN A LARGE, SHALLOW RESERVOIR
- 459 **Petzoldt, T. L.**; Forgrave, R. K.; Bruesewitz, D. A.: PATTERNS OF NUTRIENT LIMITATION IN STREAMS AND LAKES OF THE BELGRADE LAKES WATERSHED: COMPARISONS ACROSS ECOSYSTEMS AND TROPHIC STATES
- 460 **Baldwin, A. H.**; Yarwood, S. A.: CARBON CYCLING DIFFERS SIGNIFICANTLY BETWEEN STANDS OF NORTH AMERICAN AND EURASIAN LINEAGES OF *PHRAGMITES AUSTRALIS*
- 461 **Greblunas, B. D.**; Perry, W. L.: STOICHIOMETRIC LIMITATION OF WETLAND DENITRIFICATION WITHIN HIGH NITRATE-N AGRICULTURAL SYSTEMS
- 462 **MacNeill, K. L.**; Kohler, B. S.; Thomas, S. A.; Flecker, A. S.: ASSESSING NUTRIENT UPTAKE ALONG AN ELEVATION GRADIENT IN ECUADOR USING MULTIPLE TECHNIQUES
- 463 **Fjare, D. H.**; Jones, J. B.; Harms, T. K.: COUPLING THE EFFECTS OF DISSOLVED ORGANIC MATTER COMPOSITION AND NUTRIENT STOICHIOMETRY WITH NUTRIENT UPTAKE IN BOREAL HEADWATER STREAMS
- 464 **Fifield, C. C.**; Baker, C. L.; Harms, T. K.; Jones, J. B.: TOP-DOWN AND BOTTOM-UP EFFECTS ON METABOLISM IN A BOREAL STREAM
- 465 **Bier, R. L.**; Bernhardt, E. S.: MEROMICTIC LAKES IN CENTRAL APPALACHIA? CHARACTERIZATION OF BIOGEOCHEMISTRY DOWNSTREAM FROM APPALACHIA'S LARGEST SURFACE COALMINE

466 **Reid, B. L.:** WATERSHED SCALE BIOGEOCHEMISTRY OF DISSOLVED SILICA: LEGACY OF THE 1991 ERUPTION OF THE HUDSON VOLCANO IN CHILEAN PATAGONIA

130 P Ecotoxicology - Poster Session

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John Bailey, jbailey@laurentian.ca

Location: Exhibit Hall

- 481 **Saunders, L. E.;** Pezeshki, S. R.: EFFECTS OF GLYPHOSATE EXPOSURE IN THE ROOT-ZONE OF *POLYGONUM HYDROPIPEROIDES* (SMARTWEED): CHLOROPHYLL FLUORESCENCE PARAMETERS AND CHLOROPHYLL CONTENT
- 482 **Johnson, B. R.;** Nietch, C. T.; Lazorchak, J. M.; Franson, S. E.; Fritz, K. M.: DENSITY-DEPENDENT GROWTH OF TWO-LINED SALAMANDER LARVAE, *EURYCEA CIRRIGERA*, IN MESOCOSMS EXPOSED TO A GRADIENT OF SODIUM BICARBONATE CONCENTRATION
- 483 **Lewis, M. A.:** COASTAL PLANTS: CHEMICAL SENSITIVITIES AND RISK ASSESSMENTS
- 484 **Nietch, C. T.;** Lazorchak, J. M.; Johnson, B. R.; Allen, J. H.; Weaver, P. M.: COMMUNITY SCALE STREAM TAXA SENSITIVITIES TO DIFFERENT COMPOSITIONS OF EXCESS TOTAL DISSOLVED SOLIDS
- 485 **Loadman, N. L.;** Huebner, J. D.; Florke, K. R.; Hudson, J. M.; Latimer, J. G.; Loxton, L. J.; Wuerz, M. T.; Wiegand, M. D.: EFFECTS OF DIFFERENT LIGHT REGIMES ON SURVIVAL, REPRODUCTION AND PRODUCTION OF MALES IN *DAPHNIA MAGNA* EXPOSED TO JUVENILE HORMONE
- 486 **Harrison, A. M.;** Costello, D. M.; Burton, G. A.; Hammerschmidt, C. R.: IMPROVING METAL SEDIMENT TOXICITY TESTING: METHODS FOR MORE ENVIRONMENTALLY RELEVANT EXPOSURES
- 487 **Nedrich, S. M.;** Daley, J. M.; Sano, L.; Burton, G. A.: THE EFFECT OF RESUSPENSION AND BIOTURBATION ON METAL BIOAVAILABILITY IN LAKE DEPUE (ILLINOIS) SEDIMENT
- 488 Du, B.; **Haddad, S. P.;** Scott, W. C.; Breed, C.; Chambliss, C. K.; Brooks, B. W.: DIFFERENTIAL BIOACCUMULATION OF SELECT CONTAMINANTS OF EMERGING CONCERN IN AN URBAN BAYOU, HOUSTON, TEXAS, USA
- 489 **Tweedy, B. N.;** Sansom, B.; Vaughn, C. C.: EFFECTS OF FRESHWATER MUSSELS ON MERCURY CONTAMINATION OF AQUATIC FOOD WEBS
- 490 **Cote, J. M.:** IMPACT OF PHOTOLYZED VS. NON-PHOTOLYZED OIL AND POLYAROMATIC HYDROCARBONS ON SULFATE-REDUCING BACTERIA IN GULF OF MEXICO COASTAL SEDIMENTS
- 491 **Jagoe, C. H.;** Allen, L.; Rumbold, D.; Loh, A. N.: PAH CONCENTRATIONS AND BIOMARKERS OF EXPOSURE IN PLANKTON AND NEUSTON FROM COASTAL WATERS IN THE GULF OF MEXICO AFTER THE DEEPWATER HORIZON OIL SPILL
- 492 **Dolan, J. M.;** Gawel, J. E.: MONITORING METAL STRESS IN PUGET SOUND USING METALLOTHIONEIN PRODUCTION IN MUSSELS IN THE NEARSHORE

493 **Mayfield, B.;** Yeager-Armstead, M. M.; Wilson, M. L.; Parson-White, A.: THE ANALYSIS OF IN VIVO AND IN VITRO BIOASSAY SENSITIVITIES AND RESPONSES TO *PRYMNESIUM PARVUM* TOXINS

494 **Burket, S. B.;** Du, B.; Haddad, S. P.; Chambliss, C. K.; Brooks, B. W.: EXAMINING BIOACCUMULATION OF CONTAMINANTS OF EMERGING CONCERN BY *CORBICULA FLUMINEA*

495 **Haro, R.;** Rolfus, K.; Sandheinrich, M.; Wiener, J.: METHYLMERCURY CONCENTRATION VARIES ACROSS SYMPATRIC GUILDS OF LENTIC DRAGONFLY LARVAE: DO GUILDS OCCUPY DIFFERENT TROPHIC POSITIONS?

131 P Landuse And Non-Point Source Impacts - Poster Session

Chair(s): Mark Munn, mdmunn@usgs.gov
Robert P. Brooks, rpb2@psu.edu

Location: Exhibit Hall

- 496 **Fritz, K. M.;** Johnson, B. R.; Martin, R. M.; Alberts, J. M.; Nietch, C. T.; Golden, H. E.: EXPOSURE CHARACTERIZATION OF ABRASIVE DISTURBANCE TO STREAM PERIPHYTON ACROSS A LAND USE GRADIENT
- 497 **Lourenço Amorim Pereira, C.;** Silva-Araújo, M.; Silva-Júnior, E. F.; Tromboni, F.; Feijó de Lima, R.; Thomas, S. A.; Moulton, T. P.; Zandoná, E.: INFLUENCE OF RIPARIAN FOREST IN PERIPHYTON ACCRUAL, NUTRIENT LIMITATION AND STOICHIOMETRY IN ATLANTIC RAIN FOREST STREAMS IN RIO DE JANEIRO, BRAZIL.
- 498 **Turunen, J. T.;** Karjalainen, S. M.; Muotka, T.; Vuori, K. M.; Aroviita, J.: RELATIVE IMPORTANCE OF HYDROMORPHOLOGICAL DEGRADATION AND DIFFUSE POLLUTION ON THE RESPONSE OF RIVER ASSEMBLAGES
- 499 **Daza Secco, E.;** Kauppila, T.; Valpola, S.; Meissner, K.: PEATLAND USE IMPACTS ON AQUATIC ECOSYSTEMS: DEFINING REFERENCE CONDITIONS FOR TESTACEAN COMMUNITIES FROM SEDIMENT RECORDS
- 500 **Nieminen, M. L.;** Ärje, J.; Raunio, J.; Meissner, K.: PEATLAND USE EFFECTS ON BOREAL AQUATIC ECOSYSTEMS CAN BE INFERRED FROM CHIRONOMID PUPAL EXUVIAE
- 501 **Maceli, C.;** Uhrlass, A.; LeTourneau, A.; Vail, E.; Tobin, K. T.; Richardson, D. C.: SUMMER STORMS MODIFY WATER QUALITY IN A SERIES OF MAN-MADE PONDS ON THE STATE UNIVERSITY OF NEW YORK AT (SUNY) NEW PALTZ CAMPUS
- 502 Kuhn, A.; **Smucker, N. J.;** Charpentier, M. A.; Cruz-Quinones, C. J.; Elonen, C. M.; Hill, B. H.; Lake, J.; Serbst, J.; Whorley, S. B.; Wehr, J. D.: TARGETING URBAN WATERSHED STRESSOR GRADIENTS: STREAM SURVEY DESIGN, ECOLOGICAL RESPONSES, AND IMPLICATIONS OF LAND COVER RESOLUTION
- 503 **Ramirez, M. A.;** Lipps, J.; Tomasula, P.; Wu, M.; Lee, L.; Galster, J.; Pope, G.: EFFECTS OF LAND USE ON WATER QUALITY OF THE PASSAIC RIVER THROUGH COLIFORM BACTERIA LEVELS
- 504 **Lipps, E. J.;** Tomasula, P. R.; Ramirez, M. A.; Wu, M.; Galster, J.; Pope, G.: EFFECTS OF URBANIZATION ON WATER QUALITY OF TWO NEW JERSEY RIVERS

- 505 **Mirrer, L. K.;** Wu, M.; Finocchiaro, M. T.; Feng, H.: IMPACTS OF LAND USE ON THE PASSAIC RIVER'S WATER QUALITY
- 506 **Choi, J.;** Harvey, J.; Larsen, L.; Skalak, K.; Ferreira, C.; Walker, A.; Benthem, A.; Buskirk, B.; Singh, J.; Hoyos, S.: HYDROLOGIC AND ECOLOGICAL ALTERATIONS OF URBAN HEADWATERS: RELATIVE INFLUENCE OF IN-CHANNEL AND WATERSHED BEST MANAGEMENT PRACTICES (BMPS)
- 507 **Cushman, S. F.;** Beston, S. M.; Hilton, J.; Pauflve, M.: SPATIAL AND TEMPORAL VARIATION IN BENTHIC MACROINVERTEBRATE COMMUNITIES IN AN URBAN WATERSHED.
- 508 **Musto, A.;** Custer, A.; Earnheart, W.; Entekin, S.: EFFECTS OF NATURAL GAS DEVELOPMENT ON STREAMS IN THE FAYETTEVILLE SHALE
- 509 **Sorensen, J. J.;** Heise, B. A.: DENSITY OR FLUX? EXPLORING THE RELATIONSHIP BETWEEN AQUATIC INVERTEBRATE DRIFT AND STREAM DISCHARGE.
- 510 **Cappuccio, N.;** Miller, S. W.: USING MULTIPLE LINES OF EVIDENCE TO ASSESS AQUATIC RESOURCE CONDITION FOR WESTERN PUBLIC LANDS: A CASE STUDY FROM THE NORTHERN GREAT BASIN, USA
- 511 **Wilgruber, N. A.;** Julian, J. P.; de Beurs, K. M.; Mayer, P. M.: LAND COVER CHANGE IMPACTS ON STREAM CHANNEL LOSS IN CENTRAL OKLAHOMA FROM 1874 TO 2010
- 512 **McFadyen, S. A.;** Wrona, F. J.; Prowse, T.: DISTURBANCE-RELATED PATTERNS IN FISH COMMUNITY COMPOSITION IN SELECTED RIVERS OF THE LOWER ATHABASCA DELTA
- 520 **Chiu, M.;** Liu, S.; Kuo, M.: EFFECT OF EXPERIMENTAL CHANGES IN FLOW RATE ON THE COLONIZATION OF DISTURBED AND UNDISTURBED TAIWAN STREAMS BY AQUATIC INSECTS
- 521 **Pechal, J. L.;** Erb, R.; Lang, J. M.; Wallace, J. R.; Benbow, M. E.: LIVING ON THE DEAD: MICROBIAL COMMUNITY SUCCESSION ON DECOMPOSING CARRION IN A HEADWATER STREAM AND POSSIBLE APPLICATIONS FOR FORENSICS
- 522 **Euclide, P. T.;** Stockwell, J. D.; Hansson, S.: DO PELAGIC MACROINVERTEBRATES DISPLAY POPULATION SUB-STRUCTURE IN LARGE LAKE SYSTEMS?
- 523 **Dauwalter, D. C.;** Morehouse, R. L.: SEASONAL HABITAT USE BY CRAYFISHES IN AN OZARK STREAM
- 524 **Hartnett, R. N.;** GENETIC AND ENVIRONMENTAL COMPONENTS OF LIFE-HISTORY DYNAMICS IN *DAPHNIA*
- 525 **Naughton, H. R.;** Cardinale, B. J.: PHYLOGENETIC DISTANCE CANNOT PREDICT RELATIVE COMPETITIVE ABILITY ACROSS PHYLA IN GREEN ALGAE COMMUNITIES
- 526 **Pecor, K.;** Dewey, T.; Hammond, G.; Myers, P.: QUAARDVARK: AN INSTRUMENT FOR TEACHING ECOLOGICAL INFORMATICS
- 527 **Shelley, B. C.;** CO-OCCURRENCE, CHECKERBOARDS, DISPERSAL AND THE ASSEMBLY OF MACROINVERTEBRATE COMMUNITIES IN HIGH-GRADIENT STREAMS
- 528 **Weidner, K. T.;** Berry, N. L.; Bonino, J. L.; Rosebrook, S. K.; Riley, L. A.; Verb, R. G.: CHARACTERIZATION OF THE ALGAL AND MACROINVERTEBRATE COMMUNITIES OF TWO VERNAL POOLS AT TIDD-OAKES FARM, HARDIN COUNTY, OHIO
- 529 **Boys, S. M.;** Timbrook, K. A.; Thomas, T. N.; Schroeder, S. C.; Carroll, C. M.; Jacquemin, S. J.; Riley, L. A.; Verb, R. G.; Keiser, T. D.: STREAM COMPARISONS BETWEEN GLACIATED AND UNGLACIATED REGIONS OF OHIO
- 530 **Alley, L. D.;** Rosebrook, S. K.; Riley, L. A.; Verb, R. G.; Bixby, R. J.: SPATIAL AND TEMPORAL ALGAL COMMUNITY VARIATION IN A DROUGHT-RESISTANT SPRING SYSTEM IN THE SANDIA MOUNTAINS, NEW MEXICO
- 531 **Erickson, L. C.;** Alley, L. D.; Elsass, J. R.; TysonMayer, K.; Riley, L. A.; Verb, R. G.: VARIATION OF ALGAL AND MACROINVERTEBRATE COMMUNITY STRUCTURE IN RESTORED WETLANDS WITH VARYING WATER INPUTS
- 532 **Metzner, G. K.;** Kneubehl, A. R.; DeColibus, D. T.; Blakely, B. J.; Carroll, C. M.; Riley, L. A.; Verb, R. G.: DISTRIBUTIONS AND COMPOSITIONS OF BENTHIC ALGAL COMMUNITIES IN THE UPPER MAD RIVER WATERSHED, OHIO
- 533 **Taylor, M. C.;** Akiyama, N.; Carroll, C. M.; Decolibus, D. T.; Foster, R. G.; Goforth, A. R.; Rubino, D. L.; Riley, L. A.; Verb, R. G.: INFLUENCE OF WOOD TYPE ON DIATOM AND MACROINVERTBRATE COLONIZATION PATTERNS

132 P Population And Community Ecology - Poster Session

Chair(s): Kathryn L. Cottingham, kathryn.cottingham@dartmouth.edu
 Steven Kohler, steve.kohler@wmich.edu
 Mark Pyron, mpyron@bsu.edu
 David G. Armanini, darmanini@protheagroup.com
 Scott A. Wissinger, swissing@allegheny.edu

Location: Exhibit Hall

- 512 **Hornbach, D. J.;** Sietman, B.; Davis, M.: A COMPARISON OF SAMPLING TECHNIQUES TO MONITOR MUSSEL COMMUNITIES: AN EXAMPLE FROM THE ST. CROIX RIVER, MN AND WI
- 513 **Phillips, K. R.;** Snyder, E. B.; Overweg, M. L.: UNIONIDS: THEIR CURRENT STATUS, ASSOCIATION WITH MACROINVERTEBRATES AND POPULATION DYNAMICS AT CEDAR CREEK
- 514 **Carter, C. D.;** Waller, D. A.: WATER QUALITY EFFECTS ON DRAGONFLY NYMPH SPECIES AND SIZE IN FOUR SOUTHEASTERN VIRGINIA LAKES
- 515 **Slattery, M.;** Lesser, M. P.: ALLELOPATHY IN THE TROPICAL ALGA *LOBOPHORA VARIEGATA* [PHAEOPHYCEAE]: AN INDIRECT CAUSE OF PHASE SHIFTS ON MESOPHOTIC CORAL REEFS?
- 516 **Pitcher, K. A.;** Soluk, D. A.: DO GOOD PLANTS MAKE GOOD NEIGHBORS? INFLUENCE OF AQUATIC PLANT DENSITY ON THE OUTCOME OF INTERSPECIFIC INTERACTIONS BETWEEN MULTIPLE PREDATORS.
- 517 **Hoffman, S. M.;** Crisman, T. L.: WATERBIRD RESPONSE TO URBANIZATION AND STRUCTURAL COMPLEXITY OF SMALL PONDS IN SOUTHWEST FLORIDA
- 518 **Kumagai, H.;** Ishida, S.; Makino, W.; Urabe, J.: THE ROLE OF OVERWINTERING FORMS OF *DAPHNIA* AS A MECHANISM SUSTAINING CRYPTIC POPULATION STRUCTURE

- 534 **Verb, R. G.**; Bixby, R. J.; Price, R. L.: SURVEY OF BENTHIC ALGAL ASSEMBLAGES FROM GEOTHERMAL INFLUENCED AQUATIC SYSTEMS IN VALLES CALDERA NATIONAL PRESERVE
- 535 Paroschy, K.; **Rusak, J. A.**; Jones, F. C.: SPATIAL VARIATION IN LITTORAL INVERTEBRATES WITHIN AND AMONG LAKES: THE INFLUENCE OF METRIC CHOICE AND DISTURBANCE ON OUR ABILITY TO DETECT IMPACTS
- 536 **Creed, R. P.**; Thomas, M. J.; Meeks, A. L.; Brown, B. L.: DETERMINING THE MECHANISM BY WHICH AN ECOSYMBIONT AFFECTS ITS HOST IN A CLEANING SYMBIOSIS
- 537 **Carroll, C. M.**; Weidner, K. T.; Chen, R. A.; Metzner, G. K.; Bensch, J. M.; Backus, J. K.; Verb, R. G.; Riley, L. A.: MACROINVERTEBRATE COMMUNITY COMPOSITION ACROSS THE UPPER MAD RIVER WATERSHED
- 538 **Riley, L. A.**; Dybdahl, M. F.: CHARACTERIZATION OF STREAM MACROINVERTEBRATE COMMUNITIES IN THE PRESENCE OF AN INTRODUCED FRESHWATER SNAIL
- 539 **Perkins, K. D.**; Hoyt, K.; Borczon, I.; Cann, A.; Robbins, J. R.; Milanovich, J.; Hopton, M.; McIntosh, M. D.: A TWO-YEAR ASSESSMENT OF LARVAL MOSQUITO POPULATIONS (DIPTERA: CULICIDAE) IN WETLANDS OF SOUTHWESTERN OHIO.
- 540 **Numata, K.**; Beatty, C. D.; McMillan, D. M.; Abbott, J. C.; Ware, J. L.: ROLE OF THE WESTERN INTERIOR SEAWAY IN THE BIOGEOGRAPHY OF THE RELICT DRAGONFLY *TACHOPTERYX THOREYI* IN NORTH AMERICA
- 541 **Church, J. O.**; Little, A. M.: LOCAL AND REGIONAL CONSTRAINTS ON FAUNAL COMMUNITIES IN EPHEMERAL WETLANDS IN WISCONSIN
- 542 **Seymore, K. R.**; Maret, T. J.: THE EFFECT OF FOREST COMPOSITION AND CADDISFLY LARVAE (*LIMNEPHILUS INDIVISUS*) ON VERNAL POND COMMUNITIES
- 133 P Aquatic Ecosystem Management And Policy**
Chair(s): Tom L. Arsuffi, tom.arsuffi@ttu.edu
Location: Exhibit Hall
- 543 **Ponzio, K. J.**; Hall, D. L.; Miller, T. D.: RESPONSES OF A WILLOW (*SALIX CAROLINIANA*) SHRUB SWAMP TO HERBICIDE APPLICATION
- 544 **Duff, J. H.**; Sheibley, R. W.; Tesoriero, A. J.: LOW TRANSIENT STORAGE AND UPTAKE EFFICIENCIES LIMIT NUTRIENT DEMAND IN AGRICULTURAL STREAMS
- 545 **Gerig, B. S.**; Chaloner, D. T.; Janetski, D. J.; Moerke, A. H.; Rediske, R. R.; O'keefe, J. P.; Lamberti, G. A.: TRACING SALMON-DERIVED PERSISTENT ORGANIC POLLUTANTS IN GREAT LAKES TRIBUTARIES USING CONGENER ANALYSES
- 546 **Goodwin, K. E.**; Pillsbury, L.: TOXIC POLLUTANTS IN OREGON'S RIVERS AND STREAMS: RESULTS FROM THE FIRST FIVE YEARS OF THE STATEWIDE WATER QUALITY TOXICS MONITORING PROGRAM
- 547 **Irwin, E. T.**; Shaftel, R. S.; Bogan, D. L.; Merrigan, D. W.; Rinella, D. J.: BENTHIC MACROINVERTEBRATE COMMUNITY DYNAMICS AND THE IMPLICATIONS FOR BIOMONITORING IN STREAMS OF BRISTOL BAY, ALASKA
- 548 **Burger, C. A.**; Soranno, P. A.; Cheruvellil, K. S.: EXAMINING THE LINK BETWEEN STATE WATER QUALITY CRITERIA AND LAKE NUTRIENT LEVELS IN THE UPPER MIDWEST US
- 549 **Laterza, K. J.**: REMOTE SENSING OF AQUATIC RESOURCES IN THE USDA/NRCS REMOTE SENSING LABORATORIES
- 550 **MacKay, H.**; Gill, P.; Dumas, M.; Lutz, S.; Stanley, S.; Hume, C.: AGRICULTURE-WATERSHED CHARACTERIZATION TO SUPPORT INCENTIVES AND PAYMENTS AS INVESTMENTS IN BOTH AGRICULTURE AND WATERSHED SYSTEMS IN WHATCOM COUNTY
- 551 **Lynch, J. S.**; Roark, S. A.; Smith, E. A.; Canton, S. P.: A REVIEW OF BEDDED SEDIMENT CRITERIA; WHERE THE U.S. IS AND WHAT MIGHT BE NEXT FOR THE STATE OF COLORADO
- 552 **Katz, S. L.**; McKenna, M. F.: SOLVING THE INFORMATICS CHALLENGES IN REPURPOSING MARITIME SAFETY DATA FOR OCEAN CONSERVATION
- 553 Garcia-Llorente, M.; **Castro, A. J.**; Vaughn, C. C.; Julian, J. P.; Mikle, C. J.; Berg-Mattson, N.; Kuster, E.; Zhou, L.; Williams, K.; Ryan, A.: ECOSYSTEM SERVICES ACROSS US WATERHEDS: A SYSTEMATIC REVIEW
- 135 P Land-Water Interfaces**
Chair(s): Philip R. Kaufmann, kaufmann.phil@epa.gov
Location: Exhibit Hall
- 570 **West, A. O.**; Scott, J. T.: INVESTIGATING HYSTERESIS EFFECTS IN TOTAL SUSPENDED SOLIDS AND TURBIDITY IN FIVE NORTHWEST ARKANSAS RIVERS 2000-2013
- 571 **Meyers, C.**; Hockaday, W. C.: SAMPLING METHODS FOR AQUATIC PARTICULATE MATTER: A STUDY OF THE BRAZOS RIVER, TEXAS
- 572 **Wensink, S. M.**; Tiegs, S. D.: RIPRAP ALTERS THE STRUCTURE AND FUNCTION OF LAKE ST. CLAIR SHORELINES (MI, USA)
- 573 **Gann, G. L.**; Powell, C. H.; Chumchal, M. M.; Drenner, R. W.: MERCURY-CONTAMINATED TERRESTRIAL SPIDERS POSE A POTENTIAL HEALTH RISK TO SONGBIRDS AT CADDO LAKE, TEXAS/LOUISIANA, USA
- 136 P Biodiversity And Ecosystem Function - Poster Session**
Chair(s): Christopher Jerde, cjerde@nd.edu
Sophia Passy, sophia.passy@uta.edu
Location: Exhibit Hall
- 574 **DeColibus, D. T.**; Rober, A. R.; Turetsky, M. R.; Wyatt, K. H.: INCREASED FREQUENCY OF DRYING-REWETTING EVENTS ALTERS ALGAL COMMUNITY DYNAMICS IN A BOREAL RICH FEN PEATLAND
- 575 **Black, C. R.**; Smock, L. A.: ADULT DRAGONFLY SPECIES RICHNESS AND SITE SELECTION IN A FLORIDA SLOUGH SYSTEM.
- 576 **Berkowitz, J. F.**; Noble, C. V.; Summers, E. A.: DEVELOPING A FRAMEWORK FOR DATA-DRIVEN GEOGRAPHICAL EXPANSION OF AN ECOLOGICAL ASSESSMENTS

- 577 **Morse, J. C.;** Burington, Z. L.; Pometto, S. F.; Wimmer, J. M.; McArthur, J. V.: A 33-YEAR REVIEW OF THE WORLD'S MOST SPECIES-RICH TRICHOPTERA COMMUNITY: CADDISFLIES OF UPPER THREE RUNS CREEK AND ITS TRIBUTARIES, SAVANNAH RIVER SITE, SC
- 578 **Hutchings, M. G.;** Creed, R. P.: DO INHIBITORY INTERACTIONS BETWEEN DETRITIVORES INFLUENCE LEAF BREAKDOWN?
- 579 **Everroad, R. C.;** Lee, J. Z.; Detweiler, A.; Prufert-Bebout, L.; Bebout, B. M.: MICROBIAL MAT LIVING LIBRARY: DEVELOPMENT OF A FULLY DEFINED MICROBIAL MAT TOOLKIT FOR MICROBIOLOGICAL RESEARCH
- 138 P Zooplankton Dynamics**
Chair(s): Janet Fischer, janet.fischer@fandm.edu
Location: Exhibit Hall
- 590 **Choi, K. C.;** Jang, M. C.; Shin, K.: MESOZOOPLANKTON COMMUNITY IN A SEASONALLY HYPOXIC AND HIGHLY EUTROPHIC BAY
- 591 **Erikson, K.;** Blanco-Bercial, L.; Richardson, D.; Hare, J.; Bucklin, A.: WATCHING TIME FLY: VISUALIZATION OF ZOOPLANKTON POPULATION DYNAMICS 1977 - 2013 FROM NOAA-NEFSC ECOSYSTEM MONITORING OF THE NW ATLANTIC CONTINENTAL SHELF
- 592 **Nakano, D.;** Kobayashi, T.; Sakaguchi, I.: DIEL CHANGE IN VERTICAL DISTRIBUTION OF PLANKTONIC LARVAE OF A FRESHWATER MUSSEL (*LIMNOPERNA FORTUNEI*) IN A RESERVOIR
- 593 **Taylor, C. D.;** Brown, B. L.: EFFECT OF DISPERSAL ON ZOOPLANKTON COMMUNITY DYNAMICS: A TEST OF METACOMMUNITY THEORY
- 594 **Arora, V.;** Nejtgaard, J. C.; Berger, S. A.; Pride, C.; Ebanks, S.; Jakobsen, H. H.: BEHAVIORAL RESPONSES OF PLANKTONIC CILIATES TO PRESENCE OF PREDATORY COPEPODS
- 595 **Lee, T.;** Bollens, S.; Rollwagen-Bollens, G.; Emerson, J.: SEASONAL SUCCESSION AND ENVIRONMENTAL FORCING OF THE ZOOPLANKTON COMMUNITY IN A SHALLOW EUTROPHIC LAKE
- 140 P Invasive And Non-Native Species - Poster Session**
Chair(s): Neal Flanagan, nflanagan@duke.edu
Jake R. Walsh, jrwalsh2@wisc.edu
Randall E. Hicks, rhicks@d.umn.edu
Eric Ahern Sawyer, eahernsawyer@antioch.edu
Location: Exhibit Hall
- 610 **Bellamy, P. W.;** Cho, H. J.: INVENTORY OF AQUATIC PLANTS IN RETENTION PONDS AND DITCHES IN DAYTONA BEACH, FLORIDA
- 611 **Barboza, K. A.;** Whitcraft, C.; Zahn, E.: IMPACTS OF THE RESTORATION ON BENTHIC MARINE INVERTEBRATES AND WINGED ARTHROPODS
- 612 **Brown, M. E.:** SEASONAL DYNAMICS IN THE PRODUCTION AND DEPOSITION OF THE RESTING EGGS OF *CERCOPAGIS PENGOI* (FISHHOOK WATER FLEA)
- 613 **Tolley-Jordan, L. R.;** Chadwick, M. A.; Wooten, J. A.: WHERE WILL MELANOIDES BE NEXT? PREDICTIONS OF AN INVASIVE SNAIL RANGE EXPANSION IN THE USA
- 614 **Williams, D.;** Nguyen, I.; Jakstis, K.; Weilhoefer, C. L.: THE EFFECT OF REED CANARY GRASS (*PHALARIS ARUNDINACEA*) ON HABITAT AND MACROINVERTEBRATE COMMUNITY STRUCTURE IN A FRESHWATER WETLAND IN PORTLAND, OR.
- 615 **Freeland-Riggert, B. T.;** Cairns, S.; Poulton, B. C.; Dean, K.: THE EFFECTS OF AN INVASIVE CRAYFISH ON THE AQUATIC MACROINVERTEBRATE COMMUNITY IN AN OZARK STREAM
- 616 Tudor, K. D.; Gunderson, J. L.; Jensen, D. A.; **Schooler, S. S.:** WHERE HAVE ALL THE CRAYFISH GONE? CHANGE IN DISTRIBUTION OF INVASIVE AND NATIVE CRAYFISH IN THE ST. LOUIS RIVER ESTUARY OVER 14 YEARS.
- 617 Bazer, C. E.; **Perry, W. L.;** Preston, R. L.: OSMOREGULATION DYNAMICS OF RUSTY CRAYFISH (*ORCONECTES RUSTICUS*): IS THERE POTENTIAL FOR INVASION INTO ESTUARIES?
- 618 **Harshbarger, D.;** Benscotter, B. W.; Gible, R.; Mason, C.; Kapsch, M.: EFFECTIVENESS OF AERIAL HERBICIDE TREATMENT OF MELALEUCA FOR HABITAT RECOVERY IN THE NORTHERN EVERGLADES
- 619 **Halliday-schult, T. C.;** Beyer, J. E.; Hambright, K. D.: RANGE EXPANSION LEADS TO NEW CHALLENGES: ZEBRA MUSSELS IN A SUBTROPICAL RESERVOIR
- 620 **Marko, M. D.;** Smith, R. S.: ECOLOGY AND PHENOLOGY OF FLOWERING RUSH IN MINNESOTA
- 621 **Sloan, C. M.;** Reed, A. J.; Sadowsky, M. J.; Hicks, R. E.: CHARACTERIZING ANTIBIOTIC AND HEAVY METAL RESISTANT GENES FROM BACTERIA IN COMMERCIAL SHIP BALLAST WATER DISCHARGED INTO THE DULUTH-SUPERIOR HARBOR
- 622 **Sheffels, T. R.;** Carter, J.; Merino, S.; Sytsma, M. D.; Mortenson, J.: A COMPARISON OF ATTACHING TRANSMITTERS TO THE TAIL VERSUS THE NECK IN NUTRIA (*MYOCASTOR COYPUUS*) TELEMETRY.
- 623 **Brainard, A. S.;** Schulz, K. L.: THE INFLUENCE OF RECREATIONAL BOAT TRAFFIC ON NON-NATIVE MACROPHYTE BIOMASS AND NATIVE DIVERSITY
- 624 Figary, S.; Teece, M. A.; Rudstam, L. G.; **Schulz, K. L.:** WHY ARE HALF OF THE LAKES IN A LAKE DISTRICT INVADED BY *CERCOPAGIS PENGOI*, WHILE THE OTHER HALF HAVE REMAINED NON-INVADED FOR WELL OVER A DECADE?
- 625 **Pfleeger, A. Z.;** Eagles-Smith, C. A.; Fradkin, S.: EFFECTS OF NON-NATIVE TROUT ON MERCURY BIOACCUMULATION IN AQUATIC COMMUNITIES OF REMOTE ALPINE LAKES
- 626 **Schulte, L. L.;** Thum, R. A.: GENETIC VARIATION FOR 2,4-D SENSITIVITY IN WATERMILFOIL
- 627 **Ludlam, J. P.;** Steinmetz, J.; Stoeckmann, A.; Truncellito, D.; Turner, D.: POPULATION DYNAMICS OF INVASIVE *DAPHNIA LUMHOLTZI* AND NATIVE ZOOPLANKTON IN LAKE WATEREE, SC
- 628 **Shappell, L. J.;** Hartman, J. M.; Struwe, L.: HOPE ON THE INVASION FRONT OF JAPANESE STILTGRASS (*MICROSTEGIUM VIMINEUM*) IN HEADWATER WETLANDS
- 629 **Paufve, M. R.;** Brown, M. E.: EFFECTS OF TEMPERATURE AND PREY TYPE ON THE FEEDING PREFERENCES OF ADULT BLOODY RED SHRIMP

- 630 Yang, Y. Y.; Kim, J. G.; **Heo, J. O.**: NICHE AND TOLERANCE ABILITY OF A RARE PLANT PENTHORUM *CHINENSE*
- 631 **Bollens, S.**; Rollwagen-Bollens, G.; Counihan, T.; Hardiman, J.; Zimmerman, J.; Hassett, W.; Emerson, J.: INVASIVE MUSSEL MONITORING IN THE COLUMBIA RIVER BASIN — PAST, PRESENT, AND FUTURE
- 632 Marburger, J. E.; Travis, S. E.; **Middleton, B. A.**: MOLECULAR AND CYTOLOGICAL IDENTIFICATION OF CATTAIL TAXA IN NATIONAL PARKS
- 633 **Folino-Rorem, N. C.**; Reid, M.; McDunn, M.; Peard, T.: CULTURING MEDUSAE OF THE INVASIVE FRESHWATER JELLYFISH, *CRASPEDACUSTA SOWERBII*
- 141 P Wetlands - Poster Session**
- Chair(s): Dennis Whigham, whighamd@si.edu
Jay Christensen, christensen.jay@epa.gov
Jessica L. Franks, jessielee07@gmail.com
Thomas Hruba, thru461@ecy.wa.gov
- Location: Exhibit Hall
- 634 **Dorney, J. R.**; Gale, S.: UTILIZATION OF A SEAMLESS SOILS DATABASE TO DETERMINE THE HISTORICAL EXTENT OF WETLANDS IN NORTH CAROLINA
- 635 **Jackson, R.**; Tomczyk, N.; Podzikowski, L.; Greig, H.; Capps, K.: PATTERNS IN MACRO-INVERTEBRATE COMMUNITY COMPOSITION IN VERNAL POOLS IN THE NORTHEASTERN UNITED STATES
- 636 **Wilcox, D. A.**; Uzarski, D. G.; Brady, V. J.; Cooper, M. J.; Brown, T. N.: WETLAND RESTORATION ENHANCED BY GREAT LAKES COASTAL WETLAND MONITORING PROGRAM
- 637 **Garrett, V. W.**; Johnston, C. A.: WATERSHED CHARACTERISTICS INFLUENCE BEAVER POND ESTABLISHMENT AND LONGEVITY
- 638 **Sihi, D. S.**; Gerber, S. G.; Inglett, K. I.; Inglett, P. I.: MATHEMATICAL FORMULATION OF CARBON USE EFFICIENCY AFFECTS WARMING RESPONSE IN WETLAND DECOMPOSITION MODELS
- 639 **Lane, C. R.**; Autrey, B. C.; Jicha, T.; Lehto, L.; Elonen, C.; Seifert-Monson, L.: DENITRIFICATION AND PHOSPHORUS ASSIMILATION IN GEOGRAPHICALLY ISOLATED WETLANDS OF FLORIDA AND NORTH CAROLINA, USA
- 640 **Barrett, N. J.**; Dwyer, A.; Brutemark, A.; Almen, A.; Engstrom-Ost, J.; De Stasio, B.: EFFECTS OF TOXIC CYANOBACTERIA ON FEEDING AND REPRODUCTION ECOLOGY OF THE COPEPOD EURYTEMORA AFFINIS FROM GREEN BAY, LAKE MICHIGAN
- 641 **Dee, S. M.**; Ahn, C.: PLANT TISSUE NUTRIENTS AS AN INDICATOR FOR FUNCTIONAL DEVELOPMENT OF CREATED MITIGATION WETLANDS
- 642 **Maas, P. E.**; Eggert, S. L.; Drewes, A. L.; Goggeleye, S.; Johnson, A. M.; Staples, J. L.: INVERTEBRATE STRUCTURE AND FUNCTION IN MINNESOTA SEASONAL PONDS AFFECTED BY TREE BLOWDOWN
- 643 **Means, M.**; Ahn, C.; Korol, A.: POTENTIAL CARBON STORAGE BY FOUR HERBACEOUS WETLAND PLANTS AS AFFECTED BY PLANT FUNCTIONAL DIVERSITY
- 644 **Holland, M. M.**; Burk, C. J.: PERSISTENCE THROUGH DECLINE: THREE DECADES OF CHANGE IN WESTERN MASSACHUSETTS OXBOW SWAMP FORESTS
- 645 **Martinson, G. O.**; Brandt, F.; Conrad, R.: TANK BROMELIAD – A NATURAL MODEL ECOSYSTEM FOR METHANE CYCLING RESEARCH
- 646 **Korol, A.**; Ahn, C.: TRADEOFFS IN SPECIES FUNCTIONAL PERFORMANCE AND COMPETITIVE ABILITY DETERMINE THE EFFECTS OF WETLAND MACROPHYTE DIVERSITY ON NET PRIMARY PRODUCTIVITY
- 647 **Eggert, S. L.**; Drewes, A. L.; Maas, P. E.; Goggeleye, S.; Johnson, A. M.; Staples, J. L.: QUANTIFICATION OF WOOD INPUTS TO NORTHERN SEASONAL PONDS FOLLOWING A LARGE BLOWDOWN EVENT
- 648 **Coleman Wasik, J. K.**; Engstrom, D. R.; Mitchell, C. P.; Swain, E. B.; Monson, B. A.; Balogh, S. J.; Jeremiason, J. D.; Kolka, R. K.; Branfireun, B. A.; Almendinger, J. E.: SPATIALLY VARIABLE RESPONSE OF MERCURY METHYLATION TO SULFATE ADDITION AND WATER-TABLE FLUCTUATIONS IN A SMALL PEATLAND
- 649 **Britson, A. J.**; Wardrop, D. H.; Boyer, E. W.; Drohan, P. J.: DIFFERENCES IN WATER CHEMISTRY, SOIL CHEMISTRY, AND PLANT LITTER QUALITY IN HIGH AND LOW DISTURBANCE WETLANDS
- 650 **Sanders, A. J.**; Halloran, K.: IT'S A TRAP! IMPACTS OF SALINITY ON *UTRICULARIA GIBBA* (LENTIBULACEAE) FEEDING SUCCESS.
- 651 **Peterson, H. M.**; Goldsborough, G.: *TYPHA X GLAUCA* GROWTH AND NUTRIENT UPTAKE AS A FUNCTION OF WATER DEPTH IN OAK HAMMOCK MARSH, CANADA
- 652 Overweg, M. L.; **Snyder, E. B.**; Phillips, K. R.: FUNCTIONAL ROLE OF FRINGING FLOODPLAIN WETLANDS ON STREAMS IN SOUTH-CENTRAL MICHIGAN.
- 653 **Marty, J.**; Kettenring, K. M.: SEED VIABILITY, DORMANCY, AND GERMINATION REQUIREMENTS OF THREE WIDESPREAD WETLAND BULRUSH SPECIES: *SCHOENOPLECTUS ACUTUS*, *S. AMERICANUS*, AND *S. MARITIMUS*
- 654 **Marois, D. E.**; Mitsch, W. J.; Song, K.: MODELING THE EFFECTS OF MACROPHYTE COMMUNITIES ON PHOSPHORUS RETENTION AT LOW CONCENTRATIONS
- 655 **Rich, M. W.**; Hopple, A.; Marton, J. M.; Roberts, B. J.: TEMPORAL PATTERNS IN LOUISIANA SALT MARSH PRODUCTION AND DECOMPOSITION RATES
- 656 **McKee, M. B.**; Steinmuller, H. E.; Graham, S. A.; Mendelsohn, I. A.; White, J. R.: EFFECTS OF LONG-TERM NUTRIENT LOADING ON MICROBIAL ACTIVITY OF COASTAL WETLAND SOIL
- 657 **Kim, J. H.**; Nam, J. M.; Kim, J. G.: SHADING EFFECTS ON AMPHICARPY OF *PERSICARIA THUNBERGII*
- 658 **Thiesing, M. A.**; Dean, H. E.; Herczeg, B.; Holley, M.: HYDROLOGIC CONNECTIVITY AND WETLAND DISTRIBUTION IN THE COASTAL PLAIN REGION ON ALASKA'S NORTH SLOPE

142 P Food Webs - Poster Session

Chair(s): Ross M. Thompson, ross.thompson@canberra.edu.au
 Peter Kiffney, peter.kiffney@noaa.gov
 Alan Hildrew, a.hildrew@qmul.ac.uk

Location: Exhibit Hall

- 659 **Ocasio-Torres, M. E.**; Crowl, T. A.; Sabat, A. M.: THE EFFECT OF PREDATOR PRESENCE AND SHRIMP PHENOTYPE ON LEAF BREAKDOWN BY XIPHOCARIS ELONGATA
- 660 **Arsenault, E. R.**: AN ASSESSMENT OF MACROINVERTEBRATE FEEDING INTERACTIONS IN THREE HEADWATER STREAMS REVEALS SENSITIVITY TO ROAD CROSSINGS
- 661 **Fortner, A. M.**; Smith, J. G.; Morris, J. G.; Otter, R.; Bailey, F.; Adams, S. M.; Mathews, T. J.: TROPHIC TRANSFER OF SELENIUM AT A COAL ASH SPILL SITE
- 662 **Deacy, W. W.**; Stanford, J. A.; Leacock, W. B.: SCALE DEPENDENCE OF A PREDATOR-PREY RELATIONSHIP: KODIAK BROWN BEAR TRACKING OF SPAWNING SALMON

- 663 **Stern, E.**; Charifson, D. M.; Stanson, V.; Thompson, J.; Richardson, D. C.: A TROPHIC CASCADE AS THE RESULT OF THE INTRODUCTION OF *NOTEMIGONUS CRYSOLEUCAS* (GOLDEN SHINER MINNOW) IN LAKE MINNEWASKA, NEW YORK
- 664 **Stanson, V.**; Stern, E.; Charifson, D. M.; Thompson, J.; Richardson, D. C.: ENVIRONMENTAL CHANGE ON THE SHAWANAGUNK RIDGE, NEW YORK: HOW ACID RAIN AND FISH INTRODUCTION HAVE AFFECTED BIOLOGY AND WATER CHEMISTRY IN LAKE MINNEWASKA
- 665 **Rine, K. M.**; Wipfli, M. S.; Schoen, E.; Stricker, C. A.: PATTERNS OF ENERGY FLOW IN SALMONID FOOD WEBS WITHIN A LARGE GLACIAL ALASKAN RIVER

200 PSA Bold Award Session

Chair(s): Paul Gabrielson , drseaweed@hotmail.com

Location: Exhibit Hall

- 713 **Jovanovska, E.**; Florian, C. R.; Spaulding, S. A.: DIATOM-BOUND NITROGEN ISOTOPIC SIGNATURE IN LAKE SEDIMENTS (GRAND TETON NP)

Wednesday, 5/21/2014 Orals

003 Putting Microbial Genomes To Work In Ecosystem Science

Chair(s): Stephen Giovannoni, Stephen.giovannoni@oregonstate.edu
Adriana Zingone, zingone@szn.it

Location: Oregon Ballroom

- 10:00 **Johnston, A. W.**; Curson, A. R.; Todd, J. D.; Fowler, E. K.: PATHWAYS FOR SULFUR AND NITROGEN BIOTRANSFORMATIONS – POLES APART IN THEIR GENETIC HERITAGE
- 10:30 **Morris, J. J.**; Johnson, Z. I.; Zinser, E. R.: DIEL REGULATION OF HYDROGEN PEROXIDE DEFENSES IN OPEN OCEAN MICROBIAL COMMUNITIES
- 10:45 **Smith, M. W.**; Davis, R. E.; Youngblut, N. D.; Whitaker, R. J.; Metcalf, W. W.; Herfort, L.; Tebo, B. M.; Simon, H. M.: A METAGENOMIC ANALYSIS OF SEDIMENTS FROM THREE DIVERSE LATERAL BAY REGIONS IN THE LOWER COLUMBIA RIVER ESTUARY
- 11:00 **Bryson, S.**; Li, Z.; Pett-Ridge, J.; Hettich, B.; Pan, C.; Mayali, X.; Mueller, R.: DEFINING CARBON PREFERENCES IN A COASTAL MARINE MICROBIAL COMMUNITY WITH PROTEOMICS-BASED STABLE ISOTOPE PROBING (PROTEOMICS-SIP)
- 11:15 **DeLorenzo, S.**; Herfort, L.; Tebo, B. M.; Zuber, P.: BACTERIAL AND ARCHAEL AMOA GENE EXPRESSION IN THE COASTAL NORTHEAST PACIFIC OCEAN
- 11:30 **Qiu, X.**; Shimasaki, Y.; Tsuyama, M.; Matsubara, T.; Honjo, T.; Oshima, Y.: RELATIONSHIPS AMONG PHOTOSYNTHETIC ACTIVITY, GROWTH RATE, AND CELLULAR PROTEIN EXPRESSION LEVEL OF *CHATTONELLA MARINA* THROUGH A FIELD BLOOM
- 11:45 **Shilova, I. N.**; Jimenez, V.; Sudek, S.; Turk-Kubo, K.; Worden, A. Z.; Zehr, J. P.: INTERACTIONS BETWEEN NITRATE SUPPLY AND MICROBIAL COMMUNITY FUNCTIONS IN THE CALIFORNIA CURRENT SYSTEM
- 13:30 **Santoro, A. E.**; Dupont, C.; Saito, M. A.: ABUNDANT, MINIMALIST MARINE ARCHAEA*
- 14:00 **Dreher, T. W.**; Otten, T. G.; Brown, N.; Driscoll, C.; Bozarth, C. S.; Shepardson, J. W.; Graham, J. L.; Mueller, R. S.: GENETICS AND DRIVERS OF FRESHWATER CYANOBACTERIAL BLOOMS IN THE U.S. PACIFIC NORTHWEST
- 14:30 **Merbt, S. N.**; Proia, L.; Ribot, M.; Bernal, S.; Casamayor, E. O.; Marti, E.: LIGHT INHIBITS NITRIFICATION IN STREAM BIOFILMS, BUT THE BIOFILM MATRIX CAN HAVE A POTENTIAL UMBRELLA EFFECT
- 14:45 **Elser, J. J.**; Kellom, M.; Corman, J. R.; Eick, H.; Lee, Z.; Laspoumaderes, C.; Bastidas, M.; Balseiro, E.; Modenutti, B.: OPPORTUNISTIC SAMPLING REVEALS UNIQUE MICROBIAL COMMUNITIES AND SUBSTANTIAL BIOGEOCHEMICAL IMPACT OF LIFE ON FLOATING PUMICE
- 15:00 **Kim, J. W.**; Stiller, J.; Prochnik, S.; Grossman, A. R.; Brawley, S. H.: COMPARATIVE ANALYSIS OF THREE PLANCTOMYCETE GENOMES ASSOCIATED WITH THE BLADES OF THE RED ALGA PORPHYRA UMBILICALIS

- 15:15 **Graham, L. E.**; **Knack, J. J.**; Piotrowski, M. J.; Wilcox, L. W.; Cook, M. E.; Wellman, C. H.; Taylor, W.; Lewis, L. A.; Arancibia-Avila, P.: A NEW LACUSTRINE MICROBIALITE GENERATED BY *NOSTOC* (NOSTOCALES) AND ASSOCIATED MICROBIOME

012 Diversity And Ecological Function Of Fungi In Freshwater And Marine Environments

Chair(s): Maiko Kagami, kagami@env.sci.toho-u.ac.jp
Hans-Peter Grossart, hgrossart@igb-berlin.de

Location: A 105

- 10:00 **Baerlocher, F.**: RESEARCH ON AQUATIC HYPHOMYCETES IN A CHANGING WORLD*
- 10:15 **Sime-Ngando Télesphore, S. T.**: DIVERSITY AND ECOLOGICAL FUNCTIONS OF MICROSCOPIC FUNGI IN AQUATIC ECOSYSTEMS*
- 10:30 **Davis, W. J.**; Antonetti, J.; Edmonds, J. W.; Longcore, J. E.; Powell, M. J.: DIVERSITY OF EARLY-DIVERGING FUNGAL LINEAGES IN TEMPORARY PONDS
- 10:45 **Niyogi, D. K.**; Thraillkill, K. Q.; Hu, C. Y.; Kuo, J. H.; Westenberg, D. J.: THE EFFECTS OF DRYING ON FUNGAL COMMUNITIES IN STREAMS
- 11:00 **Ueda, M.**; Doi, K.; Nakajima, M.; Honda, D.: ECOLOGICAL STUDY OF FUNGOID PROTISTS, THRAUSTOCHYTRIDS (LABYRINTHULOMYCETES, STRAMENOPILES)
- 11:15 **Gulis, V.**; Burns, T. P.; Fitzgerald, J.; Barrett, C. R.; Kominoski, J. S.; Benstead, J. P.; Rosemond, A. D.: DISSOLVED NUTRIENTS DRIVE MICROBIAL ACTIVITY WHILE FUNGI CONTROL DECOMPOSITION AND NUTRIENT STOICHIOMETRY OF SUBMERGED LEAF LITTER AND WOOD
- 11:30 **Maier, M. A.**; Uchii, K.; Kagami, M.; Needoba, J. A.; Peterson, T. D.: DEVELOPMENT AND APPLICATION OF QUANTITATIVE PCR ASSAYS FOR STUDIES OF THE AQUATIC MYCOLOOP
- 11:45 **Ibelings, B. W.**; Gsell, A. S.; van Donk, E.: A VARIABLE ENVIRONMENT AND CHYTRID PARASITES MAINTAIN GENETIC DIVERSITY OF A SPRING BLOOM DIATOM POPULATION*
- 015 Seaweed Blooms In A Changing World: Understanding Their Causes, Dynamics And Consequences**
- Chair(s): Donald Cheney, d.cheney@neu.edu
Kathy Van Alstyne, Kathy.VanAlstyne@www.edu
Carol Thornber, thornber@uri.edu
- Location: B 114
- 10:00 **Lapointe, B. E.**; Herren, L. W.; Tarnowski, M.; Dustan, P.: EUTROPHICATION, CLIMATE CHANGE AND MACROALGAL BLOOMS IN SOUTH FLORIDA AND THE CARIBBEAN REGION *
- 10:15 **Van Alstyne, K. L.**; Nelson, T. A.; Gifford, S. A.: SPATIAL AND TEMPORAL PATTERNS OF ULVOID ALGAL ABUNDANCE AND CHEMICAL COMPOSITION AT BLOOM AND NON-BLOOM SITES IN THE CENTRAL SALISH SEA, WASHINGTON*
- 10:30 **He, P. M.**; Huo, Y. Z.; Yu, K. F.; Ma, J. H.; Zhang, J. H.: THE CAUSE AND IMPACT OF GREEN TIDES IN YELLOW SEA*
- 10:45 **Thornber, C. S.**; Tyler, A. C.; Guidone, M.: HERBIVORY AND TROPHIC IMPACTS ON MACROALGAL BLOOMS*

- 11:00 **Wilkes, R. J.;** Best, M. A.; Kolbe, K.; Neto, J. M.; Rossi, N.; Scanlan, C. M.: USING OPPORTUNISTIC MACROALGAL BLOOMS AS A TOOL FOR ASSESSING ECOLOGICAL STATUS FOR THE EU WATER FRAMEWORK DIRECTIVE*
- 11:15 **Israel, A.:** MACROALGAL BLOOMS IN THE EASTERN MEDITERRANEAN SHORES*
- 11:30 **Nelson, T. A.;** Van Alstyne, K. L.; Gifford, S.: MULTISCALE FLUCTUATIONS IN SEAWATER PH AND OXYGEN NEAR MACROALGAL BLOOMS*
- 11:45 **Cheney, D.;** Logan, J.; Gardner, K.; Sly, E.: UPTAKE AND TRANSFER OF PCBs UP THE FOOD CHAIN BY A SEAWEED BLOOM (ULVA RIGIDA) IN NEW BEDFORD HARBOR, MA, USA*
- 017 Understanding Linkages Between Terrestrial And Aquatic Organic Matter Across Ecosystems**
- Chair(s): Kaelin Cawley, kaelin.cawley@colorado.edu
Jessica Ebert, j.lebert88@gmail.com
Rudolf Jaffe, jaffer@fuu.edu
Diane McKnight, diane.mcknight@colorado.edu
- Location: A 106
- 10:00 **Lee, B.;** Strid, A.; Lajtha, K.; Peterson, F.: THE LINKAGE BETWEEN SOIL, SOIL WATER, AND A STREAM IN A WESTERN CASCADE FOREST, OREGON
- 10:15 **Kelso, J.;** Epstein, D.; Baker, M. A.: CHARACTERIZATION OF SOURCES OF ORGANIC MATTER TO AN URBAN RIVER
- 10:30 **Williams, C. J.;** Bach, E.; Hofmockel, K. S.; Helmers, M. J.; Downing, J. A.: EFFECTS OF CROPPING SYSTEM AND SOIL-WATER INTERACTIONS ON DISSOLVED ORGANIC MATTER CHARACTERISTICS IN AGRICULTURAL WATERSHEDS
- 10:45 **Ya, C.;** Jaffe, R.: ORGANIC MATTER DYNAMICS IN A MANGROVE DOMINATED ESTUARY: LINKING PARTICULATE ORGANIC MATTER WITH DISSOLVED ORGANIC MATTER
- 11:00 **Jaffe, R.;** Ding, Y.; Wagner, S.: ASSESSING THE MECHANISMS OF TRANSLOCATION OF BLACK CARBON FROM SOILS TO THE AQUEOUS PHASE
- 11:15 **Zhou, Z.;** Guo, L.: COLLOIDAL SIZE DISTRIBUTION OF DISSOLVED ORGANIC MATTER IN SOIL LEACHATE AND MILWAUKEE RIVER AS CHARACTERIZED BY FLOW-FIELD FLOW FRACTIONATION
- 11:30 **Ramey, T. L.;** Richardson, J. S.: STREAM INFLUENCES ON DECOMPOSITION RATES IN THE RIPARIAN ZONE
- 11:45 **Wymore, A. S.;** Mineau, M. M.; Potter, J. D.; Marks, J. C.; McDowell, W. H.: LEAF LITTER LEACHATE CONTROLS BACTERIAL COMMUNITIES AND ECOSYSTEM PROCESSING RATES
- 13:30 Langlois, M.; Weavers, L. K.; **Chin, Y.:** HERBICIDE MEDIATED PHOTBLEACHING OF CHROMOPHORIC DISSOLVED ORGANIC MATTER
- 13:45 **Guillemette, F.;** Mostovaya, A.; Tranvik, L. J.: SEASONAL VARIABILITY IN MICROBIAL DOC DEGRADATION IN BOREAL LAKES: LINKS TO MOLECULAR COMPOSITION, CARBON SOURCES, AND BASELINE METABOLISM
- 14:00 **Ward, C. P.;** Cory, R. M.: LINKING CHEMICAL COMPOSITION OF DISSOLVED ORGANIC MATTER FROM ARCTIC SOILS TO ITS COMPLETE AND PARTIAL PHOTOOXIDATION IN SURFACE WATERS.
- 14:15 **Cottrell, B. A.;** Gonsior, M.; Timko, S. A.; Simpson, A. J.; Cooper, W. J.: TOWARDS AN UNDERSTANDING OF METAL-DISSOLVED ORGANIC MATTER INTERACTIONS: A PARTIAL CHARACTERIZATION OF COPPER-ORGANIC MATTER LIGANDS IN NATURAL WATERS.
- 14:30 **Catalán, N.;** Kellerman, A. M.; Peter, H.; Carmona, F.; Tranvik, L.: ABSENCE OF PRIMING EFFECT ON DOC DEGRADATION IN LAKE WATER
- 14:45 **Barnes, R. T.;** Voynova, Y. G.; Ullman, W. J.; Sikes, E. L.; Aufdenkampe, A. K.: SALT MARSH INFLUENCE ON THE COMPOSITION AND BIOAVAILABILITY OF ORGANIC MATTER FRACTIONS IN A TEMPERATE ESTUARY, DELAWARE, USA
- 15:00 **Lapierre, J. F.;** del Giorgio, P. A.: PARTIAL COUPLING AND DIFFERENTIAL REGULATION OF BIOLOGICALLY AND PHOTO-CHEMICALLY LABILE DISSOLVED ORGANIC CARBON ACROSS BOREAL AQUATIC NETWORKS
- 15:15 **Steen, A. D.;** Mach, L. N.; Buchan, A.: THE MARINE PRIMING EFFECT: STIMULATION OF DETRITAL ORGANIC REMINERALIZATION BY ADDITION OF LABILE ORGANIC CARBON IN AN ESTUARINE MICROBIAL COMMUNITY
- 16:00 **Martin, R. A.;** Harrison, J. A.: HYDROLOGIC DYNAMICS CONTROL DOC CONCENTRATION AND DOM QUALITY IN TILE DRAIN DISCHARGE IN A SMALL AGRICULTURAL CATCHMENT
- 16:15 **Pollard, P. C.:** DISSOLVE ORGANIC CARBON OR FLOW – WHICH CONTROLS FRESHWATER ECOLOGICAL HEALTH?
- 16:30 **Hartnett, H. E.;** Smith, Z. P.; Bowman, M. M.; Raleigh, M.; Pavlovic, G.: CLIMATE AND WATER MANAGEMENT EFFECTS ON INPUTS OF TERRESTRIAL AND AQUATIC DOM TO AN URBAN LAKE: A TIME-SERIES 3D-FLUORESCENCE STUDY
- 16:45 **Mladenov, N.;** Enriquez, H.: DOM TRANSFORMATION ALONG WETLAND GROUNDWATER FLOWPATHS
- 17:00 **Ebert, J.;** Castendyk, D.; McKnight, D. M.: EVOLUTION OF DISSOLVED ORGANIC MATTER (DOM) UNDER LAKE ICE IN LAKE HOARE, ANTARCTICA
- 17:15 **Grosbois, G.;** Del Giorgio, P.; Rautio, M.: RIVER AND MACROPHYTE EFFECT ON AQUATIC FOOD SOURCES AND THEIR INTEGRATION IN ZOOPLANKTON IN A BOREAL LAKE
- 17:30 **Zuckerman, A.;** Fremier, A. K.; Bellmore, J. R.; Mejia, F. H.: TERRESTRIAL CARBON DYNAMICS, AQUATIC FOOD WEBS, AND IMPLICATIONS FOR ECOSYSTEM RESTORATION
- 17:45 **Osborne, D. M.;** Cressman, K.; Mohrman, C. F.; Tfaily, M. M.: DETERMINING THE SOURCE OF DISSOLVED ORGANIC MATTER IN COASTAL ESTUARIES

027 Feeding A Hungry Planet: How Is Agriculture Affecting Aquatic Ecosystems And What Role Will Global Change Play?

Chair(s): Laura Johnson, ljohnso1@heidelberg.edu
Amy Burgin, aburgin2@unl.edu
Todd Royer, troyer@indiana.edu
Jennifer Tank, tank.1@nd.edu

Location: E 142 - 144

- 10:00 **Werner, B. A.**; Tracy, J.; Johnson, W. C.; Voldseth, R. A.; Guntenspergen, G. R.; Millett, B.: MODELING THE EFFECTS OF TILE DRAIN PLACEMENT ON THE HYDROLOGIC FUNCTION OF FARMED PRAIRIE WETLANDS
- 10:15 **Gettel, G. M.**; van Dam, A. A.; Hes, E. M.: AGRICULTURAL DEVELOPMENT IN WETLANDS IN SUB-SAHARAN AFRICA: IMPLICATIONS FOR NITROGEN RETENTION
- 10:30 **Goyette, J. O.**; Howarth, R. W.; Bennett, E.; Maranger, R.: CHANGES IN ANTHROPOGENIC NITROGEN INPUTS TO THE ST. LAWRENCE BASIN OVER THE LAST 100 YEARS
- 10:45 **Dee, M. M.**; Tank, J. L.; Mahl, U. H.; Powers, S. M.: ESTIMATING THE IMPACT OF FLOODPLAIN RESTORATION ON NUTRIENT EXPORT FROM THE WABASH RIVER WATERSHED: A HISTORICAL PERSPECTIVE
- 11:00 **Elias, D.**; Bernot, M. J.: META-ANALYSIS OF THE RELATIONSHIP BETWEEN STREAM PHYSICOCHEMICAL PARAMETERS AND PESTICIDE ABUNDANCE IN MIDWESTERN STREAMS
- 11:15 **Burgin, A. J.**; Loecke, T. D.; Riveros-Iregui, D. A.; Thomas, S. A.; Ward, A. S.; Davis, C. A.; St. Clair, M. A.: WEATHER WHIPLASH IN AGRICULTURAL REGIONS CREATES UNFORESEEN CHANGES IN WATER QUALITY
- 11:30 **Wilson, H. F.**; Glenn, A. J.: CARBON, NITROGEN, AND PHOSPHORUS CHEMISTRY AND EXPORT IN AGRICULTURAL WATERSHEDS OF THE ASPEN PARKLAND ECOREGION AS INFLUENCED BY LAND USE AND LANDFORM
- 11:45 **Hanrahan, B. R.**; Tank, J. L.; Aubeneau, A. F.; Bolster, D.: ISOLATING THE INFLUENCE OF SUBSTRATE HETEROGENEITY ON BIOFILM-MEDIATED NUTRIENT RETENTION IN STREAMS
- 13:30 **Maofang, G.**; Jianjun, Q.; Changsheng, L.; Yuan, S.; Yong, L.: NITROGEN REMOVAL AND RETENTION IN AGRICULTURAL STREAMS OF FIVE TYPICAL CATCHMENTS OF YANGTZE WATERSHED IN CHINA
- 13:45 **Hansen, A. T.**; Finlay, J. C.: CONTROLS ON AQUATIC NITROGEN UPTAKE WITHIN AN AGRICULTURAL WATERSHED
- 14:00 **Huyck Orr, C.**; Keller, C. K.; Kelley, C. J.; Moon-Neilsen, L.; Martin, R. A.: DO GREENHOUSE GASSES EVADED FROM AGRICULTURAL STREAMS HAVE A TERRESTRIAL SOURCE?*
- 14:15 **D'Amario, S. C.**; Xenopoulos, M. A.: LINKING STREAM DISSOLVED CO₂ TO AGRICULTURE LAND USE AND DISSOLVED ORGANIC CARBON QUALITY
- 14:30 **Reisinger, A. J.**; Tank, J. L.; Rosi-Marshall, E. J.; Hall, R. O.; Baker, M. A.: REGIONAL AND SEASONAL VARIATION IN NUTRIENT LIMITATION OF RIVERINE BIOFILMS
- 14:45 **Bruder, A.**; Salis, R.; Rodriguez-Lozano, P.; Matthaei, C. D.: STREAM ECOSYSTEM FUNCTIONING AFFECTED BY MULTIPLE AGRICULTURAL STRESSORS: A FOUR-STRESSOR STREAMSIDE MESOCOSM EXPERIMENT

- 15:00 **Johnson, L. T.**; Boehler, J. A.; Boehler, C. T.; Krieger, K. A.; Baker, D. B.: MACROINVERTEBRATE COMMUNITY STRUCTURE IN AGRICULTURAL DITCHES, THE HEADWATER STREAMS OF AGRO-ECOSYSTEMS

029 Aquatic Species Investigation: Environmental DNA Applications For Aquatic Ecosystems

Chair(s): Erik Pilgrim, pilgrim.erik@epa.gov
Eric Stein, erics@sccwrp.org
Mehrdad Hajibabaei, mhajibab@uoguelph.ca

Location: E 145 - 146

- 10:00 **Lodge, D. M.**: CONSERVATION IN A CUP OF WATER: RECIPROCAL FEEDBACKS BETWEEN EDNA TECHNOLOGY AND CONSERVATION MANAGEMENT
- 10:15 **Gibson, J. F.**; Shokralla, S.; Baird, D. J.; King, I. W.; Monk, W.; Porter, T. M.; Hajibabaei, M.: IMPROVING THE POWER AND EFFICIENCY OF AQUATIC ECOLOGICAL ASSESSMENT THROUGH THE USE OF DNA METASYSTEMATICS AND NEXT-GENERATION SEQUENCING
- 10:30 **Penalva-Arana, C. D.**; Pilgrim, E. M.; Martinson, J. W.: UTILIZING ENVIRONMENTAL BARCODING TO IMPROVE THE ACCURACY AND COMPARABILITY OF ENVIRONMENTAL ASSESSMENTS
- 10:45 **Gillett, D. J.**; Stein, E. D.: CAN WE MERGE TRADITIONAL MORPHOLOGICAL AND MOLECULAR TAXONOMIC METHODS FOR USE IN MARINE BENTHIC ASSESSMENT PROGRAMS?
- 11:00 **Bouchez, A.**; Kermarrec, L.; Rimet, F.; Chardon, C.; Chaumeil, P.; Frigerio, J. M.; Laizet, Y.; Salin, F.; Franc, A.: A NEXT-GENERATION SEQUENCING APPROACH FOR RIVER BIOMONITORING USING BENTHIC DIATOMS
- 11:15 **Goldberg, C. S.**; Strickler, K.; Fremier, A. K.: MODELING ENVIRONMENTAL DNA DETECTION OF AQUATIC SPECIES ACROSS SYSTEMS
- 11:30 **Brown, E. A.**; Zhan, A.; Flynn, J.; MacIsaac, H.; Cristescu, M. E.: EARLY DETECTION OF AQUATIC INVADERS: CAN NEXT-GENERATION SEQUENCING ACCURATELY DESCRIBE ZOOPLANKTON COMMUNITIES?
- 11:45 **Pawlowski, J.**; Esling, P.; Lejzerowicz, F.; Cedhagen, T.; Pochon, X.; Wood, S. A.; Keeley, N.; Wilding, T. A.: ENVIRONMENTAL DNA BARCODING AS A TOOL FOR MONITORING IMPACT ASSOCIATED WITH FISH FARMING ON COMMUNITY OF BENTHIC FORAMINIFERA
- 13:30 **Prichard, C. G.**; Blomquist, T. M.; Stepien, C. A.: A NEW NEXT-GENERATION SEQUENCING ASSAY TO IDENTIFY AND QUANTIFY ALL FISH SPECIES FROM AN EDNA WATER SAMPLE
- 13:45 **Pagenkopp Lohan, K. M.**; Fleischer, R. C.; Holzer, K. K.; Carney, K. J.; Ruiz, G. M.: AMPLICON-BASED PYROSEQUENCING REVEALS PROTISTAN PARASITE DIVERSITY IN BALLAST WATER
- 14:00 **Wilson, C.**; Bronnenhuber, J.; Boothroyd, M.; Serrao, N.; Wozney, K.; Caleigh Smith, C.; Reid, S.: OVERVIEW OF ENVIRONMENTAL DNA TESTING AND APPLICATIONS FOR INVASIVE AND ENDANGERED SPECIES IN ONTARIO
- 14:15 **Simmons, T.**; Talbot, S.; Flamme, M.: USING NEXT-GENERATION SEQUENCING OF ENVIRONMENTAL DNA TO ASSESS FISH ASSEMBLAGES IN ALASKA NATIONAL PARKS

- 14:30 **Port, J. A.**; Kelly, R. P.; Yamahara, K. M.; Crowder, L. B.: USING ENVIRONMENTAL DNA TO CENSUS FISHES IN MARINE ECOSYSTEMS
- 14:45 **Sformo, T.**; Stoeckel, D. M.; Bickham, J. W.; Crawford, J. A.: ENVIRONMENTAL DNA ASSESSMENT OF ARCTIC MARINE FISH FROM THE BEAUFORT SEA OF ALASKA
- 15:00 **Walsh, E. J.**; Moody, M. L.; Leung, M. Y.; Gill, T. E.; Hinson, K. I.: ASSESSMENT OF ARIDLAND AQUATIC BIODIVERSITY USING SECOND GENERATION SEQUENCING
- 15:15 **Eaton, W. D.**; Shebitz, D. J.: DEVELOPMENT OF FUNGAL FUNCTIONAL GROUPS AND PLANT LIFE FORMS IN ATLANTIC WHITE-CEDAR SWAMPS FROM EARLY RESTORATION AREAS TO OLD GROWTH SWAMPS
- 16:00 **Deiner, K.**; Walser, J.; Mächler, E.; Altermatt, F.: CAPTURE AND EXTRACTION METHODS AFFECT BIODIVERSITY DETECTED FROM ENVIRONMENTAL DNA
- 16:15 **Bik, H. M.**: PHINCH: AN INTERACTIVE, EXPLORATORY DATA VISUALIZATION FRAMEWORK FOR ENVIRONMENTAL SEQUENCE DATA
- 16:30 **Turner, C. R.**; Uy, K. L.; Everhart, R. C.; Jerde, C. L.; Lodge, D. M.: CONCENTRATIONS OF AQUEOUS AND SEDIMENTARY ENVIRONMENTAL DNA (EDNA) REFLECT FISH ABUNDANCE
- 16:45 **Barnes, M. A.**; Turner, C. R.; Jerde, C. L.; Lodge, D. M.: ENVIRONMENTAL DNA PARTICLE SIZE DISTRIBUTIONS: IMPLICATIONS FOR COLLECTION AND ANALYSIS
- 17:00 **Shogren, A. J.**; Andruszkiewicz, E.; Tank, J. L.; Bolster, D.; Olds, B.; Jerde, C.: PREDICTING THE EFFECT OF HETEROGENEOUS SUBSTRATE ON THE FLUVIAL TRANSPORT OF FISH EDNA USING FLOW-THROUGH COLUMN EXPERIMENTS
- 17:15 **Olds, B. P.**; Evans, N.; Jerde, C. L.; Turner, C. R.; Renhaw, M. A.; Uy, K.; Gantz, C.; Li, Y.; Lamberti, G. A.; Lodge, D. M.: EFFECTIVENESS OF TRADITIONAL GEARS VERSUS EDNA IN DETECTING SPECIES RICHNESS OF AQUATIC COMMUNITIES
- 17:30 **Zhang, X.**; Yang, J.; Xie, Y.: APPLICATION AND COMPARISON OF THE PCR-DEPENDENT AND PCR-FREE NGS APPROACHES ON BIODIVERSITY ASSESSMENT OF FRESHWATER ZOOPLANKTONS IN TAI LAKE, CHINA

036 Interactions Between Non-Native Flora And Native Fauna In Submerged, Wetland, And Riparian Systems

Chair(s): Matthew Kornis, kornism@si.edu
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Dennis Whigham, whighamd@si.edu
Kimberly L. Dibble, kdibble@usgs.gov

Location: E 142 - 144

- 16:00 **Grosholz, E. D.**; Reynolds, P. L.; Glanz, J.; Hann, C.; Couture, J.; Yang, S.: FACILITATION AND EXCLUSION OF INVERTEBRATE COMMUNITIES IN SALT MARSH ECOSYSTEMS FOLLOWING CORDGRASS (SPARTINA) INVASION AND ERADICATION. [†]
- 16:30 **Weis, J. S.**: INTERACTIONS OF INVASIVE COMMON REED, PHRAGMITES AUSTRALIS, WITH NATIVE ESTUARINE FAUNA

- 16:45 **Kornis, M. S.**; Breitbart, D. L.; Hazelton, E.; Heggie, K.; Soulen, H.; Whigham, D.: LINKING PREDATOR/PREY INTERACTIONS IN COASTAL FISH COMMUNITIES TO HABITAT HETEROGENEITY OF NATIVE AND INVASIVE INTERTIDAL WETLANDS
- 17:00 **Schultz, R. E.**: EFFECTS OF NON-NATIVE MACROPHYTES ON MACROINVERTEBRATES AND FISH: THE ROLE OF TRAITS*
- 17:15 **Chapman, A. D.**; Benscoter, B. W.; Dorn, N. J.: CASCADING EFFECTS OF VEGETATION ON PEAT SOIL PROPERTIES AND CRAYFISH SURVIVAL IN THE FLORIDA EVERGLADES
- 17:30 **McNeish, R. E.**; Benbow, M. E.; McEwan, R. W.: CROSS-SYSTEM SUBSIDY CHANGES ASSOCIATED WITH THE REMOVAL OF A RIPARIAN FOREST INVADER (LONICERA MAACKII) ALTER ECOSYSTEM PROCESSES AND DYNAMICS
- 17:45 **Holzer, K. A.**; Lawler, S. P.: MOVING BEYOND THE "NON-NATIVE=BAD" PARADIGM: EXAMINING THE RELATIONSHIP BETWEEN A NATIVE FROG AND INTRODUCED REED CANARY GRASS

042 Functioning Of Salt Marsh And Mangrove Wetland Ecosystems Across Ecological And Spatial Scales

Chair(s): Amanda C. Spivak, aspivak@whoi.edu
Stefan M. Sievert, ssievert@whoi.edu

Location: C 120 - 122

- 16:00 **Yando, E. S.**; Osland, M. J.; Hester, M. W.: MICRO-SPATIAL EXAMINATION OF ABOVE- AND BELOWGROUND PROCESSES AT THE SALT MARSH-MANGROVE ECOTONE IN THE NORTHERN GULF OF MEXICO
- 16:15 **Kelleway, J. J.**; Saintilan, N.; Ralph, P. J.: MANGROVES MARCHING INTO SALT MARSHES: WHAT DOES IT MEAN FOR CARBON SEQUESTRATION POTENTIAL?
- 16:30 **Meynecke, J.**; Lee, S.; Wang, W.: FISH ABUNDANCE AND DISTRIBUTION IN A MODIFIED MANGROVE FOREST IN NORTHERN NEW SOUTH WALES, AUSTRALIA
- 16:45 **Spivak, A. C.**; Reeve, J. L.; Pohlman, J. W.: RAPID TURNOVER OF CARBON RECENTLY FIXED BY THE SALT MARSH GRASS *SPARTINA ALTERNIFLORA* : INSIGHTS FROM A STABLE ISOTOPE PROBING EXPERIMENT
- 17:00 **Marton, J. M.**; Roberts, B. J.; Bernhard, A. E.; Giblin, A. E.; Mack, S.; Moore, T.: DIFFERENTIAL BIOGEOCHEMICAL RESPONSES OF *SPARTINA ALTERNIFLORA* AND *AVICENNIA GERMINANS* SOILS FOLLOWING THE DEEPWATER HORIZON OIL SPILL
- 17:15 **Servais, S. M.**; Kominoski, J. S.; Pachon, J. C.; Davis, S.; Gaiser, E.; Troxler, T.: SHORT-TERM EFFECTS OF PHOSPHORUS LOADING AND PLANT DEFOLIATION ON PLANT-SOIL CARBON PROCESSES IN COASTAL ECOSYSTEMS
- 17:30 Etheridge, R.; **Birgand, F.**; Burchell, M.: CONFIRMING NUTRIENT OUTWELLING FROM A SOUTH-EASTERN TIDAL MARSH: OBSERVATIONS AND MECHANISMS
- 17:45 **Schiebel, H. N.**; Gardner, G. B.; Peri, F.; Chen, R. F.: SEASONAL VARIATION IN OUTWELLING OF DISSOLVED ORGANIC MATTER (DOM) FROM SALT MARSHES

044 Microbially-Mediated Ecosystem Services: The Good, The Bad And The Ugly

Chair(s): Catherine Febria, catherine.febria@canterbury.ac.nz
 Mike Beman, mbeman@ucmerced.edu
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 Stephanie Yarwood, syarwood@umd.edu

Location: Oregon Ballroom

- 16:00 **Lennon, J. T.;** Stuart, D.; Kent, A. D.; Peralta, A. L.: A SOCIAL-ECOLOGICAL FRAMEWORK FOR "MICROMANAGING" MICROBIAL SERVICES*
- 16:15 **Ghadouani, A.;** Reichwaldt, E. S.; Barrington, D. J.; Song, H.; Sinang, S. C.: A NOVEL FRAMEWORK FOR CYANOBACTERIAL BLOOM MANAGEMENT: UNDERSTANDING THE RISK THROUGH A HOLISTIC ECOSYSTEM APPROACH
- 16:30 **Chapman, E. L.;** Lu, Y.; Sponseller, R. A.; Edmonds, J. W.: CONNECTING MICROBIAL COMMUNITY COMPOSITION TO SEASONAL PULSES OF RIVERINE PHYTOPLANKTON PRODUCTION
- 16:45 **Bothwell, M. L.;** Taylor, B. W.; Kilroy, C.: WHAT CAUSES BLOOMS OF ROCK SNOT?
- 17:00 **Yarwood, S. A.;** Prasse, C. E.; Baldwin, A. H.: MICROBIAL COMMUNITY NETWORKS IN TIDAL FRESHWATER WETLANDS
- 17:15 **Nemec, J. A.;** Reed, A. J.; Johnson, N. W.; Hicks, R. E.: FINE-SCALE BACTERIAL COMMUNITY AND CHEMICAL CHANGES WITHIN STEEL CORROSION TUBERCLES IN THE DULUTH-SUPERIOR HARBOR
- 17:30 **Giovannoni, S. J.;** Jhirad, N.; Vergin, K. L.: CONNECTEDNESS, STABILITY, AND TURNOVER IN OCEANIC MICROBIAL PLANKTON: HOW MUCH IS DRIVEN BY INTERACTIONS?*
- 17:45 **Graham, L. E.;** Knack, J. J.; Phillippi, E.; Arancibia-Avila, P.: AMPLICON AND METAGENOMIC ANALYSES IDENTIFY METHANOTROPHY AS AN ECOSYSTEM SERVICE PROVIDED BY MICROBIAL EPIBIONTS OF COMMON FRESHWATER PERIPHYTIC ALGAE

061 Linking Reservoir Management To Aquatic Biogeochemistry

Chair(s): Bridget Deemer, bridget.deemer@email.wsu.edu
 John Harrison, john_harrison@vancouver.wsu.edu
 Martin Doyle, martin.doyle@duke.edu

Location: B 114

- 13:30 **Doyle, M. W.;** Patterson, L.: ADAPTIVE MANAGEMENT OF FEDERAL RESERVOIRS FOR NEW PURPOSES
- 13:45 **Powers, S. M.;** Tank, J. L.; Robertson, D. M.: A HISTORICAL PERSPECTIVE ON RESERVOIR NITROGEN AND PHOSPHORUS ACCUMULATION, MOBILIZATION, AND MANAGEMENT
- 14:00 **Beaulieu, J. J.;** Smolenski, R. L.; Nietch, C. T.; Townsend-Small, A.; Elovitz, M. S.: HIGH METHANE EMISSIONS FROM A MID-LATITUDE AGRICULTURAL RESERVOIR
- 14:15 **Harrison, J. A.;** Deemer, B. R.; Birchfield, K.: WATER LEVEL MANAGEMENT AND METHANE BUBBLE EMISSIONS FROM RESERVOIRS IN THE PACIFIC NORTHWEST U.S.
- 14:30 **Deemer, B. R.;** Harrison, J. A.: RESERVOIR WATER LEVEL MANAGEMENT AFFECTS WATER COLUMN CHEMISTRY: A CASE STUDY

- 14:45 **Murphy, C. A.;** Arismendi, I.; Johnson, S.: SUMMER CONDITIONS IN FALL CREEK RESERVOIR FOLLOWING EXTENDED WINTER DRAWDOWNS: PRELIMINARY DATA
- 15:00 **Gooding, R. M.;** Baulch, H. M.: AGRICULTURAL RESERVOIRS: HOTSPOTS OF DENITRIFICATION
- 15:15 **Gerling, A. B.;** Browne, R. G.; Gantzer, P. A.; Little, J. C.; Carey, C. C.: WHOLE-ECOSYSTEM HYPOLIMNETIC OXYGENATION SUPPRESSES INTERNAL NUTRIENT LOADING AND STIMULATES ALGAL GROWTH IN A EUTROPHIC RESERVOIR
- 16:00 **Waters, M. N.;** Golladay, S. W.; Covich, A. P.; Shivers, S. D.; Smoak, J. M.; Boston, J. E.; Patrick, C. H.: LAND USE, FRAGMENTATION AND BIOLOGICAL INVASIONS INFLUENCE BENTHIC AND PELAGIC BIOGEOCHEMICAL PROCESSES IN A LARGE, SHALLOW RESERVOIR: LAKE SEMINOLE, GA, USA
- 16:15 **Vonk, J. A.;** Van der Geest, H. G.; Bijkerk, R.; Admiraal, W.: HYDROLOGICAL MANAGEMENT CAUSES SILICA DEPRIVATION IN A DELTA LAKE LEADING TO REDUCED DIATOM DEVELOPMENT AND CONSEQUENT SUSPENSION OF MINERAL SEDIMENTS
- 16:30 **Brentrup, J. A.;** Williamson, C. E.: PHOTOLABILITY AND BIOLABILITY OF DISSOLVED ORGANIC MATTER IN THREE CONTRASTING LAKES
- 16:45 **Olsen, B. K.;** Chislock, M. C.; Gamble, A.; Hilyer, D.; Mendenhall, K.; Thornton, W.; Wilson, A. E.: INTERACTIONS BETWEEN NITROGEN CONCENTRATION AND NITROGEN-TO-PHOSPHORUS RATIO MEDIATE OFF-FLAVOR IN A DRINKING WATER RESERVOIR

067 The Las Vegas Wash And Lake Mead: Aquatic Ecosystem Management And Restoration In An Arid, Urban Region

Chair(s): Todd Tietjen, todd.tietjen@snwa.com
 Erica Schlickeisen Tietjen, Erica.Tietjen@unlv.edu
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Location: A 105

- 16:00 **Gautam, M.;** Acharya, K.; **Shanahan, S. A.:** ONGOING RESTORATION AND MANAGEMENT OF LAS VEGAS WASH: AN EVALUATION OF SUCCESS CRITERIA*
- 16:15 **Tietjen, E. S.:** THE LAS VEGAS WASH: SYNTHETIC SYSTEM WITH AUTHENTIC EXPERIENCES FOR UNDERGRADUATE STUDENTS*
- 16:30 **Wei, X.;** Acharya, K.; Yu, Z.: UNDERSTANDING SELENIUM DISTRIBUTION IN LAKE MEAD USING A THREE DIMENSIONAL MATHEMATICAL MODEL*
- 16:45 **Rosen, M. R.;** Caldwell, T. J.; Chandra, S.; Acharya, K.; Cairns, A. M.; Davis, C. J.; Thaw, M.; Webster, D.: TEMPORAL AND BASIN-SPECIFIC DYNAMICS OF QUAGGA MUSSELS IN THE SOFT-SEDIMENT OF A MULTI-BASIN RESERVOIR.*
- 17:00 **Ruhmann, E. K.;** Acharya, K.; Davis, C. J.; Chandra, S.: CAN QUAGGA MUSSEL VELIGERS SURVIVE IN LOW CALCIUM WATERS? A COMPARISON OF GROWTH AND SURVIVAL IN HIGH AND LOW CALCIUM AQUATIC SYSTEMS. *
- 17:15 **Tietjen, T. E.:** INTERACTIONS BETWEEN THE LAS VEGAS WASH AND LAKE MEAD: DENSITY DRIVES THE DESTINATION OF NUTRIENTS IN THE WATER COLUMN*

071 Impacts Of Climate Change On The Ecological Function Of Tropical Aquatic Ecosystems

Chair(s): Richard MacKenzie, rmackenzie@fs.fed.us
Therese Frauendorf, tfrauendorf@gmail.com
Rupesh Bhomia, r.bhomia@cgiar.org

Location: B 113

- 13:30 **Frauendorf, T. C.**; MacKenzie, R. A.; Riney, M. H.: AQUATIC INVERTEBRATE BIOMASS AND PRODUCTION ACROSS A RAINFALL GRADIENT: IMPLICATIONS OF CLIMATE CHANGE ON STREAM COMMUNITIES IN HAWAII
- 13:45 **Riney, M. H.**; MacKenzie, R. A.; Frauendorf, T. C.; Tingley III, R. W.; Ostertag, R.; Foulk, P. B.: THE IMPACTS OF CLIMATE CHANGE ON FOOD WEBS IN HAWAIIAN STREAMS
- 14:00 **Tingley, R. W.**; Infante, D. M.; MacKenzie, R. A.; Strauch, A. M.: POTENTIAL IMPACTS OF A CHANGING CLIMATE ON THE ENDEMIC HAWAIIAN ATYID, ATYOIDA BISULCATA: INFLUENCES OF DECREASED FLOW ON POPULATION SIZE AND STRUCTURE
- 14:15 **Foulk, P. B.**; MacKenzie, R. A.; Frauendorf, T. C.: POTENTIAL IMPACTS OF CLIMATE CHANGE ON COMMUNITY COMPOSITION AND TIMING OF INSECT EMERGENCE FROM TROPICAL ISLAND STREAMS
- 14:30 **Strauch, A. M.**; MacKenzie, R. A.; Bruland, G. L.; Giardina, C. P.: CLIMATE CHANGE IMPACTS ON TROPICAL SEDIMENT LOADS AND WATER QUALITY
- 14:45 **Marrack, L. C.**: PREDICTING SHIFTS IN COASTAL AQUATIC HABITATS DUE TO SEA LEVEL RISE: A CASE STUDY USING HAWAII'S GROUNDWATER FED ANCHIALINE POOLS
- 15:00 **Povak, N. A.**; Hessburg, P. F.; Reynolds, K. M.; MacKenzie, R. A.; Giardina, C. P.; Heider, C.; Salminen, E.; Strauch, A. M.: A TROPICAL DECISION SUPPORT TOOL FOR MANAGING INVASIVE SPECIES AND HYDROLOGICAL OUTPUT IN TROPICAL ISLAND WATERSHEDS
- 15:15 **Kim, L. Y.**; Vadeboncoeur, Y.; McIntyre, P. B.; Hartzler, L.: EFFECTS OF WARMING AND FOOD QUALITY ON THE METABOLISM AND GROWTH OF AN ALGIVOROUS FISH FROM LAKE TANGANYIKA
- 16:00 **Chambers, L. G.**; Guevara, R.; Troxler, T.; Boyer, J. N.; Davis, S. E.: MICROBIAL COMMUNITY RESPONSE TO SIMULATED SEA LEVEL RISE IN A MANGROVE SOIL (EVERGLADES, USA)*
- 16:15 **Watts, D.**: CARBON LANDSCAPES IN THE BALANCE: THE FUTURE OF FIRE, HYDROLOGY, AND PEAT ACCRETION IN THE EVERGLADES*
- 16:30 **Bosire, J. O.**; Maina, J.; Kairo, J. G.; Bandeira, S.; Macamo, C.; Kirui, B.: VULNERABILITY OF MANGROVES IN THE WIO REGION TO CLIMATE CHANGE AND ASSOCIATED ANTHROPOGENIC PRESSURES: A MULTIFACTORIAL APPROACH
- 16:45 **Bhomia, R. K.**; Kauffman, J. B.: CHANGED CLIMATE AND EXTREME WEATHER EVENTS: VULNERABILITY OF COASTAL CARBON STOCKS IN THE TROPICS
- 17:00 **Kauffman, J. B.**; Bhomia, R. K.; Clifuentes, M.: POTENTIAL EMISSIONS ARISING FROM MANGROVE CONVERSION: THE JUMBO CARBON FOOTPRINT OF A LITTLE SHRIMP *

- 17:15 **Ganong, C. N.**; Small, G. E.; Duff, J. H.; Ardón, M.; Ramírez, A.; Triska, F. J.; Pringle, C. M.: CONSEQUENCES OF CLIMATE-DRIVEN CHANGES IN PRECIPITATION: SHIFTS IN SEASONAL PH REGIME AND NUTRIENT CONCENTRATIONS IN NEOTROPICAL RAINFOREST STREAMS
- 17:30 **Tobón, C. M.**; **McCarten, N. E.**: PEAT WETLANDS AND ALPINE LAGUNAS OF THE PARAMO IN CHINGAZA NATIONAL PARK, COLOMBIA: POTENTIAL EFFECTS FROM CLIMATE CHANGE

076 Water Resource Sustainability And Resilience: Assessments, Approaches, And Communication

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Roxane Maranger, r.maranger@umontreal.ca
Heather Galindo, hgalindo@compassonline.org

Location: C 123 - 124

- 10:00 **Grimm, N. B.**; Jacobs, K.: CLIMATE ASSESSMENT AS A BOUNDARY ACTIVITY[†]
- 10:30 **Galindo, H. M.**: CAN YOU HEAR ME NOW?: HOW SCIENTISTS CAN MORE EFFECTIVELY ENGAGE TO INFORM POLICY*
- 10:45 **Jeppesen, E.**: CLIMATE CHANGE EFFECTS ON TROPHIC DYNAMICS AND ECOLOGICAL STATE OF LAKES*
- 11:00 **Kelly, S.**: ECOCHANGE: INVESTIGATIONS IN ECOLOGICAL CHANGE
- 11:15 **Smith, R. F.**; Roy, A. H.: THINKING OUTSIDE THE SHED: EXAMINING LANDSCAPE CHARACTERISTICS AS PART OF MANAGEMENT STRATEGIES FOR SUSTAINING STREAM ECOSYSTEMS
- 11:30 **Gingras, B.**; Morissette, J.: BRIDGING THE GAP BETWEEN SCIENCE, POLICY AND PRACTICE: APPLYING WETLAND SCIENCE TO WETLAND CONSERVATION IN THE BOREAL FOREST OF CANADA.
- 11:45 **Auerbach, D. A.**; Tallis, H.; Flecker, A.: 'BENEFITS VS. BUDGETS': EVALUATING SCENARIOS OF WATERSHED INVESTMENT
- 13:30 **Scott, G. I.**; Holland, A. F.; Blair, A.; Fulton, M. H.; Sandifer, P.; Pennington, P. L.; Wirth, E. F.; Moore, J.; DeLorenzo, M.; Chandler, G. T.: CLIMATE CHANGE AND COASTAL URBANIZATION: A RECIPE FOR DISASTER FOR COASTAL ECOSYSTEM AND HUMAN HEALTH[†]
- 14:00 **Dahm, C. N.**: A SUSTAINABLE AND RESILIENT CALIFORNIA DELTA AND WATER SUPPLY: ACHIEVING THE CO-EQUAL GOALS*
- 14:15 **Scheuerell, M. D.**; Ward, E. J.; Katz, S. L.: ANALYZING TEMPORAL CHANGES IN THE STABILITY OF A KELP FOREST ECOSYSTEM
- 14:30 **McLain, N. K.**; Whitcraft, C. R.; Dillon, J. G.: EFFECTS OF SEA LEVEL RISE ON DECOMPOSER IN A RESTORED COASTAL SALT MARSH
- 14:45 **Glodzik, K.**; Pine, B.: ALTERED SPRING FLOW IN NORTH FLORIDA AND CONNECTION TO RAINFALL PATTERNS
- 15:00 **Cherrier, J.**; Bolques, A.: THE GREEN HORIZON: CAN GREEN INFRASTRUCTURE ADDRESS RUNOFF AND CLIMATE CHANGE CHALLENGES?

15:15 **Goldstein, J. H.**; Tallis, H.: PRIORITIZING INVESTMENTS IN NATURAL INFRASTRUCTURE FOR WATER RESOURCE SUSTAINABILITY AND RESILIENCE*

079 Recognizing The Multiple Values Of Aquatic Ecosystems To People

Chair(s): Janet Keough, keough.janet@epa.gov
Robert McInnes, rob@rmwe.co.uk
Erika Washburn, erika.washburn70@gmail.com

Location: C 120 - 122

- 10:00 **McInnes, R. J.**: WHY SHOULD ECOLOGISTS CARE ABOUT ECOSYSTEM VALUES?^T
- 10:30 **Landers, D. H.**; Nahlik, A. M.: HUMANKIND IS TOTALLY DEPENDENT ON NATURE - HOW CAN WE DEFINE, QUANTIFY, AND TRACK NATURE'S VITAL (AND SOME NOT SO VITAL) BENEFITS TO INFORM DECISION MAKING?*
- 10:45 **Simpson, M.**; Mistry, J.; Berardi, A.; Tschirhart, C.; Haynes, L.: SYSTEM VIABILITY AND PARTICIPATORY VISUAL METHODS - APPROACHES FOR RECOGNISING SOCIO-ECOLOGICAL VALUE IN AQUATIC ECOSYSTEMS IN THE GUIANA SHIELD REGION*
- 11:00 **Melcher, A. H.**; Moog, O.; Sendzimir, J.; Savadogo, M.; Oueda, A.; Ouedraogo, R.: SUSTAINABLE MANAGEMENT OF AQUATIC ECOSYSTEMS AND FISH RESOURCES IN BURKINA FASO, WEST AFRICA
- 11:15 **Robb, M.**; Duggan, I.; Awatere, S.: THE ROLE OF INDIGENOUS KNOWLEDGE IN WETLAND MONITORING AND MANAGEMENT IN AOTEAROA, NEW ZEALAND
- 11:30 **Grabowski, J. H.**; Brumbaugh, R. D.; Conrad, R.; Keeler, A. G.; Opaluch, J.; Peterson, C. H.; Piehler, M. F.; Powers, S. P.; Smyth, A. R.: VALUATION OF ECOSYSTEM SERVICES PROVIDED BY OYSTER REEFS
- 11:45 **Castro, A. J.**; Vaughn, C. C.; Garcia-Llorente, M.; Julian, J. P.: EXPLORING THE CULTURAL AND ECONOMIC VALUE OF ECOSYSTEM SERVICES FOR WATERSHED MANAGEMENT
- 13:30 **Washburn, E. L.**: UNDERSTANDING LAMPREY RIVER WATERSHED COASTAL DECISION-MAKERS AND THE PROTECTION OF ECOSYSTEM VALUES^T
- 14:00 **Yokota, K.**; Bailey, C. L.; Johnson, D. K.; Luce, J.; Stroosnyder, C. A.; Wong, D.; Harman, W. N.: WHAT DO LAKE WATERSHED RESIDENTS WANT? SURVEYS OF FOUR LAKES IN CENTRAL NEW YORK BY LAKE MANAGERS IN TRAINING
- 14:15 Bolgrien, D.; Angradi, T.; **Bellinger, B.**; Pearson, M.; Launspach, J.: MAPPING ECOSYSTEM SERVICES IN THE ST. LOUIS RIVER ESTUARY
- 14:30 **Alexander, K. E.**; Leavenworth, W. B.; Jordaan, A. P.: COASTAL RESOURCE VALUATION IN TIMES OF PLENTY: MAINE FISHERIES IN THE 1800S
- 14:45 **Arsuffi, T. L.**; Thomas, Z.: DOLLARS AND SENSE OF GUADALUPE BASS ANGLING AND PADDLING: BRIDGING ENVIRONMENTAL LITERACY, WATERSHED PROTECTION AND FLOW OF TEXAS HILL COUNTRY STREAMS
- 15:00 **Weber, M.**; Ringold, P. L.: PUBLIC INPUT ON STREAM MONITORING IN THE WILLAMETTE VALLEY, OREGON
- 15:15 **Baulch, H. M.**; Strickert, G.; Hill, H.: TEACHING WHAT WE NEED: DROUGHT TOURNAMENT TO STIMULATE INTERDISCIPLINARY DIALOG AND UNDERSTANDING OF WATER MANAGEMENT TRADE-OFFS

088 Advancing The Science And Management Of Mountain Peatlands

Chair(s): Kathleen A. Dwire, kadwire@fs.fed.us
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Location: B 113

- 10:00 **Dwire, K. A.**; Cooper, D. J.; Aldous, A.; Chimner, R.; D'Amore, D.; Haynes, K.; Johnston, B.; Lemly, J.; Millar, D.; Weixelman, D.: DISTINGUISHING FENS FROM OTHER WETLANDS IN MOUNTAINOUS TERRAIN: THE ROLE AND ECOLOGICAL MEANING OF PEAT THICKNESS
- 10:15 **Weixelman, D. A.**; Mark, M. T.; Marsico, S.: PLANT SPECIES COMPOSITION AND ABUNDANCE IN RELATION TO SOIL CHEMISTRY, THICKNESS OF PEAT, AND LIVESTOCK USE IN FENS IN THE SIERRA NEVADA, CA, USA
- 10:30 **Gannett, M. W.**; Aldous, A.; Keith, M. K.; O'Connor, J. E.: GEOLOGIC CONTROLS ON THE DISTRIBUTION, EVOLUTION, AND HYDROLOGY OF FENS IN THE CENTRAL OREGON CASCADE RANGE
- 10:45 **Cooper, D. J.**; Meneses, R.; Yager, K.; Wolf, E.; Slayback, D.: PEATLANDS IN THE BOLIVIAN ANDES: BIODIVERSITY, HYDROLOGIC REGIME, CONNECTIONS TO GLACIERS AND HUMAN USE
- 11:00 **Chimner, R. A.**; Hribljan, J. A.; Lilleskov, E. A.: CARBON STORAGE AND ACCUMULATION RATES OF TROPICAL MOUNTAIN PEATLANDS OF SOUTH AMERICA
- 11:15 **D'Amore, D. V.**; Edwards, R. T.; Hood, E.; Herendeen, P. A.; Fellman, J. B.: HYDRODYNAMICS AND CARBON EXPORT FROM MOUNTAIN PEATLANDS OF THE PERHUMID COASTAL TEMPERATE RAINFOREST IN ALASKA.
- 11:30 **Rowan, J. O.**; Kling, R. M.: INVESTIGATION OF SUBMERGED PEATLAND PROVIDES UNDERSTANDING OF THE ECOLOGY OF TWO IMPOUNDED AQUATIC ECOSYSTEMS

097 Calibration And Verification Of Rapid Wetland And Stream Assessment Methods

Chair(s): John Dorney, jdorney@moffattnichol.com
Rick Savage, rick.savage@ncdenr.gov

Location: B 115

- 10:00 **Nadeau, T. L.**: VALIDATION OF RAPID ASSESSMENT METHODS TO DETERMINE STREAMFLOW DURATION CLASSES IN THE PACIFIC NORTHWEST
- 10:15 **Wenerick, W. R.**; Fritz, K. M.; Kostich, M. S.: A VALIDATION STUDY OF A RAPID FIELD-BASED RATING SYSTEM FOR DISCRIMINATING AMONG FLOW PERMANENCE CLASSES OF HEADWATER STREAMS IN SOUTH CAROLINA
- 10:30 **Kroll, S. A.**; Wall, R. J.; Howell, P.; Johnson, A. W.; Keller, D. H.: COORDINATED RESTORATION AND CONSERVATION ACTIONS AND MONITORING THE WATERSHED PROTECTION PROGRAM, DELAWARE RIVER BASIN & KIRKWOOD-COHANSEY AQUIFER
- 10:45 **Ciborowski, J. J.**; Kovalenko, K.; Brady, V. J.; Brown, T. N.; Danz, N.; Gathman, J. P.; Host, G. E.; Niemi, G. L.; Buckley, J.; Johnson, L. B.: SENSITIVITY AND CONSISTENCY OF BIOLOGICAL INDICATORS OF ENVIRONMENTAL CONDITIONS: PROPOSING A STANDARD PROTOCOL
- 11:00 **Albert, D.**; Danz, N.; Wilcox, D.; Gathman, J.: EVALUATING TEMPORAL VARIABILITY OF FLORISTIC QUALITY INDICES IN LAURENTIAN GREAT LAKES COASTAL WETLANDS

^(T) represents Tutorial presentations

- 11:15 **Rudenko, M.**; Verble, K.: UPGRADE OF THE OREGON RAPID WETLAND ASSESSMENT PROTOCOL (ORWAP)
- 11:30 Savage, R.; Baker, V.; **Munoz, B.**; Dorney, J. R.: VALIDATION OF RAPID ASSESSMENT METHODS: SUGGESTIONS ON VARIOUS APPROACHES USING NORTH CAROLINA'S WETLAND RAPID ASSESSMENT
- 11:45 **Adamus, P. R.**; Brazner, J. C.; Morlan, J.: ASSESSING WETLAND FUNCTIONS: CALIBRATING AND TESTING ADAPTATIONS OF A RAPID METHOD IN FOUR REGIONS OF NORTH AMERICA

101 Carbon In Aquatic Ecosystems: Recent Advances In Understanding The Transport Of Carbon To Streams And Its Fate In Stream Ecosystems

Chair(s): Jay Zarnetske, jpz@cns.msu.edu
Steven Wondzell, swondzell@fs.fed.us
Roy Haggerty, haggertr@geo.oregonstate.edu

Location: F 150 - 151

- 16:00 **Wollheim, W. M.**; Aiken, G. R.; Butler, K. E.; Stewart, R.; Morse, N.; Sheehan, K.; Salisbury, J.: FATE OF TERRESTRIAL DISSOLVED ORGANIC MATTER WITHIN A NEW ENGLAND RIVER NETWORK
- 16:15 **Wickland, K. P.**; Crawford, J. T.; Dornblaser, M. M.; Kelsey, K. C.; Striegl, R. G.: TERRESTRIAL-AQUATIC LINKAGES OF CARBON IN A HIGH-LATITUDE HEADWATER CATCHMENT, ALASKA
- 16:30 **Tank, S. E.**; Kokelj, S. V.: DECADAL-SCALE TRENDS IN DISSOLVED CARBON FLUX AT THE MOUTH OF THE MACKENZIE RIVER, NWT, CANADA
- 16:45 **Kamjunke, N.**; Herzsprung, P.; Büttner, O.; Neu, T. R.; Weitere, M.: PLANKTONIC AND BENTHIC BACTERIAL CARBON TURNOVER IN STREAMS ALONG A LAND-USE GRADIENT
- 17:00 **Seybold, E. C.**: THE ROLE OF HYDROLOGIC CONNECTIVITY IN MEDIATING DOC DYNAMICS ACROSS SPACE AND TIME
- 17:15 **Jankowski, K. J.**; Schindler, D. E.; Holtgrieve, G. W.: UNIVERSAL OR GEOMORPHIC CONTROL ON TEMPERATURE DEPENDENCE OF AQUATIC ECOSYSTEM METABOLISM?
- 17:30 **Bodmer, P.**; Pusch, M.; Premke, K.: QUALITY MATTERS: IMPACT OF CARBON QUALITY ON DISSOLVED AND GASEOUS CARBON FLUXES IN STREAM ECOSYSTEMS
- 17:45 **King, R. S.**; Walker, C. M.; Yeager, A. D.; Robbins, C. J.; Cook, S.; Maurer, J.; Doyle, R. D.; Whigham, D. E.: FROM MICROBES TO SALMONIDS: DRAMATIC ECOSYSTEM RESPONSE TO LOW-LEVEL DISSOLVED ORGANIC CARBON ADDITIONS IN AN ALASKAN HEADWATER STREAM

104 Ecosystem-Scale Experimental And Modeling Approaches To Investigate Effects Of Environmental Drivers On Freshwater And Marine Planktonic And Benthic Systems

Chair(s): Jens C Nejtgaard, jens.nejtgaard@skio.uga.edu
Sandra A Nierzwicki-Bauer, nierzs@rpi.edu
Stella A Berger, stella.berger@skio.uga.edu
Marc E Frischer, marc.frischer@skio.uga.edu

Location: B 117 - 119

- 16:00 **Paterson, M. J.**; Blanchfield, P. J.; Hesslein, R. H.; Higgins, S. N.; Rennie, M. D.; McCandless, M.; Orihel, D. M.: 45 YEARS OF WHOLE-ECOSYSTEM EXPERIMENTATION AT THE EXPERIMENTAL LAKES AREA: LESSONS LEARNED AND FUTURE DIRECTIONS

- 16:15 **Wollrab, S.**; Litchman, E.; Hampton, S. E.; Silow, E. A.; Klausmeier, C. A.; Izmestyeva, L. R.: SEASONALLY FORCED PLANKTON DYNAMICS IN LAKE BAIKAL AND EXPECTED CHANGES WITH CLIMATE WARMING
- 16:30 **Gessner, M. O.**; Soeter, A. M.; Rossberg, R.; Lentz, M.; Engelhardt, C.: EFFECTS OF ENFORCED LAKE MIXING ON PHYTOPLANKTON PRODUCTION IN A LARGE ENCLOSURE FACILITY
- 16:45 **Striebel, M.**; Spörl, G.; Hartmann, L.; Ganglbauer, A.; Hein, T.; Hillebrand, H.: INTERACTING EFFECTS OF DIVERSITY, PRODUCTIVITY AND DISTURBANCE ON PLANKTON COMMUNITIES: A MESOCOSM APPROACH
- 17:00 **Rasconi, S.**; Gall, A.; Winter, K.; Kainz, M.: EFFECT OF TEMPERATURE AND TERRESTRIAL HUMIC CONTENT ON FRESHWATER PLANKTON DIVERSITY AND NUTRITIONAL QUALITY: A MESOCOSM APPROACH
- 17:30 **Liess, A.**; Faithfull, C.; Rowe, O.; Guo, J.; Deining, A.; Lange, K.; Lefebvre, R.; Schröder, A.; Mathisen, P.; Francoeur, S. N.: TERRESTRIAL RUNOFF BOOSTS MARINE PHYTOPLANKTON PRODUCTIVITY BUT MAY LEAD TO MORE INTENSE CARBON LIMITATION OF FISH – EVIDENCE FROM A MESOCOSM STUDY
- 17:45 **Garzke, J.**; Ismar, S. M.; Sommer, U.: GLOBAL WARMING DECREASES COPEPOD SIZE AND ABUNDANCE: CLIMATE CHANGE AFFECTS LOW TROPHIC LEVEL MARINE CONSUMERS

105 Wetland Restoration: Delivering Multiple Benefits And Recreating Lost Services

Chair(s): Nathaniel Hough-Snee, nate@natehough-snee.org
Andy Herb, andyherb@alpine-eco.com
Nicholas Davidson, davidson@ramsar.org
Rob McInnes, rob@rmwe.co.uk

Location: B 115

- 13:30 **Foote, L.**; Roy, M. C.; Ciborowski, J.: ESTABLISHING WETLAND PLANT COMMUNITIES ON OIL SANDS SUBSTRATES: THE ROLES OF PEAT, HYDROLOGY AND PROPAGULES.
- 13:45 **Daly, C. A.**: THE ROLE OF WETLAND RECLAMATION RESEARCH IN RE-ESTABLISHING FUNCTIONAL ECOSYSTEMS IN THE OIL SANDS REGION OF NORTHEASTERN ALBERTA
- 14:00 **McCaddin, C. F.**; Coppola, E. C.: ADAPTIVE MANAGEMENT MEASURES TO PROMOTE SIGNIFICANT WETLANDS RESTORATION ON A HIGHLY INDUSTRIALIZED BROWNFIELD DEVELOPMENT SITE IN NEW JERSEY
- 14:15 **Carpenido, S. M.**; Hinz, T.; Downing, J.; Crone, T.: INTEGRATING WETLANDS INTO THE WATERSHED RESTORATION PLANNING PROCESS TO ADDRESS WATER QUALITY AND QUANTITY IMPAIRMENTS
- 14:30 **Diefenderfer, H. L.**; Borde, A. B.; Thom, R. M.; Johnson, G. E.; Studebaker, C. A.; Sagar, J.: LARGE-SCALE HYDROLOGICAL RECONNECTION OF WETLANDS ON THE LOWER COLUMBIA RIVER AND ESTUARY FLOODPLAIN
- 14:45 **Bouwes, N.**; Weber, N.; Wheaton, J.; Pollock, M.; Jordan, C.; Volk, C.: PROMOTING MORE STABLE BEAVER DAMS TO REDUCE INCISION AND INCREASE STEELHEAD PRODUCTIVITY IN BRIDGE CREEK, OREGON

(*) represents Invited presentations

- 15:00 **Bennett, S. N.**; Wheaton, J.; Camp, R.; Bouwes, N.: RESTORATION OF WADEABLE STREAMS WITH HIGH-DENSITY, HAND-INSTALLED LARGE WOODY DEBRIS: A LOW IMPACT, INEXPENSIVE APPROACH
- 15:15 **Morissette, J. L.**; Bayne, E. M.; Hobson, K. A.: RESPONSES OF WETLAND BIRD COMMUNITIES TO AGRICULTURAL CONVERSION: ARE THERE THRESHOLDS?
- 16:00 **Kidd, S. A.**; Yeakley, J. A.: TRAJECTORIES OF ECOSYSTEM RECOVERY IN OLIGOHALINE TIDAL WETLAND RECONNECTION RESTORATION PROJECTS
- 16:15 **Pier, B. M.**; Dresser, B. R.; Lee, J. J.; Boylen, C. W.; Nierzwicki-Bauer, S. A.: SUCCESSION AND SUCCESS: A PRE AND POST PLANTING ECOLOGICAL ANALYSIS OF A CONSTRUCTED MITIGATION WETLAND IN THE ADIRONDACKS
- 16:30 **van Zuidam, J. P.**; Soons, M. B.; Verhoeven, J. T.: EXPANSION OF CLONAL WETLAND PLANTS ON ARTIFICIAL FLOATING RAFTS IN EARLY SUCCESSIONAL WETLANDS
- 16:45 **Skigen, S. B.**; Canton, S. P.: A CASE STUDY ON THE IMPORTANCE OF ENHANCED WETLAND SYSTEMS FOR THE ATTENUATION OF SELENIUM
- 17:00 **Balmer, M. B.**; Harland, B.; Gautsch, J.; Geisthardt, E.: INCREASED ECOSYSTEM SERVICES THROUGH PRAIRIE POT HOLE WETLAND RESTORATION IN AN AGRICULTURE DOMINATED LANDSCAPE
- 17:15 **Glamore, W. C.**; Rayner, D.; Ruprecht, J.; Hopper, D.: ZOOMING OUT TO DIG IN: LINKING CATCHMENT DYNAMICS TO ON-GROUND WETLAND REMEDIATION
- 11:30 **Loewen, C. J.**; Vinebrooke, R. D.: FUNCTIONAL RESISTANCE OF PLANKTONIC METACOMMUNITIES TO THE NET EFFECTS OF INVASIVE TROUT AND HIGHER TEMPERATURES IN MOUNTAIN LAKES
- 11:45 **Roberts, J. J.**; Fausch, K. D.; Schmidt, T. S.; Walters, D. M.: ECOLOGICAL CONSEQUENCES OF CLIMATE CHANGE FOR MOUNTAIN LAKE-STREAM POPULATIONS OF CUTTHROAT IN THE SOUTHERN ROCKY MOUNTAINS
- 13:30 **Strecker, A. L.**; Miller, R.; Sytsma, M. D.; Eilers, J. M.: MULTIPLE STRESSORS IN MOUNTAIN LAKES: IMPLICATIONS OF FISH STOCKING FOR PLANKTON COMMUNITIES AND HARMFUL ALGAL BLOOMS
- 13:45 **Williams, J.**; Beutel, M.; Moore, B.; Nurse, A.: EFFECTS OF NITROGEN DEPOSITION AND GLACIER MELTING ON MOUNTAIN LAKES IN NORTH CASCADES NATIONAL PARK (USA)
- 14:00 **McKnight, D.**; Sakaeva, A.; Rue, G.; Townsend, E.; Johnson, M.; Dougherty, T.; Carney, R.; Koebele, E.; Hallowell, R.: AFTER THE 1000 YEAR FLOOD: RECOVERY OF STREAM ECOSYSTEMS IN BOULDER, COLORADO *
- 14:15 **Jacobsen, D.**; Dangles, O.: BENTHIC FAUNA ALONG STREAMS FED BY SHRINKING GLACIERS: DOWNWARDS-UPWARDS ALTITUDINAL SHIFTS?
- 14:30 **Hotaling, S.**; Muhlfeld, C. C.; Giersch, J. J.; Ali, O. A.; Jordan, S. P.; Miller, M. R.; Weisrock, D. W.; Luikart, G.: USING RAD-SEQUENCING TO ASSESS POPULATION GENOMIC STRUCTURE AND GENE FLOW FOR A THREATENED, ALPINE STONEFLY (LEDNIA TUMANA) IN GLACIER NATIONAL PARK, MONTANA.
- 14:45 **Bierwagen, B. G.**; Hamilton, A.; Stamp, J.; Witt, J.; Passmore, M.: VULNERABILITY ASSESSMENTS OF MOUNTAIN STREAMS IN THE EASTERN UNITED STATES TO PRIORITIZE MONITORING NEEDS AND TEST HYPOTHESES OF CLIMATE CHANGE EFFECTS
- 15:00 Haase, P.; **Li, F.**; Sundermann, A.; Lorenz, A. W.; Stoll, S.: CLIMATE-DRIVEN THREE-DIMENSIONAL SHIFTS IN BIODIVERSITY IN CENTRAL EUROPE
- 15:15 **Ray, A.**; Sepulveda, A.; Hossack, B.; Patla, D.; Thoma, D.; Al-Chokhachy, R.: WETLAND INUNDATION AND AMPHIBIAN BREEDING IN GRAND TETON AND YELLOWSTONE NATIONAL PARKS: INFLUENCE OF TEMPERATURE AND PRECIPITATION DRIVERS
- 108 Impacts Of Global Change On Aquatic Biodiversity And Ecosystem Processes In Mountains**
- Chair(s): Rolf Vinebrooke, rolf@ualberta.ca
Angela Strecker, strecker@pdx.edu
Jeff Brittain, jbritt2@pdx.edu
- Location: D 137 - 139
- 10:00 **Vinebrooke, R. D.**; Graham, M. D.; Loewen, C. J.; Lyons, D.; MacLennan, M. M.: TOWARDS AN ECOLOGY OF THE CUMULATIVE IMPACTS OF MULTIPLE AQUATIC STRESSORS
- 10:15 **Fischer, J. M.**; Olson, M. H.; Williamson, C. E.; Rose, K. C.; Brentrup, J. A.; Hayashi, M.: VARIATION IN SENSITIVITY OF MOUNTAIN LAKES TO METEOROLOGICAL DRIVERS: IMPLICATIONS FOR THE "LAKES AS SENTINELS" CONCEPT*
- 10:30 **Hayden, C. J.**; Beman, J. M.: MICROBIAL ECOLOGY AND BIOGEOCHEMISTRY OF ALPINE LAKES OF YOSEMITE NATIONAL PARK, SIERRA NEVADA, CALIFORNIA
- 10:45 **Peter, H.**; Moya, L.; Dittmar, T.; Sommaruga, R.: COUPLING OF MICROBIAL COMMUNITY DYNAMICS AND DOC COMPOSITION IN GLACIER-FED LAKES *
- 11:00 **Ask, J.**; Graham, M.; Vinebrooke, R.: BENTHIC ALGAL PRODUCTIVITY, DIVERSITY AND FUNCTION IN LAKES WITH VARYING DOC CONTENT
- 11:15 **Brittain, J. T.**; Strecker, A. L.: THE RESPONSE OF PLANKTON COMMUNITIES IN LAKES OF DIFFERENT FISH STOCKING HISTORIES TO ATMOSPHERIC NITROGEN DEPOSITION SIMULATIONS IN MONTANE LAKES
- 121 Does Nutrient Pollution Jeopardize Tidal Wetland Viability? A Controversy Revisited**
- Chair(s): Thomas J. Mozdzer, tmozdzer@brynmawr.edu
Adam Langley, adam.langley@villanova.edu
- Location: A 105
- 13:30 **Morris, J. T.**: NUTRIENT CONTROL OF BELOWGROUND PRODUCTION*
- 13:45 **Turner, R. E.**: EFFECTS OF INCREASED NUTRIENT LOADING TO COASTAL MARSHES BELOWGROUND*
- 14:00 **Anisfeld, S. C.**; Hill, T. D.: MARSH DEGRADATION IN LONG ISLAND SOUND DOES NOT APPEAR TO BE DRIVEN BY NUTRIENTS*
- 14:15 **Wigand, C.**: MARSH SOIL RESPONSES TO NUTRIENTS: BELOWGROUND STRUCTURAL AND ORGANIC PROPERTIES *

- 14:30 **Graham, S. A.**; Mendelssohn, I. A.: TIDAL WETLAND ELEVATION STABILITY MAINTAINED THROUGH COUNTERBALANCING ACCRETIONARY RESPONSES TO CHRONIC NUTRIENT ENRICHMENT*
- 14:45 **Hester, M. W.**; Willis, J. M.; Fisher Kubiak, K.: RESPONSE OF FRESHWATER THICK-MAT FLOATING MARSH TO NITRATE AND PHOSPHATE LOADINGS UNDER FRESH AND OLIGOHALINE CONDITIONS *
- 15:00 **Deegan, L. A.**; Nelson, J.; Johnson, D. S.; Peterson, B. J.: CHRONIC NUTRIENT PRESS DIFFERENTIALLY ALTERS SALT MARSH ECOSYSTEM FUNCTIONS*
- 15:15 **Mozdzer, T.**; Langley, A.; Chapman, S.: IGNITE SUB-SESSION: NUTRIENT POLLUTION AND TIDAL WETLAND STABILITY - THE LIGHTNING ROUND*

123 A Large River Ecology (Part 1)

Chair(s): Maury Valett, maury.valett@umontana.edu

Location: D 135 - 136

- 10:00 **Valett, H. M.**; Peipoch, M.; DeGrandpre, M.; Watson, V.; Payn, R. A.; Suplee, M.: LONG-TERM WATER QUALITY DATA AND BIOGEOCHEMICAL FILTERING ALONG THE UPPER CLARK FORK RIVER, MT, USA
- 10:15 **Ward, P. R.**; Minshall, G. W.; Holderman, C. E.; Hoyle, G.; Yassien, H.; Gidley, G.; Anders, P. J.: DISSOLVED NITROGEN AND PHOSPHORUS UPTAKE IN A LARGE (SEVENTH ORDER) OLIGOTROPHIC RIVER DOWNSTREAM OF A LARGE RESERVOIR
- 10:30 **Parker, S. M.**; Roehm, C. L.; Vance, J.: NEON SAMPLING IN LARGE RIVERS: INTEGRATING CHEMICAL, PHYSICAL, AND BIOLOGICAL VARIABLES THROUGH A WATERSHED
- 10:45 **Manier, J. T.**; Haro, R. J.; Houser, J. N.; Rada, R. G.: SPATIAL AND TEMPORAL DYNAMICS OF PHYTOPLANKTON ASSEMBLAGES IN SELECTED REACHES OF THE UPPER MISSISSIPPI RIVER: NAVIGATION POOLS 8, 13, AND 26.
- 11:00 **Wilson, M. J.**; Bohr, H. R.; McTammany, M. E.: MANGANESE OXIDE DEPOSITS AS POTENTIAL DRIVERS OF BENTHIC INVERTEBRATE DENSITY AND COMMUNITY COMPOSITION
- 11:15 Brabender, M.; **Weitere, M.**; Brauns, M.: COMPARTMENT-SPECIFIC PATTERNS OF BENTHIC SECONDARY PRODUCTION IN A LARGE LOWLAND RIVER
- 11:30 **Harrison, A. B.**; Ochs, C. A.; Slack, W. T.; Killgore, K. J.: THE INVISIBLE INVERTEBRATE – DISCOVERING THE BENTHIC COMMUNITIES IN NORTH AMERICA'S LARGEST RIVER
- 11:45 Minshall*, G. W.; Shafii, B.; **Holderman, C. E.**; Price, W.; Anders, P. J.; Lester, G.; Barrett, P.: EFFECTS OF NUTRIENT REPLACEMENT ON BENTHIC MACROINVERTEBRATES IN AN ULTRA-OLIGOTROPHIC REACH OF THE 7TH ORDER KOOTENAI RIVER IN NORTHERN IDAHO

123 B Large River Ecology (Part 2)

Chair(s): Gaston E. Small, gaston.small@stthomas.edu

Location: D 135 - 136

- 13:30 **Small, G. E.**; Finlay, J. C.; Loken, L. C.; Stanley, E. H.; Sterner, R. W.: QUANTIFYING NUTRIENT PROCESSING RATES IN A FRESHWATER ESTUARY USING A HYDROLOGIC MIXING MODEL

- 13:45 **Jiann, K.**: HYDROLOGICAL EFFECT ON VARIABILITY OF DISSOLVED CADMIUM CONCENTRATIONS IN COASTAL WATERS FROM MOUNTAINOUS RIVERS WITH VARYING RIVER DISCHARGES

- 14:00 **Jacobs, A. I.**; Keller, R. P.: STRADDLING THE DIVIDE: INVASIVE AQUATIC SPECIES IN ILLINOIS AND MOVEMENT BETWEEN THE GREAT LAKES AND MISSISSIPPI DRAINAGES

- 14:15 **Richardson, B. M.**; Flinn, M. B.: A DIETARY COMPARISON BETWEEN FOUR SYMPATRIC GAR SPECIES (FAMILY: LEPISOSTIDAE)

- 14:30 **Rouch, M. G.**; McGarvey, D. J.; Kirk, A.: ANNUAL PRODUCTION, ASSEMBLAGE COMPOSITION AND BIOMASS OF FISH IN THREE SOUTHERN WEST VIRGINIA STREAMS

- 14:45 **Dodrill, M. J.**; Yackulic, C.; Kennedy, T.: DEVELOPMENT OF A DRIFT-FORAGING AND BIOENERGETICS GROWTH MODEL FOR RAINBOW TROUT IN THE LEES FERRY TAILWATER

- 15:00 **Elder, T. S.**; Woodley, C. M.; Ploskey, G. R.; Weiland, M. A.; Strecker, A. L.: FACTORS INFLUENCING THE SURVIVAL OF JUVENILE SALMONIDS MIGRATING THROUGH THE LOWER COLUMBIA RIVER HYDROSYSTEM

- 15:15 **Etchison, L. J.**; Pyron, M.: GIS ANALYSIS OF RIVER HABITAT AND FISH ASSEMBLAGE STRUCTURE

127 A Climate Change (Part 1)

Chair(s): Matthew Pyne, mattpyne@hotmail.com

Location: B 117 - 119

- 10:00 **Pyne, M. I.**; Poff, N. L.: VULNERABILITIES OF WESTERN UNITED STATES STREAM INSECT TAXA AND COMMUNITIES TO CO-VARYING TEMPERATURE AND HYDROLOGIC CHANGE PROJECTED UNDER GLOBAL WARMING

- 10:15 **Harrison, E.**; Dyer, F.; Lucena-Moya, P.; Kath, J.; El Sawah, S.; Brawata, R.; Croke, B.; Tschierschke, A.; Reynoldson, T.; Jakeman, A.: MANAGING STREAM ECOLOGICAL CONDITION IN A CHANGING CLIMATE – WHAT DRIVES ECOLOGICAL RESPONSES?

- 10:30 **Klamt, M.**; Thompson, R.; Griffiths, J.; Kelly, T.; Davis, J.: INTER-ANNUAL VARIABILITY IN PLAYTUPUS DIET: IMPACTS OF DROUGHT

- 10:45 **Byström, P.**; Hedström, P.; Hotchkiss, E.; Rodriguez, P.; Karlsson, J.: TEMPERATURE INCREASE CAUSE DECREASED DENSITIES AND SMALLER FISH

- 11:00 **Persaud, A. D.**; Luek, A.; Keller, B.; Gunn, J.; Jones, C.; Johnston, T.; Dillon, P.: TROPHIC DYNAMICS OF SEVERAL FISH SPECIES IN LAKES OF A CLIMATICALLY SENSITIVE REGION, THE HUDSON BAY LOWLANDS.

- 11:15 **Hamilton, A. T.**; Stamp, J. D.; Zheng, L.; Witt, J.; Bierwagen, B. G.; Passmore, M.: INVERTEBRATE INDICATORS WITH COMBINED TEMPERATURE AND HYDROLOGIC SENSITIVITY TO CLIMATE CHANGE SCENARIOS

- 11:30 **LeMoine, M. T.**; Eby, L.: LITTLE FISH CAN GIVE WAY TO BIG SHIFTS IN DISTRIBUTIONS IN A CHANGING CLIMATE: DECLINES IN CRYPTIC SPECIES ACROSS THE LANDSCAPE.

- 11:45 **Hovel, R. A.**; Carlson, S. M.; Quinn, T. P.: CLIMATE-DRIVEN CONDITIONS CONTROL LIFE HISTORY EXPRESSION AND DEMOGRAPHY IN A LACUSTRINE FISH

127 B Climate Change (Part 2)

Chair(s): James Hood, hoodx008@umn.edu

Location: B 117 - 119

- 13:30 **Hood, J. M.**; Benstead, J. P.; Cross, W. F.; Hury, A. D.; Nelson, D.; Johnson, P. W.; Junker, J. R.; Gislason, G. M.; Ólafsson, J. S.: INFLUENCE OF WARMING ON NITROGEN AND PHOSPHORUS UPTAKE AND KINETICS: RESULTS FROM A WHOLE-STREAM WARMING EXPERIMENT
- 13:45 **Guntenspergen, G. R.**; Yeates, A.; Cahoon, D. R.: BRACKISH TIDAL MARSH ELEVATION RESPONSE TO LONG-TERM FERTILIZATION AND IMPACTS FOR RESILIENCE TO SEA LEVEL RISE
- 14:00 Simon, M. R.; Zogg, G. P.; **Travis, S. E.**: A STRUCTURE-FUNCTION LINK IMPACTS RESPONSE TO SEA LEVEL RISE OF SALT MARSH SEDIMENT MICROBIAL COMMUNITIES OCCUPYING THE EAST COAST OF THE US
- 14:15 **Kaur-Kahlon, G.**; Kumar, S.; Rehnstam-Holm, A. S.; Rai, A.; Edler, L.; Singh, A.; Andersson, B.; Karunasagar, I.; Rengaswamy, R.; Godhe, A.: EFFECT OF CHANGING TEMPERATURE AND SALINITY ON A TROPICAL PELAGIC MICROBIAL COMMUNITY: A MESOCOSM STUDY FROM COASTAL ARABIAN SEA
- 14:30 **Eng, K.**; Wolock, D. M.: SENSITIVITY OF TEMPORARY STREAMS TO CLIMATE VARIATIONS IN THE WESTERN UNITED STATES
- 14:45 **Sharma, S.**; Ruppert, J.; Magnuson, J. J.: MULTI-CENTURY ICE DYNAMICS OF LAKE SUWA AND TORNIO RIVER: CLIMATE CHANGE, LARGE-SCALE CLIMATE DRIVERS, AND WEATHER
- 15:00 **Cross, W. F.**; Benstead, J. P.; Hury, A. D.; Hood, J. M.; Welter, J. R.; Junker, J. R.; Nelson, D.; Williamson, T. W.; Johnson, P. W.; Gislason and Olafsson, G. J.: TOWARDS UNDERSTANDING SHORT- AND LONG-TERM RESPONSES TO WARMING USING A NATURAL GEOTHERMAL LABORATORY
- 15:15 **Umeda, M.**; Ishiyama, Y.; Ochiai, Y.: INFLUENCE OF CLIMATE CHANGE ON PHYTOPLANKTON GROWTH IN RESERVOIRS IN JAPAN

128 A Biogeochemistry (Part 1)

Chair(s): Erin Hotchkiss, ehotchkiss@gmail.com

Location: F 150 - 151

- 10:00 **Hotchkiss, E. R.**; Hall, R. O.; Sponseller, R. A.; Klaminder, J.; Laudon, H.; Karlsson, J.: IDENTIFYING THE RELATIVE CONTRIBUTIONS OF TERRESTRIAL CO₂ AND STREAM METABOLISM TO FRESHWATER CO₂ EMISSIONS
- 10:30 **Lu, Y. H.**; Hu, Y.; Sai, W.; Zheng, C. M.; Das, O.; Edmonds, J.: HYDROLOGICAL AND LAND-USE CONTROLS OF SOURCES AND QUALITY OF DISSOLVED ORGANIC MATTER IN A LARGE ARID RIVER OF WESTERN CHINA
- 10:45 **Coble, A. A.**; Marcarelli, A. M.; Kane, E. S.; Huckins, C. J.: SPATIAL AND TEMPORAL MEASUREMENTS OF N, P, AND C UPTAKE IN SMALL LAKE SUPERIOR TRIBUTARIES
- 11:00 **Golub, M.**; Desai, A. R.; Remucal, C. K.; Stanley, E. H.: RANDOM MEASUREMENT UNCERTAINTIES EFFECT ON CO₂ EMISSIONS FROM LAKES

- 11:15 **Hu, J.**; Inglett, K. S.; Wright, A. L.; Clark, M. W.; Reddy, K. R.: GREENHOUSE GAS FLUXES FOR DIFFERENT FLOODING AND DRAINING CYCLES OF PEATLANDS
- 11:30 **McAllister, S. A.**; Hopple, A. M.; Pfeifer-Meister, L.; Ye, R.; Keller, J. K.; Medvedeff, C. A.; Bohannan, B.; Bridgman, S. D.: ANAEROBIC CARBON CYCLING IN NORTHERN PEATLANDS: A DYNAMIC MIX OF SIMULTANEOUS PROCESSES
- 11:45 **Bernal, B.**; Mozdzer, T. J.; Megonigal, J. P.: SPECIES INVASION INTO A WETLAND PRIMES ORGANIC MATTER ACCUMULATED UNDER NATIVE VEGETATION.

128 B Biogeochemistry (Part 2)

Chair(s): Ryan Burrows, ryan.burrows@slu.se

Location: F 150 - 151

- 13:30 **Burrows, R. M.**; Hotchkiss, E. R.; Jonsson, M.; Laudon, H.; Mckie, B. G.; Sponseller, R. A.: HETEROTROPHIC BIOFILMS IN BOREAL STREAMS EXHIBIT STRONG NITROGEN LIMITATION DURING AUTUMN
- 13:45 **Burke, R.**; Mckinley, R.; Parsons, M.; McNeal, K.; Martin, J.: SEDIMENT PORE WATER AMMONIUM CONCENTRATIONS IN OLD TAMPA BAY AS DETERMINED BY THE DIFFUSIVE EQUILIBRATION IN THIN FILMS (DET) TECHNIQUE
- 14:00 **Tromboni, F.**; Zandonà, E.; Moulton, T. P.; Silva-Júnior, E. F.; Lourenço Amorim Pereira, C.; Heatherly II, T.; Thomas, S. A.: MEASURING NUTRIENT SPIRALLING IN A BRAZILIAN PRISTINE COASTAL STREAM
- 14:15 **Chronopoulou, M.**; Purdy, K.; Trimmer, M.: NITROUS OXIDE PRODUCTION IN THE OXYGEN MINIMUM ZONE OF EASTERN TROPICAL NORTH PACIFIC
- 14:30 **O'Brien, J. M.**; Graham, S. E.; Franklin, H.; Harding, J. S.; McIntosh, A. R.: ENHANCING NITROGEN RETENTION IN AGRICULTURAL STREAMS: CAN WE IMPROVE IN-STREAM DENITRIFICATION WITH ORGANIC MATTER ADDITIONS?
- 14:45 **Carlson, S. P.**; Poole, G. C.; Hall, R. O.; Wohl, E.; Walters, D. M.; Venarsky, M. P.; Livers, B.; Sutfin, N. A.: RELATIONSHIPS BETWEEN STREAM DENITRIFICATION, RESPIRATION, AND NITRATE CONCENTRATION PROVIDE THE FOUNDATION FOR A COUPLED C-N NETWORK MODEL
- 15:00 **Hernandez, M. E.**; Vidal-Alvarez, M.; Moreno-Casasola, P.: ASSESSING BIOTIC AND PHYSICAL FACTORS THAT CONTROL DENITRIFICATION RATES IN SOILS OF COASTAL MARSHES IN VERACRUZ MEXICO
- 15:15 **Fitzgibbon, A. S.**; Bernot, M. J.; Wyatt, K. H.: COMPARISON OF ALGAL AND ECOSYSTEM METABOLISM AND NUTRIENT DYNAMICS IN A CENTRAL INDIANA STREAM

130 A Ecotoxicology (Part 1)

Chair(s): William Clements, willc@cnr.colostate.edu

Location: B 116

- 10:00 **Clements, W. H.**; Kotalik, C. J.; Cadmus, P.: EFFECTS OF MAJOR IONS ON BENTHIC COMMUNITIES: AN EXPERIMENTAL TEST OF THE PROPOSED U.S. EPA AQUATIC LIFE BENCHMARK FOR CONDUCTIVITY
- 10:15 **Griffith, M. B.**: WHY CRUSTACEANS MAY NOT BE AN OPTIMAL MODEL FOR THE TOXICITY OF MAJOR IONS IN AQUATIC INSECTS

- 10:30 **Conley, J. M.;** Buchwalter, D. B.: WHY CAN'T AQUATIC INSECTS DEAL WITH HIGH TDS WATER?
- 10:45 **Tran, T.;** Barzen, J.; Choowaew, S.; Duong, N.; Wilson, S.: PERSISTENT ORGANIC POLLUTANTS IN WETLANDS OF THE MEKONG RIVER BASIN
- 11:00 **Edwards, D. D.;** Moore, P. A.: FIELD MEASUREMENT OF CHEMICAL PLUMES IN HEADWATER STREAMS
- 11:15 **Kelly, J. J.;** Binh, C. T.; Tong, T.; Gaillard, J. F.; Gray, K. A.: HIGH-THROUGHPUT SCREENING AND NEXT-GENERATION SEQUENCING CAN BE USED TO ASSESS THE ACUTE EFFECTS OF ENGINEERED NANOMATERIALS ON AQUATIC BACTERIAL COMMUNITIES
- 11:30 **Gawel, J. E.;** REMOBILIZATION OF LEGACY ARSENIC FROM LAKE SEDIMENTS IN THE VICINITY OF THE ASARCO SMELTER IN RUSTON, WASHINGTON, DECADES AFTER CLOSURE
- 11:45 **Nowicki, C. J.;** Kashian, D. R.: MECHANISMS OF TOLERANCE: COMPARING THE OXIDATIVE STRESS RESPONSE IN TWO INVASIVE DREISSENIID MUSSELS UNDER DIFFERENT ENVIRONMENTAL STRESSORS

130 B Ecotoxicology (Part 2)

Chair(s): John Bailey, jbailey@laurentian.ca

Location: B 116

- 13:30 **Bailey, J. L.;** Celis-Salgado, M. P.: WHOLE BODY CONCENTRATIONS OF MAJOR CATION LEVELS IN *DAPHNIA PULICARIA* THROUGHOUT A 24-HOUR EXPOSURE TO LC-50S FOR HEXAVALENT CHROMIUM AND COPPER.
- 13:45 **Sherwood, N. R.;** Wu, M. S.: MERCURY CONTAMINATION IN NEW JERSEY'S SNAPPING TURTLES (*CHELYDRA SERPENTINA*)
- 14:00 **Proulx, I.;** Hare, L.: CHIRONOMUS SPECIES DIFFER IN THEIR FEEDING HABITS AND THUS THEIR EXPOSURE TO CONTAMINANTS
- 14:15 **Wright, M. V.;** King, R. S.; Baker, L. F.; Matson, C. W.: INTERACTIONS BETWEEN TITANIUM DIOXIDE NANOPARTICLES AND FISH GRAZING OF PERIPHYTON ON CELL DENSITIES OF ALGAE AND BACTERIA IN OUTDOOR STREAM MESOCOSMS
- 14:30 **Mathews, T.;** Smith, J. G.; Fortner, A. M.; Morris, J. G.: THE EFFECT OF LEGACY MERCURY CONTAMINATION ON SELENIUM BIOACCUMULATION AT THE TENNESSEE VALLEY AUTHORITY'S KINGSTON COAL ASH SPILL SITE
- 14:45 **Painter, K. J.;** Westbrook, C. J.; Hall, B. D.; O'Driscoll, N. J.; Jardine, T. D.: IN-CHANNEL BEAVER IMPOUNDMENTS INCREASE AVAILABILITY OF METHYLMERCURY TO STREAM FOODWEBS
- 15:00 **McArthur, J. V.;** Mills, G. L.; Lindell, A. H.; Fletcher, D. E.: TAXONOMIC AND SPATIAL VARIATION IN TRACE ELEMENT BIOACCUMULATION AND STABLE ISOTOPE ANALYSIS IN ODONATE NYMPHS IN A STREAM RECEIVING COAL COMBUSTION WASTE
- 15:15 **Poteat, M. D.;** Buchwalter, D. B.: INTERSPECIFIC VARIABILITY IN TRACE METAL BIOACCUMULATION AMONG CLOSE RELATIVES AND THE IMPORTANCE OF TAXONOMIC RESOLUTION IN DIVERSITY MEASURES

130 C Ecotoxicology (Part 3)

Chair(s): Jenifer McIntyre, jen.mcintyre@wsu.edu

Location: B 116

- 16:00 **McIntyre, J. K.;** Davis, J.; Hinman, C.; Macneale, K.; Scholz, N.; Stark, J.: DOES GREEN STORMWATER INFRASTRUCTURE PREVENT TOXICITY IN AQUATIC ANIMALS EXPOSED TO URBAN RUNOFF?
- 16:15 **Allen, L.;** Johnson, D.; Farris, K.; Patterson, W.; Tarnecki, J.; Jagoe, C. H.: ASSESSMENT OF PAH EXPOSURE AND EFFECTS IN AQUATIC SYSTEMS AFTER OIL SPILLS: RESPONSES OF SELECTED BIOMARKERS IN FISH FOLLOWING THE DEEPWATER HORIZON ACCIDENT
- 16:30 **De Jong, G. D.;** ACUTE TOXICITY OF NATURAL, ACIDIC HYDROTHERMAL ALTERATION SCAR RUNOFF AND FREQUENCY OF EXPOSURE TO A NATIVE MAYFLY IN THE RED RIVER, NEW MEXICO
- 16:45 **Scott, W. C.;** Du, B.; Haddad, S. P.; Breed, C.; Chambliss, C. K.; Brooks, B. W.: INFLUENCE OF DIEL PH VARIABILITY ON PREDICTED THERAPEUTIC HAZARDS OF IONIZABLE PHARMACEUTICALS TO FISH IN TEXAS ESTUARIES
- 17:00 **Oziolor, E. M.;** Guberman, S. L.; Matson, C. W.: GRADIENT OF EVOLVED RESISTANT TO CONTAMINANT-INDUCED CARDIAC TERATOGENESIS IN GULF KILLIFISH (*FUNDULUS GRANDIS*) COLLECTED FROM THE HOUSTON SHIP CHANNEL, TEXAS
- 17:15 **Barry, M. J.;** CONTRASTING RESPONSES OF FISH AND TADPOLES TO FLUOXETINE
- 17:30 **Gutierrez, D. B.;** Zimba, P. V.: TEXAS BLUE CRABS (*CALLINECTES SAPIDUS*) ACCUMULATE ESTUARINE MICROCYSTINS
- 17:45 **Zimba, P. V.;** Gutierrez, D. G.; Ordner, P.; Huang, I. S.; O'Mara, S. P.; Triemer, R. E.; Moeller, P. D.: EVIDENCE FOR REOCCURRING FALL BLOOMS OF TOXIN PRODUCING EUGLENOIDS IN BOTH FRESHWATER AND MARINE SYSTEMS

132 C Population And Community Ecology (Part 3)

Chair(s): Kathryn L. Cottingham, kathryn.cottingham@dartmouth.edu

Location: D 137 - 139

- 16:00 **Cottingham, K. L.;** Wood, Z. T.; Eliassen, M.; Herren, C. M.; Greer, M. L.; Ewing, H. A.; Carey, C. C.; Weathers, K. C.: DENSITY-DEPENDENCE IN CYANOBACTERIA? POPULATION DYNAMICS OF *GLOEOTRICHIA ECHINULATA* AT DAILY TIME SCALES
- 16:15 **De Palma-Dow, A. A.;** Cheruvilil, K. S.: THE ROLES OF HYDROLOGIC CONNECTIVITY AND LAKE AND LANDSCAPE CHARACTERISTICS IN SHAPING MACROPHYTE COMMUNITIES IN ISLE ROYALE NATIONAL PARK INLAND LAKES.
- 16:30 **Karentz, D.;** Read, R.; Neveux, I.; Grzymalski, J. J.: POPULATION DYNAMICS AND TRANSCRIPTOME ANALYSES OF A SPRING BLOOM OF *CORETHRON PENNATUM* IN ANTARCTIC COASTAL WATERS
- 16:45 **White, J. D.;** Sarnelle, O.: SIZE-STRUCTURED VULNERABILITY OF THE COLONIAL CYANOBACTERIUM, *MICROCYSTIS AERUGINOSA*, TO GRAZING BY ZEBRA MUSSELS (*DREISSENA POLYMORPHA*)

- 17:00 **Muth, A. F.**; Fox, M. D.; Graham, M. H.: PHYLOGENY CONSTRAINS RESPONSE TO SUB-LETHAL BIOMASS REMOVAL IN KELPS
- 17:15 **Visser, J. M.**; Pasch, A.: CHANGES IN PLANT SPECIES DISTRIBUTIONS ALONG THE LOUISIANA COAST 1997-2013
- 17:30 **Beyer, J. E.**; Hallidayschult, T. C.; Glidewell, D. L.; Hambright, K. D.: INTERACTIVE EFFECTS OF CYANOBACTERIA AND MATERNAL CONDITION ON SURVIVAL, REPRODUCTION, AND OFFSPRING PROVISIONING IN ROTIFERS.
- 17:45 **Kelly, P. T.**; Searle, A. R.; Jones, S. E.: HABITAT USE GOVERNED BY PREDATION RISK AND RESOURCE QUALITY IN A HETEROGENOUS ENVIRONMENT

135 Land-Water Interfaces

Chair(s): Philip R. Kaufmann, kaufmann.phil@epa.gov

Location: C 123 - 124

- 16:00 **Kaufmann, P. R.**; Peck, D. V.; Seeliger, C. W.: DRAWDOWN EFFECTS ON LAKE AND RESERVOIR PHYSICAL HABITAT – A NATIONAL PICTURE
- 16:15 **Alberts, J. M.**; Buffam, I.: INFLUENCE OF SEASONAL RIPARIAN CANOPY ON PRIMARY PRODUCTION IN STREAMS FROM URBAN AND FORESTED WATERSHEDS
- 16:30 **Warren, D. R.**; Kaylor, M. J.: RIPARIAN FOREST CONTROLS ON LIGHT AND NUTRIENT CYCLING IN HEADWATER STREAMS
- 16:45 **Carlson, P. E.**; McKie, B. G.; Johnson, R. K.: CROSS-HABITAT LINKAGES BETWEEN AQUATIC INSECT SUBSIDIES AND TERRESTRIAL ARTHROPODS: INTERACTING INFLUENCES OF LAND USE AND MICROHABITAT
- 17:00 **Kielstra, B. W.**; Arnott, S. E.; Gunn, J. M.: THINKING OUTSIDE THE LAKE: MULTIPLE SCALES OF AMPHIPOD (*HYALELLA AZTECA*) RECOVERY
- 17:15 **Carlson, E. M.**; Rejmankova, E.: SOIL BIOGEOCHEMISTRY ASSAYS IN LAKE ATITLAN, GUATEMALA: DO SOILS ACT AS A SINK OR A SOURCE OF NUTRIENTS?
- 17:30 **Premke, K.**; Attermeyer, K.; Flury, S.; Hoffmann, C.; Kazanjian, G.; Lisboa, C.; Jaconi, A.; Nitzsche, K.; Omari, M.; Gessler, A.: CONNECTING PROCESSES AND STRUCTURES DRIVING THE LANDSCAPE CARBON DYNAMICS OVER SCALES
- 17:45 **Gibble, C. M.**; Kudela, R. M.: DETECTION OF PERSISTENT MICROCYSTIN TOXINS AT THE LAND-SEA INTERFACE IN MONTEREY BAY CALIFORNIA.

138 Zooplankton Dynamics

Chair(s): Janet Fischer, janet.fischer@fandm.edu

Location: D 135 - 136

- 16:00 **Olson, M. H.**; Fischer, J. M.; Theodore, N.; Williamson, C. E.; Rose, K. C.; Hwang, J.: DIEL VERTICAL MIGRATION OF COPEPODS IN MOUNTAIN LAKES: ASSESSING THE ROLE OF UV RADIATION
- 16:15 **Valois, A. E.**; Poulin, R.: SIZE DOESN'T MATTER: THE ROLE OF PARASITES IN STRUCTURING ZOOPLANKTON POPULATIONS AT A LANDSCAPE-SCALE

- 16:30 **Schneider, T.**; Vincent, W. F.; Rautio, M.: SEASONAL DRIVERS OF COPEPOD PIGMENTATION IN FRESHWATER ECOSYSTEMS
- 16:45 **Prater, C.**; Wagner, N. D.; Frost, P. C.: TEMPORAL CHANGES IN DAPHNID ELEMENTAL COMPOSITION, BIOCHEMISTRY, AND POPULATION DYNAMICS ACROSS A GROWING SEASON
- 17:00 **Briland, R. D.**; Culver, D. A.; Ludsin, S. A.: ZOOPLANKTON COMMUNITY RESPONSE TO INCREASING NUTRIENT INPUTS AND *MICROCYSTIS* BLOOMS IN LAKE ERIE
- 17:15 **Beaver, J. R.**; Kirsch, J. E.; Blasius-Wert, B. J.; Renicker, T. R.; Cooper, D. D.; Manis, E. E.; Baldarelli, L. M.: PHYTOPLANKTON AND ZOOPLANKTON PHENOLOGY AND COMPOSITION REMAIN UNCHANGED BY INVASION OF QUAGGA MUSSELS IN LAKE MEAD, AZ/NV (2007-2013)
- 17:30 **Ekvall, M. T.**; Hylander, S.; Xi, Y.; Bianco, G.; Hansson, L. A.: QUANTIFYING ZOOPLANKTON BEHAVIOR USING NEWLY DEVELOPED NANOPARTICLE LABELING

146 A General Phycology (Part 1)

Chair(s): Wayne Litaker, Wayne.Litaker@noaa.gov

Location: B 110 - 112

- 13:30 **Litaker, R. W.**; Kibler, S. R.; Holland, W. C.; Vandersea, M. W.; Hickerson, E. L.; Eckert, R.; Tester, P. A.: GAMBIERDISCUS BIOGEOGRAPHY AND THE CONSEQUENCES OF CLIMATE CHANGE
- 13:45 **McManus, H. A.**; Sanchez, D. J.; Letsch, M. R.: VARIATIONS BETWEEN TWO CHLOROPLAST GENOMES WITHIN THE SPHAEROPLEALES
- 14:00 **Romero, R.**: EFFECTS OF PROPAGULE AVAILABILITY AND HERBIVORY ON RECRUITMENT OF ULVOIDS IN SAN FRANCISCO BAY
- 14:15 **Tepler, S. K.**; Prentice, P.; Pittermann, J.: TAKING THE PULSE OF KELP: FUNCTIONAL ANATOMY OF THE VASCULAR SYSTEM IN THE LAMINARIALES
- 14:30 **Kim, H. J.**; Park, S. B.; Kim, J.; Wang, P.; Han, M.: INTRASPECIFIC DIVERSITY AND DISTRIBUTION OF THE COSMOPOLITAN SPECIES PSEUDO-NITZSCHIA PUNGENS (BACILLARIOPHYCEAE): MORPHOLOGY, GENETICS AND ECOPHYSIOLOGY
- 14:45 Santelices, B.; **Gonzalez, A. V.**: CHIMERISM IN NATURAL POPULATIONS OF THE KELP LESSONIA SPICATA
- 15:00 **Sassenhagen, I.**; Wilken, S.; Richardson, T. L.; Pinckney, J. L.; Rengefors, K.: FROM ISOLATED HABITATS TO A WIDESPREAD NORTHERN EUROPEAN NUISANCE – PLASTICITY AND ADAPTATION IN A FRESHWATER MICROALGA
- 15:15 **Parsons-White, A.**; Mayfield, B.; Yeager-Armstead, M. M.; Wilson, M. L.: ESTABLISHING VARIABILITY IN TOXINS PRODUCED BY *PRYMNESIUM PARVUM* EXPOSED TO DIFFERING CULTURE AND TOXICITY INDUCING CONDITIONS

146 B General Phycology (Part 2)

Chair(s): John W. Stiller, stillerj@ecu.edu

Location: B 110 - 112

- 16:00 **Stiller, J. W.**; Schreiber, J.; Yue, J.; Guo, H.; Ding, Q.; Huang, J.: SERIAL ENDOSYMBIOSIS IN THE ORIGINS AND EVOLUTION OF "CHROMIST" PLASTIDS.

- 16:15 **Schmidt, W. E.**; Sauvage, T.; Self-Krayesky, S.; Clinton, K.; Fredericq, S.; Richards, J. L.; Camacho, O.: EXPLORATION OF CRYPTIC MICROBIOTA ASSOCIATED WITH NW GULF OF MEXICO RHODOLITHS
- 16:30 **Melton, J. T.**; Macaya, E.; Wynne, M. J.; Lopez-Bautista, J. M.: BIODIVERSITY OF ULVA (ULVOPHYCEAE, CHLOROPHYTA) FROM THE GULF OF MEXICO AND CHILE BASED ON MOLECULAR DATA
- 16:45 **Han, J. W.**; Klochkova, T. A.; Shim, J.; Nagasato, C.; Motomura, T.; Kim, G. H.: DIFFERENTIAL EXPRESSION OF MITOCHONDRIAL-TARGETED GENES DURING SEXUAL REPRODUCTION OF THE BROWN ALGA, *SCYTOSIPHON LOMENTARIA*
- 17:00 **Green, L. A.**; Eriksen, R. L.; Neefus, C. D.: EXPLORING THE LONG-TERM FREEZING TOLERANCE OF *PORPHYRA UMBILICALIS* KTTZING USING NEXT GENERATION SEQUENCING
- 17:15 **Kim, G. H.**; Han, J. H.; Han, J. W.; Nam, S. W.; Shin, W.; Park, J. W.; Yih, W.: GENE EXPRESSION OF THE STOLEN NUCLEUS OF CRYPTOPHYTE IN THE KARYOKLEPTIC CILIATE, *MESODINIUM RUBRUM*
- 17:30 **Sherwood, A. R.**; Liddy, Z. J.; Conklin, K. Y.: AIRBORNE ALGAE IN THE HAWAIIAN ISLANDS AS A TOOL FOR STUDYING ALGAL DISPERSAL
- 17:45 **Diller, J. T.**; Carrick, H. J.: INFLUENCES ON DIATOM (BACILLARIOPHYCEAE) DIVERSITY AMONG ISOLATED LENTIC SYSTEMS AS ISLAND ECOSYSTEMS (BEAVER ISLAND, MICHIGAN, USA)

147 Applied Phycology

Chair(s): James L. Wee, wee@loyno.edu

Location: B 110 - 112

- 10:00 **Wee, J. L.**; Nguyen, N. K.; Patterson, J.; Cattolico, R. A.; John, D. E.; Paul, J. H.; Millie, D. F.: GROWTH EFFECTS OF LIGHT SLOP CRUDE OIL ON A SKELETONEMA COSTATUM ISOLATED FROM THE LAKE PONTCHARTRAIN BASIN ESTUARY AND GROWN IN F/2 MADE FROM LPBE WATER
- 10:15 **Busse, L. B.**; Fetscher, A. E.; Johnson, S.; Rehn, A.; Mazor, R.; Stein, E.; Ode, P.; Stancheva, R.; Sheath, R.; Kociolek, P.: ALGAE AS INDICATORS FOR AQUATIC HEALTH AND EUTROPHICATION IN SOUTHERN CALIFORNIA STREAMS
- 10:30 **Graham, M. D.**; Vinebrooke, R. D.; Pilienci, S.; Galbraith, C.; Zurawell, R.; Huang, D.; Kinniburgh, D.; Graydon, J.; Gabos, S.; Zhang, W.: CYANOBACTERIA IN EUTROPHIC LAKES OF THE NORTHERN GREAT PLAINS: THE USE OF THE ECOLOGICAL NICHE TO PREDICT BLOOM FORMATIONS
- 10:45 **Moldaenke, C.**: MONITORING THE APPEARANCE OF THE CYANOBACTERIA PLANKTOTHRIX RUBESCENS IN RESERVOIRS IN MIDDLE EUROPE: NEW APPROACHES FOR AUTOMATIC IDENTIFICATION
- 11:00 **Adhikary, S. P.**: CYANOBACTERIA BIOFERTILIZER AND SEAWEED LIQUID FERTILIZER FOR SUSTAINABLE AGRICULTURE IN INDIA AND THEIR ROLE IN MITIGATING POLLUTION OF AQUATIC ECOSYSTEMS
- 11:15 **Kim, H. G.**; Adharini, R. I.; Kandasamy, G.; Kim, J.: MARICULTURE OF GRATELOUPIA ASIATICA (RHODOPHYTA) IN KOREA
- 11:30 **Stepanek, J. G.**; Kociolek, J. P.: DEVELOPING AN EVOLUTIONARY BASED APPROACH TO THE SELECTION OF HIGH LIPID PRODUCING DIATOMS

Thursday, 5/22/2014 Orals

004 Large-Scale Limnology – Integrating Across Landscapes To Understand Regional Controls On Biodiversity And Nutrient Cycles

Chair(s): Matt Leibold, mleibold@mail.utexas.edu

Nigel Roulet, nigel.roulet@mcgill.ca

Lars Tranvik, lars.tranvik@ebc.uu.se

Jake Vander Zanden, mjvanderzand@wisc.edu

Location: Oregon Ballroom

- 10:00 **Declerck, S.**: METACOMMUNITY THEORY AS A FRAMEWORK FOR THE STUDY OF SPATIAL COMMUNITY PATTERNS: ON THE IMPORTANCE OF LANDSCAPE FEATURES AND ORGANISM TRAITS*
- 10:15 **Brown, B. L.**; Swan, C. M.; Wahl, C.: LIMNOLOGISTS WHO GET THE DRIFT: THE STRUCTURE OF RIVER NETWORKS DICTATES THE PROCESS OF COMMUNITY ASSEMBLY*
- 10:30 **Gudasz, C.**; Seekell, D. A.; Pace, M. L.; Verpoorter, C.; Tranvik, L. J.; Karlsson, J.: TOWARDS REGIONAL CARBON CYCLING IN LAKES; LANDSCAPE SCALE NONLINEARITIES OF CARBON DIOXIDE EMISSION IN SWEDISH LAKES*
- 10:45 **Winslow, L. A.**; Read, J. S.; Hanson, P. C.; Stanley, E. H.: THE IMPORTANCE OF BIG AND SMALL: USING POWER-LAW BASED MODELS TO CONNECT ECOSYSTEM PROCESS TO THE SIZE DISTRIBUTION OF LAKES*
- 11:00 **Read, J. S.**; Winslow, L. A.; Hansen, G. A.; Van Den Hoek, J.; Hanson, P. C.; Bruce, L.; Markfort, C. D.: SIMULATING LAKES IN THE LANDSCAPE*
- 11:15 **Kritzberg, E. S.**; Ekström, S.; Reader, H.: CAUSES AND CONSEQUENCES OF INCREASING IRON CONCENTRATIONS IN FRESHWATERS*
- 11:30 **Greene, S.**; Johnes, P. J.; Bloomfield, J.; Reaney, S.; Lawley, R.: IMPROVING LANDSCAPE-SCALE NUTRIENT FLUX MODELLING USING A REGIONALISED GEOSPATIAL MODELLING FRAMEWORK
- 11:45 **Lottig, N. R.**; Tan, P. N.; Cheruvilil, K. S.; Scott, C. E.; Wagner, T.; Soranno, P. A.; Stow, C. A.; Yuan, S.: TAXONOMY OF CHANGE: USING CLUSTER ANALYSIS TO IDENTIFY TEMPORAL- PATTERNS IN LIMNOLOGICAL DATA
- 13:30 **Striegl, R. G.**; Wickland, K. P.; Dornblaser, M. M.; Spencer, R. G.: CARBON DYNAMICS OF BOREAL LAKES IN THE YUKON FLATS REGION OF INTERIOR ALASKA
- 13:45 **Rasilo, T.**; Prairie, Y. T.; del Giorgio, P. A.: PATTERNS IN SUMMER CH₄ FLUXES ACROSS BOREAL QUEBEC LAKES AND LINKS TO CO₂ AND TOTAL C EMISSIONS
- 14:00 **Jones, S. E.**; Zwart, J. A.; Solomon, C. T.: SPATIALLY EXPLICIT SCALING OF A LAKE PROCESS MODEL TO ESTIMATE LAKE CONTRIBUTIONS TO REGIONAL CARBON BUDGETS
- 14:15 **Kellerman, A. M.**; Dittmar, T.; Kothawala, D. N.; Tranvik, L. J.: MOLECULAR-LEVEL REGULATORS AND CHARACTERIZATION OF DISSOLVED ORGANIC MATTER ACROSS LANDSCAPES
- 14:30 **Hughes, R. M.**; Leitão, R. P.; Ligeiro, R.; Macedo, D. R.; Junqueira, N.; Silva, D. O.; Sanches, B. O.; Terra, B. F.; Callisto, M.; Pompeu, P. S.: DIVERSITY PATTERNS AND THE RELATIVE INFLUENCE OF CATCHMENT AND SITE VARIABLES ON LOTIC FISH AND MACROINVERTEBRATE RICHNESS

- 14:45 **Feld, C. K.**; Birk, S.; Eme, D.; Gerisch, M.; Kernan, M.; Malard, F.; Pletterbauer, E.; Salgado-Bonnet, J.; Stendera, S.; Hering, D.: INDEPENDENT, OVERLAPPING AND INTERACTING EFFECTS OF GEO-CLIMATIC FACTORS AND HUMAN LAND USE ON DIVERSITY PATTERNS IN FIVE EUROPEAN FRESHWATER ECOSYSTEMS
- 15:00 **Ptácnik, R.**: REGIONAL DIVERSITY GRADIENTS PREDICT SEVERITY OF PHYTOPLANKTON BLOOMS
- 15:15 **Soued, C.**; del Giorgio, P. A.; Maranger, R.: CROSS-REGIONAL PATTERNS OF NITROUS OXIDE FLUXES FROM BOREAL FRESHWATER NETWORKS
- 16:00 **O'Reilly, C. M.**; Sharma, S.; Grey, D. K.; Hampton, S. E.; Read, J. S.; Rowley, R. J.; Hook, S. J.; Schneider, P.; Ruppert, J.; GLTC Contributors, .: GLOBAL PATTERNS IN LAKE SURFACE TEMPERATURE TRENDS
- 16:15 **Oliver, S. O.**; Stanley, E. H.; Cheruvilil, K. S.; Downing, J. A.; Fergus, C. E.; Soranno, P. A.; Wagner, T.; Webster, K.; Winslow, L.: PREDICTION AND PATTERNS OF LAKE DEPTH ACROSS A 17-STATE REGION IN THE U.S.
- 16:30 **Langer, T. A.**; Pangle, K. L.; Murry, B. A.; Uzarski, D. G.: BETA DIVERSITY, SPATIOTEMPORAL STRUCTURING AND MECHANISMS SHAPING GREAT LAKE COASTAL WETLAND FISH AND MACROINVERTEBRATE COMMUNITIES
- 16:45 **Christel, S. T.**; Soranno, P. A.; Stanley, E. H.; Cheruvilil, K. S.; Lottig, N. R.: LESSONS FROM LAGOS: THE TRIUMPHS AND CHALLENGES OF CREATING AN INTEGRATED MULTI-SCALED, MULTI-THEMED LAKE NUTRIENT GEODATABASE AT SUBCONTINENTAL SCALES
- 17:00 **Read, E. K.**; Patil, V.; Oliver, S. K.; Hetherington, A.; Brentrup, J.; Winters, K.; Zwart, J.; Winslow, L.; Hanson, P. C.; Weathers, K. C.: LAKE HYDROLOGIC CONNECTIVITY DETERMINES THE SCALE OF INFLUENCES ON WATER QUALITY METRICS ACROSS THE CONTINENTAL US
- 17:15 **Fergus, C. E.**; Oliver, S. K.; Skaff, N. K.; Scott, C. E.; Soranno, P. A.; Cheruvilil, K. S.; Webster, K.; Bremigan, M. T.: MEASURING PATTERNS OF LAKE, STREAM, AND WETLAND CONNECTIVITY AT MACROSCALES
- 17:30 **Thornbrugh, D. J.**; Infante, D. M.: LANDSCAPE EFFECTS ON FLUVIAL FISH ASSEMBLAGE STRUCTURE: REGION-SPECIFIC RESPONSE TO ANTHROPOGENIC STRESSORS.
- 17:45 **Scott, C. E.**; Fergus, C. E.; Lottig, N. R.; Filstrup, C. T.; Wagner, T.; Stanley, E. H.; Soranno, P. A.: WHICH GLOBAL AND REGIONAL CLIMATE METRICS AT MACROSCALES BEST DESCRIBE LAKE WATER QUALITY RESPONSES TO CLIMATE CHANGE?

024 We've Got A Nitrogen Fixation! Exploring, Integrating, And Understanding N Fixation Along The Freshwater To Marine Continuum

Chair(s): Thad Scott, jts004@uark.edu

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Jill Welter, jill.welter@gmail.com

Location: E 145 - 146

- 13:30 **Marcarelli, A. M.**; Fulweiler, R. W.; Scott, J. T.; Welter, J. R.: NITROGEN FIXATION ALONG THE FRESHWATER TO MARINE CONTINUUM: STATE OF THE SCIENCE AND RESEARCH NEEDS

- 13:45 **DeLuca, T. H.**; Zackrisson, O.; Bergman, I.; Diez, B.; Bergman, B.: DIAZOTROPHY IN ALLUVIAL MEADOWS OF SUBARCTIC RIVER SYSTEMS *
- 14:00 **Wiedner, C.**; Dolman, A. M.; Rucker, J.; Knie, M.: DOES NITROGEN FIXATION MATTER?
- 14:15 **Welter, J. R.**; Williamson, T. J.; Cross, W. F.; Hood, J. M.; Benstead, J. P.; Huryn, A. D.; Johnson, P. W.; Ahles, A. M.; Goldschmidt, J. B.: NITROGEN FIXATION AMPLIFIES THE TEMPERATURE-DEPENDENCE OF PRIMARY PRODUCTION IN STREAMS
- 14:45 **Baker, B. C.**; Scott, J. T.: DETERMINATION OF ECOSYSTEM-SCALE N₂ FIXATION USING ¹⁵N ANALYSIS IN SIX SMALL RESERVOIRS
- 15:00 **Fulweiler, R. W.**; Newell, S. E.; Heiss, E. M.; Rogener, M. K.; LeCleir, G. R.; Wilhelm, S. W.: THE OBSERVER EFFECT: QUANTIFYING THE IMPACT OF THE ACETYLENE REDUCTION ASSAY ON MARINE SEDIMENT N-FIXERS
- 15:15 **Madinger, H. L.**; Kunza, L. A.; Hall, R. O.: MEASUREMENT OF STREAM NITROGEN FIXATION WITH MEMBRANE-INLET MASS SPECTROMETRY
- 16:00 **Greathouse, E. A.**; Compton, J. E.; Van Sickle, J.: LANDSCAPE CHARACTERISTICS AND HIGH STREAM NITROGEN IN THE OREGON COAST RANGE: RED ALDER COMPLICATES USE OF NUTRIENT CRITERIA
- 16:15 **Scott, J. T.**; Grantz, E. M.; Baker, B. C.; Haggard, B. E.: TOO MUCH JUST AIN'T ENOUGH: HOW SOME OF THE HIGHEST-REPORTED N FIXATION RATES MAY NOT REVERSE PERPETUAL N LIMITATION IN LAKES
- 16:30 **Bratt, A. R.**; Finlay, J. C.; Welter, J. R.: CONSTRAINTS TO NITROGEN FIXATION INFLUENCE NUTRIENT LIMITATION OF PRIMARY PRODUCERS IN A NORTHERN CALIFORNIA STREAM NETWORK
- 16:45 **Kumar, S.**; Bhavya, P. S.; Gupta, G. V.; Sudheesh, V.; Sudharma, K. V.: DISSOLVED INORGANIC NITROGEN (DIN) UPTAKE AND N₂ FIXATION RATES IN A TROPICAL EUTROPHIC ESTUARY AND ADJACENT COASTAL WATERS
- 17:00 **Furey, P. C.**; Welter, J. R.; Ahles, A.; Goldschmidt, J.; Nelson, D.: WHAT DO THE ALGAE SAY? WINTER PATTERNS IN NIROGREN-FIXING ALGAL ASSEMBLAGES IN STREAMS IN THE HENGILL REGION OF ICELAND
- 17:15 **Gradoville, M. R.**; Letelier, R. M.; Bombar, D.; White, A. E.: SEARCHING FOR APHOTIC MARINE NITROGEN FIXATION IN THE PACIFIC NORTHWEST AND THE SOUTH PACIFIC
- 17:30 **Scott, J. T.**; Fulweiler, R. W.; Marcarelli, A. M.; Welter, J. R.; INVITED PANELISTS, .: PANEL DISCUSSION: WE'VE GOT A NITROGEN FIXATION! EXPLORING, INTEGRATING, AND UNDERSTANDING N FIXATION ALONG THE FRESHWATER TO MARINE CONTINUUM†
- 16:15 **Diaz, J. M.**; Dyhrman, S. T.: PRODUCTION AND UTILIZATION OF POLYPHOSPHATE BY MARINE PHYTOPLANKTON
- 16:30 **Jones, D. S.**; Flood, B. E.; Bailey, J. V.: POLYPHOSPHATE METABOLISM AND PHOSPHORUS CYCLING IN HYPOXIC MARINE SEDIMENTS*
- 16:45 **Whitney, L. P.**; Lomas, M. W.: DISSECTING THE CELLULAR RESPONSE OF THE PICOEUKARYOTE, *MICROMONAS*, TO THE INTERACTIVE EFFECTS OF PHOSPHORUS DEFICIENCY AND OCEAN ACIDIFICATION*
- 17:00 **Porcal, P.**: PHOTOCHEMICAL DEGRADATION OF DOM REDUCES PHOSPHORUS AVAILABILITY IN STREAMS
- 17:15 **Willis, A.**; Chuang, A.; Orr, P.; Burford, M.: EXPLORING THE COMPLEXITIES OF PHOSPHORUS UTILISATION BY THE TOXIC CYANOBACTERIUM *CYLINDROSPERMOPSIS RACIBORSKII**
- 17:30 **Morrison, E. M.**; Bae, H. S.; Zhou, J.; Ogram, A.: SHIFTS IN MICROBIAL PHOSPHORUS CYCLING IN THE FLORIDA EVERGLADES
- 17:45 **Muscarella, M. E.**; Bird, K. C.; Larsen, M. L.; Placella, S. A.; Lennon, J. T.: PHOSPHORUS RESOURCE HETEROGENEITY AFFECTS THE STRUCTURE AND FUNCTION OF MICROBIAL FOOD WEBS

031 A City Is A City Is A City? Comparative Analyses In Urban Aquatic Ecosystems

Chair(s): Jennifer L. Morse, jlmorse@gmail.com
Nathaniel Morse, nat.morse@unh.edu

Location: A 105

- 13:30 **Roy, A. H.**; Capps, K. A.; Jones, K. L.; Parr, T. B.; Ramirez, A.; Smith, R. F.; Walsh, C. J.; Wenger, S. J.: GLOBAL DIFFERENCES IN URBANIZATION AND STREAM ECOLOGY: A SYNTHESIS*
- 13:45 **Hopkins, K. G.**; Morse, N. B.; Bain, D. J.; Betzet, N. D.; Grimm, N. B.; Morse, J. L.; Palta, M.: CROSS-CITY COMPARISON OF HYDROLOGIC ALTERATIONS AND VARIATION IN NUTRIENT FLUX FOLLOWING URBANIZATION*
- 14:00 **Steele, M. K.**; Heffernan, J. B.; Betzet, N.; Cavender-Bares, J.; Groffman, P. M.; Grove, M.; Hall, S.; Hobbie, S. E.; Larson, K.; Morse, J. L.: CONVERGENT SURFACE WATER DISTRIBUTIONS IN U.S. CITIES*
- 14:15 **Palta, M. M.**: THE ECOSYSTEM FUNCTIONS OF ACCIDENTAL URBAN WETLANDS*
- 14:30 **Oertli, B.**; Demierre, E.; Ilg, C.: CAN URBAN WETLANDS BE BIODIVERSITY HOTSPOTS IN OUR CITIES ?
- 14:45 **Yeakley, J. A.**: PORTLAND-VANCOUVER ULTRA-EX: GOVERNANCE AND ENVIRONMENTAL QUALITY IN URBAN ECOSYSTEMS*
- 15:00 **Brooks, B. W.**: TEN YEARS LATER: LESSONS AND OPPORTUNITIES FROM FISH ON PROZAC AND OTHER HARBINGERS OF THE URBAN WATER CYCLE
- 15:15 **Link, H. D.**: DROUGHT & SCARCITY – A POLITICAL CONTOURS OF THE WATER CRISIS
- 16:00 **Blaszczak, J. R.**; Delesantro, J. M.; Urban, D. L.; Bernhardt, E. S.: IS ALL IMPERVIOUS COVER CREATED EQUAL? A STUDY OF VARIATION IN STREAM CHEMISTRY ACROSS 10% IMPERVIOUS SURFACE WATERSHEDS

030 Insights Into The Molecular Ecology Of Phosphorus Biogeochemistry From Diverse Aquatic Ecosystems

Chair(s): Elise Morrison, emorrison@ufl.edu
Andrew Ogram, aogram@ufl.edu
Julia Diaz, jdiaz@whoie.edu
Sonya Dyhrman, sdyhrman@ldeo.columbia.edu

Location: B 110 - 112

- 16:00 **Cotner, J. B.**; Godwin, C. M.: WHAT'S SALT GOT TO DO WITH IT?: WHY DO MARINE PLANKTON MAKE POLYPHOSPHATE AND FRESHWATER PLANKTON DON'T? *

(*) represents Invited presentations

- 16:15 **Koch, B. J.**; Febria, C. M.; Colson, A.; Cooke, R. M.; Palmer, M. A.: USING STRUCTURED EXPERT JUDGMENT TO ESTIMATE VARIABILITY IN NITROGEN RETENTION BY URBAN STORMWATER CONTROL STRUCTURES
- 16:30 **Looper, E. N.**; McMillan, S. K.: DENITRIFYING COMMUNITY RESPONSE TO STORM DISTURBANCE IN AN URBAN STREAM RECEIVING DISCHARGE FROM A STORMWATER CONTROL MEASURE
- 16:45 **Fisher, J. C.**; Newton, R. J.; Dila, D. K.; McLellan, S. L.: MICROBIAL METROPOLIS: BACTERIAL INDICATORS OF URBAN IMPACTS ON AQUATIC ECOSYSTEMS
- 17:00 **Smith, R. M.**; Kaushal, S. S.; Beaulieu, J. J.; Pennino, M. J.; Mayer, P. M.; Welty, C.; Miller, A. J.: IMPACTS OF STORMWATER MANAGEMENT ON GREENHOUSE GAS FLUXES FROM URBAN STREAMS
- 17:15 **Grabowski, Z. J.**; Janjua, S. J.; Chang, H.: BLUE, GREEN, GREY AND BEYOND: CHALLENGES AND OPPORTUNITIES FOR COMPARATIVE URBAN ECO-HYDROLOGY, A PORTLAND METRO CASE STUDY
- 17:30 **Miner, J. J.**; Carr, K. W.; Bryant, K. E.: PERFORMANCE OF BIOSWALES USED FOR IMPROVEMENT OF ROADWAY RUNOFF FROM A MAJOR INTERSTATE IN ILLINOIS, USA
- 17:45 **Carr, K. W.**; Miner, J. J.: EVIDENCE FOR HIGH TDS GROUNDWATER STORAGE IN HIGHWAY GRADES; A SOURCE OF CHRONIC IMPACTS TO BIOSWALES AND ROADWAY ADJACENT STREAMS AND WETLANDS

033 Bridging The Gap: Using High-Frequency Sensor-Derived Data And Networks In Education, Training And Outreach

Chair(s): Catherine O'Reilly, oreilly@ilstu.edu
Cayelan Carey, cayelan@vt.edu
Leah Wasser, lwasser@neoninc.org
Keli Goodman, kgoodman@neoninc.org

Location: A 105

- 10:00 **O'Reilly, C. M.**; Darnier, R.; Carey, C. C.; Richardson, D. C.; Weathers, K. C.: THE USE OF HIGH-FREQUENCY DATA TO ENGAGE STUDENTS IN QUANTITATIVE REASONING AND SCIENTIFIC DISCUSSION
- 10:15 **Wasser, L. A.**; Goodman, K.; Fitzgerald, M. X.; Goehring, L.; Gram, W.: FACILITATING INTEGRATION OF SPATIO-TEMPORAL ECOLOGICAL DATA INTO UNIVERSITY COURSES: NEON'S ONLINE LEARNING PORTAL
- 10:30 Richardson, D. C.; Klug, J. L.; **Carey, C. C.**: CONNECTING HIGH-FREQUENCY AND LONG-TERM DATA WITH TRADITIONAL UNDERGRADUATE LAB ACTIVITIES TO BUILD QUANTITATIVE REASONING AND LIMNOLOGY LITERACY
- 10:45 **Peri, F.**; Albert, M.; Pearson, A. N.; Wetherill, B. R.; Zhang, Y.: THOMPSON ISLAND EXPERIMENTAL LEARNING INITIATIVE: INCORPORATING REMOTELY COLLECTED DATA INTO THE BOSTON EDUCATION SYSTEM
- 11:00 **McDowell, W. H.**; Potterr, J. D.; Daley, M. L.; Snyder, L.; Mulukutla, G.: USING SENSORS AND SENSOR NETWORKS TO QUANTIFY ECOSYSTEM SERVICES IN DEVELOPED AND RURAL WATERSHEDS
- 11:15 **Bruesewitz, D. A.**; King, W.: GOLDIE THE GREAT POND BUOY: A TOOL FOR LIMNOLOGY, EDUCATION AND COMMUNITY OUTREACH

- 11:30 **Cohen, M. J.**: FRESH EYES IN THE WATER: A SENSOR-DRIVEN REVOLUTION IN WATER QUALITY MONITORING IN FLORIDA*
- 11:45 **Weathers, K. C.**: ENHANCING HUMAN PASSION AND CURIOSITY ABOUT LAKE ECOSYSTEM FUNCTION: SENSORS, CITIZENS, AND CYBERINFRASTRUCTURE*

034 Metapopulation And Metacommunity Approaches To Research And Management Of Fragmented Aquatic Systems

Chair(s): Amanda Little, littlea@uwstout.edu
Jim Church, churchjam@uwstout.edu

Location: B 115

- 10:00 **Little, A. M.**; Church, J. O.: METACOMMUNITY STRUCTURE OF ISOLATED WETLAND PLANT COMMUNITIES*
- 10:15 **Howeth, J. G.**; Weis, J. J.; Brodersen, J.; Hatton, E. C.; Post, D. M.: INTRASPECIFIC PHENOTYPIC VARIATION IN A FISH PREDATOR AFFECTS MULTI-TROPHIC LAKE METACOMMUNITY STRUCTURE*
- 10:30 **Lancaster, J.**; Downes, B. J.: A LANDSCAPE-SCALE FIELD EXPERIMENT TESTS METACOMMUNITY IDEAS: DE-COUPLING THE ABIOTIC ENVIRONMENT FROM RESOURCE DENSITIES REVEALS THE IMPORTANCE OF DISPERSAL*
- 10:45 **Boersma, K. S.**; Dee, L. E.; Miller, S. J.; Bogan, M. T.; Lytle, D. A.: LINKING MULTIDIMENSIONAL FUNCTIONAL DIVERSITY TO ECOLOGICAL THEORY IN FRAGMENTED AQUATIC HABITATS*
- 11:00 **Terui, A.**; Miyazaki, Y.; Yoshioka, A.; Kaifu, K.; Matsuzaki, S. S.; Washitani, I.: ASYMMETRIC DISPERSAL STRUCTURES A METAPOPULATION OF THE FRESHWATER PEARL MUSSEL*
- 11:15 **Anderson, K. E.**; Sarhad, J.; Manifold, S.: ASSESSING GEOMETRIC AND HABITAT-BASED INDICES FOR DETERMINING POPULATION PERSISTENCE POTENTIAL USING CONTINUOUS SPACE MODELS OF RIVER NETWORKS*
- 11:30 **Anthony, W. J.**; Dreslik, M. J.; Douglas, M. R.; Marioni, N. K.; Phillips, C. A.: CONNECTIVITY OF A FRAGMENTED TURTLE ASSEMBLAGE WITHIN THE LOWER DES PLAINES RIVER VALLEY IN NORTHEASTERN ILLINOIS*
- 11:45 **Walker, R. H.**; Adams, G. L.: ECOLOGICAL FACTORS INFLUENCING MOVEMENT OF CREEK CHUB IN AN INTERMITTENT STREAM OF THE OZARK MOUNTAINS, ARKANSAS*

035 Population Genetic And Genomic Advances In Understanding The Evolution Of Plankton

Chair(s): Karin Rengefors, karin.rengefors@biol.lu.se
Michelle Wood, m.michellewood@gmail.com
Anke Kremp, anke.kremp@ymparisto.fi
Thorsten Reusch, treusch@geomar.de

Location: B 115

- 13:30 **Watts, P. C.**; Lowe, C. D.: CROSSING THE DIVIDE: POPULATION GENOMICS OF ADAPTATION TO SALINITY IN THE MARINE FLAGELLATE *OXYRRHIS MARINA**
- 13:45 **Sefbom, J.**; Kremp, A.; Rengefors, K.; Jonsson, P.; Godhe, A.: SMALL-SCALE PHYSICAL OCEANOGRAPHIC BARRIERS PREVENT GENE FLOW BETWEEN NEIGHBOURING DIATOM POPULATIONS

^(*) represents Tutorial presentations

- 14:00 **Palenik, B.**; Stuart, R. K.; Paz-Yepes, J.; Busby, K.; Brahamsha, B.: HORIZONTAL GENE TRANSFER CONTRIBUTES TO SYNECHOCOCCUS POPULATION FITNESS*
- 14:15 **Alverson, A. J.**; Kessenich, C. R.; Wickett, N. J.: HORIZONTAL GENE TRANSFER IN DIATOM GENOMES
- 14:30 **Krueger-Hadfield, S. A.**; Balestreri, C.; Schroeder, J. L.; Highfield, A. C.; Lohbeck, K. T.; Riebesell, U.; Reusch, T.; Rickaby, R.; Brownlee, C.; Schroeder, D. C.: GENETIC DIVERSITY IN AN *EMILIANA HUXLEYI* BLOOM AND IMPLICATIONS FOR PHYTOPLANKTON POPULATION GENETICS
- 14:45 **Ryan, D. E.**; Campbell, L.; Pepper, A. E.: IDENTIFICATION OF NUCLEOTIDE VARIATIONS AND CONSERVED GENES IN THE TRANSCRIPTOMES OF THREE *KARENIA BREVIS* CLONES
- 15:00 **Wood, A. M.**: SINGLE-CELL ANALYSIS AND THE HERITABLE COMPONENT OF PHENOTYPIC VARIATION IN VOLUME AND SCATTERING PROPERTIES OF A THECATE DINOFLAGELLATE
- 15:15 **Godhe, A.**; Sjöqvist, C.; Lundholm, N.; Seftom, J.; Sildever, S.; Bunse, C.; Legrand, C.; Johansson, E. M.; Rengefors, K.; Kremp, A.: POPULATION GENETIC ANALYSES OF THE BALTIC SEA SPRING BLOOM DISPLAY DIFFERENTIATED POPULATION STRUCTURE DESPITE OCEANOGRAPHIC CONNECTIVITY*
- 16:00 **Brady, M. C.**; Theriot, E. C.: BIG LAKES BIG DATA: COMPARING POPULATION GENETICS OF CLOSELY RELATED SPECIES WITHIN *AULACOSEIRA* (BACILLARIOPHYTA) FROM THE GREAT LAKES AND LAKE BAIKAL*
- 16:15 **Sjöqvist, C.**; Godhe, A.; Jonsson, P.; Kremp, A.: OCEANOGRAPHIC AND ECOLOGICAL DRIVERS OF GENETIC DIVERSITY AND DIFFERENTIATION OF A MARINE DIATOM SPECIES ALONG THE BALTIC SEA SALINITY GRADIENT
- 16:30 **Kordbacheh, A.**; Walsh, E. J.: CRYPTIC SPECIATION: A BETTER ESTIMATE OF SPECIES DIVERSITY IN AQUATIC INVERTEBRATES
- 16:45 **Hellweger, F. L.**; Van Sebille, E.; Fredrick, N. D.: EXPLORING THE CONTRIBUTION OF NEUTRAL EVOLUTION TO BIOGEOGRAPHY IN GLOBAL SURFACE OCEAN MICROBES USING AGENT-BASED MODELING*
- 17:00 **Yau, S.**; Grimsley, N. H.; Sanchez-Ferandin, S.; Piganeau, G.: POPULATION GENOMICS OF THE CRYPTIC PHYTOPLANKTON SPECIES, *OSTREOCOCCUS MEDITERRANEUS*
- 17:15 **McCary, N. D.**; Carlson, M. G.; Rocop, G. L.: SEASONAL AND STRAIN SPECIFIC VARIATION IN PSEUDONITZSCHIA VIRUS SUSCEPTIBILITY IN THE PACIFIC NORTHWEST
- 17:30 **Whittaker, A.**; Rynearson, A.: POPULATION SUCCESSION OF THE MARINE DIATOM *THALASSIOSIRA ROTULA*: LINKING EVOLUTIONARY POTENTIAL AND BLOOM FORMATION*
- 17:45 **Rengefors, K.**; Lebet, K.: THE USE OF POPULATION GENETICS AND GENOMICS TO EXPLORE THE INCREASE OF A NUISANCE BLOOM-FORMING MICROALGA

054 Understanding And Managing Legacy Contaminants In Freshwater Ecosystems

Chair(s): Richard McDowell, richard.mcdowell@agresearch.co.nz
 Anthony Buda, anthony.buda@ars.usda.gov
 John Quinn, j.quinn@niwa.co.nz
 Clive Howard-Williams, c.howard-williams@niwa.co.nz

Location: D 135 - 136

- 16:00 **McDowell, R.**; Dodd, R.: ASSESSING AND MITIGATING PHOSPHORUS LEGACIES AT MULTIPLE SCALES DUE TO GROUNDWATER INPUTS
- 16:15 **Buda, A. R.**; Tzilkowski, S. S.; Kibet, L. C.; Bryant, R. B.; Boyer, E. B.; Allen, A. L.; Kleinman, P. J.; May, E. B.: TERRESTRIAL SOURCES OF UREA TO WATER IN A MIXED LAND USE WATERSHED: EXPLORING THE ROLES OF CURRENT AND PAST NITROGEN MANAGEMENT
- 16:30 **Parsons, C. T.**; Rezanezhad, F.; Van Cappellen, P.: SEDIMENT NUTRIENT DYNAMICS UNDER REDOX OSCILLATING CONDITIONS
- 16:45 **Quinn, J. M.**; Hughes, A. O.: VARIABLE RESPONSE LEGACIES OF STREAM HYDROLOGY, WATER QUALITY, NUTRIENT FLUXES AND INVERTEBRATES AFTER INTEGRATED MANAGEMENT OF A NEW ZEALAND HILL FARM
- 17:00 **Tesoriero, A. J.**; Duff, J. H.; Miller, M. P.: ASSESSING THE VULNERABILITY OF STREAMS TO LEGACY NITRATE SOURCES
- 17:15 **Orihel, D. M.**; O'Connell, D. W.; Van Cappellen, P.; Schindler, D. W.: CONTRASTING THE BEHAVIOR OF LEGACY PHOSPHORUS IN BOREAL AND PRAIRIE LAKES
- 17:30 **Verborg, P.**: INTERNAL NUTRIENT LOADING IN LAKES
- 17:45 **Spears, B. M.**; Meis, S.; Gunn, I.; Maberly, S.: CONTROLLING LEGACY PHOSPHORUS IN LAKES USING GEO-ENGINEERING: LESSONS FROM MULTIPLE ECOSYSTEM SCALE EXPERIMENTS

055 Carbon Cycling And Fluxes In Coastal Vegetated Wetlands

Chair(s): Zhaohui Aleck Wang, zawang@whoi.edu
 Kevin Kroeger, kkroeger@usgs.gov
 Serena Moseman-Valtierra, smoseman@mail.uri.edu

Location: B 113

- 13:30 **Crooks, S.**; Emmett-Mattox, S.: BREAKING THE CARBON BLUES: URGENT RESEARCH NEEDS *
- 13:45 **Brown, C. A.**; Mochon-Colloura, T.; DeWitt, T. H.; Janousek, C.: OREGON SALT MARSHES: HOW BLUE ARE THEY?
- 14:00 **Chen, R. F.**; Cable, J. E.; Meile, C.; Cherrier, J. E.; Gardner, G. B.; Wang, X. C.; Schalles, J.; Peri, F.; Schiebel, H. N.: DISSOLVED ORGANIC CARBON (DOC) EXPORT FROM SALT MARSHES*
- 14:15 **Kroeger, K. D.**; Pohlman, J. W.; Ganju, N. K.; Spivak, A. C.; Wang, Z. A.; Green, A.; Brooks, T. W.; Baldwin, S.; Moseman-Valtierra, S.; Tang, J.: SALT MARSH CARBON BUDGETS: FLUXES AND SOURCES OF DISSOLVED AND PARTICULATE ORGANIC CARBON IN TIDAL EXCHANGES
- 14:30 **Lyons, G.**; Chen, R. F.; Cherrier, J.: DISSOLVED ORGANIC CARBON (DOC) OUTWELLING FROM A FL BIG BEND COASTAL WETLAND SYSTEM

(*) represents Invited presentations

- 14:45 **Megonigal, J. P.**; Tzortziou, M. A.; Neale, P. J.; Miller, A. W.: CONTRASTING EFFECTS OF ELEVATED CO₂ ON OCEAN AND TIDAL WETLAND CARBONATE CHEMISTRY: OCEAN ACIDIFICATION VERSUS WETLAND ALKALINIZATION OF ESTUARIES*
- 15:00 **Wang, Z. A.**; Kroeger, K. D.; Green, A.; Hoering, K. A.; Pohlman, J. W.; Ganju, N. K.; Moseman-Valtierra, S.; Tang, J.: SALT MARSH CARBON BUDGETS: BIOGEOCHEMISTRY OF THE CO₂ SYSTEM AND TIDAL EXCHANGES OF INORGANIC CARBON AND ALKALINITY
- 15:15 **Forbrich, I.**; Giblin, A. E.: ECOSYSTEM-SCALE NEE MEASUREMENTS IN A NEW ENGLAND SALT MARSH
- 16:00 **Windham-Myers, L.**; Bergamaschi, B. A.; Anderson, F.; Miller, R. L.; Fujii, R.: TALES OF AN EXTREME WETLAND RESTORATION IN THE SAN FRANCISCO BAY-DELTA: MULTISCALE CONTINUOUS FLUX DATA ILLUSTRATE CONSTRAINTS FOR GREENHOUSE GAS BUDGETS *
- 16:15 **Chmura, G. L.**; Kellman, L.: SEASONAL GREENHOUSE GAS FLUXES FROM A MACROTIDAL AND MICROTIDAL COLD TEMPERATE SALT MARSH*
- 16:30 **Abdul-Aziz, O. I.**; Ishtiaq, K. S.: EMPIRICAL MODELING AND PREDICTIONS OF GREENHOUSE GAS (GHG) FLUXES FROM COASTAL WETLANDS: A DATA-ANALYTICS APPROACH*
- 16:45 **Marchio, D. A.**; Mitsch, W. J.: SOIL CARBON SEQUESTRATION IN MANGROVE ECOSYSTEMS OF SOUTHWEST FLORIDA: COMPARING IMPACTED AND OPEN TIDAL CREEK SYSTEMS
- 17:00 **Breithaupt, J. L.**; Smoak, J. M.; Smith III, T. J.; Sanders, C. J.; Peterson, L. C.; Byrne, R. H.: ASSESSING 100 YEARS OF CARBON BURIAL AND SEDIMENT ACCRETION IN THE CONTEXT OF SEA LEVEL RISE, REDUCED FRESHWATER INPUT, & STORMS IN THE COASTAL EVERGLADES
- 17:15 **Basuki, I.**; Kauffman, J. B.: LAND USE CHANGE EFFECTS ON THE CARBON DYNAMICS OF INDONESIAN TROPICAL PEATLAND FORESTS
- 17:30 **Sedghi, N.**; Day, E. P.: BLUE CARBON IN COASTAL FRESHWATER MARSHES ON THE BARRIER ISLANDS OF VIRGINIA: BELOWGROUND CARBON POOLS
- 17:45 **Arriola, J. M.**; Cable, J. E.; Bost, M.; Housego, R.: SEDIMENT ACCRETION AND CARBON BURIAL RATE VARIABILITY WITHIN A FLORIDA SALT MARSH: ECONFINA-AUCILLA RIVER ESTUARY.
- 14:15 **Coleman, M. L.**; Anderson, M. R.: COMPARATIVE POPULATION GENOMICS IN OLIGOTROPHIC INLAND SEAS
- 14:30 **Nelson, C. E.**; Sadro, S.; Knapp, R. A.: BACTERIAL LINEAGE DISTRIBUTIONS ALONG OLIGOTROPHIC MONTANE LAKE CHAINS: LINKING BIOGEOCHEMICAL AND VEGETATION GRADIENTS TO MICROBIAL METACOMMUNITY STRUCTURE
- 14:45 **Newton, R. J.**; Eren, A. M.; McLellan, S. L.: WITHIN-TAXON BACTERIAL POPULATION SHIFTS REFLECT TRANSITION FROM EUTROPHIC TO OLIGOTROPHIC WATERS IN LAKE MICHIGAN
- 15:00 **Rii, Y. M.**; Bidigare, R. R.; Bowers, R. M.; Church, M. J.; Omori, E. H.; Rappé, M. S.: PHYTOPLANKTON DIVERSITY IN EUTROPHIC TO HYPEROLIGOTROPHIC REGIONS IN THE EASTERN SOUTH PACIFIC OCEAN
- 15:15 **Rosen, B. H.**; Saunders, C.; Coronado-Molina, C.; Sklar, E.; Newman, S.; Harvey, J. W.; Larsen, L. G.; Wilcox, S. M.; Trexler, J.; Ho, D.: THE EVERGLADES: HOW ALAGL SPECIES RICHNESS RESPONDS TO EXPERIMENTAL FLOW PULSES
- 16:00 **Vadeboncoeur, Y.**; McIntyre, P. B.; May, J. A.; Hile, E.: THE COMPLEXITY OF TOP-DOWN CONTROL ON PRIMARY PRODUCTIVITY: INTERACTIVE EFFECTS OF BIOMASS REMOVAL AND CONSUMER NUTRIENT RECYCLING IN A LOW NUTRIENT ECOSYSTEM
- 16:15 **Corman, J. R.**; Moody, E. K.; Brundage, M. M.; Elser, J. J.: A SHADING EXPERIMENT TO STUDY HOW CALCIUM CARBONATE DEPOSITION INFLUENCES NUTRIENT LIMITATION
- 16:30 **Vizza, C.**; Lang, J. M.; Chaloner, D. T.; Benbow, M. E.; Lamberti, G. A.: NUTRIENT LIMITATION AND INHIBITION OF BIOFILMS IN PONDS OF THE COPPER RIVER DELTA, ALASKA
- 16:45 **Francois, C.**; Mermillod-Blondin, F.; Malard, F.; Eme, D.; Lefebvre, T.; Douady, C. J.; Simon, L.: TROPHIC ECOLOGY IN UNPRODUCTIVE ENVIRONMENTS: COMPARATIVE ISOTOPIC ANALYSES REVEAL PARTICULAR FEEDING STRATEGIES IN GROUNDWATER
- 17:00 **Winikoff, S. G.**; Tank, J. L.; Dee, M. M.; Mahl, U. H.: COMPARING THE STRUCTURE AND FUNCTION OF SUBARCTIC TUNDRA LAKES RECEIVING CONTRASTING RESOURCE SUBSIDIES

069 Life At Low Nutrients

Chair(s): Stuart Jones, sjones20@nd.edu
Maureen Coleman, mlcoleman@uchicago.edu
Ryan Newton, newtonr@uwm.edu

Location: C 120 - 122

- 13:30 **Bellinger, B. J.**; Van Mooy, B.; Cotner, J. B.; Benitez-Nelson, C. R.; Cotter, A.: PHYSIOLOGICAL MODIFICATIONS OF SESTON IN RESPONSE TO PHYSICO-CHEMICAL GRADIENTS WITHIN LAKE SUPERIOR
- 13:45 **Rivers, A. R.**; Burns, A. S.; Moran, M. A.: NON-CODING SMALL RNAs DIFFERENTIALLY EXPRESSED UNDER CARBON AND NITROGEN LIMITATION BY THE ROSEOBACTER *RUEGERIA POMEROYI*
- 14:00 **Godwin, C. M.**; Cotner, J. B.: MAKING THE MOST OF IT: BIOMASS PHOSPHORUS CONTENT AND ALLOCATION IN BACTERIOPANKTON FROM LAKES ACROSS A PRODUCTIVITY GRADIENT

070 River-Floodplain Connectivity As A Geomorphic, Biogeochemical, And Organismal Driver Of Floodplain Function

Chair(s): Greg Noe, gnoe@usgs.gov
Durelle Scott, dscott@vt.edu
Richard Keim, rkeim@lsu.edu
Cliff Hupp, crhupp@usgs.gov

Location: C 123 - 124

- 10:00 **Weigelhofer, G.**; Reckendorfer, W.; Bondar-Kunze, E.; Funk, A.; Preiner, S.; Hein, T.: INFLUENCE OF FLOODPLAIN CONNECTIVITY, BACKWATER MORPHOLOGY, AND FLOOD MAGNITUDE ON THE BIOGEOCHEMISTRY AND PRODUCTIVITY OF AN ISOLATED FLOODPLAIN SYSTEM
- 10:15 **Houser, J. N.**: CONTRASTS AMONG AQUATIC AREAS IN A LARGE, FLOOD-PLAIN RIVER: TESTING OUR UNDERSTANDING OF NUTRIENT CYCLING, ALGAL ABUNDANCE, AND SUSPENDED SEDIMENT DYNAMICS

^(*) represents Tutorial presentations

- 10:30 Jones, C. N.; Guth, C.; Hester, E.; **Scott, D. T.**: SEASONAL HYDROLOGIC AND BIOGEOCHEMICAL RESPONSE TO FLOODPLAIN INUNDATION ALONG A SECOND-ORDER STREAM IN SOUTHWESTERN VIRGINIA
- 10:45 **Forshy, K. J.**; Faulkner, B. R.; Brooks, J. R.; McElmurry, A.; Cline, S. P.; Mayer, P. M.: GROUNDWATER AND SURFACE WATER INTERACTION OF THE
- 11:00 **Newcomer Johnson, T. A.**; Kaushal, S. S.; Mayer, P. M.; Grese, M. M.: EFFECTS OF STORMWATER MANAGEMENT AND STREAM ENGINEERING ON WATERSHED NITROGEN RETENTION
- 11:15 **Noe, G. B.**; Hupp, C. R.; Schenk, E. R.; Batson, J.; Rybicki, N. B.: INTERACTIONS AMONG HYDROLOGIC CONNECTIVITY, GEOMORPHOLOGY, AND NUTRIENT AND CARBON CYCLING IN AN URBAN, PIEDMONT FLOODPLAIN WETLAND
- 11:30 **Craft, C.**; Vymazal, J.: THE MARCH OF HISTORY: LAND USE LEGACIES AS SEEN IN SOILS OF OLD WORLD VERSUS NEW WORLD WETLANDS
- 11:45 **Hupp, C. R.**; Schenk, E. R.; Kroes, D. E.; Noe, G. B.; Willard, D. A.: HUMAN IMPACTS ON SEDIMENTATION DYNAMICS IN RESPONSE TO ALTERATION OF STREAM FLOW TO FLOODPLAIN CONNECTIVITY
- 13:30 **Peipoch, M.**; Driscoll, K. P.; Hauer, F. R.; Valett, H. M.: VARIATION IN BIOTIC FORM AND FUNCTION AMONG AQUATIC HABITATS OF RIVERINE FLOODPLAINS
- 13:45 **Jones, C. N.**; Scott, D. T.; Edwards, B. L.; Keim, R. F.: PERIRHEIC MIXING AND BIOGEOCHEMICAL PROCESSING WITHIN RIVERINE FLOODPLAINS
- 14:00 **Ochs, C. A.**; Shields, F. S.; Pongruktham, O.: DEVELOPMENT OF EMPIRICAL MODELS FOR ANALYSIS OF INTEGRATION BY HYDROLOGIC CONNECTION ACROSS THE LOWER MISSISSIPPI RIVER FLOODPLAIN
- 14:15 **Schenk, E. R.**; Hupp, C. R.; Gellis, A.; Noe, G.: A NEW STREAM METRIC FOR COMPARING STREAM FUNCTION USING A BANK-FLOODPLAIN SEDIMENT BUDGET
- 14:30 **Celi, J. E.**; Hamilton, S. K.: FLOODPLAIN HYDROLOGY OF LARGE RIVERS IN THE ANDEAN AMAZON REGION: MANAGEMENT AND CONSERVATION IMPLICATIONS
- 14:45 **Wynne, C. A.**; Webster, K. E.; Donohue, I.: HYDROGEOMORPHOLOGICAL CONTROLS ON QUALITY ASSESSMENTS ACROSS LOTIC AND LENTIC SYSTEMS
- 15:00 **Meitzen, K. M.**; Kupfer, J. A.; Gao, P.: APPLICATION OF A 2D HYDRODYNAMIC FLOOD MODEL FOR QUANTIFYING RIVER AND FLOODPLAIN PROCESS INTERACTIONS
- 15:15 **Kroes, D. E.**; Kraemer, T. F.: HUMAN-INDUCED STREAM CHANNEL ABANDONMENT AND FILLING OF FLOODPLAIN CHANNELS WITHIN THE ATCHAFALAYA RIVER BASIN, LOUISIANA
- 16:00 **Fraaije, R.**; Breeman, L.; Verduyn, G. P.; Verhoeven, J.; Soons, M. B.: STRUGGLING TO COLONIZE: GERMINATION, SEEDLING SURVIVAL AND GROWTH OF 17 RIPARIAN PLANT SPECIES ALONG LOWLAND STREAMS WITH RECONNECTED FLOODPLAINS
- 16:15 **Van Appledorn, M.**; Baker, M. E.: REGIONAL CORRESPONDENCE OF RIPARIAN PLANT FUNCTIONAL TRAITS SUBJECT TO DIFFERENT FLOOD REGIMES
- 16:30 **Battaglia, L. L.**; Denslow, J. S.: LONG-TERM FOREST DISASSEMBLY IN A RAPIDLY SUBSIDING COASTAL LOUISIANA FLOODPLAIN
- 16:45 **Kleindl, W. J.**; Rains, M. C.; Hauer, F. R.; Marshall, L.: HYDROLOGIC, GEOMORPHIC, AND ANTHROPOGENIC DRIVERS OF FLOODPLAIN/RIPARIAN PATCH DIVERSITY
- 17:00 **Death, R. G.**; Fuller, I. C.; Death, A. M.: QUANTIFYING HABITAT QUALITY – THE MISSING DIMENSION
- 17:15 **Curry, C. J.**; Monk, W. A.; Baird, D. J.: VARIATION IN RIVERINE INSECT BIODIVERSITY ALONG THE RIVER CONTINUUM IN CANADA
- 17:30 **Rieck, L. O.**; Sullivan, S. M.: SHORT-TERM GEOMORPHIC CHANGE EXERTS STRONG EFFECTS ON FISH ASSEMBLAGE DIVERSITY AND COMPOSITION IN SMALL URBAN STREAMS
- 17:45 **Helms, B.**; Sefick, S.; Reithel, S.; Kosnicki, E.; Werneke, D.; Schneid, B.; Zink, J.; Feminella, J.; Jennings, G.: GEOMORPHIC ASSESSMENTS AND INSTREAM ECOLOGICAL ENDPOINTS: INTEGRATION FOR RESTORATION AND MANAGEMENT
- 074 Environmental Flow Science In The WaterSMART Program**
- Chair(s): Jonathan G. Kennen, jgkennan@usgs.gov
Carly Jerla, cjerla@usbr.gov
Anne Brasher, abrasher@usgs.gov
- Location: E 142 - 144
- 10:00 **Evenson, E. J.**: A NATIONAL WATER CENSUS: QUANTIFYING, FORECASTING AND SECURING FRESHWATER FOR AMERICA'S FUTURE*
- 10:15 **Vaddey, S. V.**: EVALUATING CLIMATE CHANGE IMPACTS ON ECOLOGICAL RESOURCES IN RECLAMATION RECONNAISSANCE LEVEL STUDIES*
- 10:30 **Barber, N. L.**; Hutson, S. S.; Maupin, M. A.: WATER USE IN SUPPORT OF BETTER WATER ACCOUNTING -- A NATIONAL PERSPECTIVE*
- 10:45 **Kiang, J. E.**; Archfield, S. A.; Hay, L. E.: DAILY FLOW ESTIMATION IN UNGAGED BASINS FOR THE USGS NATIONAL WATER CENSUS
- 11:00 **Caldwell, P.**; Kennen, J.; Hain, E.; Sun, G.; McNulty, S.; Nelson, S.: THE US FOREST SERVICE WASSI MODEL: A BUILDING BLOCK FOR EVALUATING GLOBAL CHANGE IMPACTS ON ECOLOGICAL FLOWS AT THE NATIONAL SCALE*
- 11:15 **Reeves, H. W.**; Feinstein, D. T.; Fienen, M. N.: QUANTIFYING THE ROLE OF GROUNDWATER IN SUPPORTING ENVIRONMENTAL FLOWS IN THE GLACIAL AQUIFER SYSTEM*
- 11:30 **Williamson, T. N.**; Lant, J. G.: SIMULATING MINIMALLY IMPACTED STREAMFLOW RECORDS IN AREAS OF HISTORIC POPULATION CONCENTRATION, URBANIZATION, AND AGRICULTURE*
- 11:45 **Thompson, J. L.**; Archfield, S. A.; Kennen, J. G.; Kiang, J. E.: EFLOWSTATS: AND R PACKAGE TO COMPUTE ECOLOGICALLY-RELEVANT STREAMFLOW STATISTICS

(*) represents Invited presentations

- 13:30 **Archfield, S. A.**; Kennen, J. G.; Carlisle, D. M.; Wolock, D. M.: AN OBJECTIVE AND PARSIMONIOUS APPROACH FOR CLASSIFYING NATURAL FLOW REGIMES AT A CONTINENTAL SCALE
- 13:45 **Freeman, M. C.**; Hagler, M. M.; Jelks, H. L.; Katz, R. A.; Martin, Z.; Peterson, J. T.; Walsh, S. J.: UNDERSTANDING FLOW-ECOLOGY RELATIONS THROUGH A LENS OF COMMUNITY DYNAMICS*
- 14:00 **Hain, E. F.**; Caldwell, P.; Kennen, J. G.; Nelson, S. A.: FLOW-ECOLOGY RESPONSE MODELS FOR FISH SPECIES RICHNESS IN NORTH CAROLINA PIEDMONT STREAMS
- 14:15 **Brasher, A.**; Weile, S.; Paretto, N.; Pearlstein, S.: SYNTHESIS OF HYDROLOGY AND BIOLOGY IN THE SEMI-ARID VERDE WATERSHED, TO QUANTIFY IMPACTS OF CHANGES IN WATER AVAILABILITY ON HUMAN AND ENVIRONMENTAL NEEDS
- 14:30 **Cuffney, T. F.**; Phelan, J.; Patterson, L.: ESTABLISHING FLOWS TO MAINTAIN BENTHIC MACROINVERTEBRATES IN NORTH CAROLINA*
- 14:45 **Maloney, K. O.**; Talbert, C. B.; Cole, J. C.; Galbraith, H. S.; Blakeslee, C. J.; Hanson, L.; Holmquist-Johnson, C. L.: ASSESSING THE EFFECTS OF ALTERNATIVE FLOW SCENARIOS ON RIVERS USING THE RIVERINE ENVIRONMENTAL FLOW DECISION SUPPORT SYSTEM: THE UPPER DELAWARE RIVER, USA
- 15:00 **Phelan, J.**; Patterson, L.; Eddy, M.; Dykes, R.; Cuffney, T.: FLOW ALTERATION – BIOLOGICAL RESPONSE RELATIONSHIPS FOR FISH IN NORTH CAROLINA STREAMS
- 15:15 **McGarvey, D. J.**: BUILDING A GENERAL, FLOW-MEDIATED THEORY OF FISH SPECIES RICHNESS – A CASE-STUDY IN THE PACIFIC NORTHWEST (USA)
- 16:00 **Jerla, C. S.**; Butler, R. A.: ANALYZING ECOLOGICAL RESOURCES IN THE COLORADO RIVER BASIN WATER SUPPLY AND DEMAND STUDY
- 16:15 **Reynolds, L. V.**; Shafroth, P. B.; Poff, N. L.: ECOLOGICAL IMPACTS OF STREAM DRYING UNDER CLIMATE CHANGE IN THE UPPER COLORADO RIVER BASIN: HOW WILL LOW FLOWS SHAPE FUTURE RIPARIAN VEGETATION?
- 16:30 **Turner, T. E.**: UNDERSTANDING CLIMATE CHANGE IMPACTS IN THE HOOD RIVER BASIN, OREGON*
- 16:45 **Llewellyn, D. K.**; Roach, J. D.; Pinson, A. O.: UPPER RIO GRANDE CLIMATE IMPACT ASSESSMENT*
- 17:00 **Kennen, J. G.**; Cuffney, T. F.: REGIONAL INVESTIGATIONS OF FLOW-ECOLOGY RELATIONS: ASSESSING THE EFFECTS OF DATA PREPARATION
- 17:15 **Ruhl, P. M.**: USGS BIODATA – INTEGRATING EXTANT DATA SOURCES TO SUPPORT ACCESS TO AQUATIC ASSEMBLAGE INFORMATION*
- 17:30 **Blodgett, L.**: NEW USGS DATA AND PROCESSING TOOLS FOR ENVIRONMENTAL FLOW AND HYDROLOGIC SCIENCE DATA ASSIMILATION AND SHARING*
- 16:15 **Audet, J.**; Baattrup-Pedersen, A.; Andersen, H. E.; Hoffmann, C. C.; Kronvang, B.: ENVIRONMENTAL CONTROLS OVER PLANT SPECIES RICHNESS IN RIPARIAN WETLANDS: IMPLICATIONS FOR RESTORATION*
- 16:30 **Hein, T.**; Baumgartner, C.; Bondar-Kunze, E.; Funk, A.; Preiner, S.; Cyffka, B.; Kvarda, M.; Reckendorfer, W.; Striebel, M.; Weigelhofer, G.: RESTORATION OF FLOODPLAIN HABITATS IN THE DANUBE RIVER BASIN: EXPERIENCES FROM DIFFERENT RESTORATION APPROACHES*
- 16:45 **Verhoeven, J. T.**: RESTORATION OF FLOATING FEN VEGETATION: INITIAL LAG TIME AND THE IMPORTANCE OF CONNECTIVITY*
- 17:00 **Jensen, K.**; Markus-Michalczyk, H.: SEED ECOLOGY AND TIPPING POINTS: RESTORATION OF WILLOW DOMINATED TIDAL FORESTS DEPENDS ON A 'WINDOW OF OPPORTUNITY'*
- 17:15 **Salminen, O.**; Valkama, P.; Haapanala, S.; Vasander, H.; Vessman, T.; Rantakokko, K.; Ojala, A.; Linden, L.; Väänänen, V.; Nikinmaa, E.: URBAN OASES; MULTIFUNCTIONAL WETLANDS IN URBAN ENVIRONMENTS, CASE NUMMELA, FINLAND*
- 17:30 **Verhoeven, J. T.**: WETLAND RESTORATION IN EUROPE: TOWARD LARGER SCALES IN SPACE AND TIME^T

090 How Does The Ramsar Convention Respond To Changing Wetland Baselines, Thresholds And Perception Shifts In The Anthropocene?

Chair(s): Robert McInnes, rob@rmwe.co.uk
Professor Nick Davidson, davidson@ramsar.org

Location: B 117 - 119

- 13:30 Davidson, N.; **Finlayson, C. M.**: MANAGING RAMSAR SITES WITH AN UNKNOWN BASELINE AND INCREASING PRESSURE ON ECOSYSTEM SERVICES*
- 13:45 **Gell, P. A.**; Dearing, J.: TRAJECTORIES OF WETLAND CHANGE: UNDERSTANDING NATURAL ECOLOGICAL CHARACTER FROM A DEEPER TEMPORAL PERSPECTIVE. *
- 14:00 **Galatowitsch, S.**: DESIGNING MONITORING PROGRAMS TO DETECT RESPONSES TO COMPLEX ANTHROPOGENIC CHANGES IN HIGH QUALITY WETLANDS*
- 14:15 **McInnes, R. J.**: CHANGING MINDSETS TO DELIVER WETLAND WISE USE IN URBANISED LANDSCAPES*
- 14:30 **Hartig, E. K.**; Boger, R.; Heaviland, M.; Larson, M.: SALT MARSH LOSS IN NEW YORK CITY, 1974 TO 2012*
- 14:45 **McInnes, R.**: CHANGING WETLAND BASELINES, THRESHOLDS AND PERCEPTION SHIFTS IN THE ANTHROPOCENE – WHAT ARE THE PRIORITIES FOR THE RAMSAR CONVENTION?^T

092 Frontiers In Algal Evolution: A Case Study From The Rhodophyta

Chair(s): Hwan Su Yoon, hsyoon2011@skku.edu
Debashish Bhattacharya, bhattacharya@aesop.rutgers.edu

Location: B 114

- 10:00 **Yoon, H. S.**; Bhattacharya, D.; Boo, S. M.; Fredericq, S.; Hommersand, M.; Lopez-Bautista, J.; Saunders, G. W.; Vis, M. L.: WHAT HAVE WE LEARNED FROM THE RED ALGAL TREE OF LIFE (NSF REDTOL) PROJECT?*

083 Restoration Of European Wetlands: Thresholds And Tipping Points

Chair(s): Jos T.A. Verhoeven, j.t.a.verhoeven@uu.nl

Location: B 117 - 119

- 16:00 **Joyce, C. B.**: RESTORATION OF ABANDONED WET GRASSLANDS FOR NATURE CONSERVATION: TIMESCALES, THRESHOLDS AND CONSTRAINTS*

- 10:15 **Bhattacharya, D.**; Perineau, M. M.; Price, D. C.; Zelzion, U.: COMPARATIVE GENOME ANALYSIS OF *PORPHYRIDIIUM* STRAINS*
- 10:30 **Vis, M. L.**; Lam, D. W.; Salomaki, E. D.; Johnston, E. T.; Saunders, G. W.; Verbruggen, H.; Kim, K. M.; Yoon, H. S.: REDTOL: ADVANCES IN OUR KNOWLEDGE OF FRESHWATER RED ALGAE*
- 10:45 **Fredericq, S.**; Sauvage, T.; Schmidt, W. E.: ENVIRONMENTAL NEXT-GENERATION SEQUENCING COUPLED WITH SANGER SEQUENCING REVEALS NOVEL, UNEXPECTED RED ALGAL BIODIVERSITY WITHIN RHODOLITHS*
- 11:00 **Saunders, G. W.**; Filloramo, G.; Dixon, K.; Le Gall, L.; Kraft, G. T.: ENHANCED MULTIGENE ANALYSES BEGIN TO RESOLVE SUPRAORDINAL RELATIONSHIPS AMONG RHODYMENIOPHYCIDAEN ORDERS (FLORIDOPHYCEAE, RHODOPHYTA)*
- 11:15 **Leliaert, F.**; Porteria Evolution Consortium (21 authors), .: PHYLOGEOGRAPHY OF THE TROPICAL INDO-PACIFIC RED SEAWEED *PORTIERIA**
- 11:30 **Verbruggen, H.**: PUTTING THE ALGAL TREE OF LIFE TO USE: EVOLUTIONARY DYNAMICS OF ECOLOGICAL NICHES, PHYSIOLOGY AND SPECIES' DIAGNOSTIC TRAITS[†]
- 13:30 **Shoguchi, E.**: A FIRST ASSEMBLY OF THE *SYMBIODINIUM MINUTUM* NUCLEAR GENOME REVEALS DINOFLAGELLATE GENE STRUCTURE[†]
- 14:00 **Foflonker, F.**; Price, D. C.; Qui, H.; Palenik, B.; Wang, S.; Bhattacharya, D.: GENOME SEQUENCE OF THE GREEN ALGA PICOCHLORUM SENEW3: ORIGIN OF HALOTOLERANCE AND ROLE OF HORIZONTAL GENE TRANSFER IN ADAPTATION TO FLUCTUATING ENVIRONMENTS*
- 14:15 **DePriest, M. S.**; Bhattacharya, D.; Lopez-Bautista, J. M.: EXPLORING RED MACROALGAL GENOMES WITH *GRATELOUPIA TAIWANENSIS**
- 14:30 **Richards, J. L.**; Gabrielson, P. W.; Fredericq, S.: NEW INSIGHTS INTO THE GENUS LITHOPHYLLUM (LITHOPHYLLOIDEAE; CORALLINACEAE, CORALLINALES) FROM OFFSHORE THE NW GULF OF MEXICO*
- 14:45 **Lee, J. M.**; Kim, K. M.; Yang, E. C.; Yoon, H. S.: EVOLUTION IN RED ALGAL PLASTID GENOMES CAUSED BY HORIZONTAL GENE TRANSFER EVENTS*
- 15:00 **Gabrielson, P. W.**; Adey, W. H.; Hernández-Kantun, J. J.: *CLATHROMORPHUM* (CORALLINALES, RHODOPHYTA): A POLYPHYLETIC GENUS BASED ON GENETIC, ANATOMICAL AND ECOLOGICAL DATA*
- 15:15 **Müller, K. M.**; Lynch, M. D.; Lindstrom, S. C.; Sutherland, J. E.; Nelson, W. A.; Oliveira, M. C.: ROADMAP FOR TAXONOMIC RESOLUTION OF FILAMENTOUS BANGIALES*
- 10:15 **Loecke, T. D.**; Burgin, A. J.; Jarecke, K.: GREENHOUSE GAS BALANCE OF A WETLAND INTERRUPTED BY 120+ YEARS OF AGRICULTURE*
- 10:30 **Martina, J. P.**; Currie, W. S.; Goldberg, D. E.; Elgersma, K. J.: INVESTIGATING THE MAJOR DRIVERS OF C STORAGE IN COASTAL WETLANDS USING A SIMULATION MODEL: DO PLANT INVASIONS MATTER?*
- 10:45 **Mitraki, C.**; Crisman, T. L.: MACROPHYTE COMMUNITIES OF LAKES CREATED ON PHOSPHATE MINED LANDS OF CENTRAL FLORIDA
- 11:00 **Amos, K. L.**; Benfield, E. F.: LEGACY IMPACTS OF AGRICULTURAL LAND USE ON MACROINVERTEBRATE COMMUNITIES AND WATER QUALITY OF PIEDMONT STREAMS
- 11:15 **Lemke, M. J.**; Kent, A. D.; Dungey, K. E.; Paver, S. F.; Rodrigues, L. C.; Vehlo, L. F.; Kellerhals, D. M.: A TIME SERIES STUDY OF BACTERIA COMMUNITY CHANGES IN NEWLY RESTORED THOMPSON LAKE, EMQUON PRESERVE, IL
- 11:30 **Sadlier, C.**; Mykytczuk, N.; Kreutzweiser, D.; Gunn, J.: THE ROLE OF STREAM MICROBIAL COMMUNITIES IN THE RECOVERY OF AQUATIC ECOSYSTEMS FROM LEGACY NATURAL AND INDUSTRIAL WATERSHED DISTURBANCE
- 11:45 **Peralta, A. L.**; Matthews, J. W.: OVERCOMING AGRICULTURAL LEGACIES WHEN RESTORING WETLAND ECOSYSTEMS: CAN MANAGEMENT STRATEGY OVERRIDE LAND USE HISTORY?

111 Dissolved Organic Tracers Of Aquatic Biogeochemistry

Chair(s): George Aiken, graiken@usgs.gov
Rob Spencer, rspencer@whrc.org
Aron Stubbins, Aron.Stubbins@skio.uga.edu

Location: B 110 - 112

- 10:00 **Aiken, G. R.**; Butler, K. D.: OPTICAL MEASUREMENTS AND DISSOLVED ORGANIC MATTER COMPOSITION
- 10:15 **McClelland, J. W.**; Griffin, C. G.; Connelly, T. L.; Khosh, M. S.; Crump, B. C.; Kellogg, C.; Dunton, K. D.: SEASONALITY OF DISSOLVED ORGANIC MATTER IN LAGOON ECOSYSTEMS ALONG THE EASTERN ALASKA BEAUFORT SEA COAST
- 10:30 **Mann, P. J.**; Sobczak, W. V.; LaRue, M. M.; Bulygina, E. B.; Davydova, A.; Vonk, J. E.; Zimov, N.; Spencer, R. G.: PREFERENTIAL DEGRADATION OF ANCIENT ORGANIC CARBON IN ARCTIC RIVERS
- 10:45 **Cao, X.**; Aiken, G. R.; Spencer, R. G.; Butler, K.; Mao, J.; Schmidt-Rohr, K.: SEASONAL AND SPATIAL VARIABILITY IN CHEMICAL STRUCTURE OF DISSOLVED ORGANIC MATTER FROM THE YUKON RIVER BASIN BY NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY
- 11:00 **D'Sa, E. J.**; Kim, H. C.: SUMMER CDOM OPTICAL PROPERTIES IN THE WESTERN ARCTIC UNDER LOW SEA ICE CONDITIONS
- 11:15 **Kraus, T.**; Downing, B.; Bergamaschi, B.; Stumpner, E.; Story, A.; O'Donnell, K.: REAL-TIME WATER QUALITY MAPPING IN AND AROUND TIDAL WETLANDS: HIGH RESOLUTION DATA ACROSS SPACE AND TIME
- 11:30 **Foreman, C. M.**; D'Andrilli, J.; Smith, H. J.: WEST ANTARCTIC ICE SHEET (WAIS) DIVIDE ICE CORE: A MICROBIALY DERIVED RESERVOIR OF GLACIAL ORGANIC MATTER

110 Ghosts Of Land-Use Past: Do Land-Use Legacy Effects Constrain The Restoration Of Aquatic Ecosystems?

Chair(s): Ariane Peralta, peraltaa@ecu.edu
Marcelo Ardon, ardonaysaom@ecu.edu

Location: E 145 - 146

- 10:00 **Ardon, M.**; Bernhardt, E. S.: DO LAND-USE LEGACIES CONSTRAIN OUR ABILITY TO RESTORE THE WATER QUALITY FUNCTION OF WETLANDS UNDER A CHANGING CLIMATE?

(*) represents Invited presentations

- 11:45 **Stubbins, A.**; Spencer, R. G.; Guo, W.; Raymond, P. A.; Dittmar, T.; Fellman, J.; Hood, E.: SOURCE AND BIO-LABILITY OF ANCIENT DISSOLVED ORGANIC MATTER IN GLACIER AND LAKE ECOSYSTEMS ON THE TIBETAN PLATEAU
- 13:30 **Kaplan, L. A.**; Mosher, J. J.: THE DIVERSITY OF DISSOLVED ORGANIC MATTER CHEMICAL COMPOSITION DECLINES ALONG A RIVER CONTINUUM
- 13:45 **Singer, G. A.**; Besemer, K.; Bertuzzo, E.; Dittmar, T.; Battin, T. J.: SIGNATURES OF DISSOLVED ORGANIC MATTER IN A DENDRITIC STREAM META-ECOSYSTEM: TRACING UPSTREAM LANDSCAPE AND FLUVIAL PROCESSES
- 14:00 **Logue, J. B.**; Stedmon, C. A.; Kellerman, A. M.; Nielsen, N. J.; Lindström, E. S.; Laudon, H.; Kritzberg, E. S.: THE SIGNIFICANCE OF AQUATIC BACTERIAL COMMUNITY COMPOSITION TO THE DEGRADATION OF DISSOLVED ORGANIC MATTER
- 14:15 Goodman, M.; **Larsen, L. G.**; Skalak, K.; Harvey, J. W.: FLUORESCENCE-BASED SOURCE TRACKING OF ORGANIC SEDIMENT
- 14:30 **Arakawa, N. K.**; Aluwihare, L. I.: EXAMINING THE DISTRIBUTION OF DEGRADED TERPENOID IN TERRESTRIAL DOM FOLLOWING CHEMICAL REDUCTION
- 14:45 **Maurice, P. A.**; Kuhn, K.; Neubauer, E.; von der Kammer, F.; Hofmann, T.: CHARACTERIZATION OF METALS AND RARE EARTH ELEMENTS ASSOCIATED WITH NATURAL ORGANIC MATTER FROM THE SUWANNEE RIVER (GA, USA): COMPARISON OF RO AND XAD SAMPLES
- 15:00 **Guo, W.**; Wei, J.; Liu, B.; Guo, D.: FLUORESCENCE PROPERTIES AND BIOLABILITY OF DISSOLVED ORGANIC MATTER RELEASED DURING THE METABOLIC PROCESSES OF JELLYFISH AURELIA AURITA
- 15:15 **Koch, B. P.**; Kattner, G.; Witt, M.; Passow, U.: RECALCITRANT OR LABILE? MOLECULAR INSIGHTS INTO THE MICROBIAL FORMATION OF DISSOLVED ORGANIC MATTER

113 Uncommon Garden: Exploring The Role Of Macrophytes In Mediating Biodiversity And Functional Processes Across Aquatic Ecosystems

Chair(s): Peter S Levi, peter.levi@biology.au.dk
Tenna Riis, tenna.riis@biology.au.dk

Location: B 113

- 10:00 **Levi, P. S.**; Riis, T.; Tank, J. L.; Reisinger, A. J.; Baattrup-Pedersen, A.: DYNAMICS OF SEASONAL NUTRIENT UPTAKE ARE CONTROLLED BY ECOSYSTEM METABOLISM IN MACROPHYTE-DOMINATED STREAMS
- 10:15 **Patrick, C. J.**; Weller, D. E.: FLUCTUATIONS IN AN UNDERWATER GARDEN: LINKING YEAR-TO-YEAR VARIATION IN CHESAPEAKE BAY SAV TO WATER QUALITY AND PRIOR SAV DISTRIBUTION
- 10:30 **Chambers, P. A.**: BIOGEOGRAPHY OF NORTH AMERICAN AQUATIC VASCULAR PLANTS: SPECIES RICHNESS AND COMPOSITION IN RELATION TO ENVIRONMENTAL GRADIENTS
- 10:45 **Tyrrell, C. D.**; Chambers, P. A.; Culp, J. M.: UNCOUPLING THE EVOLUTIONARY AND ECOLOGICAL SIGNALS DRIVING MACROPHYTE NUTRIENT STOICHIOMETRY

- 11:00 **Grasset, C.**; Delolme, C.; Bornette, G.: EUTROPHICATION IMPACT ON AQUATIC PLANT CARBON ALLOCATION
- 11:15 **Newman, R. M.**; Knopik, J. M.; JaKa, J. D.: RESTORATION OF SUBMERSED AQUATIC MACROPHYTES AFTER CARP REMOVAL IN A SMALL MINNESOTA LAKE
- 11:30 **Thompson, V. F.**; Bixby, R. J.; Dahm, C. N.: EFFECTS OF CATASTROPHIC FOREST FIRE ON SUBMERGED AQUATIC MACROPHYTES IN A MOUNTAIN STREAM
- 11:45 **Riis, T.**; Tank, J. L.; Levi, P. S.; Reisinger, A. J.; Aubeneau, A.: SEASONAL CHANGES IN TRANSIENT STORAGE AND NUTRIENT UPTAKE IN A MACROPHYTE-RICH RIVER

114 Wetlands: Getting To A Science Based Approach

Chair(s): Nicholas Coffey, nick@coffey-geo.com
Phil Scoles, pscoles@terrascince.com

Location: B 116

- 10:00 **Bried, J. T.**; Jog, S. K.; Dzialowski, A. R.; Davis, C. A.: ANALYTICAL FRAMEWORK TO ESTIMATE BENCHMARK BIOCRITERIA FOR AQUATIC AND WETLAND SITES
- 10:15 **Ahn, C.**; Moser, K.; Wolf, K.; Dee, S.; Peralta, R.; Korol, A.; Williams, L.; Noe, G.: ASSESSING THE EFFECTS AND RELATIONSHIP OF DESIGN ELEMENTS THAT CAN GUIDE FUNCTIONAL NO-NET-LOSS TO RESTORE WETLAND ECOSYSTEM SERVICES
- 10:30 **Choung, C. B.**; Baird, D. J.: ASSESSING RISKS OF COMPLEX STRESSORS IN A THREATENED FRESHWATER DELTA OF INTERNATIONAL SIGNIFICANCE
- 10:45 **Fong, L. S.**; Stein, E. D.: DEVELOPMENT OF SOUTHERN CALIFORNIA STREAM RESTORATION PERFORMANCE CURVES USING THE CALIFORNIA RAPID ASSESSMENT METHOD, AN INTEGRATIVE WETLAND CONDITION INDEX
- 11:00 **Sloey, T. M.**; Hester, M. W.: HYDROLOGIC AND EDAPHIC CONSTRAINTS ON VEGETATION EXPANSION IN A FRESHWATER TIDAL MARSH: RECOMMENDATIONS FOR RESTORATION
- 11:15 **Jog, S.**; Fouts, T.; Bried, J.; Dzialowski, A.: FLORISTIC QUALITY AS AN INDICATOR OF WETLAND CONDITION IN OKLAHOMA
- 11:30 **Bingham, S. N.**: WATER LEVEL AND VEGETATION MONITORING AT WETLANDS IN CUYAHOGA VALLEY NATIONAL PARK, OHIO
- 11:45 **Cooke, S. S.**: COMPARING THE REGION 9 2012 PLANT INDICATORS FOR 126 OF THE MOST COMMON SPECIES IN THE PUGET BASIN TO ACTUAL DATA

116 The Role Of Microbial And Algal Communities In Stressed Aquatic Systems: Linking Structure To Function

Chair(s): Emily B. Graham, emily.graham@colorado.edu
Lee F. Stanish, Lee.Stanish@colorado.edu

Location: C 120 - 122

- 10:00 **Tan, X.**; Sheldon, F.; Zhang, Q.; Valdez, D.; Burford, M.; Bunn, S.: IS THERE A RELATIONSHIP BETWEEN ALGAL COMPOSITION AND BENTHIC METABOLISM UNDER THE DISTURBANCE GRADIENTS IN SUBTROPICAL RIVERS?
- 10:15 **Schucker, C. M.**; McNeely, F.; O'Quinn, R.: STREAM MICROBIAL COMMUNITIES ALONG AN AGRICULTURAL GRADIENT

^(*) represents Tutorial presentations

- 10:30 **Alsterberg, C.**; Gamfeldt, L.; Hallin, S.; Hulth, S.; Sundbäck, K.: THE EFFECTS OF MULTIPLE STRESSORS AND HABITAT DIVERSITY ON ECOSYSTEM MULTIFUNCTIONALITY
- 10:45 **Graham, E. B.**; McKnight, D. M.; Nemergut, D. R.: BIOLOGICAL AND GEOCHEMICAL CONTROLS OF MERCURY METHYLATION IN WILD RICE PATCHES
- 11:00 **Hewson, I.**; Burge, C. A.; Harvell, C. D.; Haulena, M.; Lahner, L.; Miner, B.; Miner, M.; Murray, M.; Newton, A.; Raimondi, P.: MICROBIAL ECOLOGY OF PACIFIC ASTEROIDEA AFFECTED BY WASTING DISEASE
- 11:15 **Kim, J. H.**; Kim, K. Y.: ECOPHYSIOLOGICAL RESPONSES OF TEMPERATE MACROALGAE WITH DIFFERENT PHOTOSYNTHETIC STRATEGIES TO OCEAN ACIDIFICATION: A MESOCOSM STUDY
- 11:30 **Drerup, S. A.**; Johnson, K. S.; Vis, M. L.: BIOFILM STRUCTURE AND FUNCTION AS TOOLS FOR STREAM REMEDIATION ASSESSMENT

122 A Molecular Ecology (Part 1)

Chair(s): Allison Fong, fonga@hawaii.edu

Location: A 106

- 10:00 **Fong, A. A.**; Kemp, P. F.: MICROBIAL DIVERSITY OF SINKING PARTICULATE ORGANIC MATTER FROM SUBTROPICAL OCEANS
- 10:15 **Jenkins, B. D.**; Chappell, P. D.: A NEW METHOD FOR FOLLOWING DIATOM TAXONOMY TO ENABLE GENOME-BASED STUDIES IN THE ENVIRONMENT
- 10:30 **Edgar, R.**; Monier, A.; Terrado, R.; Lovejoy, C.: EXPLORING GENES CRUCIAL TO THE SURVIVAL OF ARCTIC MICROALGAE
- 10:45 **Chappell, P. D.**; Jenkins, B. D.: COMPARISON OF WHOLE CELL TRANSCRIPTIONAL RESPONSE TO LIGHT AND FE IN MULTIPLE DIATOM SPECIES
- 11:00 **Kodner, R. B.**; McLaughlin, R.; Land, T.; Kruse, M.: RECONCILING ABUNDANCE, DIVERSITY AND FUNCTIONAL PATTERNS OF PHYTOPLANKTON IN METAGENOMES
- 11:15 **Hubbard, K. A.**; O'Dea, S.; Richlen, M. L.; McGillicuddy, D. J.; Anderson, D. M.; Cembella, A.; Chakraborty, S.; Disney, J.; Sirois, A.; Mogensen, H.: DNA FINGERPRINTING OF EASTERN NORTH AMERICAN PHYTOPLANKTON COMMUNITIES REVEALS COMPLEX STRUCTURE WITHIN THE DIATOM GENUS *PSEUDO-NITZSCHIA*
- 11:30 **Walters, A. D.**; Inoue, K.; Harris, J. L.; Berg, D. J.: NICHE OVERLAP AND DIVERGENCE TIME ARE NEGATIVELY CORRELATED IN A FRESHWATER MUSSEL SPECIES COMPLEX
- 11:45 **Peterson, M. G.**; O'Grady, P. M.; Resh, V. H.: POPULATION STRUCTURE OF COMMON AQUATIC INSECTS (*DICOSMOECLUS GILVIPES*, *PTERONARCYS CALIFORNICA*, *CALINEURIA CALIFORNICA*) IN THE WESTERN UNITED STATES

122 B Molecular Ecology (Part 2)

Chair(s): Carol Stepien, carol.stepien@utoledo.edu

Location: A 106

- 13:30 **Stepien, C. A.**; Pierce, L.: EVOLUTIONARY DYNAMICS OF THE VHS FISH VIRUS: AN EMERGING PATHOGEN
- 13:45 **Lycett, K. A.**; Pitula, J. S.: MOLECULAR-BASED ECOLOGICAL INVESTIGATIONS OF HEMATODINIUM PEREZI, A CRUSTACEAN PARASITE

- 14:00 **Douglas, M. E.**; Douglas, M. R.: MANAGEMENT UNITS OF A NATIVE FISH DEFINED BY STREAM HIERARCHY IN THE COLORADO RIVER BASIN OF WESTERN NORTH AMERICA
- 14:15 **Douglas, M. R.**; Douglas, M. E.: GENE FLOW AND ENDEMISM IN MOUNTAIN SUCKER OF THE COLORADO RIVER BASIN IN WESTERN NORTH AMERICA
- 14:30 **Krosch, M. N.**; Cranston, P. S.; Vink, S.: EVOLUTIONARY TOXICOLOGY AND ECOTOXICOGENOMICS IN FRESHWATER BIOMONITORING: THE CURIOUS CASE OF CRICOTOPUS VAN DER WULP (DIPTERA: CHIRONOMIDAE) IN AUSTRALIA
- 14:45 Elbrecht, V.; Feld, C. K.; Gies, M.; Hering, D.; Sondermann, M.; Tollrian, R.; **Leese, F.**: ASSESSING A SPECIES' RECOLONIZATION POTENTIAL: DISPERSAL POTENTIAL & GENETIC DIVERSITY OF THE STONEFLY DINOCRAS CEPHALOTES IN A EUROPEAN LOW MOUNTAIN RANGE
- 15:00 **Macher, J.**; Rozenberg, A.; Pauls, S.; Wagner, R.; Tollrian, R.; Leese, E.: PHYLOGEOGRAPHY AND POPULATION GENETICS OF *THREMMMA GALLICUM* MCLACHLAN, 1880.
- 15:15 **Eldridge, W.**; Borecki, L.: EDNA DETECTION OF FRESHWATER MUSSELS – A GENERAL APPROACH FOR ALL UNIONIDAE

124 A Bioassessment (Part 1)

Chair(s): Johanna Arje, johanna.arje@jyu.fi

Location: D 137 - 139

- 10:00 **Norton, S. B.**; Suter, G. W.: ASSESSING CAUSES IN A MULTIPLE STRESSOR WORLD
- 10:15 **Hargett, E. G.**: IMPROVING COMPARABILITY OF BIOLOGICAL ASSESSMENTS FROM WYOMING'S MULTIMETRIC AND PREDICTIVE INDICES
- 10:30 **Meissner, K.**; Årje, J.; Kärkkäinen, S.; Tirronen, V.; Turpeinen, T.; Juhola, M.; Joutsijoki, H.; Raitoharju, J.; Kiranyaz, S.; Gabbouj, M.: CAN RECENT ADVANCES IN AUTOMATED BENTHIC MACROINVERTEBRATE TAXA IDENTIFICATION PROVIDE A VIABLE OPTION TO MANUAL KEYING?
- 10:45 **Årje, A. J.**; Kärkkäinen, S.; Meissner, K.: CORRECTING THE EFFECT OF AUTOMATED TAXA IDENTIFICATION ERRORS IN DIVERSITY INDICES
- 11:00 **Yates, A. G.**: ANALYSIS OF RESIDUALS: A METHOD FOR ASSESSING THE MITIGATION EFFECTS OF BEST MANAGEMENT PRACTICES
- 11:15 **Griffiths, R. W.**: PREDICTIVE POWER OF WATER QUALITY INDICES AND BIOTIC METRICS IN DETECTING SEWAGE IMPACTS IN A SPECIES-RICH RIVER
- 11:30 **Chen, K.**; Olson, J. R.; Hawkins, C. P.; Vander Laan, J. J.; Hill, R. A.; Wang, B.: IMPROVING THE PERFORMANCE OF ECOLOGICAL INDICES BY SELECTING REFERENCE SITES WITH BOTH HIGH QUALITY AND BETTER REPRESENTATIVENESS OF NATURAL CONDITIONS
- 11:45 **Bailey, R. C.**; Moreland, K.; Donovan, S. A.; MacLeod, K.: BUILDING AND TESTING A PRELIMINARY REFERENCE CONDITION APPROACH BIOASSESSMENT MODEL FOR STREAMS IN CAPE BRETON ISLAND, NOVA SCOTIA, CANADA.

124 B Bioassessment (Part 2)

Chair(s): Christine Raczka, ceraczka@g.coastal.edu

Location: D 137 - 139

- 13:30 **Raczka, C. E.**; Luken, J. O.: ASSESSING THE AQUATIC BRYOPHYTE COMMUNITIES OF THE WACCAMAW RIVER, SC AND THEIR USE AS BIOINDICATORS FOR NUTRIENT LEVELS
- 13:45 **Gillett, N. D.**; Steinman, A. D.; Weinert, M.: LIVE DIATOMS AS A BIOASSESSMENT TOOL IN AN URBAN STREAM
- 14:00 **Keck, F.**; Rimet, F.; Larras, F.; Franc, A.; Bouchez, A.: LINKING DIATOMS ECOLOGICAL PREFERENCES TO PHYLOGENY: NEW PERSPECTIVES FOR AQUATIC ECOSYSTEMS BIOASSESSMENT
- 14:15 **Zhang, Q.**; Tan, X.: SPATIO-TEMPORAL VARIATIONS OF BENTHIC DIATOM COMMUNITY IN A SUBTROPICAL RIVER, CHINA
- 14:30 **Battegazzore, M.**: A DIATOM-BASED INDEX FOR THE EVALUATION OF PHYSICAL IMPACTS AND ACCEPTABLE LEVELS OF WATER RELEASES FROM HYDROELECTRIC RESERVOIRS IN ALPINE RIVER SYSTEMS
- 14:45 **Sullivan, S. P.**; Bollman, W. A.: DEVELOPMENT AND EVALUATION OF A COMBINED INVERTEBRATE AND DIATOM MULTIMETRIC INDEX OF BIOTIC INTEGRITY
- 15:00 **DeNicola, D. M.**; Lellock, A. J.: NUTRIENT LIMITATION OF PERIPHYTON IN STREAMS ALONG AN ACID MINE DRAINAGE GRADIENT
- 15:15 **Lehman, P. W.**; Teh, S. J.; Kendall, C.; Boyer, G. L.; Brooks, M. L.: CASCADING EFFECTS OF ANTHROPOGENIC AND CLIMATIC FACTORS ON THE IMPACT OF A BIOLOGICAL CONTAMINANT, TOXIC MICROCYSTIS BLOOMS, IN SAN FRANCISCO ESTUARY

124 C Bioassessment (Part 3)

Chair(s): Anna Belyaeva, belyaeva@iastate.edu

Chris Prescott, chris.prescott@portlandoregon.gov

Location: D137 - 139

- 16:00 **Belyaeva, A. M.**; Downing, J. A.: ARE MACROINVERTEBRATES USEFUL INDICATORS OF THE ECOLOGICAL INTEGRITY OF EUTROPHIC LAKES?
- 16:15 **Krynak, E.**; Yates, A. G.: ARE FUNCTIONAL DIVERSITY METRICS A USEFUL ASSESSMENT TOOL IN AN AGRICULTURALLY STRESSED SYSTEM?
- 16:30 **Miller, T. G.**; Hoven, H. M.; Richards, D. C.; Johnson, W. C.: SELECTION OF A SUITE OF MACROINVERTEBRATE METRICS FOR INCLUSION INTO A MMI THAT MEASURES ECOSYSTEM HEALTH OF IMPOUNDED WETLANDS SURROUNDING GREAT SALT LAKE
- 16:45 **Lemein, T. J.**; Albert, D. A.; Wilcox, D. A.; Mudrzyński, B.; Gathman, J.; Danz, N. P.; Rokitnicki-Wojcik, D.; Grabas, G.: CORRELATION OF PHYSICAL FACTORS TO COASTAL WETLAND VEGETATION COMMUNITY DISTRIBUTION IN THE LAURENTIAN GREAT LAKES
- 17:00 **Hoven, H. M.**; Miller, T. G.; Richards, D. C.; Johnson, W. P.: SELECTION OF A SUITE OF PLANT METRICS FOR INCLUSION INTO AN MMI THAT MEASURES ECOSYSTEM HEALTH OF IMPOUNDED WETLANDS SURROUNDING GREAT SALT LAKE
- 17:15 **Germ, M.**; Kuhar, U.; Urbanic, G.; Gaberščik, A.: MACROPHYTES HABITAT CHARACTERISTICS AND THEIR INDICATOR VALUE IN SLOVENIAN RIVERS

- 17:30 **Prescott, R. C.**; Law, J.: METALS AND TOTAL SUSPENDED SOLIDS AS INDICATORS OF URBAN LAND USE IMPACTS ON STREAM WATER QUALITY

132 D Population And Community Ecology (Part 4)

Chair(s): Steven Kohler, steve.kohler@wmich.edu

Location: B 117 - 119

- 10:00 **Pomeranz, J. F.**; Clements, W. H.: AVAILABILITY AND UTILIZATION OF TERRESTRIAL AND AQUATIC PREY RESOURCES TO BROWN TROUT IN THE ARKANSAS RIVER, CO.
- 10:15 **Dauwalter, D. C.**; Wenger, S. J.; Gardner, P.: THE ROLE OF COMPLEXITY IN HABITAT USE AND SELECTION BY STREAM FISHES IN A SNAKE RIVER BASIN TRIBUTARY
- 10:30 Wessel, R. M.; **Kohler, S. L.**: TOP-DOWN AND BOTTOM-UP EFFECTS ON BENTHIC COMMUNITY STRUCTURE IN STREAM DEPOSITIONAL HABITATS
- 10:45 **Reinhold, A. M.**; Bramblett, R. G.; Zale, A. V.; Poole, G. C.; Roberts, D. W.: FISH ASSEMBLAGE AND HABITAT DIFFERENCES BETWEEN SIDE AND MAIN CHANNELS IN THE LOWER YELLOWSTONE RIVER
- 11:00 **Colvin, M. E.**; Peterson, J. T.; Kent, M.; Schreck, C. B.: EVALUATING THE INFLUENCE OF INTERSPECIFIC INTERACTIONS ON THE STRUCTURE OF PATHOGEN METACOMMUNITIES IN SPRING CHINOOK SALMON
- 11:15 **Showalter, A. M.**; Vanni, M. J.; Gonzalez, M. J.: IS ELEMENTAL IMBALANCE A CAUSE OR CONSEQUENCE OF ONTOGENETIC DIET SHIFTS? THE ECOLOGICAL STOICHIOMETRY OF THE BLUEGILL SUNFISH
- 11:30 **Rafalski, A. V.**; Cressler, C. E.; Schiesari, L.; Peacor, S. D.; Werner, E. E.: SCALING UP PREDATOR NONCONSUMPTIVE EFFECTS TO MULTIPLE GENERATIONS OF COMPETING ZOOPLANKTON: INDIRECT EFFECTS CAUSE VARYING AND OPPOSING RESPONSES OF PREY
- 11:45 **Miyazono, S.**; Taylor, C. M.: FISH METACOMMUNITY DYNAMICS IN A DESERT RIVER SYSTEM

134 A Aquatic Conservation And Restoration (Part 1)

Chair(s): Julie Zimmerman, julie_zimmerman@fws.gov

Location: F 150 - 151

- 10:00 **Zimmerman, J. K.**; Hannon, J.; Merz, J.; Hammersmark, C.; Horner, T.; Campbell, B.: EVALUATING RIVER RESTORATION FOR BIOLOGICAL OUTCOMES
- 10:15 **Bond, J. A.**: QUANTIFYING THE ENVIRONMENTAL BENEFITS OF RESTORATION ACTIONS
- 10:30 **Fugere, V.**; Nyboer, E. A.; Bleecker, J. C.: WHERE SHOULD WE WORK? A GLOBAL ASSESSMENT OF RESEARCH EFFORT ON DEFORESTATION AND AQUATIC ECOSYSTEMS
- 10:45 **Latimore, J. A.**; Wolfson, L. G.: DEVELOPING LOCAL LEADERS FOR AQUATIC ECOSYSTEM CONSERVATION
- 11:00 **Zhang, Y.**; Gao, X.; Ding, S.; Meng, W.: TRANSFORMATION OF CONSERVATION STRATEGIES FOR A LARGE TEMPERATE AQUATIC ECOSYSTEM, THE LIAO RIVER BASIN IN NORTHEAST OF CHINA
- 11:15 **Louhi, P.**; Vehanen, T.; Huusko, A.; Mäki-Petäys, A.; Muotka, T.: RIGOROUS LONG-TERM MONITORING REVEALS THE SUCCESS OF SALMONID HABITAT REHABILITATION

⁽¹⁾ represents Tutorial presentations

- 11:30 **Gayeski, N.**; Price, M. H.; Whited, D.; Stanford, J. A.: QUANTIFYING SALMON PRODUCTION POTENTIAL IN A LARGE RIVER USING REMOTE-SENSING-BASED HABITAT MEASUREMENT AND ESTIMATION OF HISTORICAL ABUNDANCE
- 11:45 **Gao, X.**; Zhang, Y.; Ding, S.; Meng, W.: THE REFERENCE CONDITION: PREDICTING BACKGROUNDS FOR ECOLOGICAL CONSERVATION AND RESTORATION

134 B Aquatic Conservation And Restoration (Part 2)

Chair(s): Brian G. Laub, laubbriang@gmail.com

Location: F 150 - 151

- 13:30 **Laub, B. G.**; Palmer, M. A.: POTENTIAL IMPACTS OF CHANNEL STABILITY RESTORATION ON BENTHIC DIATOM COMMUNITIES IN URBAN STREAMS
- 13:45 **Winking, C.**; Lorenz, A. W.; Sures, B.; Hering, D.: RECOLONIZATION OF FORMERLY HEAVILY POLLUTED URBAN STREAMS WITH BENTHIC INVERTEBRATES AFTER RESTORATION
- 14:00 **Miyake, Y.**; Imada, S.; Inoue, M.: CHANNEL INCISION MEDIATES THE EFFECT OF FLOOD DISTURBANCE ON FISH AND INVERTEBRATES
- 14:15 **Gonzalez, R.**; Dunham, J. B.: THE INFLUENCE OF LARGE WOOD RESTORATION ON LARVAL LAMPREY IN A PACIFIC NORTHWEST STREAM
- 14:30 **Smiley Jr., P. C.**; King, K. W.; Fausey, N. R.: RELATIVE INFLUENCE OF DIFFERENT HABITAT FACTORS ON CREEK CHUB POPULATION STRUCTURE WITHIN CHANNELIZED AGRICULTURAL HEADWATER STREAMS IN CENTRAL OHIO
- 14:45 **Tonkin, J. D.**; Stoll, S.; Sundermann, A.; Haase, P.: COLONISATION OF RESTORED RIVER REACHES DEPENDS ON DISPERSAL CONSTRAINTS FACING BENTHIC INVERTEBRATES
- 15:00 **Peterson, S. D.**; Whiteman, H. H.: DROUGHT EFFECTS ON BENTHIC MACROINVERTEBRATE RECOLONIZATION IN A DEGRADED STREAM: IMPLICATIONS FOR RESTORATION AND MANAGEMENT
- 15:15 **Rubin, Z. K.**; Rios-Touma, B.; Kondolf, G. M.: PREY AVAILABILITY IN CONSTRUCTED RIPARIAN HABITAT ON THE LOWER COLORADO RIVER

134 C Aquatic Conservation And Restoration (Part 3)

Chair(s): David T. Zanatta, zanat1d@cmich.edu

Location: F 150 - 151

- 16:00 **Schuettenberg, A. A.**; Compson, Z. G.; Dijkstra, P.; Marks, J. C.: PLANT GENETIC IDENTITY OF COTTONWOOD LEAF LITTER INFLUENCES RESPIRATION RATES IN AN IMPORTANT AQUATIC SHREDDER
- 16:15 **Burns, S. E.**; Royer, T. V.; White, J. R.: MACROINVERTEBRATE COMMUNITY RESPONSE TO RESTORATION VIA FINE SEDIMENT REMOVAL, FAWN RIVER, INDIANA, USA
- 16:30 **Zanatta, D. T.**; Burlakova, L. E.; Krebs, R. A.; Bossenbroek, J. M.; Schloesser, D. T.; Karatayev, A. Y.; de Szalay, F.; Crail, T.: ASSESSMENT OF REMNANT NATIVE MUSSEL ASSEMBLAGES AFTER 25 YEARS OF DREISSENID INFESTATION IN THE LOWER GREAT LAKES AND PROGNOSIS FOR THE FUTURE

- 16:45 **Zisette, R. R.**: FLOATING WETLANDS FUNCTION AND APPLICATION

- 17:00 **Maney, R. N.**: A ROTATIONAL VEGETATION SAMPLING DESIGN TO EFFICIENTLY INFORM STATUS AND TREND FOR LARGE-SCALE WETLAND MITIGATION PERFORMANCE MONITORING

- 17:15 **Bowles, M. B.**; Macdonald, M.: FLOATING WETLAND ISLANDS AND THE RECOVERY OF A LOST ECOSYSTEM: THE LOWER STENSLAND CREEK MITIGATION PROJECT

- 17:30 **Menichino, N. M.**; Jones, L.; Evans, C.; Pullin, A.; Jones, P.; Guest, J.; Freeman, C.; Fenner, N.: HYDRO-CHEMICAL AND BOTANICAL RESPONSE TO RESTORATION (MOWING) IN RARE UK FENS

- 17:45 **Hanisak, M. D.**; Chamberlain, R.; Virnstein, R.; Hart, J.; Morris, L.: AFTER THE BLOOMS: IS SEAGRASS RECOVERY IN THE INDIAN RIVER LAGOON RECRUITMENT LIMITED?

137 A Ecology Of Fish And Other Aquatic Vertebrates (Part 1)

Chair(s): Don Schloesser, dschloesser@usgs.gov

Location: A 106

- 16:00 **Schloesser, D. W.**; Malakauskas, D. M.; Malakauskas, S. J.: FRESHWATER POLYCHAETES, *MANAYUNKIA SPECIOSA* LEIDY, IN THE LAURENTIAN GREAT LAKES WITH A 70-YEAR CASE HISTORY IN WESTERN LAKE ERIE
- 16:15 **Beston, S. M.**; Cushman, S. F.: BLACK SPOT INFECTION: THE RELATIONSHIP BETWEEN FISH BODY CONDITION, INFECTION PREVALENCE, AND CYST ABUNDANCE IN THE SENECA LAKE WATERSHED
- 16:30 **Campbell, E. Y.**; Dunham, J. B.; Reeves, G. H.; Wondzell, S. M.: THERMAL VARIATION INFLUENCES SALMON EMERGENCE TIMING AND SUBSEQUENT JUVENILE GROWTH IN ALASKA STREAMS
- 16:45 **Murray, D. S.**; Bain, M. M.; Adams, C. E.: ADHESION MECHANISMS IN EUROPEAN WHITEFISH (*COREGONUS LAVARETUS*) EGGS: A SURVIVAL MECHANISM FOR HIGH ENERGY SPAWNING GROUNDS?
- 17:00 **Marin Jarrin, J. R.**; Pangle, K.; Xia, M.; Ludsin, S.; Mason, D.; Rutherford, E.: COMBINING PARTICLE TRACKING MODELS AND OTOLITH CHEMISTRY TO STUDY THE SWIMMING BEHAVIOR OF LARVAL YELLOW PERCH IN WESTERN LAKE ERIE
- 17:15 **Fritz, K. A.**; Kirschman, L. J.; Warne, R.; Whiles, M. R.: PHYSIOLOGICAL STRESS AFFECTS NUTRIENT STOICHIOMETRY OF EXCRETA AND TISSUES OF LARVAL AMPHIBIANS
- 17:30 **Benoit, P. O.**; Beisner, B. E.; Solomon, C. T.: INFLUENCE OF DISSOLVED ORGANIC CARBON (DOC) ON GROWTH OF THREE FISH SPECIES IN NORTH-TEMPERATE LAKES.
- 17:45 **Craig, N.**; Jones, S. E.; Weidel, B. C.; Solomon, C. T.: MECHANISMS FOR REDUCTION IN FISH PRODUCTIVITY IN LAKES WITH INCREASING DISSOLVED ORGANIC CARBON (DOC) CONCENTRATION

139 A Benthic Communities And Function (Part 1)

Chair(s): Kevin H. Wyatt, khwyatt@bsu.edu

Location: D 135 - 136

- 10:00 **Wyatt, K. H.**; Bange, J.; Fitzgibbon, A. S.; Sampson, A. M.; Rober, A. R.; Turetsky, M. R.: RELEASE OF NUTRIENT CONSTRAINTS ON ALGAL PRODUCTIVITY PROMOTES HETEROTROPHIC METABOLISM IN AN ALASKAN PEATLAND
- 10:15 **Kunza, L. A.**; Sundareswar, P. V.; Spaulding, S. A.; Gautam, S.: RESPONSE OF *DIDYMOSPHEA GEMINATA* TO ALTERED PHOSPHORUS AND IRON AVAILABILITY
- 10:30 **Ress, J. A.**: CONTRAST AND COMPARISON OF BENTHIC ALGAL COMMUNITIES FROM TWO COLORADO FRONT RANGE STREAMS
- 10:45 **Whorley, S. B.**; Wehr, J. D.: INTERANNUAL VARIATION OF PERIPHYTON FATTY ACID PROFILES UNDER AGRICULTURAL STRESS
- 11:00 **Harding, J. N.**; Harding, J. M.; Reynolds, J. D.: EFFECTS OF SALMON ON STREAM BIOFILM AND BENTHIC MACRO-INVERTEBRATE POPULATIONS IN COASTAL ECOSYSTEMS
- 11:15 **Williamson, T. J.**; Cross, W. F.; Welter, J. R.; Benstead, J. P.; Hood, J. M.; Huryn, A. D.; Johnson, P. W.: WARMING ALTERS THE FUNCTIONAL COMPOSITION AND STOICHIOMETRY OF AQUATIC BIOFILMS
- 11:30 **Wright, K. K.**; Frye, S.: SEDIMENT DEPOSITION DURING LOW-FLOW CONDITIONS IN SOUTHWEST WISCONSIN TROUT STREAMS
- 11:45 **Admiraal, W.**; van der Geest, H. G.; Vonk, J. A.; Mulling, B. T.; Whatley, M. H.; Goldenberg Vilar, A.: DYNAMICS OF SUSPENDED ORGANIC PARTICLES IN EUTROPHIC PEAT LAND WATERS: SLIPPING OUT OF CONTROL.

139 B Benthic Communities And Function (Part 2)

Chair(s): Brittney Hoemsen, brittney.hoemsen@usask.ca

Location: D 135 - 136

- 13:30 **Hoemsen, B. M.**; Phillips, I. D.; Chivers, D. P.: DETERMINING CHANGE IN BENTHIC COMMUNITY COMPOSITION DUE TO SEDIMENT DEPOSITION IN THE NORTHERN GREAT PLAINS
- 13:45 **Nogaro, G.**; **Steinman, A. D.**: ALUM APPLICATION, INVERTEBRATE BIOTURBATION, AND SEDIMENT CHARACTERISTICS INTERACT TO AFFECT NUTRIENT FLUXES IN EUTROPHIC WETLANDS
- 14:00 **Genovese, A.**; Cattaneo, A.; Hudon, C.: THE INFLUENCE OF AGRICULTURAL TRIBUTARIES ON THE MOLLUSK COMMUNITY IN THE ST. LAWRENCE RIVER
- 14:15 **Hayford, B. L.**; Caires, A. M.; Chandra, S.: ENVIRONMENTAL STRESSORS INFLUENCE SPATIAL VARIATION OF MACROINVERTEBRATE COMMUNITIES IN THE NEARSHORE ZONE OF LAKE TAHOE
- 14:30 **Boyer-Rechlin, N. J.**; Bruland, G. L.; Rechlin, M. A.: MACROINVERTEBRATE COMMUNITY STRUCTURE IN RELATION TO AGRICULTURAL LAND USE IN SOUTHERN ILLINOIS HEADWATER STREAMS
- 14:45 **Essien-Ibok, M. A.**; Ekpo, I. E.; Akpan, A. W.; Ekanem, M. S.: LONGITUDINAL PATTERNS IN FRESHWATER MACROINVERTEBRATE BIODIVERSITY AND TROPHIC GUILDS IN, NIGERIA.

15:00 **Stites, A. J.**; Taylor, C. A.: BIGGER IS BETTER: FEEDING ECOLOGY OF THE GIANT CRAYFISH IN THE GENUS *BARBICAMBARUS*.

15:15 **Mehring, A. S.**; Levin, L. A.; Evrard, V.; Grant, S. B.; Cook, P.: THE EFFECTS OF AQUATIC INVERTEBRATES ON URBAN WETLAND GREENHOUSE GAS EMISSIONS

143 Invertebrate Biology And Life History

Chair(s): Timothy Caldwell, timothycaldwell@unr.edu

Location: B 114

- 16:00 **Caldwell, T. J.**; Chandra, S.; Gamble, A. E.; Webb, K. J.; Allen, B. C.; Liston, A. E.; Reuter, J. E.; Schladow, G.: LIVING SHORTER: THE PHENOTYPIC RESPONSE OF A NON-NATIVE FRESHWATER OMNIVORE 60 YEARS AFTER INTRODUCTION IN THREE SUB-ALPINE OLIGOTROPHIC LAKES.
- 16:15 **Landler, L.**; Skelton, J.; Painter, M. S.; Youmans, P. W.; Muheim, R.; Brown, B. L.; Phillips, J. B.: IS YOUR WORM-COMPASS ALIGNED? ECTOSYMBIONTS ALTER CRAYFISH RESPONSE TO EARTH'S MAGNETIC FIELDS
- 16:30 **Halvorson, H. M.**; Scott, J. T.; Sanders, A. J.; Evans-White, M. A.: SHREDDING LIGHT ON THRESHOLD ELEMENTAL RATIOS: NEW INSIGHTS FROM STREAM INSECT DETRITIVORES REGARDING ELEMENTAL LIMITATION OF ANIMAL GROWTH
- 16:45 **DeMots, R. L.**; Soluk, D. A.: BEYOND INCREASING NUMBERS, THE BENEFITS OF CAPTIVE REARING PROGRAMS FOR RARE AND ENDANGERED AQUATIC INSECTS.
- 17:00 **Camp, A. A.**; Buchwalter, D. B.: MOLTING-- AN UNDERAPPRECIATED STRESSOR IN THE LIFE HISTORIES OF AQUATIC INSECTS.
- 17:15 **Shah, A. A.**; Ghilamabor, C. K.; Poff, N. L.: COMPARING THERMAL ACCLIMATION ABILITY IN TROPICAL AND TEMPERATE AQUATIC INSECTS
- 17:30 **Skelton, J.**; Creed, R. P.; Doak, S. M.; Brown, B. L.: SIZE MATTERS AND LOCATION IS EVERYTHING: COMPETITION AND PRUDENT DISPERSAL EXPLAIN TRANSMISSION IN A FRESHWATER CLEANING SYMBIOSIS
- 17:45 **Caires, A. M.**; Chandra, S.; Nelson, C. R.; LaCroix, T.: THE ENDEMIC DEEPWATER STONEFLY IN LAKE TAHOE: UNIQUE LIFE HISTORY CHARACTERISTICS AND CHANGES IN POPULATION DENSITY AND DISTRIBUTION

145 A Systematics And Taxonomy (Part 1)

Chair(s): Edward Theriot, etheriot@austin.utexas.edu

Location: B 116

- 13:30 **Theriot, E. C.**; Ashworth, M.; Nakov, T.: MAKING INFERENCES ABOUT ORIGIN OF DIATOM TRAITS BASED ON PHYLOGENY
- 13:45 **Ashworth, M. P.**; Nakov, T.; Theriot, E. C.: MODEL ADEQUACY AND SITE-SPECIFIC HETEROGENEITY IN A SIX-GENE CHLOROPLAST PHYLOGENY OF DIATOMS
- 14:00 **Thomas, E. W.**; Kocielek, J. P.: NICHE CONSERVATISM, MORPHOLOGY, AND MOLECULAR DIVERSITY OF RHOICOSPHEA IN THE UNITED STATE

- 14:15 **Oh, S.**; Shiozawa, D. K.; Evans, P. R.; Unmack, P.: PHYLOGENETIC RELATIONSHIPS OF COTTIDS (PISCES: COTTIDAE) IN THE UPPER SNAKE RIVER PLAIN OF IDAHO
- 14:30 **Beatty, C. D.**; Ware, J. L.: THE PETALTAIL DRAGONFLIES (ODONATA: PETALURIDAE): MESOZOIC HABITAT SPECIALISTS THAT SURVIVE TO THE MODERN DAY
- 14:45 **Baumgardner, D. E.**: PHYLOGENY AND BIOGEOGRAPHY OF THE MAYFLY FAMILY LEPTOHYPHIDAE (INSECTA: EPHEMEROPTERA)
- 15:00 **Barkau, C. L.**; Williams, B. W.; Erséus, . C.; Anderson, F. E.: APPLYING PHYLOGENETICS TO SPECIES DELIMITATION IN *STYLARIA LACUSTRIS*
- 145 B Systematics And Taxonomy (Part 2)**
 Chair(s): Karolina Fucikova, karolina.fucikova@uconn.edu
 Location: B 116
- 16:00 **Fucikova, K.**; Lewis, P. O.; Lewis, L. A.: MITOCHONDRIAL GENOMES OF SPHAEROPLEALES: A BALANCE BETWEEN VARIATION AND CONSERVATION.
- 16:15 **Spalding, H. L.**; O'Kelly, C. J.; Sherwood, A.: NEW MESOPHOTIC ULVALES (ULVOPHYCEAE, CHLOROPHYTA) FROM ACROSS THE HAWAIIAN ARCHIPELAGO REVEAL UNIQUE COMMUNITIES AND BIOGEOGRAPHIC PATTERNS
- 16:30 **Sauvage, T.**; Wynne, M. J.; Paul, V. J.; Fredericq, S.: MORPHOLOGICAL AND MOLECULAR CLARIFICATION OF THE ENIGMATIC *CAULERPA FLORIDANA* W.R. TAYLOR (CHLOROPHYTA, BRYOPSIDALES) FROM THE DRY TORTUGAS, FLORIDA
- 16:45 **Lopez-Bautista, J. M.**; Tronholm, A.; Melton, J. T.; Leliaert, F.: CHLOROPLAST GENOME EVOLUTION IN THE ULVOPHYCEAE (CHLOROPHYTA)
- 17:00 **Tronholm, A.**; Leliaert, F.; Depriest, M. S.; Bhattacharya, D.; Fredericq, S.; Lopez-Bautista, J.: PHYLOGENETIC POSITION OF PALMOPHYLLALES (CHLOROPHYTA): INDEPENDENT EVOLUTION OF MULTICELLULARITY IN DEEP WATER
- 17:15 **Johnston, E. T.**; Sherwood, A. R.: *SPONGIOCHRYSIS*, THE HAWAIIAN CLADOPHORALES, AND A PRELIMINARY LOOK AT THE ROLE OF OSMOREGULATION IN HABITAT TRANSITIONS IN THE ULVOPHYCEAE
- 17:30 **Carlile, A. L.**; Hall, J. D.; Sherwood, A. R.: SORTING OUT TAXONOMIC NOISE IN THE CHAETOPHORACEAE: EXAMPLES FROM THE HAWAIIAN FLORA
- 17:45 **Karol, K. G.**; Perez, W.; McCourt, R. M.: ANALYSES OF THE MITOCHONDRIAL AND PLASTID GENOMES IN THE CHARACEAE (CHAROPHYCEAE).

Thursday, 5/22/2014 Posters

003 Putting Microbial Genomes To Work In Ecosystem Science

Chair(s): Stephen Giovannoni, stephen.giovannoni@oregonstate.edu
Adriana Zingone, zingone@szn.it

Location: Exhibit Hall

- 8 **Kraft, C. E.**; Angert, E. R.: THIAMINE DEFICIENCY AND REPRODUCTIVE FAILURE IN GREAT LAKES AND BALTIC SEA FISHES: GENOMIC INSIGHTS REGARDING AN UNSOLVED MYSTERY
- 9 **Thompson, B. P.**; Fergusson, E.; Poulton, N.; Tupper, B.; Bellows, W. K.; Masland, D.; Field, E.; Labonté, J. M.; Swan, B. K.; Stepanauskas, R.: BIGELOW LABORATORY FOR OCEAN SCIENCES SINGLE CELL GENOMICS CENTER
- 10 **Young, E. B.**; Lee, P. O.; McLellan, S. L.: FUNCTIONAL COMMUNITY RESPONSES OF BENTHIC BACTERIA TO INVASIVE DREISSENID MUSSELS AND BENTHIC ALGAE IN LAKE MICHIGAN
- 11 **Sun, J.**; Thrash, J. C.; Qian, Y.; Qian, M. C.; Giovannoni, S. J.; Temperton, B.; Todd, J. D.; Fowler, E. K.; Johnston, A. W.: DMSP METABOLISM IN SAR11 PELAGIC MARINE BACTERIA
- 12 **Davis, R. E.**; Tebo, B. M.: CULTURE-INDEPENDENT IDENTIFICATION OF MANGANESE-OXIDIZING GENES FROM DEEP-SEA HYDROTHERMAL COMMUNITIES
- 13 **Choi, C. J.**; Sudek, S.; Worden, A. Z.: GLOBAL ANALYSIS OF PLASTID DIVERSITY IN PHOTOSYNTHETIC STRAMENOPILES

004 Large-Scale Limnology – Integrating Across Landscapes To Understand Regional Controls On Biodiversity And Nutrient Cycles

Chair(s): Matt Leibold, mleibold@mail.utexas.edu
Nigel Roulet, nigel.roulet@mcgill.ca
Lars Tranvik, lars.tranvik@ebc.uu.se
Jake Vander Zanden, mjvanderzand@wisc.edu

Location: Exhibit Hall

- 14 Karas, U.; **Larsen, S.**; Tockner, K.: THE CONTRIBUTION OF LATERAL AQUATIC HABITATS TO INSECT DIVERSITY ALONG RIVER CORRIDORS IN THE ALPS
- 15 **Bowen, J. C.**; Clark, C. D.; De Bruyn, W. J.: SPATIAL ANALYSIS OF CHROMOPHORIC DISSOLVED ORGANIC MATTER (CDOM) OPTICAL PROPERTIES IN COASTAL SOUTHERN CALIFORNIA
- 16 **Baecher, J. A.**; Leasure, D. R.; Lynch, D.; Magoulick, D. D.: INFLUENCE OF LAND USE AND HYDROLOGIC DISTURBANCE ON CRAYFISH ASSEMBLAGES
- 17 **Ruiz Gonzalez, C.**; Lapierre, J. F.; Niño, J. P.; Del Giorgio, P. A.: LANDSCAPE AND DOC CONTROLS ON BACTERIOPLANKTON FUNCTIONAL CAPACITIES ACROSS BOREAL AQUATIC SYSTEMS
- 18 **Filstrup, C. T.**; Oliver, S. K.; Stanley, E. H.; Stow, C. A.; Wagner, T.; Webster, K. E.; Downing, J. A.: SUBSIDY-STRESS EFFECTS OF NITROGEN ON PHYTOPLANKTON BIOMASS
- 19 **West, W. E.**; Coloso, J. J.; Jones, S. E.: LANDSCAPE DRIVERS OF LAKE METHANE EMISSIONS
- 20 **Fork, M. L.**; Heffernan, J. B.: LONG-TERM TRENDS IN ORGANIC MATTER CONCENTRATION AND FLUX ACROSS U.S. RIVERS

- 21 **Olker, J. H.**; Schoff, P. K.; Guntenspergen, G. R.; Johnson, L. B.: LANDSCAPE FACTORS INFLUENCING *RANA PIPIENS* PRESENCE, BREEDING, SKELETAL MALFORMATIONS, AND GONADAL DEVELOPMENT IN THE U.S. PRAIRIE POTHOLE REGION
- 22 Hinkel, K. M.; Arp, C. D.; Beck, R. A.; Eisner, W. R.; Frey, K. E.; Grosse, G.; Jones, B. M.; **Lenters, J. D.**; Liu, H.; Townsend-Small, A.: THE CIRCUM-ARCTIC LAKES OBSERVATION NETWORK (CALON): LARGE-SCALE LIMNOLOGY IN NORTHERN ALASKA
- 23 **Miller, C. C.**; Harrison, J. A.: RESULTS FROM A REGIONAL ASSESSMENT OF NITROGEN DYNAMICS IN THE COLUMBIA RIVER BASIN USING A DOWNSCALED GLOBAL DISSOLVED INORGANIC NITROGEN MODEL
- 24 **Kraemer, B. M.**; Silow, E.; Vadeboncoeur, Y.; McIntyre, P. B.: NONLINEAR RESPONSES OF LAKE ECOSYSTEMS TO CLIMATE CHANGE
- 25 **Roehm, C. I.**: ENABLING LARGE SCALE LIMNOLOGY USING ECOLOGICAL SENSOR NETWORKS
- 26 **Hughes, A. T.**; Pederson, C. L.: DO ARTIFICIAL RIFFLES ENHANCE NUTRIENT RETENTION IN A RESTORED STREAM?

005 Robust Restoration Of Freshwater Ecosystems In The Face Of Uncertainty

Chair(s): Samantha Capon, s.capon@griffith.edu.au
Michael Reid, mreid24@une.edu.au

Location: Exhibit Hall

- 27 **Moscicki, D. J.**; Schoepfer, V. A.; Webber, C. M.; Trowbridge, M. A.; Burgin, A. J.: THE RESPONSE OF INTERNAL PHOSPHORUS LOADING TO ALUM ADDITION AND ROUGH FISH REMOVAL IN MIDWESTERN SANDPIT LAKES
- 28 **Schlafke, K. E.**; Webber, C. M.; Burgin, A. J.: SEDIMENTATION CONTROLS ZOOPLANKTON COMMUNITY DYNAMICS FOLLOWING RESTORATION IN MIDWESTERN (U.S.A.) SAND-PIT LAKES
- 29 **McCarten, N. E.**; Christman, M. C.: ECOHYDROLOGICAL APPROACH TO VERNAL POOL RESTORATION IN THE CENTRAL VALLEY OF CALIFORNIA
- 30 **Liu, Z.**; Zhong, P.; Zhang, X.; Ning, J.; Li, K.; Chen, F.; Guan, B.; Larsen, S.; Jeppesen, E.: REVERSING REGIME SHIFTS IN TROPICAL AND SUBTROPICAL SHALLOW EUTROPHIC LAKES BY BIOMANIPULATION
- 31 **Okie, C. D.**; Flanagan, N. E.; Shashy, S.; Richardson, C. J.: ANABRANCHING AS A NOVEL RESTORATION DESIGN TO REDUCE AQUATIC POLLUTION
- 32 **Sudduth, E. B.**: DO STREAM RESTORATION PROJECTS GET BETTER WITH AGE?
- 33 **Finch, C.**; Budy, P.: HABITAT MEDIATED DISPERSAL AND RECOLONIZATION IN STREAM FISH FOLLOWING A SEVERE FIRE
- 34 **Palmer, M. E.**; Keller, W.; Winter, J. D.; Yan, N. D.: ECOSYSTEM RESTORATION IN A CHANGING WORLD: SHIFTING BASELINES CAN AFFECT THE SUCCESSFUL RECOVERY OF BIOLOGICAL COMMUNITIES

006 Advancing The Science And Management Of Temporary Aquatic Habitats

- Chair(s): Thibault Datry, thibault.datry@irstea.fr
 Jenny DAVIS, Jenny.Davis@monash.edu
 Michael T. BOGAN, michaelthomasbogan@gmail.com
 Tiffany SCHRIEVER, schrievt@onid.orst.edu
 Catherine Leigh, catherine.leigh@irstea.fr
 Raphael Mazor, raphaelm@sccwrp.org
- Location: Exhibit Hall
- 35 **Rhymes, J. M.**; Wallace, H.; Fenner, N.; Jones, L.: EVIDENCE FOR SENSITIVITY OF DUNE WETLANDS TO GROUNDWATER NUTRIENTS
- 36 **Datry, T.**; Larned, S. T.; Tockner, K.: TEMPORARY RIVERS: A CHALLENGE FOR FRESHWATER SCIENCE
- 37 **Moniz, P. J.**; Mendez, P. K.; Halaburka, B. J.; Lawrence, J. E.; Hsiao, J.; Luthy, R. G.; Resh, V. H.: RECYCLED WATER FOR URBAN STREAM ENHANCEMENT IN NORTHERN CALIFORNIA: CASE HISTORIES OF APPLICABILITY AND LIMITATIONS OF USE IN MEDITERRANEAN-CLIMATES
- 38 **Stubbington, R.**; Wood, P. J.; Boulton, A. J.: BENTHIC AND HYPORHEIC COMMUNITY RESPONSES TO INTERACTING DROUGHT AND HEATWAVE DISTURBANCES IN A TEMPERATE-ZONE STREAM
- 39 **Barthès, A.**; Leflaive, J.; Lamy, A.; Rols, J. L.; Ten-Hage, L.: RESILIENCE OF MICROBIAL COMMUNITIES SUBMITTED TO DROUGHT – SMALL-SCALE STUDIES
- 40 **Baccei, J. S.**; Hart, S. C.; McClaran, M.; Kuhn, T. J.: SEASONAL PATTERNS IN SOIL STRENGTH IN SUBALPINE MEADOWS SUBJECT TO PACK STOCK GRAZING, YOSEMITE NATIONAL PARK, SIERRA NEVADA MOUNTAINS, CALIFORNIA, USA
- 41 **Chandler, H. C.**; Rypel, A. L.; Haas, C. A.; Gorman, T. A.: MODELING THE HYDROPERIOD OF EPHEMERAL WETLANDS IN PINE FLATWOODS: POTENTIAL IMPACTS OF CLIMATE CHANGE ON *AMBYSTOMA BISHOP* REPRODUCTION
- 42 **Staunch, A. P.**: ERADICATION OF LUDWIGIA PEPLOIDES FROM A THREE ACRE WETLAND IN PORTLAND, OR: A CASE STUDY
- 43 Klancnik, K.; **Gaberšcik, A.**: THE TRAITS DETERMINING LEAF REFLECTANCE DIFFER AMONG PLANT SPECIES GROWING ALONG WATER/LAND GRADIENTS
- 44 **Spadafora, E. D.**; Lamp, W. O.: PREDACEOUS BEETLE COMMUNITIES (COLEOPTERA: DYTISCIDAE) IN RELATION TO THE VEGETATION OF DELMARVA WETLANDS
- 45 **Harner, M.**; Forsberg, M.; Farrell, M.; Whited, D.; Geluso, K.; Wright, G.; Speicher, S.; Brinley Buckley, E.: AN INTRODUCTION TO THE WET MEADOWS OF THE PLATTE RIVER AND THE HABITAT COMPLEXITY AND BIODIVERSITY THEY SUPPORT
- 46 Sepesy, R.; **Saunders, P. A.**: ZOOPLANKTON DYNAMICS IN FORESTED PONDS WITH DIFFERENT HYDROPERIODS AND INFLUENCED BY FLOODING OF THE BLACK FORK OF THE MOHICAN RIVER, OH
- 47 **Boix, D.**; Caria, M. C.; Gascón, S.; Mariani, M. A.; Sala, J.; Ruhí, A.; Compte, J.; Bagella, S.: CONTRASTING SPACE/TIME PATTERNS AMONG ORGANISMS GROUPS WITH DIFFERENT DISPERSION CAPACITY IN SARDINIAN TEMPORARY WETLANDS

007 Distributed Long-Term, High Frequency Networks For Ecological Data Collection: Advantages, Hurdles, And Applications

- Chair(s): Ryan Utz, rutz@neoninc.org
 Walter Dodds, wkdodds@ksu.edu
- Location: Exhibit Hall
- 48 **Akmon, D.**; Myers, J.; Hedstrom, M. L.; Kumar, P.; Plale, B.: SEAD: LIGHTWEIGHT DATA SERVICES FOR SUSTAINABILITY RESEARCH
- 49 **McPherson, M. R.**; McNair, J. N.: ESTIMATING LAKE METABOLISM USING THE FREE WATER METHOD AND A 1-D HYDRODYNAMIC MODEL
- 50 **Shonka, N. K.**; McDowell, W. H.: USING IN-SITU WATER QUALITY SENSORS TO PROVIDE INSIGHT INTO THE SUSPENDED SOLIDS DYNAMICS OF HIGH FLOW STORM EVENTS IN THE LAMPREY RIVER, NEW HAMPSHIRE
- 51 **Berukoff, S. J.**: NEON DATA PRODUCTS: ENABLING CONTINENTAL-SCALE ECOLOGICAL SCIENCE

012 Diversity And Ecological Function Of Fungi In Freshwater And Marine Environments

- Chair(s): Maiko Kagami, kagami@env.sci.toho-u.ac.jp
 Hans-Peter Grossart, hgrossart@igb-berlin.de
- Location: Exhibit Hall
- 57 **Kagami, M.**; Motoki, Y.; Miki, T.; Takimoto, G.; Bec, A.: MYCOLOOP: THE ROLES OF PARASITIC AND SAPROTROPHIC CHYTRIDS IN AQUATIC FOOD WEBS
- 58 **Miura, A.**; Urabe, J.: EFFECT OF LIGHT CONDITIONS TO FUNGAL ASSEMBLAGES ON SUBMERGED TILES IN A RIVER
- 59 Wurzbacher, C.; Rychla, A.; Roesler, S.; **Grossart, H.**: DECOMPOSER NICHE OVERLAP OF SAPROPHYTIC FUNGI AND BACTERIA IN AQUATIC ECOSYSTEMS
- 60 **Pires-Zottarelli, C. A.**; Marano, A. V.; Souza, J. I.; James, T. Y.; Jesus, A. L.; Jerônimo, G. H.; Rocha, S. O.: DIVERSITY OF ZOOSPORIC FUNGI AND OOMYCETES FROM "PARQUE ESTADUAL DA ILHA DO CARDOSO", CANANIIA, SOO PAULO STATE, BRAZIL
- 61 **Yamaguchi, M.**; Sakamoto, S.; Kimura, K.: MORPHOLOGICAL AND MOLECULAR CHARACTERIZATION OF ZOOSPORIC FUNGAL PARASITES ON MARINE DINOFLAGELLATES
- 62 Salgado, C. A.; **Encalada, A.**; Flecker, A.; Poff, L.; Graça, M. A.: LITTER DECOMPOSITION PATTERNS ALONG AN ALTITUDINAL GRADIENT IN TROPICAL STREAMS
- 63 **Raub, S. C.**; Jinggut, T.: FUNGAL DIVERSITY IN INDO-MALAYSIAN PEAT, ARE THERE REGIONAL DIFFERENCES?

014 Ecological Change In Arctic And Alpine Freshwaters

- Chair(s): Joseph Culp, Joseph.Culp@ec.gc.ca
 Jennifer Lento, jlento@gmail.com
 Willem Goedkoop, Willem.Goedkoop@slu.se
 Kirsten Christoffersen, kchristoffersen@bio.ku.dk
- Location: Exhibit Hall
- 67 **Hayes-Pontius, E. M.**; Northington, R. M.; Saros, J. E.: ZOOPLANKTON COMMUNITY COMPOSITION IN ARCTIC LAKES OF SOUTHWEST GREENLAND
- 68 **Crevecoeur, S. M.**; Comte, J.; Lovejoy, C.; Vincent, W. F.: RNA ANALYSIS OF BACTERIAL COMMUNITIES IN PERMAFROST THAW LAKES: IMPLICATION FOR GREENHOUSE GAS EMISSIONS

- 69 **Levenstein, B. M.**; Culp, J.; Lento, J.; Chin, K. S.; Kokelj, S. V.: INVESTIGATING THE IMPACTS OF RETROGRESSIVE THAW SLUMPS ON ECOSYSTEM STRUCTURE AND FUNCTION IN ARCTIC STREAMS, NWT
- 70 **Sandøy, S.**: ARCTIC FRESHWATER BIODIVERSITY MONITORING PLAN: INTEGRATED CIRCUMPOLAR MONITORING OF ARCTIC RIVER AND LAKE ECOSYSTEMS
- 71 **Tellez, A.**; Reyes, F.; Lougheed, V. L.: THE EFFECTS OF PERMAFROST THAW ON LONG-TERM NUTRIENT RELEASE INTO ARCTIC TUNDRA PONDS
- 72 **Olivarez, Y. J.**; Hernandez, C.; Lougheed, V. L.: NUTRIENT LIMITATION OF PHYTOPLANKTON BIOMASS IN ARCTIC TUNDRA PONDS
- 73 **Chiapella, A. M.**; Strecker, A. L.: AN ANALYSIS OF THE CUMULATIVE MECHANISMS CONTRIBUTING TO PCB DYNAMICS IN FOOD WEBS OF HIGH ELEVATION LAKES
- 74 Blank, S.; Deng, L.; Proell, J.; Gabriel, C.; **Kurmayer, R.**: CHARACTERISING BACTERIA AND PHYTOPLANKTON DIVERSITY IN ALPINE LAKES IN RELATION TO HABITAT CHARACTERISTICS AND CLIMATIC CHANGE

015 Seaweed Blooms In A Changing World: Understanding Their Causes, Dynamics And Consequences

Chair(s): Donald Cheney, d.cheney@neu.edu
Kathy Van Alstyne, Kathy.VanAlstyne@wwu.edu
Carol Thornber, thornber@uri.edu

Location: Exhibit Hall

- 75 **Nagle, D. G.**; Mahdi, F.; Paul, V. J.; Mao, S. C.; Datta, S.; Jekabsons, M. B.; Slattery, M.; Gerwick, W. H.; Zhou, Y. D.: PRODUCTION OF MITOCHONDRIAL POISONS BY BENTHIC FILAMENTOUS MARINE CYANOBACTERIA MAY FACILITATE BLOOM FORMATION
- 76 **Collado-Vides Ligia, L. M.**; Natalie Dou, ; Christian Avila, ; Stephen Blair, ; Frederik Leliaert, ; Dení Rodríguez, ; Pamela Sweeney, ; John Berry, ; Miroslav Gantar, ; Diego Lirman, : A COMPREHENSIVE STUDY OF A PERSISTENT BLOOM OF ANADYOMENE J.V. LAMOUROUX (ANADYOMENACEAE, CHLOROPHYTA) IN BISCAYNE BAY, FLORIDA.

017 Understanding Linkages Between Terrestrial And Aquatic Organic Matter Across Ecosystems

Chair(s): Kaelin Cawley, kaelin.cawley@colorado.edu
Jessica Ebert, j.lebert88@gmail.com
Rudolf Jaffe, jaffer@fiu.edu
Diane McKnight, diane.mcknight@colorado.edu

Location: Exhibit Hall

- 81 **Dempsey, C. M.**; Morris, D. P.; Osburn, C. L.; Peters, S. C.; Pazzaglia, F. J.: BIOLABILITY: ASSESSING CHANGES TO DOM SPECTRAL PROPERTIES DURING SEASONAL STORM EVENTS
- 82 **Karkuff, S. A.**; Stella, J. C.; Schulz, K. L.; Teece, M. A.: QUANTIFYING FOREST SUBSIDIES TO FOOD WEBS IN WOODLAND PONDS
- 83 **Khosh, M. S.**; McClelland, J. W.: THE EFFECT OF FREEZING AND DRYING ON DOM LEACHING FROM ABOVE GROUND VASCULAR PLANT MATERIAL FROM THE ALASKAN ARCTIC

- 84 **Handsel, L. T.**; Paerl, H.; Osburn, C. L.: IDENTIFYING POTENTIAL URBAN SOURCES OF ORGANIC CARBON AND NITROGEN IN A NORTH CAROLINA RIVER BASIN USING ORGANIC MATTER FLUORESCENCE AND STATISTICAL MODELING
- 85 **Su, Y. L.**; Chen, F. Z.; Liu, Z. W.: OPTICAL PROPERTIES OF CHROMOPHORIC DISSOLVED ORGANIC MATTER (CDOM) IN BELOW- OR ABOVE-TREE-LINE ALPINE LAKES: INSIGHTS INTO SOURCES OF CDOM

024 We've Got A Nitrogen Fixation! Exploring, Integrating, And Understanding N Fixation Along The Freshwater To Marine Continuum

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Location: Exhibit Hall

- 101 **Spinette, R. F.**; Jenkins, B. D.: EFFECTS OF COMBINED NITROGEN, OXYGEN AND TEMPERATURE ON THE GROWTH AND NITROGEN FIXATION RATES OF A SULFATE REDUCING BACTERIUM ISOLATED FROM MARINE SEDIMENTS
- 102 **Willis, A.**; Chuang, A.; Orr, P.; Burford, M.: EXPLORING THE COMPLEXITIES OF NITROGEN UTILISATION BY THE TOXIC CYANOBACTERIUM *CYLINDROSPERMOPSIS RACIBORSKII*
- 103 **Zivkovic, T.**; Moore, T. R.: NITROGEN FIXATION IN SPHAGNUM SPP. ALONG THE HYDROLOGICAL GRADIENT – BEAVER POND TO BOG TRANSITION AT MER BLEUE, ONTARIO, CANADA
- 104 **Bade, D. L.**; Surace, M. L.; Chaffin, J. D.: NITROGEN FIXATION IN LAKE ERIE
- 105 **Gulecal, Y.**: SPATIAL AND TEMPORAL VARIATIONS OF GENETIC CAPACITY OF NITROGEN CYCLING IN SALDA LAKE, TURKEY
- 106 **Ahles, A. M.**; Welter, J. R.; Goldschmidt, J. B.; Sander, D. R.; Furey, P. C.: THE EFFECT OF TEMPERATURE ON NITROGEN FIXATION IN NOSTOC SPECIES IN STREAMS IN THE HENGILL REGION OF ICELAND
- 107 **Goldschmidt, J. B.**; Welter, J. R.; Ahles, A. M.; Williamson, T. J.: THE RELATIONSHIP BETWEEN NITROGEN FIXATION AND TEMPERATURE: WHAT CAN VARIOUS METHODS TELL US?

027 Feeding A Hungry Planet: How Is Agriculture Affecting Aquatic Ecosystems And What Role Will Global Change Play?

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- 123 **Keitzer, S. C.**; Sowa, S.; Annis, G.; Froehlich, A.; Herbert, M.; Sasson, A.; Ludsin, S. A.: STREAM FISH COMMUNITY DYNAMICS IN LAKE ERIE'S AGRICULTURALLY DOMINATED WESTERN BASIN WATERSHEDS, 1900-2012

029 Aquatic Species Investigation: Environmental DNA Applications For Aquatic Ecosystems

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- 130 **Klymus, K. E.**; Richter, C. A.; Chapman, D. C.; Paukert, C.: QUANTIFICATION OF EDNA SHEDDING RATES FROM INVASIVE BIGHEADED CARPS
- 131 **Martinson, J.**; Kostich, M.; Matthews, S.; Penalva-Arana, C.; Pilgrim, E.: ANALYSIS OF THE REPRODUCIBILITY OF METAGENOMIC DATA TO MEASURE AQUATIC BIODIVERSITY
- 132 **Flynn, J.**; Brown, E. A.; Chain, F.; Zhan, A.; MacIsaac, H.; Cristescu, M. E.: CLUSTERING OF PYROSEQUENCE DATA: METHODS TO PRODUCE ACCURATE ESTIMATES OF SPECIES RICHNESS
- 133 **Connor, S. J.**; Baird, D. J.; Curry, C.; Gibson, J.; Hajibabaei, M.; Heard, K.; Hussey, B.; King, I.; Monk, W.; Rosolen, S.: APPLYING THE BIOMONITORING 2.0 APPROACH IN TWO CONTRASTING SUB-ARCTIC TRIBUTARIES OF THE SLAVE RIVER, NWT, CANADA.
- 134 **Matthews, S.**; Hoffman, J.; Peterson, G.; Barker, J.; Martinson, J.; Pilgrim, E.: IDENTIFICATION OF LAKE SUPERIOR LARVAL FISH ASSEMBLAGES BY NEXT-GENERATION DNA SEQUENCING
- 135 **Pilgrim, E.**; Martinson, J.; Matthews, S.: COMPARISON OF ESTIMATES OF AQUATIC BIODIVERSITY USING DIFFERENT GENETIC LOCI

030 Insights Into The Molecular Ecology Of Phosphorus Biogeochemistry From Diverse Aquatic Ecosystems

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Location: Exhibit Hall

- 136 **Watson, S. J.**; Needoba, J.; Peterson, T.: DISTRIBUTION OF POLYPHOSPHATE ACCUMULATING ORGANISMS IN THE COLUMBIA RIVER ESTUARY

031 A City Is A City? Comparative Analyses In Urban Aquatic Ecosystems

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Location: Exhibit Hall

- 137 **Clifford, C. C.**; Holmquist, J. G.; Schmidt Gengenbach, J.; Heffernan, J. B.: ARTIFICIAL VS. NATURAL STREAMS: AN INVERTEBRATE CASE STUDY FROM BISHOP, CALIFORNIA
- 138 **Gutiérrez-Fonseca, P.**; Ramírez, A.: FOOD WEBS TOPOLOGY AND BIOMASS FLOW IN A TROPICAL URBAN STREAM
- 139 **Delesantro, J. M.**; Blaszcak, J.; Bernhardt, E. S.; Urban, D. L.: INVESTIGATING THE ROLE OF DEVELOPMENT CONFIGURATION IN URBAN HYDROLOGY AND CONTAMINANT LOADING
- 140 **Reinier, J. E.**: MONITORING AND ASSESSING WETLANDS WITHIN AN URBAN PARK DISTRICT IN NORTHEAST OHIO

- 141 **Macneale, K. H.**; Eash-Loucks, W.; Wilson, D.: LONG-TREM TRENDS INDICATE BACTERIA CONTAMINATION HAS DECLINED BUT REMAINS A PROBLEM IN AN URBAN RIVER IN SEATTLE, WA
- 142 **Sánchez-Ruiz, J. A.**; Gutiérrez-Fonseca, P.; Rosas, K. G.; Ramírez, A.: ASSESSING MACROINVERTEBRATE GROWTH RATES IN THE RIO PIEDRAS, A TROPICAL URBAN STREAM, PUERTO RICO
- 143 **Higley, M. C.**; Ackerman, J. A.; Long, C. M.: USING SPECIFIC CONDUCTIVITY TO CALCULATE MASS OF TDS IN HIGHWAY RUNOFF TO ILLINOIS TOLLWAY BIOSWALES
- 144 **McEldowney, R. R.**: STORY MILL COMMUNITY PARK – RESTORING ECOLOGICAL SERVICES IN AN URBAN ENVIRONMENT
- 145 **Clinton, S. M.**; McMillan, S. K.; Wang, X.: IMPACT OF STORMWATER MANAGEMENT ON MACROINVERTEBRATE COMMUNITIES IN URBAN STREAMS
- 146 **Labbe, T. R.**; Lev, E.; Garvey, M.; Engelmeyer, K. S.; Bauer, J.: NYBERG MARSH: URBAN WATERSHED RETROFIT, HABITAT RESTORATION, AND PARTNERSHIP OPPORTUNITIES
- 147 **Kanya, J. A.**; Wakeford, A.; Macdonald, N.; Newberry, A.; Gillies, S.: BIOLOGY 335: FRESHWATER ECOLOGY DIRECTED STUDIES PROJECT: BEVAN AVENUE GROUNDWATER SUPPLY PROJECT: FISH HABITAT MONITORING PROGRAM YEAR 2

033 Bridging The Gap: Using High-Frequency Sensor-Derived Data And Networks In Education, Training And Outreach

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- 151 **Isaak, D. J.**: THE NORWEST REGIONAL STREAM TEMPERATURE DATABASE, MODEL, AND CLIMATE SCENARIOS
- 152 **Leff, L. G.**; Bade, D.; Scaffidi, J.; Williamson, C.; Woolverton, C.: ENVIRONMENTAL AQUATIC RESOURCE SENSING: BASIC SCIENCES, BUSINESS EDUCATION, AND OUTREACH
- 153 **Stepien, C. A.**; Chen, J.; Shao, C.; Czajkowski, K. P.; Bridgeman, T. B.; Becker, R. H.: A NEW LAND-LAKE SENSOR NETWORK FOR MEASURING GREENHOUSE GAS, WATER, AND ENERGY EXCHANGES: USE IN EDUCATION AND OUTREACH
- 154 **Herbst, D. B.**; Medhurst, R. B.; Bell, I. D.: A MONITORING NETWORK FOR DETECTING CLIMATE CHANGE EFFECTS ON THE ECOLOGY OF SIERRA NEVADA STREAMS
- 155 **Gibson, C. A.**: STUDENT ANALYSIS OF STREAMFLOW TRENDS IN THE NORTHEAST U.S.
- 156 Hession, C.; **Scott, D. T.**; Easton, Z.; Thompson, T.: VIRGINIA TECH'S STREAM RESEARCH, EDUCATION, AND MANAGEMENT (STREAM) LABORATORY
- 157 **Hafich, K. A.**; Erb, P.; Ray, C.; Williams, M. W.: ALPINE HYDROLOGY IN THE CLASSROOM: A PARTNERSHIP BETWEEN SCIENCELIVE AND NIWOT RIDGE LTER

(*) represents Invited presentations

035 Population Genetic And Genomic Advances In Understanding The Evolution Of Plankton

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- 158 **Kahn, P. L.**; Voorhees, I.; McAteer, D.; Zuber, P.: UNIQUE SEQUENCE ELEMENTS IN 28S RRNA GENES OF HETEROTROPHIC PROTISTS.
- 159 **Smith, K. F.**; Selwood, A. I.; Hallegraef, G.; Gu, H.; Yilmaz, M.; Morquecho, L.; Wolny, J.; Puchlutegui, C.; Rhodes, L.: DOES THE PINNATOXIN-PRODUCING DINOFLAGELLATE, VULCANODINIUM RUGOSUM, COMPRISE A SPECIES COMPLEX?
- 160 **Blank, C. E.**; Moore, L. R.; Cui, H.; Wu, E. H.; Burleigh, J. G.; Liu, J.; Slonczewski, J. L.; Barich, D.; Gasparich, G. E.: AVATOL MICROBIAL PHENOMICS: DEVELOPING A MICROBIAL ONTOLOGY AND NATURAL LANGUAGE PROCESSING TOOLS TO AUTOMATE THE STUDY OF THE EVOLUTION OF MICROBIAL TRAITS

042 Functioning Of Salt Marsh And Mangrove Wetland Ecosystems Across Ecological And Spatial Scales

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Location: Exhibit Hall

- 170 **Hundy, L. C.**; Hester, M. W.: PLANT COMMUNITY COMPOSITION IN RESTORED SALT MARSHES: UNDERSTANDING THE RELATIONSHIPS BETWEEN ELEVATION, SOIL TYPE AND THE RESTORED COMMUNITY
- 171 **Howard, R. J.**; Biagas, J.; Allain, L.: MANGROVE ESTABLISHMENT SUCCESS IN MARSH VEGETATION: A GREENHOUSE SIMULATION OF PROPAGULE DISPERSAL

043 Distributions In Aquatic Ecosystems: Predictors, Models & Communities

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Location: Exhibit Hall

- 172 **Backus, J. K.**; Pyron, M.: CONCORDANCE AMONG FISH AND MACROINVERTEBRATE ASSEMBLAGES IN INDIANA STREAMS
- 173 **Eckmann, M. L.**: BULL TROUT DEPTH USE IN A LAKE WITH CONFLICTING COSTS AND BENEFITS
- 174 **Fobbe, D. J.**; Simmons, L. J.; Berges, J. A.: PHYTOPLANKTON LIFE AND DEATH IN AN URBAN FRESHWATER POND
- 175 **Azzella, M. M.**; Bolpagni, R.; Lombardo, P.; Mjelde, M.: INFLUENCE OF WATER TRANSPARENCY AND LAKE MORPHOLOGY ON THE DISTRIBUTION OF MACROPHYTES ALONG THE DEPTH GRADIENT
- 177 **Santiago-González, I.**; Harris, L.: SPATIAL DISTRIBUTION OF PHYTOPLANKTON ACROSS A WATER QUALITY GRADIENT AT LAGUNA GRANDE IN FAJARDO, PUERTO RICO

- 178 **Gunderson, M. D.**; Kapuscinski, K. L.; Crane, D. P.; Farrell, J. M.: HABITAT-ASSEMBLAGE MODELING OF AQUATIC MACROPHYTES AS A GUIDE FOR ENHANCEMENT OF FISH HABITAT

- 179 **Jayaprakas, V.**; Ranju, R.: ROLE OF FRESH WATER FREE LIVING PROTOZOANS AS BIOINDICATORS AND BIOREMEDIATION AGENTS IN VEMBANADU LAKE, KERALA, INDIA, AN IMPORTANT RAMSAR SITE

- 176 **McShane, R. R.**; Auerbach, D. A.; Poff, N. L.: RE-OPERATING DAMS IN A RIVER NETWORK TO MANAGE SPECIES DISTRIBUTION AS CLIMATE CHANGES

044 Microbially-Mediated Ecosystem Services: The Good, The Bad And The Ugly

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Location: Exhibit Hall

- 180 **O'Meara, T. A.**: DISTRIBUTIONS OF FUNGAL AND BACTERIAL DENITRIFICATION FROM THE MARITIME FOREST TO THE SHALLOW SUB-TIDAL IN TEMPERATE ESTUARINE MARSHES
- 181 **Cohen, D. B.**; Stevenson, N. A.; Kent, A. D.: MICROBIAL COMMUNITY COMPOSITION HAS RAMIFICATIONS FOR DENITRIFICATION CAPACITY IN RESTORED WETLANDS
- 182 **Welsh, M. K.**; McMillan, S. K.; Vidon, P. G.: IMPACT OF FLOODPLAIN RESTORATION ON RIPARIAN SOIL AND STREAM SEDIMENT DENITRIFICATION POTENTIAL IN THE PIEDMONT REGION OF NORTH CAROLINA
- 183 **Steffen, M. M.**; Boyer, G. L.; Bourbonniere, R. A.; Watson, S. B.; Wilhelm, S. W.: THE INTERSECTION OF MICROBIAL FUNCTION AND BIOGEOCHEMISTRY: THE ACTIVE TOXIC CYANOBACTERIAL BLOOM COMMUNITY

055 Carbon Cycling And Fluxes In Coastal Vegetated Wetlands

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- 196 **Pachon, J. C.**; Kominoski, J.; Servais, S.; Davis, S.; Gaiser, E.; Troxler, T.: PREDICTING STORM-DRIVEN IMPACTS OF PHOSPHORUS LOADING AND TERRESTRIAL CARBON LOSS ON COASTAL AQUATIC ECOSYSTEM METABOLISM
- 197 **Jung, Y.**; Burd, A.: VARIABILITY OF NON-STRUCTURAL CARBOHYDRATES IN *SPARTINA ALTERNIFLORA* MEASURED IN A GEORGIA SALT MARSH
- 198 **Martin, R. M.**; Moseman-Valtierra, S. M.: EFFECTS OF PHRAGMITES AUSTRALIS INVASION AND SALINITY ON GREENHOUSE GAS FLUXES IN TWO NEW ENGLAND SALT MARSHES
- 199 **Rybczyk, J. M.**; Poppe, K.; Crooks, S.; O'Connell, K.; Devier, D. L.; Moore, N.; Emmett-Mattox, S.: ESTUARINE WETLAND RESTORATION, CARBON SEQUESTRATION, AND ENHANCING RESILIENCE TO RISING SEA LEVELS IN THE SNOHOMISH RIVER ESTUARY, WASHINGTON

- 200 **Arifanti, V. B.**; Kauffman, J. B.: CARBON STOCK DYNAMICS IN MANGROVE ECOSYSTEM AT THE MAHAKAM DELTA, INDONESIA
- 201 **Tweedie, C. E.**; Lopez, A.; Cody, R.; Kofoed, K.; Vargas, S.; Aguirre, A.; Brown, J.; Oberbauer, S.: TRENDS AND CONTROLS OF COASTAL EROSION FOR THE BARROW ENVIRONMENTAL OBSERVATORY, NORTHERN ALASKA (2002-2013)

059 Biogeography And Speciation In The Northeast Pacific

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- 212 **Blanchard, A. L.**: Drivers of temporal variations in observed biodiversity patterns of marine benthic communities

060 Nitrogen Transformation Mechanisms At The Sediment-Water-Interface In Aquatic Ecosystems Over A Range Of Latitudes

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- 213 **Qin, W.**; Amin, S. A.; Martens-Habbena, W.; Walker, C. B.; Urakawa, H.; Devol, A. H.; Ingalls, A. E.; Moffett, J. W.; Armbrust, E. V.; Stahl, D. A.: HIGH ECOPHYSIOLOGICAL DIVERSITY AMONG CLOSELY RELATED MARINE AMMONIA-OXIDIZING ARCHAEA

061 Linking Reservoir Management To Aquatic Biogeochemistry

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Location: Exhibit Hall

- 214 **Galuschik, N. E.**; Baulch, H. M.: AGRICULTURAL DAMS AND PONDED AREAS: HOW DO SEDIMENTS AFFECT PHOSPHORUS CHEMISTRY
- 215 **Patrick, C. H.**; Waters, M. N.; Golladay, S. W.: THE DISTRIBUTION AND ECOLOGICAL ROLE OF THE INVASIVE CLAM, CORBICULA FLUMINEA, IN A SHALLOW RESERVOIR SYSTEM: LAKE SEMINOLE, GA, USA
- 216 **Clark, C. L.**; Koch, C.; Dutton, A.; Hoovestol, C.; Naymik, J.: IN-SITU PHOSPHATE MEASUREMENTS WITH THE CYCLE-PO₄ SENSOR TO EVALUATE PHOSPHORUS LOADINGS AND IMPACT ON BIOGEOCHEMISTRY TO BROWNLEE RESERVOIR

065 Connectivity Within Watersheds: Effects, Functions, And Values Of Headwaters And Isolated Aquatic Features On Downstream Waters

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- 218 **Caruso, B. S.**: ANALYSIS OF HEADWATERS HYDROLOGIC CONNECTIVITY FOR JURISDICTIONAL EVALUATION IN A ROCKY MOUNTAIN WATERSHED

- 219 **Golden, H. E.**; Sander, H. A.; Zhao, C.; Lane, C. R.; Price, K.; D'Amico, E.; Christensen, J. R.: CUMULATIVE EFFECTS OF GEOGRAPHICALLY ISOLATED WETLANDS ON STREAMFLOW IN A COASTAL PLAIN BASIN: ESTIMATES USING A HYBRID MODELING APPROACH
- 220 **Ashkenas, L. R.**; Johnson, S. L.; Argerich, A.: ECOSYSTEM METABOLISM IN FORESTED HEADWATER STREAMS OF OREGON: TEMPORAL AND SPATIAL VARIATION OF CONTROLLING FACTORS AND EFFECTS DOWNSTREAM
- 221 **Epting, S. M.**; Palmer, M. A.; Lang, M.; Alexander, L. C.; Hosen, J. D.: ASSESSING THE USE OF GIS-BASED LANDSCAPE INDICATORS TO CHARACTERIZE WETLAND-STREAM SURFACE CONNECTIVITY AT THE WATERSHED SCALE

069 Life At Low Nutrients

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- 224 **Wood, Z. T.**; Trout-Haney, J. V.; Culler, L. E.: MIDGE LARVAE (GENUS: CRICOTOPUS) IN COLONIAL GREENLANDIC CYANOBACTERIA (NOSTOC PRUNIFORME)
- 225 **Trout-Haney, J. V.**; Wood, Z. T.; Cottingham, K. L.: BENTHIC COLONIAL CYANOBACTERIA (GENUS: NOSTOC) AND THE OCCURRENCE OF CYANOTOXINS IN LOW-NUTRIENT ARCTIC LAKES OF SOUTHWESTERN GREENLAND
- 226 **Evans-White, M. A.**; Halvorson, H. M.; Fuller, C.; Entekin, S. A.; Smartt, A.; Scott, J. T.: LITTER TYPE MEDIATES SHREDDING INSECT GROWTH RESPONSES TO LITTER PHOSPHORUS ENRICHMENT
- 227 **Schmit, A. M.**; Smith, H. J.; Foster, R. A.; Foreman, C. M.: MICROBIAL DIVERSITY AND ECOPHYSIOLOGY OF CRYOCONITE GRANULES FROM THE DRY VALLEYS, ANTARCTICA
- 228 **Ellison, E. T.**; Peters, S. C.; Hargreaves, B. R.; Morris, D. P.: CHARACTERIZING IRON-NITROGEN COLIMITATION INTERACTIONS IN A CHEMOSTAT MODEL OF FRESHWATER ENVIRONMENTS

070 River-Floodplain Connectivity As A Geomorphic, Biogeochemical, And Organismal Driver Of Floodplain Function

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- 229 **Rybicki, N. B.**; Noe, G. B.; Hupp, C. R.: RIPARIAN VEGETATION INFLUENCES ON NUTRIENT CYCLING ALONG LATERAL AND LONGITUDINAL FLOODPLAIN GRADIENTS
- 230 **Turner, E. D.**; Clinton, S. M.; McMillan, S. K.: FLOODPLAIN CONNECTIVITY EFFECTS ON SOIL CHARACTERISTICS OF RESTORED URBAN STREAMS IN THE PIEDMONT REGION OF NORTH CAROLINA

075 Aquatic Ecosystem Services

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Location: Exhibit Hall

- 231 **Eberle, J. R.:** ECOLOGICAL CONTEXT OF SEXUAL SIZE DIMORPHISM IN TWO FRESHWATER AMPHIPODS SPECIES
- 232 **Warner, K. A.;** Strock, K. E.; Teisl, M. F.; Saros, J. E.: ECOLOGICAL AND ECONOMIC VULNERABILITY OF MAINE DRINKING WATER RESOURCES TO INCREASED FREQUENCY OF EXTREME STORM EVENTS
- 233 **Leonard, C. L.;** Johnson, A.; Primozich, D.; Swanson, K.: WATER QUALITY TRADING PROGRAM REQUIREMENTS AND MONITORING
- 234 **River, M. A.;** Flanagan, N. E.; Richardson, C. J.: PHOSPHORUS RETENTION IN DUKE'S STREAM AND WETLAND ASSESSMENT AND MANAGEMENT PARK
- 235 **Zhang, Y. X.:** RIPARIAN ECOLOGY AND CONSERVATION: ECOSYSTEM FUNCTIONING AND SERVICES

076 Water Resource Sustainability And Resilience: Assessments, Approaches, And Communication

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Location: Exhibit Hall

- 236 **Tsai, J.;** Wiesbrook, S. M.: AN ASSESSMENT OF HYDRIC SOIL INDICATORS OF ILLINOIS DEPARTMENT OF TRANSPORTATION WETLAND DELINEATION PROJECTS.
- 237 **Mullins, M. L.;** Doyle, R. D.; Schell, N. Y.: SUSTAINABILITY IN THE SWAMP- A WATER RESOURCE SUSTAINABILITY EDUCATION PROJECT

079 Recognizing The Multiple Values Of Aquatic Ecosystems To People

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- 258 **Salakory, R.;** O'Daniel, S.; Boyer, D.; Elliot, T.; Nadeau, T. L.: CHRYSALIS TO IMAGO: PNW TRIBAL WETLAND WORKING GROUP
- 259 **Syrjämäki, E.;** **Nieminen, M. L.:** DOES WATER MONITORING PROVIDE THE RIGHT ANSWERS? LINKING LOCAL OBSERVATIONS TO PEATLAND USE INDUCED CHANGES IN BOREAL AQUATIC ECOSYSTEMS
- 260 **Burdett, A. S.;** Daniel, M. J.; Novak, D. A.; Walter, C. H.: INFORMAL SCIENCE EDUCATION IS AN OPPORTUNITY FOR PUBLIC OUTREACH: LINKING MUSEUMS WITH RESEARCH ABOUT ENERGY AND WATER IN NEW MEXICO
- 261 **Ringold, P. L.;** Weber, M.; Boyd, J. W.; Herlihy, A.: LINKING AQUATIC ECOSYSTEMS TO HUMAN WELL-BEING
- 262 **Black, D. R.;** Greene, G.: REMOVAL OF INVASIVE SPECIES (CARP) FROM A SHALLOW WATER SYSTEM AND THE RESULTING INCREASED VALUE OF AQUATIC ECOSYSTEM SERVICES

- 263 **Rios Arana, J. V.;** Walsh, E. J.; Wood, W. W.; Cutler, S.; Sproul, J.: A MUSEUM EXHIBIT OUTREACH OPPORTUNITY: MAKING THE CASE FOR CHANGING HOW WE MANAGE THE RIO GRANDE
- 264 **Rollwagen-Bollens, G.;** Nelson, T.; Kennedy, A.; James, K.; Lock, B.; Graves, M.; Bollens, S.: PARTNERS IN DISCOVERY OF THE COLUMBIA RIVER WATERSHED GK-12 PROJECT: BUILDING LASTING COLLABORATION THROUGH SCIENTIST-TEACHER PARTNERSHIPS

088 Advancing The Science And Management Of Mountain Peatlands

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Location: Exhibit Hall

- 275 **Maguigan, M. A.;** Rodgers, J. C.; Dyer, J. L.: CONTROLS ON PRIMARY PRODUCTIVITY IN SOUTHERN APPALACHIAN WETLANDS

089 Wildlife Response To Restoration

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- 276 **Schott, K. A.;** Martínez, L.: FLUCTUATING ASYMMETRY AS AN INDICATOR OF THE TOXICITY OF DRAINAGE AFTER REMEDIATION IN KERBER CREEK, SAGUACHE COUNTY, COLORADO
- 277 **Sullivan, L. R.;** Nyman, J. A.: ASSESSMENT OF THE HABITAT VALUE AND EDGE EFFECT OF DIFFERENT WETLAND RESTORATION TECHNIQUES FOR WATERBIRDS IN THE MISSISSIPPI RIVER BIRD'S FOOT DELTA

092 Frontiers In Algal Evolution: A Case Study From The Rhodophyta

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Location: Exhibit Hall

- 283 **Boo, G. H.;** Kim, K. M.; Freshwater, D. W.; Miller, K. A.; Nelson, W. A.; Yoon, H. S.; **Boo, S. M.:** PHYLOGEOGRAPHY OF THE AGAROPHYTE *GELIDIUM* (GELIDIALES, RHODOPHYTA) BASED ON THREE CODING GENES, COX1, PSAA, AND RBCL*
- 284 **Ball, S. G.;** Tirtiaux, C.; Nakamura, Y.: FLORIDEAN STARCH SYNTHESIS IN RED ALGAE AND THEIR SECONDARY ENDOSYMBIOSIS DERIVATIVES

093 Anthropogenic Influences On Watershed Biogeochemistry: New Findings And Methods

Chair(s): Rebecca Barnes, becca.barnes@gmail.com
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Henry Wilson, henry.wilson@agr.gc.ca

Location: Exhibit Hall

- 285 **Bonney, R. J.;** Hunt, K. C.; Hoppie, B. W.: THE EFFECTS OF DELIBERATELY RESTRICTED STREAM FLOW ON WATER QUALITY IN A MIDWESTERN AGRICULTURAL DITCH SYSTEM
- 286 **Higgs, S. A.;** Lutz, B. D.; Smemo, K. A.: SPATIAL AND TEMPORAL NITROGEN UPTAKE VARIATION IN FOREST STREAMS
- 287 **Davis, C. A.;** **Ward, A. S.;** Schnoebelen, D.; Weber, L.; Burgin, A.; Loecke, T.; Riveros-Iregui, D.; St. Clair, M.; Thomas, S.; Just, C.: ANTECEDENT MOISTURE CONTROLS ON STREAM NITRATE FLUX IN AN AGRICULTURAL WATERSHED, CLEAR CREEK, IOWA

^(*) represents Tutorial presentations

095 Remote Sensing Optically Shallow Aquatic Ecosystems: Methods And Applications

Chair(s): Lachlan I.W. McKinna, lachlan.mckinna@curtin.edu.au
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John Hedley, j.d.hedley@envirocs.com
Curtiss O. Davis, cdavis@coas.oregonstate.edu

Location: Exhibit Hall

291 **Hooker, S. B.**; Morrow, J. H.; Lind, R.; Booth, C. R.: OCEAN COLOR UNDERWATER LOW-LIGHT ADVANCED RADIOMETER (OCULLAR): OCEAN COLOR AND NIGHT

103 Lakes And Streams As Engines In Global Processes: Insights From Technical Advances In Limnology

Chair(s): Jordan S Read, jread@usgs.gov
Paul C Hanson, pchanson@wisc.edu
Augusto Getirana, augusto.getirana@nasa.gov
David P Hamilton, davidh@waikato.ac.nz

Location: Exhibit Hall

302 **Hook, S. J.**; Schneider, P.; Hulley, G. C.: TRENDS IN INLAND WATER SURFACE TEMPERATURES FROM SATELLITE OBSERVATIONS

303 **Eckert, W.**; Nishri, A.: LONGTERM CHANGES IN PHOSPHORUS CYCLING OF A SUBTROPICAL LAKE WITH SPECIAL EMPHASIS ON MAN-MADE PERTURBATIONS IN THE WATERSHED AND CLIMATE CHANGE

304 Waring, W. R.; **Schoepfer, V. A.**; Burgin, A. J.; Ore, J. P.; Detweiler, C.; Elbaum, S.: USING UNMANNED AERIAL VEHICLES (UAVS) TO MAP SOURCES OF GROUNDWATER IN A SALINE WETLAND

305 **DelSontro, T. S.**; Eugster, W.; Sollberger, S.; Kling, G. W.; Wehrli, B.; Shaver, G. R.: HIGH RESOLUTION METHANE EMISSIONS AND DISSOLVED METHANE MEASUREMENTS HELP CONSTRAIN SURFACE GAS EMISSION DYNAMICS IN AN ARCTIC LAKE (TOOLIK LAKE, ALASKA)

306 **Isles, P. D.**; Schroth, A. W.; Xu, Y.; Giles, C. D.; Stockwell, J. D.: QUANTIFYING THE ROLE OF CYANOBACTERIAL BUOYANCY REGULATION IN LAKE METABOLISM AND BLOOM PROGRESSION USING HIGH-FREQUENCY DATA

307 **Stauffer, B. A.**; Shaw, D. M.; Preuss, P.: IDENTIFYING USES AND REQUIREMENTS FOR CONTINUOUS NUTRIENT SENSING IN FEDERAL AND STATE PROGRAMS

107 Characteristics And Management Of Aquatic Systems In Agricultural Landscapes

Chair(s): Robert Kroger, rkroger@cfr.msstate.edu
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Beth Poganski, bpoganski@cfr.msstate.edu
Austin Omer, aomer@cfr.msstate.edu

Location: Exhibit Hall

317 **Lovato Niles, C.**; MacKay, H.; Belisle, D.: VEGETATED RIPARIAN BUFFERS ON STREAMS CAN GENERATE BOTH AGRICULTURAL AND ECOLOGICAL BENEFITS: FOURMILE CREEK CASE STUDY

318 **Henderson, K. A.**; Murdock, J. N.; Locke, M. A.; Lizotte, R. E.: THE ASSOCIATION BETWEEN WATER DEPTH, ALGAL ASSEMBLAGES, AND HYPOXIA IN AGRICULTURAL LAKES

319 **Chara-Serna, A. M.**; Richardson, J. S.; Chara, J. D.; Zuniga, M. C.; Ramirez, Y. P.: INFLUENCE OF CATTLE-FARMING PRACTICES ON EXPORTS OF PARTICULATE ORGANIC MATTER AND INVERTEBRATES FROM ANDEAN HEADWATER STREAMS

320 **Fazekas, H. M.**; Vadeboncoeur, Y.: THE EFFECTS OF AGRICULTURAL LAND USE ON PERIPHYTON QUALITY AND FATTY ACID COMPOSITION IN MIDWESTERN STREAMS

321 **Madison, A. M.**; Jacobson, S. S.; Royer, T. V.: FROM THE HILLTOP TO THE STREAMBED: THE INFLUENCE OF LAND COVER ON THE SEDIMENT-WATER COLUMN PHOSPHORUS RELATIONSHIP IN AN AGRICULTURAL LANDSCAPE.

322 **Taylor, J. M.**; Lizotte, R. E.; Knight, S. S.; Locke, M. A.; Shields, F. D.: TEMPORAL AND SPATIAL PATTERNS IN NUTRIENT AND SEDIMENT CONCENTRATIONS IN THREE MISSISSIPPI DELTA BAYOUS

110 Ghosts Of Land-Use Past: Do Land-Use Legacy Effects Constrain The Restoration Of Aquatic Ecosystems?

Chair(s): Ariane Peralta, peraltaa@ecu.edu
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Location: Exhibit Hall

324 **Gerla, P. J.**; Gbolo, P.: MAPPING THE FATE OF NUTRIENTS IN WETLANDS ADJACENT TO AN ABANDONED FEEDLOT

325 **Smith, T.**; White, S. M.; Kelsey, D.; McCullough, D.: WATERSHED HISTORY REVEALED THROUGH GOVERNMENT LAND OFFICE SURVEYS: DETECTING CHANGE OVER A CENTURY OF LAND USE IN THE COLUMBIA RIVER BASIN

326 **Fang, W. T.**; Shih, S. S.: EXPLORING PONDSCAPE SYSTEMATIC DYNAMICS ON FRESHWATER FARM POND AREAS IN TAIWAN

111 Dissolved Organic Tracers Of Aquatic Biogeochemistry

Chair(s): George Aiken, graiken@usgs.gov
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Location: Exhibit Hall

327 **Wagner, S.**; Dittmar, T.; Jaffe, R.: MOLECULAR CHARACTERIZATION OF DISSOLVED BLACK NITROGEN

328 **LaRue, M. M.**; Sobczak, W. V.; Bulygina, E.; Spencer, R. G.: POTENTIAL RELEASE OF DISSOLVED ORGANIC MATTER FROM SEDIMENTS DUE TO ARCTIC COASTAL EROSION

329 **Drake, T. W.**; Spencer, R. G.; McKnight, D. M.; Striegl, R. G.; Wickland, K. P.: RAPID RESPIRATION OF ANCIENT PERMAFROST CARBON AND CO₂ PRODUCTION UPON THAW

330 **Kohler, B. S.**; MacNeill, K. L.; Flecker, A. S.; Thomas, S. A.: COMPARING MULTIPLE APPROACHES FOR QUANTIFYING NUTRIENT UPTAKE FROM INSTANTANEOUS ADDITIONS

331 **Wuensch, U. J.**; Koch, B. P.; Witt, M.; Martin, R. A.; Needoba, J.: SEASONAL CHEMICAL VARIABILITY OF DISSOLVED ORGANIC MATTER IN THE COLUMBIA RIVER: ULTRAHIGH RESOLUTION IN SITU SENSORS AND MASS SPECTROMETRY

- 332 **Holloway, J. M.**; Orem, W. H.; Aiken, G. R.; Varonka, M. S.; Butler, K. D.; Kokaly, R. E.: DISTINGUISHING NATURAL ORGANIC MATTER FROM PETROLEUM DECAY PRODUCTS IN GULF COAST AND COASTAL MARSHES FOLLOWING THE DEEPWATER HORIZON OIL SPILL
- 333 **Queimaliños, C. P.**; García, P. E.; Soto Cárdenas, E. C.; Gereá, M.; García, R. D.; Reissig, M.; Pérez, G. L.; Diéguez, M. C.; Aiken, G. R.: SPECTRAL PROPERTIES OF DISSOLVED ORGANIC MATTER FROM DEEP AND SHALLOW LAKES OF GLACIAL ORIGIN (NORTH PATAGONIA, ARGENTINA): CONTRASTING VERTICAL PATTERNS
- 334 **Dowdy, K. L.**; Spencer, R. G.; Mann, P. J.; Vonk, J. E.; Davydova, A.; Davydov, S. P.; Zimov, N.; Bulygina, E. B.; Holmes, R. M.: IMPLICATIONS OF YEDOMA PERMAFROST THAW STREAM INPUTS FOR RIVERINE CARBON TURNOVER
- 335 **Spencer, R. G.**; Mann, P. J.; Dittmar, T.; Eglinton, T. I.; Stubbins, A.: DETECTING THE SIGNATURE OF PERMAFROST THAW IN ARCTIC RIVERS

112 Emerging Technologies And Integrative Data Analysis Approaches For Microbiological Studies In Aquatic Environments

Chair(s): Holly Simon, simonh@ebs.ogi.edu
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Lydie Herfort, herfort@ohsu.edu

Location: Exhibit Hall

- 336 **Dun, S.**; Kantz, T.: SIMULATING FLOW DYNAMICS DURING A STORM EVENT AT THE LOWER REACH OF CLARKS CREEK, WA
- 337 **Herfort, L.**; Seaton, C.; Wilkin, M.; Baptista, A.; Simon, H.: AUTONOMOUS ADAPTIVE SAMPLING OF MICROBIAL PROCESSES IN A DYNAMIC ESTUARY
- 338 **Brownlee, E. F.**; Sosik, H. M.; Olson, R. J.: AUTOMATED IMAGING TO EXAMINE CILIATE COMMUNITIES
- 339 **Cox, A. M.**; Moore, S. K.; Rhodes, L. D.; Yamahara, K. M.; Marin III, R. M.; Nilsson, W. B.; Preston, C. M.; Birch, J. M.; Scholin, C. A.; Hallam, S. J.: COUPLED "OMIC" INVESTIGATIONS OF MICROBIAL COMMUNITY STRUCTURE AND FUNCTION USING AUTONOMOUS ESP ARCHIVES FROM AQUACULTURE SITES IN PUGET SOUND
- 340 **Reyes, J. A.**; Johnson, S.; Morris, K.; Kelley, K. M.: POLLUTANT EFFECTS IN WILDLIFE – BIOMARKERS OF PHYSIOLOGICAL DISRUPTIONS IN ORGANISMS
- 341 **Hancock, T.**; Brand, J. J.: TOWARDS LINKING MICROBIAL COMMUNITY COMPOSITION TO ECOLOGICAL PROCESSES IN LIMESTONE BIOFILMS

113 Uncommon Garden: Exploring The Role Of Macrophytes In Mediating Biodiversity And Functional Processes Across Aquatic Ecosystems

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Tenna Riis, tenna.riis@biology.au.dk

Location: Exhibit Hall

- 342 **Guan, B. H.**: FATE OF CYANOBACTERIA DERIVED NITROGEN IN BOTTOM-DWELLING AND CANOPY-FORMING SUBMERGED MACROPHYTES SYSTEMS
- 343 **Hester, S. E.**; Doyle, R. D.: BICARBONATE UTILIZATION POTENTIAL OF SUBMERSED AQUATIC VEGETATION IN A SPRING-FED CENTRAL TEXAS RIVER

- 344 St. Pierre, J. I.; **Kovalenko, K. E.**; Pollock, A.; Ciborowski, J. H.: EFFECTS OF MACROPHYTE COMPLEXITY ON FUNCTIONAL ATTRIBUTES OF MACROINVERTEBRATE COMMUNITIES
- 345 **Beal, L. M.**; Perry, W. L.: THE EFFECTS OF PHRAGMITES AUSTRALIS AND TYPHA ANGUSTIFOLIA ON NITRATE REMOVAL AND WETLAND SEDIMENT ATTRIBUTES IN HIGH NITRATE, LOW CARBON SYSTEMS

114 Wetlands: Getting To A Science Based Approach

Chair(s): Nicholas Coffey, nick@coffey-geo.com
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Location: Exhibit Hall

- 346 **Hsieh, H.**; Chen, C.: REACHING CONSENSUS AMONG STAKEHOLDERS ON THE PROTECTION OF ALGAL REEFS IN TAIWAN

116 The Role Of Microbial And Algal Communities In Stressed Aquatic Systems: Linking Structure To Function

Chair(s): Emily B. Graham, emily.graham@colorado.edu
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Location: Exhibit Hall

- 349 **Akins, L.**; Leff, L.: IDENTIFICATION OF BACTERIAL TAXA THAT FACILITATE MICROCYSTIS BLOOMS
- 350 **Lu, X.**; Sun, S.; Mou, X.: POLYAMINE-TRANSFORMING BACTERIA IN COASTAL, OFFSHORE, AND OPEN OCEAN ENVIRONMENTS REVEALED BY 16S RRNA GENE PYROTAG SEQUENCING
- 351 Shan, K.; **Li, L.**; Wu, Y.; Yu, G.; Song, L.; Li, G.; Xiao, B.: EFFECT OF CYANOBACTERIAL BLOOM ON THE ECOSYSTEM STRUCTURE IN A SHALLOW HYPEREUTROPHIC LAKE: A CASE STUDY OF DIANCHI LAKE IN CHINA
- 352 **Rollwagen-Bollens, G.**; Bollens, S.; Lee, T.; Boyer, J.; Zimmerman, J.; Emerson, J.: ASSESSING THE ROLE OF BIOTIC AND ABIOTIC FACTORS ON THE DEVELOPMENT AND DECLINE OF HARMFUL CYANOBACTERIA BLOOMS IN A LARGE, TURBID LAKE (VANCOUVER LAKE, WA)
- 353 **Liu, B.**; Stevenson, R. J.; Baustian, M. M.: IDENTIFYING SOURCES OF POLLUTIONS OF LAKE ST. CLAIR, NORTH AMERICA BASED ON DITP

122 P Molecular Ecology - Poster Session

Chair(s): Allison Fong, fonga@hawaii.edu
Carol Stepien, carol.stepien@utoledo.edu

Location: Exhibit Hall

- 366 **Beck, S. V.**: THE FUTURE OF ARCTIC CHARR IN NORTH WALES
- 367 **Chung, C. C.**; Huang, C. Y.; Gong, G. C.; Lin, Y. C.: INFLUENCE OF THE CHANGJIANG RIVER FLOOD ON SYNECHOCOCCUS ECOLOGY IN THE SURFACE WATERS OF THE EAST CHINA SEA
- 368 **Weiss, M.**; Leese, F.: GENETIC DIVERSITY AND CONNECTIVITY OF THE FRESHWATER AMPHIPOD *GAMMARUS FOSSARUM* IN A GERMAN LOW-MOUNTAIN RANGE
- 369 Miranda, P.; Thao, M.; Hatzenpichler, R.; Orphan, V.; **Dillon, J. G.**: DIVERSITY AND ACTIVITY OF SULFUR-CYCLING CHEMOAUTOTROPHIC MICROBIAL MATS IN THE PALOS VERDE HYDROTHERMAL VENT FIELD, CALIFORNIA

^(*) represents Tutorial presentations

- 370 Huang, C.; **Chung, C.**; Gong, G.; Lin, Y.; Chang, J.: A DISASTROUS CHANGJIANG RIVER FLOOD CHANGED PROKARYOTIC PICOPLANKTON ASSEMBLAGE IN THE SURFACE EAST CHINA SEA
- 371 **San Miguel, R. A.**; Epperson, Z.; Woods, A.; Bowers, H. A.; Smith, G. J.: POPULATION GENETIC STRUCTURE OF *PSEUDO-NITZSCHIA FRAUDULENTA* USING ISSR MARKERS
- 372 **Morningstar, C. R.**; Inoue, K.; Lang, B. K.; Berg, D. J.: AN INVESTIGATION OF CRYPTIC SPECIATION: MORPHOLOGICAL VARIATION AND POPULATION STRUCTURE OF THE GASTROPOD *STAGINOCLA CAPERATA* AT DIFFERING ELEVATIONS
- 373 **Williams, T. J.**; Inoue, K.; Lang, B. K.; Berg, D. J.: GENETIC VARIATION AND CRYPTIC SPECIATION OF THE CHIHUAHUA DESERT AMPHIPOD (*HYALELLA* SP.)
- 374 **Hewitt, T. L.**; Bergner, J. L.; Zanatta, D. T.: PHYLOGEOGRAPHY OF TWO FRESHWATER MUSSEL SPECIES (BIVALVIA: UNIONIDAE) ALONG HYPOTHESIZED POST-GLACIAL COLONIZATION ROUTES INTO THE GREAT LAKES
- 375 **Rosales, D.**; Lycett, K. A.; Brittingham, D.; Pitula, J. S.: MOLECULAR APPROACHES TO IDENTIFYING HARMFUL ALGAL BLOOMS IN THE CONTEXT OF ECOLOGICAL INVESTIGATIONS OF HEMATODINIUM SP.
- 376 **Smith, G. J.**; Savage, T. J.; Kudela, R.; Hayashi, K.; Bowers, H. A.: TRANSCRIPTOME ANALYSIS OF *PSEUDO-NITZSCHIA AUSTRALIS* YIELDS INSIGHTS ON NITROGEN ASSIMILATION AND DOMOIC ACID BIOSYNTHESIS IN THIS TOXIGENIC DIATOM
- 377 **Mabe, J. A.**; Kennedy, J. H.; Johnson, J. A.: INVESTIGATING THE POPULATION GENETIC STRUCTURE OF *QUADRULA AUREA* (LEA 1859) (BIVALVIA: UNIONIDAE), AN ENDANGERED FRESHWATER MUSSEL IN CENTRAL TEXAS.
- 378 Blouin, N.; **Brawley, S. H.**; Gantt, E.; Prochnik, S. E.: EXPRESSION ANALYSIS DEMONSTRATES COMPLEX DEVELOPMENTAL CHANGES DURING ASEXUAL REPRODUCTION IN *PORPHYRA UMBILICALIS*
- 379 **Macias, N. A.**; Colon Gaud, J. C.; Harrison, J. S.: MULTILOCUS VARIATION OF THE RED CLAW CRAYFISH (*CHERAX QUADRICARINATUS*) RECENTLY INTRODUCED TO PUERTO RICO
- 392 Smith, A. J.; **Baldigo, B. P.**; Duffy, B. T.; Dresser, B. R.; George, S. D.: THE RESPONSE OF MACROINVERTEBRATE COMMUNITIES TO AN EXTREME FLOOD IN A CATSKILL MOUNTAIN RIVER: IMPLICATIONS FOR ROUTINE BIOASSESSMENTS
- 393 **Shanteau, J.**; De Jong, G.; Smith, E.; Lynch, J.: INCREASING TAXA TRENDS IN LONG-TERM DATA COLLECTED IN MINING IMPACTED STREAMS.
- 394 **Snyder, H. N.**; Woller-Skar, M.: RECOMMENDED CONSUMPTION OF NORTHERN PIKE SAMPLED FROM AN OLIGOTROPHIC LAKE USING WORLD HEALTH ORGANIZATION STANDARDS
- 395 **Poulton, B. C.**; Tao, J.: ASSESSMENT OF STRESS MECHANISMS IN SMALL URBAN STREAMS USING TRAIT-BASED AQUATIC INSECT METRICS
- 396 **Brizzolara, D. T.**; Verweire, K.; Yozzo, D. J.: STREAM AND WETLAND RESTORATION AS COMPENSATORY MITIGATION FOR A RAIL INFRASTRUCTURE PROJECT; RAPID BIO-ASSESSMENT, ELECTROFISHING, AND WETLAND MONITORING
- 397 **MacCoy, D. E.**: BIODATA: AN AQUATIC BIOASSESSMENT DATABASE FOR THE NATION
- 398 Pfeiffer, J.; **Puls, A.**; Salter, S.; Sullivan, S.; Wisseman, R.: IMPROVING FRESHWATER MACROINVERTEBRATE DATA SHARING IN THE PACIFIC NORTHWEST THROUGH THE DEVELOPMENT OF A STANDARD TAXONOMIC EFFORT (STE) AGREEMENT
- 399 **Marshall, B. D.**: PROBLEMS WITH USING BIOASSESSMENT METHODS FOR NON-BIOASSESSMENT PURPOSES, PART IV: EFFECTS OF THE FIXED-COUNT SUBSAMPLE STANDARD UNIT EFFORT
- 400 Engelbert, B. S.; **Taylor, C. A.**: STATISTICS VERSUS TIME: EVALUATING A SAMPLING METHODOLOGY FOR STREAM-DWELLING CRAYFISH ACROSS WIDE GEOGRAPHIC SCALES
- 401 **Phillips, I. D.**; Bowman, M. F.; McMaster, G.; Chivers, D. P.: THE BENTHIC RIVER AND STREAM BIOMONITORING MODEL FOR THE NORTHERN GREAT PLAINS OF SASKATCHEWAN
- 402 **Ikeya, T.**: DOUBLE BANDS OF COHERENT FUNCTIONAL PHYTOPLANKTON SPECIES RANGE IN SURFACE WATER AT THE KUROSHIO FRONT
- 403 **Judson, S. W.**; Miller, S. W.; Courtwright, J. C.; Jimenez, J.: BIOLOGICAL, CHEMICAL, AND PHYSICAL CONDITION OF UTAH BLM WADEABLE, PERENNIAL STREAMS
- 404 **Roux, A. J.**; Clinton, S. M.: RESPONSE OF THREE PIEDMONT STREAMS IN NORTH CAROLINA TO LAND USE CHANGES OVER A 20 YEAR PERIOD.
- 405 **Johnson, R. K.**: EFFECTS OF RIPARIAN SHADING ON STREAM TEMPERATURE AND BIOLOGICAL ASSEMBLAGES
- 406 **Johnston, M. K.**; Koeck, D.: BIOMONITORING THE BALCONES: ASSESSING BIODIVERSITY FROM A METACOMMUNITY PERSPECTIVE
- 407 **Pan, Y.**; Wang, L.; Cao, Y.; Pang, W.; Wang, Q.; Deng, G.: BENTHIC ALGAL ASSEMBLAGES IN SUBALPINE KARSTIC LAKES IN THE JIAZHAIGOU NATIONAL PARK, CHINA

124 P Bioassessment - Poster Session

Chair(s): Martin Neale, martin.neale@aucklandcouncil.govt.nz
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 Chris Prescott, chris.prescott@portlandoregon.gov
 Christine Raczka, ceraczka@g.coastal.edu
 Anna Belyaeva, belyaeva@iastate.edu

Location: Exhibit Hall

- 390 **Brightbill, R. A.**: NATIONAL WATER-QUALITY ASSESSMENT PROGRAM'S AQUATIC MACROINVERTEBRATE MULTI-STATE COMPILATION DATABASE
- 391 **Kirk, A. J.**; McGarvey, D. J.; Rouch, M. G.: BENTHIC MACROINVERTEBRATE ASSEMBLAGE STRUCTURE AND BIOMASS IN PRISTINE STREAMS OF SOUTHERN WEST VIRGINIA

- 408 **Prier, B.;** Sittaramane, V.: DEVELOPING THE ZEBRAFISH MODEL AS A BIOMONITORING TOOL FOR THE OGEECHEE RIVER WATER SYSTEM
- 409 **Courtwright, J.;** Miller, S.; Judson, S.; Olsen, A. R.: BLM NATIONAL AQUATIC MONITORING STRATEGY: BUILDING PARTNERSHIPS TO MONITOR THE CONDITION OF STREAMS AND RIVERS ON PUBLIC LANDS
- 410 Perez, R. A.; **Lockwood, A. S.;** Genard, L. M.: ALABAMA'S HEALTHY WATERSHED INITIATIVE AND BIOLOGICAL CONDITION GRADIENT: TWO TOOLS FOR PRIORITIZING RESTORATION AND PROTECTION EFFORTS
- 411 **Sprague, M.:** RELATIONSHIP BETWEEN MACROINVERTEBRATE METRICS AND RPB SCORES ON THE SANTA ANA RIVER, CALIFORNIA
- 412 **Larson, C. A.;** Hartman, C.: B-IBI SCORES, SPECIES ACCUMULATION AND BETA DIVERSITY OF MACROINVERTEBRATE COMMUNITIES DECREASE WITH IMPERVIOUS COVER IN PUGET LOWLAND STREAMS
- 413 **Connelly, R. A.:** A COMPARATIVE BENTHIC MACROINVERTEBRATE STUDY FOLLOWING CAPPING OF STREAM SEDIMENTS
- 414 **Furnish, J. L.;** Ode, P. R.; Rehn, A. C.: ENHANCED BIOASSESSMENT OF SIERRA NEVADA PERENNIAL STREAMS AND RIVERS BY DEPLOYMENT OF COMBINED PROBABILISTIC SAMPLING DESIGNS
- 415 **Jessup, B. K.;** Huff, E. S.; O'Neil, P. E.; Gerritsen, J.: BIOLOGICAL CONDITION GRADIENT TAXA ATTRIBUTES ASSIGNED THROUGH EXPERT CONSENSUS IN COMPARISON TO ANALYTICALLY DERIVED OR HISTORICALLY ACCEPTED TRAITS
- 416 **Drover, D. R.;** Schoenholtz, S. H.; Zipper, C. E.; Timpano, A. J.; Soucek, D. J.: DETECTION OF INVERTEBRATE COMMUNITY CHANGE IN MINE-INFLUENCED STREAMS USING QUANTITATIVE SAMPLING.
- 417 **Spaulding, S. A.;** Rushforth, S.; Potapova, M.; Lowe, R.; Kociolek, J. P.; Edlund, M. B.: PROGRESS TOWARD COMPLETING THE DIATOM FLORA OF THE UNITED STATES
- 418 Opiso, E. M.; **Quimpang, V. T.;** Leaño, E. P.; Galan, G. L.; Logramonte, B. A.; Paulino, R. R.; Buot, G. A.; Forten, R. R.; Coquilla, K. L.; Amoroso, V. B.: STATUS OF MINDANAO LTER SITE BASED ON AQUATIC BIODIVERSITY AND ASSOCIATED LAND USE: THE CASE OF MARBOL AND MATINGAO RIVERS, MT. APO NATURAL PARK, PHILIPPINES

125 P Bacteria And Phytoplankton Dynamics - Poster Session

Location: Exhibit Hall

- 419 **Watanabe, T.;** Kojima, H.; Fukui, M.: BETAPROTEOBACTERIA ARE MAJOR COMPONENTS OF SULFUR-OXIDIZING BACTERIAL COMMUNITY IN A STRATIFIED FRESHWATER LAKE
- 420 **Smith, B. R.;** Hayes, K.; Wetz, M.: SPATIAL-TEMPORAL DISTRIBUTION OF HETEROTROPHIC BACTERIA IN A EUTROPHIC, LAGOONAL ESTUARY (OSO BAY, CORPUS CHRISTI, TX)

- 421 **Ignacio, D. P.;** Betancourt, C.; Read, B. A.: CHARACTERIZING THE ROLE OF CARBONIC ANHYDRASE ISOZYMES IN BIOMINERALIZATION OF THE MARINE MICROALGAE, EMILIANIA HUXLEYI
- 422 **Alfara, N. H.;** Sahatjian, B.; Xu, W.; Pan, Y.: HARMFUL ALGAL BLOOMS IN SHALLOW URBAN LAKES: DRIVEN BY TEMPERATURE OR NUTRIENTS?

126 P Algae And Primary Production - Poster Session

Chair(s): Steven Rier, srier@bloomu.edu
Euan Reavie, ereavie@d.umn.edu

Location: Exhibit Hall

- 423 **Duan, H.;** Xu, J.; Loisel, S. A.: OPTICAL CHARACTERIZATION OF BLACK WATER BLOOMS IN EUTROPHIC WATERS
- 424 **Felcmanova, K.;** Lukes, M.; Kotabova, E.; Komarek, O.; Prasil, O.: REGULATION OF PHOTOSYNTHESIS AND PRIMARY PRODUCTION OF PHYTOPLANKTON: ANALYSIS OF MODEL PROKARYOTE MICROORGANISM *PROCHLOROCOCCUS MARINUS*
- 425 **Zhang, C. Y.;** Ma, H. R.; Duan, T. H.; Xu, D. J.: A NOVEL ALGORITHM TO ESTIMATE ALGAL BLOOM COVERAGE TO SUB-PIXEL RESOLUTION IN LAKE TAIHU
- 426 **Xu, D. J.;** Wang, R. Z.; Ma, H. R.: STUDY ON DATA ASSIMILATION OF CHLOROPHYLL-A CONCENTRATION IN LAKE TAIHU BASED ON ENKF
- 427 **Kim, J.;** Kandasamy, G.; Kim, H. G.: PHOTOSYNTHETIC PERFORMANCE AND PIGMENT CONCENTRATION OF *GRATELOPIA ASIATICA* (HALYMENIACEAE, RHODOPHYTA) FROM DIFFERENT DEPTHS
- 428 **Fisher, N. L.;** Halsey, K. H.: PHOTOSYNTHETIC ENERGY ALLOCATION IN *THALASSIOSIRA PSEUDONANA* IN RESPONSE TO LIGHT LIMITATION
- 429 **Sawyers, J. E.:** COMPARISON OF NATURAL AND ARTIFICIAL SUBSTRATES IN RHODE ISLAND WADEABLE STREAMS FOR DEVELOPMENT OF NUMERIC NUTRIENT CRITERIA
- 430 Beasley, M. W.; **Greenwood, J. L.:** DIATOM BIODIVERSITY OF NORTH BRANCH PAW PAW CREEK, A STREAM NEAR REELFOOT LAKE, NORTHWEST TENNESSEE.

129 P Organic Matter Processing - Poster Session

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David Manning, manningd@uga.edu

Location: Exhibit Hall

- 467 **Mehner, T.;** Brothers, S.; Scharnweber, K.; Syväranta, J.; Hilt, S.: HOW ALLOCHTHONOUS IS A LAKE? COMPARISON OF CONSUMER DIETS, PRIMARY AND SECONDARY PRODUCTION AND CARBON BALANCES IN TWO EXPERIMENTALLY-SUBSIDIZED LAKES
- 468 **Wear, E. K.;** Carlson, C. A.; Nelson, N.; Guillocheau, N.; Siegel, D.: EFFECTS OF PHOTBLEACHING ON DISSOLVED ORGANIC MATTER BIOAVAILABILITY TO BACTERIOPLANKTON IN AN UPWELLING-DRIVEN COASTAL SYSTEM
- 469 **Robbins, C. J.;** King, R. S.; Alyse, D. Y.; Walker, C. M.; Jeff, A. B.: LOW-LEVEL ADDITION OF DISSOLVED ORGANIC CARBON INCREASES NITROGEN UPTAKE AND BACTERIAL BIOMASS PRODUCTION IN AN ALASKAN HEADWATER STREAM

^(*) represents Tutorial presentations

- 470 Fuller, C.; Evans-White, M.; **Entrekin, S.**: DIPTERA GROWTH RESPONSE TO A GRADIENT OF DETRITAL STOICHIOMETRY
- 471 **Hooker, K. V.**; Kostka, P. K.; Hockaday, W. C.; Walker, C. M.; Whigham, D. F.; King, R. S.: NUCLEAR MAGNETIC RESONANCE REVEALS EFFECTS OF NUTRIENT ENRICHMENT ON LEAF LITTER BREAKDOWN IN ALASKAN HEADWATER STREAMS
- 472 **Lu, K.**; Liu, Z.; Gardner, W. S.: USING A 15N LABELED TETRAPEPTIDE TO TRACE THE FATES OF NITROGEN AFTER DEGRADATION IN COASTAL SEAWATER
- 473 **Silva-Araújo, M.**; Silva-Junior, E. F.; Zandonà, E.; Tromboni, F.; Lourenço Amorim Pereira, C.; Feijó de Lima, R.; Moulton, T. P.; Thomas, S. A.: THE EFFECTS OF LAND COVER ON LEAF BREAKDOWN AND SECONDARY PRODUCTION IN ATLANTIC RAIN FOREST STREAMS IN BRAZIL
- 474 **Tacik, L. R.**; Choi, A.; Gregoriou, G. N.; Martin, C.; Peters, K. D.; Fortino, K.: THE DECOMPOSITION OF ALLOCHTHONOUS DETRITUS IN MAN-MADE PONDS IN CENTRAL VIRGINIA
- 475 Johnson, K. S.; **Coons, A. L.**; Green, A.; Nihiser, B.: EFFECTS OF DISSOLVED ALUMINUM ON RESPIRATION AND ORGANIC MATTER PRODUCTION BY TWO STREAM DETRITIVOVERS: A CRANEFLY AND LIMNOPHILID CADDISFLY
- 476 Ritchie, J.; **Balczon, J. M.**: THE RELATIONSHIP BETWEEN TOTAL PHOSPHORUS AND ALKALINE PHOSPHATASE ACTIVITY DERIVED FROM EUTROPHIC POND SEDIMENTS.
- 477 **Reeves, T. G.**; Colon-Gaud, C.: LEAF LITTER DECOMPOSITION AND MACROINVERTEBRATE ASSEMBLAGES ALONG A LONGITUDINAL GRADIENT OF THE OGEECHEE RIVER IN SOUTHEAST GA
- 478 **Smarrt, A.**; Scott, J. T.; Evans-White, M. A.: PATTERNS IN STREAM DETRITAL MICROBIAL P-LIMITATION OVER TIME WITH LITTER TYPE, STOICHIOMETRY, AND STREAM WATER PHOSPHORUS ENRICHMENT
- 479 **Goehrig, T. J.**; Franks, K.; Colon-Gaud, C.: LEAF DECOMPOSITION IN A 6TH ORDER BLACKWATER RIVER IN THE SOUTHEASTERN COASTAL PLAIN: A 2-YEAR STUDY OVER DIFFERING HYDROLOGIC REGIMES
- 480 **Walker, R. H.**; Orr, M.; Miller, S. W.: ASSESSING THE ROLE OF SPECIES EXTIRPATION ON LEAF DECOMPOSITION IN TWO STREAMS OF THE INTERMOUNTAIN WEST, UTAH
- 554 **Shin, W. S.**; Na, K. R.; Kim, Y. K.: ADSORPTION CHARACTERISTICS OF METAL IONS OF PRETREATED RECYCLED AGGREGATE
- 555 **Ishiyama, N.**; Sueyoshi, M.; Nakamura, F.: BIODIVERSITY AND ENDEMIC SPECIES DISTRIBUTIONS OF FRESHWATER FISH IN AN AGRICULTURAL LANDSCAPE, NORTHERN JAPAN: THE WETLAND IMPORTANCE
- 556 **Yoshimura, M.**; Akama, A.: RADIOACTIVE CONTAMINATION OF AQUATIC ANIMALS IN STREAM IMPACTED BY THE FUKUSHIMA NUCLEAR POWER PLANT ACCIDENT
- 557 **Buys, D. J.**; Sellers, K.; Koster, R. A.: BENTHIC MACROINVERTEBRATE COMMUNITY DATA COLLECTED FROM DEPOSITIONAL, EROSIONAL AND SUBSURFACE HABITATS TO HELP SELECT THE REMEDY FOR A SMALL STREAM SITE
- 558 **Kim, Y. K.**; Woo, E. J.; Shin, W. S.: CHARACTERISTICS OF ADSORPTION FOR CR(VI) USING MODIFIED ACTIVATED CARBON
- 559 **Beas, B. J.**; Smith, L. M.: AMPHIBIAN COMMUNITY RESPONSES TO WETLAND RESTORATION IN RAINWATER BASIN PLAYA WETLANDS
- 560 **Fairchild, M. P.**: JEEPS IN CREEKS: EFFECTS OF OFF-HIGHWAY VEHICLE ROADS ON HEADWATER STREAMS IN COLORADO, USA
- 561 **Pillsbury, R. W.**; Hollandsworth, D.: NATIVE CLAM CONSERVATION: EVIDENCE THAT SMALL EFFORTS CAN HAVE A BIG IMPACT ON THE PERSISTENCE OF NATIVE CLAM POPULATIONS.
- 562 Poquette, S. R.; Youngquist, T.; **Whitlow, W. L.**: RUNNING AMOK IN THE MUCK: INVESTIGATING URBAN CREEKS AND RESTORED WETLANDS IN THE DUWAMISH RIVER
- 563 **Velasco, K. Z.**; Mendez, P. K.; O'Dowd, A. P.; Leventhal, R.; Chin, A.: BENTHIC MACROINVERTEBRATE COMMUNITY RESPONSE OF SELF-ORGANIZING STEP-POOL RESTORATION IN WILDCAT CREEK (ALAMEDA CO., CA, U.S.A)
- 564 **Lawrence, D. J.**; Gascon, C.: THE SCORECARD APPROACH TO ACHIEVING MEASURABLE OUTCOMES FOR FRESHWATER FISH CONSERVATION
- 565 **Cao, Y.**; Stodola, A.; Shasteen, D.; Douglass, S.; Holtrop, A.; Cummings, K.: DISTRIBUTIONS AND DIVERSITY OF MUSSEL SPECIES IN WADEABLE STREAMS OF ILLINOIS
- 566 **Choi, R. Y.**; Kim, J. G.: PALEOECOLOGICAL PERSPECTIVES OF ANTHROPOGENIC IMPACTS IN SEOICHEON, KOREA
- 567 **Hough-Snee, N. W.**; Kasprak, A. k.; Wheaton, J. M.; Bouwes, N.; Roper, B. B.; Meredith, C. S.: ENVIRONMENTAL DRIVERS OF INSTREAM WOOD: MODELS FROM THE COLUMBIA RIVER BASIN, USA.
- 568 **Kaster, J. L.**; Groff, C. M.: Re-establishment of Hexagenia Mayflies in Lower Green Bay, Lake Michigan
- 569 **Lois, S.**; Cowley, D.; Outeiro, A.; San Miguel, E.; Amaro, R.; Ondina, P.: INTEGRATING BIOTIC INTERACTIONS IN DISTRIBUTION AND ABUNDANCE MODELS TO UNDERSTAND SPATIAL PATTERNS AND TO ADDRESS CONSERVATION IN RIVER ECOSYSTEMS
- 134 P Aquatic Conservation And Restoration - Poster Session**
Chair(s): David T. Zanatta, zanat1d@cmich.edu
Julie Zimmerman, julie_zimmerman@fws.gov
Brian G. Laub, laubbriang@gmail.com
Location: Exhibit Hall
- 137 P Ecology Of Fish And Other Aquatic Vertebrates - Poster Session**
Chair(s): Don Schloesser, dschloesser@usgs.gov
David Janetski, janetski88@gmail.com
Location: Exhibit Hall

- 581 **Watt, C. R.;** Swanson, C. A.; Miller, D. A.; Esposito, A. C.; May, C. L.: HOW BROOK TROUT ADAPT BODY COLORATION TO MATCH SUBSTRATE CONDITIONS AND DOMINANCE HIERARCHIES
- 582 **Kaylor, M. J.;** Warren, D. R.: RIPARIAN FOREST CONTROLS ON STREAM LIGHT AND ASSOCIATED IMPACTS ON PRIMARY PRODUCTION AND GROWTH OF YOUNG-OF-YEAR TROUT IN HEADWATER STREAMS
- 583 **Fisher, J. S.;** Snow, K. J.; May, C. L.: REDUCED BENTHIC COVER RESULTS IN INCREASED AGGRESSION AND ALTERED FEEDING OF NATIVE BROOK TROUT: TESTING EFFECTS OF FINE SEDIMENT IN ARTIFICIAL CHANNELS
- 584 **Laub, B. G.;** Wheeler, K.; Meredith, C.; Null, S.; Roper, B.; Walker, R.; Wurtsbaugh, W.; Heredia, N.; Mohn, H.; Pluth, D.: APPROACHES FOR STUDYING FISH PRODUCTION: DO RIVER AND LAKE RESEARCHERS HAVE DIFFERENT PERSPECTIVES?
- 585 **Kuzniar, Z. J.;** Snyder, E. B.; VanKirk, R. W.: SEASONAL EFFECTS OF MACROPHYTE GROWTH ON RAINBOW TROUT HABITAT IN THE HENRY'S FORK OF THE SNAKE RIVER, IDAHO
- 586 **Robillard, K. J.;** Colón-Gaud, J. C.; Vives, S. P.: EFFECTS OF SUBSTRATE MANIPULATIONS ON FISH ASSEMBLAGES IN SOUTHEASTERN COASTAL PLAIN RIVER SYSTEMS
- 587 **Kilibarda, S. L.;** Smith, A. S.; Little, A. M.; Church, J. O.: ENVIRONMENTAL FACTORS INFLUENCING WOOD FROG (*LITHOBATES SYLVATICUS*) TADPOLE SIZE IN A GLACIATED WISCONSIN LANDSCAPE
- 588 **Marques, P. S.;** Costa, M. F.; Corrêa, C. D.; Marinho, M. M.; Mazzoni, R.: BEHAVIORAL CHANGE UNDER REDUCED SPATIAL SCALE: DOES IT MATTERS?
- 589 **Dittman, A. H.;** May, D.; Hoppe, P. D.: OLFATORY IMPRINTING AND HOMING IN PACIFIC SALMON: LINKAGES BETWEEN SENSORY BIOLOGY AND STREAM ECOLOGY
- 601 **Cook, S. C.;** King, R. S.; Robbins, C.; Yeager, A.; Walker, C.: MACROINVERTEBRATE ABUNDANCE DRAMATICALLY INCREASES IN RESPONSE TO LOW-LEVEL DISSOLVED ORGANIC CARBON ADDITIONS IN AN ALASKA HEADWATER STREAM
- 602 **Kroll, S. A.;** Ringler, N. H.; De las Heras, J.: PREDICTED EFFECTS OF CLIMATE CHANGE ON AQUATIC INSECT COMMUNITIES IN THE SHORT-TERM IN CASTILLA-LA MANCHA, SPAIN
- 603 **Scharold, J. V.;** Kelly, J. R.; Corry, T. D.: STATUS OF THE AMPHIPOD *DIPOREIA* SPP. IN LAKE SUPERIOR, 2011
- 604 **Amsler, C. D.;** Schoenrock, K. M.; Aumack, C. F.; Zamzow, J. P.; Huang, Y. M.; Mc Clintock, J. B.; Baker, B. J.: CHEMICAL MEDIATION OF MUTUALISTIC INTERACTIONS BETWEEN MACROALGAE AND MESOGRAZERS STRUCTURE UNIQUE COASTAL COMMUNITIES ALONG THE WESTERN ANTARCTIC PENINSULA
- 605 **Hiatt, D. L.;** King, R. S.; Back, J. A.; Doyle, R. D.: WATER VELOCITY AND NUTRIENT AVAILABILITY CONTROL PERIPHYTON ENZYME ACTIVITY IN SUBTROPICAL LIMESTONE STREAMS
- 606 **Demetropoulos, C. L.;** Pareti, J. S.; Baskin, J. N.: INFLUENCE OF HABITAT DYNAMICS & MACROINVERTEBRATE COMPOSTION ON DISTRIBUTION, ABUNDANCE & CONDITION OF THREATENED SANTA ANA SUCKER (*CATOSTOMUS SANTAANAE*)
- 607 **Henderson, S. E.;** Clinton, S.: FLOOD RESPONSES IN MACROINVERTEBRATE POPULATIONS IN RESTORED URBAN SYSTEMS
- 608 **Amsler, M. O.;** Young, R.; von Salm, J. L.; Amsler, C. D.; Lopez-Bautista, J. M.; McClintock, J. B.; Baker, B. J.: CRYPTIC GENETIC DIVERSITY CORRELATES WITH SECONDARY METABOLITE DIVERSITY IN ANTARCTIC *PLOCAMIUM CARTILAGINEUM*
- 609 **Beugly, J.;** Goforth, R. R.: MACROINVERTEBRATE PROCESSING AND COLONIZATION OF DIFFERENT CPOM SUBSIDIES WITHIN AND AMONG LANDSCAPES CORRISPONDING TO THOSE SUBSIDES

139 P Benthic Communities And Function - Poster Session

Chair(s): Brittney Hoemsen, brittney.hoemsen@usask.ca
Kevin H. Wyatt, khwyatt@bsu.edu

Location: Exhibit Hall

- 596 **Knorp, N. E.;** Murdock, J. N.: INVESTIGATING HERBIVORE-BIOFILM INTERACTIONS USING INVERTEBRATE EXCLUSION CAGES: A DESIGN COMPARISON
- 597 **Stauffer, N. J.;** Carter, J. L.; Fend, S. V.: SPATIAL VARIABILITY IN BENTHIC INVERTEBRATE ASSEMBLAGES IN UPPER KLAMATH LAKE, OREGON
- 598 **Silva, D. R.;** Ligeiro, R.; Hughes, R. M.; Callisto, M.: VISUALLY DETERMINED STREAM MESOHABITATS INFLUENCE BENTHIC MACROINVERTEBRATE ASSESSMENTS IN HEADWATER STREAMS
- 599 **Sueyoshi, M.;** Tojo, K.; Ishiyama, N.; Nakamura, F.: THE RESPONSE OF AQUATIC INSECTS ALONG THE GRADIENTS OF AGRICULTURAL INTENSITY AND FLOOD MAGNITUDE
- 600 **Baumann, K. A.;** Scholl, E. A.; Rantala, H. M.; Whiles, M. R.: MACROINVERTEBRATE COMMUNITY RESPONSES TO HYDROLOGIC EXTREMES IN A SOUTHERN ILLINOIS RIVER

143 P Invertebrate Biology And Life History

Chair(s): Timothy Caldwell, timothyacaldwell@unr.edu

Location: Exhibit Hall

- 666 **Fields, K. L.;** Baumgardner, D. E.: LIFE CYCLE AND COMMUNITY STRUCTURE OF ELMID BEETLES (COLEOPTERA: ELMIDAE) IN THE NAVASOTA RIVER, TEXAS.
- 667 **Pruski, S. K.;** Baumgardner, D. E.: LIFE CYCLE AND COMMUNITY STRUCTURE OF CADDISFLIES (INSECTA: TRICHOPTERA) IN THE NAVASOTA RIVER, TEXAS.
- 668 **Nesloney, K. A.;** Baumgardner, D. E.: LIFE CYCLE AND COMMUNITY STRUCTURE OF MAYFLIES (INSECTA: EPHEMEROPTERA) AND CHIRONOMIDS (INSECTA: CHIRONOMIDAE) IN THE NAVASOTA RIVER, TEXAS.
- 669 **Batko, K.;** McArdle, C.; Nicholson, M.; Stalter, C.; Pecor, K. W.: PHENOLOGY OF STREAM ARTHROPODS IN CENTRAL NEW JERSEY
- 670 **Wilson, R. C.;** Leslie, A. W.; Spadafora, E.; Lamp, W. O.: CITIZEN SCIENCE MEETS STREAM INSECTS: DETERMINATION OF THE SOURCE OF NUISANCE BLACK FLIES (DIPTERA: SIMULIIDAE) IN MARYLAND

- 671 **Perry, H. A.**; Kennedy, J. H.; Moulton, III, S. R.: USING NATURAL HISTORY COLLECTIONS TO ESTABLISH BASELINE DATA FOR THE BIOGEOGRAPHY OF TRICHOPTERA IN THE SOUTH-CENTRAL UNITED STATES.
- 672 **Evans, A. N.**; Gerth, W.; Wyss, L.; Roger, D. C.: THE ECOLOGY AND EXPANDED DISTRIBUTION OF DUMONTIA OREGONENSIS, THE SOLE MEMBER OF A PRIMITIVE CLADOCERAN FAMILY
- 673 Ortega, A.; Eggers, J. T.; **von Ende, C. N.**: ABUNDANCE OF LARVAL AND ADULT DRAGONFLIES OVER THREE YEARS AT A SHALLOW, FISHLESS POND IN NORTHERN ILLINOIS
- 674 **Levitan, C.**; Coe, K.; Gahan, K.; Gallery, C.: RESPIRATION OF SWIMMING AND STANDING MYSIS DILUVIANA, AND ITS EFFECTS ON SHRIMP LIFE CYCLE AND LONGEVITY
- 144 P Hydro-Ecology - Poster Session**
Chair(s): Carl Ruetz, cruetzi@uconn.edu
Kathleen Rugel, keen55@hotmail.com
Clara Mendoza-Lera, clara.mendozalera@b-tu.de
Alison P. O'Dowd, ap73@humboldt.edu
Location: Exhibit Hall
- 675 **Shinohara, R.**; Imai, A.; Kawasaki, N.; Komatsu, K.; Kohzu, A.; Miura, S.; Sano, T.; Satou, T.; Tomioka, N.; Shimotori, K.: TEMPORAL AND VERTICAL CHANGES IN SEDIMENT P COMPOUNDS IN LAKE KASUMIGAURA, JAPAN – A ³¹P NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY STUDY
- 676 **Eberhart, S. R.**; Bledsoe, B. P.: DEVELOPING FLOW-ECOLOGY RELATIONSHIPS IN SOUTHERN CALIFORNIA
- 677 **Kasahara, T.**; Ikemi, H.; Sato, T.; Kuroki, H.; Shinozuka, K.; Minagawa, T.; Shimatani, Y.: STREAM-GROUNDWATER EXCHANGE IN NEIGHBORING STREAMS WITH DIFFERENT GEOLOGY
- 678 **Ryo, M.**; Sui, P.; Iwasaki, Y.; Saavedra, O.; Yoshimura, C.: MAPPING ALTERED AND NATURAL FLOW REGIME USING A DISTRIBUTED HYDROLOGICAL MODEL: DOES DAM ALWAYS INCREASE THE DEGREE OF ALTERATION?
- 679 **McCormick, P. V.**; Cowart, L. C.; Golladay, S. W.: EFFECTS OF REDUCED STREAM FLOWS ON INSTREAM HABITAT IN THE LOWER FLINT RIVER BASIN, GEORGIA, USA
- 680 **Carpenter, K. D.**; Rounds, S. A.: PLANKTON COMMUNITIES AND SUMMERTIME DECLINES IN ALGAL ABUNDANCE ASSOCIATED WITH LOW DISSOLVED OXYGEN IN THE TUALATIN RIVER, OREGON
- 681 **Baker, G. R.**; Battaglia, L. L.: EFFECTS OF ALTERED HYDROLOGY ON FLOODPLAIN FORESTS IN THE CACHE RIVER BASIN
- 145 P Systematics And Taxonomy Poster Session**
Chair(s): Edward Theriot, etheriot@austin.utexas.edu
Karolina Fucikova, karolina.fucikova@uconn.edu
Location: Exhibit Hall
- 682 **Henson, K. A.**; Baumgardner, D. E.: FIRST DESCRIPTION OF THE LARVAL STAGE OF *THRAULODES CENTRALIS* (EPHEMEROPTERA: LEPTOPHLEBIIDAE)
- 683 **Mendel, M. J.**; Adler, P. H.; Mendel, R. J.: BLACK FLY SPECIES INHABITING NORTHERN OHIO STREAMS, RIVERS AND NATURAL POND OUTLETS
- 684 **Preza, E.**; Kordabacheh, A.; Walsh, E. J.: CRYPTIC SPECIATION IN SESSILE ROTIFERS
- 685 **Graf, L.**; Yang, E. C.; Boo, G. H.; Boo, S. M.; Andersen, R. A.; Yoon, H. S.: SYSTEMATIC STUDY OF THE PHOTOSYNTHETIC HETEROKONTS BASED ON MOLECULAR PHYLOGENETIC ANALYSIS
- 686 **Al-Saffar, M. A.**; Morse, J. C.; Al-Obaidi, G. S.; Berg, D. J.: KEY TO THE FAMILIES, SUBFAMILIES, GENERA, AND SUBGENERA OF MAYFLY LARVAE IN KURDISTAN REGION, NORTHERN IRAQ
- 687 **Talavera, A. Z.**; Baumgardner, D. E.: AN ANALYSIS OF GILL STRUCTURE OF SELECTED SPECIES IN THE GENUS *THRAULODES* (EPHEMEROPTERA: LEPTOPHLEBIIDAE)
- 688 **Schoenlein-Crusius, I. H.**; Diniz, B. F.; Moro, L. B.; Boro, M.; Ishida, C. M.; Jesus, A. L.; Pires-Zottarelli, C. L.: DIVERSITY OF CONIDIAL FUNGI AFTER THE REOPENING OF THE
- 689 **Camargos, L. M.**; Pes, A. M.: SIX NEW SPECIES AND DESCRIPTIONS OF IMMATURES OF BRAZILIAN *MARILIA* MLLER (TRICHOPTERA: ODONTOCERIDAE)
- 690 **Camacho, O.**; Schmidt, W.; Fredericq, S.: BROWN MACROALGAE (PHAEOPHYCEAE) GROWING FROM RHODOLITHS COLLECTED IN THE NW GULF OF MEXICO
- 691 **Kang, J.**; Lee, J.; Kim, M.: EVIDENCE FOR POLYPHYLETIC ORIGIN OF *ACROSORIUM* (DELESSERIACEAE, RHODOPHYTA) BASED ON *RBCL* AND *COI* SEQUENCES
- 692 **Lovell, A. C.**; Walsh, C. J.; Miller, A. D.: AN INVESTIGATION OF THE TAXONOMY OF *PARATYA AUSTRALIENSIS* IN MELBOURNE, AUSTRALIA USING MULTIPLE LINES OF EVIDENCE
- 693 **Lee, H.**; Kim, M.: TAXONOMIC PROBLEMS IN THE RED ALGAL FAMILY KALLYMENIACEAE (GIGARTINALES) FROM THE NORTHWESTERN PACIFIC
- 694 **Casamatta, D. A.**; Dvorak, P.; Hasler, P.; Poulickova, A.: *AMMOSOLINEA* (CYANOBACTERIA) GEN. NOV.: A NOVEL EPIPELIC CYANOBACTERIAL LINEAGE FROM FLORIDA, USA.
- 695 **Schuler, B. E.**; Zanatta, D. T.: GENETIC AND MORPHOLOGICAL DIVERSITY OF *PYGANODON GRANDIS* AND *PYGANODON LACUSTRIS* FROM THE BEAVER ISLAND ARCHIPELAGO, MICHIGAN
- 696 Pappas, M. G.; **McCourt, R. M.**; Hall, J. D.: SPIROGYRA, MOUGEOTIA AND ZYGNEMA: A MULTISCALE COMPARISON OF THE CORRELATION BETWEEN GENETIC VARIATION AND GEORGRAPHICAL DISTANCE
- 697 Starkenburg, S. R.; Kwon, K. J.; Jha, R. K.; McKay, C.; Jacobs, M.; Chertkov, O.; Twary, S.; Rocap, G.; **Cattolico, R. A.**: *NANNOCHLOROPSIS* ORGANELLAR GENOMES: NOVEL GENETIC VARIATIONS OCCUR IN KEY METABOLIC GENES.
- 698 **Phillips, N.**; Salomon, M.; Boore, J.; Braun, E.: COMPARATIVE GENOMICS OF HETEROKONT ORGANELLES

146 P General Phycology - Poster Session

Chair(s): John W. Stiller, stillerj@ecu.edu
Wayne Litaker, Wayne.Litaker@noaa.gov

Location: Exhibit Hall

- 699 **Woods, A. L.**; Smith, G. J.: A TRAIT BASED ASSESSMENT OF STRAIN DIVERSITY IN THE DIATOM PSEUDO NITZSCHIA SUGGESTS A ROLE FOR ROS SIGNALING IN THE DOMOIC ACID BIOSYNTHETIC PATHWAY
- 700 **Jung, M. G.**; Koo, B. C.; Han, J. W.; Kim, G. H.: COLD STRESS AND CO₂ INFLUX REGULATE THE EXPRESSION OF EARLY LIGHT INDUCIBLE PROTEINS (ELIPS) IN *CHLAMYDOMONAS REINHARDTII*
- 701 **Han, J. H.**; Han, J. W.; Jeong, H. J.; Zuccarello, G. C.; Kim, G. H.: GENOMIC INSIGHTS : PHOTOSYNTHETIC GENES IN HETEROTROPHIC DINOFLAGELLATES *PFIESTERIA PISCICIDA* AND *STOECKERIA ALGICIDA*
- 702 **Hovde, B. T.**; Starkenburg, S. R.; Hunsperger, H.; Deodato, C.; Jha, R.; Monnat, R. J.; Cattolico, R. A.: HAPTOPHYTE ORGANELLAR GENOMES AND CHRYSOCHROMULINA TOBIN: EVOLUTIONARY INSIGHTS FROM LARGE AND SMALL REPEAT STRUCTURES
- 703 Mecham, S. L.; Deobald, K. N.; Miller, M. S.; **Cole, D. G.**: CO-ISOLATION OF A EUGLENID AND BACTERIAL STRAINS
- 704 **Garcia-Soto, G. C.**; Lopez-Bautista, J. M.: THE AMANSIEAE (RHODOMELACEAE) REVISITED: A MULTIGENE APPROACH

147 P Applied Phycology

Chair(s): James L. Wee, wee@loyno.edu

Location: Exhibit Hall

- 705 **Wu, S. C.**; Hood, C. S.; Pinckney, J. L.; Wee, J. L.: ASSESSING PERIPHYTON ACCUMULATION ON HUMAN HAIR SUBMERGED IN AQUATIC ENVIRONMENTS FOR DETERMINING THE POSTMORTEM SUBMERSION INTERVAL (PMSI)
- 706 **Graham, J. M.**; Piotrowski, M. J.; Novoveska, L.: CARBON DIOXIDE ENHANCES MICROALGAL GROWTH IN WASTEWATER EFFLUENTS
- 707 Novoveská, L.; **Henley, W. J.**: A TWO-STAGE CONTINUOUS CULTURE SYSTEM FOR MICROALGAE
- 708 **Lee, J.**; Shah, M.; Samarakoon, K.; Jeon, Y.; An, S.; Ko, J.; Lakmal, H.; Lee, J.: POTENTIALITY OF BETHIC DINOFLAGELLATE CULTURES AND SCREENING OF THEIR BIOACTIVITIES IN JEJU ISLAND, KOREA
- 709 **Cobbs, M. E.**: EFFECTS OF MEDIA COMPOSITION ON THE NATURAL AGGREGATION OF *DUNALIELLA* SP.
- 710 **Franks, D. T.**: OPTIMIZATION OF A TWO-STAGE CONTINUOUS CULTURE SYSTEM FOR OLEAGINOUS MICROALGAE PRODUCTION WITH PILOT SCALE INTENTIONS
- 711 **Lauran Liggan, M.**: THE CHANGING TISSUE PROPERTIES OF *FUCUS* IN WAVE SWEPT ENVIRONMENTS
- 712 Wilson, M. L.; **Yeager-Armstaed, M. M.**; Parsons-White, A.: THE EFFICACY OF A NOVEL CONTROL STRATEGY FOR GOLDEN ALGAE MANAGEMENT IN HATCHERIES

Friday, 5/23/2014 Orals

005 Robust Restoration Of Freshwater Ecosystems In The Face Of Uncertainty

Chair(s): Samantha Capon, s.capon@griffith.edu.au
Michael Reid, mreid24@une.edu.au

Location: Oregon Ballroom

- 10:00 **Hondula, K. L.**; Palmer, M. A.: RESTORATION AS MITIGATION: ECOLOGICAL VS REGULATORY APPROACHES TO EVALUATING STREAM AND WETLAND MITIGATION*
- 10:15 **Hermoso, V.**; Pantus, F.; Olley, J.; Linke, S.; Mugodo, J.; Lea, P.: REHABILITATION PLANNING FOR FRESHWATER ECOSYSTEMS: COPING WITH MULTIPLE OBJECTIVES IN COMPLEX DECISION MAKING SCENARIOS*
- 10:30 **Stromberg, J. C.**: JUST ADD WATER! RESTORATION OF DESERT RIVERS IN URBANIZING REGIONS *
- 10:45 **Bond, N. R.**; Thomson, J. R.; Reich, P.: CAN THE INCLUSION OF PREDICTED RANGE-SHIFTS IMPROVE THE OUTCOMES FROM CONSERVATION AND RESTORATION EFFORTS IN FRESHWATER ECOSYSTEMS? *
- 11:00 **Chambers, J. M.**: RESTORATION UNDER CLIMATE CHANGE: ANTICIPATING SHIFTING GOALPOSTS*
- 11:15 **McIntosh, A. R.**; Graham, S. E.; O'Brien, J. M.; Febria, C. M.; McHugh, P. A.; Greig, H. S.; Harding, J. S.: USING FOOD-WEB THEORY TO ENHANCE THE EFFECTIVENESS OF AQUATIC RESTORATION
- 11:30 **Capon, S. J.**; Reid, M. A.: ENVISIONING THE FUTURE OF FRESHWATER ECOSYSTEM RESTORATION: THE ROLE OF ECOLOGICAL SCIENCE IN THE NEW PARADIGM^T
- 13:30 **Reid, M. A.**; Gell, P. A.; Davidson, T. A.; Sayer, C. D.; Tibby, J.; Fluin, J.: BEYOND BENCHMARKING: THE IMPORTANCE OF LONG-TERM RECORDS TO RESTORATION OF FRESHWATER ECOSYSTEMS*
- 13:45 **Barnas, K. A.**; Hamm, D. E.; Diaz, M. C.; Katz, S. L.; Jordan, C. E.: IS HABITAT RESTORATION TARGETING RELEVANT ECOLOGICAL NEEDS FOR PACIFIC SALMON ACROSS THE PACIFIC NORTHWEST
- 14:00 **Palinkas, C. M.**; Engelhardt, K. A.; Sanders, G.; Delgado, P.; Milton, M.: THE ROLE OF SEDIMENT AND VEGETATION FEEDBACKS IN TIDAL FRESHWATER MARSH RESTORATION
- 14:15 **White, S. M.**; Justice, C. J.; McCullough, D.; See, K.; Sedell, E.: JEWELS OF INDRA'S NET: GUIDING RESTORATION FOR COLUMBIA RIVER SALMONIDS USING INTERCONNECTED, HOLISTIC MEASURES OF ECOSYSTEM PROCESS
- 14:30 **Danehy, R. J.**; Bilby, R.; Reber, P. L.; Owen, S.; Moberly, E. R.; Duke, S. D.: ARE ADADROMOUS SALMON CAUGHT BETWEEN PAST LAND USE AND CLIMATE CHANGE IN OREGON'S WILLAMETTE VALLEY?
- 14:45 **Pasternack, G. B.**; Brown, R. A.: LESSONS IN RESTORATION OF REGULATED GRAVEL BED RIVERS TO AID PACIFIC SALMONID POPULATIONS
- 15:00 **Smit, J. T.**; Steinman, A. D.: WETLAND SEDIMENT NUTRIENT FLUX IN RESPONSE TO HYDROLOGIC RECONNECTION AND CLIMATE WARMING
- 15:15 **Finlayson, C. M.**: RESTORING WETLANDS OF INTERNATIONAL IMPORTANCE - BASELINES & TARGETS*

006 Advancing The Science And Management Of Temporary Aquatic Habitats

Chair(s): Thibault Datry, thibault.datry@irstea.fr
Jenny Davis, Jenny.Davis@monash.edu
Michael T. Bogan, michaelthomasbogan@gmail.com
Tiffany Schriever, schrievt@onid.orst.edu
Catherine Leigh, catherine.leigh@irstea.fr
Raphael Mazor, raphaelm@sccwrp.org

Location: B 114

- 10:00 **Rosset, V.**; Ruhi, A.; Datry, T.: PARALLELS AND CONTRASTS IN BIOTIC RESPONSES TO DRYING BETWEEN LOTIC AND LENTIC TEMPORARY FRESHWATER SYSTEMS
- 10:15 **Leigh, C.**; Datry, T.; Bonada, N.; Boulton, A. J.; Larned, S. T.: POST-DRYING RECOVERY BY AQUATIC INVERTEBRATES IN INTERMITTENT RIVERS: A CROSS-CLIMATE STUDY
- 10:30 **Schriever, T. A.**; Bogan, M. T.; Boersma, K. S.; Williams, D. D.; Lytle, D. L.: RESPONSES OF AQUATIC INVERTEBRATE COMMUNITIES TO HYDROLOGY
- 10:45 **Koch, J. C.**; Schmutz, J.; Gurney, K. E.; Laske, S.; Wipfli, M.; Fondell, T.: THE EFFECT OF EPHEMERAL PONDS, STREAMS, AND LARGE LAKES ON NUTRIENT FLUXES, ECOSYSTEMS AND WILDLIFE OF THE ARCTIC COASTAL PLAIN OF ALASKA
- 11:00 **Davis, J. A.**; Sim, L. L.; Pinder, A.; Murphy, N.; Brim Box, J.; Sheldon, F.; Thompson, R.; Sunnucks, P.: LANDSCAPE-SCALE PATTERNS IN THE DIVERSITY AND DISTRIBUTION OF INVERTEBRATE COMMUNITIES OF TEMPORARY AQUATIC HABITATS ACROSS ARID AUSTRALIA
- 11:15 **Hill, M. J.**; Wood, P. J.: THE INFLUENCE OF POND CONNECTIVITY ON MACROINVERTEBRATE COMMUNITY COMPOSITION OF EPHEMERAL PONDS
- 11:30 **Smith, C. R.**; McCormick, P. V.; Golladay, S. W.; Covich, A. P.: INFLUENCE OF STREAM INTERMITTENCY ON AQUATIC INVERTEBRATE ASSEMBLAGES IN THE LOWER FLINT RIVER BASIN, SOUTHWESTERN GA, USA
- 11:45 **McCluney, K. E.**; Sabo, J. L.; Stromberg, J. C.: SHIFTS IN RIPARIAN ARTHROPOD ASSEMBLAGES AND DIVERSITY THROUGH DIRECT AND INDIRECT EFFECTS OF DECREASING FLOWS ALONG A SEMI-ARID RIVER
- 13:30 **Kneitel, J. M.**: AQUATIC-TERRESTRIAL INTERACTIONS IN TIME: TEMPORAL SUBSIDY EFFECTS IN CALIFORNIA VERNAL POOLS
- 13:45 **Murphy, A. L.**; Adams, M.; Lemmon, A. R.; Moriarty Lemmon, E.; McNeil, D.; Unmack, P. J.; Thompson, R. M.; Davis, J. A.; Sunnucks, P.: PERSISTENCE AND CONNECTIVITY OF FISH POPULATIONS IN THE TEMPORARY AQUATIC HABITATS OF ARID CENTRAL AUSTRALIA
- 14:00 **Razeng, E. E.**; Smith, A. E.; Brim Box, J.; Lemmon, A. R.; Moriarty Lemmon, E.; Sunnucks, P.; Davis, J. A.: CONTRASTING PATTERNS OF GENE FLOW AMONG AQUATIC INSECTS IN AUSTRALIAN DESERT WATERS
- 14:15 **Magoulick, D. D.**; Lynch, D. T.: EFFECTS OF SEASONAL DRYING ON FISH AND CRAYFISH ASSEMBLAGES IN SIMULATED INTERMITTENT STREAMS

(*) represents Invited presentations

- 14:30 **Bogan, M. T.**: MACROINVERTEBRATE COMMUNITY ASSEMBLY FOLLOWING FLOW RESUMPTION IN AN INTERMITTENT DESERT STREAM
- 14:45 **Vander Vorste, R.**; Malard, F.; Datry, T.: CONTRIBUTION OF THE HYPORHEIC ZONE TO COMMUNITY RESILIENCE IN INTERMITTENT RIVERS: A FIELD EXPERIMENT
- 15:00 **Hay, S. E.**; Jenkins, K. M.; Kingsford, R. T.: CONTRASTING USE OF DRY SEDIMENT AS A REFUGE BY AQUATIC INVERTEBRATES IN DIFFERENT CLIMATE REGIONS
- 15:15 **Gascón, S.**; Boix, D.; Borthagaray, A. I.; Sala, J.; Arim, M.; Ávila, N.; Romo, S.; López-Flores, R.; Quintana, X. D.: FACTORS DETERMINING LIPID CONTENT, TROPHIC POSITION AND NICHE DIVERSIFICATION AT THE BASE OF THE FOOD WEB OF TAXA INHABITING TEMPORARY WETLANDS
- 16:00 **Wallace, R. L.**; Walsh, E. J.; Smith, H. A.; Schröder, T.: TEMPORARY WATERS IN ISOLATED DESERT HABITATS: REPOSITORIES OF ROTIFER BIODIVERSITY
- 16:15 **Beller, E. E.**; Grossinger, R. M.; Dusterhoff, S.: UPSIDE-DOWN STREAMS: THE HISTORICAL ECOLOGY OF INTERMITTENT ALLUVIAL RIVERS IN CALIFORNIA
- 16:30 **Marchetti, M. P.**; Limm, M.; Lorig, B.; Benigno, G.; Bowen, H.: CRITICAL ROLE OF SEASONAL TRIBUTARIES FOR NATIVE AQUATIC BIOTA IN THE SACRAMENTO RIVER
- 16:45 **Carlisle, D. M.**; Wolock, D. M.; Wieczorek, M.: STREAMFLOW IN CALIFORNIA'S XERIC REGIONS: TOWARDS UNDERSTANDING AND PREDICTION
- 17:00 **Mazor, R. D.**; Ode, P. R.; Denton, M.; Stein, E.: TECHNICAL OBSTACLES AND SOLUTIONS FOR THE MANAGEMENT OF TEMPORARY STREAMS: WHAT ARE WESTERN STATES DOING, AND HOW CAN RESEARCHERS HELP?
- 17:15 **Cover, M. R.**; Lunde, K. B.: A BENTHIC MACROINVERTEBRATE INDEX OF BIOLOGICAL INTEGRITY (IBI) FOR TEMPORARY STREAMS OF THE SAN FRANCISCO BAY AREA, CALIFORNIA
- 17:30 **Richards, D. C.**; Spindler, P.: ARIZONA'S NEW TOLERANCE INDEX FOR INTERMITTENT STREAM BIOASSESSMENTS: ARIZONA/NEW MEXICO MOUNTAINS ECOREGION
- 17:45 **Casanova, M. T.**: MANAGEMENT OF TEMPORARY AQUATIC HABITATS IN AN AGRICULTURAL LANDSCAPE: AUSTRALIAN EXAMPLES
- 10:45 **Argerich, A.**; Johnson, S. L.: SHARING AND INTEGRATING DATA: SOME LESSONS FROM STREAMCHEMDB (A WEB-ACCESSIBLE STREAM CHEMISTRY DATABASE)
- 11:00 **Goodrich, D. C.**; Armendariz, G.; Heilman, P.; Nichols, M.; Moran, S. M.; Steiner, J.; Sadler, J.; Walbridge, M.: LESSONS LEARNED FROM THE USDA-ARS EXPERIMENTAL WATERSHED NETWORK
- 11:15 **Jones, J. B.**; Whiles, M. R.; Dodds, W. K.; Johnson, S. L.; Paul, M. J.; Riis, T.; Zeglin, L. H.: THE STREAM RESILIENCY RESEARCH COORDINATION NETWORK
- 11:30 **Fitzgerald, M.**; Goodman, K. J.: ESTABLISHING STANDARDIZED GROUNDWATER OBSERVATIONS IN THE NEON NETWORK
- 11:45 **Bohall, C.**; Vance, J.; Fitzgerald, M.; McLaughlin, B.; Roehm, C.; Utz, R.; Goodman, K.; Parker, S.; Stewart, J.: THE NEON AQUATIC INSTRUMENT SYSTEM: A SUITE OF NEAR-CONTINUOUS WATER QUALITY MONITORS PRODUCING HIGH FREQUENCY DATA IN SUPPORT OF ECOLOGICAL MONITORING
- 13:30 **Moufaddal, W. M.**: THE NILE DELTA IN THE ANTHROPOCENE: DRIVERS OF COASTAL CHANGE AND IMPACTS ON LAND-OCEAN MATERIAL TRANSFER AND MARINE BIOGEOCHEMISTRY
- 13:45 **MacKenzie, R. A.**; Foulk, P. B.; Klump, J. V.; Weckerly, K.; Purbopusito, J.; Murdiyarso, D.: USING A PACIFIC-WIDE MONITORING NETWORK TO UNDERSTAND RESILIENCE OF MANGROVES TO SEA LEVEL RISE
- 14:00 **Kirkpatrick, B. A.**; Jochens, A. E.; Lloyd, L.; Kohler, K.; Nowlin, W. D.: INTEGRATION OF WATER QUALITY MONITORING DATA SETS INTO THE GULF OF MEXICO COASTAL OCEAN OBSERVING SYSTEM DATA PORTAL
- 14:15 **Ostrovsky, I.**; Yacobi, Y. Z.: SEDIMENTATION PROCESSES IN A LARGE LAKE
- 14:30 **Mayorga, E.**; Cohen, S.; Kettner, A. K.; Harrison, J. A.; Syvitski, J. M.: 50-YEAR TRENDS IN SEDIMENTS AND PARTICULATE NUTRIENTS AND CARBON IN LARGE RIVERS: A MODEL-BASED ANALYSIS
- 14:45 **Stammler, K. L.**; Taylor, W. D.; Mohamed, M. N.: COMPARING LONG TERM TRENDS IN TOTAL PHOSPHORUS CONCENTRATIONS AND LOADINGS IN LAKE SIMCOE TRIBUTARIES
- 15:00 **Potter, J. D.**; Snyder, L.; Mulukutla, G.; McDowell, W. H.: ADDRESSING ANTHROPOGENIC EFFECTS ON AQUATIC BIOGEOCHEMISTRY USING A DISTRIBUTED SENSOR NETWORK IN NEW HAMPSHIRE

007 Distributed Long-Term, High Frequency Networks For Ecological Data Collection: Advantages, Hurdles, And Applications

Chair(s): Ryan Utz, rutz@neoninc.org
Walter Dodds, wkdodds@ksu.edu

Location: E 142 - 144

- 10:00 **Kratz, T. K.**; Weathers, K. C.; Hanson, P. C.; Read, E. K.: GLEON: INTEGRATING NETWORKS OF PEOPLE, HARDWARE, AND DATA LEADS TO EFFECTIVE TEAM SCIENCE
- 10:15 **Hooper, R. P.**; Couch, A.; Pollak, J.; Martin, M.; Seul, M.: FROM VISION TO REALITY: MAKING DATA SERVICES USEFUL TO AQUATIC SCIENTISTS
- 10:30 **Pollak, J.**; Hooper, R.; Couch, A.; Martin, M.; Seul, M.; Arrigo, J.: THE CUAHSI WDC: NEXT GENERATION DATA SERVICES FOR THE WATER SCIENCE COMMUNITY

010 Eco-Evolutionary Dynamics In Aquatic Ecosystems

Chair(s): Eric P. Palkovacs, epalkova@ucsc.edu
Michael T. Kinnison, mkinnison@maine.edu

Location: B 115

- 10:00 **Palkovacs, E. P.**; Kinnison, M. T.; Turley, N. E.; Fryxell, D. C.; Hendry, A. P.; Post, D. M.: INTRODUCTION TO THE SPECIAL SESSION AND SYNTHESIS OF ECO-EVOLUTIONARY EFFECTS IN AQUATIC SYSTEMS*
- 10:15 **El-Sabaawi, R.**; Warbanski, M.; Matthews, B.; Rudman, S.: CHARACTERIZING THE ECOLOGICAL EFFECTS OF STICKLEBACK EVOLUTION: A STOICHIOMETRIC APPROACH *

^(*) represents Tutorial presentations

- 10:30 **Rudman, S. M.**; Schluter, D.: ECOLOGICAL CONSEQUENCES OF THE EVOLUTION OF REPRODUCTIVE ISOLATION IN THREESPINE STICKLEBACK
- 10:45 **Narwani, A.**; Hampton-Miller, C.; Herrin, J.; Vouaux, A.; Zhou, C.; Alexandrou, M. A.; Oakley, T. H.; Cardinale, B. J.: COMMON ANCESTRY DOES NOT INFLUENCE THE ECOLOGICAL TRAITS OF FRESHWATER GREEN ALGAE
- 11:00 **Hughes, A. R.**; Hanley, T. C.; Byers, J. E.; Grabowski, J. H.; Kimbro, D. L.; Malek, J. C.; Piehler, M. F.: GENETICS, NOT GEOGRAPHY, PREDICTS SUCCESS OF JUVENILE OYSTER (*CRASSOSTREA VIRGINICA*) TRANSPLANTS ACROSS MULTIPLE SITES IN THE SOUTHEASTERN U.S.*
- 11:15 **Pantel, J. H.**; Rousseaux, S.; Declerck, S.; Peres-Neto, P.; Urban, M. C.; Leibold, M. A.; De Meester, L.: CONGRUENT AND DIVERGENT RESPONSES OF POPULATION GENETIC AND COMMUNITY ECOLOGICAL STRUCTURE TO THE GEOGRAPHIC MOSAIC OF ENVIRONMENTAL GRADIENTS
- 11:30 **Phillis, C. C.**; Pearse, D. E.; Hayes, S. A.; Cooper, A. B.; Moore, J. W.: ECO-EVOLUTIONARY DYNAMICS AND THE INDIRECT EFFECT OF DENSITY ON AQUATIC ECOSYSTEMS*
- 13:30 **Kinnison, M. T.**; Tuckett, Q. M.; Simon, K. S.: CONTEXT-DEPENDENT ECO-EVOLUTIONARY DYNAMICS REINFORCE CULTURAL EUTROPHICATION*
- 13:45 **Urban, M. C.**: DECODING THE CRYPTIC EFFECT OF EVOLUTION ON COMMUNITY ECOLOGY*
- 14:00 **Warbanski, M. L.**; Matthews, B.; El-Sabaawi, R.: A MULTI-ELEMENTAL ANALYSIS OF FRESHWATER AND MARINE THREE-SPINED STICKLEBACK (*GASTEROSTEUS ACULEATUS*) FROM COASTAL BRITISH COLUMBIA
- 14:15 **Ohms, H. A.**; Lytle, D. A.; De Leenheer, P.; Jordan, C. E.: A MODEL FOR THE COEXISTENCE OF STEELHEAD AND RAINBOW TROUT
- 14:30 **Carlson, S. M.**; Kelson, S. J.; Miller, M. R.; Palkovacs, E. P.: ECO-EVOLUTIONARY DYNAMICS OF PACIFIC SALMONIDS*
- 14:45 **DeLong, J.**; Brassil, C.; Forbes, V.; Galic, N.; Gibert, J. P.; Laport, R.; Phillips, J.; Reynolds, S.; Vavra, J.: THE SIMILARITY OF EVOLUTIONARY AND ECOLOGICAL RATES
- 15:00 **Flecker, A. S.**; Thomas, S. A.; Dalton, C. M.; Bassar, R. D.; Heatherly, T.; Simon, T. N.; El-Sabaawi, R.; Leduc, A.; Reznick, D.; Pringle, C. M.: ECO-EVOLUTIONARY INTERACTIONS AND TRINIDADIAN GUPPIES: RECONCILING OUTCOMES FROM CONTRASTING EXPERIMENTAL VENUES AND SPATIO-TEMPORAL SCALES *
- 10:15 **Gislason, G. M.**; Olafsson, J. S.: GLACIAL RIVER ECOSYSTEMS IN ICELAND AND THE EFFECT OF GLOBAL WARMING ON THEIR BIOLOGICAL COMMUNITIES
- 10:30 **Brittain, J. E.**; Borgström, R.: LONG-TERM CHANGES IN A NORWEGIAN SUBALPINE LAKE ECOSYSTEM*
- 10:45 **Olafsson, J. S.**; Demars, B.; Gislason, G. M.; Magnúsdóttir, R. Þ.: GEOTHERMAL STREAM ECOSYSTEMS AS SENTINELS FOR CLIMATE WARMING IN LOTIC ECOSYSTEMS*
- 11:00 Howland, K. L.; Gallagher, C.; **Smith, E.**; Adair, K.; Chavarie, L.; Janjua, Y.; Leonard, D.; Podemski, C.; Tallman, R.; Tonn, W. M.: IMPACTS OF CLIMATE CHANGE ON THE AQUATIC ECOSYSTEM IN GREAT BEAR LAKE, CANADA
- 11:15 **Giersch, J. J.**; Muhlfeld, C. C.: ALPINE STREAM INVERTEBRATE COMMUNITY AND THERMAL GRADIENTS IN GLACIER NATIONAL PARK, MONTANA: IMPLICATIONS FOR CLIMATE CHANGE IMPACTS ON AQUATIC BIODIVERSITY
- 11:30 **Niedrist, G.**; Füreder, L.: CHIRONOMIDAE (DIPTERA) ARE AN ESSENTIAL TOOL FOR MONITORING ENVIRONMENTAL STATUS AND CHANGE IN ALPINE HEADWATERS
- 11:45 **Finn, D. S.**; Encalada, A. E.: A ROLE FOR LIFE-HISTORY DIFFERENTIATION IN DRIVING INTRASPECIFIC GENETIC DIVERSITY IN GLACIERIZED ALPINE BASINS*
- 13:30 **Vincent, W. F.**; Laurion, I.: THAW LAKES ON PERMAFROST LANDSCAPES IN TRANSITION IN THE EASTERN CANADIAN ARCTIC*
- 13:45 **Andresen, C. G.**; Lougheed, V. L.: DECREASE IN SIZE AND ABUNDANCE OF ARCTIC TUNDRA WETLAND PONDS IN THE BARROW PENINSULA, ALASKA.
- 14:00 **Braegelmann, S. D.**; Butler, M. G.: CHANGES IN INSECT SEASONALITY ACROSS FOUR DECADES IN SOME HIGH ARCTIC PONDS
- 14:15 **Svenning, M. A.**; Lowen, T.; Reist, J.: CLIMATE INDUCED CHANGE IN LIFE HISTORY STRATEGY IN HIGH ARCTIC SVALBARD CHARR*
- 14:30 **Goedkoop, W.**; Angeler, D.: LONG-TERM CHANGE IN WATER CHEMISTRY AND PHYTOPLANKTON/ INVERTEBRATE COMMUNITIES IN SWEDISH ARCTIC/ ALPINE LAKES
- 14:45 **Füreder, L.**; Brittain, J. E.: MONITORING BIODIVERSITY AND ECOSYSTEM FUNCTION IN HIGH ARCTIC STREAMS*
- 15:00 **Lento, J.**; Lau, D.; Culp, J.; Goedkoop, W.; Brittain, J. E.: PATTERNS IN MACROINVERTEBRATE TRAITS OF CANADIAN AND EUROPEAN ARCTIC STREAMS
- 15:15 **Wipfli, M. S.**; McFarland, J.; Heim, K.; Gurney, K.; Laske, S.; Whitmann, M.; Arp, C.; Adams, J.; Koch, J.: FRESHWATER FOOD WEB PROCESSES ON THE ARCTIC COASTAL PLAIN, ALASKA: VULNERABILITIES IN A CHANGING ENVIRONMENT
- 16:00 **Wrona, F. J.**; Prowse, T. D.; diCenzo, P.; deRham, L.; Peters, D.; Dibiike, Y.: EFFECTS OF A CHANGING CRYOSPHERE ON THE HYDROLOGY, GEOCHEMISTRY AND ECOLOGY OF WESTERN ARCTIC TUNDRA LAKES*

014 Ecological Change In Arctic And Alpine Freshwaters

Chair(s): Joseph Culp, Joseph.Culp@ec.gc.ca
 Jennifer Lento, jlento@gmail.com
 Willem Goedkoop, Willem.Goedkoop@slu.se
 Kirsten Christoffersen, kchristoffersen@bio.ku.dk

Location: C 123 - 124

- 10:00 **Milner, A. M.**; Khamis, K.; Hannah, D. M.; Blaen, P.; Brown, L. E.: CLIMATE CHANGE AND WATER SOURCES IN ALPINE AND ARCTIC STREAMS; EFFECTS ON BIOTIC COMMUNITIES*

(*) represents Invited presentations

- 16:15 **Arp, C. D.**; Jones, B. M.; Liljedahl, A. K.; Whitman, M. S.; Wipfli, M. S.: RESPONSE OF AN ARCTIC FRESHWATER ECOSYSTEM TO CLIMATE AND LAND-USE CHANGE: INTERDISCIPLINARY RESEARCH IN THE FISH CREEK WATERSHED, NORTHERN ALASKA, U.S.A.*
- 16:30 **Culp, J.**; Lento, J.; Chin, K.; Kokelj, S.: PERMAFROST MEGASLUMPS INDUCE STATE CHANGE IN ARCTIC STREAM BENTHOS
- 16:45 **Kendrick, M. R.**; Schuett, E. B.; Huryn, A. D.; Bowden, W. B.; Peterson, B. J.; Deegan, L. A.; Kling, G. W.: RIVER ECOSYSTEMS IN A CHANGING ARCTIC: USING LONG-TERM ECOLOGICAL RESEARCH (LTER) DATA TO ASSESS RECENT CHANGE
- 17:00 **Christoffersen, K. S.**: WINTER DYNAMICS IN ICE-COVERED ARCTIC LAKES – IS IT OF IMPORTANCE?
- 17:15 **Butler, M. G.**; Braegelman, S. D.: THERMAL CONTROL OF CHIRONOMID EMERGENCE IN SOME HIGH ARCTIC PONDS
- 17:30 **Rautio, M.**; Rantala, M. V.; Nevalainen, L.: CLADOCERAN CARAPACE PIGMENTATION INCREASES WITH INCREASING WATER COLUMN UV TRANSPARENCY: PALEOLIMNOLOGICAL EVIDENCE FROM ARCTIC AND ALPINE LAKES*
- 17:45 Christensen, N.; **Siver, P. A.**; Lott, A. M.; Wolfe, A. P.: POTENTIAL USE OF CHRYSOPHYTE CYST MORPHOMETRICS AS A TOOL FOR RECONSTRUCTING ARCTIC EOCENE ENVIRONMENTS
- 11:30 **Falke, J. A.**; Dunham, J. B.; Hockman-Wert, D.; Pahl, R.: INTEGRATING MODELS OF SPECIES DISTRIBUTIONS, PHYSIOLOGICAL THRESHOLDS, AND PHYSICAL POTENTIAL TO DIAGNOSE TEMPERATURE IMPAIRMENT IN GREAT BASIN STREAMS
- 11:45 **Flitcroft, R. L.**; Lewis, S. L.: SHIFTING CORRELATIONS BETWEEN FLOW AND WATER TEMPERATURE: WHAT DOES IT MEAN FOR AQUATIC SPECIES?*
- 13:30 **Wondzell, S. M.**; Adelfio, L.; Reeves, G. H.; Mantua, N. J.; Campbell, E. Y.; Dunham, J.: SPATIAL HETEROGENEITY OF WINTER STREAM TEMPERATURES, COPPER RIVER DELTA, ALASKA, USA: IMPLICATIONS FOR UNDERSTANDING LIKELY CLIMATE CHANGE EFFECTS ON SALMON*
- 13:45 **Arimendi, I.**; Safeeq, M.; Dunham, J. B.; Johnson, S. L.: CAN AIR TEMPERATURE BE USED TO PROJECT INFLUENCES OF CLIMATE CHANGE ON STREAM TEMPERATURE?*
- 14:00 **Pilla, R. M.**; Williamson, C. E.; Zhang, J.; Renwick, W.; Smyth, R.; Hargreaves, B.: LAKES AS TEMPERATURE SENTINELS OF CLIMATE CHANGE
- 14:15 **Penaluna, B. E.**: LOCAL VARIABILITY EXPLAINS VULNERABILITY OF TROUT POPULATIONS TO LAND USE AND CLIMATE CHANGE*
- 14:30 **Melcher, A. H.**; Graf, W.; Rauch, P.; Leitner, P.; Pletterbauer, F.; Schmutz, S.: ANTHROPOGENIC IMPACTS ON WATER TEMPERATURE IN EUROPEAN STREAMS AND THEIR ECOLOGICAL CONSEQUENCES ON FISH AND BENTHIC INVERTEBRATES*
- 14:45 **Greene, S. L.**; Torgersen, C. E.; Wondzell, S. M.; Johnson, S. L.; Dunham, J. B.; Leinenbach, P.: STREAM TEMPERATURE AND RIPARIAN THINNING: INFLUENCE OF HETEROGENOUS EFFECTIVE SHADE ON THERMAL COMPLEXITY
- 15:00 **Detenbeck, N. E.**; Morrison, A.; Abele, R.; Kopp, D.; Morgan, J.: PREDICTING THERMAL REGIMES OF STREAM NETWORKS ACROSS NEW ENGLAND: NATURAL AND ANTHROPOGENIC INFLUENCES
- 15:15 **Pike, A.**; Danner, E.: REAL-TIME WATER TEMPERATURE FORECASTING IN REGULATED RIVERS *
- 16:00 **Ebersole, J. L.**; Torgersen, C. E.; Keenan, D. M.; Fullerton, A.; Labiosa, R. G.: PROTECTING, AND RESTORING (?) FINE-SCALE THERMAL HETEROGENEITY IN STREAMS*
- 16:15 **Diabat, M.**; Wondzell, S. M.; Haggerty, R.: STREAM TEMPERATURE RESPONSE TO RESTORATION OF CHANNEL MEANDERS AND RIPARIAN FOREST AT A DREDGE-MINED STREAM IN NORTHEASTERN OREGON, USA
- 16:30 **Neilson, B. T.**; Majerova, M.; Snow, C. J.; Schmadel, N. M.; Wheaton, J. M.: INFLUENCES OF BEAVER COLONIZATION ON THERMAL HETEROGENEITY AT DIFFERENT TEMPORAL AND SPATIAL SCALES
- 16:45 **Lisi, P. J.**; Schindler, D. E.: QUANTIFYING COORDINATED THERMAL RESPONSES IN TRIBUTARIES OF RIVER BASINS*
- 17:00 Van Cleave, K.; **Lenters, J. D.**; Blanken, P. D.; Petchprayoon, P.; Spence, C.; Wang, J.; Gronewold, A. D.; Verhamme, E. M.: THE RAPID WARMING OF LAKE SUPERIOR: A REGIME SHIFT IN SUMMER WATER TEMPERATURE AND EVAPORATION FOLLOWING THE WINTER OF 1997/98
- 17:15 **Saito, L.**; Sapin, J.; Balaji, R.: USING RESERVOIR OPERATIONS TO ADDRESS ECOSYSTEM IMPACTS AT SHASTA LAKE

037 Rapid Changes In Water Temperature: Quantifying, Understanding, And Managing Heterogeneity In Freshwater Thermal Regimes Over Space And Time

Chair(s): E. Ashley Steel, asteel@fs.fed.us
Aimee H Fullerton, aimee.fullerton@noaa.gov

Location: E 142 - 144

- 10:00 **Isaak, D. J.**; Ver Hoef, J. M.; Peterson, E. E.: BIG DATA COMES TO FRESHWATER: SPATIAL AND TEMPORAL PATTERNS IN REALLY BIG STREAM TEMPERATURE DATABASES*
- 10:15 **Steel, E. A.**; Beechie, T. J.; Sowder, C.; Fullerton, A. H.; Tillotson, A.; Beckman, B. R.; Torgersen, C. E.: TEMPORAL VARIABILITY IN RIVERINE THERMAL REGIMES: WHAT IS IT? WHY DOES IT MATTER?
- 10:30 **Maheu, A.**; Poff, N. L.; St-Hilaire, A.: CHARACTERIZATION OF DIEL, ANNUAL AND INTERANNUAL VARIABILITY IN STREAM WATER TEMPERATURE IN THE CONTERMINOUS UNITED STATES
- 10:45 **Fullerton, A. H.**; Torgersen, C. E.; Faux, R. N.; Lawler, J. J.; Steel, E. A.; Beechie, T. J.; Ebersole, J. L.; Leibowitz, S. G.: REMOTELY SENSED STREAM TEMPERATURES REVEAL DIVERSE SPATIAL PATTERNS AT MULTIPLE SCALES THROUGHOUT THE PACIFIC NORTHWEST
- 11:00 **Torgersen, C. E.**; Ebersole, J. L.; Keenan, D. M.: REALIZING COLD-WATER REFUGES AND THERMAL DIVERSITY IN RIVERINE LANDSCAPES*
- 11:15 **Tillotson, A. E.**; Beckman, B. R.; Larsen, D.; Young, G.; Steel, E. A.: IMPACTS OF DAM ALTERED THERMAL REGIMES ON DEVELOPMENT AND EMERGENCE TIMING OF CHINOOK SALMON (*ONCORHYNCHUS TSHAWYTSCHA*)*

^(*) represents Tutorial presentations

- 17:30 **Cole, J. C.**; Maloney, K. M.; Schmid, M.; McKenna, J. E.: A COMPARISON OF MULTIPLE TEMPERATURE MODELS, CAN YOU ACCURATELY PREDICT RIVER TEMPERATURES IN A REGULATED RIVER
- 17:45 **Lepori, F.**; Simona, M.: WARMING OF A LARGE EUROPEAN LAKE (LAKE LUGANO, SWITZERLAND): TRENDS, DRIVERS, AND PREDICTIONS

038 Ecological And Social Problems Related To Eutrophication Of Aquatic Ecosystems In Developing Countries

Chair(s): Sudeep Chandra, limnosudeep@me.com
Eliska Rejmankova, erejmankova@ucdavis.edu

Location: A 106

- 13:30 **Bootsma, H. A.**; Odada, E. O.; Fellin, P.; Hecky, R. E.; Ngochera, M.: THE SKY IS FALLING: ATMOSPHERIC NUTRIENT DEPOSITION AND EUTROPHICATION OF THE AFRICAN GREAT LAKES
- 13:45 **Hall, E. K.**: ANTHROPOCENTRIES: THE INTERACTIVE EFFECTS OF MULTIPLE STRESSORS ON THE LAKE YOJOA ECOSYSTEM (HONDURAS CA) AND THE POTENTIAL IMPACT ON ITS LIVELIHOODS
- 14:00 **Chandra, S.**; Dix, M.; Rejmankova, E.; Mosquera, V.; Giron, N.; Heyvaert, A.: LAKE ATITLON, GUATEMALA: DEVELOPING RESEARCH AND EDUCATIONAL CAPACITY TO PREVENT FURTHER EUTROPHICATION
- 14:15 **Richardson, C. J.**: ECOLOGICAL AND SOCIAL DIMENSIONS OF WATER POLLUTION AND SUPPLY FOR THE WETLANDS OF IRAQ*
- 14:30 **Rejmankova, E.**: LINKING EUTROPHICATION AND VECTOR-BORNE DISEASES: EXAMPLES FROM CENTRAL AMERICAN WETLANDS
- 14:45 **Paerl, H. W.**; Xu, H.; Zhu, G.; Hall, N. S.; Qin, B.: CONTROLLING HARMFUL CYANOBACTERIAL BLOOMS IN HYPEREUTROPHIC LAKE TAIHU, CHINA: THE CASE FOR DUAL NUTRIENT (NITROGEN AND PHOSPHORUS) INPUT REDUCTIONS
- 15:00 **McCarthy, M. J.**; Newell, S. E.; Zhang, L.; Gardner, W. S.: TUG OF WAR: THE COMPETING ROLES OF SEDIMENTS IN EXACERBATING AND MITIGATING EUTROPHICATION IN LAKES FROM A NITROGEN PERSPECTIVE
- 15:15 **Acharya, K.**; Tang, C.; Li, Y.; Paerl, H. W.: CONTROLLING HARMFUL CYANOBACTERIAL BLOOMS IN HYPEREUTROPHIC LAKE TAIHU, CHINA: THE RATIONALE FOR WATERSHED NUTRIENT REDUCTION
- 16:00 **Li, H.**; Zhu, G.; Luo, L.; Cheng, X.: PREDICTING THE RESPONSE OF NUTRIENTS TO REDUCED EXTERNAL NITROGEN AND PHOSPHORUS LOADING IN A LARGE RESERVOIR IN CHINA USING THE DYRESM-CAEDYM MODEL
- 16:15 **Tang, C.**; Li, Y.; Acharya, K.: A MODELING APPROACH TO ASSESS THE EFFECT OF NUTRIENT LOADS REDUCTION ON WATER QUALITY IN LAKE TAIHU, CHINA
- 16:30 **Li, W.**; Qin, B. Q.; Zhang, Y. L.: CONVERGENCE AND DIVERGENCE OF CURRENT: HYDRODYNAMIC MECHANISM CONTROLLING THE OCCURRENCE AND ACCUMULATION OF CYANOBACTERIAL BLOOMS IN LAKE TAIHU, CHINA
- 16:45 **Qin, B.**; Shen, J.; Wang, Y.; Li, W.; Zhu, G.: MITIGATING THE RISK OF CYANOBACTERIAL BLOOMS IN EUTROPHIC LAKE TAIHU, CHINA

- 17:00 **Dix, M. A.**; Toledo, M. A.; Ochaeta, G. R.; Komárek, J.; Rejmánková, E.; Dix, M. W.; van Tuylen, S.; Chandra, S.: LAKE ATITLON EUTROPHICATION 1968 TO 2013: IMPACTS ON PHYTOPLANKTON DYNAMICS AND CYANOBACTERIAL BLOOMS
- 17:15 **Mosquera, V.**; Giron, N.; Dix, M.; Chandra, S.; Carlson, E.; Rejmankova, E.: NUTRIENT LOADING BY RIVERS TO LAKE ATITLAN, GUATEMALA

043 Distributions In Aquatic Ecosystems: Predictors, Models & Communities

Chair(s): Mathias Kuemmerlen, mkuemmerlen@senckenberg.de
Scott Foster, scott.foster@csiro.au
Simon Linke, s.linke@griffith.edu.au
Sami Domisch, sami.domisch@yale.edu

Location: D 135 - 136

- 10:00 **Linke, S.**; Rosauer, D.; Hermoso, V.: PLANNING FOR RARE AQUATIC SPECIES USING GENERALISED DISSIMILARITY MODELING (GDM)
- 10:15 **Braoudakis, G. V.**; Jackson, D. A.: A META-ANALYSIS OF ZOOPLANKTON SPECIES CO-OCCURRENCE PATTERNS
- 10:30 **Cattarino, L.**; Hermoso, V.; Carwardine, J.; Kennard, M. J.; Linke, S.: MULTI-ACTION PLANNING FOR THREAT MANAGEMENT: A NOVEL APPROACH FOR THE SPATIAL PRIORITIZATION OF CONSERVATION ACTIONS
- 10:45 **McNair, J. N.**; Thum, R. A.; Parks, S.; Schulte, L.: MODELING THE SPREAD OF INVASIVE EURASIAN WATERMILFOIL IN NORTHERN LAKES OF THE UNITED STATES: CONTEMPORARY EVOLUTION, ENVIRONMENT, AND MANAGEMENT
- 11:00 **Henrichs, D. W.**; Hetland, R. D.; Campbell, L.: AN INDIVIDUAL-BASED MODEL APPROACH TO PHYTOPLANKTON BLOOM SUCCESSION ALONG THE COAST OF TEXAS
- 11:15 **Saunders, W. C.**; Bouwes, N.; Blanchard, M.; Jordan, C.: SPATIAL VARIATION IN PRIMARY PRODUCTION THROUGHOUT A MOUNTAINOUS WATERSHED AND INFLUENCES ON SPATIAL VARIATION IN FISH ABUNDANCE
- 11:30 **Mendez, P. K.**; Deitch, M. J.; Resh, V. H.: PATTERNS IN COMMUNITY STRUCTURE AND SPECIES TRAITS OF FUNCTIONAL PROCESS ZONES IN THE FRASER RIVER, BC
- 11:45 **Guyette, M. Q.**; Kornis, M. S.; Januchowski-Hartley, S. R.; Neeson, T. M.; McIntyre, P. B.: LINKING HABITAT CONNECTIVITY TO ROUND GOBY RANGE EXPANSION IN GREAT LAKES TRIBUTARIES
- 13:30 **Miller, R. A.**; Sytsma, M. D.: MODELS FOR PREDICTING SUBMERGED AQUATIC VEGETATION DISTRIBUTIONS IN A SHALLOW MESOTROPHIC LAKE
- 13:45 **Kramer, A. M.**; Annis, G.; Wittmann, M. E.; Chadderton, W. L.; Drake, J. M.: PREDICTING POTENTIAL DISTRIBUTION OF INVASIVE SPECIES USING RANGE BAGGING: GOLDEN MUSSEL AND KILLER SHRIMP IN THE GREAT LAKES*
- 14:00 **Canobbio, S.**; Cabrini, R.; Azzellino, A.; Fornaroli, R.; Sartori, L.; Marazzi, F.; Piana, A.; Marchesi, V.; Mezzanotte, V.: ANALYSIS OF SURVEY DATA WITH QUANTILE REGRESSION: DISENTANGLING THE LIMITING EFFECT OF MULTIPLE STRESSORS ON MACROINVERTEBRATE DENSITIES

(*) represents Invited presentations

- 14:15 **Sokolovska, I.**; Hawkins, C. P.; Hill, R. A.: VALIDATING SPECIES DISTRIBUTION MODELS: ARE CRITICAL THERMAL MAXIMA USEFUL MEASURES OF THERMAL TOLERANCE?*
- 14:30 **Batt, R. D.**; Carpenter, S. R.; Ives, A. R.: SURPRISING TAILS OF ECOLOGICAL EXTREMES*
- 14:45 **Millie, D. F.**; Weckman, G. R.; Fahnenstiel, G. L.; Carrick, H. J.; Ardjmand, E.; Young II, W. A.; Shuchman, R. A.; Sayers, M. J.; Fries, D. P.: BIG DATA ANALYTICS AND 'SQUARING THE CIRCLE': USING ARTIFICIAL INTELLIGENCE TO ENABLE CYANOHAB KNOWLEDGE DISCOVERY RELEVANT TO GREAT LAKES STEWARDSHIP
- 15:00 **Domisch, S.**; Jetz, W.: INTEGRATING MULTIPLE DATA TYPES FOR PREDICTING THE FINE-SCALE SPATIAL DISTRIBUTION AND ENVIRONMENTAL NICHE OF FRESHWATER FISH
- 15:15 **Alexander, J. D.**; Wright, K. A.; Som, N. J.; Hetrick, N. J.; Bartholomew, J. L.: NOVEL USE OF MODELS TO ASSESS ALTERNATIVES FOR MANAGING THE ABUNDANCE OF THE INVERTEBRATE HOST OF THE MYXOZOAN SALMON PARASITE CERATOMYXA SHASTA*
- 16:00 **Troia, M. J.**; Gido, K. B.: TEMPERATURE-DEPENDENT HATCH SUCCESS AMONG CONGENERIC MINNOWS: IMPLICATIONS FOR MECHANISTIC NICHE MODELS AND CLIMATE CHANGE
- 16:15 **Dexter, E. D.**; Bollens, S.; Rollwagen-Bollens, G.: THE COLUMBIA RIVER AS A HEAVILY INVADED ECOSYSTEM: DISCERNING PATTERNS OF ABUNDANCE OF NATIVE AND NON-NATIVE ZOOPLANKTON
- 16:30 **Rashleigh, B.**; Ebersole, J.; Brookes, A.; Boxall, G.; White, D.; Bolte, J.: SIMULATING FISH ASSEMBLAGES IN RIVERINE NETWORKS: RESPONSE TO HABITAT IN THE WILLAMETTE WATERSHED
- 16:45 **Blanchard, M. R.**; Bouwes, N.; Wheaton, J. M.; Saunders, C.; O'Brien, G.; Jordan, C.: NETWORK SCALE MODELING AND THE USE OF STREAM CLASSIFICATION SYSTEMS TO EXPLAIN FISH DISTRIBUTIONS
- 17:15 **Boddy, N. C.**; McIntosh, A. R.: INTERACTING GLOBAL CHANGE DRIVERS LIMIT THE DISTRIBUTION OF A THERMALLY-SENSITIVE FISH*
- 17:30 **Weinert, M.**; Kröncke, I.; Neumann, H.; Pohlmann, T.; Reiss, H.: MODELING CLIMATE CHANGE EFFECTS ON BENTHOS: DISTRIBUTIONAL SHIFTS IN THE NORTH SEA FROM 2001 TO 2099*
- 17:45 **Kuemmerlen, M.**; Schmalz, B.; Cai, Q.; Fohrer, N.; Jähmig, S. C.: EFFECTS OF PREDICTED CLIMATE AND LAND USE CHANGES ON THE DISTRIBUTION OF STREAM MACROINVERTEBRATES IN A CHINESE CATCHMENT
- 16:30 **Lindstrom, S.**: OCEANOGRAPHIC, METEOROLOGICAL AND HISTORICAL DETERMINANTS OF SEAWEED BIOGEOGRAPHY ALONG THE NORTH PACIFIC RIM, WITH EMPHASIS ON THE NORTHERN GULF OF ALASKA
- 16:45 **Augyte, S.**; Shaughnessy, F. J.: NATURAL AND ANTHROPOGENIC FACTORS AFFECTING THE DISTRIBUTIONS OF SEAWEEDS IN THE CAPES REGION: SOUTHERN OREGON AND NORTHERN CALIFORNIA
- 17:00 **Gerth, W. J.**; Herlihy, A. T.: SPECIES IDENTITIES AND PHYLOGENY OF ENDEMIC PACIFIC NORTHWEST FRESHWATER AMPHIPODS
- 17:15 **Eernisse, D. J.**: RARE TRANS-PACIFIC INVASIONS CONTRIBUTE TO HIGH SPECIES DIVERSITY IN NORTH PACIFIC CHITONS AND LIMPETS (MOLLUSCA)
- 060 Nitrogen Transformation Mechanisms At The Sediment-Water-Interface In Aquatic Ecosystems Over A Range Of Latitudes**
 Chair(s): Amber Hardison, amber.hardison@utexas.edu
 Denise Bruesewitz, dabruese@colby.edu
 Wayne Gardner, wayne.gardner@utexas.edu
 Mark McCarthy, mjm.kingston@gmail.com
 Location: B 110 - 112
- 10:00 **Gardner, W. S.**; McCarthy, M. J.; Bruesewitz, D. A.; Hardison, A.: EXAMINING SEDIMENT-WATER NITROGEN DYNAMICS IN SHALLOW AQUATIC ECOSYSTEMS[†]
- 10:30 **Hou, L.**; Yin, G.; Gardner, W.: A NOVEL METHOD FOR DETERMINING CONCENTRATION OF 15NH₄⁺ IN AQUEOUS SOLUTION WITH MEMBRANE INLET MASS SPECTROMETER AND ITS POTENTIAL APPLICATION*
- 10:45 **Hardison, A. K.**; Brin, L.; Heiss, E. M.; Fulweiler, R. W.; Rich, J. J.; Giblin, A.: SEDIMENT N₂ PRODUCTION FROM SHORE TO SHELF—A METHODS COMPARISON
- 11:00 **Giblin, A. E.**; Tucker, J.; Hardison, A. K.; Brin, L.; Rich, J. J.: HOW DOES THE IMPORTANCE OF DISSIMILATORY NITRATE REDUCTION TO AMMONIUM (DNRA) CHANGE WITH DEPTH, CARBON LOADING, AND LATITUDE?*
- 11:15 **Bruesewitz, D. A.**; Zarnoch, C. B.; Hoellein, T. J.; Beaulieu, J. J.: NITROGEN CYCLING DYNAMICS AT THE SEDIMENT-WATER INTERFACE FOLLOWING HURRICANE SANDY IN THE LONG ISLAND SOUTH SHORE ESTUARY
- 11:30 **Fields, L.**; Joye, S. B.: FATES OF DISSOLVED INORGANIC NITROGEN IN COLD SEEP HABITATS ALONG THE GULF OF MEXICO DEEP SLOPE
- 11:45 **McTigue, N. D.**; Gardner, W. S.; Dunton, K. H.; Hardison, A. K.: SOURCE VERSUS SINK: BENTHIC NITROGEN TRANSFORMATIONS IN THE PRODUCTIVE HANNA SHOAL REGION OF THE CHUKCHI SEA, ALASKA
- 13:30 **Hamilton, S. K.**; Kincaid, D. W.: FRESHWATER SEDIMENT-WATER NITROGEN TRANSFORMATIONS IN TROPICAL AND TEMPERATE REGIONS[†]
- 14:00 **Ritz, S.**; Fischer, H.: USING OPEN-CHANNEL METHODS TO STUDY NITROGEN RETENTION IN A LARGE, NITROGEN RICH LOWLAND RIVER
- 14:15 **Fredrick, N. D.**; Li, W.; McCarthy, M. J.; Zhu, G.; Qin, B.; Gardner, W. S.; Hellweger, F. L.: LAKE NITROGEN CYCLING DYNAMICS EXPLORED WITH ISOTOPE TRACING AND MATHEMATICAL MODELING

059 Biogeography And Speciation In The Northeast Pacific

Chair(s): Sandra Lindstrom, Sandra.Lindstrom@botany.ubc.ca
 Doug Eernisse, deernisse@exchange.fullerton.edu

Location: B 113

- 16:00 **Harley, C. D.**: THE RELATIONSHIPS BETWEEN LOCAL SCALE, REGIONAL SCALE, AND TEMPORAL PATTERNS IN SEAWEED DISTRIBUTIONS
- 16:15 **Grant, W. S.**: DID PLEISTOCENE GLACIATIONS ENHANCE OR RETARD SPECIATION IN NORTH PACIFIC MARINE ORGANISMS?

- 14:30 **Bernard, R. J.**; Mortazavi, B.: FROM THE DELTA TO THE GULF: SEDIMENT NITROGEN CYCLING IN MOBILE BAY ALABAMA
- 14:45 **Anderson, I. C.**; Stanhope, J. W.; Brush, M. J.; Smyth, A. R.; Piehler, M. F.; Currin, C. A.: INTERACTING DRIVERS REGULATING THE FATE OF NITROGEN IN SHALLOW PHOTIC MARINE SYSTEMS*
- 15:00 **Piehler, M. F.**; Smyth, A. R.; Grabowski, J. H.; Byers, J.; Hughes, A. R.; Kimbro, D.: ASSESSING THE EFFECTS OF PREDATORS AND GEOGRAPHIC LOCATION ON OYSTER REEF SEDIMENT DENITRIFICATION
- 15:15 **Zarnoch, C. B.**; Hoellein, T. J.; Prudente, D.; Furman, B.; Peterson, B.: NITROGEN CYCLING IN SUBTIDAL SEAGRASS BEDS AND UNVEGETATED SEDIMENTS WITHIN A TEMPERATE COASTAL LAGOON

065 Connectivity Within Watersheds: Effects, Functions, And Values Of Headwaters And Isolated Aquatic Features On Downstream Waters

Chair(s): Hadas Raanan Kiperwas, raanan-kiperwas.hadas@epa.gov
Jason Todd, todd.jason@epa.gov
Heather Golden, golden.heather@epa.gov

Location: B 113

- 10:00 **Downing, D. M.**: NAVIGATING THE CLEAN WATER ACT: THE ROLE OF CONNECTIVITY IN DETERMINING FEDERAL PROTECTION*
- 10:15 **Alexander, L. C.**; Pollard, A. I.; Leibowitz, S. G.; Mushet, D. M.; Lang, M. W.: WHAT'S IN A NAME? REVIVING THE 2003 DEBATES ON THE SCIENCE BEHIND "GEOGRAPHICALLY ISOLATED WETLANDS"
- 10:30 **Creed, I. F.**; Cohen, M. J.: INCIPIENT LOSS OF GEOGRAPHICALLY ISOLATED WETLANDS LEADS TO PERMANENT LOSS OF WATERSHED ECOSYSTEM SERVICES*
- 10:45 **Todd, M. J.**; Leibowitz, S. G.: USING HYDROLOGIC LANDSCAPES AS A CONCEPTUAL FRAMEWORK FOR ASSESSING STREAM AND WETLAND CONNECTIVITY
- 11:00 **Rains, M. C.**; McLaughlin, D. L.; Cohen, M. J.; Golden, H. E.; Jawitz, J. W.; Kalla, P.; Lang, M.; Leibowitz, S. G.; Raanan Kiperwas, H.: GEOGRAPHICALLY ISOLATED WETLANDS AS PART OF THE HYDROLOGIC LANDSCAPE
- 11:15 **Gooseff, M. N.**: A FRAMEWORK FOR CHARACTERIZING THE CONNECTIVITY OF WATER BODIES WITHIN A WATERSHED CONTEXT – LESSONS FROM A NAKED WATERSHED
- 11:30 **Weitzell, Jr., R. E.**; Lookingbill, T.; Guinn, S.; Elmore, A.: CUMULATIVE IMPACTS OF STREAM BURIAL ON NETWORK STRUCTURE AND FUNCTIONAL CONNECTIVITY IN HEADWATER STREAM SYSTEMS OF THE POTOMAC RIVER BASIN, USA
- 11:45 **Sobota, J. L.**; Li, J.; Gerth, W.; Van Driesche, R.; Bateman, D.: COMPARING THREE LONG-TERM STUDIES OF PAIRED WATERSHEDS PRE- AND POST-HARVEST IN WESTERN OREGON
- 13:30 **Tornwall, B. M.**; Brown, B. L.; Swan, C. M.: THE EFFECT OF NETWORK LOCATION: MANIPULATION OF A LOCAL ENVIRONMENTAL FACTOR LEADS TO DIFFERENT DIVERSITY OUTCOMES IN HEADWATER AND MAINSTEM STREAMS
- 13:45 **Mushet, D. M.**; Inczauskis, H. L.; Alexander, L. C.: THE NORTHERN LEOPARD FROG: CONNECTING AQUATIC ECOSYSTEMS ACROSS THE PRAIRIE POTSOLE LANDSCAPE*
- 14:00 **Ali, G.**; Chiasson, M.; Haque, A.; Badiou, P.; Wilson, H.: WETLAND-TO-STREAM CONNECTIVITY PATTERNS ACROSS AN ALTERATION GRADIENT IN THE PRAIRIE POTSOLE REGION
- 14:15 **Lang, M. W.**; Alexander, L. C.; Yeo, I. Y.; Huang, C.: NEW APPROACHES TO REVEAL INUNATION DYNAMICS AND HYDROLOGIC CONNECTIONS IN HEADWATER WETLANDS*
- 14:30 **Evenson, G. R.**; Golden, H. E.; Lane, C. R.; D'Amico, E. I.: EVALUATING THE AGGREGATE EFFECT OF GEOGRAPHICAL ISOLATED WETLANDS AND ASSOCIATED SPATIAL AND SIZE DISTRIBUTIONS ON DOWNSTREAM HYDROLOGY
- 14:45 **Forbes, M. G.**; Doyle, R. G.; Yelderman, J.; Clapp, A.: TINY GIANTS: TEXAS COASTAL PRAIRIE WETLANDS ARE NUTRIENT TRANSFORMERS*
- 15:00 **Callahan, M. K.**; Whigham, D. F.; Rains, M. C.; King, R. S.; Walker, C. M.; Maurer, J. R.; Baird, S. J.: NITROGEN SUBSIDIES FROM HILLSLOPE ALDER STANDS TO STREAMSIDE WETLANDS AND HEADWATER STREAMS, KENAI PENINSULA, ALASKA
- 15:15 **Badiou, P. H.**; Page, B.; Boychuk, L.: REGULATION OF WATER QUANTITY AND QUALITY BY ISOLATED WETLAND BASINS IN A PRAIRIE WATERSHED: IMPLICATIONS OF FOUR DECADES OF DRAINAGE.

075 Aquatic Ecosystem Services

Chair(s): Donald Jackson, don.jackson@utoronto.ca
Irena Creed, icreed@uwwo.ca
John Gunn, jgunn@laurentian.ca

Location: F 150 - 151

- 10:00 **Allan, J. D.**; Smith, S. D.; Joseph, C. G.; Dickinson, C.: SPATIAL HETEROGENEITY AND COINCIDENCE OF ECOSYSTEM SERVICES IN THE LAURENTIAN GREAT LAKES^T
- 10:30 **Laurent, K. L.**; Friedman, K. B.; Krantzberg, G.; Scavia, D.; Creed, I. F.: LOOKING TO THE FUTURE TO FOSTER A SOCIO-ECOLOGICALLY SUSTAINABLE STRATEGY FOR THE GREAT LAKES-ST. LAWRENCE RIVER BASIN.*
- 10:45 **Hill, B. H.**; Kolka, R. K.; McCormick, F. H.; Starry, M. S.: A SYNOPTIC SURVEY OF ECOSYSTEM SERVICES FROM HEADWATER CATCHMENTS IN THE UNITED STATES*
- 11:00 Harmon, T.; Conde, D.; Rusak, J.; **Perillo, G. M.**; Velez Caicedo, M. I.; Escobar Jaramillo, J. H.; Piccolo, M. C.; Reid, B.; London, S.: UNDERSTAND AND ADAPT TO ALTERED ENERGY AND MASS INPUTS TO FRESHWATER ECOSYSTEMS: A PAN-AMERICAN STUDY OF ECOSYSTEM SERVICE RISK ASSESSMENT AND MITIGATION*
- 11:15 Kreutzweiser, D. P.; Muto, E.; **Sibley, P. K.**; Musetta, J.: USING NATURAL DISTURBANCE TO SET REALISTIC FOREST MANAGEMENT TARGETS FOR CONSERVING AQUATIC ECOSYSTEM SERVICES*
- 11:30 **Wolin, J. A.**; Dunleavy, M.; Soika, A.; Bienvenu, T.; Ostry, J.: URBAN LAKE ASSESSMENT: WATER QUALITY AND LAKE CONDITION IN CUYAHOGA COUNTY, OHIO
- 11:45 **Diamond, J. M.**: RECASTING AQUATIC DESIGNATED USES AS ECOSYSTEM SERVICES IN CLEAN WATER ACT PROGRAMS

(*) represents Invited presentations

- 13:30 **Jackson, D. A.**; NSERC-CNAES, .: NSERC CANADIAN NETWORK FOR AQUATIC ECOSYSTEM SERVICES*
- 13:45 **Palen, W. J.**; Popescu, V. D.; Munshaw, R. G.; Dubman, E.: DEVELOPING A DECISION-SUPPORT TOOL TO MINIMIZE TRADE-OFFS BETWEEN SMALL HYDROPOWER DEVELOPMENT AND IMPACTS TO SPECIES AND ECOSYSTEMS*
- 14:00 **Melles, S. J.**; Chu, C.; Alofs, K. M.; Jackson, D. A.: STRATEGIC EVALUATION OF RIVER-LAKE NETWORKS AND DAMS AS CONDUITS AND BARRIERS OF WARM WATER FISH SPECIES INVASIONS UNDER CLIMATE CHANGE.
- 14:15 **Ferrareze, M.**; Jackson, D. A.; Casatti, L.: SMALL RESERVOIRS EFFECTS ON NEOTROPICAL FISH COMMUNITIES
- 14:30 **Febria, C. M.**; Harding, J.; McIntosh, A.: CANTERBURY WATERWAY REHABILITATION EXPERIMENT (CAREX): REHABILITATING DEGRADED STREAM ECOSYSTEM FUNCTIONS TO SUPPORT NEW ZEALAND LIVELIHOODS*
- 14:45 **Van Dam, A. A.**; Gettel, G. M.; Kipkemboi, J.; Namaalwa, S.; Nasongo, S.; Khisa, P.; Rongoei, P.; Okeyo-Owuor, J. B.; Zsuffa, I.; Zaal, A. M.: BALANCING FOOD SECURITY NEEDS WITH BIODIVERSITY AND REGULATING SERVICES: OPTIONS FOR WISE USE OF PAPYRUS WETLANDS IN EAST AFRICA
- 15:00 **Reichwaldt, E. S.**; Zhou, W.; Ho, W. Y.; Ghadouani, A.: A NOVEL APPROACH TO ASSESS THE DELIVERY OF ECOSYSTEM SERVICES: THE USE OF METABOLOMICS IN AQUATIC SYSTEMS
- 15:15 **Lamothe, K. A.**; Jackson, D. A.; Somers, K. M.: QUANTIFYING ECOLOGICAL RESILIENCE: A SIMULATION STUDY
- 16:00 **Guerry, A.**: ARTICULATING NATURE'S BENEFITS TO IMPROVE DECISIONS IN COASTAL AND MARINE SYSTEMS^T
- 16:30 **Villa, J. A.**; Mitsch, W. J.: CARBON SEQUESTRATION VS METHANE EMISSIONS IN FOUR DIFFERENT WETLAND PLANT COMMUNITIES OF SOUTHWEST FLORIDA
- 16:45 **Ribaud, C.**; Bertrin, V.; Abril, G.; Anschutz, P.; Dutartre, A.: IN SITU OXYGEN AND METHANE BENTHIC FLUXES MEASUREMENTS WITHIN ISOETIDS MEADOWS
- 17:00 **Cattaneo, A.**; Lévesque, D.; Visconti, A.; Hudon, C.: FIELD AND LABORATORY EVIDENCES OF THE IMPACT OF BENTHIC CYANOBACTERIAL MATS ON RIVERINE ECOSYSTEMS
- 17:15 **Kim, J. K.**; Kraemer, G. P.; Yarish, C.: KELP FARMING IN LONG ISLAND SOUND AND THE NEW YORK ESTUARIES FOR NUTRIENT BIOEXTRACTION
- 17:30 **Kaplan, D.**; Frederick, P.; Valle-Levinson, A.; Olabarrieta, M.; Seavey, J.: ESTUARINE FRESHWATER ENTRAINMENT BY OYSTER REEFS: QUANTIFYING A KEYSTONE ECOSYSTEM SERVICE
- 17:45 **DeWitt, T. H.**; Dumbauld, B. R.; D'Andrea, T. F.; Wyllie-Echeveria, S.; Lewis, N. S.: DOES COMPETITION AMONG ECOSYSTEM ENGINEERING SPECIES RESULT IN TRADEOFFS IN THE PRODUCTION OF ECOSYSTEM SERVICES?

089 Wildlife Response To Restoration

Chair(s): James T. Anderson, jim.anderson@mail.wvu.edu
Joshua D. Stafford, jstafford@usgs.gov

Location: Oregon Ballroom

- 16:00 **Strain, G. F.**; Turk, P. J.; Anderson, J. T.: FUNCTIONAL EQUIVALENCY OF CREATED AND NATURAL WETLANDS IN THE CENTRAL APPALACHIANS: REPRODUCTIVE SUCCESS, CALL PHENOLOGY, AND DIET COMPOSITION OF AMPHIBIANS.*
- 16:15 **Arrigoni, J.**; Gibbs, J. P.; Curatolo, J.: DO CONSTRUCTED VERNAL POOLS BOOST AMPHIBIAN POPULATIONS? THE EFFECTS OF POOL DESIGN AND LANDSCAPE CONTEXT
- 16:30 **Myers, J. E.**: MOTTLED DUCK BIOLOGY AND ENGINEERING*
- 16:45 **Stoll, S.**; Breyer, P.; Früh, D.; Kail, J.; Lorenz, A. W.; Sundermann, A.; Haase, P.: REGIONAL HABITAT QUALITY AND METACOMMUNITY STRUCTURE ARE CRUCIAL FOR THE SUCCESS OF RIVER RESTORATIONS
- 17:00 Li, F.; Sundermann, A.; Stoll, S.; **Haase, P.**: RECOLONIZATION OF RESTORED RIVERS DEPENDS ON DISPERSAL CAPACITY OF BENTHIC INVERTEBRATES
- 17:15 **Hagy, H. M.**; Beverlin, J.; Horath, M. M.; Yetter, A. P.; Hine, C. S.; Smith, R. V.; Casper, A. N.: FLOODPLAIN RESTORATION AND PEOPLE MANAGEMENT *
- 17:45 **Nyman, J. A.**: BUILDING TERRACES TO CREATE COASTAL WETLAND EDGE HABITAT*

093 Anthropogenic Influences On Watershed Biogeochemistry: New Findings And Methods

Chair(s): Rebecca Barnes, becca.barnes@gmail.com
David Butman, david.butman@yale.edu
Henry Wilson, henry.wilson@agr.gc.ca

Location: B 117 - 119

- 13:30 **Lu, Y. H.**; Li, X. P.; Mesfioui, R.; Bauer, J. E.; Canuel, E. A.; Chambers, R. M.; Hatcher, P. G.: HIGH-RESOLUTION MOLECULAR CHARACTERIZATION REVEALS PASTURE LAND USE ALTERS STREAMWATER DISSOLVED ORGANIC MATTER
- 13:45 **Rattan, K. J.**; Corriveau, J.; Chambers, P. A.; Yates, A. G.; Culp, J.: SEASONAL VARIATION IN NUTRIENTS IN PRAIRIE STREAMS IN THE RED RIVER BASIN, MANITOBA CANADA
- 14:00 **Cade-Menun, B. J.**; Baker-Ismail, S.; Barrett, D.; Fouli, Y.; Hodder, K.; McMartin, D.; Perez-Valdivia, C.; Wu, K.: CHARACTERIZING DISSOLVED AND PARTICULATE PHOSPHORUS FORMS IN SNOWMELT RUNOFF FROM CROPLAND AND PASTURES USING P-31 NMR SPECTROSCOPY
- 14:15 **Tomasek, A. A.**; Hondzo, M.; Kozarek, J. L.; Sadowsky, M. J.; Finlay, J. C.: ANALYZING AND OPTIMIZING DENITRIFICATION HOT SPOTS IN MINNESOTA'S SURFACE WATERS
- 14:30 **Cohen, M. J.**; Nifong, R. L.; Kurz, M. J.; Martin, J. B.; Cropper, W. P.; Korhnak, L. V.: STOICHIOMETRY, METABOLISM AND NUTRIENT LIMITATION ACROSS THE PERIODIC TABLE IN NATURAL FLOWING-WATER CHEMOSTATS

- 14:45 **Hafich, K. A.**; Williams, M. W.; Erbland, J.; Savarino, J.: DETERMINING SOURCES OF NITRATE IN A HIGH ALPINE CATCHMENT IN THE FRONT RANGE OF COLORADO WITH TRIPLE OXYGEN ISOTOPES
- 15:00 **McKee, G. A.**; Rhoades, C.; Borch, T.: ANALYSIS OF THE IMPACT OF THE PINE BEETLE OUTBREAK ON VEGETATION-DERIVED DISSOLVED ORGANIC MATTER IN SUBALPINE FOREST HEADWATER STREAMS
- 15:15 **Ross, M. R.**; Bernhardt, E. S.: NOT JUST SCRATCHING THE SURFACE: ESTIMATING THE DEEP IMPACTS OF MOUNTAINTOP MINING
- 16:00 **Buffam, I.**; Mitchell, M.: VEGETATED ROOFS AS NOVEL URBAN WATERSHEDS: AN ANALYSIS OF NUTRIENT RUNOFF PATTERNS AND THEIR IMPLICATIONS FOR ECOSYSTEM PROCESSES
- 16:15 **White, C. L.**; Piehler, M. F.; Thompson, S. P.: WATERSHED DEVELOPMENT ALTERS LOADING OF NUTRIENTS AND CARBON TO COASTAL STREAMS
- 16:30 **Parr, T. B.**; Ohno, T.; Sleighter, R. L.; Cronan, C. S.; Simon, K. S.: URBANIZATION, NUTRIENTS, AND THE MOLECULAR BASIS OF DISSOLVED ORGANIC MATTER BIOAVAILABILITY
- 16:45 **Finlay, J.**; Hobbie, S.; Baker, L.; Janke, B.: ECOSYSTEM REGULATION OF NUTRIENT TRANSPORT IN URBAN LANDSCAPES
- 17:00 **Carey, R. O.**; Wollheim, W. M.; Mulukutla, G. K.: VARIANCE AMONG STORM-EVENT CARBON, NITROGEN, AND PHOSPHORUS FLUXES IN A SUBURBANIZING WATERSHED
- 17:15 **Epstein, D. M.**; Kelso, J.; Bahr, J.; Baker, M. A.: ORGANIC MATTER BUDGET FOR AN IMPACTED URBAN STREAM
- 17:30 **Daley, M. L.**; Potter, J. D.; Kobylinski, A.; French, C.; Miller, S.; Keeley, C.; Bucci, J.; McDowell, W. H.: COLLABORATIVE SCIENCE TO IDENTIFY NON-POINT NITROGEN SOURCES IN A COASTAL NEW ENGLAND WATERSHED AND REDUCE NITROGEN DELIVERY TO AN IMPAIRED ESTUARY
- 17:45 **Mayer, P. M.**; Beaulieu, J.; Cooper, C.; Forshay, K.; Harrison, M.; Kaushal, S.; Merritts, D.; Newcomer, T.; Pennino, M.; Walter, R.: THE LEGACY OF LAND-USE IS REVEALED IN THE BIOGEOCHEMISTRY OF URBAN STREAMS
- 10:45 **Lin, S.**; Novitski, L. N.; Jones, J. R.; Stevenson, R. J.: CHLOROPHYLL A REMOTE SENSING ALGORITHM ASSESSMENT FOR MISSOURI INLAND TURBID WATER
- 11:00 **Tuffillaro, N.**; Bozarth, C. S.; Shepardson, J. W.; Graham, J. L.; Dreher, T. W.; Davis, C. O.: EXAMPLES OF HYPERSPECTRAL IMAGING OF CYANOBACTERIAL BLOOMS IN LAKES FROM SPACE.
- 11:15 **Le, C.**; Lehrter, J.: PREDICTING HYPOXIA SIZE WITH SATELLITE-OBSERVED SPATIO-TEMPORAL PHYTOPLANKTON DYNAMICS ON THE LOUISIANA CONTINENTAL SHELF
- 11:30 **Griffin, C. G.**; McClelland, J. W.; Frey, K. E.; Holmes, R. M.: DISSOLVED ORGANIC MATTER IN LARGE ARCTIC RIVERS FROM SATELLITE REMOTE SENSING
- 11:45 **McKinna, L. I.**; Weeks, S. J.; Fearn, P.; Werdell, P. J.; Reichstetter, M.; Franz, B. A.; Feldman, G. C.: SWIM: A SEMI-ANALYTICAL OCEAN COLOR INVERSION ALGORITHM FOR OPTICALLY SHALLOW WATERS
- 103 Lakes And Streams As Engines In Global Processes: Insights From Technical Advances In Limnology**
- Chair(s): Jordan S Read, jread@usgs.gov
Paul C Hanson, pchanson@wisc.edu
Augusto Getirana, augusto.getirana@nasa.gov
David P Hamilton, davidh@waikato.ac.nz
- Location: E 142 - 144
- 16:00 **Lenters, J. D.**; Read, J. S.; Gray, D.; Sharma, S.; O'Reilly, C. M.; Hook, S. J.; Schneider, P.; Hampton, S.; McIntyre, P. B.; GLTC Contributors, .: RAPID WARMING OF THE WORLD'S LAKES FROM IN SITU AND SATELLITE-BASED MEASUREMENTS*
- 16:15 **Tyler, A. N.**; Hunter, P. D.; Spyarakos, E.; Maberly, S.; Carvalho, L.; Groom, S.; Vincente, V. M.; Cutler, M. E.; Rowan, J. S.; Politi, E.: A GLOBAL OBSERVATORY OF LAKE RESPONSES TO ENVIRONMENTAL CHANGE (GLOBOLAKES)*
- 16:30 **Birkett, C.**; Bjerklie, D.; Carabajal, C.; Beckley, B.: LAKES AND RESERVOIRS AS INDICATORS OF REGIONAL AND GLOBAL CHANGE: GATHERING OF WATER LEVEL VARIATIONS VIA SATELLITE-BASED ALTIMETRY*
- 16:45 **Roulet, N. T.**; Kim, Y. I.; Strachan, I. B.; Tremblay, A.; Wang, W. F.: SIMULATING CARBON EXCHANGES IN LARGE BOREAL RESERVOIRS*
- 17:00 **Sheng, Y.**; Wang, J.; Smith, L. C.; Lyons, E. A.; Te, G.; Woods, J.; Garibay, D.; Knox, B.; Gao, F.: MAPPING GLOBAL LAKE DYNAMICS USING LANDSAT ARCHIVE: A PROGRESS REPORT*
- 17:15 **Hipse, M. R.**: BRIDGING THE TERRESTRIAL-AQUATIC INTERFACE: A STRATEGY FOR EFFECTIVE BIOGEOCHEMICAL MODELLING ACROSS COMPLEX AQUATIC LANDSCAPES
- 17:30 **McLaughlin, D. L.**; Cohen, M. J.: UNDERSTANDING DRIVERS OF STREAM PROCESSES WITH HIGH RESOLUTION DATA
- 17:45 **Hanson, P. C.**; Carey, C. C.; Hu, Y. H.; Muraoka, K.: PATTERNS IN LAKE DYNAMICS: DO SIMULATIONS AND SENSOR NETWORKS SPEAK THE SAME LANGUAGE?
- 095 Remote Sensing Optically Shallow Aquatic Ecosystems: Methods And Applications**
- Chair(s): Lachlan I.W. McKinna, lachlan.mckinna@curtin.edu.au
Peter Fearn, P.Fearn@exchange.curtin.edu.au
John Hedley, j.d.hedley@envirocs.com
Curtiss O. Davis, cdavis@coas.oregonstate.edu
- Location: B 117 - 119
- 10:00 **Kutser, T.**; Kotta, J.; Vahtmäe, E.; Herkül, K.: COMBINING REMOTE SENSING, SPATIAL MODELS AND IN SITU DATA IN GIS ENVIRONMENT FOR SPATIAL PLANNING PURPOSES
- 10:30 **Novitski, L. N.**; Esselman, P. C.; Qi, J.; Stevenson, R. J.: USING MODIS AND LANDSAT TO INFER CHLOROPHYLL IN GREAT LAKES SURFACE WATERS WITH A FOCUS ON SAGINAW BAY

(*) represents Invited presentations

107 Characteristics And Management Of Aquatic Systems In Agricultural Landscapes

Chair(s): Robert Kroger, rkroger@cfr.msstate.edu
Derek Faust, dfaust@cfr.msstate.edu
Beth Poganski, bpoganski@cfr.msstate.edu
Austin Omer, aomer@cfr.msstate.edu

Location: B 115

- 16:00 **Holmes, R.**; Yates, A. G.: STREAM BENTHIC MACROINVERTEBRATE COMMUNITY RESPONSE TO USE AND POSITION OF AGRICULTURAL BEST MANAGEMENT PRACTICES
- 16:15 **Faust, D. R.**; Kröger, R.: EFFECTS OF ORGANIC CARBON AMENDMENTS ON NITROGEN REMOVAL IN AGRICULTURAL DRAINAGE DITCH SEDIMENTS
- 16:30 **Graham, S. E.**; O'Brien, J. M.; McIntosh, A. R.: RETHINKING THE ROLE OF ALLOCHTHONOUS SUBSIDIES IN LOWLAND AGRICULTURAL STREAM RESTORATION
- 16:45 **van der Geest, H. G.**; Goldenberg Vilar, A.; Whatley, M. H.; Vonk, J. A.; Admiraal, W.: A CLEAR MESSAGE ON TURBID WATER: SUSPENDED PARTICLES AFFECT BENTHIC COMMUNITIES IN AGRICULTURAL PEATLANDS
- 17:00 **Clark, D. L.**; Heise, B. A.: EFFECTS OF LIVESTOCK GRAZING ON AQUATIC MACROINVERTEBRATES IN WETLANDS OF BRITISH COLUMBIA'S SOUTHERN INTERIOR
- 17:15 **Trowbridge, M. A.**; Pegg, M. A.; Burgin, A. J.: THE RESPONSE OF PRIMARY PRODUCTION TO NUTRIENT AND FISH COMMUNITY RESTORATION TECHNIQUES IN EUTROPHIC SANDPIT LAKES
- 17:30 **Julich, H. M.**; Downing, J. A.: TWO HUNDRED YEARS OF LANDSCAPE CHANGE; CONSEQUENCES FOR EAST OKOBOJI LAKE, IOWA
- 17:45 **Larson, D. M.**; Dodds, W. K.; Whiles, M. R.; Fulgoni, J.: ECOLOGICAL STATE SHIFTS IN GRASSLAND STREAMS FOLLOWING FIRE AND CATTLE GRAZING: A MULTI-SITE BACI EXPERIMENT

112 Emerging Technologies And Integrative Data Analysis Approaches For Microbiological Studies In Aquatic Environments

Chair(s): Holly Simon, simonh@ebs.ogi.edu
Steven Hallam, shallam@mail.ubc.ca
Lydie Herfort, herfort@ohsu.edu

Location: B 110 - 112

- 16:00 **Halperin, D.**; Howe, B.: FLEXIBLE DATA SERVICES FOR ADAPTIVE SENSING APPLICATIONS*
- 16:15 **Ryan, J.**; Gomes, K.; McCann, M.; Cline, D.; Edgington, D.; Bellingham, J.; Chavez, F.: AN INTEGRATED SYSTEM FOR COORDINATING OCEAN OBSERVATIONS, DATA MANAGEMENT AND ANALYSIS
- 16:30 **Preston, C.**; Ryan, J.; Pargett, D.; Roman, B.; Jensen, S.; Yamahara, K.; Girguis, P.; Marin III, R.; Birch, J.; Scholin, C.: ECOGENOMIC SENSOR REVEALS DEEP-SEA MICROBIAL POPULATION DYNAMICS
- 16:45 **Zhang, Y.**; Ryan, J. P.; Harvey, J. B.; Bellingham, J. G.: AUTONOMOUSLY TARGETED OBSERVATION AND SAMPLING OF COASTAL MARINE ECOLOGICAL FEATURES BY AUTONOMOUS UNDERWATER VEHICLES*

- 17:00 **Robidart, J. C.**; Preston, C. M.; Fatland, R.; Marin, R.; Jensen, S.; Birch, J.; Chavez, E.; Bellingham, J.; Zehr, J. P.; Scholin, C. A.: THE ROLE OF IN SITU AUTONOMOUS INSTRUMENTATION IN REFINING OUR UNDERSTANDING OF MICROBIAL DISTRIBUTIONS AND ACTIVITIES IN MONTEREY BAY
- 17:15 **Ottesen, E. A.**; Scholin, C. A.; Delong, E. F.: INSIGHTS INTO MICROBIAL COMMUNITY FUNCTION FROM HIGH-RESOLUTION METATRANSCRIPTOMIC TIME SERIES*
- 17:30 **Needham, D. M.**; Fuhrman, J. A.: DAILY TIME-SERIES OFF SOUTHERN CALIFORNIA REVEAL DYNAMICS AND POTENTIAL SUCCESSIONAL PATTERNS OF DISTINCT BACTERIAL, ARCHAEAL, PROTISTAN, AND VIRAL TAXA*
- 17:45 **Nelson, H.**; Peterson, T.; Rieff, B.; Wolfe, P.: IMPROVED METHODOLOGIES FOR SEMI-AUTOMATED IDENTIFICATION OF PLANKTON AND BIOVOLUME ESTIMATION

124 D Bioassessment (Part 4)

Chair(s): Martin Neale, martin.neale@aucklandcouncil.govt.nz

Location: D 137 - 139

- 10:00 **Neale, M. W.**; Lear, G.; Buckley, H.; Lau, K.; Case, B.; Lewis, G.: BRIDGING THE MICRO-MACRO GAP; A COMPARISON OF BACTERIA AND INVERTEBRATES AS ECOLOGICAL INDICATORS OF STREAMS
- 10:15 **Novodvorsky, N. M.**; Bailey, J. L.; Reynoldson, T. B.: EXPANSION OF THE APPLICATION OF BENTHIC INVERTEBRATE RCA BIOASSESSMENT REFERENCE SITES: HOW FAR CAN WE GO?
- 10:30 **Wilhelm, J. O.**; Fore, L.; Wisseman, B.; Lester, D.; Hayslip, G.; Dorfmeier, E.: RECALIBRATION OF THE PUGET LOWLAND B-IBI
- 10:45 **Plotnikoff, R. W.**; Blizard, J. A.: IDENTIFICATION OF STRESSORS TO STREAM BENTHIC COMMUNITIES THAT RESULT FROM STORMWATER IMPACTS ORIGINATING FROM DRAINAGE NETWORK PONDS AND DIRECT INPUT.
- 11:00 **Miler, O.**; Böhmer, J.; Brauns, M.; Porst, G.; Pusch, M.: RELATIONSHIP BETWEEN MACROINVERTEBRATE COMMUNITY COMPOSITION AND PHYSICAL HABITAT SURVEY DATA IN THE BIOTIC ASSESSMENT OF MORPHOLOGICAL LAKE SHORE ALTERATIONS
- 11:15 Richards, D.; Bilger, M.; Pfeiffer, J.; **Lester, G.**: DEVELOPMENT OF IDAHO MACROINVERTEBRATE TEMPERATURE OCCURRENCE MODELS
- 11:30 Yoshizaki, M.; **Negishi, J. N.**; Watanabe, N.; Nunokawa, M.; Nakamura, F.: INTERMEDIATE DISTURBANCE HYPOTHESIS PREDICTS THE VARIABILITY IN DAM EFFECTS ON MACROINVERTEBRATES
- 11:45 **Bogatov, V. V.**: DRIFT AND BEHAVIOR OF THE RIVER MACROINVERTEBRATES

126 A Algae And Primary Production (Part 1)

Chair(s): Steven Rier, srier@bloomu.edu

Location: C 120 - 122

- 10:00 **Rier, S. T.**; Kinek, K. C.; Francoeur, S. N.; Kuehn, K. A.: PERIPHYTON POLYPHOSPHATE STORAGE DURING STORM RUNOFF IN A NORTH CENTRAL PENNSYLVANIA STREAM

- 10:15 **Kinek, K. C.;** Rier, S. T.: BRIEF PULSES OF PHOSPHORUS STIMULATE ALGAL GROWTH AND REVEAL POTENTIAL FOR PHOSPHORUS STORAGE IN AQUATIC BIOFILMS
- 10:30 **Kiesling, R. L.;** Garono, R. J.; Elliott, S. M.: NUTRIENT LIMITATION OF PHYTOPLANKTON AND PERIPHYTON IN THE ST. LOUIS RIVER ESTUARY AREA OF CONCERN 2011-2013: IMPLICATIONS FOR ECOSYSTEM RESTORATION CRITERIA
- 10:45 **Francoeur, S. N.;** Kuehn, K. A.: EFFECTS OF ALGAL PHOTOSYNTHESIS ON HETEROTROPHIC PRODUCTION AND EXTRACELLULAR ENZYME ACTIVITY IN LITTER-ASSOCIATED PERIPHYTON.
- 11:00 **Bakkila, K. A.;** Kashian, D. R.: QUANTIFYING THE TRANSFER OF FECAL INDICATOR BACTERIA ASSOCIATED WITH SHORE DEPOSITS OF LYNGBYA WOLLEI TO BEACH SAND AND NEAR SHORE WATERS IN LAKE ST CLAIR, MI
- 11:15 **Keller, T. A.;** Klein, J. E.: POST-HARVEST RECOVERY OF PERIPHYTON WASTEWATER FLOW-WAYS
- 11:30 **Brown, L. R.;** Brown, J.; Fearn, R. L.; Paudel, D.; Quigg, A.: ELUCIDATING THE IMPACTS OF CONTAMINANT SUPPRESSANTS USING CONTINUOUS-FLOW CYTOMETRY FOR MICROALGAL CULTURES GROWN IN OPEN POND SYSTEMS
- 11:45 **Lacour, T.;** Joannie Ferland, J.; Babin, M.: ARCTIC DIATOM PHOTOACCLIMATION IN RELATION TO GROWTH TEMPERATURE

126 B Algae And Primary Production (Part 2)

Chair(s): Euan Reavie, ereavie@d.umn.edu

Location: C 120 - 122

- 13:30 **Reavie, E. D.;** Heathcote, A. J.: VALIDATE YOUR INDICATORS! AN EXAMPLE USING DIATOMS AND PHOSPHORUS
- 13:45 **Manoylov, K. M.;** Mutiti, S.; Dunn, R. M.: ALGAL GROWTH IN LOW NUTRIENT HIGH TURBIDITY SINCLAIR LAKE, GEORGIA
- 14:00 **Poister, D.;** Schaefer, A.; Richards, K.; Poplin, T.: ALLELOPATHIC REJUVENATION: STIMULATION OF DORMANT *AULACOSEIRA GRANULATA* BY *GLOEOCYSTIS PLANCTONICA*
- 14:15 **Davison, I. R.;** Wyatt, K. H.: SHORT-TERM RESPONSES TO NUTRIENT ENRICHMENT IN THE GREEN MACROALGA *CLADOPHORA GLOMERATA*
- 14:30 **Allinger, L. E.;** Reavie, E. D.: LAKE ONTARIO'S STORY AS TOLD BY PHYTOPLANKTON
- 14:45 **Kashian, D. R.;** Dyble, J.; Stow, C. A.; Gossiaux, D. C.: DREISSENID-INDUCED CHANGES IN THE SAGINAW BAY PHYTOPLANKTON COMMUNITY STRUCTURE SINCE THE DREISSENID INVASION OF SAGINAW BAY, LAKE HURON
- 15:00 **Harrison, J. W.;** Howell, E. T.; Watson, S. B.; Hiriart-Baer, V. P.; Smith, R. E.: PCA-BASED ESTIMATES OF LAKE PHYTOPLANKTON COMMUNITY COMPOSITION OBTAINED USING IN SITU FLUORESCENCE FROM THE BBE FLUOROPROBE
- 15:15 **Garono, R. J.;** Weillhofer, C. L.: ALGAL COMMUNITIES IN A TURBID LAKE SUPERIOR DROWNED RIVER MOUTH

129 A Organic Matter Processing (Part 1)

Chair(s): Chris L. Dutton, cldutton@gmail.com

Location: B 116

- 10:00 **Dutton, C. L.;** Subalusky, A. L.; Rosi-Marshall, E. J.; Post, D. M.: AFRICAN BLACK WATER: HIPPOS, HYPOXIC FLOODS AND FISH KILLS IN THE MARA RIVER, EAST AFRICA
- 10:15 **Kothawala, D. N.;** Stedmon, C. A.; Müller, R. A.; Weyhenmeyer, G. A.; Köhler, S. J.; Tranvik, L. J.: HOW DOES LAND COVER AND CLIMATE INFLUENCE THE QUALITY OF DOM IN BOREAL LAKES?
- 10:30 **Acuña, V.;** Casellas, M.; Freixa, A.; Romani, A.; Sabater, S.: CONSEQUENCES OF WARMER NIGHT-TIME TEMPERATURES ON THE STREAM CARBON METABOLISM: THEORETICAL AND EXPERIMENTAL INSIGHTS
- 10:45 **Lougheed, V. L.;** Andresen, C. G.; Contreras, G.; Tweedie, C. E.: CARBON SOURCES AND SINKS IN WETLAND AND LAGOON ENVIRONMENTS OF THE ARCTIC COASTAL PLAIN.
- 11:00 **Fortino, K.;** Whalen, S. C.; Johnson, C. R.: DECREASE IN LAKE TRANSPARENCY REDUCES WHOLE-LAKE SEDIMENT ORGANIC MATTER MINERALIZATION EVEN WITH EPILIMNETIC WARMING IN ARCTIC LAKES
- 11:15 **Attermeyer, K.;** Flury, S.; Kazanjian, G.; Gessler, A.; Premke, K.: THE ROLE OF OXYGEN, TEMPERATURE, AND SEDIMENT ORGANIC CARBON ON SEDIMENT MINERALIZATION RATES IN KETTLE HOLES IN NORTHEAST GERMANY
- 11:30 **Bullard, A. E.;** Hershey, A. E.: A STUDY OF THE RATE OF METHANOGENESIS IN SEDIMENT SLURRIES OF AN URBAN AND A FORESTED STREAM.
- 11:45 **D'Andrilli, J.;** Foreman, C. M.; McKnight, D. M.; Marshall, A. G.: CHARACTERIZATION OF IHSS PONY LAKE FULVIC ACID DOM BY FOURIER TRANSFORM ION CYCLTRON RESONANCE MASS SPECTROMETRY AND FLUORESCENCE SPECTROSCOPY

129 B Organic Matter Processing (Part 2)

Chair(s): David Manning, manningd@uga.edu

Location: B 116

- 13:30 **Giling, D. P.;** Grace, M. R.; Mac Nally, R.; Thompson, R. M.: AQUATIC ORGANIC CARBON DYNAMICS IN MASSIVELY ALTERED LANDSCAPES: PAST, PRESENT AND FUTURE.
- 13:45 **Doyle, R. D.;** King, R. S.; Hiatt, D. L.; Whigham, D. F.; Walker, C. M.: BIOAVAILABLE ORGANIC CARBON IN KENAI LOWLAND HEADWATER STREAMS, ALASKA
- 14:00 **Manning, D. W.;** Rosemond, A. D.; Kominoski, J. S.; Gulis, V.; Benstead, J. P.; Maerz, J. C.: NITROGEN AND PHOSPHORUS INCREASE LITTER BREAKDOWN RATES VIA DIFFERENT MECHANISTIC PATHWAYS
- 14:15 **Farrell, K. J.;** Rosemond, A. D.; Ballantyne, F.; Bonjour, S. M.; Kominoski, J. S.: SPATIAL DYNAMICS IN ORGANIC MATTER STOICHIOMETRY IN STREAM NETWORKS
- 14:30 **Arroita, M.;** Chauvet, E.; Flores, L.; Lambrigot, D.; Lamothe, S.; Larrañaga, A.; Elosegi, A.: EFFECTS OF DROUGHT ON STREAM LITTER-DECAYING FUNGI: A MESOCOSM EXPERIMENT

(*) represents Invited presentations

- 14:45 **Koenig, L. E.**; Ramirez, A.; McDowell, W. H.: QUANTIFYING CARBON LOSSES FROM TROPICAL WATERSHEDS: THE EFFECTS OF URBANIZATION ON ORGANIC AND INORGANIC CARBON FLUX
- 15:15 **Gašparovic, B.**; Cvitešić, A.; Penezic, A.; Frka, S.; Lampitt, R. S.; Kazazic, S.; Holguin, O.; Sudasinghe, N.; Schaub, T.: POTENTIAL OF LIPIDS FOR CARBON SEQUESTRATION IN THE ATLANTIC OCEAN

129 C Organic Matter Processing (Part 3)

Chair(s): Stephanie Harper, sh04565@georgiasouthern.edu
Jenise Snyder, jsnyder@ursuline.edu

Location: B 116

- 16:00 **Harper, S.**; Colón-Gaud, J. C.; Harrison, S.; Wu, T.: MICROBIAL COMMUNITIES OF DECOMPOSING LITTER IN FORESTED HEADWATER STREAMS: A TROPICAL AND TEMPERATE COMPARISON
- 16:15 **Snyder, J. M.**; Rejmankova, E.; Castle, S. T.: DOES ABOVEGROUND MIRROR BELOWGROUND?: AN EXAMINATION OF MACROPHYTE LITTER DECAY IN RESPONSE TO PHOSPHORUS ENRICHMENT
- 16:30 **LeRoy, C. J.**; Schweitzer, J. A.; Bailey, J. K.; Marks, J. C.; Whitham, T. G.; Fischer, D. G.; Lindroth, R. L.: PLANT GENES AND GENETIC BY ENVIRONMENT INTERACTIONS LINK FORESTS AND STREAMS
- 16:45 **Castle, S. T.**; Rejmankova, E.; Snyder, J. M.: SACRAMENTO-SAN JOAQUIN DELTA: ASSESSING THE ROLE OF ABOVE- AND BELOWGROUND LITTER DECOMPOSITION IN CONSTRUCTED WETLANDS FOR PROMOTING ORGANIC MATTER ACCRETION
- 17:00 **Alamo, E. B.**; Ribor Bermejo, M.; Bolivar, M.; Sabater, F.; Martí i Roca, E.: THE ROLE OF WATER VELOCITY ON LEAF-LITTER DECOMPOSITION RATES
- 17:15 **Polaskey, S.**; Evans-White, M.; Scott, T.; Entekin, S.: INDIRECT EFFECTS OF SHREDDER FEEDING ON LEAF DECOMPOSITION
- 17:30 **Jones, J. A.**; Cherry, J. A.; McKee, K. L.: EUTROPHICATION AND ATMOSPHERIC CO₂ EFFECTS ON ROOT DECOMPOSITION OF BRACKISH MARSH PLANTS
- 17:45 **Hopple, A. M.**; Pfeifer-Meister, L.; Keller, J.; Medvedeff, C.; Bridgman, S.: IS METHANE PRIMARILY DERIVED FROM SOLID-PHASE PEAT OR DOC IN PEATLANDS?

132 E Population And Community Ecology (Part 5)

Chair(s): Scott A. Wissinger, swissing@allegheny.edu

Location: C 120 - 122

- 16:00 **Wissinger, S. A.**; Klemmer, A. J.; Thornton, E. J.; Perchik, M.; Burns, R. J.; Greig, H. S.; Eddy, C.: DENSITY-DEPENDENT NUTRIENT CROSS-LINKS BETWEEN DETRITUS PROCESSING AND BENTHIC ALGAE IN SHALLOW PONDS AND WETLANDS
- 16:15 **Demi, L. M.**; Benstead, J. P.; Rosemond, A. D.; Maerz, J. C.; Gulis, V.: CONSUMER BIOMASS AND PRODUCTION IN FIVE DETRITUS-BASED STREAM ECOSYSTEMS IN RESPONSE TO AN EXPERIMENTAL DISSOLVED N:P GRADIENT
- 16:45 **Pollard, A. I.**; Alexander, L. C.; Yuan, L. L.: ASSEMBLAGE CHANGE ALONG GRADIENTS OF DISTURBANCE: HOW CONSISTENT ARE PATTERNS IN LAKES?

- 17:15 **Becker, J. C.**; Rodibaugh, K. R.; Labay, B. J.; Lash, F. P.; Bonner, T. H.; Zhang, Y.; Nowlin, W. H.: CONCORDANCE AND SPATIAL AUTOCORRELATION BETWEEN MACROINVERTEBRATE AND FISH COMMUNITIES IS CONTROLLED BY ENVIRONMENTAL GRADIENTS IN A GULF SLOPE RIVER ECOSYSTEM

- 17:30 **Hanley, T. C.**; DeLong, J. P.: THE EFFECTS OF *DAPHNIA* INTRASPECIFIC DIVERSITY ON PREDATOR-PREY DYNAMICS AND THE PLASTICITY OF ALGAL (*SCENEDESMUS*) COLONY FORMATION
- 17:45 **Crumrine, P. W.**; Grandinetti, M. E.; Norwood, K. M.; Kawecki, S.: SIZE STRUCTURE AND IDENTITY OF TOP PREDATORS IN FISHLESS PONDS INFLUENCE THE SURVIVAL OF PREY

137 B Ecology Of Fish And Other Aquatic Vertebrates (Part 2)

Chair(s): David Janetski, janetski88@gmail.com

Location: A 106

- 10:00 **Carter, J.**; Ackleh, A. S.; Zhang, P.; Martin, A. M.; Johnson, D.: USING THE RESIDUALS FROM ALLOMETRIC MODELS FOR ASSESSING POPULATION-LEVEL CHANGES IN THE SEASONAL ENERGETICS OF THE GREEN TREE FROG (*HYLA CINEREA*)
- 10:15 **McLean, K. I.**; Mushet, D. M.; Stockwell, C. A.: FISH AND SALAMANDER COMMUNITIES RESPOND TO INCREASED WATER LEVELS IN PRAIRIE POT HOLE LAKES: EFFECTS OF A CHANGING CLIMATE
- 10:30 **Wheeler, K.**; Miller, S. W.; Crowl, T. A.: MIGRATORY FISHES EXHIBIT MULTI-FUNCTIONALITY IN RIVERINE ECOSYSTEMS
- 10:45 **Blumenshine, S. C.**; Griffiths, W. K.; Workman, M.: NON-NATIVE PREDATOR DISTRIBUTIONS IN THE SAN JOAQUIN RIVER: A THREAT TO CHINOOK SALMON RESTORATION
- 11:00 **Utz, R. M.**; Cooper, S. D.; Gido, K. B.; Stewart, J.: EFFECTIVE PATCH-SCALE ELECTRICAL EXCLUSION OF FISH AND INVERTEBRATES IN THE BENTHOS ACROSS WATER CONDUCTIVITY LEVELS USING ADJUSTABLE ELECTRICAL SETTINGS
- 11:15 **Giordano, B. J.**; Luttenton, M. R.: DIEL AND SEASONAL MOVEMENT OF BROWN TROUT (*SALMO TRUTTA*) IN THE AU SABLE RIVER SYSTEM, MI
- 11:30 **Ho, S. K.**; Dudgeon, D.: A MARK-RECAPTURE STUDY IN A HONG KONG STREAM SHOWS BALITORID LOACHES AND GOBIES ARE HIGHLY SEDENTARY
- 11:45 **Janetski, D. J.**; Ruetz III, C. R.: SPATIOTEMPORAL PATTERNS OF FISH COMMUNITY COMPOSITION IN DROWNED RIVER MOUTH LAKES OF EASTERN LAKE MICHIGAN

140 C Invasive And Exotic Species (Part 1)

Chair(s): Randall E. Hicks, rhicks@d.umn.edu

Location: D 137 - 139

- 13:30 **Hicks, R. E.**; Reed, A. J.; Badgley, B. D.; Sloan, C. M.; Sadowsky, M. J.: TOWARD EARLY DETECTION OF BALLAST-WATER DERIVED MICROBIAL INVASIONS AND UNDERSTANDING THEIR IMPACTS
- 13:45 **Dzialowski, A. R.**; Graham, J. L.; Boeckman, C. J.; Goeckler, J.: POPULATION DYNAMICS AND POTENTIAL IMPACTS OF ZEBRA MUSSELS (*DREISSENA POLYMORPHA*) IN TURBID, EUTROPHIC RESERVOIRS

- 14:00 **Aliff, M. N.**; Reavie, E. D.; TenEyck, M.; Cangelosi, A. A.: HOW MANY PROPAGULES DOES IT TAKE TO CAUSE AN INVASION?
- 14:15 **Holzer, K. K.**; Carney, K. J.; Minton, M. A.; Miller, A. W.; Ruiz, G. M.: A TALE OF THREE COASTS: TEMPORAL AND SPATIAL VARIATION IN BALLAST WATER MANAGEMENT TO REDUCE INVASION RISK
- 14:30 **Strayer, D. L.**; Malcom, H. M.: THE LONG GOODBYE: COMPLEX, LONG-TERM INTERACTIONS BETWEEN NATIVE UNIONID MUSSELS AND INVASIVE DREISSENIDS IN THE HUDSON RIVER
- 14:45 **Dusting, A.**; Gleeson, D.; Sunnucks, P.; Thompson, R.: WHO DO YOU THINK YOU ARE? THE NEW ZEALAND ORIGIN OF AUSTRALIAN *POTAMOPYRGUS ANTIPODARUM*, AN INVASIVE FRESHWATER SNAIL
- 15:00 **Sleith, R. S.**; Hall, J. D.; McCourt, R. M.; Karol, K. G.: THE INVASIVE MACROALGA *NITELLOPSIS OBTUSA* (N. A. DESVAUX) J. GROVES (CHARACEAE, CHAROPHYCEAE) IN NEW YORK STATE
- 15:15 **Bray, J. P.**; Harding, J. S.; Kilroy, C.; Gerbeaux, P.: *DIDYMOSPHENIA GEMINATA* IMPACTS ON AQUATIC ASSEMBLAGES VARY BASED ON DIFFERING NICHE AND NEUTRAL DETERMINISM DRIVEN BY ORGANISM SIZE

140 D Invasive And Exotic Species (Part 2)

Chair(s): Jake R. Walsh, jrwalsh2@wisc.edu

Location: D 137 - 139

- 16:00 **Kitson, M. T.**; Jensen, D. A.; Gunderson, J. L.: CERCOPAGID RELATED OUTREACH IN THE GREAT LAKES REGION
- 16:15 **Meyer, E. I.**; Santhosh Kumar, D.; Riss, H. W.: SUBLETHAL EFFECTS OF INCREASED SALINITY ON THE PERFORMANCE OF NATIVE VS. INVASIVE AMPHIPODS
- 16:30 **Adams, J. B.**; Bollens, S. M.: SELECTIVE PREDATION ON NATIVE VS INVASIVE ZOOPLANKTON IN THE LOWER COLUMBIA RIVER
- 16:45 **Larson, E. R.**; Twardochleb, L. A.; Olden, J. D.: COMPARATIVE TROPHIC ECOLOGY OF THE GLOBALLY INVASIVE CRAYFISHES *PACIFASTACUS LENIUSCULUS* AND *PROCAMBARUS CLARKII*
- 17:00 **Walsh, J. R.**; Lathrop, R. C.; Vander Zanden, M. J.: THE IMPACT OF THE INVASIVE PREDATORY INVERTEBRATE, *BYTHOTREPES LONGIMANUS*, CASCADES INTO PRIMARY PRODUCTION IN LAKE MENDOTA, WI.
- 17:15 **Kerfoot, W. C.**; Hobmeier, M. M.; Yousef, F.; Hirsch, J.; Maki, R. P.: BLIND-SIDED: SPINY WATERFLEA (*BYTHOTREPES LONGIMANUS*) DISPERSAL AND IMPACTS ON PELAGIC FOOD WEBS
- 17:30 **Sánchez, M. I.**; Amat, J. A.; Ramo, C.; Varo, N.; Paredes, I.; Labouvier, M.; Green, A. J.: THE ECOLOGICAL SIGNIFICANCE OF PARASITES IN HYPERSALINE ECOSYSTEMS: IMPLICATIONS FOR THE INVASION OF *ARTEMIA FRANCISCANA* (CRUSTACEA: BRANCHIOPODA: ANOSTRACA)

144 A Hydro-Ecology (Part 1)

Chair(s): Carl Ruetz, cruetziii@gmail.com

Location: A 105

- 10:00 **Ruetz, C. R.**; Janetski, D. J.; Woods, J. L.; Waller, J. C.; McNair, J. N.: DRIFT SETTLING RATES OF BENTHIC MACROINVERTEBRATES: EVALUATING TURBULENT TRANSPORT DYNAMICS OF PARTICLES IN STREAMS
- 10:15 **Orlofske, J. M.**; Monk, W. A.; Baird, D. J.: THE TEMPORAL TRACKING OF AQUATIC INSECT ASSEMBLAGE RESPONSE VARIABLES TO ANNUAL AND INTER-ANNUAL VARIABILITY IN HYDROLOGICAL CONDITIONS
- 10:30 **Dua, A.**; Bal, R.: SHRINKING FRESHWATER HABITATS: A CASE STUDY ON NATURAL WETLANDS OF GURDASPUR, PUNJAB, INDIA.
- 10:45 McBain, S.; **Kupferberg, S.**: DECLINING DOWNSTREAM: MODELING EFFORTS TO ASSESS RECRUITMENT TO FROG POPULATIONS IN REGULATED RIVERS
- 11:00 **Nukazawa, K.**; Kazama, S.; Takase, A.; Watanabe, K.: ESTIMATING HABITAT SUITABILITY OF STREAM INSECTS BASED ON HYDROLOGICAL MODEL AND ITS CONNECTION TO GENETIC DIVERSITY
- 11:15 **Garey, A. L.**; Smock, L. A.: QUANTIFYING MACROINVERTEBRATE DRIFT RESPONSES TO ANTHROPOGENICALLY-INDUCED FLOW PULSES
- 11:30 **Barmuta, L. A.**; Hardie, S. A.: WATER LEVEL MANIPULATIONS AND BREEDING IN ENDEMIC LACUSTRINE GALAXIIDS: SOME RELATIONSHIPS ARE STRONGER THAN OTHERS
- 11:45 **Christman, M. C.**; McCarten, N. F.: RESPONSE OF NATIVE VERNAL POOL PLANTS TO CLIMATE CHANGE IN HARDPAN VERNAL POOLS OF THE CENTRAL VALLEY OF CALIFORNIA

144 B Hydro-Ecology (Part 2)

Chair(s): Alison P. O'Dowd, ap73@humboldt.edu

Location: A 105

- 13:30 **O'Dowd, A. P.**; Chin, A.: DO BIO-PHYSICAL ATTRIBUTES OF STEPS AND POOLS DIFFER IN HIGH GRADIENT MOUNTAIN STREAMS?
- 13:45 **Poole, G. C.**; Helton, A. M.; Izurieta, C.; Payn, R. A.; Stanford, J. A.; Bernhardt, E. S.; Burgin, A. J.: SIMULATING THE HYDRO-ECOLOGY OF A LARGE RIVER FLOODPLAIN AND ALLUVIAL AQUIFER: PROGRESS AND FUTURE DIRECTIONS
- 14:00 **Niu, S.**; Knouft, J. H.: HYDROLOGICAL CHARACTERISTICS, FOOD RESOURCE ABUNDANCE, AND FOOD WEB ARCHITECTURE.
- 14:15 **Blevins, E.**; Aldous, A.: HYDRO-ECOLOGY OF SAND DUNE WETLANDS ON THE OREGON COAST
- 14:30 **Jones, S. J.**; Slattery, M.: HYDROLOGIC RESPONSE OF HILLSLOPE SEEPS AND HEADWATER STREAMS OF THE FORT WORTH PRAIRIE
- 14:45 **O'Daniel, S. J.**; Poole, G. C.; Fogg, S. K.; Carlson, S. P.; Hyman, A.: CHARACTERIZING HYPORHEIC EFFECTS ON DIEL AND ANNUAL STREAM TEMPERATURE CYCLES ACROSS VARIABLE CHANNEL MORPHOLOGY AND AQUIFER CHARACTERISTICS

- 15:00 **Durkota, J.**; Thompson, J. R.; Flower, R.: ECOLOGY OF A CHALK AQUIFER: COMPOSITION OF BENTHIC, HYPORHEIC AND PHREATIC INVERTEBRATE COMMUNITIES IN RELATION TO CHANGING ENVIRONMENTAL CONDITIONS
- 15:15 **Amerson, B. E.**; Poole, G. C.; O'Daniel, S. J.; Lambert, M.: PREDICTING WATER MOVEMENT THROUGHOUT COARSE-GRAINED ALLUVIAL AQUIFERS VIA ANALYSIS OF ANNUAL TEMPERATURE SIGNALS
- 144 C Hydro-Ecology (Part 3)**
- Chair(s): Kathleen Rugel, keen55@hotmail.com
Clara Mendoza-Lera, clara.mendozalera@b-tu.de
- Location: A 105
- 16:00 **Kinsman-Costello, L. E.**; Sheik, C.; Dick, G.; Sheldon, N.; Burton, A.; Gallagher, T.; Marcus, D.; Snider, M.; Biddanda, B.: DYNAMIC BIOGEOCHEMISTRY OF MICROBIAL MAT AND SEDIMENT ECOSYSTEMS IN SUBMERGED GROUNDWATER SEEPS OF LAKE HURON
- 16:15 **Flury, S.**; Brüning, J.; Premke, K.; McGinnis, D. E.: A NEW LOOK AT AN OLD PROBLEM – ENHANCED INTERNAL NUTRIENT LOADING THROUGH EBULLITION PROCESSES.

- 16:30 **Gonzalez-Pinzon, R.**; Peipoch, M.; Haggerty, R.; Marti, E.; Fleckenstein, J.: DIEL FLUCTUATIONS OF RESPIRATION IN A HEADWATER STREAM
- 16:45 **Zarnetske, J. P.**: REVEALING THE NITRATE SOURCE-SINK FUNCTION OF STREAM SEDIMENT-WATER INTERFACES: IDENTIFYING KEY TRANSPORT AND REACTION CONDITIONS
- 17:00 **Mermillod-Blondin, F.**; Navel, S.; Foulquier, A.; Nogaro, G.: LINKS BETWEEN HYDROLOGICAL EXCHANGES AND BIOGEOCHEMICAL PROCESSES AT THE WATER-SEDIMENT INTERFACE: WHEN DOES BIOTURBATION MATTER?
- 17:15 **Krause, S.**; Gomez, J. D.; Blume, T.; Weatherill, J.; Angermann, L.; Tecklenburg, L.; Munz, M.; Cassidy, N. J.; Wilson, J. L.: HYDROGEOPHYSICAL STREAMBED CONTROLS ON HYPORHEIC HOTSPOTS OF MICROBIAL METABOLISM AND BIOGEOCHEMICAL TURNOVER
- 17:30 **Mendoza-Lera, C.**; Fabian, J.; Garcia, M.; Krahl, J.; Mutz, M.; Premke, K.; Zipfel, L.; Zlatanovic, S.: SEDIMENT MOVEMENT DYNAMICS MODULATE MICROBIAL CARBON TURNOVER IN SANDY STREAMBEDS

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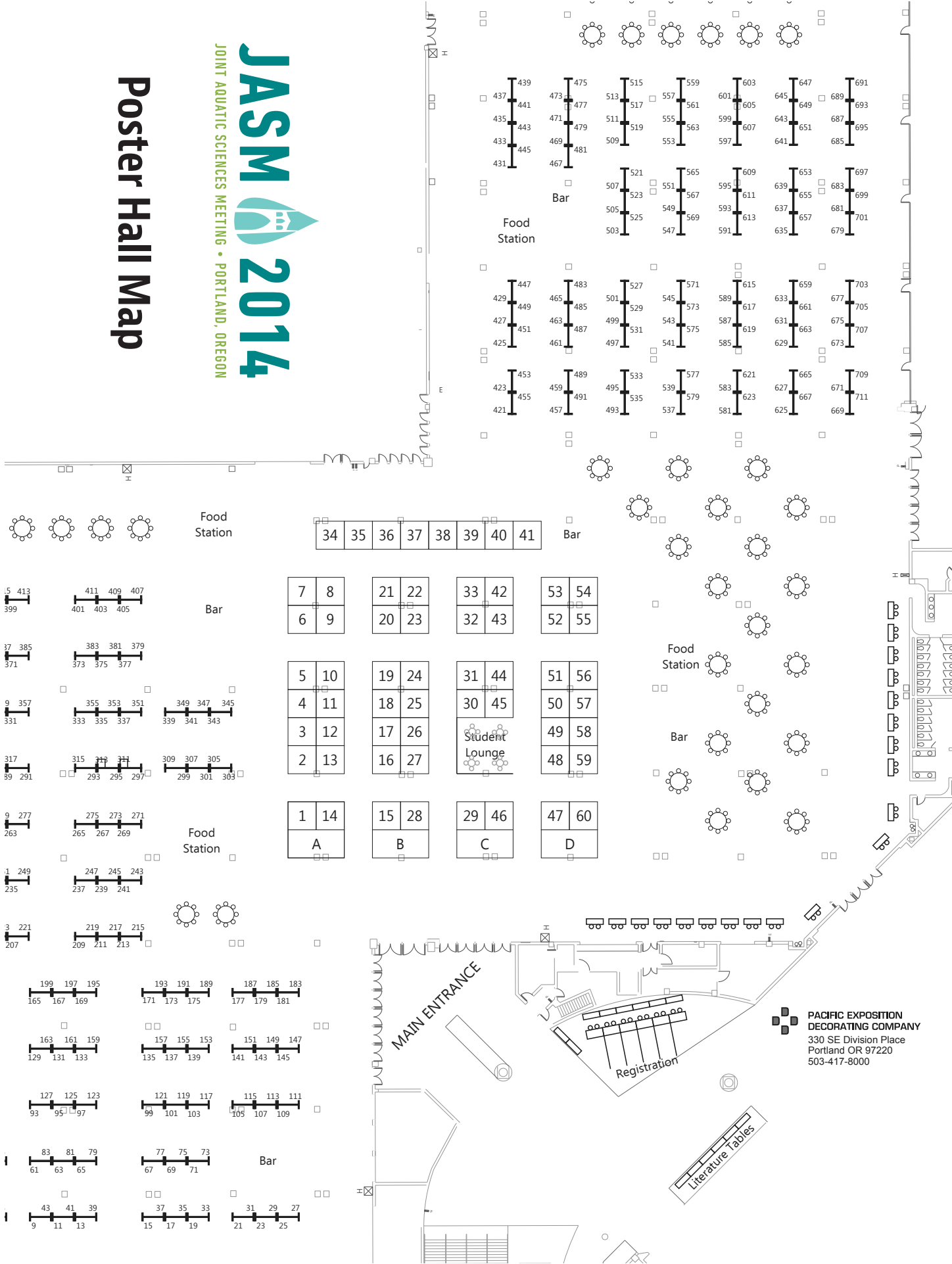
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