

VERSION 2.2

PROGRAM BOOK



WATER CONNECTS!

ASLO 2018 SUMMER MEETING

10-15 JUNE 2018

VICTORIA CONFERENCE CENTRE

VICTORIA, BC, CANADA

WWW.ASLO.ORG/VICTORIA2018



SPONSORED BY

ASLO

Association for the Sciences of
Limnology and Oceanography

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WATER CONNECTS!

Water connects everything and everyone! Water transcends and connects all spheres: the lithosphere, atmosphere, and biosphere – from fresh to salty, from microscopic to macroscopic. Water connects us to each other and to resources – across cultures and society, across politics and international boundaries. However, these elements are too frequently studied in isolation. This meeting will encourage you to bring your knowledge, curiosity, and creativity to connect with each other and to share your passion for water!

VICTORIA CONFERENCE CENTRE ART

To honor ASLO and to highlight this meeting's theme, selected artwork from local galleries is on display throughout the Victoria Conference Centre and Empress Hotel. Please take some time to study and appreciate these incredible works of art.

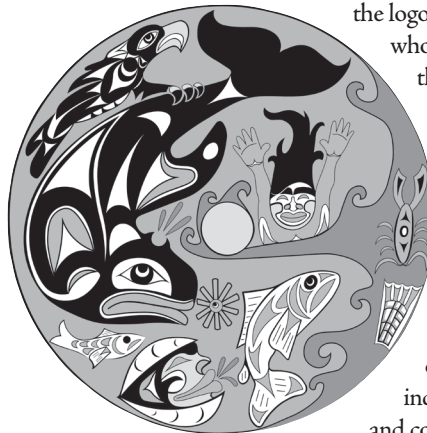
ASSOCIATION FOR THE SCIENCES OF LIMNOLOGY AND OCEANOGRAPHY

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 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.

For more than 50 years, ASLO has been the leading professional organization for researchers and educators in the field of aquatic science. ASLO traces its roots to the Limnological Society of America (LSA), which was established in 1936 to further interest and research in limnological science. While the LSA had members working in both freshwater and marine systems, the name did not reflect this diversity until 1948 when the Oceanographic Society of the Pacific merged with the LSA to become the American Society of Limnology and Oceanography. ASLO is incorporated as a non-stock (non-profit) corporation in the State of Wisconsin. Membership in the society is presently more than 3,800 members. Members are drawn from 58 countries including the United States, and more than a quarter of the members reside outside the U.S. In 2011, ASLO members voted to change its name to the Association for the Sciences of Limnology and Oceanography, reflecting the increasingly international nature of the society.

ABOUT THE 2018 SUMMER MEETING LOGO

The 2018 ASLO summer meeting logo was designed by Doug Lafortune, a well-known Coast Salish artist of Salish ancestry, currently living on Vancouver Island. The logo is intended to integrate the land-water-air interface through the images as well as the connectivity of different organisms across scales. The center of



the logo, where the hole of the whorl is located, represents the sun and symbolizes growth, energy, and life. In Coast Salish culture, power and spirituality belong to the unseen. It includes images of aquatic microscopic life with such features designed into the logo, including a diatom, rotifer and copepod, likely their first depictions in Salish tradition.

Other images are classically found in Salish art. The salmon, which connects rivers to the sea and back again, symbolizes prosperity, the power of instinct and intuition. They are the providers and givers of life. Images of salmon in pairs are a sign of good luck. The orca is the lord of the ocean; it carries the history of the world. It symbolizes communication, intuition, harmony and goodness. The eagle, connecting air, water and land, is the divine spirit closest to the Great Spirit. It has the highest perception and symbolizes great vision, strength, the ability to go further, with the capacity to bridge worlds. The eagle is a leader, providing clarity and truth.

The human emerging from the clam is a symbol that all life originally comes from water. The human figure with head and arms rising out of the ocean waves is meant to invite you to the meeting and the uplifted arms and hands are the traditional Coast Salish welcome gesture. All the images you will see in West Coast First Nation art have powerful meanings, with deep connections to place in the natural and spiritual worlds.

The photo used to highlight our logo was also carefully selected. It is to remind us to maintain our child-like curiosity as we pursue our quest to understand water. To remind us of the privilege and how much fun it is to play in water with our friends! It is also a reminder of the need to protect water and aquatic resources now and for future generations.

THANK YOU TO THE GORDON AND BETTY MOORE FOUNDATION

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FOUNDATION

ASLO thanks the Gordon and Betty Moore Foundation for supporting the ASLO 2018 Meeting. For more information about the foundation, please go to: <https://www.moore.org/>

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INCLUDED IN THIS PROGRAM

This program is produced for reference on site at the meeting. It contains the most up-to-date program information. Changes received after the printing of the program can be found on the conference web site.

WEB SITE AND SOCIAL MEDIA

We encourage you to use the meeting web site for all current information and to navigate the meeting.

Facebook: facebook.com/ASLO.org

Twitter: @ASLOMtg (#ASLOMtg)

ASLO RECORDING POLICY

Please! No recording of individual talks or sessions. This includes the opening plenary session as well as the poster and oral presentations that will take place throughout the week. Additionally, audio taping, videotaping, or photographing presentations is not allowed at the meeting. Thank you for your cooperation!

OVERVIEW OF THE SCIENTIFIC PROGRAM SCHEDULE

The meeting will formally start on Sunday evening at 18:00 with a brief welcome by the conference co-chairs, First Nations blessing ceremony, and opening speaker. A mixer reception will follow. Each day of the week (Monday through Friday) will begin with concurrent sessions in various rooms at the conference center. There will be a break following the concurrent sessions that will allow attendees time to network with one another before moving into the plenary session on the 2nd floor of the Victoria Conference Centre. Plenary sessions will include award acceptance talks and brief presentations or “flash talks” by various artists who will be participating in a session later in the week. Two-hour poster sessions and receptions are scheduled Tuesday and Thursday afternoons. This schedule maximizes the time for poster presentations. Posters will be up all week for viewing. Friday’s schedule will include a closing plenary session followed by a closing mixer.

PLENARY SESSIONS

OPENING PLENARY SESSION: WELCOME, BLESSING CEREMONY AND OPENING SPEAKER

Sunday, 10 June 2018, 18:00 – 19:00

Carson Hall – Victoria Conference Centre



WELCOME BY ASLO PRESIDENT

Linda Duguay, Director of the University of Southern California (USC) Sea Grant Program and Director of Research for the Wrigley Institute for Environmental Studies at USC, Los Angeles, California, USA

WELCOME BY MEETING CO-CHAIRS

Jennifer Cherrier, Professor and Department Chairperson, Earth and Environmental Sciences, Brooklyn College - CUNY, Brooklyn, New York, USA

Roxane Maranger, Internal Director, GRIL, Department of Biological Sciences, University of Montreal, Montreal, Quebec, Canada

BLESSING CEREMONY

The First Nations Blessing Ceremony is a cultural ceremony that has been used for many generations to begin meetings and events in Victoria. This protocol will be honored at the start of the ASLO Summer Meeting. Coast Salish First Nations use the blessing to ask for safe journey and to ask for protection on land and water. The blessing also acknowledges the ancestors that lived here in the past on the traditional lands of the Lekwungen people.



OPENING SPEAKER

Sybil Seitzinger, Executive Director, Pacific Institute for Climate Solutions (PICS) and Professor, School of Environmental Studies, University of Victoria, Victoria, British Columbia, Canada

Opening Presentation: Borders, boundaries, frontiers: Water knows no political, economic, or environmental constraints

Presentation Description: Welcome to beautiful British Columbia. Glaciers to rivers, lakes, wetlands to coasts and oceans—British Columbia has it all. However, virtually all aspects of the physical, biogeochemical and ecosystem dynamics and interactions are, and will increasingly be, affected by climate change, with consequences for ecosystems and people that rely on them. In many ways, British Columbia is a microcosm of many places in the world. Never before has there been such an urgency to understand all aspects of aquatic systems. And there will be many surprises, economic, political and environmental. Developing effective approaches to prepare for those changes needs interdisciplinary engagement by aquatic ecologists, economists, legal scholars, policy analysts, behavioural scientists, cross border negotiators, and many others. “I used to think I knew what interdisciplinary meant. I now realize I had only an inkling of what is needed for understanding and developing climate solutions.”

Biographical Information: Dr. Sybil Seitzinger is the Executive Director of the Pacific Institute for Climate Solutions (PICS), and Professor in the School of Environmental Studies at the University of Victoria. The Pacific Institute for Climate Solutions is a dynamic knowledge network that brings together leading researchers from British Columbia and around the world to study the impacts of climate change and to develop positive approaches to mitigation and adaptation.

Dr. Seitzinger joined PICS from her position as executive director of the International Geosphere-Biosphere Program (IGBP) based in Stockholm, Sweden. Prior to that, she was director of the Rutgers/NOAA Cooperative Marine Education and Research Program and visiting professor at Rutgers University in the US.

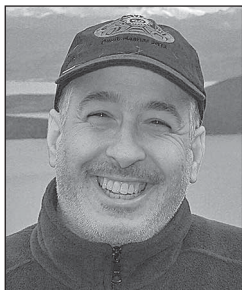
Dr. Seitzinger’s work at the IGBP involved facilitating and integrating the work of scientists and researchers across Africa, the Americas, Asia-Pacific and Europe on global environmental change. As a pioneering scientist, her work at Rutgers centered on land-atmosphere-ocean biogeochemistry, with a focus on changes in the global nitrogen cycle and how humans are affecting it. Her research spans a range of spatial scales from molecular level organic chemical characterization to models at global scales.

Dr. Seitzinger holds a PhD in biological oceanography from the University of Rhode Island, is an elected member of the American Academy of Arts and Sciences, and has been awarded an honorary PhD from Utrecht University in the Netherlands. She served as president of the American Society of Limnology and Oceanography from 2006-2010. She is highly cited, with more than 130 peer-reviewed publications to her credit.

MONDAY PLENARY SESSION

Monday, 11 June 2018, 11:00 – 12:30

Carson Hall – Victoria Conference Centre



PLENARY PRESENTER

Phil Levin, Professor of Practice, School of Environmental and Forest Sciences, University of Washington, and Lead Scientist, The Nature Conservancy, Seattle, Washington, USA

Plenary Presentation: Conservation in the Face of Ocean Tipping Points

Presentation Description: Forage fish are

at the heart of many marine food webs. Eaten by many species, including people, they are economically, ecologically, and culturally important. Their numbers are also notoriously variable. In the Northeast Pacific, herring have been central to the social, cultural, and economic relations of coastal indigenous communities for many thousands of years⁷, and many communities seek to continue their traditional fisheries for herring and herring roe on kelp. Industrial seine and gillnet fishing of adult fish for their roe has also contributed to the economy and livelihoods of many communities across the Northwest Coast. With this socio-cultural centrality comes complexity for management. This talk will explore how marine species, and the human communities that depend upon them respond to a suite of pressures, and how we can best predict tipping points in the socio-ecological system. I highlight how access, power relationships and perspectives on sustainability create conflict, but also reveal a way forward.

Biographical Information: Phillip Levin is the lead scientist of The Nature Conservancy, Washington and a professor-of-practice in the School of Environmental and Forest Sciences at the University of Washington. Dr. Levin is a conservation scientist who is interested in bridging the gaps between theory and practice in conservation, and developing modeling and statistical approaches to inform conservation and management of ecosystems. The focus of his current work is developing interdisciplinary tools to inform conservation of marine, aquatic and terrestrial ecosystems and the communities that depend on them. Prior to joining the Nature Conservancy and University of Washington, he was the Director of Conservation Biology and a Senior Scientist at NOAA Fisheries' Northwest Fisheries Science Center in Seattle, WA, USA. Levin served as the scientific lead of NOAA's Integrated Ecosystem Assessment efforts in the California Current Large Marine Ecosystem and Puget Sound. During this work, he has led the development of new analytical tools for characterizing ecosystem health and forecasting the cumulative effects of coastal zone management and climate change on ecosystems. Dr. Levin received the Department of Commerce Silver Award and NOAA's Bronze Medal for his work on marine ecosystems, and the Seattle Aquarium's Conservation Research Award for his work in Puget Sound. He has published over 150 scientific papers in peer-

reviewed journals, book chapters and technical reports, and edited the recently published book, "Conservation of the Anthropocene Ocean: interdisciplinary approaches for nature and people". His work has been featured in such news outlets as NPR, PBS, the BBC, MSBNC, The Economist, among others. Levin recently served as President of the Western Society of Naturalists, and has served on numerous editorial boards and scientific advisory panels. Levin received his Ph.D. in zoology from the University of New Hampshire in 1993 and was a postdoctoral fellow at the University of North Carolina.



2018 YENTSCH-SCHINDLER EARLY CAREER AWARD

Cayelan Carey, Assistant Professor, Biological Sciences, Virginia Tech, Blacksburg, Virginia, USA

Yentsch-Schindler Early Career Award honors an early-career scientist for outstanding and balanced contributions to research, science training, and broader societal issues such as resource management, conservation, policy, and public education. The 2018 recipient is Cayelan Carey for outstanding and balanced contributions to research on the causes and effects of cyanobacterial blooms, science training, and broader societal issues such as lake and reservoir management, drinking water policy, and public education.

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TUESDAY PLENARY SESSION

Tuesday, 12 June 2018, 11:00 – 12:30

Carson Hall – Victoria Conference Centre



PLENARY PRESENTER

Amina I. Pollard, Ecologist, Office of Water, U.S. Environmental Protection Agency, Washington, DC, USA

Plenary Presentation: The promise and potential of national-scale limnology using the U.S. National Lakes Assessment

Presentation Description: Scientific

investigations conducted at different spatial and temporal scales can be complementary. To maximize this potential, we in the scientific community collectively have to work to find connections among approaches, data, and conclusions resulting from studies conducted at different scales. The effort to identify connections includes noting the strengths of different projects and recognizing how this information can be leveraged to develop a more complete understanding. In this presentation Dr. Pollard will discuss three examples that demonstrate how broad, population-scale information can be leveraged to better understand relative condition and change in lakes. She will provide an overview of the U.S. National Lakes Assessment (NLA) project. The NLA is a collaborative, coordinated part-

nership project among States, Tribes, and the U.S. Environmental Protection Agency designed to provide national and regional-scale statistics describing select biological, chemical, physical, human use, and watershed characteristics in lakes. Multiple researchers from state and federal agencies as well as universities have used NLA data from just a few sites to the full national set to test hypotheses about lake ecology and management, but there are also opportunities to consider the perspective that population-level information can bring to aquatic sciences. The first example leverages national-scale data to examine temporal change in nutrient concentration. In conjunction with comparable national streams data, information from NLA has been used to show population-level changes in total phosphorus concentration across the U.S. A second example highlights how population information from different spatial scales can be leveraged to better understand relative condition of lake shoreline habitat. Finally, by connecting an individual lake to the NLA inferences, she will highlight an approach for using population information to provide context for local data. These examples demonstrate how population-scale lake data generated by NLA can be leveraged to inform hypothesis generation, strengthen the case for management activity, and understand phenomenon occurring at local scales in the context of large-scale patterns.

Biographical Information: Amina Pollard is an ecologist working in the Office of Water at the U.S. Environmental Protection Agency. She is a graduate from Lawrence University (B.A., 1995), Wright State University (M.S., 1997), and the University of Wisconsin Madison (Ph.D., 2002). Dr. Pollard leads the U.S. National Lakes Assessment. At the broadest level this survey characterizes the biological, chemical, physical and recreational status of lakes to determine whether their condition is changing over time. She collaborates with scientists and resource managers across the U.S. to implement this survey and to communicate results to diverse audiences. Dr. Pollard's research explores local and regional environmental controls on the biological assemblages in lakes, streams, and wetlands. The third component of Dr. Pollard's career involves working at the interface of science and policy locally, nationally, and internationally (e.g., China, Uruguay).



2018 G. EVELYN HUTCHINSON AWARD

Emily Stanley, Professor, Center for Limnology and Department of Integrative Biology, University of Wisconsin, Madison, Wisconsin, USA

The G. Evelyn Hutchinson Award honors a scientist who has made considerable contributions to knowledge in limnology and oceanography, and

whose future work promises a continuing legacy of scientific excellence. Emily Stanley is the 2018 award winner for her outstanding and synthetic contributions to our understanding of the roles of hydrology and the biogeochemistry of nitrogen and carbon in lake and stream ecology.

WEDNESDAY PLENARY SESSION

Wednesday, 13 June 2018, 11:00 – 12:30

Carson Hall – Victoria Conference Centre



PLENARY PRESENTER

Jonathan W. Moore, Liber-Ero Chair of Coastal Science and Management, and Associate Professor, Simon Fraser University, Burnaby, BC, Canada

Plenary Presentation: Connections and Resilience in Salmon Watersheds

Presentation Description: One pressing challenge that we face is to understand

and conserve Earth's natural ability to cope with change. In this context, Dr. Moore will discuss recent findings from my collaborative research program on the resilience of large salmon watersheds of western Canada. Rivers and their migratory fishes connect headwaters with the ocean. He presents emerging evidence that this river connectivity means that these systems act as natural portfolios that stabilize important processes, from hydrology to fisheries catches. However, these connections also mean that environmental risks can spread up and down river systems. At the controversial nexus of indigenous rights, industrial development, and environmental risk assessment, he will discuss our collaborative research on the estuary of one of the world's great salmon watersheds faced with fossil fuel development. His research revealed the need to align the scale of environmental decision making with the true spatial scale of potential environmental risk. These activities in partnership with First Nations fisheries programs have strengthened his belief in the need and opportunity for the scientific process to better integrate with diverse cultures. Most broadly, there is a need to understand processes of resilience, quantify their limits, and translate this emerging scientific understanding into conservation and management action.

Biographical Information: Jonathan Moore is the Liber-Ero Chair of Coastal Science and Management at Simon Fraser University and is an associate professor. Dr. Moore received his PhD from the University of Washington and his BSc from Carleton College. Prior to Simon Fraser University, he was a professor at University of California and a postdoctoral research fellow at the Northwest Fisheries Science Center with the National Oceanic and Atmospheric Administration. He was recently recognized as a leading emerging scientist in the field of fisheries sciences by the Canadian Fisheries Society (J. C. Stevenson Award) and was a Wilburforce Fellow for conservation science. Dr. Moore's research program focuses on the dynamics of aquatic ecosystems to inform sustainable management with expertise on salmon and their watersheds. His research program uses a combination of intensive field work in partnership with diverse collaborators, syntheses of large data sets, and modeling. His work also aims to bring scientific clarity to controversial environmental decision-making.



2018 RAMÓN MARGALEF AWARD FOR EXCELLENCE IN EDUCATION

Cynthia Hagley, Environmental Quality Extension Educator, Minnesota Sea Grant College Program, Duluth, Minnesota, USA

The Ramón Margalef Award for Excellence in Education honors excellence in teaching and mentoring in the fields

of limnology and oceanography. The 2018 award goes to Cynthia Hagley. She is recognized for her vision and success at developing career-long relationships among scientists and educators, for impacting thousands of students, and for making environmental and aquatic data understandable to non-specialists.



2018 RUTH PATRICK AWARD

Margaret Palmer, Director, National Socio-Environmental Synthesis Center, Annapolis, Maryland, and Distinguished University Professor, University of Maryland, College Park, Maryland, USA

The 2018 Ruth Patrick Award will be accepted on Dr. Palmer's behalf by Kelly

Hondula, Quantitative Researcher and Computer Programmer, National Socio-Environmental Synthesis Center, Annapolis, Maryland, USA.

The Ruth Patrick Award honors scientists who have applied the aquatic sciences towards solving critical environmental problems. Margaret Palmer is the 2018 recipient of the Ruth Patrick Award in recognition for being a champion of solution-driven science for the protection of freshwaters.

THURSDAY PLENARY SESSION

Thursday, 14 June 2018, 11:00 – 12:30

Carson Hall – Victoria Conference Centre



PLENARY PRESENTER

Igor Klein for Claudia Kuenzer, Department of Land Surface, Earth Observation Center (EOC), German Aerospace Center, DLR, Köln, Germany

Plenary Presentation: The Potential of Earth Observation for the Analysis of River Deltas and the Coastal Zone

Presentation Description: The face of our planet is changing at unprecedented speed. Total population grew by 26% between 1992 and 2010, the number of megacities with over 10 million inhabit-

ants more than doubled between 1990 and 2010, and the latest, uncontested climate trends, sea level rise, and sporadic endogenous and exogenous natural hazards aggravate environmental change, as does the constant demand to cope with and adapt to ever changing livelihoods. The major settled river delta areas of our planet are highly dynamic social-ecological systems, which are especially exposed to the impacts of socio-economic development, urbanization, changes in climate, and natural hazards. Although river deltas only contribute 5% to the overall land surface, nearly six hundred million people live in these environments, which combine a variety of appealing locational advantages such as flat topography, fertile alluvial soils, access to sea and freshwater resources, transport hub functions, a rich biodiversity of marine, brackish and inland ecosystems, as well as – often – abundant underground resources of hydrocarbons (oil, gas), and salts. At the same time, these highly dynamic, valuable environments are exposed to a variety of threats. Urban areas, industry, infrastructure, agriculture, and aquaculture all extend into formerly untouched land and disturb and/or replace valuable ecosystems such as wetlands, coastal forests, and marshes. Increasing water, soil, and air pollution accompany this process. Sediment compaction through heavy structures and underground resource extraction adds to a natural subsidence component. The same applies for many coastal areas globally. At present an unrivalled amount of remotely sensed earth observation data is globally available in satellite data archives. Imagery from coarse-, medium-, high-, and highest-resolution optical, multispectral, radar, and thermal infrared sensors is waiting to be exploited to reveal its full potential. The USA and Europe have set the pace in sharing earth observation resources. Along with this current trend of opening numerous satellite data archives worldwide go increasing capabilities to handle and explore big data. Compared to former uni- or bi-temporal mapping endeavors, the current benchmark is the exploitation of remote sensing time series to reveal land surface dynamics at differing spatial-, and temporally-dense scales. The goal of this contribution / talk is to demonstrate this profound potential for large river deltas and coastal areas globally.

Biographical Information for Claudia Kuenzer: Claudia Kuenzer received her PhD in remote sensing from Vienna University of Technology in 2005. She went to the University of Wuerzburg in 2016, and she is currently head of the Department of Land Surface at the Earth Observation Center (EOC) of the German Aerospace Center, DLR. This department with currently 55 scientists, studies and quantifies global environmental change, and, in this context, addresses societal relevant questions. Focus is on the development of information products useful for planning and decision-making purposes based on innovative data analyses methods. A wide range of geoscience topics, employing all types of earth observation sensors (multispectral, hyperspectral, SAR) at various spatial scales (global, regional, national, local) is addressed. Until the end of 2015, Claudia had been head of the group Land Surface Dynamics at DFD of DLR. She has been scientific coordinator of several international, trans-disciplinary geoscience projects mainly focusing on Integrated Water Resources Management, as well as coast related topics. She frequently lectures and has lectured for the Universities of Wuer-

zburg, Germany, Vienna University of Technology, Austria, the Chinese Academy of Sciences, CAS, the Vietnamese Academy of Sciences, VAST, and the European Space Agency, ESA. Claudia also is an appointed Scientific Steering Committee member of Future Earth Coasts under Future Earth, a member of the bureau of the International Society for Digital Earth, ISDE, and member of several journal editorial boards. She has authored and co-authored over 100 SCI journal papers, more than 35 book chapters, over 120 conference contributions, and published three books. Next to applied remote sensing especially in the context of earth observation for the coastal zone, as well land use management and integrated water resources management, her current main research interest is on time series analyses of temporally dense time series of high resolution, as well as on the joint analyses of natural and social sciences data.

Biographical Information for Igor Klein: Igor Klein received his master's degree in physical geography in 2011 from the University of Augsburg. Since then he has been a scientific researcher at the German Remote Sensing Data Center (DFD) at the German Aerospace Center (DLR). He is specialized in geoscientific research based on remote sensing techniques and statistical methods with a focus on global surface water dynamics and land cover changes. He focuses on earth observation approaches using multispectral time series of optical data with different temporal and spatial resolution. Additionally, Klein has experience with airborne laser scanning (LiDAR) and Synthetic Aperture Radiometer (SAR) data. He has been scientifically responsible and coordinating activities of international projects addressing environmental monitoring and assessment as well as land use management. He has contributed to more than 20 scientific publications including 10 SCI journal papers, two book chapters and several international conference contributions. Klein has been reviewing for five SCI journals in the field of earth observation and geosciences including the Nature Journal.



2018 JOHN H. MARTIN AWARD

Robert Howarth, David R. Atkinson
Professor of Ecology and Environmental Biology, Cornell University, Ithaca, New York, USA

ASLO presents the John H. Martin Award to one paper each year that has led to fundamental shifts in research focus and interpretation of a large

body of previous observations. The 2018 John H. Martin Award is for "Regional nitrogen budgets and riverine N & P fluxes for the drainages to the North Atlantic Ocean: Natural and human influences." The 1996 paper established the first estimates of net anthropogenic nitrogen inputs to the coastal oceans thereby fundamentally changing our understanding of the relationship between human activity and nitrogen transport and storage. The award will be presented to lead author Robert Howarth on behalf of study co-authors Gilles Billen, Dennis Swaney, Alan Townsend, Norbert Jaworsky, Kate Lajtha, John Downing,

Ragnar Elmgren, Nina Caraco, Thomas Jordan, Frank Berendse, John Freney, Valery Kudeyarov, Peter Murdoch, and Zhu Zhao-Liang. The paper was one of several published in a special issue of Biogeochemistry, based on a workshop held in 1993 by the International SCOPE Nitrogen Project.



2018 RAYMOND L. LINDEMAN AWARD

Meredith Holgerson, David Smith
Conservation Research Fellow,
Portland State University, Portland,
Oregon, USA

The Raymond L. Lindeman Award honors a young author for an outstanding peer-reviewed, English-language paper in the aquatic sciences. The 2018 award is being presented to Meredith Holgerson for her paper, "Large contribution to inland water CO₂ and CH₄ emissions from very small ponds," which advances the understanding of the role of small ponds in the global carbon cycle.

FRIDAY CONFERENCE CLOSING PRESENTATION

Friday, 14 June 2018, 15:30 – 16:30

Carson Hall – Victoria Conference Centre



PLENARY PRESENTER

Evelyn Gaiser, Executive Director,
School of Environment, Arts and Society;
Professor, Department of Biological
Sciences and Southeast Environmental
Research Center; and Lead Principle
Investigator, Florida Coastal Everglades
Long Term Ecological Research Pro-
gram, Florida International University

Closing Presentation: Surface Tension: Sustaining our Future through the Connecting Properties of Water

Presentation Description: From molecular to planetary scales, water exposes its intrinsic properties through its capacity to connect. At the molecular scale, connections formed by hydrogen bonds create surface tension. At the planetary scale, freshwater overconsumption connects societies as they cross sustainable boundaries – creating surface tension of global proportions. This talk will explore how the connecting power of water may be harnessed to resolve conflicts by catalyzing societal change. Examples will be provided from South Florida, where decades of freshwater mis-management are interacting with accelerating sea level rise to threaten more assets than any other coastal city in the world. Delays in restoration have magnified saltwater intrusion into the Everglades, altering vertical and lateral hydrologic connections and leading to abrupt changes in the distinctive features and functions of this International Biosphere Preserve. These losses and their reinforcing feedbacks threaten an aquifer that supports 9 million people with freshwater, biodiversity, carbon

sequestration, recreational fisheries, and other ecosystem properties and services, diminishing the region's economic vitality. By coupling long-term research findings with mechanistic experiments and models, scientists from academia, agencies, and municipalities are uniting around solutions for reversing or at least decelerating these changes. Independent evaluators, including scientists serving the National Academy of Sciences, are being regarded as critical 'restoration brokers' for their insightful contributions to science-backed conflict resolution. After perilous delays, freshwater restoration is now underway with improved public recognition and support stemming from novel approaches to civic engagement. The restoration process also exhibits a more nimble and adaptive approach by freshwater managers – an attribute that has never been more important as multiple drivers interact to change ecosystems in unpredictable ways. As communities unite around Everglades restoration, scientists are engaging in international collaborations to transfer knowledge to secure a better fate for other expansive freshwater wetlands, and their dependent communities. By enhancing social cohesion, the properties of water may resolve tensions stimulated by resource limitation by generating creative solutions for sustainable sharing.

Biographical Information: Dr. Evelyn Gaiser is Executive Director of the School of Environment, Arts and Society and Professor in the Department of Biological Sciences and Southeast Environmental Research Center at FIU. She is an aquatic ecologist whose research is focused on understanding how algae can be used as "sentinels" of the effects of long-term changes in climate and land-use in aquatic ecosystems. She has published over 100 peer-reviewed publications and book chapters that detail the ways that algae reflect changes in water quality and availability, and that have set the stage for regulatory criteria protecting the nation's waters. While her work focuses on aquatic systems of South Florida, she and her students also conduct international studies to expand findings contextually. She received her B.S. from Kent State University, M.S. from Iowa State University and Ph.D. at University of Georgia. Research in Dr. Geiser's lab has informed the progress of Everglades Restoration, and is integrated into the Florida Coastal Everglades Long-Term Ecological Research program (FCE LTER, <http://fcelter.fiu.edu/>), which Dr. Gaiser has led since 2007. The FCE LTER program is a National Science Foundation (NSF)-funded long-term Everglades research platform operated out of FIU, and is one of only 25 sites in the U.S. LTER Network. The FCE LTER program includes 75 senior scientists and 64 students from multiple departments and schools at FIU, as well as 29 partnering institutions including academic and agency partners. Research focuses on the central idea that in coastal wetlands, climate change and resource management decisions interact to influence freshwater availability, ecosystem dynamics, and the value and utilization of ecosystem services by people. Dr. Gaiser has been committed to facilitating the advancement of science through collaboration and public-private partnerships, and serves on the science council of the LTER Network and steering committee of the Global Lake Ecological Research Network (GLEON). As Executive Director of FIU's School of Environment,

Arts and Society (SEAS), Dr. Gaiser works to unite faculty across the natural and social sciences and humanities in creative work and inspirational teaching to foster sustainability of the planet. The mission of SEAS is to find solutions to address environmental challenges by training students to be innovative leaders of the 21st Century. SEAS faculty and students engage with the public through key partnerships that engage communities in actions of change through science and the arts. Dr. Gaiser is a trained musician and has created creative works to express science through music (<https://www.youtube.com/watch?v=m7fCmHG3h7k>).

PRESENTER INFORMATION

ON-SITE SUBMISSION OF ORAL PRESENTATIONS

All oral presentations will need to be submitted in the Presentation Room, View Royal Room, located on Level 2 of the Victoria Conference Centre. This room will be staffed and run by audio visual technicians. Presenters may submit their presentations beginning at 15:00 on Sunday, 10 June 2018. If you were assigned to give a talk, you will need to upload your presentation preferably 24 hours in advance. Those who are presenting on Monday need to arrive in time to upload on Sunday.

Personal laptops cannot be used in the session rooms. Dedicated internet access will not be available in the session rooms and cannot be used for presentations.

Presentation room hours are listed below:

Sunday	15:00 to 21:00
Monday, Tuesday, Wednesday.....	07:30 to 17:30
Thursday.....	08:00 to 17:30
Friday	07:30 to 16:00

POSTER SESSIONS AND RECEPTIONS

Posters numbered 1 through 92 will be located in the Lower Pavilion, and those numbered 93 through 180 will be in the Upper Pavilion. The Lower Pavilion also will include artists' posters lettered A through H.

Posters will be organized in session groupings for the entire meeting to maximize opportunities for viewing. There are two designated poster sessions during the meeting, Tuesday and Thursday, from 16:00 to 18:00 in the Pavilion areas. Poster presenters have been assigned to a specific poster session, but they can present their posters during both sessions to ensure maximum exposure for their research. Receptions are planned during both poster sessions. The poster session times do not conflict with concurrent oral presentations, and poster sessions are scheduled in conjunction with the oral component of the session to which they are assigned.

POSTER SET UP AND TEARDOWN TIMES

Posters can go up Sunday, 10 June, from 15:00 to 19:00 and will remain in place through 18:00 on Thursday, 14 June. They must be removed following the final poster session by 21:00 on Thursday.

MEETING AGENDA

SATURDAY, 9 JUNE 2018

8:00 - 17:00	ASLO Board Meeting	Empress Hotel
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SUNDAY, 10 JUNE 2018

8:00 - 16:00	ASLO Board Meeting	Empress Hotel
8:00 - 17:00	International Federation of Boreal Aquatic Research Workshop (Invitation Only)	Sidney - Level 2 - VCC
13:00 - 18:00	Water Connects First Nations Art Show	Pre-function Area-Level 1 - VCC
13:00 - 16:00	Broadening the Impacts of Your Aquatic Science	Colwood 1&2-Level 2 - VCC
15:00 - 19:00	Registration	Pre-function Area-Level 1 - VCC
15:00 - 21:00	Presentation Room Open	View Royal - Level 2 - VCC
15:00 - 21:00	Family Room Open	West Coast Room - Level 1 - VCC
17:00 - 18:00	Student Volunteer Training	Meet at Registration Desk
18:00 - 19:00	Opening Plenary Session	Carson Hall - Level 2 - VCC
19:00 - 21:00	Opening Mixer Reception	Crystal Ballroom and Palm Court - Empress Hotel
21:00	Student Pub Crawl	Meet Near the Registration Desk - VCC

MONDAY, 11 JUNE 2018

07:30 - 17:30	Registration	Pre-function Area-Level 1 - VCC
07:30 - 17:30	Presentation Room Open	View Royal - Level 2 - VCC
08:00 - 18:00	Family Room Open	West Coast Room - Level 1 - VCC
08:00 - 18:00	Local Artists	Totem Area - Level 1 - VCC
08:30 - 10:30	Concurrent Sessions	Various Rooms - VCC
10:30 - 11:00	Coffee Break	Courtyard - Level 1 - VCC
11:00 - 12:30	Plenary Session	Carson Hall - VCC
12:30 - 14:00	Lunch	Attendees are on their own.
12:30 - 18:00	Poster Set Up by Presenters	Pavilions 1 & 2 - VCC
12:30 - 18:00	Exhibit Set Up	Pre-function Area - Level 1 - VCC
14:00 - 15:30	Concurrent Sessions	Various Rooms - VCC
15:30 - 16:00	Coffee Break	Courtyard - Level 1 - VCC
16:00 - 18:00	Concurrent Sessions	Various Rooms - VCC
18:00 - 19:00	ASLO Fellows and Membership Reception	Carson Hall Pre-function Area - Level 2 - VCC
19:00 - 20:00	ASLO Business Meeting	Carson Hall A - Level 2 - VCC
20:00 - 21:00	Early Career Mixer	Courtyard - Level 1 - VCC
20:00 - 21:00	Student Mixer	Carson Hall Pre-function Area - Level 2 - VCC

TUESDAY, 12 JUNE 2018

07:30 - 17:30	Presentation Room Open	View Royal - Level 2 - VCC
08:00 - 17:30	Registration	Pre-function Area-Level 1 - VCC
08:00 - 18:00	Family Room Open	West Coast Room - Level 1 - VCC
08:00 - 18:00	Local Artists	Totem Area - Level 1 - VCC
08:30 - 10:30	Concurrent Sessions	Various Rooms - VCC
08:30 - 18:00	Exhibit Area	Pre-function Area-Level 1 - VCC
08:30 - 18:00	Poster Area	Pavilions 1 & 2 - VCC
10:30 - 11:00	Coffee Break	Courtyard - Level 1 - VCC
11:00 - 12:30	Plenary Session	Carson Hall - VCC
12:30 - 14:00	Lunch	Attendees are on their own.
12:30 - 14:00	Coaching Science Workshop	Esquimalt - Level 1 - VCC
12:30 - 14:00	Wikiproject Lakes Workshop	Sidney - Level 2 - VCC
12:30 - 14:00	ASLO Student Workshop - Publish Me, Please!	Saanich 1 & 2 - Level 1 - VCC
14:00 - 16:00	Concurrent Sessions	Various Rooms - VCC
16:00 - 18:00	Poster Session and Reception	Pavilions 1&2 and Courtyard - VCC

20:00 - 22:00	Story Collider Event - Optional Off-site	Copper Owl (1900 Douglas Street, Victoria)
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WEDNESDAY, 13 JUNE 2018

07:30 - 17:30	Presentation Room Open	View Royal - Level 2 - VCC
08:00 - 17:30	Registration	Pre-function Area-Level 1- VCC
08:00 - 18:00	Family Room Open	West Coast Room - Level 1 - VCC
08:00 - 18:00	Local Artists	Totem Area - Level 1 - VCC
08:30 - 18:00	Exhibit Area	Pre-function Area-Level 1- VCC
08:30 - 18:00	Poster Area	Pavilions 1 & 2 - VCC
08:30 - 10:30	Concurrent Sessions	Various Rooms - VCC
10:30 - 11:00	Coffee Break	Courtyard - Level 1 - VCC
11:00 - 12:30	Plenary Session	Carson Hall - VCC
12:30 - 14:00	Lunch	Attendees are on their own.
12:30 - 14:00	Publishing Methods in Aquatic Science Workshop	Esquimalt - Level 1 - VCC
12:30 - 14:00	ASLO Early Career Workshop - Effective Publishing and Review Strategies	Oak Bay 1 & 2 - Level 1 - VCC
14:00 - 15:30	Concurrent Sessions	Various Rooms - VCC
15:30 - 16:00	Coffee Break	Courtyard - Level 1 - VCC
16:00 - 18:00	Concurrent Sessions	Various Rooms - VCC
19:00 - 22:00	Ultimate Victoria Evening Event - Optional Off-site	Ogden Point Breakwater Pier B - Victoria

THURSDAY, 14 JUNE 2018

07:30 - 17:30	Presentation Room Open	View Royal - Level 2 - VCC
08:00 - 18:00	Family Room Open	West Coast Room - Level 1 - VCC
08:30 - 17:30	Registration	Pre-function Area-Level 1- VCC
08:00 - 18:00	Local Artists	Totem Area - Level 1 - VCC
08:30 - 18:00	Exhibit Area	Pre-function Area-Level 1- VCC
08:30 - 18:00	Poster Area	Pavilions 1 & 2 - VCC
09:00 - 10:30	Concurrent Sessions	Various Rooms - VCC
10:30 - 11:00	Coffee Break	Courtyard - Level 1 - VCC
11:00 - 12:30	Plenary Session	Carson Hall - VCC
12:30 - 14:00	Lunch	Attendees are on their own.
12:30 - 14:00	ASLO Student Workshop - How to ASK so that you shall RECEIVE	Saanich 1 & 2 - Level 1 - VCC
12:30 - 14:00	Strategies for Cross-jurisdictional HABs Prevention Town Hall	Sidney - Level 2 - VCC
14:00 - 16:00	Concurrent Sessions	Various Rooms - VCC
14:00 - 16:00	Artists' Session - Ch[art]ing the Waters: Artists investigate aquatic worlds and environmental change	Colwood 1&2-Level 2- VCC
16:00 - 18:00	Poster Session and Reception	Pavilions 1&2 and Courtyard - VCC
18:00 - 21:00	Poster Teardown by Presenters	Pavilions 1&2
18:00 - 21:00	Exhibit Teardown by Exhibitors	Pre-function Area-Level 1 - VCC

FRIDAY, 15 JUNE 2018

07:30 - 16:00	Presentation Room Open	View Royal - Level 2 - VCC
08:00 - 17:30	Registration	Pre-function Area-Level 1 - VCC
08:00 - 18:00	Family Room Open	West Coast Room - Level 1 - VCC
08:00 - 18:00	Local Artists	Totem Area - Level 1 - VCC
08:30 - 10:00	Concurrent Sessions	Various Rooms - VCC
10:00 - 10:30	Coffee Break	Pre-function Area and Courtyard - Level 1 - VCC
10:30 - 12:00	Concurrent Sessions	Various Rooms - VCC
12:00 - 13:30	Lunch	Attendees are on their own.
13:30 - 15:00	Concurrent Sessions	Various Rooms - VCC
15:00 - 15:30	Coffee Break	Pre-function Area and Courtyard - Level 1 - VCC
15:30 - 16:30	Closing Plenary Session	Carson Hall - VCC
16:30 - 18:00	Closing Mixer	Pre-function Area and Courtyard - Level 1 - VCC

Should you need minor first aid when you are the conference center, please come to the conference registration desk on Level 1. Staff at the desk will contact someone who can assist you.

SPECIAL NEEDS

If you have a disability or limitation that may require special consideration to ensure your full participation in this meeting, please see a staff person at the conference registration desk. You also may send an email to business@aslo.org prior to your arrival at the meeting.

LOST AND FOUND

Please come to the Registration Desk for inquiries concerning lost and found items.

MESSAGE BOARDS

Message boards are located on Level 2 in the foyer of Carson Hall. This is where you may post announcements or check for messages throughout the conference.

COFFEE BREAKS

Morning coffee breaks are planned during the transition time between concurrent oral sessions and the plenaries Monday through Friday. Afternoon breaks are planned Monday, Wednesday and Friday as well. Complimentary coffee and tea will be served.

Water will be provided in coolers, and attendees are encouraged to bring their own water bottles. Breaks will be set in various locations on Level One.

RECEIPTS AND LETTERS OF PARTICIPATION

Your registration confirmation that was emailed to you when you registered 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, please send an email to the conference registrar, Jo Davis, at jdavis@sgmeet.com. Likewise, letters of participation only will be provided to those who are registered for the meeting. If you need a letter of participation, please contact Jo Davis at the email address given.

CONFERENCE REGISTRATION AND INFORMATION

Registration and check in for the meeting will be available all week in the prefunction area on Level 1 of the Victoria Conference Centre. Please check in upon your arrival at the meeting in order to receive your name badge and other important materials and information.

REGISTRATION DESK HOURS:

Sunday, 10 June 2018	15:00 to 19:00
Monday, 11 June 2018	07:30 to 17:30
Tuesday, 12 June 2018	08:00 to 17:30
Wednesday, 13 June 2018	08:00 to 17:30
Thursday, 14 June 2018	08:30 to 17:30
Friday, 15 June 2018	08:00 to 17:30

ASLO CODE OF CONDUCT

A core goal of ASLO is to foster a scientific community that is safe, hospitable, and productive for all its members. Thus, ASLO seeks to provide a welcoming and productive environment for those attending our meetings, workshops, and events, regardless of gender, sexual orientation, gender identity, race, ethnicity, religion, disability, physical appearance, or career level. All participants, including, but not limited to, attendees, speakers, volunteers, exhibitors, ASLO staff, service providers, and others are expected to abide by this ASLO Events Code of Conduct. This Code of Conduct applies to all components of an ASLO event, including those sponsored by organizations other than ASLO but held in conjunction with ASLO events, in public or private facilities.

EXPECTED BEHAVIOR

- All participants, attendees, ASLO staff, and vendors are treated with respect and consideration, valuing a diversity of views and opinions.
- Be considerate, respectful, and collaborative.
- Communicate openly with respect for others, critiquing ideas rather than individuals.
- Avoid personal attacks directed toward other attendees, participants, ASLO staff, and suppliers/vendors.
- Be mindful of your surroundings and of your fellow participants. Alert staff if you notice a dangerous situation or someone in distress.
- Respect the rules and policies of the meeting venue, hotels, ASLO-contracted facility, or any other venue.

UNACCEPTABLE BEHAVIOR

- Harassment, sexual harassment, bullying, or discrimination in any form will not be tolerated.
- Physical or verbal abuse of any attendee, speaker, volunteer, exhibitor, ASLO staff member, service provider, or other event guest.
- Examples of unacceptable behavior include, but are not limited to, verbal comments related to gender, sexual orientation, disability, physical appearance, body size, race, religion, national origin, inappropriate use of nudity and/or sexual images in public spaces or in presentations, or threatening or stalking any attendee, speaker, volunteer, exhibitor, ASLO staff member, service provider, or other event guest.

- Disruption of talks at oral or poster sessions, in the exhibit hall, or at other events organized by ASLO at the event venue, hotels, or other ASLO-contracted facilities.

CONSEQUENCES

- Anyone requested to stop unacceptable behavior is expected to comply immediately.
- ASLO staff (or their designee) or security may take any action deemed necessary and appropriate, including immediate removal from the meeting without warning or refund.
- ASLO reserves the right to prohibit attendance at any future meeting.

REPORTING UNACCEPTABLE BEHAVIOR

If you are the subject of unacceptable behavior or have witnessed any such behavior, please immediately notify an ASLO staff member or ASLO officer.

WATER CONNECTS FIRST NATIONS ART SHOW

Sunday, 10 June 2018, 13:00 to 18:00

Pre-function Area – Level 1 - VCC

Monday through Friday, 11 – 15 June 2018, 10:30 to 18:00

Eagle Feather Gallery (633 Courtney St., Victoria, B.C.)

The Art Show features local First Nations Artists who have created art works with a water theme in a variety of mediums including wood carvings, acrylic paintings, prints, ceramics and engraved silver. First Nations Artists will be in attendance for the show and a wood carving demonstration will be featured.

The Water Connects First Nations Art Show is from 13:00 and 18:00 pm on Sunday, June 10th in the conference center lobby. The art show will then continue Monday thru Friday at Eagle Feather Gallery, daily from 10:30 am to 6:00 pm, located next door to the conference center in Nootka Court.

A First Nations table featuring handmade items with a water theme and t-shirts with the conference Spindle Whorl logo will be for sale daily from 10:30 to 16:30 Monday to Friday in the conference center lobby.

For more information on the art show, please contact or go by the following:

Eagle Feather First Nations Artists' Gallery
633 Courtney St., Victoria, B.C., V8W 1Z8
Tel: (250) 388-4330
Email: info@eaglefeathergallery.com
www.eaglefeathergallery.com

EXHIBITORS

Exhibitors are in the pre-function area on Level 1 across from the conference registration desk at the Victoria Conference Centre. Exhibits will be set up by Monday afternoon at 18:00 and will be in place over the following days and times:

Tuesday, June 12, 2018 8:30 – 18:00
Wednesday, June 13, 2018 8:30 – 18:00
Thursday, June 14, 2018 8:30 – 18:00

Attendees will have access to the exhibits during the hours listed above. ASLO appreciates the support of the following organizations who are exhibiting at the 2018 Summer Meeting:

ANDRÉ E. LALONDE AMS LABORATORY (E-04)

University of Ottawa
25 Templeton Street (ARC 418)
Ottawa, Ontario K1N 6N5 Canada
Contact: Christabel Jean
Phone: 613-562-5800 (1183)
Email: cjean2@uottawa.ca
Website: <http://www.ams.uottawa.ca>

ASL ENVIRONMENTAL SCIENCES INC. (E-05)

#1-6703 Rajpur Place
Victoria, British Columbia V8M 1Z5 Canada
Contact: Jan Buermans
Phone: +1 250-656-0177, ext. 125
Email: jan@aslenv.com
Website: www.aslenv.com

ASLO (E-08/E-09)

1105 Wooded Acres, Suite 260
Waco, TX 76710 USA
Contact: Helen Schneider Lemay
Phone: 254-776-3550
Email: business@aslo.org
Website: <http://aslo.org>

EUREKA WATER PROBES (E-06)

2113 Wells Branch Parkway, Suite 4400
Austin, TX 78728 USA
Contact: Gary Miller
Email: [gmiller@waterprobes.com](mailto:gmillier@waterprobes.com)
Website: www.waterprobes.com

FLUID IMAGING TECHNOLOGIES (E10)

200 Enterprise Drive
Scarborough, ME 04074 USA
Contact: Harry Nelson
Phone: 207-289-3242
Email: harry.nelson@fluidimaging.com
Website: www.fluidimaging.com

JOHN WILEY & SONS, INC. (E-08/E-09)

111 River Street – Mail Stop 8-02
 Hoboken, NJ 07030 USA
 Contact: Fione Sarne
 Phone: 201-748-7850
 Email: fsarne@wiley.com
 Website: www.wiley.com

JONAH VENTURES (E17)

1600 Range Street, Suite 201
 Boulder, CO 80301 USA
 Contact: Joseph Craine
 Phone: 785-317-9318
 Email: josephmcraine@jonahventures.com
 Website: www.jonahventures.com

MCLANE RESEARCH LABORATORIES, INC. (E-11)

121 Bernard St. Jean Drive
 East Falmouth, MA 02536 USA
 Contact: Jon Mogul
 Phone: 1-508-495-4000
 Email: mclane@mclanelabs.com
 Website: www.mclanelabs.com

PRO-OCEANUS SYSTEMS (E-07)

80 Pleasant Street
 Bridgewater, Nova Scotia B4V 1N1 Canada
 Contact: Cyndel Kelly
 Phone: 902-530-3550
 Email: cyndel@pro-oceanus.com
 Website: www.pro-oceanus.com

PYROSCIENCE GMBH (E-02)

Hubertusstr. 35
 D-52064 Aachen Germany
 Contact: Dr. Andrea Wieland
 Phone: +49 (0)241 518322-10
 Fax: +49 (0)241 518322-99
 Email: info@pyro-science.com
 Website: http://www.pyro-science.com

ROCKLAND SCIENTIFIC, INC. (E-01)

520 Dupplin Road
 Victoria, British Columbia V8Z 1C1 Canada
 Contact: Jeremy Hancyk
 Phone: 250-370-1688
 Fax: 250-370-0234
 E-mail: info@rocklandscientific.com
 Website: www.rocklandscientific.com

SEAL ANALYTICAL (E-12)

6501 W. Donges Bay Road
 Mequon, WI 53092 USA
 Contact: L Alicia Potter
 Phone: 262-241-7900
 Email: potter@seal-us.com
 Web: www.seal-analytical.com

SUN YAT-SEN UNIVERSITY (E-03)

School of Marine Sciences
 South Laboratory Building Rm E202
 Guangzhou, Guangdong 510006 China
 Contact: Moxiang Han
 Phone: +86-20-39332159
 Email: hanmox@mail.sysu.edu.cn
 Website: http://marine.sysu.edu.cn/

TURNER DESIGNS (E-14)

1995 N. 1st Street
 San Jose, CA 95112 USA
 Contact: Tom Brumett
 Phone: 408-749-0994
 Fax: 408-749-0998
 Email: sales@turnerdesigns.com
 Website: www.turnerdesigns.com

UNISENSE A/S (E-13)

Tueager 1
 Aarhus 8200 Denmark
 Contact: Dr. Thomas Rattenborg
 Phone: +45 89-44-9500
 Email: tr@unisense.com
 Website: www.unisense.com

WHONDRS (E-15)

902 Battelle Boulevard
 Richland, WA 99352 USA
 Contact: Amy Goldman
 Phone: 509-372-6906 (ofc); 617-947-5212 (cell)
 Email: amy.goldman@pnnl.gov
 Website: www.pnnl.gov

WORKSHOPS, AUXILIARY EVENTS, AND TOWN HALLS

INTERNATIONAL FEDERATION OF BOREAL AQUATIC RESEARCH

Sunday, 10 June 2018, 08:00 to 17:00
Sidney – Level 2 - VCC

The integration of aquatic biogeochemistry is key to our understanding of the boreal biome, and involves combining information from a large diversity of systems, and in turn scaling this in space and time, and both steps represent major challenges. The objective is this workshop is to pursue this integration through the enhancement of research collaborations among the research groups that are operating across the boreal biome. This workshop is directly associated to the special session SS026: Integrative Research on the Biogeochemistry of Inland Waters in Northern High Latitudes, and will be part of the ongoing effort to develop the International Federation of Boreal Aquatic Research (IFBAR), an initiative that was launched over seven years ago to facilitate exchange between groups working across the boreal biome. This is also a follow up of an extremely successful workshop that was carried out during the ASLO in Puerto Rico along similar lines. Participants will discuss the problems and possible solutions associated to scaling up of boreal biogeochemical processes at the watershed and regional levels, and the extrapolation of these processes in time. They will also explore concrete actions that the IFBAR can take in the future to enhance and catalyze collaborations, including funding opportunities, and the possibility of developing special thematic issues in ASLO journal among others. Workshop will involve a maximum of 10 to 15 participants who are all already attending the ASLO meeting. The workshop will be organized and led by the co-chairs of SS026, and participants will include a core group of researchers who have already been involved in the development of the IFBAR, plus invited colleagues who will be selected on the basis of 1) geographical location of their research, so as to have representation of the major boreal regions, 2) expertise on specific aquatic components, so as to cover the major aquatic components of the boreal landscape (streams, rivers, wetlands, lakes), and 3) expertise in modeling, landscape analysis and remote sensing. Organizers hope for a mix of graduate students, early career and more senior scientists, as well as the participation of graduate students. Organizers are open to welcoming colleagues who might be interested in taking part, and it is very likely that the group will continue to meet informally throughout the course of the ASLO meeting.

Attendance to this event is by invitation only. For more information about this event, please contact: Paul del Giorgio, del_giorgio.paul@uqam.ca

BROADENING THE IMPACTS OF YOUR AQUATIC SCIENCE

Sunday, 10 June 2018, 13:00 to 16:00
Colwood 1 & 2 – Level 2 - VCC

This workshop will focus on helping participants develop ideas for effective education and outreach activities. Featuring active, hands-on learning, small group discussions, and guided inquiry, this workshop will include short presentations on exemplary projects in formal and informal education designed for K-12, undergraduate, graduate, and public audiences to stimulate ideas. Discussions of how people learn, how to assess the effectiveness of outreach activities, and how to develop projects that meet specific goals will help support project development. Participants are welcome to bring ideas that they would like to develop and share, and for which they would like to receive feedback.

Attendance is open. For more information about this event, please contact: Robert Chen, bob.chen@umb.edu

COACHING SCIENCE

Tuesday, 12 June 2018, 12:30 to 14:00
Esquimalt – Level 1 - VCC

Coaching Science: Improving your teaching by observing how kids learn to play sports. In order to build new knowledge in a diversity of learner, scientists need to understand how people learn. Millions of kids learn to play youth sports, and some simple but powerful coaching techniques can be applied to your teaching of science. Do science. Practice science. Have fun. Allow students to make mistakes and learn from each other. Adopt a “slanty” line for assessment of learning gains. This workshop will examine the similarities between teaching science and coaching sports.

Attendance is open. For more information about this event, please contact: Cynthia Hagle, chagle@d.umn.edu

WIKIPROJECT LAKES WORKSHOP

Tuesday, 12 June 2018, 12:30 to 14:00
Sidney – Level 2 - VCC

People are increasingly looking towards the internet for information about specific natural areas such as lakes. However, basic information about these areas is often only available to non-professional scientists via scattered state-based web portals. One of the few general public-facing sources of this information that includes lake locations, types, and other characteristics is Wikipedia (<https://wikipedia.org>). However, because only a small fraction of lakes in the world have a dedicated page on Wikipedia, people are not able to easily find basic information about their local lake or lakes they might like to visit. During this workshop, participants will learn about the underlying structure of Wikipedia pages, recommended practices, and reasonable workflows for editing existing lake pages as well as creating new ones. Workshop materials will be archived at <https://doi.org/10.6084/m9.figshare.6157226>

Attendance is open. For more information about this event, please contact: Joseph Stachelek, stachel2@msu.edu

PUBLISHING METHODS IN AQUATIC SCIENCE EDUCATION

Wednesday, 13 June 2018, 12:30 to 14:00

Esquimalt – Level 1 - VCC

New methods for teaching ocean science, environmental science, and limnology have been recently developed and evaluated in both formal and informal settings. However, scientists and informal educators rarely share their methods widely through peer-reviewed literature, especially in the aquatic sciences. This workshop invites anyone that is interested in publishing their formal or informal educational methods in limnology and oceanography. "Limnology and Oceanography: Methods will consider any manuscript whose primary focus is methodological and that deals with problems in the aquatic sciences." A Special Issue of Limnology and Oceanography Methods focused on methods in education is currently being considered. Come meet the editor, discuss the possible rewards of publishing educational research methods, and receive pointers on how to gather data, present findings, and write your paper.

Attendance is open. For more information about this event, please contact: Paul Kemp, webeditor@aslo.org

STRATEGIES FOR CROSS-JURISDICTIONAL HABS PREVENTION

Thursday, 14 June 2018, 12:30 to 14:00

Sidney – Level 2 - VCC

Strategies for cross-jurisdictional HABs prevention, preparedness, and response -- All ASLO participants are invited to participate in a town-hall style gathering to share strategies for cross-jurisdictional HABs prevention, preparedness, and response. Many waters suffering from Harmful Algal Blooms are shared by multiple political jurisdictions. This geo-political reality presents unique challenges and opportunities for HABS research and management. Facilitators will share perspectives from the binational Great Lakes region which covers two countries, multiple tribes/first nations, eight states, two provinces and hundreds of local units of government. Most of the time will be spent asking participants to share their perspectives about strategies experienced or observed or that have been successful or show promise for preventing, preparing, and responding to HABS prevention in a cross-jurisdictional setting. They will also be asked to share lessons learned about what hasn't worked and how we can use those lessons to improve future activities. Finally, participants will document (for their keeping), and have the opportunity share with others, the strategies from this town hall discussion they plan to take back to their work.

Attendance is open. For more information about this event, please contact: Victoria Pebbles, vpebbles@glc.org

ARTISTS' SESSION

SS074: CH[ART]ING THE WATERS: ARTISTS INVESTIGATE AQUATIC WORLDS AND ENVIRONMENTAL CHANGE

Thursday, 14 June 2018, 14:00 to 16:00

Colwood 1 & 2 – Level 2 – VCC

ORGANIZERS:

Nina Otis Haft, Professor of Theater and Dance, California State University, East Bay, Hayward, California, USA

Lauren Elder, Environmental Artist/Designer, Lauren Elder Studio, Oakland, California, USA

PARTICIPANTS:

Maria Aranguren-Gassis, Animal Biology and Ecology Department, University of Vigo, Vigo, Spain

Elizabeth "Liz" Miller, Professor in Communication Studies, Concordia University, Montreal, and Director, The Shoreline Project

John Roloff, Environmental Artist, John Roloff Studio, Oakland, California, USA

Buster Simpson, Installation/Public Art, Buster Simpson, LLC, Seattle, Washington, USA

Don Wilkison, Artist/Hydrologist, Warrior Ant Press, Kansas City, Missouri, USA

Moira Williams, Artist/Instigator Working in Bio - Art, Performance, Installation, Sculpture, and Sound, Sayville, New York, USA

Humans have studied the forms, phenomena and mysteries of water since our beginnings. The oldest examples of Australian Aboriginal rock art, including depictions of waterholes, are estimated to be as much as 40,000 years old. Proceeding from this lineage, contemporary artists are posing questions, checking assumptions, observing patterns, acting creatively and modeling the future of water, which is the lifeblood of the human body and of the planet. Ch[art]ing the Waters maps this growing body of aesthetic and sensory practices. There is urgency and also timelessness in this endeavor. What do today's artists contribute to understanding and working with water as a resource, a process and a habitat? What critical changes are triggered when artists sit at the table with scientific researchers in the physical, biological, geological, environmental fields? How might artists and scientists partner in solving today's problems? This session invites presentations by artists whose materials, methods, forms and are focused upon water in all its forms. This session will target an interdisciplinary audience to explore art and science as complementary modes of creative inquiry in response to local and global issues of water, launching new conversations and opening new routes of action.

Artists from this session will participate in plenary sessions during the week with brief presentations about their work.

SOCIETY EVENTS

ASLO BUSINESS MEETING

Monday, 11 June 2018, 19:00 - 20:00

Carson Hall A – VCC

The annual ASLO Business Meeting will be held on Monday, 11 June, beginning at 19:00. A reception honoring ASLO fellows and sustaining fellows will precede the business meeting, and food and drinks will be available during that time. The business meeting is open to all attendees -- members and non-members. This will be a great opportunity to meet and talk to the ASLO officers, board members, and staff.

STUDENT EVENTS

STUDENT VOLUNTEER TRAINING SESSION

Sunday, 10 June 2018, 17:00 – 18:00

Meet Near the Registration Desk – VCC

Students who have signed up to serve as student volunteer room monitors must attend this training session. Meet at the registration area on Level 1 of the Victoria Conference Centre. Please contact Sue Rulla at suer@sgmeet.com for more information or if you have a travel conflict and will not be available to attend the training session on Sunday.

STUDENT PUB CRAWL

Sunday, 10 June 2018, 21:00

Meet Near the Registration Desk – VCC

This is the Conference Kickoff for students! Drink specials will be offered at different bars and establishments near the Victoria Conference Centre. Come make memories with the students who will be at the meeting! Starting at 21:00 immediately following the opening mixer. The group will gather and will leave right after.

STUDENT SOCIAL MIXER SPONSORED BY ASLO

Monday, 11 June 2018, 20:00 - 21:00

Carson Hall Pre-function Area – Level 2 - VCC

An informal student social mixer will be held on Monday evening following the ASLO Membership Meeting. This is a time to come and network with peers as well as senior scientists. Beverages and snacks will be served, and drink tickets will be available at the door (for soft drinks and limited alcoholic beverages). All student registrants, whether ASLO members or non-members, are invited to attend.

STUDENT WORKSHOPS

Students are encouraged to attend the student workshops planned during lunch on Tuesday and Thursday. A limited number of box lunches will be provided for those who plan to stay and participate in these workshops.

PUBLISH ME, PLEASE!

Tuesday, 12 June 2018, 12:30 to 14:00

Saanich I and II – Level 1 – VCC

A panel of editors and reviewers will share what they are looking for when accepting submissions to their journals.

HOW TO ASK SO THAT YOU SHALL RECEIVE

Thursday, 14 June 2018, 12:30 to 14:00

Saanich I and II – Level 1 – VCC

A panel of senior scientists from the public and private sectors will provide insight on how to negotiate salary and other helpful job tips for upcoming graduates.

EARLY CAREER EVENTS

EARLY CAREER SOCIAL MIXER SPONSORED BY ASLO

Monday, 11 June 2018, 20:00 - 21:00

Courtyard Area – Level 1 - VCC

A "meet and mix" reception is planned and organized by members of the ASLO early career (EC) committee to give early career members an opportunity to provide feedback on various topics relevant to them, including any concerns or expectations as an early career member. This is a social gathering for early career members to get to know each other and to network. Beverages and snacks will be served, and drink tickets will be available at the door (for soft drinks and limited alcoholic beverages). Come and meet the ASLO Board and members of the EC committee!

EARLY CAREER WORKSHOP

EFFECTIVE PUBLISHING AND REVIEW STRATEGIES

Wednesday, 13 June 2018, 12:30 to 14:00

Oak Bay I and II – Level 1 - VCC

This will be round table discussion on the topics of effective publishing and reviewing strategies, both of which are important for building up a career. A limited number of lunches will be available to those who attend. Further details about this workshop will be provided later.

ASLO MEETING MENTOR PROGRAM

The ASLO Meeting Mentor Program is open to any participant looking for guidance on navigating the meeting and making new connections. Mentees are grouped with experienced scientists (mentors) who will provide guidance on navigating the meeting and introduce them to other scientists throughout the week. The Meeting Mentor Program debuted at the 2013 Aquatic Sciences Meeting in New Orleans. If you are participating as either a mentor or a mentee, please wear your badge ribbon that identifies you as a participant in this program. Ribbons will be available at registration when you pick up your badge and meeting materials.

SOCIAL AND EVENING EVENTS

OPENING MIXER RECEPTION

Sunday, 10 June 2018, 19:00 - 21:00

Crystal Ballroom and Palm Court – Empress Hotel

This is a time to reconnect with friends and colleagues that you may not have seen since the last ASLO meeting! This event is always a great start to the week. Refreshments and a cash bar will be available. Each registered participant will have one complimentary beverage ticket that can be used at the reception.

ASLO FELLOWS AND MEMBERSHIP RECEPTION SPONSORED BY ASLO

Monday, 11 June 2018, 18:00 - 19:00

Carson Hall Pre-function Area – Level 2

A reception honoring ASLO fellows and sustaining fellows will precede the annual business meeting. This will be a great time to meet and to talk to ASLO officers and board members. Reception food and drink will be served. Everyone is encouraged to attend the business meeting and the membership reception -- especially new ASLO members and student members. The timing is planned so you can attend the business meeting and reception before you head out to the student or early career mixer.

CLOSING MIXER

Friday, 15 June 2018, 16:30 to 18:00

Courtyard and Pre-function Area – Level 1 – VCC

Come and enjoy the closing mixer following the closing plenary session on Friday. ASLO will close the 2018 Summer Meeting in wonderful way. A carefully-crafted raffle prize will be given during the reception. Your registration will include admission to the event. You will want to make every effort to attend. Each registered participant will have one complimentary beverage ticket that can be used at the reception.

OPTIONAL ACTIVITIES

LEKWUNGAN CULTURAL WALKING TOUR

Walking tours are daily Monday to Friday from 12:30 to 2:00 pm. Cost is \$15.00 CAD. Book in advance by emailing info@eaglefeathergallery.com.

Victoria's harbor is the traditional, unceded territory of the Songhees First Nations, who are the Lekwungan people, whose territory extended from Victoria, to Bellingham in Washington State. The walking tour will be conducted by Songhees First Nations Youth from the Songhees Cultural Center, located on the Inner Harbor. The hour and a half walking tour will highlight the First Nations art, sacred water sites and stories of the Lekwungan people. A stop at the Songhees Food Truck on the harbor will provide an opportunity for lunch. For more information on the art show and the walking tours, please contact or go by the following:

Eagle Feather First Nations Artists' Gallery
633 Courtney St., Victoria, B.C., V8W 1Z8
Tel: (250) 388-4330
Email: info@eaglefeathergallery.com
www.eaglefeathergallery.com

STORY COLLIDER EVENT

Tuesday, 12 June 2018 – 20:00 to 22:00

Location: The Copper Owl (1900 Douglas Street, Victoria, BC V8T-4K8)

Cost: \$10.00 CAD per person (paid at the door)

Stories are powerful. Whether hilarious or heartbreaking, subversive or soothing, they reflect who we are and what matters to us. And now, we want to hear yours! Join The Story Collider at ASLO on June 12th for an evening of true, personal stories about science. From a hunt for a meaningful career to a search for those lost at sea, five storytellers will share very different takes on the water that connects us all. If you are curious and would like to browse The Story Collider podcast archive to see what Story Collider is all about, go to: <http://soundcloud.com/the-story-collider>.

Participants in the ASLO Story Collider event include the following:

Michelle McCrackin, Stockholm University's Baltic Sea Center
CJ Beegle-Krause, SINTEF

Christa Torrens, Institute of Arctic and Alpine Research, University of Colorado - Boulder

Maliheh Mehrshad, Biology Centre CAS

Stuart Dyer, Oregon Health & Science University

THE ULTIMATE VICTORIA EVENING EVENT!

Wednesday, 13 June 2018, 19:00 to 22:00

Ogden Point Breakwater Pier B, Victoria

Cost: \$60.00 USD. This is a ticketed optional event and includes select food items and beverages. Additional food and beverage will be available for purchase. You must sign up for this event in advance. A limited number of tickets remain for this event. Please visit the conference registration desk by noon on Wednesday, 13 June, to sign up if you have not done so already.

This unique, warehouse-style location is within easy walking distance (approximately one mile) from the Victoria Conference Centre and offers spectacular evening views of the ocean and cruise ship marine docks. The event will go on rain or shine! Local craft beers and wines will be included along with a selection of non-alcoholic beverages. In keeping with uniquely West Coast fare, participants will enjoy regional cuisine from the top five Victoria food trucks. Local seafood, beef, chicken, and pork options will be featured along with gluten-free, vegan and vegetarian.

The pier has lots of interesting places to visit, and you will be entertained throughout the evening with music from one of Vancouver Island's top-rated DJs, dancing, and even karaoke for those who dare.

MONDAY SCHEDULE-AT-A-GLANCE

Room	Carson Hall A	Carson Hall B	Carson Hall C	Colwood 1&2	Lecture Theater	Saanich 1&2	Oak Bay 1&2	Esquimalt	Sidney
8:30 - 10:30 am	SS025 Climate Change and Small Lakes: Physical, chemical, and biological responses	SS013 Unraveling the Role of Physics on Biological & Biogeochemical Processes in Aquatic Ecosystems	SS011 The Biogeochemistry of Organic Matter: Cutting Across Ecosystem Boundaries & Aquatic Gradients	SS028 Small Pond Ecology: Synthesizing current knowledge and identifying future research needs	SS002 Importance of Winter and Seasonality in Aquatic Systems	SS067 Effects of Human Alterations on Hydrological, Ecological, and Biogeochemical Dynamics of Aquatic Systems	SS040 Innovations in Aquatic Science Education	SS006 Preparing for 21st Century Challenges in Aquatic Sciences: Science-Policy Communication and Diversity in the Scientific Community	SS052 Parasites, Pathogens Everywhere: It's time for a closer look
10:30 - 11:00 am	COFFEE BREAK - Courtyard and Prefunction Area 1A								
11:00 am - 12:30 pm	<p>PLENARY AND AWARDS SESSION Plenary Speaker - Phil Levin Professor of Practice, School of Environmental and Forest Sciences, University of Washington, and Lead Scientist, The Nature Conservancy, Seattle, Washington, USA</p> <p>Art Session Introduction - Ajit Subramaniam Lamont-Doherty Earth Observatory, Columbia University, New York, New York, USA</p> <p>Artist Presentations: Nina Otis Haft, Professor of Theater and Dance, California State University, East Bay Hayward, California, USA Lauren Elder, Environmental Artist/Designer, Lauren Elder Studio, Oakland, California, USA</p> <p>2018 Yentsch-Schindler Award Recipient - Cayelan Carey Virginia Tech University, Blacksburg, VA, USA</p>								
12:30 - 2:00 pm	LUNCH - WORKSHOPS AND AUXILIARY MEETINGS								
2:00 - 3:30 pm	SS025 Climate Change and Small Lakes: Physical, chemical, and biological responses	SS013 Unraveling the Role of Physics on Biological & Biogeochemical Processes in Aquatic Ecosystems	SS011 The Biogeochemistry of Organic Matter: Cutting Across Ecosystem Boundaries & Aquatic Gradients	SS090 Frontiers in Aquatic Respiration	SS002 Importance of Winter and Seasonality in Aquatic Systems	SS072 Acidification, Hypoxia and Carbonate Chemistry in Marine and Freshwater Systems	SS031 Trait-based Community Organization Along Environmental Gradients: Ecological & Evolution	SS006 Preparing for 21st Century Challenges in Aquatic Sciences: Science-Policy Communication and Diversity in the Scientific Community	SS052 Parasites, Pathogens Everywhere: It's time for a closer look
3:30 - 4:00	COFFEE BREAK - Courtyard and Prefunction Area 1A								
4:00 - 6:00 pm	SS022 Marine Microbial Biochemistry, Productivity and Climate Change	SS013 Unraveling the Role of Physics on Biological & Biogeochemical Processes in Aquatic Ecosystems	SS011 The Biogeochemistry of Organic Matter: Cutting Across Ecosystem Boundaries & Aquatic Gradients	SS080 From Headwaters to Coastal Zones: Emerging & legacy contaminants in aquatic ecosystems and their effects	SS002 Importance of Winter and Seasonality in Aquatic Systems	SS015 Methane Production and Fluxes from Oxidative Marine and Freshwater Systems	SS031 Trait-based Community Organization Along Environmental Gradients: Ecological & Evolution	SS062 Socio-ecological Complexity in Regulated Aquatic Ecosystems: Transforming potential conflicts into acceptable trade-offs	SS077 Urban water systems: ecological connections, ecosystem services, and opportunities for management intervention
6:00 - 7:00 pm	ASLO FELLOWS RECEPTION - Carson Hall Prefunction 2A								
7:00 - 8:00 pm	ASLO BUSINESS MEETING / MEMBERSHIP MEETING - Carson Hall								

TUESDAY SCHEDULE-AT-A-GLANCE

Room	Carson Hall A	Carson Hall B	Carson Hall C	Colwood 1&2	Lecture Theater	Saanich 1&2	Oak Bay 1&2	Esquimalt	Sidney
8:30-10:30 am	SS021 The Damming of Rivers and Lakes and Its Effects on Biogeochemical Cycles	SS100 Food Web Interactions and Trophic Linkages	SS051 Cyanobacterial Ecology as a Basis for Their Mitigation and Control Under Global Change	SS020 Living in a Variable World: Studying the role & consequence of variance, covariance, and extremes in aquatic ecosystems	SS002 Importance of Winter and Seasonality in Aquatic Systems	SS063 Linking Metagenomics to Aquatic Microbial Ecology and Biogeochemical Cycles	SS029 Ecological Stoichiometry Across Scales	SS063 Understanding The Mercury Cycle in a changing world: Linking Terrestrial and Aquatic Systems	SS084 Beyond Natural Variability: Cumulative effects and tipping points in aquatic systems
10:30-11:00 am	COFFEE BREAK - Courtyard and Prefunction Area 1A								
11:00 am-12:30 pm	<p>PLENARY AND AWARDS SESSION Plenary Speaker - Anina Pollard U.S. Environmental Protection Agency, Washington, DC, USA</p> <p>Artists' Presentations Moira Williams, Artist/Instigator Working in Bio-Art, Performance, Installation, Sculpture, and Sound, Sayville, New York, USA Don Wilkison, Artist/Hydrologist, Warrior Ant Press, Kansas City, Missouri, USA 2018 G. Evelyn Hutchinson Award - Emily Stanley University of Wisconsin, Madison, Wisconsin, USA</p>								
12:30-2:00 pm	LUNCH - ASLO STUDENT WORKSHOP, OTHER WORKSHOPS AND AUXILIARY MEETINGS								
2:00-4:00 pm	SS021 + SS038 The Damming of Rivers and Lakes and Its Effects on Biogeochemical Cycles (3 TALKS) Environmental Flows: Recent Science, Applications, and Policy Implementation (5 TALKS)	SS100 Food Web Interactions and Trophic Linkages	SS051 Cyanobacterial Ecology as a Basis for Their Mitigation and Control Under Global Change	SS082 Emerging Models of Trace Metal Bioavailability to Aquatic Organisms	SS016 Change in Lakes and Rivers at Regional, Continental and Global Scales	SS063 Linking Metagenomics to Aquatic Microbial Ecology and Biogeochemical Cycles	SS029 Ecological Stoichiometry Across Scales	SS063 Understanding The Mercury Cycle in a changing world: Linking Terrestrial and Aquatic Systems	SS041 How Micro-bial Dispersal and Shape Determine the Local Structure and Functioning of Aquatic Assemblages
4:00-6:00 pm	POSTER SESSION AND RECEPTION Pavilion and Courtyard								
8:00-10:00 pm	STORY COLLIDER EVENT - Off-site (Copper Owl) Doors Open at 7:30, Event from 8:00 to 10:00								

WEDNESDAY SCHEDULE-AT-A-GLANCE

Room	Carson Hall A	Carson Hall B	Carson Hall C	Colwood 1&2	Lecture Theater	Saanich 1&2	Oak Bay 1&2	Esquimalt	Sidney
8:30 - 10:30 am	SS083 Sources, Trophic Transfer, & Utilization of Dietary Nutrients in Aquatic Ecosystems: Current Status and Future Challenges	SS026 Integrative Research on the Biogeochemistry of Inland Waters in Northern High Latitudes	SS050 Control of Algal Blooms	SS037 Fish Ecology	SS008 Understanding Mountain Lakes in a Changing World	SS044 Bringing the "Natural Flow Regime" to Lakes	SS029 Ecological Stoichiometry Across Scales	SS016 Change in Lakes and Rivers at Regional, Continental and Global Scales	SS041 How Microbial Dispersal and Shape Determine the Local Structure and Functioning of Aquatic Assemblages
10:30 - 11:00 am	COFFEE BREAK - Courtyard and Prefunction Area 1A								
11:00 am - 12:30 pm	<p>PLENARY AND AWARDS SESSION Plenary Speaker - Jonathan Moore Liber Ero Chair of Coastal Science and Management and Associate Professor, Simon Fraser University, Burnaby, BC, Canada</p> <p>ASLO 2019 - San Juan Presentation - John Downing Artist Presentation John Roloff, Environmental Artist, John Roloff Studio, Oakland, California, USA</p> <p>2018 Ramón Margalef Award for Excellence in Education - Cynthia Hagley Minnesota Sea Grant College, Duluth, Minnesota, USA</p> <p>2018 Ruth Patrick Award Acceptance - Kelly Hondula for Margaret Palmer University of Maryland, College Park, Maryland, USA</p>								
12:30 - 2:00 pm	LUNCH - WORKSHOPS AND AUXILIARY MEETINGS								
2:00 - 3:30 pm	SS083 Sources, Trophic Transfer, & Utilization of Dietary Nutrients in Aquatic Ecosystems: Current Status and Future Challenges	SS026 Integrative Research on the Biogeochemistry of Inland Waters in Northern High Latitudes	SS050 Control of Algal Blooms	SS037 Fish Ecology	SS008 Understanding Mountain Lakes in a Changing World	SS018 Aquatic Ecosystem Development: Does function follow form?	SS045 Gas Exchange at the Water-Atmosphere Interface in Lakes, Rivers, Estuaries and the Open Ocean	SS075 Integrating Science and Management at the Coastal Interface: Landscape-Based Approaches and Application to Watershed, Coastal, and Ocean Resource Management	SS092 The Ecological Consequences of Evolution and Phenotypic Plasticity in Aquatic Ecosystems
3:30 - 4:00 pm	COFFEE BREAK - Courtyard and Prefunction Area 1A								
4:00 - 6:00 pm	SS034 Temperature Dependence of Consumer-resource Interactions: New empirical & theoretical in	SS026 Integrative Research on the Biogeochemistry of Inland Waters in Northern High Latitudes	SS019 Influence of Water Levels & Water Level Fluctuations on the Ecology and Food Webs of Large Lakes and Reservoirs	SS056 Complexity in Coastal Systems	SS008 Understanding Mountain Lakes in a Changing World	SS023 Trophic Interactions in Marine Micro- and Mesozooplankton	SS045 Gas Exchange at the Water-Atmosphere Interface in Lakes, Rivers, Estuaries and the Open Ocean	SS014 Social-ecological Dynamics in Aquatic Ecosystems	SS065 Relevance of Host-microbe Interactions in Aquatic Ecosystem Functioning
7:00 - 10:00 pm	Ultimate Victoria Evening Event - Ogden Point Breakwater Pier B								

THURSDAY SCHEDULE-AT-A-GLANCE

Room	Carson Hall A	Carson Hall B	Carson Hall C	Colwood 1&2	Lecture Theater	Saanich 1&2	Oak Bay 1 & 2	Esquimalt	Sidney
9:00 - 10:30 am	SS055 Lakes They Are A-changin': How concurrent long-term changes interact to affect aquatic ecosystems	SS012 Integrating Ecosystems - linking biogeochemical cycles across aquatic and terrestrial boundaries	SS032 The Aquatic Carbon Pipe - where, when, and why is it active or passive?	SS005 Ecotones: Micro-bial community transition zones in aquatic systems	SS087 Cyanobacteria in Inland Waters: New monitoring, reporting, modelling and ecological research	SS024 Terrestrial Organic Matter in Aquatic Food Webs: Resource subsidy or subtraction?	SS009 Recent Advances in Aquatic Photo-chemistry	SS027 Advancing Knowledge and Management of HABs Through Interdisciplinary Collaboration	SS060 Sustainable Aquaculture: Issues, Tools, and Trends
10:30 - 11:00 am	COFFEE BREAK - Courtyard and Prefunction Area 1A								
11:00 am - 12:30 pm	<p>PLENARY AND AWARDS SESSION</p> <p>Plenary Speaker - Igor Klein for Claudia Kuenzer Department of Land Surface, Earth Observation Center (EOC), German Aerospace Center, DLR, Koeln, Germany</p> <p>Artists' Presentations</p> <p>Elizabeth "Liz" Miller, Professor in Communication Studies, Concordia University, Montreal, and Director, The Shoreline Project Buster Simpson, Installation/Public Art, Buster Simpson, LLC, Seattle, Washington, USA</p> <p>2018 John H. Martin Award - Robert Howarth Cornell University, Ithaca, New York, USA</p> <p>2018 Raymond L. Lindeman Award - Meredith Holgerson Portland State University, Portland, Oregon, USA</p>								
12:30 - 2:00 pm	LUNCH - WORKSHOPS AND AUXILIARY MEETINGS								
2:00 - 4:00 pm	SS055 Lakes They Are A-changin': How concurrent long-term changes interact to affect aquatic ecosystems	SS012 Integrating Ecosystems - linking biogeochemical cycles across aquatic and terrestrial boundaries	SS032 The Aquatic Carbon Pipe - where, when, and why is it active or passive?	SS074 Charting the Waters: Artists investigate aquatic worlds and environmental change	SS071 Crossing Disciplinary Boundaries Across Freshwater-Marine Continuum to Advance the Understanding of Harmful Algal Blooms (HABs)	SS024 Terrestrial Organic Matter in Aquatic Food Webs: Resource subsidy or subtraction?	SS017 Living Downstream from Shrinking Glaciers: Understanding the hydrology, geomorphology, ecology and biogeochemistry of glacier-fed streams	SS039 Observation Systems and Big Data are Unlocking New Insights into Aquatic Ecosystem Dynamics	SS060 Sustainable Aquaculture: Issues, Tools, and Trends
4:00 - 6:00 pm	POSTER SESSION AND RECEPTION Pavilion and Courtyard								

FRIDAY SCHEDULE-AT-A-GLANCE

Room	Carson Hall A	Carson Hall B	Carson Hall C	Colwood 1&2	Lecture Theater	Saanich 1&2	Oak Bay 1&2	Esquimalt	Sidney
8:30 - 10:00 am	SS054 Linking Microbial Ecology to Carbon Biogeochemistry Across Spatial Scales	SS035 Tipping the Scales: Examining broad-scale patterns and processes in limnology	SS058 Biogeochemical Transformations Across Terrestrial – Aquatic Interfaces	SS094 Zooplankton	SS078 Freshwater Cyanobacteria: Beyond eutrophication	SS086 Connecting the Dots: Signals of Global Change Effects in Freshwater and Marine Ecosystems	SS059 Biodiversity - Ecosystem Functioning Under Stochastic Environmental Forcing	SS049 Advances in Methods and Technologies for Studying Methane Cycling in Freshwater Ecosystems	
10:00 - 10:30 am	COFFEE BREAK - Courtyard and Prefunction Area 1A								
10:30 am - 12:00 pm	SS054 Linking Microbial Ecology to Carbon Biogeochemistry Across Spatial Scales	SS035 Tipping the Scales: Examining broad-scale patterns and processes in limnology	SS058 Biogeochemical Transformations Across Terrestrial – Aquatic Interfaces	SS094 + SS097 Zooplankton (3 TALKS) Aquatic Invasion Ecology (3 TALKS)	SS007 Cyanobacterial and Algal Metabolites: Occurrence, ecology, prediction, and management	SS064 Past, Present, and Future Phosphorus Cycling: From the mine to the deep sea	SS001 Oil and Water Do Mix: The fate, behavior and impact of dispersed oil droplets in the sea	SS049 Advances in Methods and Technologies for Studying Methane Cycling in Freshwater Ecosystems	
12:00 - 1:30 pm	LUNCH - WORKSHOPS AND AUXILIARY MEETINGS								
1:30 - 3:00 pm	SS057 Small Things Can Tell Big Stories: Algae as indicators in aquatic habitats	SS035 Tipping the Scales: Examining broad-scale patterns and processes in limnology	SS058 Biogeochemical Transformations Across Terrestrial – Aquatic Interfaces	SS097 Aquatic Invasion Ecology	SS007 Cyanobacterial and Algal Metabolites: Occurrence, ecology, prediction, and management	SS064 Past, Present, and Future Phosphorus Cycling: From the mine to the deep sea	SS001 Oil and Water Do Mix: The fate, behavior and impact of dispersed oil droplets in the sea	SS036 Linking -Omics to Eco-physiological Traits for the Study of Phytoplankton Acclimation &	
3:00 - 3:30 pm	COFFEE BREAK - Courtyard and Prefunction Area 1A								
3:30 - 4:30 pm	CLOSING PLENARY SESSION Plenary Speaker - Evelyn Gaiser Executive Director, School of Environment, Arts and Society; Professor, Department of Biological Sciences and Southeast Environmental Research Center, and Lead Principle Investigator, Florida Coastal Everglades Long Term Ecological Research Program, Florida International University								
4:30 - 6:00 pm	CLOSING MIXER - Courtyard and Prefunction Area								

MONDAY ORALS

SSOO2 IMPORTANCE OF WINTER AND SEASONALITY IN AQUATIC SYSTEMS

- Chair(s): Stephen Powers, Washington State University (steve.powers@wsu.edu)
Diane McKnight, University of Colorado (diane.mcknight@colorado.edu)
Bailey McMeans, Univ of Toronto Mississauga (bailey.mcmeans@utoronto.ca)
Ted Ozersky, Univ Minnesota Duluth (tozersky@d.umn.edu)
- Location: Lecture Theater
- 8:30 AM **Devlin, S.**; Doran, P.; Hawes, I.: BENTHIC MICROBIAL MATS IN MCMURDO DRY VALLEY LAKES: A PRODUCTIVE AND VIBRANT OASIS IN THE COLDEST DESERT IN THE WORLD¹
- 8:45 AM **Wissel, B.**; Bateson, D.; Nanayakkara, L.; Quiñones-Rivera, Z.: WINTER DYNAMICS IN HARDWATER LAKES, NOT YOUR TYPICAL BOREAL LAKES
- 9:00 AM **Guillemette, F.**; Frey, K.; Podgorski, D.; Townsend-Small, A.; Corilo, Y.; Spencer, R.: LANDSCAPE AND SEASONAL CONTROLS ON CHROMOPHORIC DISSOLVED ORGANIC MATTER AND MOLECULAR COMPOSITION IN ALASKAN NORTH SLOPE LAKES
- 9:15 AM **Steiner, P.**; Sintes, E.; Kieber, D.; Xue, L.; De Corte, D.; Pfannkuchen, D.; Najdek, M.; Simó, R.; Herndl, G.: SEASONAL DYNAMICS OF THE MARINE SNOW-ASSOCIATED AND FREE-LIVING DEMETHYLATING BACTERIAL COMMUNITY
- 9:30 AM **Priscu, J.**; Michaud, A.; Skidmore, M.; Vick-Majors, T.; Dore, J.; Christner, B.: BIOGEOCHEMISTRY DURING PERMANENT WINTER CONDITIONS IN LAKES BENEATH THE WEST ANTARCTIC ICE SHEET
- 9:45 AM **Hampton, S.**; Labou, S.; Galloway, A.; Powers, S.; Lottig, N.: RELATIONSHIP OF UNDER-ICE LIGHT ENVIRONMENT WITH BIOMASS AND NUTRITIONAL QUALITY OF WINTER PHYTOPLANKTON
- 10:00 AM **Shchapov, K.**; Ozersky, T.: THE SEASONALITY OF ZOOPLANKTON COMMUNITY AND TROPHIC STRUCTURE ACROSS AN ESTUARINE TO PELAGIC GRADIENT IN LAKE SUPERIOR.
- 10:15 AM **Martin, R.**; McCauley, S.: OVIPOSITION BEHAVIOUR LEADS TO DIFFERENTIAL WINTER SURVIVAL AND HATCHING PHENOLOGY IN EGGS OF SYMPETRUM DRAGONFLIES
- 2:00 PM **Fernandes, T.**; Kuganathan, A.; McMeans, B.: A TALE OF TWO STRATEGIES: INVESTIGATING HOW FRESHWATER FISH THRIVE IN SEASONAL CLIMATES
- 2:15 PM **Bowman, L.**: ZOOPLANKTON METABOLISM PREDICTS POPULATION DYNAMICS ACROSS SEASONAL ENVIRONMENTAL GRADIENTS
- 2:30 PM **Dunton, K.**; Bonsell, C.; Harris, C.; McTigue, N.; Schonberg, S.: SEASONALLY DRIVEN PROCESSES THAT DEFINE BENTHIC COMMUNITY STRUCTURE AND TROPHIC RELATIONS IN AN ICE DOMINATED SYSTEM¹
- 2:45 PM **Houser, J.**; Jankowski, K.: LEARNING FROM A FROZEN RIVER: WHAT ARE THE IMPLICATIONS OF CONTRASTS IN NUTRIENT PATTERNS BETWEEN SUMMER AND WINTER IN THE UPPER MISSISSIPPI RIVER?
- 3:00 PM **Jankowski, K.**; Houser, J.: ICE AND SNOW COVER AFFECT WINTER LIMNOLOGICAL CONDITIONS DIFFERENTLY ACROSS A LENTIC-LOTIC GRADIENT IN A LARGE FLOODPLAIN RIVER

- 3:15 PM **Myrstener, M.**; Rocher-Ros, G.; Gomez Gener, L.; Giesler, R.; Sponseller, R.: NUTRIENT AVAILABILITY SHAPES SEASONAL METABOLIC REGIMES IN ARCTIC STREAMS.
- 4:00 PM **Casson, N.**; Wilson, H.; Higgins, S.: HYDROLOGICAL VS. IN-STREAM CONTROLS ON SEASONAL PATTERNS OF PHOSPHORUS IN AGRICULTURAL STREAMS
- 4:15 PM **Dugan, H.**: IS THE DISAPPEARANCE OF LAKE ICE ECOLOGY RELEVANT?
- 4:30 PM **Powers, S.**; Hampton, S.: INVESTIGATING THE ECOSYSTEM CONSEQUENCES OF ICE LOSS IN NORTH TEMPERATE LAKES
- 4:45 PM **Rautio, M.**; Imbeau, E.; Amaudrut, S.; Vincent, W.: BIOGEOCHEMICAL AND BIOLOGICAL ANALYSES OF LAKE ICE REVEAL HIDDEN STORES OF ORGANIC CARBON IN NORTHERN LAKES
- 5:00 PM **Lottig, N.**; Schramm, P.; Dugan, H.; Powers, S.; Stanley, E.: LAKE METABOLISM UNDER ICE
- 5:15 PM **Wisniewski, V.**; Lehnherr, I.; Schiff, S.; Aukes, P.; Kirk, J.: ECOSYSTEM METABOLISM OF A CANADIAN HIGH-ARCTIC PERMAFROST THAW LAKE: IMPACTS OF A WARMING ARCTIC ON HIGH-LATITUDE FRESHWATER PRODUCTIVITY
- 5:30 PM **Brentrup, J.**; Richardson, D.; Carey, C.; Ward, N.; Bruesewitz, D.; Weathers, K.: THE IMPORTANCE OF ICE-ON AND ICE-OFF PERIODS FOR DRIVING UNDER-ICE METABOLISM DYNAMICS IN AN OLIGOTROPHIC LAKE

SSOO6 PREPARING FOR 21ST CENTURY CHALLENGES IN AQUATIC SCIENCES: SCIENCE-POLICY COMMUNICATION AND DIVERSITY IN THE SCIENTIFIC COMMUNITY

- Chair(s): Michelle McCrackin, Stockholm University (michelle.mccrackin@su.se)
Adrienne Sponberg, ASLO (sponberg@aslo.org)
Jonathan C. Lewis, Indiana University of Pennsylvania (jclewis@iup.edu)
Michael B. Jones, U.S. NSF (mbjones@nsf.gov)
Sharon Cooper, Columbia University (scooper@ldeo.columbia.edu)
- Location: Esquimalt
- 8:30 AM **Cooper, S.**; **Lewis, J.**: EXPANDING THE GEO/OCEAN SCIENCE PIPELINE THROUGH INNOVATIVE AT-SEA EXPERIENCES
- 8:45 AM **Carrigan, M.**: PERILS AND POTENTIAL FOR RECRUITING COMMUNITY COLLEGE STUDENTS TO THE GEOSCIENCES VIA IMMERSIVE AQUATIC FIELDWORK
- 9:00 AM **Jones, M.**; Rom, L.; Adams, M.; Patino, L.: GOLD: BUILDING CAPACITY FOR BROADENING PARTICIPATION IN THE GEOSCIENCES
- 9:15 AM **Sponberg, A.**: MAKING SCIENCE MATTER IN POLICYMAKING
- 9:30 AM **Xenopoulos, M.**: THE UPS AND DOWNS OF ENGAGING WITH MANAGEMENT AND POLICY DEVELOPMENT
- 9:45 AM **Harms, T.**; Varpe, Ø.; Vestergaard, N.; Arnbom, T.: A CHANGING ARCTIC OCEAN: ENVISIONING POLICIES TO SUPPORT SUSTAINABILITY
- 10:00 AM **McCrackin, M.**: BALTIC EYE: NAVIGATING THE WATERS OF SCIENCE-POLICY COMMUNICATION FOR THE BALTIC SEA ENVIRONMENT
- 10:15 AM **Diep, N.**; Tybinkowski, M.; Malhotra, M.; Cameron, B.; Moggy, S.; Giannetas, C.; Martherus, J.; Winter, J.: FARMING IN THE GREAT LAKES: SCIENCE TO INFORM DECISIONS ON THE MANAGEMENT OF FRESHWATER CAGE AQUACULTURE

- 2:00 PM **Sobota, D.**; Foster, E.; Brannan, K.; Bloom, J.; Calvert, P.; Costello, E.; Creutzburg, B.; Donald, C.; Michie, R.; Rubenson, M.: LESSONS LEARNED FROM THE DEVELOPMENT AND IMPLEMENTATION OF WATER QUALITY MANAGEMENT IN OREGON, USA
- 2:15 PM **Nanayakkara, L.**; Leavitt, P.; Wissel, B.: RECONCILING SOCIETAL VALUES AND ECOSYSTEM SERVICES: MANAGING HARDWATER PRAIRIE LAKES BEYOND FISH
- 2:30 PM **Rich, M.**: SOURCE WATER PROTECTION: ENGAGING THE PUBLIC THROUGH SECCHI DAY, A CITIZEN SCIENCE PROGRAM ON BEAVER LAKE, ARKANSAS.
- 2:45 PM **Ogene, O.**: OCEAN SCIENCE PUBLIC OUTREACH AND PARTICIPATION: LIVE OCEAN EXPLORATION AND RESEARCH AS A TOOL FOR COMMUNITY ENGAGEMENT
- 3:00 PM **Kuzyk, Z.**; Candlish, L.; Kamula, M.; Lemay, M.; Barber, D.: PERSPECTIVES FROM PREPARING THE ARCTICNET INTEGRATED REGIONAL IMPACT STUDY (IRIS) OF THE GREATER HUDSON BAY MARINE REGION
- 3:15 PM **Sung, W.**; Wang, H.: POPULATION SENSITIVITY TO FISHING DEPENDS ON LIFE HISTORY AND MATING TYPES: A CASE STUDY OF REEF FISHES
- 2:15 PM **D'Andrilli, J.**; Storb, M.; Payn, R.: EXPLORING SPATIOTEMPORAL VARIATION IN STREAM DISSOLVED ORGANIC MATTER TO BETTER UNDERSTAND HYDROECOLOGICAL REGIMES IN A MONTANE, URBANIZING WATERSHED
- 2:30 PM **Sadro, S.**; Smits, A.; Sickman, J.: HYDROLOGICAL AND BIOLOGICAL CONTROLS DRIVE CHANGES IN DOM IN MOUNTAIN LAKES
- 2:45 PM **Lau, M.**; Grossart, H.; del Giorgio, P.: ANOXIC LAKE WATERS AS IMPORTANT REACTION SITES FOR DISSOLVED ORGANIC MATTER
- 3:00 PM **Dadi, T.**; Harir, M.; Hertkorn, N.; Koschorreck, M.; Schmitt-Kopplin, P.; Herzsprung, .: REDOX CONDITIONS INFLUENCE DISSOLVED ORGANIC CARBON QUALITY IN STRATIFIED FRESHWATERS
- 3:15 PM **Hawkes, J.**; Xu, W.; Bergquist, J.; Tranvik, L.: DEGRADATION OF DISSOLVED ORGANIC MATTER INVESTIGATED AT THE MOLECULAR LEVEL USING MODEL COMPOUNDS
- 4:00 PM **Hernes, P.**; Dydá, R.; McDowell, W.: CONNECTING TROPICAL RIVER ORGANIC MATTER TO THE LANDSCAPE WITH LIGNIN BIOMARKERS
- 4:15 PM **Hounshell, A.**; Rudolph, J.; Bhattacharya, R.; Hall, N.; Osburn, C.; Paerl, H.: THE ROLE OF DISCRETE DISCHARGE EVENTS ON DISSOLVED ORGANIC CARBON QUALITY AND QUANTITY IN THE MICROTIDAL NEUSE RIVER ESTUARY, NC
- 4:30 PM **Martin, E.**; Dubble, S.; Ingalls, A.; dos Santos, G.: AN INVESTIGATION OF THE IMPACTS OF THE 2015 EL NINO EVENT ON THE AGE OF PARTICULATE CARBON EXPORTED FROM A TEMPERATE RAINFOREST CATCHMENT
- 4:45 PM **Krause, J.**; McDonnell, J.; Hinojosa, A.; Burke Watson, E.; Gray, A.: ASSESSMENT OF SPATIO-TEMPORAL DYNAMICS OF CARBON STOCKS AND ORGANIC MATTER SOURCES TO SEAGRASS-ASSOCIATED SEDIMENTS OF SAN QUNITIN BAY, MEXICO
- 5:00 PM **Rosentreter, J.**; Maher, D.; Erler, D.; Murray, R.; Eyre, B.: ON THE FACTORS CONTROLLING CARBON DIOXIDE AND METHANE EMISSIONS IN THREE TROPICAL MANGROVE-DOMINATED ESTUARIES IN AUSTRALIA
- 5:15 PM **Lowman, H.**; Melack, J.; Page, M.: LIGNIN PHENOLS AS BIOMARKERS OF TERRESTRIAL ORGANIC MATTER IN THE SANTA BARBARA CHANNEL
- 5:45 PM **Dale, A.**; Stolpovsky, K.; Wallmann, K.: REMINERALIZATION KINETICS OF ORGANIC CARBON IN SURFACE MARINE SEDIMENTS: CONSIDERATIONS AT THE GLOBAL SCALE

SSO11 THE BIOGEOCHEMISTRY OF ORGANIC MATTER: CUTTING ACROSS ECOSYSTEM BOUNDARIES & AQUATIC GRADIENTS

- Chair(s): Patricia M. Medeiros, University of Georgia (medeiros@uga.edu)
Nicholas D. Ward, Pacific Northwest National Laboratory (nickdward@gmail.com)
Tomoko Komada, San Francisco State University (tkomada@sfsu.edu)
Byron C. Crump, Oregon State University (bc Crump@coas.oregonstate.edu)
- Location: Carson Hall C
- 8:30 AM **Moran, M.**: METABOLITES OF THE OCEAN MICROBIOME
- 9:00 AM **Stegen, J.**; Graham, E.; Tfaily, M.: MERGING ECOLOGICAL THEORY WITH METABOLOMICS
- 9:15 AM **Neilen, A.**; Carroll, A.; Hawker, D.; O'Brien, K.; Burford, M.: SOURCE, SUNLIGHT AND BACTERIA EFFECT COMPOSITION OF DISSOLVED ORGANIC MATTER AND ITS TOXICITY TO CYANOBACTERIA: A NOVEL APPROACH
- 9:30 AM **Catalán García, N.**; Pastor, A.; Borrego, C.; Casas-Ruiz, J.; Hawkes, J.; Gutiérrez, C.; von Schiller, D.; Obrador, B.; Marcé, R.: COMPOSITION VS ENVIRONMENTAL CONDITIONS: WHAT DRIVES DISSOLVED ORGANIC MATTER DEGRADATION?
- 9:45 AM **Hannes, P.**; Singer, G.; Ulseth, A.; Dittmar, T.; Prairie, Y.; Battin, T.: MOLECULAR DOM DYNAMICS THROUGHOUT A FLUVIAL NETWORK – THE ROLE OF TIME SPENT IN A STREAM NETWORK FOR STRUCTURING COMPOSITION AND REACTIVITY
- 10:00 AM **Roebuck, J.**; Seidel, M.; Dittmar, T.; Jaffe, R.: CHARACTERIZATION OF DISSOLVED ORGANIC MATTER ALONG A RIVER CONTINUUM: LINKING WATERSHED LAND USE TO THE RIVER CONTINUUM CONCEPT
- 10:15 AM **LaBrie, R.**; Lapierre, J.; Maranger, R.: CONTRASTING PATTERNS OF LABILE AND SEMI-LABILE ORGANIC CARBON FROM CONTINENTAL WATERS TO THE OPEN OCEAN
- 2:00 PM **Koch, B.**; Leefmann, T.; Schaefer-Neth, C.; Frickenhaus, S.: BIOGEOCHEMISTRY IN ARCTIC FJORDS: CHEMOMETRICS USING A BROWSER-BASED APPLICATION FOR THE EVALUATION OF HIGH RESOLUTION MASS SPECTROMETRIC DATA

SSO13 UNRAVELING THE ROLE OF PHYSICS ON BIOLOGICAL & BIOGEOCHEMICAL PROCESSES IN AQUATIC ECOSYSTEMS

- Chair(s): Dominic Vachon, University of Geneva (dominic.vachon@unige.ch)
Alicia Cortes, UCSB (alicia.cortes@ucsb.edu)
Daniel F. McGinnis, University of Geneva (daniel.mcginis@unige.ch)
Sally MacIntyre, University of California Santa Barbara
- Location: Carson Hall B
- 8:30 AM **Graves, K.**; Laval, B.: SEASONAL EVOLUTION OF THERMAL STRATIFICATION IN A SMALL, DEEP, COASTAL-MOUNTAIN LAKE
- 8:45 AM **Cortes, A.**; MacIntyre, S.: SPRING MIXING IN SMALL ICE-COVERED ARCTIC LAKES
- 9:00 AM **Prairie, Y.**: PIMPING YOUR PROFILE: ESTIMATING BASIN-SCALE VERTICAL DIFFUSIVITIES FROM SINGLE TEMPERATURE PROFILES IN SEASONALLY STRATIFIED LAKES

¹ REPRESENTS INVITED PRESENTATIONS

- 9:15 AM **Johnson, B.**; Cowen, E.: SEDIMENT SUSPENSION AND BED MORPHOLOGY IN A MEAN SHEAR FREE TURBULENT BOUNDARY LAYER
- 9:30 AM **Johnson, R.**; Gulick, A.; Bolten, A.; Bjorndal, K.: EFFECTS OF GREEN TURTLE GRAZING ON SEDIMENT RESUSPENSION AND EROSION IN A TROPICAL SEAGRASS MEADOW
- 9:45 AM **Khazaei, B.**; Hamidi, S.; **Bravo, H.**; Houghton, E.; Bartlett, S.: ON THE RELATION BETWEEN SEDIMENT CONCENTRATION AND WATER QUALITY PARAMETERS IN THE GREEN BAY OF LAKE MICHIGAN
- 10:00 AM **Delwiche, K.**; Hemond, H.: METHANE BUBBLES TRANSPORT ARSENIC FROM SEDIMENT TO A LAKE WATER SURFACE
- 2:00 PM **Roberts, D.**; Sprague, H.; Schladow, G.: SPATIAL AND TEMPORAL VARIABILITY IN THE EXPRESSION AND IMPACT OF BAROTROPIC SEICHES AT THE PERIPHERY OF A LARGE LAKE
- 2:15 PM **Hairston, N.**; Gilman, B.; Gronwall, T.; Gronwall, D.; King, A.; Schaffner, L.; Razavi, R.; Cleckner, L.: INTERNAL WAVES, INTERNAL LOADING, AND THE STIMULATION OF CYANOBACTERIA IN A SHALLOW FINGER LAKE, NEW YORK
- 2:30 PM **Li, Y.**; Stumpf, R.; Tomlinson, M.: INFLUENCE OF WIND ON *KARENIA BREVIS* BLOOM DYNAMICS ALONG SOUTHWEST COAST OF FLORIDA: OBSERVATIONS AND COUPLED BIO-PHYSICAL MODEL SIMULATIONS
- 2:45 PM **Noges, P.**: HYDRO-METEOROLOGICAL FORCING AFFECTING PHYTOPLANKTON COMMUNITY AT DIFFERENT TIME SCALES
- 3:00 PM **Ploug, H.**; Bergkvist, J.; Klawonn, I.; Lavik, G.; Whitehouse, M.; Brüchert, V.: SMALL- AND LARGE-SCALE CO₂ SEQUESTRATION BY CHAIN-FORMING DIATOMS ARE SIMULTANEOUSLY STIMULATED BY TURBULENCE IN THE SEA
- 3:15 PM **Beéri-Shlevin, Y.**; Bueno, M.; Sukenik, A.; Nishri, A.; Tessier, E.; Amouroux, D.; Romero Rama, A.: DISSOLVED SELENIUM IN LAKE KINNERET (SEA OF GALILEE) REVISITED AFTER 20 YEARS
- 4:00 PM **Ruiz, E.**; Sharples, J.; Hopkins, J.; Woodward, M.: SEASONALITY IN THE CROSS-SHELF PHYSICAL STRUCTURE OF A TEMPERATE SHELF SEA AND THE IMPLICATIONS FOR NITRATE SUPPLY
- 4:15 PM **Dosser, H.**; Jackson, J.; Waterman, S.; Hunt, B.; Hannah, C.: NEW INSIGHTS INTO THE PHYSICS OF UPWELLING AND DOWNWELLING ALONG THE BC CENTRAL COAST
- 4:30 PM **Jackson, J.**; Whitney, F.; Belluz, J.; Hunt, B.: AN OXYGEN MINIMUM IN RIVERS INLET, BRITISH COLUMBIA: HOW CAN THIS PERSISTENT SEASONAL FEATURE IMPACT THE ECOSYSTEM?
- 4:45 PM **Jiann, K.**; Wang, K.: TEMPORALLY VARIABLE TRANSPORT OF TRACE METALS THROUGH THE TAIWAN STRAIT: FIELD OBSERVATION, SIMULATION AND ESTIMATION

SSO15 METHANE PRODUCTION AND FLUXES FROM OXIC MARINE AND FRESHWATER SYSTEMS

- Chair(s): Daniel F. McGinnis, University of Geneva (daniel.mcginis@unige.ch)
 Hans-Peter Grossart, IGB (hgrossart@igb-berlin.de)
 Pascal Bodmer, University of Koblenz - Landau (bodmer@uni-landau.de)
 Daphne Donis, University of Geneva (daphne.donis@unige.ch)
 Emily Stanley, University of Wisconsin (ehstanley@wisc.edu)

- Location: Saanich 1&2
- 4:00 PM **Bizic Ionescu, M.**; Klintzsch, T.; Ionescu, D.; Hindiyeh, M.; Günthel, M.; Muro-Pastor, A.; Keppler, F.; Grossart, H.: WIDESPREAD FORMATION OF METHANE BY CYANOBACTERIA IN AQUATIC AND TERRESTRIAL ENVIRONMENTS
- 4:15 PM **Lehmann, M.**; Steinle, L.; Bles, J.; Bartosiewicz, M.; Niemann, H.; Zopfi, J.: THERE IS MORE THAN ONE METHANE PARADOX - SHAKING THE PARADIGMS ON THE OXYGEN CONTROL ON BACTERIAL METHANE OXIDATION
- 4:30 PM **Wäge, J.**; Stawiarski, B.; Schmale, O.; Strassert, J.; Landsberger, A.; Michel, G.; Kreikemeyer, B.; Loick-Wilde, N.; Labrenz, M.: ZOOPLANKTON ASSOCIATED METHANE PRODUCTION IN THE OXYGENATED WATER COLUMN OF THE CENTRAL BALTIC SEA
- 4:45 PM **Bohrer, G.**; Angle, J.; Rey Sanchez, C.; Morin, T.; Wrighton, K.: OBSERVATIONS OF METHANE PRODUCTION IN THE AEROBIC ZONE OF A RIVERINE WETLAND AND CONSEQUENCES FOR THE WETLAND'S GREENHOUSE GAS BUDGET
- 5:00 PM **Li, W.**; Dore, J.; Steigmeyer, A.; Kibler, P.; Morgan-Kiss, R.; Skidmore, M.; Christner, B.; Priscu, J.: METHANE PRODUCTION IN THE OXIC WATER COLUMN OF A PERENNIALY ICE-COVERED ANTARCTIC LAKE
- 5:15 PM **Hondula, K.**; Prasse-Maietta, C.; Palmer, M.: SEASONAL PATTERNS OF METHANE CONCENTRATIONS AND FLUXES FROM DELMARVA BAYS IN RELATION TO HYDROLOGIC VARIABILITY
- 5:30 PM **Hilgert, S.**; Fernandes, C.; Fuchs, S.: REALLOCATION OF METHANE EMISSION HOTSPOTS UNDER DRAWDOWN CONDITIONS

SSO22 MARINE MICROBIAL BIOCHEMISTRY, PRODUCTIVITY AND CLIMATE CHANGE

- Chair(s): Manoj Kamalanathan, Texas A&M University at Galveston (manojka@tamug.edu)
 Antonietta Quigg, Texas A&M University (quigga@tamug.edu)
 Jessica M. Labonte, Texas A&M University at Galveston (labontej@tamug.edu)
 Ana Fernandez-Carrera, University of Vigo (Spain) (afcarrera@uvigo.es)
 Maria Perez-Lorenzo, University of Vigo (mplorenzo@uvigo.es)
- Location: Carson Hall A
- 4:00 PM **Fernandez-Carrera, A.**; Perez-Lorenzo, M.; Subramaniam, A.: STATE-OF-THE-ART: PHYTOPLANKTON PRIMARY PRODUCTION IN THE ATLANTIC OCEAN
- 4:30 PM **Marra, J.**: "CUTE LITTLE OCEAN": 70+ YEARS OF PRODUCTIVITY RESEARCH IN THE NORTH ATLANTIC
- 4:45 PM **Subramaniam, A.**; Fernandez-Carrera, A.: PRIMARY PRODUCTION IN THE EQUATORIAL ATLANTIC UPWELLING SYSTEM - WHO, HOW MUCH, AND WHY?
- 5:00 PM **Quigg, A.**; Steichen, J.; Windham, R.; Hala, D.; Kaiser, K.; Labonte, J.; Petersen, L.; Bacosa, H.; Bretherton, L.; Kamalanathan, M.; Setta, S.: MICROBIAL COMMUNITY RESPONSE TO CHANGING CLIMATOLOGY: RAPID ASSESSMENT IN RESPONSE TO HURRICANE HARVEY
- 5:30 PM **Gillard, J.**; Spriester, J.; Carlos, A.; Peraza, M.: L-ASPARAGINE STIMULATED CELL DEATH IN THE MODEL DIATOM PHAEODACTYLUM TRICORNUTUM
- 5:45 PM **Lee, K.**; Jeong, H.: NUTRIENT CONDITIONS ALTER WARMING EFFECTS ON COASTAL PHYTOPLANKTON PRODUCTION

SSO25 CLIMATE CHANGE AND SMALL LAKES: PHYSICAL, CHEMICAL, AND BIOLOGICAL RESPONSES

- Chair(s): Derek Gray, Wilfrid Laurier University (dgray@wlu.ca)
Sapna Sharma, York University (sapna.sharma23@gmail.com)
Catherine O'Reilly, Illinois State University (cmoreil@ilstu.edu)
- Location: Carson Hall A
- 8:30 AM **Paltsev, A.**; Creed, I.: OLIGOTROPHICATION: AN UNEXPECTED CHANGE IN RELATIVELY UNDISTURBED LANDSCAPES OF THE GREAT LAKES BASIN
- 8:45 AM **Gray, E.**; Jones, I.; Elliott, A.; Mackay, E.; Folkard, A.: DISTINGUISHING THE SEPARATE IMPACTS OF MIXED DEPTH AND TEMPERATURE CHANGE ON THE PHYTOPLANKTON BIOMASS AND COMMUNITY STRUCTURE OF A SMALL EUTROPHIC LAKE
- 9:00 AM **Vucic, J.**; Gray, D.: ABIOTIC FACTORS INFLUENCING ZOOPLANKTON COMMUNITY STRUCTURE IN SMALL ARCTIC LAKES
- 9:15 AM **Cohen, R.**; Vucic, J.; Gray, D.: RESPONSES OF MACROINVERTEBRATE COMMUNITIES TO WATER QUALITY VARIABLES IN SMALL ARCTIC LAKES
- 9:30 AM **Scott, R.**; Tank, S.; Wang, X.; Quinlan, R.: RESPONSES TO FLOOD REGIME VARIATION IN NORTHERN DELTAIC LAKES: 5 YEARS OF MONITORING LIMNOLOGICAL AND BIOLOGICAL CHANGES & IMPLICATIONS FOR BIOMONITORING
- 9:45 AM **Huynh, M.**; Gray, D.: DISPERSAL AS A BUFFER AGAINST ZOOPLANKTON COMMUNITY CHANGE IN RESPONSE TO FLUCTUATING SALINITY LEVELS ON THE GREAT PLAINS
- 10:00 AM **Higgins, S.**; Emmerton, C.; Paterson, M.; Rennie, M.: EVALUATING CLIMATE CHANGE EFFECTS ON BOREAL LAKES
- 10:15 AM **Scott, C.**: SMALL LAKES OF THE NATIONAL ECOLOGICAL OBSERVATORY NETWORK
- 2:00 PM **Dabrowski, J.**; Charette, M.; Mann, P.; Ludwig, S.; Henderson, P.; Holmes, M.: QUANTIFYING GROUNDWATER AS A SOURCE OF NUTRIENTS, TRACE METALS, AND GREENHOUSE GASES TO LAKES AND PONDS ON THE ALASKAN TUNDRA
- 2:15 PM **Brothers, S.**; Sibley, P.: LONG-TERM DECLINES IN SUBARCTIC TUNDRA LAKE CO₂ SATURATION: CAUSES AND EFFECTS
- 2:30 PM **Sharma, S.**; Magnuson, J.; Batt, R.; Blagrove, K.; Magee, M.; Oliver, S.; O'Reilly, C.; Straile, D.; Weyhenmeyer, G.; Winslow, L.; Woolway, L.: LOSING LAKE ICE: IMPACTS OF CLIMATE CHANGE ON EXTREME NO-FREEZE ICE EVENTS IN NORTHERN HEMISPHERE LAKES[†]

SSO28 SMALL POND ECOLOGY: SYNTHESIZING CURRENT KNOWLEDGE AND IDENTIFYING FUTURE RESEARCH NEEDS

- Chair(s): Meredith Holgerson, Portland State University (meredith.holgerson@gmail.com)
Angela Strecker, Portland State University (strecker@pdx.edu)
- Location: Colwood 1&2
- 8:30 AM **Siebers, A.**; Pettit, N.; Skrzypek, G.; Dogramaci, S.; Grierson, P.: DIEL CYCLES OF DISSOLVED INORGANIC CARBON AND ECOSYSTEM METABOLISM IN EPHEMERAL STREAM POOLS
- 8:45 AM **Barnard, M.**; Porter, J.; Wilde, S.: UTILIZING THE ALGA SPIROGYRA TO IMPROVE LIMNETIC WATER QUALITY: A PHYTOREMEDIATORY APPROACH TO NUTRIENT AND BACTERIAL POLLUTION

- 9:00 AM **Gawel, J.**; Barrett, P.; Hull, E.; Burkart, K.; Hargrave, O.; McLean, J.; Neumann, R.: ARSENIC BIOAVAILABILITY IS GREATER IN SHALLOW POLYMICHTIC URBAN LAKES THAN DEEP STRATIFIED LAKES: FLUX RATES AND THE INVOLVEMENT OF PLANKTON IN ARSENIC CYCLING
- 9:15 AM **Laurion, I.**; Bartosiewicz, M.; MacIntyre, S.; Cortes, A.; Preskienis, V.: SEASONAL DYNAMICS IN THERMAL STRUCTURE AND DISSOLVED OXYGEN OF SMALL ARCTIC THAW PONDS, AND CONSEQUENCES ON GHG EMISSIONS
- 9:30 AM **Sweetman, J.**; McLean, K.; Hu, K.; Musher, D.: SMALL POND ECOLOGY: HOMOGENIZATION, CONSOLIDATION, AND THE ECOLOGICAL IMPLICATIONS FOR INCREASED CONNECTIVITY OF SMALL PONDS IN THE PRAIRIE POTHOLE REGION
- 9:45 AM **Holgerson, M.**; Strecker, A.: FLOODPLAIN POND INVERTEBRATES: HOW DO ZOOPLANKTON AND MACROINVERTEBRATE COMMUNITIES RESPOND TO ENVIRONMENTAL STRESSORS?
- 10:00 AM **Strecker, A.**; Holgerson, M.; Crisafulli, C.; Gawel, J.: PRIMARY SUCCESSION AND COMMUNITY ASSEMBLY IN PONDS CREATED BY THE MOUNT ST. HELENS ERUPTION

SSO31 TRAIT-BASED COMMUNITY ORGANIZATION ALONG ENVIRONMENTAL GRADIENTS: ECOLOGICAL & EVOLUTION

- Chair(s): Jonas Wickman, Umea University (jonas.wickman@umu.se)
Elena Litchman, Michigan State University (litchman@msu.edu)
Alexey Ryabov, University of Oldenburg (alexey.ryabov@uni-oldenburg.de)
Christopher Klausmeier, Michigan State University (klausme1@msu.edu)
- Location: Oak Bay 1&2
- 2:00 PM **Litchman, E.**: FUTURE DIRECTIONS AND CHALLENGES OF TRAIT-BASED APPROACHES
- 2:15 PM **Venail, P.**; Ibelings, B.; Guan, Z.: PERFORMING MULTIPLE ECOSYSTEM FUNCTIONS REQUIRES A LARGE DIVERSITY OF TRAITS
- 2:30 PM **Morys, C.**; Steiner, N.; Forster, S.; Powilleit, M.; Gogina, M.; Zettler, M.; Ysebaert, T.: TRAIT-BASED EXPLANATION OF BIOTURBATION PATTERNS ALONG SALINITY GRADIENTS IN CONTRASTING ENVIRONMENTS
- 2:45 PM **Cid Puey, N.**; Vinyoles, D.; Gutiérrez-Cánovas, C.; Rodríguez-Lozano, P.; Bonada, N.; Fortuño, P.; Latron, J.; Llorens, P.; Gallart, F.; Prat, N.: COMBINED IMPACTS OF ANTHROPOGENIC AND NATURAL STRESSORS CAUSE FUNCTIONAL CHANGES IN STREAM FISH COMMUNITIES
- 3:00 PM **Marzetz, V.**; Striebel, M.; Wacker, A.: LIGHT QUALITY EFFECTS ON PHYTOPLANKTON COMMUNITIES
- 3:15 PM **Martini, S.**; Haddock, S.: DEFINING ECOLOGICAL AND MORPHOLOGICAL TRAITS OF MARINE ZOOPLANKTON BASED ON RECENT TECHNOLOGY
- 4:00 PM **Wentzky, V.**; Jäger, C.; Tittel, J.; Rinke, K.: A QUANTITATIVE APPROACH TO ASSESS PHYTOPLANKTON TRAIT SUCCESSION DURING OLIGOTROPHICATION – 50 YEARS OF OBSERVATION IN A GERMAN RESERVOIR
- 4:15 PM **Schulhof, M.**; Shurin, J.; Dederck, S.; Van de Waal, D.: TRADE-OFFS IN PHYTOPLANKTON COMMUNITY RESPONSES TO GRAZING, WARMING AND EUTROPHICATION

[†] REPRESENTS INVITED PRESENTATIONS

- 4:30 PM Gallego, I.; Venail, P.; **Ibelings, B.**: NICHE DIFFERENCES TRUMP RELATIVE FITNESS DIFFERENCES IN PREDICTING PHYTOPLANKTON COEXISTENCE IN SIZE DIFFERENCE-BASED INVASION EXPERIMENTS
- 4:45 PM **Klausmeier, C.**; Miller, E.; Kremer, C.: TRAIT-BASED PERSPECTIVES ON SPECIES COEXISTENCE IN VARIABLE ENVIRONMENTS
- 5:15 PM **Hagstrom, G.**; Hein, A.; Levin, S.: DISSOLVED ORGANIC MATTER AND THE EVOLUTION OF MICROBIAL TRAITS
- 5:30 PM **Wickman, J.**; Brännström, Å.; Diehl, S.: EVOLUTIONARY COEXISTENCE IN RESOURCE-COMPETITION IN HOMOGENEOUS AND HETEROGENEOUS ENVIRONMENTS
- 5:45 PM **Pomati, F.**; Shurin, J.; Andersen, K.; Tellenbach, C.; Barton, A.: LAKE PHYTOPLANKTON SIZE-ABUNDANCE RELATIONSHIPS ARE REGULATED BY INTERACTIONS AMONG RESOURCE SUPPLY, TEMPERATURE AND GRAZING

SSO40 INNOVATIONS IN AQUATIC SCIENCE EDUCATION

- Chair(s): Robert F. Chen, University of Massachusetts Boston (bob.chen@umb.edu)
Sarah Rosengard, University of British Columbia (srosengard@gmail.com)
Linda Duguay, University of Southern California (duguay@usc.edu)
- Location: Oak Bay 1&2
- 8:30 AM **Oguguah, N.**; Wilfred-Ekpirikpo, P.; Ayorinde, A.: ASLO GLOBAL OUTREACH INITIATIVE TO UNIVERSITY OF NIGERIA NSUKKA : A SUCCESS STORY.
- 8:45 AM Bruesewitz, D.; **Yokota, K.**; Borre, L.; Klug, J.; Richardson, D.; Weathers, K.; Wigdahl-Perry, C.: INTRODUCING UNDERGRADS TO TEAM SCIENCE IN LAKE RESEARCH: NORTHEAST GLEON
- 9:00 AM **Thompson, S.**; Cotner, J.; Cotner, S.: THE PROBES PROJECT: A COURSE-BASED UNDERGRADUATE RESEARCH EXPERIENCE IN LIMNOLOGY
- 9:15 AM **Chen, R.**: BOSTON HARBOR BOOT CAMP: GETTING GRADUATE STUDENTS' FEET WET BEFORE CLASSES START
- 9:30 AM **Sasaki, T.**; Mizutani, S.: DIRECTION OF AN ENVIRONMENTAL EDUCATION PROGRAM TO EMPHASIZE THE FOREST-RIVER-OCEAN RELATIONSHIP - ESTABLISHING A RESILIENT AND SUSTAINABLE SOCIETY BY ENHANCEMENT OF FOOD INTRINSIC VALUE
- 9:45 AM **Mizutani, S.**; Sasaki, T.: DIRECTION OF AN ENVIRONMENTAL EDUCATION PROGRAM TO EMPHASIZE THE FOREST-RIVER-OCEAN RELATIONSHIP - ESTABLISHING A RESILIENT AND SUSTAINABLE SOCIETY BY ENHANCEMENT OF FOOD INTRINSIC VALUE
- 10:00 AM **Jacoby, D.**; Insua, T.; Ralph, R.; Richardson, M.; Paquin-Mannington, M.; dahl, e.; chwelos, a.; wynden, a.; Levy, J.; coady, y.: VIRTUAL REALITY AS A TOOL FOR TSUNAMI PREPAREDNESS AND PUBLIC EDUCATION

SSO52 PARASITES, PATHOGENS EVERYWHERE: IT'S TIME FOR A CLOSER LOOK

- Chair(s): Alena Gsell, NIOO-KNAW (a.gsell@nioo.knaw.nl)
Corina Brussaard, NIOZ (corina.brussaard@nioz.nl)
Thijs Frenken, NIOO-KNAW (t.frenken@nioo.knaw.nl)
- Location: Sidney
- 8:30 AM **Grossart, H.**: PARASITISM A GREATLY NEGLECTED TOPIC IN AQUATIC SCIENCES^T
- 9:00 AM **Arsenieff, L.**; Baudoux, A.; Rigaut-Jalabert, F.; Le Gall, F.; Jeanthon, C.; Epinoux, A.; Corre, E.; Simon, N.: DIATOM-PARASITE INTERACTIONS IN THE WESTERN ENGLISH CHANNEL
- 9:15 AM **Frenken, T.**; Gsell, A.; van Donk, E.; Van de Waal, D.: CLIMATE CHANGE AFFECTS BOTTOM-UP AND TOP-DOWN CONTROL OF PHYTOPLANKTON FUNGAL PARASITES
- 9:30 AM **Rasconi, S.**; Danner, S.; Van den Wyngaert, S.; Rohrlack, T.; Kainz, M.: PHYTOPLANKTON FUNGAL PARASITES NUTRITIONAL QUALITY AND ROLE IN TROPHIC TRANSFER
- 9:45 AM **Gsell, A.**; Frenken, T.; de Senerpont Domis, L.; van Donk, E.; van den Wyngaert, S.; Van de Waal, D.: HOST-SPECIFIC CHYTRID INFECTIONS OF PHYTOPLANKTON MODIFY THE OUTCOME OF RESOURCE COMPETITION
- 10:00 AM **Nnodim, N.**; Emmanuel, O.: INFLUENCE OF PARASITE INFECTION AND ALLOMETRIC GROWTH PATTERN ON MORMYRIDS (OSTEICHTHYES: MORMYRIDEA) IN UPPER RIVER NIGER BASIN IN SOUTH EASTERN NIGERIA
- 10:15 AM **Paseka, R.**: TOWARD A STOICHIOMETRIC FRAMEWORK TO LINK HOST-PARASITE INTERACTIONS WITH ECOSYSTEM-LEVEL NUTRIENT CYCLING
- 2:00 PM **Weitz, J.**: REVISITING PARADIGMS OF VIRUS INTERACTIONS WITH MICROBIAL HOSTS: PREDATORS OR PARTNERS?
- 2:15 PM **Gong, J.**; Su, L.; Zhang, X.: HIGH THROUGHPUT SEQUENCING REVEALS THE DOMINANCE OF PARASITIC APICOCOMPLEXA (PROTISTA, ALVEOLATA) IN BENTHIC MICROBIAL EUKARYOTIC COMMUNITIES OF A SEAGRASS ECOSYSTEM
- 2:30 PM **Vlok, M.**; Suttle, C.: SPATIAL AND TEMPORAL DIVERSITY IN FRESHWATER RNA VIRUSES IN THE CONTEXT OF ENVIRONMENTAL VARIABILITY
- 2:45 PM **Finke, J.**; Suttle, C.: ENVIRONMENTAL VARIABLES SHAPE CYANOMYOVIRUS COMMUNITIES
- 3:00 PM **Zhong, X.**; Ziegler, M.; Rowe, K.; Lopez-Sandoval, D.; Castillo De La Peña, Y.; Martine-Zayala, J.; Ashy, R.; Brüwer, J.; Dolors, V.; Augusti, S.; Voolstra, C.; Chan, A.; Suttle, C.: MEASURING RIBOSOME DECAY AND PRODUCTION TO DETERMINE TAXON-SPECIFIC MICROBIAL MORTALITY RATES
- 3:15 PM **Middelboe, M.**; Castillo, D.; Kalatzis, P.; Rørbo, N.: BACTERIOPHAGE-HOST INTERACTIONS AS DRIVERS OF GENOMIC AND PHENOTYPIC DIVERSIFICATION IN MARINE BACTERIA

SSO62 SOCIO-ECOLOGICAL COMPLEXITY IN REGULATED AQUATIC ECOSYSTEMS: TRANSFORMING POTENTIAL CONFLICTS INTO ACCEPTABLE TRADE-OFFS

- Chair(s): Katrine Turgeon, McGill University and Hydro-Quebec (katrine.turgeon@mail.mcgill.ca)
Alain Tremblay, Hydro-Quebec (tremblay.alain@hydro.qc.ca)
Francois Bilodeau, Hydro-Quebec (bilodeau.francois@hydro.qc.ca)
Carine Durocher, Hydro-Quebec (durocher.carine@hydro.qc.ca)
- Location: Esquimalt
- 4:00 PM **Turgeon, K.**; Tremblay, A.; Bilodeau, F.; Durocher, C.: SOCIO-ECOLOGICAL COMPLEXITY IN REGULATED AQUATIC ECOSYSTEMS: TRANSFORMING POTENTIAL CONFLICTS INTO ACCEPTABLE TRADE-OFFS^{††}
- 4:15 PM **Olden, J.**; Chen, W.: DESIGNING FLOWS TO RESOLVE HUMAN AND ENVIRONMENTAL WATER NEEDS IN A DAM-REGULATED RIVER
- 4:30 PM **Courcelles, R.**; Murdoch, J.: THE EASTMAIN-SARCELLE-RUPERT (ESR) COMPLEX, A CASE STUDY
- 4:45 PM **Egerrup, M.**: THE COMPLEXITY OF DECISION MAKING REGARDING WATER LEVEL MANAGEMENT IN GREAT LAKE, TASMANIA, AUSTRALIA DURING AN ENERGY SUPPLY CHALLENGE
- 5:00 PM **Turgeon, K.**; Turpin, C.; Gregory-Eaves, I.: DO DAMS AFFECT FISH BIODIVERSITY IN SIMILAR WAYS ACROSS BIOMES? A GLOBAL QUANTITATIVE SYNTHESIS
- 5:15 PM **Calder, R.**; Schartup, A.; Li, M.; Valberg, A.; Balcom, P.; Bromage, S.; Sunderland, E.: FORECASTING HUMAN HEALTH IMPACTS OF RESERVOIR CREATION AND FOOD CONSUMPTION ADVISORIES: AN INTEGRATED MODEL TO GUIDE HYDROELECTRIC DEVELOPMENT
- 5:30 PM **Bortolotti, L.**; Wrubleski, D.: RESTORING A LARGE FRESHWATER COASTAL WETLAND: INTEGRATING SCIENCE AND SOCIAL DIMENSIONS FOR EFFECTIVE CONSERVATION
- 5:45 PM **McClure, R.**; Lofton, M.; Kruger, K.; Chen, S.; Little, J.; Schreiber, M.; Carey, C.: HYPOLIMNETIC OXYGENATION INCREASES METHANE EBULLITION IN A EUTROPHIC DRINKING WATER RESERVOIR

SSO67 EFFECTS OF HUMAN ALTERATIONS ON HYDROLOGIC, ECOLOGICAL, AND BIOGEOCHEMICAL DYNAMICS OF AQUATIC SYSTEMS

- Chair(s): Emily B. Graham, Pacific Northwest National Laboratory (emily.graham@pnnl.gov)
James C. Stegen, Pacific Northwest National Laboratory (james.stegen@pnnl.gov)
Tim Scheibe, Pacific Northwest National Laboratory (tim.scheibe@pnnl.gov)
Miles E. Daniels, UCSC (miles.daniels@ucsc.edu)
Eric M. Danner, NOAA (eric.danner@noaa.gov)
- Location: Saanich 1&2
- 8:30 AM **Daniels, M.**; **Danner, E.**; John, S.: AN INTRODUCTION TO UPSTREAM AND DOWNSTREAM EFFECTS OF PHYSICAL BARRIERS ON RIVERS^{††}
- 8:45 AM **Krause, S.**: THE GOOD, THE BAD AND THE UGLY - INTERACTIONS BETWEEN PHYSICAL, BIOGEOCHEMICAL AND BIOLOGICAL DRIVERS OF NUTRIENT CYCLING AT ECOHYDROLOGICAL INTERFACES[†]

- 9:00 AM **Rothenberger, M.**; Hoyt, V.; Germanoski, D.; Wilson, J.; Demirhan, F.: A RISK-ASSESSMENT STUDY OF WATER QUALITY, BIOTA, AND LEGACY SEDIMENT PRIOR TO SMALL DAM REMOVAL IN A TRIBUTARY TO DELAWARE RIVER
- 9:15 AM **Scheibe, T.**; Hou, Z.; Ren, H.; Murray, C.; Arntzen, E.; Chen, X.; Stegen, J.; Huang, M.; Gomez-Velez, J.; Duan, Z.; Perkins, W.: INTEGRATING FIELD OBSERVATIONS AND HYDRODYNAMIC MODELS FOR HYDROMORPHIC CLASSIFICATION: A FRAMEWORK FOR SIMULATING HYDROLOGIC EXCHANGE FLOWS AND BIOGEOCHEMISTRY
- 9:30 AM **Arntzen, E.**; Geist, D.; Colotelo, A.; Klett, K.; Flahety, R.; Harnish, R.; Stertz, K.; Khan, F.; Vavrinc, J.; Dawley, E.; Zimmerman, S.; Tagestad, J.; Schwartz, D.: INFLUENCE OF THE HYPORHEIC ZONE ON SUPERSATURATED GAS EXPOSURE TO INCUBATING SALMONIDS IN REGULATED RIVER SYSTEMS
- 9:45 AM **Creed, R.**; Tornwall, B.; Cherry, R.: DAMS, DETRITIVORE DISTRIBUTION AND DECOMPOSITION
- 10:00 AM **Daniels, M.**; Martin, B.; John, S.: USING LINKED PHYSICAL AND BIOLOGICAL MODELS TO EVALUATE THE THERMAL IMPACTS OF RESERVOIR OPERATIONS ON THE SURVIVAL OF DOWNSTREAM SALMON EGGS
- 10:15 AM **Graham, E.**; Stegen, J.; Goldman, A.; Chen, X.; Huang, M.; Scheibe, T.: INTEGRATING HYDROLOGY, BIOGEOCHEMISTRY AND ECOLOGY WITHIN DYNAMIC RIVER CORRIDORS^{††}

SSO72 ACIDIFICATION, HYPOXIA AND CARBONATE CHEMISTRY IN MARINE AND FRESHWATER SYSTEMS

- Chair(s): Christopher Hunt, University of New Hampshire (chunt@unh.edu)
Joseph Salisbury, UNH (joe.salisbury@unh.edu)
Claudine Hauri, University of Alaska - Fairbanks (chauri@alaska.edu)
Steffen Assmann, Kongsberg Maritime Contros GmbH (Steffen.Assmann@km.kongsberg.com)
- Location: Saanich 1&2
- 2:00 PM **Greengrove, C.**; Masura, J.; Keil, R.: PRE- AND POST-"BLOB" OCEANOGRAPHIC CONDITIONS IN A WEST COAST VANCOUVER ISLAND FJORD - CLAYQUOT SOUND, BRITISH COLUMBIA, CANADA
- 2:15 PM **Ross, T.**; Du Preez, C.; Ianson, D.; Norgard, T.; Robert, M.: LONG-TERM VARIABILITY IN THE OXYGEN MINIMUM ZONE IN THE NORTH EAST PACIFIC AND POTENTIAL IMPACTS ON SEAMOUNT COMMUNITIES
- 2:30 PM **Jäntti, H.**; Aalto, S.; Paerl, H.: THE ROLE OF FERROUS IRON AND HYDROGEN SULPHIDE IN NITRATE REDUCTION IN A HYPOXIC COASTAL ESTUARY
- 2:45 PM **Evans, M.**; Anas, M.; Wissel, B.; Jeffries, D.; Cooke, C.: ATMOSPHERIC EMISSIONS FROM THE ATHABASCA OIL SANDS AND THEIR IMPACT ON BOREAL LAKES: SPATIAL AND TEMPORAL TRENDS
- 3:00 PM **Hunt, C.**; Salisbury, J.; Vandemark, D.; Mook, W.; Fietzek, P.; Sobin, J.; Abmann, S.; Oliver, T.; Young, C.; Melendez, M.: NEW ALKALINITY SENSOR TECHNOLOGY PROVIDES IMPROVED OCEAN ACIDIFICATION INSIGHTS: LOCAL, REGIONAL, AND INTERNATIONAL RESULTS
- 3:15 PM **Alendal, G.**; Oleynik, A.; Blaser, N.; Berntsen, J.; Gundersen, K.; Blackford, J.; Cazenave, P.; Douglas, C.; García-Ibáñez, M.; Omar, A.; Johannessen, T.: THE NEED FOR PROPER ENVIRONMENTAL STATISTICS TO DESIGN ADEQUATE MONITORING FOR OFFSHORE GEOLOGICAL STORAGE OF CO₂ PROJECTS.

[†] REPRESENTS INVITED PRESENTATIONS

SSO77 URBAN WATER SYSTEMS: ECOLOGICAL CONNECTIONS, ECOSYSTEM SERVICES, AND OPPORTUNITIES FOR MANAGEMENT INTERVENTION

Chair(s): Gregory O'Mullan, Queens College, City University of New York (gomullan@qc.cuny.edu)
 Andrew Juhl, LDEO- Columbia (andyjuhl@ldeo.columbia.edu)
 M. Elias Dueker, Bard College (edueker@bard.edu)
 Brett F. Branco, Brooklyn College (bbranco@brooklyn.cuny.edu)
 Anas Ghadouani, U Western Australia (anas.ghadouani@uwa.edu.au)
 Jennifer Cherrier, Brooklyn College-The City University of New York (jennifer.cherrier18@brooklyn.cuny.edu)
 Ana Mijic, Imperial College London (ana.mijic@imperial.ac.uk)
 Brianne Smith, Brooklyn College-CUNY (brianne.smith43@brooklyn.cuny)

Location: Sidney

- 4:00 PM **Coggins, L.**; Ghisalberti, M.; Ghadouani, A.: LIMNOLOGICAL ENGINEERING OF SMALL PONDS: THE IMPORTANCE OF BIOPHYSICAL COUPLING
- 4:15 PM **Agwu, O.**; Oluwagunke, T.; Ebohon, J.; Ariyo, A.; Yakub, A.: MICROBIOLOGICAL STUDIES OF WESTERN NIGERIAN COASTAL LAGOONS AND BEACHES: ATTEMPTS, CHALLENGES AND PROSPECTS
- 4:30 PM **Dueker, M.**; Azulai, D.; Lansbury, B.; Perron, G.: MICROBIAL EXCHANGE OF SEWAGE-ASSOCIATED BACTERIA AMONG SEDIMENT, WATER, AND AIR IN A FRESHWATER STREAM SYSTEM
- 4:45 PM **Juhl, A.**; O'Mullan, G.: PATTERNS OF SEDIMENT-ASSOCIATED FECAL INDICATOR BACTERIA IN AN URBAN ESTUARY: BENTHIC-PELAGIC COUPLING AND IMPLICATIONS FOR SHORELINE WATER QUALITY
- 5:00 PM **Myers, E.**; Juhl, A.: QUANTIFYING THE EFFECT OF PARTICLE ASSOCIATION ON THE PERSISTENCE AND TRANSPORT OF EXOGENOUS FECAL INDICATOR BACTERIA
- 5:15 PM **Cherrier, J.**; Klein, Y.; Link, H.; Pillich, J.; Yonzan, N.: ECOWEIR, A NOVEL HYBRID GREEN INFRASTRUCTURE SYSTEM FOR ADDRESSING URBAN STORMWATER CHALLENGES: A NEW YORK CITY HYPOTHETICAL CASE STUDY
- 5:30 PM **Matiassek, S.**; Vitamanti, R.; Meddings, C.: A SWALE PROMISE: POLLUTANT REMOVAL IN BIOSWALES
- 5:45 PM **Brock, J.**: ONE WATER IN ACTION: INTEGRATED WATER MANAGEMENT PROGRAMMING IN NEW YORK CITY

SSO80 FROM HEADWATERS TO COASTAL ZONES: EMERGING & LEGACY CONTAMINANTS IN AQUATIC ECOSYSTEMS AND THEIR EFFECTS

Chair(s): Karen Kidd, McMaster University (karenkidd@mcmaster.ca)
 Anders Goksoyr, University of Bergen (Anders.Goksoyr@uib.no)
 Dan Schlenk, University of California Riverside (dschlenk@ucr.edu)

Location: Colwood 1&2

- 4:00 PM **Hitchcock, J.**; Westhorpe, D.; Mitrovic, S.: MICROPLASTIC IN THE PLANKTON OF ESTUARIES ACROSS A GRADIENT OF HUMAN IMPACT

- 4:15 PM **Yokota, K.**; Mehrotra, M.; Hastings, C.; Davidson Parry, E.; Waterfield, H.: TYPES MATTER – ALTERATION OF LAKE PHYTOPLANKTON COMPOSITION BY MICROPLASTICS
- 4:30 PM **Meyer, M.**; Hampton, S.; Ozersky, T.; Woo, K.; Shchapov, K.; Snow, D.; Rosi, E.; Bondarenko, N.; Timofeev, M.; Zvereva, Y.; Karnaukhov, D.: EFFECTS OF LAKESIDE DEVELOPMENT ON NEARSHORE BENTHIC COMMUNITIES ALONG THE SOUTHWESTERN SHORE OF LAKE BAIKAL (SIBERIA)
- 4:45 PM **Kirk, J.**; De Silva, A.; Muir, D.; Lohmann, R.; Lehnher, I.; Spencer, C.; Gleason, A.; Wang, X.; Sett, A.; Pijogge, L.; Laing, R.: COMMUNITY BASED SEAWATER MONITORING FOR LEGACY AND EMERGING CONTAMINANT IN THE CANADIAN ARCTIC
- 5:00 PM **Hobbs, W.**: BIOACCUMULATION OF PCBs UNDER DIFFERENT RIVER FLOW REGIMES: IMPLICATIONS UNDER FUTURE CLIMATE SCENARIOS.
- 5:15 PM **Imbery, J.**; Buday, C.; Miliano, R.; Shang, D.; Round, J.; Kwok, H.; Purdey, L.; VanAggelen, G.; Helbing, C.: THE CAUDAL FIN IS A READILY-ACCESSIBLE, MINIMALLY-INVASIVE TISSUE FOR DETERMINING SUBLETHAL, DELETERIOUS EFFECTS OF OIL SPILLS
- 5:30 PM **Schlenk, D.**; Xu, E.: GENOMIC NETWORKS PREDICT APICAL IMPAIRMENT IN EARLY LIFE STAGES OF MAHI MAHI EXPOSED TO OIL
- 5:45 PM **Goksoyr, A.**; Alendal, G.; Aranguren-Abadia, L.; Arukwe, A.; Blaser, N.; Brun, M.; Celander, M.; Dale, K.; Dankel, D.; Denslow, N.; Eide, M.; Fallahi, S.; Frøysa, H.; Ghavidel, F.; Goksoyr, S.; Goldstone, J.: DCOD 1.0: DECODING THE SYSTEMS TOXICOLOGY OF ATLANTIC COD (GADUS MORHUA)

SSO90 FRONTIERS IN AQUATIC RESPIRATION

Chair(s): Matthew Cohen, University of Florida (mjc@ufl.edu)
 Robert Hall, Flathead Bio Station (bob.hall@flbs.umt.edu)
 Lily Kirk, University of Florida (lily33@ufl.edu)

Location: Colwood 1&2

- 2:00 PM **Arroita, M.**; Elozegi, A.; Hall, R.: CHANGING SOURCES OF DAILY RESPIRATION DURING 20 YEARS OF RIVERINE RECOVERY FOLLOWING SEWAGE ABATEMENT
- 2:15 PM **Münzner, K.**; Berggren, M.: IN-SITU PLANKTON COMMUNITY RESPIRATION MEASUREMENTS SHOW LOW RESPIRATORY QUOTIENTS IN A EUTROPHIC LAKE
- 2:30 PM **Hall, R.**: PRATICAL AND CONCEPTUAL CONSIDERATIONS WHEN MEASURING ECOSYSTEM RESPIRATION VIA DIEL OXYGEN BUDGETS
- 2:45 PM **Taub, F.**; McLaskey, A.; Tran, C.: RESPIRATION AND NET PHOTOSYNTHESIS IN AQUATIC CLOSED ECOLOGICAL SYSTEMS
- 3:00 PM **Cohen, M.**; Reaver, N.; Kirk, L.; Kaplan, D.: SENSITIVITY OF SPRING-FED RIVER RESPIRATION TO TEMPERATURE AND PRIMARY PRODUCTION
- 3:15 PM **Grace, M.**: THE INFLUENCE OF ENVIRONMENTAL WATER RELEASES ON ECOSYSTEM RESPIRATION ACROSS THE MURRAY-DARLING BASIN

TUESDAY ORALS

SSO02 IMPORTANCE OF WINTER AND SEASONALITY IN AQUATIC SYSTEMS

Chair(s): Stephen Powers, Washington State University (steve.powers@wsu.edu)
Diane McKnight, University of Colorado (diane.mcknight@colorado.edu)
Bailey McMeans, Univ of Toronto Mississauga (bailey.mcmeans@utoronto.ca)
Ted Ozersky, Univ Minnesota Duluth (tozersky@d.umn.edu)

Location: Lecture Theater

8:30 AM **Barrett, D.**; Wrona, F.; Prowse, T.: TRENDS IN UNDER-ICE PRODUCTIVITY IN SEASONALLY ICE-COVERED PONDS AS A RESULT OF SURFACE-COVER MANIPULATION

8:45 AM **Kouraev, A.**; Zakharova, E.; Rémy, F.; Kostianoy, A.; Shimaraev, M.; Zdorovenov, R.; Suknev, A.: GIANT ICE RINGS ON LAKES BAIKAL AND TELETSKOYE AND FIELD OBSERVATIONS OF LENS-LIKE EDDIES IN THE MIDDLE BAIKAL (2016-2017)

9:00 AM **Henderson, S.**: OBSERVATIONS OF VELOCITY, STRATIFICATION, AND TURBULENCE IN A SMALL LAKE: FLOWS BEFORE, DURING, AND AFTER ICE-OFF

9:15 AM **Kuzyk, Z.**; Eastwood, R.; Ehn, J.; Heath, J.; Arragutainaq, L.: THE ROLE OF RIVER INFLOW ON THE FORMATION OF WINTER MIXED LAYERS IN FLAW LEADS OF SE HUDSON BAY, CANADA, UNDER A CHANGING HYDROLOGIC REGIME

9:45 AM **Rue, G.**; McKnight, D.: SEASONALITY OF A SUB-ALPINE LAKE: UNDERSTANDING EVOLVING PHYSICAL AND BIOGEOCHEMICAL CONTROLS ON AQUATIC ECOSYSTEM STRUCTURE UNDER ICE COVER

10:00 AM **Gagne, K.**; Guerard, J.: SEASONALITY INFLUENCES ON NATURAL ORGANIC MATTER (NOM) IN A SUB-ARCTIC SYSTEM: WINTER IMPACTS ON NOM AND GEOCHEMICAL COMPOSITION

SSO16 CHANGE IN LAKES AND RIVERS AT REGIONAL, CONTINENTAL AND GLOBAL SCALES

Chair(s): Hilary Dugan, University of Wisconsin-Madison (hdugan@wisc.edu)
Luke Winslow, Rensselaer Polytechnic (lawinslow@gmail.com)
David Butman, University of Washington (dbutman@uw.edu)

Location: Lecture Theater

2:00 PM **Hanson, P.**; Khandelwal, A.; Karpatne, A.; Jia, X.; Dugan, H.; Read, J.; Kumar, V.: GLOBAL MONITORING SYSTEM LEADS TO NEW INSIGHTS FOR OUR CHANGING INLAND WATERS

2:15 PM **Herlihy, A.**; Stoddard, J.; Paulsen, S.; Pollard, A.: SPATIAL CHANGES IN THE ECOLOGICAL CONDITION OF LAKES ACROSS THE CONTERMINOUS UNITED STATES SINCE 2000

2:30 PM **Kellogg, D.**; Hollister, J.; Kreakie, B.; Shivers, S.; Herron, E.; Green, L.; Gold, A.: 25 YEARS OF WATER QUALITY CHANGE IN RHODE ISLAND LAKES AND PONDS

2:45 PM **Harms, T.**; Hood, J.; Scheuerell, M.: TROPHIC INTERACTIONS AND THE LONG-TERM STABILITY OF AQUATIC ECOSYSTEMS

3:00 PM **Kraemer, S.**; Barbosa da Costa, N.; Shapiro, B.; Walsh, D.: LAND USE STRUCTURES LAKE BACTERIAL COMMUNITIES ACROSS EASTERN CANADA

3:15 PM **Kromrey, N.**: CONTRIBUTION OF METALS AND SALTS TO MAINSTEM RIVERS IN ALBERTA'S SOUTH SASKATCHEWAN RIVER BASIN. A SYNOPTIC STUDY.

3:45 PM **Marcé, R.**; Light, T.; Catalán, N.; Obrador, B.; Gómez-Gener, L.; Koschorreck, M.; Borrego, C.; Arce, M.; Singer, G.; von Schiller, D.: GLOBAL DRYING OF LAKES AND THE FATE OF SEDIMENTARY CARBON[†]

SSO20 LIVING IN A VARIABLE WORLD: STUDYING THE ROLE AND CONSEQUENCE OF VARIANCE, COVARIANCE, AND EXTREMES IN AQUATIC ECOSYSTEMS

Chair(s): Alexander Wacker, University of Potsdam, Germany (wackera@uni-potsdam.de)
Sylvain Pincebourde, Université François Rabelais, CNRS, France (sylvain.pincebourde@univ-tours.fr)
Apostolos-Manuel Koussoroplis, Université Clermont Auvergne (a-manuel.koussoroplis@uca.fr)

Location: Colwood 1&2

8:30 AM **Helmuth, B.**; Barrett, T.; Choi, F.; Cryan, A.; Dong, Y.; Gouhier, T.; Müftü, S.; Rilov, G.: WEATHERING THE IMPACTS OF CLIMATE CHANGE: CAN MICROHABITATS SERVE AS "RESCUE SITES"?[†]

8:45 AM **Loken, L.**; Butitta, V.; Stanley, E.: SPATIAL HETEROGENEITY WITHIN LAKE ECOSYSTEMS: DOMINANT SCALES OF VARIATION FOR PHYSICAL AND BIOLOGICAL VARIABLES

9:00 AM **Gogina, M.**; **Zettler, M.**; Wählström, I.; Andersson, H.; Radke, H.; Kuznetsov, I.; MacKenzie, B.: MODELLING PAST AND FUTURE DISTRIBUTION OF A KEY BENTHIC ANIMAL, SADURIA ENTOMON, IN THE BALTIC SEA UNDER COMBINED CLIMATE CHANGE AND NUTRIENT LOADING SCENARIOS

9:15 AM **Ward, N.**; Rivas-Ubach, A.; Kuo, L.; Liu, Y.; Hill, V.; Zayas-Santiago, C.; Zimmerman, R.: EVALUATING THE IMPACTS OF OCEAN CARBONATION ON THE METABOLIC FUNCTION OF EELGRASS ZOSTERA MARINA USING A METABOLOMICS-BASED APPROACH

9:30 AM **Denny, M.**: SURVIVAL IN SPATIALLY VARIABLE THERMAL ENVIRONMENTS: CONSEQUENCES OF INDUCED THERMAL DEFENSE[†]

9:45 AM **Bernhardt, J.**; Sunday, J.; Thompson, P.; O'Connor, M.: NONLINEAR AVERAGING OF THERMAL EXPERIENCE PREDICTS POPULATION GROWTH RATES IN A THERMALLY VARIABLE ENVIRONMENT

10:00 AM **Koussoroplis, A.**; Pincebourde, S.; Wacker, A.: PHYSIOLOGICAL PERFORMANCE IN VARIABLE AND MULTIFACTORIAL ENVIRONMENTS

10:15 AM **Wacker, A.**; Raatz, M.; Schällicke, S.; Bach, M.; Koussoroplis, A.: RESOURCE LIMITATION AND CO-LIMITATION IN VARIABLE ENVIRONMENTS: TEMPORAL STRUCTURE OF DIET VARIABILITY AFFECTS CONSUMER PERFORMANCE

SSO21 THE DAMMING OF RIVERS AND LAKES AND ITS EFFECTS ON BIOGEOCHEMICAL CYCLES

Chair(s): Sebastian Sobek, Uppsala University (sebastian.sobek@ebc.uu.se)
Raquel Mendonca, UFJF (raquel.mendonca@ebc.uu.se)
Nathan Barros, UFJF (nathanobarros@gmail.com)
Yves Prairie, UQAM (prairie.yves@uqam.ca)
Annika Linkhorst, Uppsala University, Sweden (annika.linkhorst@ebc.uu.se)

Location: Carson Hall A

8:30 AM **Soued, C.**; Prairie, Y.: EXPLORING THE SOURCES SUSTAINING GREENHOUSE GAS EMISSIONS IN A PERMANENTLY STRATIFIED TROPICAL RESERVOIR

[†] REPRESENTS INVITED PRESENTATIONS

- 8:45 AM **Linkhorst, A.**; Paranaíba, J.; Hiller, C.; Millen Azevedo, G.; Barros, N.; Del Sontro, T.; Mendonça, R.; Sobek, S.: TEMPORAL VARIABILITY OF CH₄ AND CO₂ EMISSION IN TROPICAL RESERVOIRS ACROSS DIFFERENT TIMESCALES
- 9:00 AM **Grinham, A.**; Dunbabin, M.; Deering, N.; Albert, S.: DO SMALL WATER BODIES REPRESENT A GLOBALLY RELEVANT METHANE SOURCE?
- 9:15 AM **Li, Z.**: THE NET GHG EMISSIONS OF THREE GORGES RESERVOIR IN CHINA: THE CONTRIBUTION OF UNRELATED ANTHROPOGENIC SOURCES
- 9:30 AM **Isidorova, A.**; Grasset, C.; Mendonça, R.; Sobek, S.: LONG-TERM METHANE PRODUCTION IN ANOXIC SEDIMENT OF THREE BRAZILIAN RESERVOIRS
- 9:45 AM **Stratton, L.**; Haggerty, R.; Grant, G.: THE IMPORTANCE OF SEDIMENT HETEROGENEITY AND COARSE-GRAINED ORGANIC MATTER: TOWARD BETTER UNDERSTANDING OF CARBON BURIAL IN RESERVOIRS
- 10:00 AM **Liu, D.**; Duan, H.: VARIATIONS OF PARTICULATE ORGANIC CARBON IN THE CHANGJIANG RIVER AFTER REGULAR FUNCTIONING OF THE THREE GORGES DAM
- 10:15 AM Mendonça, R.; Isidorova, A.; Åkerman Fulford, E.; Linkhorst, A.; Ostrovsky, I.; **Sobek, S.**: SPATIALLY RESOLVED MAPPING OF SEDIMENT CARBON ACCUMULATION AND POTENTIAL METHANE EBULLITION HOT SPOTS IN A TROPICAL RESERVOIR
- 2:00 PM **Maavara, T.**; Akbarzadeh, Z.; Van Cappellen, P.: RIVER DAMMING DRIVES GLOBAL CHANGES TO COASTAL NUTRIENT LIMITATION
- 2:15 PM **Deemer, B.**; Stets, E.; Yackulic, C.: LAKE POWELL SIGNIFICANTLY REDUCES THE CONCENTRATION, SEASONAL VARIATION, AND DOWNSTREAM TRANSPORT OF MAJOR CATIONS AND ANIONS IN THE COLORADO RIVER
- 2:30 PM **Groeger, A.**; Bass, D.; Lopes, V.; Jimenez, O.: A FRESHENING OF THE COLORADO RIVER (TX) OVER THE LAST 35 YEARS WITH TWO EXTENDED HIGH SALINITY EVENTS

SSO29 ECOLOGICAL STOICHIOMETRY ACROSS SCALES

- Chair(s): Casey M. Godwin, University of Michigan (cgodwin@umich.edu)
Seth K. Thompson, University of Minnesota (thom2587@umn.edu)
Roxane Maranger, University of Montreal (r.maranger@umontreal.ca)
Stuart E. Jones, University of Notre Dame (sjones20@nd.edu)
James B. Cotner, University of Minnesota-Twin Cities (cotne002@umn.edu)
Thad Scott, Baylor University (Thad_Scott@baylor.edu)
- Location: Oak Bay 1&2
- 8:30 AM **Olofsson, M.**; Kourtchenko, O.; Zetsche, E.; Marchant, H.; Whitehouse, M.; Godhe, A.; Ploug, H.: DIVERSITY IN C:N RATIOS AT STRAIN AND SINGLE CELL LEVEL SINCE THE TIME OF REDFIELD
- 8:45 AM **Gerhard, M.**; Hillebrand, H.; Striebel, M.: PHYTOPLANKTON RESPONSES TO STOICHIOMETRY, NUTRIENT QUANTITY AND DIFFERENT CLIMATIC CONDITIONS
- 9:00 AM **Cagle, S.**; Roelke, D.: EFFECT OF NUTRIENT STOICHIOMETRY ON MODE OF ALLELOPATHY AND TOXICITY IN *PRYMNESIUM PARVUM*
- 9:15 AM **Scott, T.**; Osburn, F.; Wang, J.: THE LIGHT:NUTRIENT HYPOTHESIS AND STOICHIOMETRIC FLEXIBILITY IN DIAZOTROPHIC AND NON-DIAZOTROPHIC CYANOBACTERIA

- 9:45 AM **Cotner, J.**; M, C.: STORAGE OF PHOSPHORUS AS POLY-PHOSPHATE IN PLANKTONIC FRESHWATER MICROBES: IS IT A THING OR NOT?
- 10:00 AM **Jeyasingh, P.**; Minghetti, M.: WHAT IS THE GROWTH RELEVANCE OF IONOME-WIDE CELL QUOTAS IN LIEBIG'S LAW OF MINIMUM?
- 10:15 AM **Herstoff, E.**; Umarani, M.; Baines, S.: COPEPOD FORAGING IN PATCHY HABITATS: THE IMPORTANCE OF LIFE HISTORY AND PATCH STOICHIOMETRIC QUALITY
- 2:00 PM **El-Sabaawi, R.**; Durston, D.: WHEN DOES ORGANISMAL STOICHIOMETRY BECOME DECOUPLED FROM EXCRETION IN VERTEBRATES?
- 2:15 PM **Boersma, M.**; Wiltshire, K.; Philip, M.; Meunier, C.: DOES TEMPERATURE DRIVE CHANGES IN THRESHOLD ELEMENTAL RATIOS IN COPEPODS?
- 2:45 PM **Berthold, M.**; von Weber, M.; Schumann, R.: SPECIES COMPOSITION BIAS THE SIGNIFICANCE OF ELEMENTAL RATIOS IN COASTAL WATER BODIES OF THE SOUTHERN BALTIC SEA
- 3:00 PM **Walsh, J.**; Corman, J.; Munoz, S.: LONG-TERM CHANGES IN SEDIMENTATION REVEAL IMPORTANCE OF LAKE FOOD WEBS AND COUPLED BIOGEOCHEMICAL CYCLES FOR P RETENTION IN A EUTROPHIC CHAIN OF LAKES
- 3:15 PM **Loeks-Johnson, B.**; Cotner, J.: RAIN DROP, LAKE TOP, NITROGEN LEAVING LAKES NON-STOP
- 3:30 PM **Thompson, S.**; Cotner, J.: DISSOLVED ORGANIC MATTER STOICHIOMETRY PREDICTS PHOSPHORUS BIOAVAILABILITY IN TEMPERATE LAKES
- 3:45 PM **Noges, T.**: POST-SOCIALIST CHANGES IN NITROGEN AND PHOSPHORUS STOICHIOMETRY IN TWO LARGE NON-STRATIFIED LAKES AND THEIR CATCHMENT LOADS

SSO38 ENVIRONMENTAL FLOWS: RECENT SCIENCE, APPLICATIONS, AND POLICY IMPLEMENTATION

- Chair(s): Allen R. Curry, Canadian Rivers Institute, UNB (racurry@unb.ca)
Wendy Monk, CRI/ECCC (wmonk@unb.ca)
Dan Peters, ECCC/UVictoria (daniel.peters@canada.ca)
Andre St-Hilaire, INRS (andre.st-hilaire@ete.inrs.ca)
Tim Jardine, University of Saskatchewan (tim.jardine@usask.ca)
David Armanini, PROTHEA Group (david.armanini@gmail.com)
- Location: Carson Hall A
- 2:45 PM **Monk, W.**; Compson, Z.; Peters, D.; Baird, D.; Curry, A.: EXPLORING FLOW-ECOLOGY TOOLS FOR ENVIRONMENTAL FLOWS ASSESSMENT IN A CHANGING WORLD: A CASE STUDY FOR THE SAINT JOHN RIVER WATERSHED (NEW BRUNSWICK, CANADA)
- 3:00 PM **Watts, R.**; Dyer, F.; Frazier, P.; Gawne, B.; Marsh, P.; Ryder, D.; Southwell, M.; Wassens, S.; Webb, A.; Yi, Q.: IMPROVING OUTCOMES OF ENVIRONMENTAL FLOWS THROUGH ADAPTIVE MANAGEMENT: AUSTRALIA'S LONG-TERM INTERVENTION MONITORING PROJECT
- 3:15 PM **Brown, L.**; Gillespie, B.; Kay, P.: E-FLOWS IN THE UK UPLANDS: CUMULATIVE EFFECTS OF EXPERIMENTAL FLOW RELEASES ON INVERTEBRATE COMMUNITIES
- 3:30 PM **Wegscheider, B.**; Linnansaari, T.; Ndong, M.; Haralampides, K.; St-Hilaire, A.; Schneider, M.; Curry, A.: SPATIO-TEMPORAL CHANGES IN HABITAT CONDITIONS DOWNSTREAM THE MACTAQUAC GENERATING STATION USING A MULTI-SCALAR HABITAT MODELLING APPROACH

3:45 PM **Smokorowski, K.**; Timusk, E.: LONG TERM ECOLOGICAL RESPONSE TO EXPERIMENTAL HYDROPEAKING

SSO41 HOW MICROBIAL DISPERSAL AND SHAPE DETERMINE LOCAL STRUCTURE AND FUNCTIONING OF AQUATIC ASSEMBLAGES

Chair(s): Clara Ruiz-González, Instituto de Ciencias del Mar (ICM-CSIC) (clara.ruiz.glez@gmail.com)
 Jérôme Comte, Institut National de la Recherche Scientifique (INRS-ETE) (comte.j@gmail.com)
 Peter Hannes, École Polytechnique Fédérale de Lausanne (hannes.peter@epfl.ch)
 Stuart Humphries, University of Lincoln, UK (shumphries@lincoln.ac.uk)
 Lee Karp-Boss, University of Maine (lee.karp-boss@maine.edu)
 Evan Variano, UC Berkeley (variano@berkeley.edu)

Location: Sidney

2:00 PM **Crump, B.**; Kling, G.: DISPERSAL OF MICROBES IN AQUATIC SYSTEMS: A DECADE OF RESEARCH USING HIGH-THROUGHPUT DNA SEQUENCING[†]

2:30 PM **Wisnoski, N.**; Muscarella, M.; Lennon, J.: DISPERSAL AND DORMANCY ACROSS ECOSYSTEM BOUNDARIES: BACTERIAL DIVERSITY AND FUNCTION ALONG A RESERVOIR TRANSECT

2:45 PM **Ruiz-González, C.**; Niño-García, J.; Hotchkiss, E.; del Giorgio, P.: DISPERSAL ACROSS THE LANDSCAPE SHAPES THE RARE BIOSPHERE OF FRESHWATER BACTERIOPLANKTON COMMUNITIES

3:00 PM **Melo, M.**; Bertilsson, S.; Sarmiento, H.: TRACKING THE SOURCES OF BACTERIA IN AN AMAZONIAN FLOODPLAIN SYSTEM

3:15 PM **Comte, J.**; Berga, M.; Severin, I.; Logue, J.; Lindström, E.: CONTRIBUTION OF DIFFERENT BACTERIAL DISPERSAL SOURCES TO LAKES - POPULATION AND COMMUNITY EFFECTS IN DIFFERENT SEASONS

3:30 PM **Pedrés-Alió, C.**; Arroyo, J.; Díez, B.; Uribe, L.; Marquet, P.: MICROBIAL DIVERSITY IN HOT SPRING MICROBIAL MAT COMMUNITIES: FROM THE TROPICS TO ANTARCTICA

3:45 PM **Cavaco, M.**; St.Louis, V.; Engel, K.; St.Pierre, K.; Stibal, M.; Neufeld, J.: INFLUENCE OF GLACIAL INPUT ON RESIDENT FRESHWATER MICROBIAL COMMUNITY STRUCTURE IN THE LAKE HAZEN WATERSHED

SSO51 CYANOBACTERIAL ECOLOGY AS A BASIS FOR THEIR MITIGATION AND CONTROL UNDER GLOBAL CHANGE

Chair(s): Bastiaan W. Ibelings, University of Geneva (bastiaan.ibelings@unige.ch)
 Petra M. Visser, University of Amsterdam (p.m.visser@uva.nl)
 Cayelan C. Carey, Virginia Tech (cayelan@vt.edu)
 Hans W. Pearl, Univ North Carolina (hans_paerl@unc.edu)

Location: Carson Hall C

8:30 AM **Burford, M.**; Willis, A.; Xiao, M.; Chuang, A.: COMBINING MOLECULAR, PHYSIOLOGICAL AND ECOLOGICAL STUDIES TO DETERMINE FACTORS AFFECTING CYANOBACTERIAL TOXIN LEVELS IN WATER RESERVOIRS.

8:45 AM **Mantzouki, E.**: TEMPERATURE EFFECTS EXPLAIN CONTINENTAL SCALE DISTRIBUTION OF CYANOBACTERIAL TOXINS

9:00 AM **Hooker, K.**; Li, C.; Zhao, D.; Krumholz, L.; Hambright, K.: GLOBAL SURVEY OF MICROCYSTIS BLOOM INTERACTOMES

9:15 AM **Dyer, S.**; Peterson, T.; Needoba, J.: A BLOOM SNAPSHOT: USING HIGH-RESOLUTION PRESSURE NEPHELOMETRY TO DETERMINE CYANOBACTERIA SPECIES COMPOSITION

9:30 AM **Zhu, M.**; Zhu, G.; Paerl, H.; Xu, H.: ANNUAL BLOOM-FORMING CYANOBACTERIA DYNAMICS AND THEIR DRIVING FACTORS REVEALED VIA DAILY OBSERVATION IN LAKE TAIHU

9:45 AM **Znavor, P.**; Nedoma, J.; Rychtecky, P.; Hejzlar, J.; Geris, R.; Kosour, D.: EFFECTS OF WEATHER AND RESOURCE LIMITATION ON THE OUTCOME OF COMPETITION BETWEEN DIATOMS AND CYANOBACTERIA IN MAN-MADE RESERVOIRS

10:00 AM **Lofton, M.**; Howard, D.; McClure, R.; Carey, C.: WHOLE-ECOSYSTEM MIXING EXPERIMENTS SUGGEST STORMS INCREASE CYANOBACTERIAL RECRUITMENT FROM THE SEDIMENTS TO THE WATER COLUMN

2:15 PM **Peterson, T.**; Tausz, C.; Dyer, S.; Needoba, J.: WATER RESIDENCE TIME PREDICTS CYANOBACTERIA BLOOM DEVELOPMENT IN A LARGE, MESOTROPHIC RIVER

2:30 PM **Ma, J.**: COMPARISON OF THE GROWTH AND DEATH (DECAY) RATES OF CYANOBACTERIA MICROCYSTIS SPP. AT DIFFERENT TEMPERATURES AND THE IMPACT OF NUTRIENTS

2:45 PM **Zhu, G.**; Qin, B.; Zhang, Y.; Xu, H.; Zhu, M.; Yang, H.; Li, K.; Min, S.; Shen, R.; Zhong, C.: VARIATION AND DRIVING FACTORS OF NUTRIENTS AND CHLOROPHYLL CONCENTRATIONS IN NORTHERN REGION OF LAKE TAIHU, CHINA DURING 2005 TO 2017

3:00 PM **Qin, B.**; Zhu, G.; Zhang, Y.; Xu, H.; Deng, J.: CLIMATE WARMING AND NUTRIENT ENRICHMENT MAKING A RECORD-SETTING OF CYANOBACTERIAL BLOOM IN LAKE TAIHU IN 2017, CHINA

3:15 PM **Paerl, H.**; Xu, H.; Zhu, G.; Hall, N.; Li, Y.; Otten, T.; Qin, B.: MITIGATING TOXIC CYANOBACTERIAL BLOOMS ALONG THE FRESHWATER TO MARINE CONTINUUM: FACING DYNAMIC ANTHROPOGENIC AND CLIMATIC PRESSURES

3:30 PM **Visser, P.**; Weenink, E.; Piel, T.; Sandrini, G.; van Herk, M.; Léon Morales-Grooters, M.; Slot, P.; Schuurmans, M.; Matthijs, H.; Huisman, J.: MITIGATION OF CYANOBACTERIA IN LAKES BY DILUTE HYDROGEN PEROXIDE

3:45 PM **Xu, H.**: THE ROLES OF EXTERNAL AND INTERNAL NUTRIENT SOURCES IN HARMFUL CYANOBACTERIAL BLOOM DYNAMICS OF LAKE TAIHU, CHINA: IMPLICATIONS FOR NUTRIENT MANAGEMENT

SSO53 LINKING METAGENOMICS TO AQUATIC MICROBIAL ECOLOGY AND BIOGEOCHEMICAL CYCLES

Chair(s): Hans-Peter Grossart, Leibniz Institute for Freshwater Ecology and Inland Fisheries (hgrossart@igb-berlin.de)
 David Walsh, Concordia University (david.walsh@concordia.ca)
 Ramon Massana, Institut de Ciències del Mar-CMIMA CSIC (ramonm@icm.csic.es)
 Rebecca Vega Thurber, Oregon State University (Rebecca.Vega-Thurber@oregonstate.edu)
 Marguerite Xenopoulos, Trent University (mxenopoulos@trentu.ca)

Location: Saanich 1&2

8:30 AM **Fuhrman, J.**; Ignacio Espinoza, J.; Yeh, Y.; Needham, D.; Berdjeb, L.; Ahlgren, N.: INTEGRATING PROKARYOTIC, VIRAL, AND PROTISTAN PROCESSES ON SCALES RANGING FROM DAYS TO YEARS VIA 'OMICS AND OTHER APPROACHES

[†] REPRESENTS INVITED PRESENTATIONS

- 8:45 AM **Jürgens, K.**; Schott, T.; Beier, S.; Herlemann, D.; Meeske, C.; Dellwig, O.; Schulz-Vogt, H.; Pollehne, F.: PROKARYOTIC ACTIVITIES IN THE REDOXCLINE OF THE BLACK SEA AS REVEALED BY A METATRANSCRIPTOMIC ANALYSIS
- 9:00 AM **Cornejo-Castillo, F.**; Ruiz-González, C.; Zehr, J.; Acinas, S.: A METAGENOMIC EXPLORATION OF NITROGEN-FIXING MICROORGANISMS UNVEILS NOVEL DIVERSITY ACROSS THE GLOBAL OCEAN
- 9:15 AM **Sebastián, M.**; Gomez-Letona, M.; Sanchez, P.; Ortega-Retuerta, E.; Alvarez-Salgado, X.; Aristegui, J.; Gasol, J.: PROKARYOTIC LIFE IN THE MEDITERRANEAN DARK REALM
- 9:30 AM **Walsh, D.**; Colatriano, D.; Patricia, T.; Guéguen, C.; Williams, W.; Lovejoy, C.: METAGENOMIC EVIDENCE FOR THE DEGRADATION OF TERRESTRIAL ORGANIC MATTER BY ARCTIC OCEAN BACTERIA
- 9:45 AM **Lovejoy, C.**; Rautio, M.; Potvin, M.; Vincent, W.: MICROBIAL BIODIVERSITY PATTERNS IN THE CANADIAN HIGH ARCTIC LAKE-OCEAN CONTINUUM AS SENTINELS OF ENVIRONMENTAL CHANGE
- 10:00 AM **Peura, S.**; Fernandez Vidal, L.; Bertilsson, S.: METAGENOMIC WINDOW TO NON-CYANOBACTERIAL NITROGEN FIXATION IN PERMAFROST THAW PONDS
- 10:15 AM **Wu, Q.**: RESPONSE OF MICROBIAL COMPOSITIONS AND FUNCTIONAL POTENTIALS TO PH CHANGES IN FRESHWATER LAKES
- 2:00 PM **Okie, J.**; Poret-Peterson, A.; Quick, Z.; Richter, A.; Alcaraz, L.; Eguiarte, L.; Siefert, J.; Souza, V.; Dupont, C.; **Elser, J.**: METAGENOMIC SIGNATURES OF MICROBIAL GROWTH AND TROPHIC STRATEGY IN A REPLICATED WHOLE-ECOSYSTEM NUTRIENT ENRICHMENT EXPERIMENT
- 2:15 PM **Ouyang, L.**; McKew, B.; Shen, L.; Trimmer, M.: CO-OCCURRENCE OF AEROBIC AMMONIUM OXIDATION, ANAEROBIC AMMONIUM OXIDATION AND NITRITE OXIDATION IN OXIC RIVERBEDS AND THEIR INFLUENCE ON NET NITRIFICATION EFFICIENCY
- 2:30 PM **LeBrun, E.**; King, R.; Back, J.; Kang, S.: A METAGENOME-BASED INVESTIGATION OF GENE RELATIONSHIPS FOR NON-SUBSTRATE ASSOCIATED MICROBIAL PHOSPHORUS CYCLING IN THE WATER COLUMN OF STREAMS AND RIVERS
- 2:45 PM **Xenopoulos, M.**; Fasching, C.; Akotoye, C.; Bizic, M.; Fonvielle, J.; Ionescu, D.; Zoccarato, L.; Walsh, D.; Grossart, H.: LINKING FUNCTIONS TO NUTRIENTS AND DISSOLVED ORGANIC MATTER QUALITY THROUGH INTEGRATED METAGENOMICS AND MULTIVARIATE ANALYSIS OF RIVER MICROBIAL COMMUNITIES
- 3:00 PM **Mehrshad, M.**; Salcher, M.; Okazaki, Y.; Nakano, S.; Šimek, K.; Andrei, A.; Ghai, R.: HIDDEN IN PLAIN SIGHT - HIGHLY ABUNDANT AND DIVERSE PLANKTONIC FRESHWATER CHLOROFLEXI
- 3:15 PM **Newton, R.**; Podowski, J.; Paver, S.; Coleman, M.: COSMOPOLITAN FRESHWATER TAXA EXHIBIT DIFFERENTIAL ABUNDANCE PATTERNS ACROSS THE LAURENTIAN GREAT LAKES
- 3:30 PM **Shi, X.**: EUKARYOTIC PICOPHYTOPLANKTON DIVERSITY IN FRESHWATER LAKE REVEALED BY FLOW CYTOMETRIC SORTING AND HIGH-THROUGHPUT SEQUENCING
- 3:45 PM **Massana, R.**; Labarre, A.; Obiol, A.; Logares, R.: ASSESSMENT OF THE DIVERSITY AND BACTERIVORY-RELATED GENES OF MARINE HETEROTROPHIC FLAGELLATES USING MULTOMIC

SSO63 UNDERSTANDING THE MERCURY CYCLE IN A CHANGING WORLD: LINKING TERRESTRIAL AND AQUATIC SYSTEMS

Chair(s): Andrea G. Bravo, Institute of Environmental Assessment and Water Research (IDAEA), Spanish National Research Council (CSIC) (jandriugarcia@gmail.com)
 Brian Branfireun, Western University (bbranfir@uwo.ca)
 Erik Bjorn, Umea University (erik.bjorn@umu.se)
 Lars-Eric Heimbürger, Aix Marseille Université, CNRS/INSU, Mediterranean Inst. of Oceanography (MIO) (lars-eric.heimburger@mio.osupytheas.fr)

Location: Esquimalt

- 8:30 AM **Sunderland, E.**: THE GLOBAL MERCURY CYCLE IN AN ERA OF ENVIRONMENTAL CHANGE[†]
- 9:00 AM **Bieser, J.**; Daewel, U.; Schrum, C.: A NOVEL COMPREHENSIVE 3D MODEL FOR MERCURY TRANSPORT, TRANSFORMATION, AND BIO-ACCUMULATION.
- 9:30 AM **Wang, K.**; Munson, K.; Beaupré-Laperrière, A.; Mucci, A.; Macdonald, R.; Wang, F.: METHYLMERCURY DISTRIBUTION IN THE SUB-SURFACE SEAWATER EXPLAINS THE SPATIAL TREND OF BIOTIC MERCURY IN THE CANADIAN ARCTIC OCEAN
- 9:45 AM **Errera, R.**; Bargu, S.; Weakley, T.; Finkelstein, M.: IMPACT OF OCEAN ACIDIFICATION ON THE GROWTH RATE AND METHYLMERCURY ACCUMULATION IN DITYLUM BRIGHTWELLII AND THALASSIOSIRA OCEANICA
- 10:00 AM **Seelen, E.**; Taylor, V.; Buckman, K.; Balcom, P.; Mazrui, N.; DiMento, B.; Curtis, A.; Chen, C.; Mason, R.: A MULTI-ESTUARY APPROACH TO UNDERSTANDING SEDIMENTS AS A SOURCE OF METHYLMERCURY TO THE PELAGIC ECOSYSTEM
- 10:15 AM **Schartup, A.**; Thackray, C.; Sunderland, E.: QUANTIFYING CLIMATE INDUCED CHANGES IN DISSOLVED ORGANIC MATTER AND NUTRIENTS ON METHYLMERCURY BIOACCUMULATION[†]
- 2:00 PM **Taylor, V.**; Buckman, K.; Chen, C.; Cottingham, K.: EFFECTS OF DISSOLVED ORGANIC CARBON ON METHYLMERCURY LOADING AND BIOAVAILABILITY IN STREAM ECOSYSTEMS
- 2:15 PM **Burke, S.**; Zimmerman, C.; Swanson, H.: DRIVERS OF MERCURY BIOACCUMULATION IN THERMOKARST LAKE FOOD WEBS OF THE ARCTIC COASTAL PLAIN OF ALASKA
- 2:30 PM **Varty, S.**; Lehnher, I.; Kirk, J.; St. Pierre, K.; Wisniewski, V.: METHYLMERCURY CYCLING AT THE AQUATIC-TERRESTRIAL INTERFACE: EXAMINING SPATIAL AND SEASONAL VARIATION IN A HIGH ARCTIC FRESHWATER SUB-CATCHMENT
- 2:45 PM **Razavi, R.**; Williams, C.; Massey, T.; Cleckner, L.: DRIVERS OF ZOOPLANKTON METHYLMERCURY BIOACCUMULATION IN THE FINGER LAKES, NEW YORK
- 3:00 PM **Cooke, C.**; Donadt, C.; Drevnick, P.; Kerr, J.; Laceby, P.; Poesch, M.: SEDIMENT SUPPLY AND HIGH MERCURY AND METHYLMERCURY CONCENTRATIONS IN THE RED DEER RIVER WATERSHED (ALBERTA, CANADA)
- 3:15 PM **Bilodeau, F.**; Tremblay, A.: BIOGEOCHEMICAL CYCLE OF MERCURY IN BOREAL RESERVOIRS IN QUÉBEC, CANADA: FROM FLOODED LAND TO FOOD CHAIN
- 3:45 PM **Bravo, A.**; Zopfi, J.; Bouchet, S.; Amouroux, D.; Buck, M.; Dominik, J.; Cosio, C.: METHYLMERCURY FORMATION UNDER FERRUGINOUS CONDITIONS: BIOLOGICAL AND CHEMICAL INTERPLAYS

[†] REPRESENTS TUTORIAL PRESENTATIONS

SSO82 EMERGING MODELS OF TRACE METAL BIOAVAILABILITY TO AQUATIC ORGANISMS

- Chair(s): David Semeniuk, Minnow Environmental Inc. (dsemeniuk@minnow.ca)
Randle Bundy, University of Washington (rbundy@uw.edu)
Anne Cremazy, U. British Columbia (acremazy@zoology.ubc.ca)
- Location: Colwood 1&2
- 2:00 PM **Campbell, P.**; Liu, F.; Fortin, C.: CHEMICAL CONDITIONS IN THE BOUNDARY LAYER SURROUNDING PHYTOPLANKTON CELLS MODIFY CADMIUM BIOAVAILABILITY
- 2:15 PM **Lopez Sandoval, D.**; Carrillo de Albornoz, P.; Rowe, K.; Duarte, C.; Agusti, S.: PLANKTONIC METABOLISM AND PRIMARY PRODUCTIVITY IN A FAST WARMING TROPICAL ECOSYSTEM
- 2:30 PM **Sprong, P.**; Neuhaus, S.; Ludwischowski, K.; Käse, L.; Fofonova, V.; Bracher, A.; Zielinski, O.; Wiltshire, K.; Metfies, K.: INFLUENCE OF HYDROGRAPHY ON PROTIST COMMUNITY AT GEOGRAPHICAL DIFFERENT STATIONS IN THE NORTH SEA USING ILLUMINA MISEQ SEQUENCING
- 2:45 PM **Molina, V.**; robbins-Wamsley, S.; Riley, S.; First, M.; Drake, L.: USING A CELL PROLIFERATION ASSAY TO EXAMINE DNA CONCENTRATIONS IN PHYTOPLANKTON TREATED BY UV AND CHLORINE

SSO84 BEYOND NATURAL VARIABILITY: CUMULATIVE EFFECTS AND TIPPING POINTS IN AQUATIC SYSTEMS

- Chair(s): Edward J Gregr, University of British Columbia (ejgregr@gmail.com)
Kai Chan, University of British Columbia (kaichan@ires.ubc.ca)
Rebecca Martone, Province of BC (rebecca.martone@gmail.com)
Cathryn Clarke Murray, Fisheries and Oceans Canada (Cathryn.Murray@dfo-mpo.gc.ca)
- Location: Sidney
- 8:30 AM **Ives, S.**; May, L.; Burthe, S.; Heal, K.; Elliott, A.; Spears, B.: ECOLOGICAL PROCESSES AND TIPPING POINTS IN SHALLOW LAKES: WHAT, WHEN AND WHY?
- 8:45 AM **Martone, R.**; Oldford, G.; McDougall, C.; Robb, C.; Rubidge, E.; Gale, K.; Chow, A.; Cristiani, J.; Chaves, L.; Mahaux, P.: ACCOUNTING FOR POTENTIAL CUMULATIVE EFFECTS WHEN ASSESSING THE CONTRIBUTION OF PROTECTED AREAS TOWARDS MEETING MPA NETWORK ECOLOGICAL OBJECTIVES
- 9:00 AM **Hughes, B.**; Lummis, S.; Kroeker, K.; Anderson, S.: RESILIENCE OF A SEAGRASS SYSTEM EXPOSED TO OCEAN ACIDIFICATION AND NUTRIENT ENRICHMENT
- 9:15 AM **Chan, K.**; Singh, G.; Sinner, J.; Kandlikar, M.; Ellis, J.; Halpern, B.; Satterfield, T.: MECHANISMS AND RISK OF CUMULATIVE IMPACTS TO COASTAL ECOSYSTEM SERVICES
- 9:30 AM **Trifonova, N.**: DETECTING TIPPING POINTS TO IMPROVE GULF OF MEXICO RESTORATION AND MANAGEMENT
- 9:45 AM **Stock, A.**; Haupt, A.; Mach, M.; Micheli, F.: LINKING COASTAL ECOLOGICAL INDICATORS AND MULTIPLE STRESSORS WITH STATISTICAL AND MACHINE LEARNING METHODS

- 10:00 AM **Gregr, E.**; Gosselin, E.; Sanchez, C.; Chan, K.: USING PATHWAYS OF EFFECTS TO LINK BRITISH COLUMBIA'S DEVELOPMENT FOOTPRINT WITH ITS CUMULATIVE IMPACT ON RAINBOW TROUT

SS100 FOOD WEB INTERACTIONS AND TROPHIC LINKAGES

- Chair(s): Amanda Kahn, University of Alberta (kahn@ualberta.ca)
Sally P. Leys, University of Alberta (sleys@ualberta.ca)
- Location: Carson Hall B
- 8:30 AM **Eklöv, P.**; Marklund, M.; Svanbäck, R.: HABITAT COUPLING MEDIATES TROPHIC CASCADES IN AN AQUATIC COMMUNITY
- 8:45 AM **Pérez-Fuentetaja, A.**; Clapsadl, M.; Snyder, R.; Cochran, J.: MIGRATORY FORAGE FISH ARE A STABILIZING FORCE SUPPORTING ECOSYSTEM RESILIENCE: THE EMERALD SHINER IN THE NIAGARA RIVER
- 9:00 AM **Alirangues Núñez, M.**; Hussner, A.; Mauersberger, R.; Vasters, K.; Brämick, U.; Hühn, D.; Hilt, S.: THE ROLE OF PERIPHYTON IN DECLINING CHAROPHYTE COMMUNITIES IN OLIGO- AND MESOTROPHIC TEMPERATE HARDWATER LAKES
- 9:15 AM **Ogorelec, Ž.**; Straile, D.: EFFECTS OF INVASIVE THREE SPINED STICKLEBACK (GASTEROSTEUS ACULEATUS) ON ZOOPLANKTON COMMUNITY STRUCTURE AND PHENOLOGY IN LAKE CONSTANCE
- 9:30 AM **Bourne, V.**; Bailey, J.; Somers, K.; Edwards, B.; Gunn, J.; Todd, A.: SEASONAL VARIABILITY OF STREAM BENTHIC MACROINVERTABRATE COMMUNITIES IN THE RING OF FIRE REGION OF NORTHERN ONTARIO: IMPLICATIONS FOR BIOASSESSMENT
- 9:45 AM **Yeung, A.**; Musetta-Lambert, J.; Kreutzweiser, D.; Sibley, P.; Richardson, J.: RELATIONS OF STREAM LITTER BREAKDOWN WITH INTERANNUAL DIFFERENCES IN DISCHARGE: BIOASSESSMENT IMPLICATIONS
- 2:00 PM **Lopez-Sepulcre, A.**; Bruneaux, M.; Collins, S.; El-Sabaawi, R.; Flecker, A.; Thomas, S.: A NOVEL STATISTICAL METHOD TO RECONSTRUCT QUANTITATIVE FOOD WEBS FROM TRACER ADDITION EXPERIMENTS
- 2:15 PM **Horn, S.**; Asmus, R.; Asmus, H.: THE INFLUENCE OF RIVERINE INPUT ON COASTAL FOOD WEBS
- 2:30 PM **Abbott Wilkins, R.**; Matthews, B.; Mazumder, A.; Hairston, N.: CALANOID COPEPOD OMNIVORY AMONG NORTH AMERICAN LAKES
- 2:45 PM **Stasko, A.**; Power, M.; Swanson, H.; Bluhm, B.; Reist, J.; Majewski, A.; Archambault, P.; Michel, C.; Atchison, S.; MacPhee, S.; Eert, J.: COMBINING SIA AND BIOLOGICAL TRAITS TO EXAMINE BENTHIC-PELAGIC FOOD WEB COUPLING IN THE OFFSHORE BEAUFORT SEA
- 3:00 PM **Grujić, V.**; Mukherjee, I.; Salcher, M.; Shabarova, T.; Nedoma, J.; Piewosz, K.; Šimek, K.: "TO EAT OR NOT TO EAT": WHICH FRESHWATER PROTISTS ARE MAJOR BACTERIVORES DURING SPRING?
- 3:15 PM **Hall, S.**; Slijivar, M.; Duffy, M.; Caceres, C.: SPREAD OF EPIDEMICS BY PREYING ON THE YOUNG: DISEASE IN STAGE-STRUCTURED PLANKTONIC FOOD WEBS

TUESDAY POSTERS

All poster sessions are held in the VCC Pavilion area.

SSO02 IMPORTANCE OF WINTER AND SEASONALITY IN AQUATIC SYSTEMS

- 4 **Katz, S.:** A BETTER CLASSIFICATION OF OCEAN BIOMES
- 5 **Cariani, Z.;** Morgan-Kiss, R.: ANTARCTIC PHOTOAUTOTROPHS AND MIXOTROPHS EXHIBIT DIFFERENTIAL STRATEGIES FOR SURVIVING MIMICKED POLAR NIGHT
- 6 **Tran, P.;** Lawson, C.; Loken, L.; Stanley, E.; McMahon, K.; Walsh, D.: NITROGEN CYCLING BACTERIA IN LAKE MENDOTA UNDER ICE
- 7 **Ozersky, T.;** Hampton, S.; Labou, S.; Powers, S.; Shchapov, K.; Stockwell, J.: PREDICTORS OF PLANKTON ABUNDANCE AND COMMUNITY COMPOSITION DIFFER BETWEEN WINTER AND SUMMER IN SEASONALLY FROZEN LAKES

SSO06 PREPARING FOR 21ST CENTURY CHALLENGES IN AQUATIC SCIENCES

- 10 **Meira, B.;** Toha, F.; Nunes, M.; Santos, G.; McGlasson, A.; Green, S.; Frost, S.; Ogorek, K.; Dungey, K.; Lemke, M.; Velho, F.: ASSESSMENT OF CONSERVATION MANAGEMENT STRATEGIES FOR TWO RIVER FLOODPLAIN SYSTEMS: RIO PARANÁ, BRAZIL, AND ILLINOIS RIVER, USA
- 11 **Sauer, J.;** Grimm, N.; Barbosa, O.; Cook, E.: SEASONAL CHANGES IN THE FLOOD MITIGATION SERVICES OF URBAN WETLANDS IN VALDIVIA DE CHILE AND THE IMPACTS OF CLIMATE CHANGE ON FUTURE FLOOD RISK
- 12 **Lindstrom, Z.;** Youngbull, C.; Elser, J.: SENSORSPACE: AN NSF SUPPORTED FULL-SERVICE INSTRUMENT PRODUCTION FACILITY FOR ECOLOGISTS

SSO11 THE BIOGEOCHEMISTRY OF ORGANIC MATTER: CUTTING ACROSS ECOSYSTEM BOUNDARIES AND AQUATIC GRADIENTS

- 21 **Koziorowska, K.;** Kuliński, K.; Pempkowiak, J.: BURIAL RATE ESTIMATIONS OF SEDIMENTARY ORGANIC AND INORGANIC CARBON IN TWO HIGH ARCTIC FJORDS
- 22 **Fox, C.;** Abdulla, H.; Burdige, D.; Lewicki, J.; Komada, T.: COMPOSITION AND REACTIVITY OF UNFRACTIONATED DISSOLVED ORGANIC MATTER IN ANAEROBIC MARINE SEDIMENTS ANALYZED BY 1H NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY
- 23 **Kim, S.;** Kim, J.; Gal, .; Hwang, J.; Shin, K.: FLUXES AND DISTRIBUTIONS OF PLANT WAX N-ALKANES IN ULLEUNG BASIN (EAST SEA)
- 24 **Tremblay, L.;** Abdou Ben Ali, D.: HPLC-SEC-FTIR CHARACTERIZATION OF THE DOM PRODUCED BY THE MICROBIAL CARBON PUMP
- 25 **Costa, M.;** Salinas-de-León, P.; Aburto-Oropeza, O.: MANGROVE BLUE CARBON ON THE ROCKY COAST OF THE GALAPAGOS ARCHIPELAGO
- 26 **Medeiros, P.;** Letourneau, M.; Hopkinson, B.; Fitt, W.: MOLECULAR COMPOSITION AND BIODEGRADATION OF SPONGE EXHALENT DISSOLVED ORGANIC MATTER
- 27 **Tittel, J.;** Büttner, O.; Rinke, K.: RADIOCARBON MEASUREMENTS DURING AN EXTREME FLOOD EVENT AND DRY-WEATHER LOW FLOW IN THE ELBE RIVER, GERMANY

- 28 **Chen, C.;** Gong, G.: SCALING EFFECTS OF THE CHANGJIANG (YANGTZE) RIVER PLUME MAGNITUDE ON ORGANIC CARBON CONSUMPTION IN THE EAST CHINA SEA IN SUMMER
- 29 **Smith, M.;** Kominoski, J.; Gaiser, E.; Troxler, T.: SHORT-TERM DISSOLVED ORGANIC MATTER DYNAMICS IN A TIDALLY INFLUENCED URBAN CREEK DURING EXTREME HIGH TIDES
- 30 **Regier, P.;** Harms, T.; Jones, J.; Mutschlecner, A.; Jaffé, R.: TEMPORAL DYNAMICS OF CARBON AND NITROGEN IN PERMAFROST CATCHMENTS
- 31 **Xue, J.;** Douglas, S.; Hardison, A.; Liu, Z.: THE IMPACT OF MAJOR STORM EVENTS ON THE LABILITY OF SUSPENDED PARTICLES IN A SUBTROPICAL ESTUARY, TEXAS

SSO13 UNRAVELING THE ROLE OF PHYSICS ON BIOLOGICAL & BIOGEOCHEMICAL PROCESSES IN AQUATIC ECOSYSTEMS

- 40 **Fitzenreiter, K.;** Xia, M.: "THE LONG AND WINDING ROAD": TRACKING THE COMPLEX JOURNEYS OF SURFACE DRIFTERS BETWEEN MARYLAND'S COASTAL BAYS AND THE ADJACENT COASTAL OCEAN
- 41 **JEON, M.;** PARK, M.; KANG, S.; JEON, M.: EVALUATION AS MONITORING SITE FOR CDOM VARIATION AT SEJONG BASE, KING GEORGE ISLAND
- 42 **Pacherres, C.;** Schmidt, G.; Holrappels, M.; Richter, C.: FLOW AND OXYGEN DYNAMICS IN THE CORAL BOUNDARY LAYER
- 43 **Meng, Q.:** INTERANNUAL VARIABILITY OF THE NORTH EQUATORIAL CURRENT BIFURCATION AND RELATIVE OCEAN-ATMOSPHERE COUPLED RESPONSES
- 44 **Caramatti, I.;** Hofmann, H.; Peeters, F.: MODELING OF INTER-ANNUAL AND SPATIAL VARIABILITY OF ICE COVER IN A SUBDIVIDED TEMPERATE LAKE
- 45 **Button, D.;** Robertson, B.: NUTRIENT CONCENTRATIONS FROM COMPETITIVE INHIBITION
- 46 **Castelao, R.;** Medeiros, P.; Klinck, J.; Dinniman, M.: PARTICULATE ORGANIC CARBON EXPORT OFF THE ANTARCTIC PENINSULA BY NONLINEAR MESOSCALE EDDIES
- 47 **Ozaki, A.;** Kaewjantawee, P.; Anongponyoskul, M.; Van Thinh, N.; Okayasu, T.; Matsumoto, M.: STUDY ON THE CLARIFICATION OF WEATHER CHARACTERISTICS THE INDUCING INVERSION OF THE THERMAL STRATIFICATION IN AQUACULTURE PONDS IN THAILAND
- 48 **Ruder, C.;** D'Ambrosio, S.; Wain, D.; Ellis, R.; Harrison, J.; Henderson, S.: THE INFLUENCE OF AN INTERNAL SEICHE ON BOTTOM BOUNDARY LAYER TURBULENCE AND OXYGEN FLUXES ACROSS THE SEDIMENT-WATER INTERFACE

SSO15 METHANE PRODUCTION AND FLUXES FROM OXIC MARINE AND FRESHWATER SYSTEMS

- 50 **Matoušů, A.;** Nedoma, J.; Frouzová, J.; Tušer, M.; Rulík, M.; Vrba, J.: METHANE DYNAMICS IN TEMPERATE ARTIFICIAL FRESHWATER ECOSYSTEMS (FISHPONDS AND RESERVOIRS)
- 51 **Xie, H.;** Li, Y.; Zhang, Y.; Geng, L.: PHOTOPRODUCTION OF METHANE FROM DISSOLVED ORGANIC MATTER (DOM) IN NATURAL WATERS: IMPLICATIONS FOR THE OCEANIC METHANE PARADOX

† REPRESENTS TUTORIAL PRESENTATIONS

- 52 Li, Y.; Xie, H.; Scarratt, M.: SEASONAL DISTRIBUTIONS OF DISSOLVED METHANE IN THE ST. LAWRENCE ESTUARY AND THE GULF OF ST. LAWRENCE

SSO20 LIVING IN A VARIABLE WORLD: STUDYING THE ROLE AND CONSEQUENCE OF VARIANCE, COVARIANCE, AND EXTREMES IN AQUATIC ECOSYSTEMS

- 61 Bricke, J.; Van Allen, B.; Jones, N.; Shurin, J.: INCREASED PRECIPITATION VARIABILITY CHALLENGES AND INTRODUCES LEGACY EFFECTS INTO THE POPULATION DYNAMICS OF TEMPORARY POOL INVERTEBRATES

SSO21 THE DAMMING OF RIVERS AND LAKES AND ITS EFFECTS ON BIOGEOCHEMICAL CYCLES

- 62 Kim, D.; Kim, J.; Kim, M.; Ra, K.; Shin, K.: ASSESSING ENVIRONMENTAL CHANGES IN LAKE SHIHWA (SOUTH KOREA) BASED ON DISTRIBUTIONS AND STABLE CARBON ISOTOPIC COMPOSITIONS OF N-ALKANES
- 63 Knag, S.; Kim, J.; Kim, D.; Ryu, J.; Ock, G.; Shin, K.: SEASONAL VARIATIONS OF ORGANIC CARBON FLUXES AND SOURCES IN GEUM AND SUMJIN RIVERS IN SOUTH KOREA
- 64 Kim, S.; Hyun, J.; Baek, J.; Baek, H.; Lee, H.; Kim, S.; Choi, S.; Lee, J.: SEDIMENT OXYGEN DEMAND AND ITS CONTROLS IN THE AFFECTED BY WEIR IMPOUNDMENTS: A CASE STUDY AT MAJOR KOREA RIVER SYSTEM

SSO22 MARINE MICROBIAL BIOCHEMISTRY, PRODUCTIVITY AND CLIMATE CHANGE

- 65 Jackson, C.; Labonté, J.: A MULTI-APPROACH TO LINK ENVIRONMENTAL VIRUSES TO THEIR ENVIRONMENTAL HOSTS
- 66 Cheung, S.; Suzuki, K.; Nakaoka, S.; Liu, H.: BASIN-SCALE AND SEASONAL DYNAMICS OF DIAZOTROPHIC POPULATIONS IN THE NORTH PACIFIC OCEAN
- 67 Fernandez-Carrera, A.; Patey, M.; Louropoulou, E.; Achterberg, E.; Montoya, J.; Dengler, M.; Brandt, P.; Subramaniam, A.: PRIMARY PRODUCTION IN TWO CONTRASTED UPWELLING SYSTEMS IN THE TROPICAL ATLANTIC OCEAN
- 68 Perez-Lorenzo, M.; Mouriño-Carballido, B.; Chouciño, P.; Fernández, E.; Fernández-Castro, B.; Fuentes-Lema, A.; Nogueira, E.; Villamaña, M.: REVISITING THE SVERDRUP HYPOTHESIS IN THE UPWELLING REGION OFF NW IBERIA

SSO25 CLIMATE CHANGE AND SMALL LAKES: PHYSICAL, CHEMICAL, AND BIOLOGICAL RESPONSES

- 71 Knoll, L.; Martin, T.; Schoenebeck, C.; Hansen, G.; Jacobson, P.; Cotner, J.: VARIABILITY IN LAKE THERMAL STRATIFICATION DURATION AND INTENSITY MEDIATES SUMMER WATER QUALITY IN FIVE TEMPERATE LAKES

SSO28 SMALL POND ECOLOGY: SYNTHESIZING CURRENT KNOWLEDGE AND IDENTIFYING FUTURE RESEARCH NEEDS

- 75 Seidu, I.; Tehoda, P.: COMPARATIVE PHYSICO-CHEMICAL PROPERTIES AND ODONATA COMMUNITY IN PONDS, RIVERS AND STREAMS IN THE ANKASA NATURE RESERVE, GHANA.

SSO29 ECOLOGICAL STOICHIOMETRY ACROSS SCALES

- 76 Wang, J.; Scott, T.: PIGMENT COMPOSITION OF MICROCYSTIS AND DOLICHOSPERMUM ACROSS VARIABLE LIGHT AND NITROGEN AVAILABILITY

- 77 Osburn, F.; Scott, T.: SIMULATED EXPERIMENTAL BLOOMS OF ANABAENA FLOS-AQUAE REVEAL DECREASING N FIXATION EFFICIENCY IN RESPONSE TO INCREASING N DEFICIENCY

SSO31 TRAIT-BASED COMMUNITY ORGANIZATION ALONG ENVIRONMENTAL GRADIENTS: ECOLOGICAL & EVOLUTION

- 78 Cadier, M.; Andersen, K.; Visser, A.; Kjørboe, T.: COMPETITION/DEFENSE TRADE-OFF INCREASES SIZE COEXISTENCE AND SEASONAL SUCCESSION IN A MIXOTROPHIC SIZE-BASED MODEL OF UNICELLULAR PLANKTON
- 79 Allart, T.; de Grandpré, A.; Bertolo, A.; Rodríguez M.: IS EDGE EFFECT IMPORTANT IN DRIVING THE DISTRIBUTION OF FISHES IN AQUATIC VEGETATION LANDSCAPES? A TEST USING CAMERA TRAPS
- 80 Green, M.; Anderson, K.: METACOMMUNITY PATTERNS IN ALPINE STREAM-LAKE NETWORKS
- 81 de Grandpré, A.; Allart, T.; Kinnard, C.; Bertolo, A.: SPATIAL CONFIGURATION OF AQUATIC VEGETATION LANDSCAPES AND ITS EFFECTS ON ZOOPLANKTON COMMUNITIES IN A TEMPERATE SHALLOW LAKE

SSO38 ENVIRONMENTAL FLOWS: RECENT SCIENCE, APPLICATIONS, AND POLICY IMPLEMENTATION

- 87 Berthot, L.; St-Hilaire, A.; Caissie, D.; El-Jabi, N.: ENVIRONMENTAL FLOW DETERMINATION IN SOUTHERN QUEBEC (CANADA): ACTUAL AND FUTURE HYDROLOGIC AND CLIMATIC CONTEXT

SSO41 HOW MICROBIAL DISPERSAL AND SHAPE DETERMINE LOCAL STRUCTURE AND FUNCTIONING OF AQUATIC ASSEMBLAGES

- 59 Aalto, S.; Saarenheimo, J.; Mikkonen, A.; Rissanen, A.; Tiitola, T.: WASTEWATER SHAPES SEDIMENT MICROBIAL COMMUNITIES THROUGH ALTERED HABITAT CHARACTERISTICS AND MICROBIAL MIGRATION
- 82 Herren, C.; Baym, M.: METABOLITE-EXPLICIT MODELS OF MICROBIAL INTERACTIONS LEND INSIGHT TO COEXISTENCE AND INVASION IN MICROBIAL COMMUNITIES
- 89 Wagner-Döbler, I.; Milici, M.; Vital, M.; Tomasch, J.; H., T.; Wang, H.; Plumeier, I.; Pieper, D.; Simon, M.: ABYSSAL WATER MASSES IN THE SOUTHERN AND NORTHERN HEMISPHERE OF THE ATLANTIC OCEAN HARBOR DIFFERENT BACTERIOPLANKTON COMMUNITIES
- 90 Pjevac, P.; Žutinić, P.; Gligora Udovič, M.; Stević, F.; Špoljarić, D.; Žuna, T.; Špoljarić Maronić, D.; Stanković, I.; Schmidt, H.; Goreta, G.; Kulaš, A.; Plenković Moraj, A.; Orlic, S.: COMMUNITY COMPOSITION IN LAKES AND RESERVOIRS ALONG A TROPHIC GRADIENT
- 91 Lansac-Toha, F.; Bini, L.; Meira, B.; Segovia, B.; Dias, J.; Higt, J.; Rodrigues, L.; Benedito, E.; Roberto, M.; Lolis, S.; Lemke, M.; Tessler, M.; Martens, K.; Lansac-Tôha, F.; Velho, L.: SCALE DEPENDENCY PATTERNS IN METACOMMUNITY STRUCTURE OF AQUATIC ORGANISMS ACROSS SOUTH AMERICAN FLOODPLAINS

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- 99 Hoke, A.; Angell, K.; Gardner, M.; Reynoso, G.; Smith, M.; Newell, S.; Wurch, L.; Steffen, M.: COMPARATIVE GENOMICS OF MEMBERS OF THE MICROCYSTIS PHYCOSPHERE

- 100 **Jurgensen, S.**; Muller, M.; Angell, K.; Boothe, O.; Buzzeo, R.; Gabby, C.; Jamie, C.; Firnstahl, P.; Holmes, C.; Hurwitz, A.; Jafari, N.; Kaiser, J.; May, E.; Michael, J.; Reynoso, G.; Smith, M.: IMPACT OF CO-CULTURE ON THE GROWTH AND PHYSIOLOGY OF MICROCYSTIS AERUGINOSA
- 101 **Xiao, Y.**; Zhang, S.; Li, Z.: THE RESPONSE OF CYANOBACTERIAL MORPHOLOGY TO TURBULENCE MIXING: EVIDENCE FROM FIELD INVESTIGATIONS AND LABORATORY EXPERIMENTS

SSO52 PARASITES, PATHOGENS EVERYWHERE: IT'S TIME FOR A CLOSER LOOK

- 102 **Jeong, H.**; Lee, K.; Ok, J.: REMOVAL OF TWO PATHOGENIC SCUTICOCILIATES MIAMIENSIS AVIDUS AND MIAMIENSIS SP USING CELLS OR CULTURE FILTRATES OF THE DINOFLAGELLATE ALEXANDRIUM ANDERSONII
- 103 **Zhang, R.**; Cai, L.; Jørgensen, B.; Suttle, C.: VIRUSES IN THE DEEP SUB-SEAFLOOR BIOSPHERE

SSO63 UNDERSTANDING THE MERCURY CYCLE IN A CHANGING WORLD: LINKING TERRESTRIAL AND AQUATIC SYSTEMS

- 122 **Yang, J.**; Han, S.: INCREASES OF DISSOLVED GASEOUS MERCURY (DGM) IN LAKE WATERS ENRICHED WITH REDUCED QUINONE-LIKE DISSOLVED ORGANIC MATTER
- 123 **Maupin, M.**; Martin, E.; Minkova, T.; Biswas, A.: MERCURY BIOACCUMULATION BY STREAM PERIPHYTON IN COASTAL WASHINGTON STATE
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- 125 **Best, R.**; Brown, M.; Razavi, R.; Cleckner, L.: METHYLMERCURY IN ZOOPLANKTON: THE ROLE OF TAXONOMIC COMPOSITION AND TEMPERATURE IN SENECA LAKE, NY
- 126 **Jung, E.**; Noh, S.; Yoon, D.; Han, S.: POTENTIAL CONTRIBUTIONS OF DISSOLVED ORGANIC MATTER TO MERCURY METHYLATION RATES IN RESERVOIR WATERS AS REVEALED BY FLUORESCENCE SPECTROSCOPY
- 127 **Kim, J.**; Han, S.: THE POSITIVE ROLE OF DISSOLVED ORGANIC MATTER IN INCREASING PHOTODEMETHYLATION RATES OF METHYLMERCURY IN SEAWATER
- 128 **Yang, S.**; Johnson, W.; Black, F.; Rowland, R.; Valdes, C.: TOTAL MERCURY AND METHYLMERCURY RESPONSE IN WATER AND SEDIMENT TO DESTRATIFICATION AND RESTRATIFICATION OF THE GREAT SALT LAKE, UTAH, USA

SSO67 EFFECTS OF HUMAN ALTERATIONS ON HYDROLOGIC, ECOLOGICAL, AND BIOGEOCHEMICAL DYNAMICS OF AQUATIC SYSTEMS

- 130 **McGlasson, A.**; Green, S.; Frost, S.; Ogorek, K.; Meira, B.; Nunes, M.; Santos, G.; Toha, F.; Velho, F.; Dungey, K.: IMPOUNDMENT IMPACTS: NUTRIENT CONCENTRATIONS AND ZOOPLANKTON COMMUNITIES IN THE RIO PARANÁ AND THE ILLINOIS RIVER FLOODPLAINS

SSO72 ACIDIFICATION, HYPOXIA AND CARBONATE CHEMISTRY IN MARINE AND FRESHWATER SYSTEMS

- 136 **Schroeder, H.**; Hintz, C.: A HIGH-PRECISION PCO₂ SYSTEM FOR LONG-TERM SEAWATER CARBONATE CHEMISTRY CONTROL OF TROPICAL CORAL CULTURE

- 137 **Sastri, A.**; Juniper, K.; Mihaly, S.; Duke, P.; Else, B.; Thomas, H.; Miller, L.; Christian, J.; Evans, W.: CONTINUOUS PCO₂ TIME SERIES FROM OCEAN NETWORKS CANADA CABLED OBSERVATORIES AT THE NORTHEAST PACIFIC SHELF EDGE, SALISH SEA, AND IN THE SUB-TIDAL ARCTIC
- 138 **Tew, K.**: EVALUATION OF SEAGRASS BED ON MARINE MICROBENTHIC ALGAE IN MESOCOSMS WITH ELEVATED CO₂ AND TEMPERATURE
- 139 **Walker, L.**; Wetz, M.: HYPOXIA DYNAMICS IN A SEMIARID SOUTH TEXAS ESTUARY
- 140 **Fan, C.**; Shen, Q.: HYPOXIA IN CHINESE LAKES: THE CONDITIONS AND LIMITING FACTORS FOR THE OCCURRENCE OF BLACK BLOOM IN HYPER EUTROPHIC LAKE TAIHU
- 141 **Bugica, K.**; Wetz, M.: TEMPERATURE CONTROL ON WINTER-SPRING PHYTOPLANKTON GROWTH AND COMMUNITY COMPOSITION IN A SUBTROPICAL ESTUARY
- 142 **Ilomo, O.**: SOME CHALLENGES AND ALTERNATIVE SOLUTIONS FACING OCEAN ACIDIFICATION (OA) STUDIES IN TANZANIA AND THE WESTERN INDIAN OCEAN (WIO) REGION

SSO77 URBAN WATER SYSTEMS: ECOLOGICAL CONNECTIONS, ECOSYSTEM SERVICES, AND OPPORTUNITIES FOR MANAGEMENT INTERVENTION

- 144 **Martinez, G.**; Pérez-Alegria, L.: A STRATIFIED DIAGNOSTIC APPROACH FOR THE RESTORATION OF WATER QUALITY AND ECOLOGICAL INTEGRITY AT THE SAN JUAN BAY ESTUARY WATERSHED IN PUERTO RICO
- 145 **Jude, B.**; Kuckyr, M.; Alba, P.: DETECTION OF VIOLACEIN PRODUCING BACTERIAL STRAINS AS A POTENTIAL INDICATOR FOR WATERWAY HEALTH
- 147 **Perron, G.**; Azulai, D.; Dueker, E.: INT1 ABUNDANCE AMONG MICROBIAL COMMUNITIES FOUND IN ENVIRONMENTAL SAMPLES FLUCTUATES WITH HUMAN AND ENVIRONMENTAL FACTORS
- 148 **Pillich, J.**; Smith, B.; Cherrier, J.; Meixner, T.; Berkowitz, A.: A RAPID GREEN INFRASTRUCTURE ASSESSMENT PROTOCOL TO MONITOR URBAN BIOSWALES WITH CITIZEN SCIENTISTS
- 149 **Gerken, T.**; Economy, L.; Wiegner, T.: SOIL SOURCES OF STAPHYLOCOCCUS AUREUS, METHICILLIN-RESISTANT S. AUREUS (MRSA), AND FECAL INDICATOR BACTERIA CONCENTRATIONS IN A HAWAIIAN WATERSHED
- 150 **O'Mullan, G.**; Montero, A.; Reichert, R.; Keller, J.; Blanford, W.; Engel, R.: THE URBAN STREET SURFACE AS A SOURCE OF FECAL BACTERIA TO COASTAL WATERWAYS: DRY WEATHER PERSISTENCE, INDICATOR DIVERSITY, AND A NOVEL MANAGEMENT SOLUTION

SSO80 FROM HEADWATERS TO COASTAL ZONES: EMERGING AND LEGACY CONTAMINANTS IN AQUATIC ECOSYSTEMS AND THEIR EFFECTS

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- 153 **Stovall, J.**; Bratton, S.: MICROPLASTIC POLLUTION IN AN URBAN RUNOFF FED STREAM IN TEXAS, USA: A COMPARISON ABOVE TREATED WASTEWATER EFFLUENTS

- 154 **Peters, C.;** Hendrickson, E.; Halbur, J.; Schreiner, K.; Minor, E.; Bratton, S.: PYR-GC/MS CHARACTERIZATION OF MICROPLASTICS FROM THE STOMACH CONTENTS OF TEXAS GULF COAST FISH

SSO82 EMERGING MODELS OF TRACE METAL BIOAVAILABILITY TO AQUATIC ORGANISMS

- 155 **Over, J.;** Pospelova, V.: DINOFLAGELLATE CYSTS AS INDICATORS OF CLIMATIC AND OCEANOGRAPHIC CHANGES DURING THE LAST INTER-GLACIAL MAXIMUM IN THE SANTA BARBARA BASIN, SOUTHERN CALIFORNIA
- 156 **Del Bel Belluz, J.;** Jackson, J.; Hunt, B.: FLUORESCENCE, BEAM ATTENUATION AND CHLOROPHYLL IN COASTAL BRITISH COLUMBIA WATERS: USING BIO-OPTICS TO EXPLORE PHYTOPLANKTON BIOMASS AND TAXONOMY
- 157 **Kang, H.;** Kim, H.: METAGENOMIC ANALYSIS OF MICROBIAL COMMUNITY IN THE COASTAL WATERS OF SOUTHERN KOREAN
- 158 **Lee, S.;** Kang, J.; Lee, J.; Kim, H.; Lee, W.; Lee, D.; Jo, N.: MONTHLY VARIATIONS OF PHYTOPLANKTON COMMUNITY IN GEOJE-HANSAN BAY OF THE SOUTHERN PART OF KOREA BASED ON HPLC PIGMENT ANALYSIS
- 159 **Yoon, E.;** Park, J.; Jeong, H.; Moon, S.: TAXONOMY OF THE HETEROTROPHIC DINOFLAGELLATES OXYRRHIS MARINA AND OXYRRHIS MARITIMA IN KOREAN WATERS
- 160 **Barry, T.;** Claassen, L.; Greengrove, C.; Masura, J.: TEMPORAL AND SPATIAL VARIABILITY OF PHYTOPLANKTON ASSEMBLAGES IN CLAYOQUOT SOUND, BC, CANADA.

SSO84 BEYOND NATURAL VARIABILITY: CUMULATIVE EFFECTS AND TIPPING POINTS IN AQUATIC SYSTEMS

- 162 **Lima, A.;** Wrona, F.: MULTIPLE STRESSORS IN THE ATHABASCA RIVER BASIN: WHAT DO WE KNOW SO FAR? A SYSTEMATIC REVIEW

SS100 FOOD WEB INTERACTIONS AND TROPHIC LINKAGES

- 171 **Choi, B.;** Lee, C.; Chang, K.; Jang, M.; Kim, H.; Shin, K.: APPLICATION OF COMPOUND SPECIFIC ISOTOPE ANALYSIS OF NITROGEN IN AMINO ACIDS TO DETERMINE FOOD CHAIN LENGTH IN FRESHWATER ECOSYSTEM
- 172 **Meira, B.;** Toha, F.; Segovia, B.; Oliveira, F.; Lansac-Toha, F.; Velho, F.: DIRECT AND INDIRECT EFFECTS CAUSED BY DIFFERENT STAGES OF DEVELOPMENT OF ASTYANAX ALTIPTARANAE LARVAE ON MICROBIAL FOOD WEBS
- 173 **Ismar, S.;** Li, S.; Kottmann, J.; Sommer, U.: TRANSCRIPTOMIC, QPCR AND BIOCHEMICAL QUANTIFICATIONS OF FLUXES THROUGH THE MARINE PELAGIC PRODUCER-CONSUMER LINK
- 175 **Will, V.;** Ullrich, M.: THE POTENTIAL ROLE OF HEAVY METAL RESISTANCE IN MARINOBACTER ADHAERENS DURING ITS INTERACTION WITH DIATOMS
- 176 **Kunzmann, A.;** Straile, D.; Yohannes, E.; Rothhaupt, K.: THE ROLE OF COPEPOD SPECIES CHANGE FOR FOOD-WEB FUNCTIONING AND ECOSYSTEM REVERSIBILITY
- 177 **Wunsch, C.;** Martin-Creuzburg, D.; Rothhaupt, K.: THE ROLE OF MIXOTROPHS FOR CARBON FLOW DYNAMICS AND NUTRIENT REGENERATION IN A LARGE, EUROPEAN PRE-ALPINE LAKE
- 178 **Kahn, A.;** Matveev, E.; Grant, N.; Law, L.; Yahel, G.; Archer, S.; Dunham, A.; **Leys, S.:** TO REEFS AND BEYOND: SPONGES AS MAJOR NUTRIENT CYCLERS IN THE DEEP SEA

WEDNESDAY ORALS

SSO08 UNDERSTANDING MOUNTAIN LAKES IN A CHANGING WORLD

Chair(s): Jill Baron, U.S. Geological Survey (jill.baron@colostate.edu)
James Elser, FLBS, U MT (jim.elser@flbs.umt.edu)
Isabella Oleksy, Colorado State University (bellaoleksy@gmail.com)
Sudeep Chandra, University of Nevada (sudeep@unr.edu)

Location: Lecture Theater

- 8:30 AM **Ren, Z.**; Niu, D.; Fu, H.; Elser, J.: CASCADING INFLUENCES OF GRASSLAND STATUS ON NUTRIENTS AND NUTRIENT LIMITATION OF PRIMARY PRODUCERS IN A HIGH MOUNTAIN LAKE (QINGHAI LAKE) AND ITS INFLOW STREAMS
- 8:45 AM **Olesky, I.**; Baron, J.; Leavitt, P.: A WARMER AND GREENER WORLD—EVIDENCE OF ALGAL ASSEMBLAGE SHIFTS FROM LAKE SEDIMENT CORES IN ROCKY MOUNTAIN NATIONAL PARK, COLORADO
- 9:00 AM **Moser, K.**; Ngai, S.; Plunkett, C.; Hundey, E.: MOUNTAIN LAKE RESPONSE TO CLIMATE CHANGE: A UINTA MOUNTAIN CASE STUDY
- 9:15 AM **Culpepper, J.**; Baron, J.; Sadro, S.; Oleksy, I.; Vinebrooke, R.; Hampton, S.; Smits, A.; Moser, K.; Brahney, J.; Strecker, A.; Chandra, S.; Williams, J.; Fradkin, S.; Nanus, L.; Rosen, M.; Noble, P.: A CONCEPTUAL MODEL FOR UNDERSTANDING THE ROLE OF MOUNTAIN GRADIENTS ON LAKES
- 9:30 AM **Cohen, A.**; Melack, J.: COMPARATIVE LIMNOLOGY OF HIGH-ELEVATION SIERRA NEVADA LAKES AND RESERVOIRS AND THEIR DOWNSTREAM EFFECTS
- 9:45 AM **Kopáček, J.**; Kaňa, J.: CLIMATE CHANGE INCREASES CALCIUM LEACHING FROM GRANITIC ALPINE CATCHMENTS
- 10:00 AM **Perga, M.**; Bruel, R.; Bouffard, D.: STORM IMPACTS ON MOUNTAIN LAKES: (LOWER) FREQUENCY, RATHER THAN SIZE, MATTERS
- 10:15 AM **Brahney, J.**; Menounos, B.; Curtis, J.: LIMNOLOGICAL CHANGES ALONG A GRADIENT IN GLACIERIZATION IN THE COLUMBIA BASIN OF CANADA
- 2:00 PM **Christianson, K.**: USING SPARSE DATA TO ESTIMATE LAKE WARMING IN THE SOUTHERN ROCKY MOUNTAINS
- 2:15 PM **Loria, K.**; Ragar, D.; McKnight, D.; Johnson, P.: COMPARATIVE SURVEY OF THE ABOITIC AND BIOTIC CHARACTERISTICS OF LAKES ACROSS AN ELEVATION GRADIENT IN THE ROCKY MOUNTAINS, USA
- 2:30 PM **Stetler, J.**; Girdner, S.; Mack, J.; Winslow, L.; Leach, T.; Rose, K.: EFFECTS OF CLIMATE CHANGE ON CRATER LAKE, OREGON: MODELING AND EMPIRICAL OBSERVATIONS OF TRENDS IN WATER TEMPERATURE AND MIXING DYNAMICS
- 2:45 PM **Fradkin, S.**; Baccus, W.; Katz, S.; Lofgren, R.; Rawhouser, A.; Welch, C.: ESTIMATION OF ICE COVER DURATION IN PACIFIC NORTHWEST MOUNTAIN LAKES
- 3:00 PM **Feher, K.**; Richards, R.; Goldman, C.; Chandra, S.: ECOLOGICAL CONDITIONS OF ICE-COVER AND ICE-FREE PERIODS OF MOUNTAIN LAKES
- 3:15 PM **Vinebrooke, R.**; MacLennan, M.; Loewen, C.: WHEN THE ORDER OF EXPOSURE MATTERS TO THE CUMULATIVE IMPACT OF MULTIPLE STRESSORS ON LAKE COMMUNITIES

- 4:00 PM **Johnsen, M.**; Vinebrooke, R.: ECOLOGICAL RESILIENCE IN A RAPIDLY CHANGING CLIMATE: AN ALPINE-MONTANE RECIPROCAL TRANSPLANT POND EXPERIMENT
- 4:15 PM **Raya, R.**: CLIMATE CHANGE IMPACT ON WATER QUALITY OF PHEWA LAKE, NEPAL
- 4:30 PM **Lakka, H.**: CONSERVATION, DIVERSITY AND DISTRIBUTION OF LARGE COLD-ADAPTED BRANCHIOPODS IN THE NORTHERN SCANDINAVIAN MOUNTAINS
- 4:45 PM **St.Louis, V.**; St.Pierre, K.; Lehnher, I.; Poulain, A.; Ruuskanen, M.: HETEROTROPHIC ACTIVITY IN THE SEDIMENTS OF THE WORLD'S LARGEST HIGH ARCTIC LAKE
- 5:00 PM **McKnight, E.**; Hik, D.: REQUIREMENTS FOR MONITORING AND DETECTING GRADUAL AND ABRUPT STATE CHANGES IN A LARGE NORTHERN LAKE, LHÜ'ÄAN MÄN, YUKON, CANADA
- 5:15 PM **Chiapella, A.**; Strecker, A.; Eagles-Smith, C.: FROM FISH TO FORESTS: MERCURY IN MOUNTAIN LAKES INFLUENCED BY VARIABLES AT MULTIPLE SCALES
- 5:30 PM **Lawlor, M.**; Matthews, R.: USING ALGAL BIOINDICATORS TO CLASSIFY SIX MOUNTAIN LAKES IN THE NORTH CASCADES, WASHINGTON (USA)

SSO14 SOCIAL-ECOLOGICAL DYNAMICS IN AQUATIC ECOSYSTEMS

Chair(s): Chris Solomon, Cary Institute of Ecosystem Studies (solomonc@caryinstitute.org)
Stuart Jones, University of Notre Dame (sjones20@nd.edu)
Kathie Weathers, Cary Institute of Ecosystem Studies (weathersk@caryinstitute.org)

Location: Esquimalt

- 4:00 PM **Weathers, K.**: ENHANCING HUMAN PASSION AND CURIOSITY ABOUT LAKE ECOSYSTEM FUNCTION: A CASE STUDY OF SCIENTISTS, SENSORS, CITIZENS, AND THEIR SOCIO-ECOLOGICAL DYNAMICS FROM LAKE SUNAPEE, NH
- 4:15 PM **Durocher, C.**: CHANGES IN INDIGENOUS LAND USE FOLLOWING RESERVOIRS IMPOUNDMENT IN QUÉBEC, CANADA
- 4:30 PM **Embke, H.**; Carpenter, S.; Cichosz, T.; Goto, D.; Hennessy, J.; Ogle, D.; Rypel, A.; Sass, G.; Vander Zanden, M.: DECLINING PRODUCTIVITY LEADS TO HIDDEN OVERFISHING OF INLAND RECREATIONAL FISHERIES
- 4:45 PM **Solomon, C.**; Dassow, C.; Janssen, M.; Jardine, S.; Jensen, O.; Jones, S.; van Poorten, B.; Ziegler, J.: SOCIAL-ECOLOGICAL DYNAMICS IN RECREATIONAL FISHERY LANDSCAPES
- 5:00 PM **Symons, C.**; Filbee-Dexter, K.; Jones, K.; Haig, H.; Pittman, J.; Alexander, S.; Burke, M.: QUANTIFYING THE SOCIO-ECOLOGICAL DYNAMICS OF ECOLOGICAL SURPRISE IN AQUATIC ECOSYSTEMS REVEALS MISMATCH BETWEEN MANAGEMENT AND ECOLOGICAL PROCESSES
- 5:15 PM **Corman, J.**; Ogari, Z.; Kwena, Z.; Roegner, A.: ADDRESSING TWO ECOLOGICAL REALITIES IMPACTING HUMAN HEALTH AT THE WORLD'S LARGEST TROPICAL LAKE, LAKE VICTORIA, EAST AFRICA
- 5:30 PM **Fortin St-Gelais, N.**; Lapiere, J.; Goyette, J.; Siron, R.; Maranger, R.: A NOVEL APPROACH TO QUANTIFY THE MULTIPLE DIMENSIONS OF WATER QUALITY AND AQUATIC ECOSYSTEM SERVICES
- 5:45 PM **Fuss, G.**: TURBIDITY DYNAMICS AT A LANDSCAPE SCALE WITH MIXED LAND USES

^T REPRESENTS TUTORIAL PRESENTATIONS

SSO16 CHANGE IN LAKES AND RIVERS AT REGIONAL, CONTINENTAL AND GLOBAL SCALES

Chair(s): Hilary Dugan, University of Wisconsin-Madison (hdugan@wisc.edu)
 Luke Winslow, Rensselaer Polytechnic (lawinslow@gmail.com)
 David Butman, University of Washington (dbutman@uw.edu)

Location: Esquimalt

- 8:30 AM **Yong, L.**; Wu, Z.: DYNAMIC MODELING DEVELOPMENT FOR EXPLORING THE ROLES OF EXTERNAL NUTRIENT LOADING AND INTERNAL CYCLING IN HYPER-EUTROPHIC LAKE DIANCH (CHINA)
- 8:45 AM **Wang, L.**; Tian, Z.; Wang, X.; Zhao, Y.; Li, H.; Zheng, B.: EFFECT OF LARGE RIVER DAMMING ON WATER ENVIRONMENT CHANGE IN THE DOWNSTREAM AREA IN DONGTING LAKE, MIDDLE REACHES OF THE YANGTZE RIVER IN CHINA
- 9:00 AM **Izhitskiy, A.**; Kirillin, G.; Zavialov, P.: EXTREME THERMAL AND MIXING CONDITIONS IN A RESIDUAL BASIN OF THE ARAL SEA
- 9:15 AM **Smits, A.**; Sadro, S.; MacIntyre, S.; Melack, J.: MULTIPLE MECHANISMS DICTATE LAKE THERMAL RESPONSES TO CHANGING SNOWPACKS IN MOUNTAIN REGIONS
- 9:30 AM **Kehoe, M.**; Joehnk, K.; Nazemi, A.; Leavitt, P.; Baulch, H.: SENSITIVITY OF LAKES TO CLIMATE CHANGE: A CASE STUDY OF DECLINING WATER QUALITY.
- 9:45 AM **Barbosa da Costa, N.**; Tromas, N.; Fugère, V.; Hébert, M.; Fussmann, G.; Gonzalez, A.; Shapiro, J.: INTERACTIVE IMPACTS OF NUTRIENT ENRICHMENT AND TWO WIDELY-USED PESTICIDES ON EXPERIMENTAL BACTERIOPLANKTON COMMUNITIES
- 10:00 AM **Wang, X.**: DEVELOPMENT AND EVALUATION OF THE PLANKTONIC INTEGRITY INDEX (PII) FOR JINGPO LAKE, CHINA
- 10:15 AM **Zhao, Y.**: SEDIMENT QUALITY CRITERIA FOR HEAVY METALS IN LAKE DONGTING BASED ON SCREENING LEVEL CONCENTRATION APPROACH

SSO18 AQUATIC ECOSYSTEM DEVELOPMENT: DOES FUNCTION FOLLOW FORM?

Chair(s): Maryam Weigt, Alfred Wegener Institute, Helmholtz Center for Polar and Marine Research and Helmholtz Institute for Functional Marine Biodiversity at the University Oldenburg (maryam.weigt@awi.de)
 Thomas Brey, Alfred Wegener Institute, Helmholtz Center for Polar and Marine Research and Helmholtz Institute for Functional Marine Biodiversity at the University Oldenburg (thomas.brey@awi.de)
 Raghav Ray, Laboratoire des Sciences de l'Environnement Marin and Institut Universitaire Européen de la Mer (raghav.ray@gmail.com)
 Dario Fiorentino, Alfred-Wegener-Institut, Helmholtz Center for Polar and Marine Research and Helmholtz Institute for Functional Marine Biodiversity at the University Oldenburg (dario.fiorentino@hifmb.de)

Location: Saanich 1&2

- 2:00 PM **Pauly, D.**: THE GEOGRAPHIC EXPANSION OF GLOBAL FISHERIES (1950-2014), BASED ON THE PRIMARY PRODUCTION THEY REQUIRE.
- 2:30 PM **Jacob, U.**; Eklöf, A.; Brey, T.: LINKING BIODIVERSITY AND ECOSYSTEM SERVICES ALONG MULTIPLE ENVIRONMENTAL DRIVERS: A NETWORK APPROACH
- 2:45 PM **Lovvorn, J.**; Rocha, A.: PREDICTING SEDIMENT ORGANIC CARBON AS A DRIVER OF MARINE FOOD WEBS FOR BENTHIC PREDATORS AND HUMAN HUNTERS IN A CHANGING ARCTIC

- 3:00 PM **Blaszczak, J.**; Delesantro, J.; Urban, D.; Doyle, M.; Bernhardt, E.: TOO MUCH OR TOO LITTLE: THE BIMODAL DYNAMICS OF URBAN STREAM ECOSYSTEMS
- 3:15 PM **Torano, O.**; Piehler, M.; Thompson, S.: EFFECTS OF STATE CHANGE ON SHALLOW LAKE NUTRIENT SEDIMENT FLUXES

SSO19 INFLUENCE OF WATER LEVELS AND WATER LEVEL FLUCTUATIONS ON THE ECOLOGY AND FOOD WEBS OF LARGE LAKES AND RESERVOIRS

Chair(s): Christina A. Murphy, Oregon State University (christina.murphy@oregonstate.edu)
 Sherri L. Johnson, USFS PNW Research (sherrijohnson@fs.fed.us)

Location: Carson Hall C

- 4:15 PM **Christensen, V.**; **Ziegeweid, J.**; Maki, R.: ARTIFICIAL WATER-LEVEL MANAGEMENT AND RELATION TO WATER QUALITY AND THE AQUATIC ECOSYSTEM IN VOYAGEURS NATIONAL PARK, USA
- 4:30 PM **Helland, I.**; Eloranta, A.; Power, M.: TOWARDS AN ENVIRONMENTAL DESIGN OF HYDROPOWER OPERATIONS IN RESERVOIRS
- 4:45 PM **Eloranta, A.**; Helland, I.; Power, M.: WATER LEVEL REGULATION IMPACTS ON SALMONIDS IN ALPINE HYDROPOWER RESERVOIRS
- 5:00 PM **Murphy, C.**; Johnson, S.; Arismendi, I.: CHANGES IN RESERVOIR FOODWEB AND COMMUNITY STRUCTURE DUE TO WATER LEVEL FLUCTUATIONS FOR DOWNSTREAM SALMON PASSAGE
- 5:15 PM **Paterson, M.**; Davies, I.; Salki, A.; Rosenberg, D.; Bodaly, R.: CHANGES IN INVERTEBRATE COMMUNITIES IN A WHOLE-LAKE DRAWDOWN EXPERIMENT
- 5:30 PM **Dillingham, R.**; Gaeta, J.: MACROINVERTEBRATE COMMUNITY STRUCTURE AND LITTORAL VEGETATION IN A SHALLOW EUTROPHIC LAKE DURING MULTIYEAR DROUGHT AND CARP REMOVAL

SSO23 TROPHIC INTERACTIONS IN MARINE MICRO- AND MESOZOOPLANKTON

Chair(s): Enric Saiz, Institut de Ciències del Mar - CSIC (enric@icm.csic.es)
 Albert Calbet, Institut de Ciències del Mar - CSIC (acalbet@icm.csic.es)

Location: Saanich 1&2

- 4:00 PM **Liu, H.**: ROLES OF ZOOPLANKTON IN TROPHIC INTERACTIONS AND ECOSYSTEM SHIFT IN A SUBTROPICAL ESTUARY
- 4:15 PM **Makarevičiūtė - Fichtner, K.**; Matthiessen, B.; Lotze, H.; Sommer, U.: MESOZOOPLANKTON SHAPES PHYTOPLANKTON RESPONSE TO CHANGING SEA: STOICHIOMETRY
- 4:30 PM **Grattepanche, J.**; McManus, G.; Katz, L.: ASSESSING BOTTOM-UP AND TOP-DOWN CONTROLS USING MICROCOSM AND 'OMICS.
- 4:45 PM **Arias, A.**; Calbet, A.; Saiz, E.: FINDING OUT THE FACTORS INVOLVED IN THE DIEL FEEDING RHYTHM OF MARINE MICROZOOPLANKTON
- 5:00 PM **Olivares, M.**; Saiz, E.; Calbet, A.: DOES ONTOGENY AFFECT DIEL ACTIVITY RHYTHMS IN ZOOPLANKTON?
- 5:15 PM **Selander, E.**; Berglund, C.; Engström, P.; Berggren, F.; Eklund, J.; Harðardóttir, S.; Lundholm, N.; Andersson, M.: TRAIT MEDIATED EFFECTS OF PREDATOR PRESENCE IN THE PELAGIC FOOD WEBS
- 5:30 PM **Takahashi, K.**; Nishibe, Y.; Ichinomiya, M.; Okazaki, Y.; Sato, M.: NEOCALANUS CRISTATUS HAS HIGHER INGESTION RATE ON NAKED CILATES IN LARGE EXPERIMENTAL BOTTLES

5:45 PM **Calbet, A.**; Saiz, E.: ARE WE ADDING ENOUGH NUTRIENTS TO MICROZOOPLANKTON DILUTION GRAZING EXPERIMENTS?

SSO26 INTEGRATIVE RESEARCH ON THE BIOGEOCHEMISTRY OF INLAND WATERS IN NORTHERN HIGH LATITUDES

Chair(s): Paul A. del Giorgio, University of Quebec at Montreal (del_giorgio.paul@uqam.ca)
Suzanne Tank, University Alberta (suzanne.tank@ualberta.ca)
Jan Karlsson, Umeå University (jan.p.karlsson@umu.se)
Rob Striegl, USGS (rstriegl@usgs.gov)

Location: Carson Hall B

8:30 AM **Ziegler, S.**; Myers-Pigg, A.; Prestegard, K.; Billings, S.; Edwards, K.: DIRECT AND INDIRECT CLIMATE CONTROLS IMPACTING TERRESTRIAL-AQUATIC LINKAGES IN BOREAL FOREST WATERSHEDS^T

9:00 AM **Bogard, M.**; Dornblaser, M.; Holtgrieve, G.; James, J.; Johnston, S.; Koch, J.; Kuhn, C.; Spencer, R.; Striegl, R.; Wickland, K.; Butman, D.: EXPLORING PERMAFROST SOIL CARBON TRANSFER ALONG HYDROLOGIC GRADIENTS ACROSS INTERIOR ALASKA¹

9:15 AM **St. Pierre, K.**; St. Louis, V.; Lehnerr, I.; Schiff, S.; Poulain, A.; Muir, D.; Talbot, C.: LIMNOLOGY OF THE WORLD'S LARGEST HIGH ARCTIC LAKE BY VOLUME: PHYSICAL, CHEMICAL AND BIOLOGICAL IMPACTS OF GLACIAL MELT WATERS (LAKE HAZEN, NUNAVUT, CANADA)

9:30 AM **Al Kharusi, E.**: MAPPING CONSERVATION PRIORITIES IN ALPINE AND SUBARCTIC SWEDISH LAKES AFFECTED BY RAPID CLIMATE CHANGE

10:00 AM **Hararuk, O.**; del Giorgio, P.; Prairie, Y.; Casas-Ruiz, J.; Jones, S.; Solomon, C.: TRACING DISSOLVED ORGANIC CARBON FROM SOILS TO OCEANS

10:15 AM **Chmiel, H.**; Pasche, N.; Hofmann, H.; Sobek, S.: WHERE DOES THE RIVER END? DRIVERS OF SPATIOTEMPORAL VARIABILITY IN CO₂ DISTRIBUTION AND GAS EXCHANGE IN A LARGE HUMIC LAKE

2:00 PM **Hutchins, R.**; Olefeldt, D.; Spence, C.; Quinton, W.; Tank, S.: FIRE AND ICE: THE EFFECT OF WILD FIRES AND PERMAFROST ON CO₂ AND CH₄ IN BOREAL STREAMS IN NWT, CANADA

2:15 PM **Rocher-Ros, G.**; Sponseller, R.; Mörth, C.; Myrstener, M.; Giesler, R.: AQUATIC METABOLISM IS AN IMPORTANT DRIVER OF CO₂ DYNAMICS IN ARCTIC STREAMS OF SWEDEN

2:30 PM **Christner, B.**; Lavender, H.; Davis, C.; Oliver, E.; Neuhaus, S.; Myers, K.; Hagedorn, B.; Tulaczyk, S.; Doran, P.; Stone, W.: BIOGEOCHEMICAL PROCESSING IN THE WEATHERING CRUST AQUIFER OF A SUBARCTIC GLACIER

2:45 PM **Casas-Ruiz, J.**; Hutchins, R.; Jakobsson, J.; del Giorgio, P.: TOTAL AQUATIC CARBON EMISSIONS AS AN EMERGENT PROPERTY OF THE BOREAL LANDSCAPE

3:00 PM **Tank, S.**; Littlefair, C.; Shakil, S.; Zolkos, S.; Kokelj, S.; St. Pierre, K.; St. Louis, V.: CHANGING BIOGEOCHEMISTRY AT THE LAND-WATER INTERFACE ON THE PEEL PLATEAU, WESTERN CANADIAN ARCTIC

3:15 PM **Lehnerr, I.**; St. Louis, V.; Sharp, M.; Gardner, A.; Smol, J.; Schiff, S.; Muir, D.; Mortimer, C.; Michelutti, N.; Tarnocai, C.; St. Pierre, K.; Emmerton, C.; Wiklund, J.; Köck, G.; Lamoureux, S.; Talbot, C.: THE WORLD'S LARGEST HIGH ARCTIC LAKE RESPONDS RAPIDLY TO CLIMATE WARMING

4:15 PM **Del Sontro, T.**; del Giorgio, P.; Prairie, Y.: GOING BEYOND THE MEAN: A NEW UPSCALING APPROACH REVEALS LOWER CH₄ EMISSIONS FROM BOREAL LAKES

4:30 PM **Serikova, S.**; Pokrovsky, O.; Laudon, H.; Karlsson, J.: C EMISSIONS FROM LAKES ACROSS PERMAFROST GRADIENT OF WESTERN SIBERIA

4:45 PM **Kellerman, A.**; Hawkings, J.; Spencer, R.; Wadham, J.: FLUX AND FLUORESCENCE OF DISSOLVED ORGANIC MATTER REFLECT CHANGING FLOWPATHS OVER THE COURSE OF THE MELT SEASON AT LEVERETT GLACIER, SOUTHWEST GREENLAND

5:00 PM **Campeau, A.**; Bishop, K.; Amvrosiadi, N.; Laudon, H.; Wallin, M.: LINKING STREAM C EXPORT TO ITS TERRESTRIAL SOURCES THROUGH A YEAR-ROUND ISOTOPIC CHARACTERIZATION OF DOC AND CO₂ IN A BOREAL HEADWATER CATCHMENT

5:15 PM **Amon, R.**; Anis, A.; Molodtsov, S.; Prokushkin, A.; Yvon-Lewis, S.; Panov, A.; Li, D.; Guggenberger, G.; Solnyshkin, I.: GAS EXCHANGE COEFFICIENTS, GHG CONCENTRATIONS AND ISOTOPIC COMPOSITION, AND CORRESPONDING GAS FLUXES ALONG THE SIBERIAN RIVER, YENISEI.

SSO29 ECOLOGICAL STOICHIOMETRY ACROSS SCALES

Chair(s): Casey M. Godwin, University of Michigan (cgodwin@umich.edu)
Seth K. Thompson, University of Minnesota (thom2587@umn.edu)
Roxane Maranger, University of Montreal (r.maranger@umontreal.ca)
Stuart E. Jones, University of Notre Dame (sjones20@nd.edu)
James B. Cotner, University of Minnesota-Twin Cities (cotne002@umn.edu)
Thad Scott, Baylor University (Thad_Scott@baylor.edu)

Location: Oak Bay 1&2

8:30 AM **Creed, I.**: GLOBAL CHANGE-DRIVEN EFFECTS ON CARBON AND COUPLED BIOGEOCHEMICAL CYCLES THROUGH THE FRESHWATER PIPE: IMPLICATIONS FOR NORTHERN FOOD WEBS^T

9:00 AM **Leavitt, P.**; Baulch, H.; Bergbusch, N.; Bogard, M.; Bunting, L.; Donald, D.; Finlay, K.; Haig, H.; Hayes, N.; Quinones-Rivera, Z.; Swarbrick, V.; Simpson, G.; Vogt, R.; Webb, J.; Wissel, B.; Members, A.: COUPLED CARBON AND NITROGEN BIOGEOCHEMISTRY IN PRODUCTIVE HARDWATER LAKES: INSIGHTS FROM MASS FLUXES OF GASES, SOLUTES AND PARTICLES OVER 25 YEARS

9:15 AM **Kelly, P.**; Renwick, W.; Vanni, M.: REDUCED N:P LOAD DURING STORM EVENTS IS DRIVEN BY DISPROPORTIONATE INCREASES IN PHOSPHORUS LOAD RELATIVE TO NITROGEN IN AN AGRICULTURAL RESERVOIR

9:30 AM **Goyette, J.**; M. Bennett, E.; Maranger, R.: THE INFLUENCE OF LANDSCAPE FEATURES, DAMS, LAKES, AND CLIMATE ON UNCOUPLING NITROGEN AND PHOSPHORUS TRANSPORT THROUGHOUT THE WATERSHED

9:45 AM **Olson, C.**; Jones, S.: HYDROLOGIC RESIDENCE TIME INTERACTS WITH NUTRIENT SUPPLY TO DICTATE LAKE ECOSYSTEM STOICHIOMETRY

10:00 AM **MacNeill, K.**; Collins, S.; Encalada, A.; Guasch, H.; Rosi, E.; McBride, M.; Thomas, S.; Flecker, A.: NITROGEN TO PHOSPHORUS RATIO AS A DRIVER OF ARSENIC RETENTION

10:15 AM **Maranger, R.**; Jones, S.; Cotner, J.: STOICHIOMETRY OF CARBON, NITROGEN, AND PHOSPHORUS THROUGH THE FRESHWATER PIPE

^T REPRESENTS TUTORIAL PRESENTATIONS

SSO34 TEMPERATURE DEPENDENCE OF CONSUMER-RESOURCE INTERACTIONS: NEW EMPIRICAL AND THEORETICAL INSIGHTS

- Chair(s): Wojciech Uszko, Umea University (wojciech.uszko@umu.se)
 Joey Bernhardt, University of British Columbia (joey.bernhardt@biodiversity.ubc.ca)
 Colin Kremer, MSU (kremerco@msu.edu)
 Elena Litchman, MSU (litchman@msu.edu)
- Location: Carson Hall A
- 4:00 PM **Uszko, W.:** WARMING EFFECTS ON CONSUMER-RESOURCE INTERACTIONS: CURRENT STATE AND NEW DEVELOPMENTS[†]
- 4:30 PM **Lindmark, M.;** Ohlberger, J.; Huss, M.; Gårdmark, A.: SPECIES INTERACTIONS DETERMINE EFFECTS OF WARMING ON STABILITY IN A STAGE-STRUCTURED FOOD CHAIN
- 4:45 PM **Sentis, A.;** Binzer, A.; Boukal, D.: PHENOTYPIC PLASTICITY, CLIMATE CHANGE, AND THEIR INFLUENCES ON FOOD-WEB PERSISTENCE
- 5:00 PM **Sunday, J.;** Bernhart, J.; Harley, C.; O'Connor, M.: AN EMPIRICAL TEST OF THE RELATIONSHIP BETWEEN COMPETITIVE ABILITY AND TEMPERATURE
- 5:15 PM **Mock, T.:** THE IMPACT OF TEMPERATURE ON MARINE PHYTOPLANKTON: FROM GENOMES TO BIOTIC INTERACTIONS
- 5:30 PM **Wang, H.;** Chen, Y.; Kiang, Y.; Heino, M.: LIFE HISTORY-TEMPERATURE CORRELATIONS PROVIDE EFFICIENT ASSESSMENTS FOR FISHES IN THE PACIFIC OCEAN

SSO37 FISH ECOLOGY

- Chair(s): Jonathan Studio, James Madison University (studioja@dukes.jmu.edu)
 Dr. Christine May, James Madison University (maycl@jmu.edu)
 Patrick Polte, Thuenen-Institute of Baltic Sea Fisheries (patrick.polte@thuenen.de)
 Dr. Paul Kotterba, Hamburg University (paul.kotterba@posteo.de)
- Location: Colwood 1&2
- 8:30 AM **May, C.:** THE WATERFALL PARADOX: BARRIERS THAT ISOLATE FISH POPULATIONS IN IDEAL HABITATS
- 8:45 AM **Studio, J.;** May, C.: COMPETITION AND PREDATION: INTERACTIONS BETWEEN AMERICAN EELS (ANGUILLA ROSTRATA) AND BROOK TROUT (SALVELINUS FONTINALIS) IN VIRGINIA MOUNTAIN STREAMS
- 9:00 AM **Zhu, X.;** Cornic, M.; Benchetrit, J.; Cairns, D.: APPLICATION OF SEMI-QUANTITATIVE MODELING APPROACHES TO ASSESS VULNERABILITY REFERENCE POINTS OF THE AMERICAN EEL IN EASTERN CANADA
- 9:15 AM **Cornic, M.;** Zhu, X.; Cairns, D.: AMERICAN EEL (ANGUILLA ROSTRATA) CPUE STANDARDIZATION IN LAKE ONTARIO AND THE UPPER ST. LAWRENCE RIVER
- 9:30 AM **Jacobson, P.;** Gårdmark, A.; Östergren, J.; Casini, M.; Huss, M.: POPULATION- AND SIZE-SPECIFIC DISTRIBUTION PATTERNS AND SIZE-DEPENDENT PREY AVAILABILITY AFFECT ATLANTIC SALMON DIET AND PERFORMANCE AT SEA
- 9:45 AM **Simmons, J.;** Feher, K.; Regan, J.; Tromboni, F.; Chandra, S.: HABITAT UTILIZATION, DIVERSITY, AND INFLUENCE OF SALINITY AND SURFACE AREA ON FISHES IN TERMINAL LAKES

- 10:00 AM **DeJong, R.;** Johnston, T.; Keller, B.; Gunn, J.; Swanson, H.: LIFE HISTORY CHARACTERISTICS OF LAKE WHITEFISH (COREGONUS CLUPEAFORMIS), CISCO (COREGONUS ARTEDI), AND NORTHERN PIKE (ESOX LUCIUS) IN HUDSON BAY LOWLAND RIVERS
- 10:15 AM **Sabel, M.;** Eckmann, R.; Straile, D.: LONG-TERM CHANGES IN THE STRUCTURE AND TRAITS OF THE LITTORAL FISH COMMUNITY IN A LARGE, PRE-ALPINE EUROPEAN LAKE
- 2:00 PM **Vasbinder, K.;** Ainsworth, C.; Zapfe, G.; Weisberg, R.; Liu, Y.: USING GENERALIZED ADDITIVE MODELING TO INVESTIGATE LARVAL DEPTH AT AGE TOWARDS IDENTIFYING LARVAL SOURCES AND SINKS
- 2:15 PM **Kotterba, P.;** von Nordheim, L.; Moll, D.; Polte, P.: SPAWNING BEHAVIOR OF ATLANTIC HERRING (CLUPEA HARENGUS) AND ITS DEPENDENCE ON LITTORAL MACROPHYTES
- 2:30 PM **von Nordheim, L.;** Kotterba, P.; Moll, D.; Polte, P.: SURVIVAL OF ATLANTIC HERRING EGGS ATTACHED TO AQUATIC VEGETATION ON BALTIC SEA SPAWNING BEDS
- 2:45 PM **Polte, P.;** Kotterba, P.; Moll, D.; Nordheim, von, L.: MULTIPLE FUNCTIONS OF LITTORAL HABITATS FOR EARLY LIFE-STAGES OF OCEANIC FISHES

SSO41 HOW MICROBIAL DISPERSAL AND SHAPE DETERMINE LOCAL STRUCTURE AND FUNCTIONING OF AQUATIC ASSEMBLAGES

- Chair(s): Clara Ruiz-González, Instituto de Ciencias del Mar (ICM-CSIC) (clara.ruiz.glez@gmail.com)
 Jérôme Comte, Institut National de la Recherche Scientifique (INRS-ETE) (comte.j@gmail.com)
 Peter Hannes, École Polytechnique Fédérale de Lausanne (hannes.peter@epfl.ch)
 Stuart Humphries, University of Lincoln, UK (shumphries@lincoln.ac.uk)
 Lee Karp-Boss, University of Maine (lee.karp-boss@maine.edu)
 Evan Variano, UC Berkeley (variano@berkeley.edu)
- Location: Sidney
- 8:30 AM **Ionescu, D.;** Bizic-Ionescu, M.; Karnatak, R.; Musseau, C.; Onandia, G.; Berger, S.; Nejtgaard, J.; Jeschke, J.; Lischoid, G.; Gessner, M.; Wollrab, S.; Grossart, H.: KETTLE HOLES AS MODEL META-ECOSYSTEMS TO STUDY LAND-USE EFFECTS ON AQUATIC BIODIVERSITY
- 8:45 AM **Reche, I.;** Batanero, G.; Joglar, V.; Green, A.; Martin-Platero, A.: FLAMINGOS AS DISPERSAL VECTORS OF RARE AQUATIC BACTERIA
- 9:15 AM **Byron, M.;** Angle, B.; Rau, M.: EXPLORING NON-HOMOGENEOUS, NON-SPHERICAL PARTICLES IN FLOW: HOW DO WE QUANTIFY INERTIA?[†]
- 9:30 AM **Sutherland, K.;** Conley, K.: MICROBE SHAPE GOVERNS PARTICLE SELECTION BY ABUNDANT MARINE GRAZERS[†]
- 9:45 AM **Schuech, R.;** Hoehfurtner, T.; Smith, D.; Humphries, S.: MOTILE CURVED BACTERIA ARE PARÉTO-OPTIMAL
- 10:00 AM **Guadayol, Ó.;** Schuech, R.; Humphries, S.: OPTIMAL ASPECT RATIOS FOR EXPLORATION AND EXPLOITATION IN CHEMOTACTIC BACTERIA
- 10:15 AM **El Baidouri, F.;** Suzuki, S.; Venditti, C.; Humphries, S.: PHENOTYPIC RECONSTRUCTION OF THE LAST COMMON ANCESTOR OF BACTERIA: ECOLOGICAL AND EVOLUTIONARY IMPLICATIONS.

[†] REPRESENTS INVITED PRESENTATIONS

SSO44 BRINGING THE "NATURAL FLOW REGIME" TO LAKES

- Chair(s): Catherine Hein, Wisconsin Department of Natural Resources (clhein@gmail.com)
Peter Lisi, UW-Madison (peter.j.lisi@gmail.com)
Noah Lorttig, UW-Madison (nlorttig@wisc.edu)
- Location: Saanich 1&2
- 8:30 AM **Hein, K.:** LAKE LEVEL FLUCTUATIONS: A SYNTHESIS AND PROSPECTUS FOR THE FUTURE^T
- 9:00 AM Hein, C.; Lorttig, N.; **Wu, Z.:** LINKING GROUNDWATER AND CLIMATE TO UNDERSTAND LONG-TERM LAKE LEVEL FLUCTUATIONS IN WISCONSIN^T
- 9:15 AM **Pereles, K.;** Vander Zanden, J.: HETEROGENEITY OF LAKE LEVEL AND SURFACE AREA RESPONSES DURING A DROUGHT IN NORTH TEMPERATE LAKES^T
- 9:30 AM **Lisi, P.;** Hein, C.: DIFFERENT RESPONSES IN LAKE WATER CLARITY TO NATURAL VARIATION IN LAKE LEVEL.¹
- 9:45 AM **Keeton, J.;** Gaeta, J.: MULTI-YEAR DROUGHT AND LITTORAL HABITAT LOSS ACROSS THE UNITED STATES: AN EVALUATION OF LAKES SURVEYED IN THE NATIONAL LAKES ASSESSMENT^T
- 10:00 AM **Gaeta, J.:** MULTI-YEAR DROUGHT, LITTORAL HABITAT, AND THE EXTINCTION POTENTIAL OF A SHORT-LIVED FISH SPECIES OF CONCERN UNDER FUTURE CLIMATE CONDITIONS^T
- 10:15 AM **Abirhire, O.;** Hunter, K.; Beadle, J.; Emmons, S.; Hudson, J.: INVESTIGATING THE LONG-TERM PATTERN OF TURBIDITY IN LAKE DIEFENBAKER USING LANDSAT-8 OLI IMAGERY

SSO45 GAS EXCHANGE AT THE WATER-ATMOSPHERE INTERFACE IN LAKES, RIVERS, ESTUARIES AND THE OPEN OCEAN

- Chair(s): Judith Rosentreter, Southern Cross University, Lismore, Australia (judith.rosentreter@scu.edu.au)
Yves Prairie, University of Quebec (prairie.yves@uqam.ca)
Paul del Giorgio, University of Quebec at Montreal (del_giorgio.paul@uqam.ca)
Bradley Eyre, Southern Cross University, Lismore, Australia (bradley.eyre@scu.edu.au)
- Location: Oak Bay 1&2
- 2:00 PM **Ulseth, A.;** Hammer, F.; Horgby, Å.; McGinnis, D.; Hall, R.; Battin, T.: GAS-EXCHANGE IN HIGH-ENERGY STREAMS: IMPLICATIONS OF BUBBLES AND SCALING CO₂ FLUXES
- 2:15 PM **Kokic, J.;** Sahlée, E.; Sobek, S.; Vachon, D.; Wallin, M.: HIGH SPATIAL VARIABILITY OF GAS TRANSFER VELOCITY IN STREAMS REVEALED BY TURBULENCE MEASUREMENTS – IMPLICATIONS FOR SCALING GREENHOUSE GAS EMISSIONS
- 2:30 PM **Caldow, C.;** Warneke, T.; Hilke, I.; Fischer, H.; Notholt, J.; Paton-Walsh, C.; Griffith, D.: DRIVERS OF WATER-ATMOSPHERE GREENHOUSE GAS (CO₂, CH₄ AND N₂O) EXCHANGE IN TWO OF THE WORLD'S MAJOR RIVERS: THE ELBE AND THE MURRAY
- 2:45 PM **Brigham, B.;** Montero, A.; Juhl, A.; Bird, J.; O'Mullan, G.: COUPLING BETWEEN ANTHROPOGENIC INPUTS AND ENHANCED CH₄ AND CO₂ EFFLUX VALUES IN THE HUDSON RIVER ESTUARY
- 3:00 PM **Herrero Ortega, S.;** Romero González-Quijano, C.; Casper, P.; Kleinschmit, B.; Singer, G.; Gessner, M.: METHANE EMISSIONS FROM URBAN FRESHWATERS: SPATIO-TEMPORAL PATTERNS, ENVIRONMENTAL DRIVERS AND THE FOOTPRINT OF A METROPOLITAN AREA

- 3:15 PM **Kim, J.;** Prairie, Y.: ASSESSING THE CONTRIBUTION OF CHEMICAL ENHANCEMENT TO CO₂ EXCHANGE ACROSS THE AIR-WATER INTERFACE IN EUTROPHIC LAKES OF QUEBEC
- 4:00 PM **Verspagen, J.;** Meijer, M.; Dean, J.; van Huissteden, K.; Dolman, H.; Huisman, J.: THE IMPACT OF A DENSE PHYTOPLANKTON BLOOM ON THE INFLUX OF ATMOSPHERIC CO₂ INTO A EUTROPHIC LAKE
- 4:15 PM **Desrosiers, K.;** Del Sontro, T.; del Giorgio, P.: INTEGRATING THE OVERALL EFFECTS OF PLANT HABITATS ON THE CH₄ AND CO₂ BUDGET OF A BOREAL LAKE
- 4:30 PM **Myllykangas, J.;** Jilbert, T.; Hietanen, S.: METHANE DYNAMICS IN A EUTROPHIED BOREAL ESTUARY
- 4:45 PM **Yao, H.;** Hu, X.; Montagna, P.: CO₂ FLUX IN NORTHWESTERN GULF OF MEXICO ESTUARIES – A HYDROLOGICAL CONTROL?
- 5:00 PM **McCutcheon, M.;** Hu, X.: UNDERSTANDING UNCERTAINTIES IN THE CHANGING CARBON BUDGET OF ESTUARIES: A CASE STUDY IN THE NORTHWESTERN GULF OF MEXICO

SSO50 CONTROL OF ALGAL BLOOMS

- Chair(s): Weiping Hu, Nanjing Institute of Geography and Limnology, CAS (wphu@niglas.ac.cn)
Johann Rudolf Strickler, University of Wisconsin (strlab1@uwm.edu)
- Location: Carson Hall C
- 8:30 AM **Hu, W.:** A NEW METHOD FOR THE REDUCTION OF THE INNER POLLUTION LOADING AND ALGAE SEEDS IN LARGE SHALLOW EUTROPHICATION LAKE
- 9:00 AM **Zhang, Y.;** Hu, W.: THE ANALYSIS OF THE INFLUENCE OF WIND WAVE FIELD ON THE DISTRIBUTION OF CYANOBACTERIA
- 9:15 AM **Duan, H.:** MODIS OBSERVATIONS OF CYANOBACTERIAL RISKS IN A EUTROPHIC LAKE: IMPLICATIONS FOR LONG-TERM SAFETY EVALUATION IN DRINKING-WATER SOURCE
- 9:30 AM **Cho, K.;** Park, Y.: EVALUATING ENVIRONMENTAL INFLUENCES ON TOXIC ALGAL BLOOMS USING HYPERSPECTRAL IMAGES
- 9:45 AM **Peng, Z.;** Weiping, H.: QUANTIFYING FORECAST UNCERTAINTY OF WEEKLY CYANOBACTERIAL BLOOM FORECASTS USING A BAYESIAN JOINT PROBABILITY MODEL
- 10:00 AM **Anbiah, R.;** Dale, B.; Thankamony, R.; AlRaisi, A.; Perumal, P.; AlHosani, S.: DINOFLAGELLATE CYSTS AS INDICATORS FOR THE RISK OF HARMFUL ALGAL BLOOMS FROM COASTAL DEVELOPMENT PROJECTS: A NEW TOOL FOR COASTAL MANAGEMENT
- 2:00 PM **Chen, k.:** LAKESIDE WETLAND AS A TRAP IN CYANOBACTERIA AND NUTRIENT REMOVAL AND CAPTURE ABILITY IN LAKE CHAOHU
- 2:15 PM **GU, X.;** Chen, k.; Zhang, L.: PRELIMINARY EVIDENCE OF NUTRIENT'S RELEASE FROM SEDIMENT IN RESPONSE TO OXYGEN ACROSS BENTHIC OXIDATION LAYER BY A LONG-TERM FIELD TRIAL
- 2:30 PM **Deng, J.;** Hu, W.; Zhu, J.; Chen, F.: VARIATIONS IN THE DISTRIBUTION OF CHL-A AND PREDICTION USING A MULTIPLE REGRESSION MODEL
- 2:45 PM **Li, W.;** Zhu, G.; Zhang, Y.: NUMERICAL FORECASTING OF SHORT-TERM ALGAE-INDUCED BLACK BLOOM IN EUTROPHIC SHALLOW LAKE : A CASE STUDY OF LAKE TAIHU, CHINA
- 3:00 PM **Lai, X.:** SENSITIVITY AND UNCERTAINTY ANALYSIS FOR WATER QUALITY MODELING IN TAIHU LAKE

^T REPRESENTS TUTORIAL PRESENTATIONS

3:15 PM **Yin, H.:** REMEDIATION OF INTERNAL PHOSPHORUS LOADS WITH MODIFIED CLAYS, INFLUENCE OF FLUVIAL SUSPENDED PARTICULATE MATTER AND RESPONSE OF THE BENTHIC MACROINVERTEBRATE COMMUNITY.

SSO56 COMPLEXITY IN COASTAL SYSTEMS

Chair(s): Robert F. Chen, University of Massachusetts Boston (bob.chen@umb.edu)
Shannon Davis, UMassBoston (shannon.davis002@umb.edu)

Location: Colwood 1&2

4:00 PM **Ferrera, I.; Auladell, A.; Reñé, A.; Alacid, E.; Basterretxea, G.; Garcés, E.:** PATTERNS OF BACTERIOPLANKTON DIVERSITY AND COMMUNITY STRUCTURE ALONG CONTRASTING CROSS-SHORE ENVIRONMENTAL GRADIENTS IN THE NORTHWESTERN MEDITERRANEAN COAST

4:15 PM **Camilleri, A.;** Ozersky, T.: NUTRIENT LIMITATION OF UPPER GREAT LAKES PERIPHYTON ACROSS LARGE SPATIAL AND ENVIRONMENTAL GRADIENTS

4:30 PM **Kodama, T.;** Takada, Y.; Iguchi, N.; Morimoto, H.; Goto, T.: VARIATIONS IN ZOOPLANKTON COMMUNITY IN THE COASTAL AREA OF THE SEA OF JAPAN SINCE 1999

4:45 PM **Saganash, N.;** Blackned, W.; Belanger, S.; Cheezo, N.; Courcelles, R.; Dunn, M.; del Giorgio, P.; Durocher, C.; Ehn, J.; Gilbert, J.; Gosselin, M.; Kuzyk, Z.; Neumeier, U.; Short, F.; Tapiatic, R.; Tremblay et al., A.: EY YOU ISTCHEE EELGRASS RESEARCH PROJECT, JAMES BAY EAST COAST

5:00 PM **Tremblay, A.;** Métivier, V.; Massicotte, B.; Dupuis, P.: MONITORING SALT WATER INTRUSION IN RUPERT BAY, JAMES BAY, CANADA, AFTER PARTIAL DIVERSION OF A MAJOR TRIBUTARY

5:15 PM **Chen, R.;** Kirshen, P.; Byrnes, J.; Lockwood, L.; Borrelli, M.: SEA-LEVEL RISE IN BOSTON HARBOR: A COMPLEX, UNCERTAIN, CHALLENGING ISSUE

5:30 PM **Sparks, E.;** Temple, N.; Martin, S.; Firth, D.; Cebrian, J.: FUNCTIONALITY AND EFFECTIVENESS OF LARGE-SCALE LIVING SHORELINE PROJECTS

SSO65 RELEVANCE OF HOST-MICROBE INTERACTIONS IN AQUATIC ECOSYSTEM FUNCTIONING

Chair(s): Ulisse Cardini, Stazione Zoologica Anton Dohrn (SZN), Italy (ulisse.cardini@szn.it)
Grazia Marina Quero, SZN, Italy (grazia.quero@ve.ismar.cnr.it)
Marco Bartoli, University of Parma, Parma, Italy (marco.bartoli@unipr.it)
Jillian Petersen, University of Vienna, Vienna, Austria (petersen@microbial-ecology.net)
Rachel Foster, Stockholm University, Stockholm, Sweden (rachel.foster@su.se)

Location: Sidney

4:00 PM **Cardini, U.:** THE BIOGEOCHEMISTRY OF HOST-MICROBE INTERACTIONS[†]

4:15 PM **Beinart, R.:** LINKING THE PHYSIOLOGY OF AQUATIC SYMBIONTS TO ECOSYSTEM PROCESSES¹

4:30 PM **Pernice, M.;** Alneberg, J.; Sundh, J.; Bunse, C.; Pontiller, B.; Andersson, A.; Pinhassi, J.; Foster, R.: QUORUM SENSING AND CROSS-DOMAIN COMMUNICATION IN MARINE ENVIRONMENT

4:45 PM **Jackrel, S.;** White, J.; Buffin, K.; Hayden, K.; Sarnelle, O.; Deneff, V.: DISENTANGLING THE ROLE OF HOSTS VERSUS THEIR BACTERIAL ASSOCIATES IN DRIVING INTRASPECIFIC NICHE DIFFERENCES AMONG PHYTOPLANKTON

5:00 PM **Garcia, Y.;** Costello, J.; Strickler, J.; Lopes, R.: WHO IS THE WINNER IN A DIATOM-CILIATE CONSORTIUM: ONE, BOTH OR NONE?

5:15 PM **Benelli, S.;** Bartoli, M.; Bodini, A.; Bondavalli, C.; Magri, M.; Fano, E.: FLUXES ALONG GRADIENTS: BIODIVERSE BENTHIC COMMUNITIES FAVOR RECYCLING AND ATTENUATE IMPORT AND LOSSES

5:30 PM **George, E.;** Roach, T.; Quinn, R.; Arts, M.; Sean, B.; Huckeba, J.; Haas, A.; Little, M.; Silveira, C.; Wegley Kelly, L.; Doorstein, P.; Rohwer, F.; Keeling, P.: MICROBIOME SPATIAL VARIATION WITHIN A CORAL HOLOBIONT

5:45 PM **Gramer, L.;** Rosales, S.; Sinigalliano, C.; Gidley, M.; Putman, N.; Staley, C.; Chun, C.; Sadowsky, C.; Lopez, J.; Hendee, J.: PHYSICAL HABITAT AS A DRIVER OF CORAL REEF MICROBIOME COMMUNITY STRUCTURE: NEXT-GENERATION-SEQUENCING AND OCEANOGRAPHY

SSO75 INTEGRATING SCIENCE AND MANAGEMENT AT THE COASTAL INTERFACE: LANDSCAPE-BASED APPROACHES AND APPLICATION TO WATERSHED, COASTAL, AND OCEAN RESOURCE MANAGEMENT

Chair(s): Franklin B Schwing, NOAA NMFS (franklin.schwing@noaa.gov)
Roger Pulwarty, NOAA ESRL (roger.pulwarty@noaa.gov)

Location: Esquimalt

2:00 PM **Pulwarty, R.;** Schwing, F.: EXTREMES, SLOW ONSETS, AND FAST REFLEXES

2:15 PM **Robinson, E.:** INTEGRATING ECOSYSTEMS, DISCIPLINES, AND PARTNERSHIPS TO ADDRESS MANAGEMENT-RELEVANT QUESTIONS IN MARINE PROTECTED AREAS OF NORTHERN CALIFORNIA

2:30 PM **Johnson, L.;** Kelly, J.; Allan, J.; Bartsch, W.; Cai, M.; Smith, S.; Yurista, P.: USE OF A NEW ANTHROPOGENIC STRESSOR SUITE IN STRESSOR-RESPONSE ANALYSES FOR THE GREAT LAKES NEARSHORE ZONE

2:45 PM **Lindley, S.;** Danner, E.; Hendrix, N.: MANAGING WATER AND SALMON IN A HIGHLY MODIFIED RIVER BASIN: APPLICATION OF A COUPLED MODELING SYSTEM

3:00 PM **Seitzinger, S.:** MANAGING THE WATERSHED-COASTAL-OCEAN CONTINUUM IN THE ERA OF CLIMATE NON-STATIONARITY

3:15 PM **Schwing, F.;** Pulwarty, R.: RESOURCE, ECOLOGICAL, AND HUMAN CONNECTIONS ACROSS THE COASTAL INTERFACE: CHALLENGES AND OPPORTUNITIES FOR AQUATIC SCIENTISTS AND MANAGERS

SSO83 SOURCES, TROPHIC TRANSFER, AND UTILIZATION OF DIETARY NUTRIENTS IN AQUATIC ECOSYSTEMS: CURRENT STATUS AND FUTURE CHALLENGES

Chair(s): Martin Kainz, WasserCluster Lunz - Biological Station (martin.kainz@donau-uni.ac.at)
Fen Guo, WasserCluster Lunz (fen.guo@donau-uni.ac.at)
Michael T. Brett, University of Washington, Seattle (mtbrett@u.washington.edu)

Location: Carson Hall A

8:30 AM **M. Nielsen, J.;** L. Clare, E.; Hayden, B.; T. Brett, M.; Burian, A.; Kratina, P.: DIET TRACING IN ECOLOGY: METHOD COMPARISON AND SELECTION^{††}

8:45 AM **Richoux, N.;** Moyo, S.: NUTRIENT TRANSFERS FROM RIVER TO LAND VIA EMERGING INVERTEBRATES

9:00 AM **Gladyshev, M.;** **Sushchik, N.;** Makhutova, O.; Glushchenko, L.; Rudchenko, A.; Makhrov, A.; Borovikova, E.; Dgebuadze, Y.: FATTY ACID COMPOSITION AND CONTENTS OF SEVEN COMMERCIAL FISH SPECIES OF GENUS COREGONUS FROM RUSSIAN SUBARCTIC WATER BODIES

[†] REPRESENTS INVITED PRESENTATIONS

- 9:15 AM **Makhutova, O.**; Shulepina, S.; Gladyshev, M.: THE EFFECT OF SOME ECOLOGICAL FACTORS ON FATTY ACID CONTENT AND COMPOSITION OF BENTHIC INVERTEBRATE GAMMARUS LACUSTRIS, VALUABLE FOOD SOURCE FOR FISH
- 9:30 AM **Martin-Creuzburg, D.**; Kowarik, C.; Straile, D.: CROSS-ECOSYSTEM FLUXES: EXPORT OF POLYUNSATURATED FATTY ACIDS FROM AQUATIC TO TERRESTRIAL ECOSYSTEMS
- 9:45 AM **Mackinnon, J.**; Parrish, C.; Marmillot, V.; Tremblay, J.: ESSENTIAL FATTY ACIDS AND ENERGY TRANSFER IN PLANKTON IN THE CANADIAN ARCTIC
- 10:00 AM **Kainz, M.**; Guo, F.; Ebn, N.; Brett, M.; Bunn, S.; Fry, B.: TROPHIC REWORKING OF LIPIDS FROM THE BASE OF THE FOOD CHAIN TO FISH BRAIN AND EYES – A COMPOUND-SPECIFIC STABLE ISOTOPE APPROACH
- 10:15 AM **Parzanini, C.**; Parrish, C.; Hamel, J.; Mercier, A.: A TROPHIC STUDY OF DEEP-SEA BENTHIC INVERTEBRATES IN THE NW ATLANTIC USING ISOTOPIC, ELEMENTAL, AND FATTY ACID ANALYSES
- 2:00 PM **Hacker Teper, S.**; Parrish, C.; Gagnon, P.: ASSESSING TEMPORAL AND SPATIAL TROPHODYNAMICS IN A NEWFOUNDLAND RHODOLITH BED COMMUNITY USING LIPID CLASS, FATTY ACID, AND STABLE ISOTOPE BIOMARKERS
- 2:15 PM **Thera, J.**; **Kidd, K.**; Bertolo, R.: PATTERNS OF ESSENTIAL AMINO ACIDS IN AQUATIC FOOD WEBS
- 2:30 PM **Brett, M.**; Schram, J.; Galloway, A.; Nielsen, J.; Strizek, A.; Kann, J.: DO DAPHNIA AND APHANIZOMENON HAVE A SYMBIOTIC RELATIONSHIP? EVIDENCE FOR HIGHLY SELECTIVE ZOOPLANKTON RESOURCE UTILIZATION IN A HYPEREUTROPHIC LAKE
- 2:45 PM **Schälicke, S.**; Teubner, J.; Martin-Creuzburg, D.; Wacker, A.: INTRASPECIFIC DIFFERENCES IN THE RESPONSE TO BIOCHEMICAL FOOD QUALITY AMONG BRACHIONUS CALYCIFLORUS STRAINS
- 3:00 PM **Jarczak, J.**: THE INFLUENCE OF TROPHIC STATE ON NUTRIENT ALLOCATION PATTERNS INTO DAPHNIA RESTING EGGS

- 3:15 PM **Currie, W.**; Bowen, K.; Rozon, R.; Berges, J.: ESTIMATES OF TROPHIC TRANSFER ALONG A EUTROPHIC-OLIGOTROPHIC GRADIENT

SSO92 THE ECOLOGICAL CONSEQUENCES OF EVOLUTION AND PHENOTYPIC PLASTICITY IN AQUATIC ECOSYSTEMS

- Chair(s): Rana El-Sabaawi, University of Victoria (rana@uvic.ca)
Andres Lopez-Sepulcre, Centre National de la Recherche Scientifique (alopez@biologie.ens.fr)
Sarah Collins, University of Wisconsin (scollins23@wisc.edu)
Steve Thomas, University of Nebraska-Lincoln (sthomas5@unl.edu)
- Location: Sidney
- 2:00 PM **Lemmen, K.**; Papakostas, S.; Declerck, S.: PHOSPHORUS AVAILABILITY DETERMINES RAPID EVOLUTIONARY RESPONSE OF ZOOPLANKTON CONSUMERS TO SELECTION FOR FAST GROWTH
- 2:15 PM **De Meester, L.**; Vanhamel, M.; Goitom, E.; Brans, K.; Kilsdonk, L.; Govaert, L.; Lemmens, P.; Pantel, J.: RAPID EVOLUTION IN DAPHNIA AND ITS CONSEQUENCES FOR TOP-DOWN CONTROL OF ALGAE
- 2:30 PM **Wasserman, B.**; Palkovacs, E.: INTRASPECIFIC VARIATION IN PREDATOR-DEFENSE TRAITS ALTERS HOST-PARASITE INTERACTIONS WITHIN AND ACROSS GENERATIONS
- 2:45 PM **Marques, P.**; Frauendorf, T.; Warbanski, M.; Zandonà, E.; Phillip, D.: HOW PREDATORS AFFECT INTRASPECIFIC VARIATION IN DIET AND GUT MORPHOLOGY ?
- 3:00 PM **Thomas, S.**; Lopez-Sepulcre, A.; El-Sabaawi, R.; Collins, S.; Bruneaux, M.; Flecker, A.: THE ECOLOGICAL CONSEQUENCES OF LOCAL ADAPTATION IN TRINIDADIAN GUPPIES: ASSESSING RESULTS ACROSS SCALES OF ENVIRONMENTAL COMPLEXITY
- 3:15 PM **Declerck, S.**; Durston, D.; El-Sabaawi, R.; Goos, J.; Jeyasingh, P.; Lemmen, K.: ECO-EVOLUTIONARY IMPLICATIONS OF CONSUMER STOICHIOMETRY: A SYNTHESIS AND PERSPECTIVE

THURSDAY ORALS

SS005 ECOTONES: MICROBIAL COMMUNITY TRANSITION ZONES IN AQUATIC SYSTEMS

Chair(s): Federico Baltar, University of Otago
(federico.baltar@otago.ac.nz)
Sergio Morales, University of Otago
(sergio.morales@otago.ac.nz)

Location: Colwood 1&2

- 9:00 AM **Morales, S.**; Meyer, M.; Currie, K.; Baltar, F.: ARE OCEANIC FRONTS ECOTONES? SEASONAL CHANGES ALONG THE SUBTROPICAL FRONT SHOW FRONTS AS BACTERIOPLANKTON TRANSITION ZONES BUT NOT DIVERSITY HOTSPOTS
- 9:15 AM **Bagnaro, A.**; **Baltar, F.**; Brownstein, G.; Lee, W.; Morales, S.; Pritchard, D.: QUANTITATIVE RELATIONS BETWEEN BACTERIOPLANKTON AND WATER MASSES: FUZZY DETECTION OF ECOTONES AND ECOSYSTEMS IN THE PELAGIC ENVIRONMENT
- 9:45 AM **Crevecoeur, S.**; Prairie, Y.; del Giorgio, P.: BACTERIAL COMMUNITY ASSEMBLY ACROSS A STEEP RIVER / LAKE ENVIRONMENTAL GRADIENT
- 10:00 AM **Isabwe, A.**: BIOGEOGRAPHIC PATTERNS OF THE RIVERINE BACTERIOPLANKTON AND PHYTOPLANKTON IN AN URBANIZING WATERSHED RESULTS MORE FROM DETERMINISTIC THAN STOCHASTIC PROCESSES
- 10:15 AM **Knack, J.**; Hicks, R.: ENVIRONMENTAL GRADIENTS CAN PREDICT PLANKTONIC BACTERIAL COMMUNITY SIMILARITY IN THE ST. LOUIS RIVER ESTUARY

SS009 RECENT ADVANCES IN AQUATIC PHOTOCHEMISTRY

Chair(s): Michael Gonsior, Chesapeake Biological Laboratory (CBL)
(gonsior@umces.edu)
Leanne Powers, Chesapeake Biological Laboratory (CBL)
(lpowers@umces.edu)
Rossana Del Vecchio, University of Maryland
(rossdv@umd.edu)
Neil Blough, University of Maryland (neilb@umd.edu)

Location: Oak Bay 1&2

- 9:00 AM **Gonsior, M.**; Powers, L.: A CUSTOM-DESIGNED PHOTODEGRADATION SYSTEM FOR KINETIC STUDIES OF DISSOLVED ORGANIC MATTER (DOM) WITH ACCURATE PH CONTROL, AIR EQUILIBRATION AND MINIMAL INNER FILTERING EFFECT.
- 9:15 AM **Mopper, K.**; Sun, L.; Qian, J.; Blough, N.: INSIGHTS INTO THE PHOTOPRODUCTION SITES OF HYDROXYL RADICALS AND LMW CARBONYL COMPOUNDS IN DOM IN NATURAL WATERS
- 9:30 AM **Powers, L.**; Gonsior, M.; McDonald, N.; Del Vecchio, R.; Blough, N.; Hertkorn, N.; Schmitt-Kopplin, P.: USING SARGASSUM COLORED DISSOLVED ORGANIC MATTER (CDOM) AS MODEL FOR MARINE CDOM PHOTODEGRADATION
- 9:45 AM **Armstrong, A.**; Powers, L.; Gonsior, M.: USING SEMI-CONTINUOUS FLUORESCENCE AND ABSORPTION MEASUREMENTS DURING PHOTOIRRADIATION TO CHARACTERIZE DISSOLVED ORGANIC MATTER IN A HETEROGENEOUS WETLAND LANDSCAPE
- 10:00 AM **Seopela, M.**: ENVIRONMENTAL FATE OF POLYCYCLIC AROMATIC HYDROCARBONS: THEIR TRANSFORMATION RATE AND PRODUCTS IN THE PRESENCE OF SOLAR RADIATION

- 10:15 AM **Miller, B.**; Powers, L.; Cao, F.: EXAMINING PHOTOCHEMICAL ASSUMPTIONS: FROM LAB TO SHINING SEA

SS012 INTEGRATING ECOSYSTEMS - LINKING BIOGEOCHEMICAL CYCLES ACROSS AQUATIC AND TERRESTRIAL BOUNDARIES

Chair(s): Jackie Webb, University of Regina (jackie.gat@gmail.com)
Nicole Hayes, University of Regina
(hayes.nicolemarie@gmail.com)
Kerri Finlay, University of Regina
(Kerri.Finlay@uregina.ca)

Location: Carson Hall B

- 9:00 AM **Rasmus, K.**; Petticrew, E.; Rex, J.: THE SEASONAL CONTRIBUTION OF SALMON-BASED MARINE DERIVED NUTRIENTS TO THE FINE BED SEDIMENT IN AN INTERIOR BRITISH COLUMBIAN RIVER
- 9:15 AM **Botrel, M.**; Hudon, C.; Biron, P.; Maranger, R.: INFLUENCE OF CLIMATE VARIABILITY ON NITRATE RETENTION IN A RIVERINE SUBMERGED AQUATIC VEGETATION BED
- 9:30 AM **Lambert, T.**; Bouillon, S.; Morana, C.; Roland, F.; Descy, J.: EFFECTS OF HUMAN LAND USE ON THE TERRESTRIAL AND AQUATIC SOURCES OF FLUVIAL ORGANIC MATTER IN A TEMPERATE RIVER BASIN (THE MEUSE RIVER, BELGIUM)
- 9:45 AM **Williamson, T.**; Vanni, M.; Jackson, M.; Scott, T.: SPATIAL AND TEMPORAL PATTERNS IN DENITRIFICATION RATES DIFFER IN RESERVOIRS WITH CONTRASTING WATERSHED LAND USE
- 10:00 AM **Webb, J.**; Leavitt, P.; Baulch, H.; Simpson, G.; Santos, I.; Maher, D.; Finlay, K.: AQUATIC CARBON FLUXES FROM UNDERREPRESENTED AGRICULTURAL RESERVOIRS: POTENTIALLY IMPORTANT SOURCES OR SINKS AT THE CATCHMENT SCALE
- 10:15 AM **Finlay, K.**; Webb, J.; Wissel, B.; Leavitt, P.; Baulch, H.; Simpson, G.; Haig, H.; Hodder, K.: CLIMATE AND CATCHMENT INTERACTIONS IMPACT SMALL RESERVOIR WATER QUALITY IN THE NORTHERN GREAT PLAINS
- 2:00 PM **Einarsdottir, K.**; Attermeyer, K.; Hawkes, J.; Kothawala, D.; Tranvik, L.: THE ROLE OF DRY EVENTS, REWETTING, AND IRON REDOX CONDITION ON THE FATE OF DOM ENTERING A HEADWATER STREAM
- 2:15 PM **Hensgens, G.**; Lechtenfeld, O.; Berggren, M.: DIFFERENT BOREAL TERRESTRIAL DOC SOURCES SHOW DIFFERENT $\delta^{13}C$ SIGNATURES: IMPLICATIONS FOR TRACING LABILE DOC ACROSS THE LAND-WATER INTERFACE
- 2:30 PM **Emilson, E.**; Yakimovich, K.; Orland, C.; Carson, M.; Myktyczuk, N.; Dirszowsky, R.; Basiliko, N.; Gunn, J.; Tanentzap, A.: CLIMATE-DRIVEN CHANGES IN FORESTED ECOSYSTEMS AFFECT GREENHOUSE GAS PRODUCTION IN LAKE SEDIMENTS
- 2:45 PM **Tait, D.**; Maher, D.; Sippo, J.; McMahon, A.; Santos, I.: THE MISSING NUTRIENT SOURCE? THE SUBMARINE GROUNDWATER DISCHARGE OF NUTRIENT INTO THE SOUTHERN GREAT BARRIER REEF
- 3:00 PM **Franklin, H.**; Garzon-Garcia, A.; Burford, M.: A NOVEL BIOASSAY TO ASSESS MARINE AND FRESHWATER PHYTOPLANKTON RESPONSES TO SOIL-DERIVED PARTICULATE NUTRIENTS
- 3:15 PM **Borsheim, Y.**: PRIMARY PRODUCTION IN THE GREENLAND SEA MAY DECREASE BECAUSE OF ACCELERATED MELTING OF TUNDRA SURROUNDING THE ARCTIC OCEAN

SSO17 LIVING DOWNSTREAM FROM SHRINKING GLACIERS: UNDERSTANDING AND PREDICTING THE HYDROLOGY, GEOMORPHOLOGY, ECOLOGY AND BIOGEOCHEMISTRY OF GLACIER-FED STREAMS

Chair(s): Tom J. Battin, Ecole Polytechnique Federale de Lausanne, EPFL (tom.battin@epfl.ch)
Dean Jacobsen, University of Copenhagen (djacobsen@bio.ku.dk)
Christopher Robinson, Eawag (Christopher.Robinson@eawag.ch)
Martyn Tranter, University of Bristol (m.tranter@bristol.ac.uk)
Stuart Lane, University of Lausanne (stuart.lane@unil.ch)

Location: Oak Bay 1&2

- 2:00 PM **Hotelling, S.:** A CENTURY OF GLACIER-FED STREAM BIOLOGY: WHERE ARE WE NOW?[†]
- 2:15 PM **Cauvy-Fraunié, S.;** Andino, P.; Espinosa, R.; Jacobsen, D.; Dangles, O.: ECOLOGICAL RESPONSES TO MULTIPLE-SCALE FLOW FLUCTUATION IN TROPICAL GLACIER-FED STREAMS[†]
- 2:30 PM **Brown, L.:** RIVER ECOSYSTEM RESPONSES TO GLACIER RETREAT
- 2:45 PM **Fell, S.;** Carrivick, J.; Kelly, M.; Füreder, L.; Brown, L.: DECLINING GLACIER COVER THREATENS THE BIODIVERSITY OF ALPINE RIVER DIATOM COMMUNITIES
- 3:00 PM **Pitman, K.;** Huss, M.; Whited, D.; Sloat, M.; Radic, V.; Milnder, A.; Hood, E.; Brenner, R.; Reeves, G.; Moore, J.: GLACIAL RETREAT CREATES NEW SALMON HABITAT IN ALASKA
- 3:15 PM **Robinson, C.;** Paillex, A.; Siebers, A.; Ebi, C.: INTERMITTENCY IN A GLACIERIZED CATCHMENT: GOING WITH THE FLOW
- 3:30 PM **Jacobsen, D.;** Andino, P.; Espinosa, R.; Crespo-Pérez, V.; Cauvy-Fraunié, S.; Tiegs, S.: MELT WATER RUNOFF DYNAMICS DRIVE DIEL VARIATION IN NUTRIENT UPTAKE IN A TROPICAL GLACIER-FED STREAM
- 3:45 PM **Hood, E.;** Bellmore, R.; Fellman, J.; Edwards, R.: IMPLICATIONS OF GLACIER LOSS FOR AQUATIC FOOD WEBS IN ALASKA

SSO24 TERRESTRIAL ORGANIC MATTER IN AQUATIC FOOD WEBS: RESOURCE SUBSIDY OR RESOURCE SUBTRACTION?

Chair(s): Sebastian Diehl, Umea University (sebastian.diehl@umu.se)
Stuart E. Jones, University of Notre Dame (sjones20@nd.edu)
Christopher T. Solomon, Cary Institute of Ecosystem Studies (solomonc@caryinstitute.org)

Location: Saanich 1&2

- 9:00 AM **Diehl, S.:** ALLOCHTHONY VS. SUBSIDY - PATHWAYS OF TERRESTRIAL IMPACTS ON AQUATIC FOOD WEBS[†]
- 9:30 AM **Gareis, J.;** Lesack, L.: PHOTODEGRADED DISSOLVED ORGANIC MATTER FROM PEAK RIVER DISCHARGE AS A SUBSTRATE FOR BACTERIAL METABOLISM IN THE MACKENZIE, A GREAT ARCTIC DELTA.
- 9:45 AM **Berggren, M.;** Bengtson, P.; Soares, A.; Karlsson, J.: TERRESTRIAL SUPPORT OF ZOOPLANKTON BIOMASS IN NORTHERN RIVERS[†]
- 10:00 AM **Wauthy, M.;** Rautio, M.: ZOOPLANKTON CARBON AND FATTY ACID COMPOSITION IN THE CONTEXT OF INCREASING DOMINANCE OF TERRESTRIAL ORGANIC MATTER DUE TO PERMAFROST THAW

- 10:15 AM **Nova, C.;** Müller-Navarra, D.; Rocha, A.; Bozelli, R.: FATTY ACID SESTON QUALITY FOR TROPICAL ZOOPLANKTON: DEPENDENCE ON THE NUTRITIONAL STATE AND THE NATURAL DISSOLVED ORGANIC CARBON CONTENT
- 2:00 PM **Jones, S.;** Kelly, P.; Olson, C.; Solomon, C.; Zwart, J.: LAKE PRODUCTIVITY RESPONSES TO TERRESTRIAL ORGANIC CARBON AND NUTRIENT LOADS: MAKING SENSE OF OBSERVATIONS AND GENERATING PREDICTIONS[†]
- 2:15 PM **Rivera de Vasconcelos, F.;** Diehl, S.; Rodríguez, P.; Karlsson, J.; Byström, P.: EFFECTS OF TERRESTRIAL ORGANIC MATTER ON AQUATIC PRIMARY PRODUCTION AS MEDIATED BY PELAGIC-BENTHIC RESOURCE FLUXES
- 2:30 PM **Koizumi, S.;** Hamdan, M.; Ali, M.; Puts, I.; Karlsson, J.; Byström, P.: EXPERIMENTAL INCREASE IN TEMPERATURE AND DISSOLVED ORGANIC CARBON LEADS TO SHIFTS IN ZOOPLANKTON COMMUNITY AND ABUNDANCE
- 2:45 PM **Andersson, M.;** Holmgren, K.; Eklöv, P.: WARMING AND BROWNING: TEASING APART CLIMATE CHANGE EFFECTS ON AN AQUATIC PREDATOR
- 3:00 PM **Tonin, J.;** Rennie, M.; Rodgers, C.; Paterson, M.: EFFECTS OF DOC ON BENTHIVOROUS FISH ABUNDANCE AND RESOURCE USE
- 3:15 PM **Mehner, T.;** Rapp, T.; Beck, M.; Monk, C.; Trudeau, A.; Kiljunen, M.; Hilt, S.; Arlinghaus, R.: WHOLE-LAKE EXPERIMENTAL ADDITION OF ANGLER'S GROUND BAIT STRONGLY AFFECTS THE FISH COMMUNITY DESPITE LOW CONTRIBUTION TO THE LAKE CARBON BUDGET[†]
- 3:45 PM **Leach, T.;** Winslow, L.; Hayes, N.; Rose, K.: DOES SPACE EQUATE TO TIME? A LONG-TERM ASSESSMENT OF ECOLOGICAL IMPACTS OF INCREASING DISSOLVED ORGANIC MATTER IN 28 LAKES

SSO27 ADVANCING KNOWLEDGE AND MANAGEMENT OF HABS THROUGH INTERDISCIPLINARY COLLABORATION

Chair(s): Kateri Salk, University of Waterloo (krsalkgu@uwaterloo.ca)
Jason Venkiteswaran, Wilfrid Laurier University (jvenkiteswaran@wlu.ca)
Victoria Pebbles, Great Lakes Commission (vpebbles@glc.org)
Morgan Steffen, James Madison University (steffemm@jmu.edu)

Location: Esquimalt

- 9:00 AM **Diep, N.;** Dove, A.; Howell, T.; Backus, S.: GREAT LAKES WATER QUALITY AND HARMFUL ALGAL BLOOM (HABS) ASSESSMENT: LAKE ST. CLAIR/THAMES RIVER
- 9:15 AM **Evans, M.;** Vandergoot, C.: FACTORS LEADING TO ALIGNMENT OF HABS FAVORABLE CONDITIONS: SEASONAL PHOSPHORUS RETENTION IN WESTERN LAKE ERIE
- 9:30 AM **Boedecker, A.;** McCarthy, M.; Chaffin, J.; Newell, S.: THE COMPETING ROLES OF NITROGEN FIXATION, DENITRIFICATION, AND PHOSPHORUS CYCLING AT THE SEDIMENT WATER INTERFACE IN THE WESTERN BASIN OF LAKE ERIE
- 9:45 AM **Salk, K.;** Venkiteswaran, J.; Couture, R.; Higgins, S.; Paterson, M.; Schiff, S.: PAIRING ECOSYSTEM MODELING AND LONG-TERM DATASETS FOR HARMFUL ALGAL BLOOM FORECASTING
- 10:00 AM **Larsen, M.;** Salk, K.; Venkiteswaran, J.; Baulch, H.; Wolfe, J.; Higgins, S.: WHEN ONE BECOMES TWO! LONGER SUMMERS LEAD TO MULTIPLE CYANOBACTERIAL BLOOMS

[†] REPRESENTS TUTORIAL PRESENTATIONS

10:15 AM **Perez-Carrascal, O.**; Terrat, Y.; Fortin, N.; Giani, A.; Tromas, N.; Shapiro, B.: COHERENCE OF MICROCYSTIS SPECIES AND BIOGEOGRAPHY REVEALED THROUGH POPULATION GENOMICS

SSO32 THE AQUATIC CARBON PIPE - WHERE, WHEN, AND WHY IS IT ACTIVE OR PASSIVE?

Chair(s): Lars J. Tranvik, Uppsala University, Sweden (lars.tranvik@ebc.uu.se)
Dolly N. Kothawala, Uppsala University, Sweden (dolly.kothawala@ebc.uu.se)
Anne M. Kellerman, Florida State University, USA (akellerman@fsu.edu)
Nuria Catalan, Catalan Institute for Water Research (ICRA), Spain (ncatalangarcia@gmail.com)
Joan Pere Casas-Ruiz, Groupe de Recherche Interuniversitaire en Limnologie (GRIL), Département des Sciences Biologiques, UQAM (jpcasasruiz@gmail.com)
Jose L. Ledesma, Swedish University of Agricultural Sciences, Sweden (jose.ledesma@slu.se)
Susana Bernal, Centre for Advanced Studies, CEAB-CSIC, Spain (sbernal@ceab.csic.es)
Rafael Marce, Catalan Institute for Water Research, ICRA, Spain (rmarce@icra.cat)
Dominic Vachon, Geneva University, Switzerland (Dominic.Vachon@unige.ch)

Location: Carson Hall C

9:00 AM **Hotchkiss, E.**: PIPES, CHIMNEYS, AND PROCESSORS: A SYNTHESIS OF ORGANIC MATTER TRANSPORT, REACTIVITY, AND FATE IN AQUATIC ECOSYSTEMS[†]

9:30 AM **Singer, G.**; del Campo, R.; Behounek, B.; Fuß, T.; Corti, R.: THE AQUATIC CARBON PIPE IS A FLUVIAL NETWORK – SHOULD WE CARE?[†]

9:45 AM **Groeneveld, M.**; Attermeyer, K.; Catalán, N.; Einarsdóttir, K.; Hawkes, J.; Kothawala, D.; Tranvik, L.: SELECTIVE LOSS OF DISSOLVED ORGANIC MATTER ALONG THE BOREAL INLAND WATER CONTINUUM - THE ROLE OF ADSORPTION TO INORGANIC SURFACES

10:00 AM **GERARDIN, M.**; Hotchkiss, E.; del Giorgio, P.: IDENTIFYING THE FACTORS CONTROLLING THE PCO₂ DECLINE ALONG A RIVERINE CONTINUUM.

10:15 AM Hawkes, J.; Radoman, N.; Bergquist, J.; Wallin, M.; **Tranvik, L.**; Löfgren, S.: THE (NON)VARIABLE COMPOSITION OF DISSOLVED ORGANIC MATTER AMONG HEADWATER STREAMS – MODERATE DIFFERENCES RELATED TO GROUNDWATER FLOW PATHS AND TEMPERATURE

2:00 PM **Mostovaya, A.**; Hawkes, J.; Koehler, B.; Dittmar, T.; Tranvik, L.: DISSOLVED ORGANIC MATTER IN LAKE WATER: NEW INSIGHTS INTO LINKS BETWEEN COMPOSITION AND DECAY[†]

2:15 PM **Vachon, D.**; Langenegger, T.; Donis, D.; Beaubien, S.; McGinnis, D.: THE ROLE OF METHANE DYNAMICS IN THE CARBON BALANCE OF EUTROPHIC LAKES

2:45 PM **Fasching, C.**; Oni, S.; Hills, E.; Haffner, D.; Howell, T.; Koops, M.; Vogt, R.; Watson, S.; King, S.; Zastepa, A.; Frost, P.; Xenopoulos, M.: SOURCES, TRANSFORMATION AND FATE OF DISSOLVED ORGANIC MATTER IN LAKE ERIE

3:00 PM **Lin, H.**: CARBON BUDGETS OF MANGROVE ECOSYSTEMS IN SUBTROPICAL AND TROPICAL TAIWAN

3:15 PM **Ho, C.**; Lin, H.: EFFECTS OF TREE THINNING ON CARBON SEQUESTRATION IN MANGROVES

3:30 PM **McCallister, S.**; Dunalp, T.: CONTRASTING ROLE OF THE AQUATIC PRIMING EFFECT ALONG A RIVER-ESTUARINE CONTINUUM

3:45 PM **Kothawala, D.**; Kellerman, A.; Hawkes, J.: REVEALING THE MOLECULAR COMPOSITION OF DOM: HOW FAR HAVE WE COME, AND WHERE DO WE GO?

SSO39 OBSERVATION SYSTEMS AND BIG DATA ARE UNLOCKING NEW INSIGHTS INTO AQUATIC ECOSYSTEM DYNAMICS

Chair(s): Autun Purser, Alfred Wegener Institute (autun.purser@awi.de)
Katleen Robert, Memorial University Canada (robert.kathleen@googlemail.com)
Martin Le Tissier, Future Earth Coasts (FEC) (martin.letissier@ucc.ie)
Eirini Politi, University College Cork (eirini.politi@ucc.ie)
Andrew Tyler, University of Stirling, UK (a.n.tyler@stir.ac.uk)

Location: Esquimalt

2:15 PM **Politi, E.**; Cutler, M.; Le Tissier, M.; Tyler, A.: CONNECTING A GLOBAL LAKE OBSERVATORY WITH THE INTERNATIONAL LAGOONS FOR LIFE INITIATIVE; USING SATELLITES TO ADDRESS KNOWN GAPS IN COASTAL LAGOON MANAGEMENT

2:30 PM **Montagna, P.**: LONG-TERM CHANGES IN ESTUARINE BENTHOS AND FISH ARE RELATED TO CLIMATE CHANGE

2:45 PM **Hoeberechts, J.**; Leonard, L.; Insua, T.; Lintern, G.: APPLYING GPS MULTIPATH REFLECTION INTERFEROMETRY TO NEAR-REALTIME TSUNAMI DETECTION

3:00 PM **Preston, N.**: FUSING SPACE WITH HUMAN NETWORKS: BLENDING BIG DATA TO MONITOR ALGAL BLOOMS IN COASTAL BRITISH COLUMBIA

3:15 PM **Purser, A.**; Hehemann, L.; Dreutter, S.; Hoge, U.: INCREASING THE RESEARCH SCOPE OF TOWED CAMERA SYSTEMS: INTEGRATING HIGH RESOLUTION CAMERAS WITH SONAR SYSTEMS

SSO55 LAKES THEY ARE A-CHANGIN': HOW CONCURRENT LONG-TERM CHANGES INTERACT TO AFFECT AQUATIC ECOSYSTEMS

Chair(s): Taylor Leach, Rensselaer Polytechnic Institute (RPI) (taylor.leach@gmail.com)
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Alex Pezzuoli, RPI (pezzua@rpi.edu)
Kevin Rose, RPI (rosek4@rpi.edu)

Location: Carson Hall A

9:00 AM **Hansen, G.**; Winslow, L.; Trembl, M.; Schmalz, P.; Carpenter, S.; Read, J.: INTERPLAY OF WATER CLARITY AND TEMPERATURE DRIVING FISH HABITAT IN MIDWESTERN LAKES[†]

9:30 AM **Jane, S.**; Winslow, L.; Leach, T.; Rose, K.: LONG-TERM TRENDS IN DISSOLVED OXYGEN ACROSS A GLOBAL SUITE OF LAKES

9:45 AM **Selbie, D.**; Gauthier, J.; Gregory-Eaves, I.; Hume, J.; Laval, B.; MacIsaac, E.; Pon, L.; Putt, A.; Sumka, M.: CULTURAL EUTROPHICATION AND CLIMATE CHANGE DEGRADE LACUSTRINE CRITICAL HABITAT AND IMPERIL ENDANGERED SOCKEYE SALMON (ONCORHYNCHUS NERKA) IN CULTUS LAKE, BRITISH COLUMBIA

10:00 AM **Vanni, M.**; Renwick, W.; Gonzalez, M.; Williamson, T.: CHANGES IN WATERSHED AGRICULTURE AND INCREASING FISH BIOMASS DRIVE INCREASED NITROGEN LIMITATION OF PHYTOPLANKTON IN A EUTROPHIC LAKE

10:15 AM **Bowen, K.**; Currie, W.: THE INFLUENCE OF TROPHIC STATUS, TEMPERATURE AND INVASIVE SPECIES ON ZOOPLANKTON PRODUCTION IN THE GREAT LAKES

[†] REPRESENTS INVITED PRESENTATIONS

- 2:00 PM **Eckert, W.**; Beeri-Shlavin, Y.; Nishri, A.; Rimmer, A.: LONGTERM CHANGES IN PHOSPHORUS CYCLING OF A SUBTROPICAL LAKE DUE TO MAN-MADE PERTURBATIONS IN THE WATERSHED AND CLIMATE CHANGE
- 2:15 PM **Hayes, N.**; Vogt, R.; Finlay, K.; Simpson, G.; Leavitt, P.: PHYTOPLANKTON PERIODICITY PROVIDES INSIGHTS INTO SEASONAL AND CATCHMENT-SPECIFIC DRIVERS OF ENVIRONMENTAL CHANGE
- 2:30 PM **Harris, C.**; Chiuchiolo, A.; Priscu, J.: LONG TERM TRENDS IN PHYTOPLANKTON PRODUCTION IN PERMANENTLY ICE-COVERED ANTARCTIC LAKES
- 2:45 PM **Arnott, S.**; Celis-Salgado, M.; Valleau, R.; Paterson, A.; Smol, J.; DeSellas, A.; Brown, A.; Yan, N.; Rusak, J.: CURRENT CHLORIDE GUIDELINES DO NOT PROTECT AQUATIC LIFE IN SOFTWATER SHIELD LAKES
- 3:00 PM **Fournier, I.**; Lovejoy, C.; Vincent, W.: ROAD SALT IMPACTS ON THE MICROBIAL PLANKTON OF A DRINKING WATER RESERVOIR
- 3:15 PM **Stephens, D.**; Hyman, A.: SPATIOTEMPORAL ASSESSMENT OF WATER CHEMISTRY DYNAMICS IN COASTAL DUNE LAKES
- 3:30 PM **Zhu, Y.**; Eyice, Ö.; Purdy, K.; Trimmer, M.: LONG-TERM WARMING ENHANCES METHANOGENESIS OVER METHANOTROPHY
- 3:45 PM **Fiskal, A.**; Deng, L.; Michel, A.; Schroth, M.; Dubois, N.; Bernasconi, S.; Lever, M.: EFFECTS OF ANTHROPOGENIC ACTIVITY ON SEDIMENTARY CARBON CYCLING IN 5 TEMPERATE LAKES

SSO60 SUSTAINABLE AQUACULTURE: ISSUES, TOOLS, AND TRENDS

Chair(s): John F. Marra, Brooklyn College-CUNY (jfm7780@brooklyn.cuny.edu)
Dror Angel, University of Haifa (adr@research.haifa.ac.il)
Megan Otu, Fisheries and Oceans Canada (megan.otu@dfo-mpo.gc.ca)
Jay Parsons, Fisheries and Oceans (Jay.parsons@dfo-mpo.gc.ca)
Pablo Conejeros, Universidad de Valparaiso (pablo.conejeros@uv.cl)

Location: Sidney

- 9:00 AM **Figuerola, C.**; Beltrami, O.; Bustos, P.; **Conejeros, P.**; Gallardo, J.: IMPROVEMENT OF BIOCONTAINMENT MEASURES FOR DISEASES IN CHILEAN SALMON AQUACULTURE
- 9:15 AM **Sylvester, E.**; Wringe, B.; Duffy, S.; Bradbury, I.: USING GENETIC TOOLS TO ASSESS TEMPORAL AND SPATIAL VARIABILITY IN HYBRIDIZATION BETWEEN WILD AND ESCAPED FARMED SALMON IN SOUTHERN NEWFOUNDLAND
- 9:30 AM **Cho, A.**; ZHONG, X.; Jiang, J.; Deeg, C.; Larsen, C.; Tabata, A.; Saunders, R.; Chan, A.; Miller, K.; Suttle, C.: CHARACTERIZING BACTERIAL AND MICRO-EUKARYOTIC COMMUNITIES OF JUVENILE FARMED PACIFIC OYSTERS USING UNIVERSAL PRIMERS AND CAS9 ENDONUCLEASE
- 9:45 AM **Lavaud, R.**; Guyondet, T.; Nadeau, A.; Davidson, J.; Filgueira, R.; Comeau, L.; Ouellette, M.; Crane, C.; Davidson, J.; Tremblay, R.: INTEGRATING MACROALGAE & WILD BIVALVE POPULATIONS TO IMPROVE ECOSYSTEM MODELS FOR A SUSTAINABLE DEVELOPMENT OF BIVALVE CULTURE IN EUTROPHIC ESTUARINE COMPLEXES.
- 10:00 AM **Beadle, J.**; Hunter, K.; Vandergucht, D.; Abirhire, O.; Hudson, J.: EFFECTS OF AQUACULTURE OPERATIONS ON WATER QUALITY IN LAKE DIEFENBAKER

- 2:00 PM **Robinson, S.**; McKindsey, C.; Simard, É.: USING MOVEMENT BEHAVIOUR TO ASSESS THE EFFECT OF SALMON AQUACULTURE FARM ACTIVITIES ON LOBSTER DISTRIBUTION PATTERNS IN THE BAY OF FUNDY
- 2:15 PM **Law, B.**; Hill, P.; Brager, L.; Crandford, P.: THE STORY OF THE MINI SLO-CORER AND GUST EROSION CHAMBER: EXAMINING SPATIAL AND TEMPORAL VARIATION IN ERODIBILITY OF BOTTOM SEDIMENTS AT ACTIVE SALMON AQUACULTURE SITES
- 2:30 PM **Crandford, P.**; Brager, L.; Law, B.; Bannister, R.: BIOLOGICAL BUFFERING CAPACITY OF DIFFERENT BENTHIC HABITATS TOWARDS THE ASSIMILATION OF IMPACTS FROM SALMON FARM WASTES
- 2:45 PM **Brager, L.**; Crandford, P.; Wong, D.; Law, B.: ALTERNATIVE METHODS FOR MONITORING BENTHIC ORGANIC ENRICHMENT EFFECTS AND APPLICABILITY ACROSS A RANGE OF ENVIRONMENTAL AND AQUACULTURE CONDITIONS
- 3:00 PM **Luu, D.**; Le Huu, H.; Faggotter, S.; Chen, C.; Sammut, J.; Burford, M.: OXYGEN AND NUTRIENT FLUXES IN INTEGRATED RICE-SHRIMP PONDS AFFECT SHRIMP PRODUCTION
- 3:15 PM **He, X.**; Sutherland, T.; Pawlowski, J.; Gilmore, S.; Abbott, C.: ENVIRONMENTAL DNA METABARCODING FOR ASSESSING BENTHIC IMPACTS OF SALMON AQUACULTURE

SSO71 CROSSING DISCIPLINARY BOUNDARIES ACROSS FRESHWATER-MARINE CONTINUUM TO ADVANCE THE UNDERSTAND

Chair(s): Bryan Brooks, Baylor University (bryan_brooks@baylor.edu)
Meredith Howard, SCCWRP (mhoward@sccwrp.org)
Jeff Steevens, USGS (jsteevens@usgs.gov)
Alan Wilson, Auburn University (wilson@auburn.edu)

Location: Lecture Theater

- 2:00 PM **Bargu, S.**; Justic, D.; White, J.: COUPLING BETWEEN HYDROLOGICAL CHANGES, NUTRIENT DYNAMICS AND CYANOBACTERIAL BLOOMS IN DELTAIC ESTUARIES
- 2:15 PM **Kowalewska, G.**; Krajewska, M.; Szymczak-Zyla, M.: CYANOBACTERIA CAROTENOIDS IN RECENT BALTIC SEDIMENTS AS INDICATORS OF STATE OF THE ENVIRONMENT AND CLIMATE WARMING
- 2:30 PM **Haddad, S.**; Taylor, R.; S, F.; Scott, T.; Chambliss, K.; Brooks, B.: DEVELOPMENT AND APPLICATION OF A NOVEL METHOD FOR SCREENING CYANOTOXINS IN WATER AND FISH
- 2:45 PM **Greenfield, D.**; Dearth, N.; Jones, J.; Pinckney, J.: DEVELOPMENT AND VALIDATION OF A SANDWICH HYBRIDIZATION ASSAY FOR IDENTIFYING MICROCYSTIS SPP.
- 3:00 PM **Flood, S.**; Burkholder, J.: ECOTOXICOLOGY OF HERBICIDE EXPOSURE ON HARMFUL ESTUARINE PHYTOPLANKTON UNDER VARYING NUTRIENT CONDITIONS
- 3:15 PM **Geeraert, N.**; Yau, Y.; Thibodeau, B.; Yan, X.; Kao, S.; Baker, D.: EUTROPHICATION AROUND A MEGA-CITY IN A MEGA-ESTUARY: THE PERSPECTIVE OF DUAL NITRATE ISOTOPES IN HONG KONG
- 3:30 PM **Howard, M.**; Caron, D.; Kudela, R.; Loflin, K.; Tatters, A.; Hayashi, K.; Smith, J.; Donovan, A.; Laughrey, Z.; Nagoda, C.; Fetscher, A.; Fluharty, S.; Fadness, R.; Crooks, J.; McCullough, J.; Almeida, M.: MONITORING MULTIPLE HAB TOXINS ACROSS THE FRESHWATER-MARINE CONTINUUM IN COASTAL CALIFORNIA

^T REPRESENTS TUTORIAL PRESENTATIONS

**SS087 CYANOBACTERIA IN INLAND WATERS:
NEW MONITORING, REPORTING, MODELLING AND
ECOLOGICAL RESEARCH**

Chair(s): Tsuyoshi Kobayashi, Office of Environment and Heritage NSW
(yoshi.kobayashi@environment.nsw.gov.au)
Simon Mitrovic, UTS, Sydney (simon.mitrovic@uts.edu.au)

Location: Lecture Theater

9:00 AM **Joehnk, K.;** Biswas, T.; Anstee, J.; Ford, P.: MANAGING THE RISK OF CYANOBACTERIA BLOOMS IN LAKE HUME, AUSTRALIA

9:15 AM **Younan, L.:** MONITORING CYANOBACTERIA IN MIXED ALGAL POPULATIONS IN AN EFFORT TO PREDICT THE ONSET OF CYANOHABS

9:30 AM **Wartman, M.;** Heraud, P.; Cook, P.; Beardall, J.: FTIR SPECTROSCOPY AS A MONITORING TOOL FOR ALGAL BLOOM ASSESSMENT IN A EUTROPHIC, BRACKISH LAKE SYSTEM

9:45 AM **Kobayashi, T.;** Ralph, T.; Sharma, P.; Mitrovic, S.: CYANOBACTERIA IN SEMI-ARID INLAND FLOODPLAIN WETLANDS

10:00 AM **Mitrovic, S.;** Violi, J.; Rogers, K.; Colville, A.: SURVEY OF BMAA AND ITS ISOMERS IN FRESHWATER CYANOBACTERIA ACROSS EASTERN AUSTRALIA

THURSDAY POSTERS

All poster sessions are held in the VCC Pavilion area.

SSO01 OIL AND WATER DO MIX: THE FATE, BEHAVIOR AND IMPACT OF DISPERSED OIL DROPLETS IN THE SEA

- 1 Won, E.; Lee, Y.; Gang, Y.; Kim, M.; Kim, C.; Lee, K.: ADVERSE EFFECTS OF OIL DISPERSED SEDIMENTS ON MARINE COPEPOD
- 2 Tang, C.; Buskey, E.: INFLUENCE OF OIL POLLUTION ON GRAZING IMPACT OF MICROZOOPLANKTON ON NATURAL PLANKTON COMMUNITY IN MESOCOSM STUDY
- 3 Wright, C.; Johannessen, S.: MORE THAN THE SUM OF ITS PART(ICLES): CHARACTERIZATION OF SUSPENDED PARTICULATE MATTER IN THE CANADIAN WATERS OF THE SALISH SEA.

SSO05 ECOTONES: MICROBIAL COMMUNITY TRANSITION ZONES IN AQUATIC SYSTEMS

- 9 Lu, L.: POTENTIAL DAMING EFFECT ON BIOGEOGRAPHICAL PATTERNS OF MICROBIAL EUKARYOTIC COMMUNITIES ALONG THE UPPER YANGTZE RIVER

SSO07 CYANOBACTERIAL AND ALGAL METABOLITES: OCCURRENCE, ECOLOGY, PREDICTION, AND MANAGEMENT

- 13 Brown, E.; Kubanek, J.: DO PHYTOPLANKTON USE DEAD COMPETITORS TO ASSESS PREDATION RISK?
- 14 Porter, M.; Harris, T.; Hill, M.; Roundy, J.; Brunzell, N.: MULTIVARIATE, SPATIO-TEMPORAL DATA ANALYSIS AND INTERACTIVE VISUALIZATION TO ADDRESS HARMFUL CYANOBACTERIAL BLOOMS AND WATER QUALITY IN LAKES AND RESERVOIRS
- 15 Pipal, M.; Prochazkova, T.; Pribojova, J.; Congiu, E.; Smutna, M.; Sychrova, E.; Hilscherova, K.: TERATOGENIC COMPOUNDS PRODUCED BY CYANOBACTERIA
- 16 Heathcote, A.; Edlund, M.; Engstrom, D.: THE ROLE OF LAKE PHYSICS ON SEASONAL ABUNDANCE AND TOXICITY OF CYANOBACTERIA

SSO08 UNDERSTANDING MOUNTAIN LAKES IN A CHANGING WORLD

- 17 Stuparyk, B.; Taylor, M.; Vinebrooke, R.: A FUNCTIONAL APPROACH TO RESTORATION EFFORTS INVOLVING ALPINE LAKES STOCKED WITH NON-NATIVE SPORTFISH
- 18 Cook, J.; Vinebrooke, R.: DO ALPINE LAKES AND PONDS DIFFER IN THEIR SENSITIVITIES TO NITROGEN AND PHOSPHORUS DEPOSITION?
- 19 Caldwell, T.; Albright, T.; Harpold, A.; Chandra, S.: DRIVERS OF ICE PHENOLOGY OF MOUNTAIN LAKES IN THE WESTERN UNITED STATES DERIVED FROM REMOTE SENSING.
- 20 Perez Coronel, E.; Beman, J.: SEASONAL VARIATION OF METHANE IN MOUNTAIN LAKES OF YOSEMITE NATIONAL PARK

SSO12 INTEGRATING ECOSYSTEMS - LINKING BIOGEOCHEMICAL CYCLES ACROSS AQUATIC AND TERRESTRIAL BOUNDARIES

- 32 Huang, J.; Gergel, S.; Liley, P.; Ruan, X.: ARE LANDSCAPE INDICATORS MORE USEFUL IN EXPLAINING WATER CHEMISTRY OR MACROINVERTEBRATES IN URBAN STREAMS?
- 33 Porcal, P.; Kopacek, J.: CAN PHOTOCHEMICAL DEGRADATION OF DISSOLVED ORGANIC MATTER REDUCE THE AVAILABILITY OF PHOSPHORUS FOR AQUATIC PRIMARY PRODUCERS?

- 34 Meng, P.: DEVELOPING TROPHIC STATE INDEX OF SEA WATER -A CASE STUDY OF DAPENG BAY, SOUTHERN TAIWAN
- 35 Sasaki, T.; Suzuki, A.: DIFFERENCE IN IRON TRANSPORT CAPACITY DEPENDING ON THE SOURCE OF HUMIC SUBSTANCES
- 36 Jani, S.; Toor, G.; Migliaccio, K.; Koeser, A.; Lusk, M.: NITROGEN IN URBAN RESIDENTIAL CATCHMENT OVER VARIOUS STORM EVENTS
- 37 Marino, R.; Schneider, R.; Baker, N.; Hayn, M.: INVESTIGATING THE ROLE OF ROADSIDE DITCH NETWORKS IN NUTRIENT TRANSPORT AND TRANSFORMATION IN A RURAL, AGRICULTURAL LANDSCAPE
- 38 Swaney, D.; Howarth, R.: REGIONAL VARIATION IN NANI AND NAPI ACROSS THE US: 1987-2012
- 39 Landis, J.; Dethier, E.; Renshaw, C.: TRACING ORGANIC SEDIMENT MOBILIZATION IN MOUNTAIN STREAMS USING SHORT-LIVED RADIONUCLIDES.

SSO14 SOCIAL-ECOLOGICAL DYNAMICS IN AQUATIC ECOSYSTEMS

- 49 Velez-Caicedo, M.; Rusak, J.; Conde, D.; Lozoya, J.; Seitz, C.; Harmon, T.; Jaramillo, J.; Perillo, G.: PALEOLIMNOLOGICAL STUDIES IMPROVE SOCIO-ECOLOGICAL RISK ASSESSMENTS: A TALE OF TWO LAGOONS

SSO17 LIVING DOWNSTREAM FROM SHRINKING GLACIERS: UNDERSTANDING AND PREDICTING THE HYDROLOGY, GEOMORPHOLOGY, ECOLOGY AND BIOGEOCHEMISTRY OF GLACIER-FED STREAMS

- 53 Torrens, C.; Gooseff, M.: A TALE OF TWO FORKS: ECOSYSTEM RESPONSE TO DISTURBANCE IN A GLACIAL MELT-WATER STREAM, ANTARCTICA
- 54 Boix Canadell, M.; Ulseth, A.; Horgby, Å.; Escoffier, N.; Battin, T.: THE HYDROLOGICAL REGIME OF GLACIER-FED STREAMS CONTROLS DISSOLVED ORGANIC MATTER EXPORT
- 55 Horgby, Å.; Boix Canadell, M.; Escoffier, N.; Ulseth, A.; Battin, T.: THE INFLUENCE OF GLACIAL COVERAGE AND HYDROLOGICAL REGIME ON CO₂ DYNAMICS IN GLACIER-FED STREAMS

SSO18 AQUATIC ECOSYSTEM DEVELOPMENT: DOES FUNCTION FOLLOW FORM?

- 56 Weigt, M.; Fry, B.; Davis, J.; Brey, T.: CAN STABLE ISOTOPE PATTERNS REVEAL SPECIFIC CHANGES IN FISH FOOD WEBS?
- 57 Umek, J.; Sada, D.: EFFECTS OF LIVESTOCK ON SPRING CONDITION AND AQUATIC COMMUNITIES IN NORTHERN NEVADA, USA
- 58 Gogina, M.; Lipka, M.; Woelfel, J.; Liu, B.; Böttcher, M.; Rehder, G.; Zettler, M.: FIELD-EVIDENCED RELATIONSHIPS BETWEEN BENTHIC MACROFAUNA AND BIOGEOCHEMISTRY IN THE SOUTH-WESTERN BALTIC SEA

SSO19 INFLUENCE OF WATER LEVELS AND WATER LEVEL FLUCTUATIONS ON THE ECOLOGY AND FOOD WEBS OF LARGE LAKES AND RESERVOIRS

- 60 Gros, M.; Turgeon, K.; Finney, B.; Gregory-Eaves, I.: A PRELIMINARY ANALYSIS OF CHANGES IN FISH BODY SHAPE ALONG A DRAWDOWN GRADIENT

SSO24 TERRESTRIAL ORGANIC MATTER IN AQUATIC FOOD WEBS: RESOURCE SUBSIDY OR RESOURCE SUBTRACTION?

- 69 Hamdan, M.; Karlsson, J.; Byström, P.; Hotchkiss, E.; Al-Haidarey, M.; Ask, J.: CARBON DIOXIDE LIMITS BENTHIC PRIMARY PRODUCTION IN BOREAL LAKES

^T REPRESENTS TUTORIAL PRESENTATIONS

- 70 **Harfmann, J.**; Hernes, P.; Kurobe, T.; Bergamaschi, B.; Teh, S.: LINKING METAGENOMIC DATA WITH CHEMICAL BIOMARKERS TO INVESTIGATE THE ROLE OF TERRESTRIAL ORGANIC MATTER IN ESTUARINE ZOOPLANKTON DIET

SSO26 INTEGRATIVE RESEARCH ON THE BIOGEOCHEMISTRY OF INLAND WATERS IN NORTHERN HIGH LATITUDES

- 72 **Holmgren, B.**; Gydemo, V.; Andersson, N.; Gudas, C.; Karlsson, J.; Klaminder, J.: DETERMINING TERRESTRIAL CONTRIBUTION TO WATER AND SEDIMENT ORGANIC CARBON POOL IN CLEAR WATER ARCTIC LAKES
- 73 **Myers-Pigg, A.**; Warren, J.; Bowering, K.; Prestegard, K.; Ziegler, S.: ORGANIC MATTER DELIVERY TO INLAND WATERS VARIES SEASONALLY WITH WATER FLUX AND PATHWAY THROUGH THE BOREAL FOREST TERRESTRIAL-TO-AQUATIC INTERFACE
- 74 **Textor, S.**; Wickland, K.; Johnston, S.; Podgorski, D.; Spencer, R.: TURNOVER AND PRIMING OF TERRIGENOUS DISSOLVED ORGANIC CARBON IN PERMAFROST-INFLUENCED STREAMS OF CENTRAL ALASKA

SSO34 TEMPERATURE DEPENDENCE OF CONSUMER-RESOURCE INTERACTIONS: NEW EMPIRICAL AND THEORETICAL INSIGHTS

- 83 **Liu, K.**; Liu, H.; Chen, B.: WARMING EXACERBATES TOP-DOWN CONTROL ON MARINE PHYTOPLANKTON BY MICROZOOPLANKTON IN SUBTROPICAL COASTAL WATERS

SSO35 TIPPING THE SCALES: EXAMINING BROAD-SCALE PATTERNS AND PROCESSES IN LIMNOLOGY

- 84 **Koerth, J.**; Showers, W.: ISOTOPIC COMPOSITION OF AMMONIUM IN FALLS LAKE, NORTH CAROLINA: SOURCE IDENTIFICATION AND IMPLICATIONS FOR EUTROPHICATION

SSO37 FISH ECOLOGY

- 85 **Clapsadl, M.**; Pérez-Fuentetaja, A.; Snyder, R.; Cochran, J.: A COMPARISON OF LARVAL FISH COMMUNITY DIVERSITY AND GROWTH IN DEVELOPED AND UNDEVELOPED EMBAYMENTS OF THE UPPER NIAGARA RIVER
- 86 **Minamoto, T.**; Hayami, K.; Sakata, M.; Okitsu, J.; Miya, M.; Gotoh, R.; Sato, H.; Yamanaka, H.: MAXIMIZING THE POTENTIAL OF ENVIRONMENTAL DNA METABARCODING FOR FISH DETECTION IN LENTIC ECOSYSTEM

SSO39 OBSERVATION SYSTEMS AND BIG DATA ARE UNLOCKING NEW INSIGHTS INTO AQUATIC ECOSYSTEM DYNAMICS

- 88 **Bartlett, K.**; Biffard, B.; Cheng, J.; Dewey, R.; Hotte, R.; **Insua, T.**; Jenkyns, R.; Lin, T.; Little, J.; Mihaly, S.; Macoun, P.; Morley, M.; Pirene, B.; Wang, M.: OCEANOGRAPHIC RADAR SYSTEMS AT OCEAN NETWORKS CANADA: BIG DATA FOR OCEAN MONITORING

SSO49 ADVANCES IN METHODS AND TECHNOLOGIES FOR STUDYING METHANE CYCLING IN FRESHWATER ECOSYSTEMS

- 92 **dos Santos, M.**; Amorim, M.: A METHOD FOR METHANE MEASUREMENT BY TURBINES AND SPILLWAYS IN HYDROPOWER FRESHWATER RESERVOIRS

- 93 **Demers, M.**; Beisner, B.; del Giorgio, P.: INFLUENCE OF CHAEBORUS MIGRATION ON LAKE METHANE DYNAMICS

- 94 **Amorim, M.**; Xavier, V.; Santos, M.: STATICAL MODELING OF METHANE AND CARBON DIOXIDE PROPORTIONS IN EBULITIVE EMISSION SAMPLERS IN AN AMAZON TROPICAL RESERVOIR BY BETA REGRESSION

- 95 **Blackburn, S.**; Gauthier, K.; Stanley, E.: WINTER METHANE EMISSIONS FROM MIDWESTERN STREAMS

SSO50 CONTROL OF ALGAL BLOOMS

- 96 **Bergbusch, N.**; Swarbrick, V.; Hayes, N.; Leavitt, P.: EFFECTS OF NITROGEN FROM A TERTIARY WASTEWATER TREATMENT PLANT ON PRIMARY PRODUCERS IN PHOSPHORUS-RICH STREAMS OF THE NORTHERN GREAT PLAINS
- 97 **Ok, J.**; Jeong, H.; Lee, K.: MIXOTROPHY IN THE PHOTOTROPHIC DINOFLAGELLATE TAKAYAMA HELIX (FAMILY KARENACEAE) AND ITS INTERACTIONS WITH POTENTIAL PROTISTAN PREDATORS
- 98 **Zhang, Y.**; Ma, R.: SATELLITE ANALYSIS TO IDENTIFY EIGHTEEN-YEAR CHANGES AND DRIVERS OF CYANOBACTERIA DYNAMICS IN LAKE TAIHU SINCE 2000

SSO54 LINKING MICROBIAL ECOLOGY TO CARBON BIOGEOCHEMISTRY ACROSS SPATIAL SCALES

- 104 **Kang, L.**; Shih, C.: DIVERSITY AND DISTRIBUTION OF HAPTOPHYTES IN THE EAST CHINA SEA EXPLORED BY NEXT-GENERATION SEQUENCING

SSO56 COMPLEXITY IN COASTAL SYSTEMS

- 105 **Mallozzi, A.**; Errera, R.; **Bargu, S.**: IMPACTS OF ELEVATED PCO2 ON ESTUARINE PHYTOPLANKTON BIOMASS AND COMMUNITY STRUCTURE
- 106 **Palino, G.**; Lucore, A.; Temple, N.; Martin, S.; Firth, D.; Sparks, E.: INFLUENCE OF LARGE-SCALE SHORELINE PROTECTION PROJECTS ON FRINGING WETLAND VEGETATION
- 107 **Omgoriola, H.**: MANGROVE DIVERSITY, SPECIES DISTRIBUTION AND AREA COVERAGE IN LAGOS LAGOON, NIGERIA.
- 108 **Hester, M.**; Willis, J.: PULSED DISTURBANCE EVENTS AND RISING SEA LEVELS IN THE FLORIDA KEYS: INSIGHTS INTO MANGROVE COMMUNITY STRUCTURE

SSO57 SMALL THINGS CAN TELL BIG STORIES: ALGAE AS INDICATORS IN AQUATIC HABITATS

- 109 **Theroux, S.**; Mazor, R.; Sutula, M.; Stein, E.: A PREDICTIVE ALGAL INDEX FOR CALIFORNIA WADEABLE STREAM BIOASSESSMENT: PERFORMANCE WITH MORPHOLOGY VERSUS DNA BARCODE DATA
- 110 **Garfield, C.**; Yokota, K.: COMPARISON OF PHYTOPLANKTON COMMUNITY DETERMINATION TECHNIQUES: PRELIMINARY EVALUATION OF PIGMENT-BASED VERSUS MICROSCOPIC ANALYSES
- 111 **Li, Z.**; Pospelova, V.; Lin, H.; Liu, L.; Song, B.: SEASONAL DINOFLAGELLATE CYST PRODUCTION AND TERRESTRIAL PALYNOFORM DEPOSITION IN THE MONSOON INFLUENCED SOUTH CHINA SEA: A SEDIMENT TRAP STUDY FROM THE SOUTHWEST TAIWAN WATERS

SSO58 BIOGEOCHEMICAL TRANSFORMATIONS ACROSS TERRESTRIAL-AQUATIC INTERFACES

- 112 **KIM, Y.:** CHARACTERISTICS OF GROWTH AND HABITATS OF SEA CUCUMBER APOSTICHOPUS JAPONOCUS
- 113 **Hyun, J.;** Mok, J.; Kim, J.; Jung, U.; Baek, J.; Baek, H.; Lee, H.; Thamdrup, B.: IMPACTS OF TYPHOON-INDUCED RAINFALL ON THE PARTITIONING OF ORGANIC CARBON OXIDATION AND N-P-S-FE CYCLES IN THE SEDIMENTS OF THE HAN RIVER ESTUARY, YELLOW SEA
- 114 **Orif, M.:** MAJOR AND TRACE METALS OF THE NEARSHORE SEDIMENTS OF FARASAN ISLANDS, SOUTHERN RED SEA
- 115 **Elovaara, S.;** Asmala, E.; Kaartokallio, H.; Tamelander, T.: PRIMARY AND BACTERIAL PRODUCTION IN A NORTHERN BALTIC ESTUARY – COMPARISON OF RECENT AND PAST SITUATIONS
- 116 **Brinkmann, M.;** Bravo, A.; Lu, K.; Komada, T.: SOURCES OF ORGANIC CARBON BURIED IN SALT MARSHES EVALUATED BY CARBON ISOTOPE ANALYSES ON SEDIMENT DENSITY FRACTIONS
- 117 **Sakamaki, T.;** Fujibayashi, M.: TESTING CONNECTIONS OF AN INNER-BAY FOOD WEB SYSTEM WITH RIVERINE MATERIAL INPUTS

SSO59 BIODIVERSITY - ECOSYSTEM FUNCTIONING UNDER STOCHASTIC ENVIRONMENTAL FORCING

- 118 **Katz, A.;** Marzetz, V.; Wacker, A.: LED LIGHTING SYSTEM FOR RAPID TESTING OF ALGAL GROWTH

SSO60 SUSTAINABLE AQUACULTURE: ISSUES, TOOLS, AND TRENDS

- 119 **Lee, J.;** Kim, H.; Sim, B.; Kim, S.; Park, J.; Choi, S.: IMPACT OF AQUACULTURE FARMING ON BENTHIC RESPIRATION AND NUTRIENT FLUXES IN SEMI-CLOSED COASTAL WATER OF KOREA
- 120 **Gilmore Solomon, L.;** Chevarie, P.; Nadeau, M.; Genard, B.; Tremblay, R.: IMPACT OF GLOBAL WARMING ON THE MAGDALEN ISLANDS (QC, CANADA) AQUACULTURE PRODUCTION: THE BLUE MUSSEL (*MYTILUS EDULIS*) AND GIANT SCALLOP'S (*PLACOPECTEN MAGELLANICUS*) CASES.
- 121 **Sim, B.;** Kim, H.; Hong, S.; Yoon, S.; Kim, J.; Jung, R.; Kang, S.; Kim, S.; Kim, J.; Jung, W.; Kim, C.: ORGANIC ENRICHMENT ON THE SEDIMENT UNDERNEATH OF ABALONE CAGE FARMS IN WANDO OF KOREA

SSO65 RELEVANCE OF HOST-MICROBE INTERACTIONS IN AQUATIC ECOSYSTEM FUNCTIONING

- 129 **Zilius, M.;** Cardini, U.; Bonaglia, S.; Samuiloviene, A.; Zaiko, A.; Petkuvienė, J.; Vybernaite-Lubiene, I.; Benelli, S.; Politi, T.; Saulys, A.; Bartoli, M.: INVERTEBRATE-BACTERIAL ASSOCIATIONS AS HOTSPOTS OF BENTHIC NITROGEN CYCLING IN ESTUARINE ECOSYSTEMS (INBALANCE)

SSO71 CROSSING DISCIPLINARY BOUNDARIES ACROSS FRESHWATER-MARINE CONTINUUM TO ADVANCE THE UNDERSTAND

- 132 **Busby, J.;** Harvey, S.; Masura, J.; Greengrove, C.: ANALYSIS OF ALEXANDRIUM CYSTS IN BELLINGHAM BAY, PUGET SOUND, WASHINGTON FOLLOWING THE 2016 HARMFUL ALGAL BLOOM
- 133 **Lovin, L.;** Haddad, S.: AQUATIC BIOCONCENTRATION AND PROBABILISTIC HAZARD ASSESSMENT OF ANATOXIN-A

- 134 **Smith, D.;** Cory, R.; Davis, T.; Kling, G.; Fanslow, D.; Vanderploeg, H.; Zastepa, A.; Dick, G.: BIOLOGICAL PRODUCTION IS THE DOMINANT SOURCE OF H₂O₂ IN LAKE ERIE CYANOBACTERIAL BLOOMS
- 135 **Masura, J.;** Greengrove, C.; Rauschl, E.: PRESENCE AND CONCENTRATION OF ALEXANDRIUM CYSTS IN WEST COAST VANCOUVER ISLAND FJORDS CLAYOQUOT AND BARKLEY SOUNDS, B.C. CANADA FROM 2005-2017

SSO75 INTEGRATING SCIENCE AND MANAGEMENT AT THE COASTAL INTERFACE: LANDSCAPE-BASED APPROACHES AND APPLICATION TO WATERSHED, COASTAL, AND OCEAN RESOURCE MANAGEMENT

- 143 **Hsu, T.:** EVALUATING EFFECTIVENESS OF RESTORATION PRACTICES FOR WATER QUALITY IMPAIRMENT IN THE MUSCONETCONG RIVER WATERSHED, NEW JERSEY, USA

SSO78 FRESHWATER CYANOHABS: BEYOND EUTROPHICATION

- 151 **Rose, V.;** Bollens, S.; Rollwagen-Bollens, G.: RUN-OF-RIVER DAMS IN THE COLUMBIA RIVER: EFFECTS OF IMPOUNDMENT AND SPILL ON PHYTOPLANKTON COMMUNITIES

SSO83 SOURCES, TROPHIC TRANSFER, AND UTILIZATION OF DIETARY NUTRIENTS IN AQUATIC ECOSYSTEMS: CURRENT STATUS AND FUTURE CHALLENGES

- 161 **Babaranti, O.;** Frew, R.; Van Hale, R.; McComb, K.: A STABLE ISOTOPIC INQUEST: INSIGHT INTO THE FLOW AND FATE OF NUTRIENTS AND ORGANIC MATERIALS IN COASTAL WATERS ALONG OTAGO PENINSULA, NEW ZEALAND

SSO87 CYANOBACTERIA IN INLAND WATERS: NEW MONITORING, REPORTING, MODELLING AND ECOLOGICAL RESEARCH

- 163 **Smith, M.;** Miller, T.: ENHANCING HARMFUL ALGAL MONITORING USING LOW COST REAL-TIME SENSING TECHNOLOGIES
- 164 **Reynoso, G.;** Smith, M.; Newell, S.; Wurch, L.; Steffen, M.: MICROBIAL COMMUNITY STRUCTURE DURING A MICROCYSTIS BLOOM IN LAKE ERIE: CULTURED VERSUS UNCULTURED REPRESENTATIVES

SSO94 ZOOPLANKTON

- 165 **Gignac Brassard, S.:** EFFECTS OF ULTRAVIOLET RADIATION AND PREDATION ON DIEL VERTICAL MIGRATION OF ZOOPLANKTON ACROSS A TRANSPARENCY GRADIENT IN BOREAL LAKES
- 166 **Qualls, K.;** Bernard, K.; Keen, E.; Picard, C.: ENVIRONMENTAL DRIVERS OF EUPHAUSIID ABUNDANCE IN THE KITIMAT FJORD SYSTEM, BC

SSO97 AQUATIC INVASION ECOLOGY

- 167 **Kalinkat, G.:** THERMALLY POLLUTED FRESHWATER SYSTEMS: A NEGLECTED OPPORTUNITY TO STUDY CLIMATE CHANGE INVASION SYNERGIES

SSO99 LOTIC ECOSYSTEMS

- 168 **Richardson, W.;** Kreiling, R.; Bartsch, L.; Christensen, V.: LAND USE EFFECTS ON NUTRIENT CYCLING AND LOSS FROM HEADWATERS TO GREAT LAKES IN THE FOX RIVER BASIN, WISCONSIN, USA.
- 169 **Inoue, T.:** PHYSICO-CHEMICAL CONDITIONS ON THE DISTRIBUTION OF THE GENUS HALOPHILA IN NAKAGUSUKU BAY, JAPAN
- 170 **Hoch, M.:** TEST OF THE RIVER CONTINUUM CONCEPT FOR HEADWATER AND MIDREACH STREAMS OF A TROPICAL WATERSHED IN THE MAYA MOUNTAINS, BELIZE

^T REPRESENTS TUTORIAL PRESENTATIONS

FRIDAY ORALS

SSO01 OIL AND WATER DO MIX: THE FATE, BEHAVIOR AND IMPACT OF DISPERSED OIL DROPLETS IN THE SEA

Chair(s): Edward J. Buskey, University of Texas at Austin (ed.buskey@utexas.edu)
Kenneth Lee, Fisheries and Oceans-Canada (ken.ll@dfm-mpo.gc.ca)

Location: Oak Bay 1&2

- 10:30 AM **Beegle-Krause, C.**: SPILLS OF NATIONAL SIGNIFICANCE (SONS) - WHY UNDERSTANDING OIL DROPLET LIFECYCLE (FORMATION, BIODEGRADATION, TRANSPORT) IS KEY TO PREPARING FOR FUTURE OIL SPILLS
- 10:45 AM Li, C.; Murphy, D.; Sampath, K.; Xue, X.; Chandrala, L.; Afshar-Mohajer, N.; Nishida, K.; Ronzhes, Y.; Koehler, K.; Sidhaye, R.; **Katz, J.**: DISPERSION AND HEALTH IMPACTS OF CRUDE OIL SPILLS BY PHYSICAL AND CHEMICAL PROCESSES
- 11:00 AM **Hounjet, L.**; Stoyanov, S.; Dettman, H.: IMPACT OF INLAND WATER CONDITIONS ON SPILL BEHAVIOUR OF DILUTED BITUMEN AND CONVENTIONAL CRUDE OIL
- 11:15 AM **Liu, Z.**; Bacosa, H.; Wang, Q.; Evans, M.; Erdner, D.: QUANTIFY BIOLOGICAL DEGRADATION AND PHOTOOXIDATION RATES OF LOUISIANA LIGHT SWEET CRUDE IN GULF OF MEXICO WATERS
- 11:30 AM **Doyle, S.**; Achberger, A.; Lin, G.; Wade, T.; Quigg, A.; Sylvan, J.: COMPARING MICROBIAL COMMUNITY RESPONSES TO OIL AND DISPERSANT BETWEEN COASTAL AND OFFSHORE WATERS
- 1:30 PM **Keitel-Gröner, F.**; Arnberg, M.; Westerlund, S.; Ramanand, S.; Bechmann, R.; Baussant, T.: EFFECTS OF MECHANICALLY AND CHEMICALLY DISPERSED OIL ON SHRIMP (*PANDALUS BOREALIS*) LARVAE
- 1:45 PM Niestroy, J.; Rubio, J.; **Strickler, J.**: HYDROSTATIC PRESSURE CHALLENGES TOXICOLOGY IN MARINE/AQUATIC SYSTEMS
- 2:00 PM **Gemmell, B.**; Du Clos, K.; Good, E.; Buskey, E.: THE EFFECT OF SUBLETHAL CONCENTRATIONS OF CRUDE OIL AND CHEMICAL DISPERSANTS ON COPEPOD ESCAPE BEHAVIOR
- 2:15 PM **Buskey, E.**; Cosgrove, S.; Maud, M.; Gemmell, B.; Almeda, R.: OIL AND WATER DO MIX: TOXIC EFFECTS OF DISPERSED OIL ON MARINE PLANKTON

SSO07 CYANOBACTERIAL AND ALGAL METABOLITES: OCCURRENCE, ECOLOGY, PREDICTION, AND MANAGEMENT

Chair(s): Ted Harris, Kansas Biological Survey (t992h557@ku.edu)
Dedmer Van de Waal, Netherlands Institut (D.vandeWaal@nioo.knaw.nl)
Alan Wilson, Auburn University (aew0009@auburn.edu)
Frances Pick, University of Ottawa (Frances.Pick@uottawa.ca)
Peter Leavitt, University of Regina (peter.leavitt@uregina.ca)
Susie Wood, Cawthron Institute (Susie.wood@cawthron.org.nz)

Location: Lecture Theater

- 10:30 AM **Harris, T.**: Global Microcystin Aggregation Project: GLOBAL MICROCYSTIN AGGREGATION (GMA) GLEON PROJECT
- 10:45 AM **Van de Waal, D.**; Harris, T.; Fronen, B.; Liu, J.; Kulkarni, P.; Garbeva, P.: BIOLOGICAL STOICHIOMETRY OF CYANOBACTERIAL SECONDARY METABOLITES

- 11:00 AM **Wood, S.**; Picard, M.; Gunning, K.; Laroche, O.; Rees, A.; Howarth, J.; Moy, C.; Schallenberg, M.; Vandergoes, M.: SEDIMENT CORE ANALYSIS USING METAGENETICS AND PIGMENTS: NEW INSIGHTS INTO HISTORICAL CYANOBACTERIAL COMMUNITIES AND CYANOTOXINS IN SIX SHALLOW TEMPERATE LAKES
- 11:15 AM Racine, M.; Saleem, A.; **Pick, F.**: VARIATION IN OLIGOPEPTIDES FROM THE METABOLOME OF THE TOXIGENIC CYANOBACTERIUM *MICROCYSTIS AERUGINOSA*
- 11:30 AM **Fernandez-Figueroa, E.**; Wilson, A.: EFFECTS OF ENVIRONMENTAL FACTORS ON TASTE AND ODOR COMPOUND PRODUCTION
- 11:45 AM **Miller, T.**; Bartlett, S.; Dinsmore, D.; Duris, J.; Davis, T.; Houghton, E.: CYANOBACTERIAL TOXINS AND BIOACTIVE METABOLITES IN GREEN BAY, WI
- 1:45 PM **Su, X.**: EVALUATING THE CONTAMINATION OF MICROCYSTINS IN LAKE TAIHU, CHINA: THE APPLICATION OF EQUIVALENT TOTAL MC-LR CONCENTRATION
- 2:00 PM **Lin, J.**: KARENIA MIKIMOTOI INDUCED INJURIOUS IMPACTS ON ABALONE *HALIOTIS DISCUS HANNAI* IN FUJIAN COASTAL AREAS, CHINA
- 2:15 PM Zhang, Y.; **Jia, X.**: EUKARYOTIC MICRO-PLANKTON COMMUNITY DIVERSITY AND CHARACTERISTICS OF REGIONAL DISTRIBUTION IN YELLOW SEA BY ITS HIGH-THROUGHPUT SEQUENCING

SSO35 TIPPING THE SCALES: EXAMINING BROAD-SCALE PATTERNS AND PROCESSES IN LIMNOLOGY

Chair(s): Ian McCullough, Michigan State University (immccull@gmail.com)
Jean-Francois Lapierre, University of Montreal (jean-francois.lapierre.1@umontreal.ca)
Katelyn King, Michigan State University (kingka21@msu.edu)
Kendra Cheruvilil, Michigan State University (ksc@msu.edu)
Patricia Soranno, Michigan State University (soranno@anr.msu.edu)

Location: Carson Hall B

- 8:30 AM **Lapierre, J.**; Cheruvilil, K.; Filstrup, C.; Heathcote, A.; Maisonneuve, P.; Seekell, D.: IS LIMNOLOGY BECOMING INCREASINGLY BIOGEOCHEMICAL AND GLOBAL?¹
- 8:45 AM **Gudasz, C.**; Vachon, D.; Prairie, Y.: THE ÜBER LAKE, A NOVEL CONCEPTUAL FRAMEWORK FOR UNDERSTANDING LAKES AT REGIONAL AND GLOBAL SCALES
- 9:00 AM Jakobsson, J.; **del Giorgio, P.**: LINKING C BIOGEOCHEMISTRY TO LAKE SHAPE AND THE MORPHOGEOGRAPHY OF LAKES ACROSS THE BOREAL BIOME
- 9:15 AM **Imtiaz, M.**; Paterson, A.; Yao, H.; Couture, S.; Higgins, S.; Hudson, J.: INCREASE IN LONG-TERM PATTERNS OF DISSOLVED ORGANIC CARBON IN EASTERN CANADIAN LAKES AND ITS RELATIONSHIP WITH REGIONAL AND GLOBAL FACTORS
- 9:30 AM **Fergus, C.**; Brooks, J.; Kaufmann, P.: PATTERNS OF LAKE HYDROLOGIC CHARACTERISTICS RELATED TO LAKE WATER LEVEL DRAWDOWN ACROSS THE CONTERMINOUS U.S.
- 9:45 AM **King, K.**; Pollard, A.; Cheruvilil, K.: THE MACROSCALE PATTERNS OF BIOTA AND WATER CHEMISTRY IN LAKE, STREAM, AND WETLAND ECOSYSTEMS
- 10:30 AM **Stachelek, J.**; Soranno, P.: DOES LAKE AND STREAM CONNECTIVITY CONTROL PHOSPHORUS RETENTION IN LAKES?

¹ REPRESENTS INVITED PRESENTATIONS

- 10:45 AM **Taylor, P.**; Law, A.; Baker, A.; Carvalho, L.: HYDROSCAPE: A NEW SUITE OF CONNECTIVITY METRICS FOR ASSESSING ECOLOGICAL RESPONSES AT THE LANDSCAPE SCALE
- 11:00 AM **O'Reilly, C.**; Hampton, S.; Sharma, S.; Gray, D.: GLOBAL-SCALE RESPONSES OF LAKES TO ENVIRONMENTAL CHANGE[†]
- 11:15 AM **McCullough, I.**; Cheruvilil, K.; Collins, S.; Soranno, P.: GEOGRAPHIC PATTERNS OF THE CLIMATE SENSITIVITY OF LAKES
- 11:30 AM **Rose, K.**; Winslow, L.; Leach, T.; Jane, S.; Stetler, J.: CONTINENTAL SCALE VARIABILITY IN LIGHT ATTENUATION AMONG LAKES
- 12:00 PM **Spence Cheruvilil, K.**; Wagner, T.; Webster, K.; King, K.; Poisson, A.: MACROSCALE PATTERNS AND DRIVERS OF PHOSPHORUS AND CHLOROPHYLL IN SHALLOW LAKES
- 12:15 PM **Collins, S.**; Schliep, E.; Lottig, N.; Stanley, E.: MACROSCALE DRIVERS OF NITROGEN CYCLING IN LAKES
- 2:00 PM **Soranno, P.**; Wagner, T.; Collins, S.; Lapierre, J.; Lottig, N.; Oliver, S.: SPATIAL VARIATION EXCEEDS TEMPORAL VARIATION IN LAKE ECOSYSTEM PROPERTIES AT MACROSCALES
- 2:15 PM **Leech, D.**; Pollard, A.; Labou, S.; Hampton, S.: AN ABUNDANCE OF MURKY WATERS: NUTRIENT-COLOR STATUS AND FOOD WEB STRUCTURE IN LAKES ACROSS THE U.S.
- 2:30 PM **Carvalho, L.**; Richardson, J.; Thackeray, S.; Maberly, S.: BRINGING CLARITY TO COMPLEXITY: HOW DOES THE RESPONSE OF CYANOBACTERIA TO CLIMATE CHANGE AND NUTRIENTS DIFFER AMONG LAKES?
- 2:45 PM **Filstrup, C.**; Lapierre, J.; Oliver, S.; Soranno, P.; Wagner, T.; Downing, J.: SPATIOTEMPORAL PATTERNS IN EXTREME LAKE CHLOROPHYLL CONCENTRATIONS AT THE SUB-CONTINENTAL SCALE

SSO36 LINKING -OMICS TO ECO-PHYSIOLOGICAL TRAITS FOR THE STUDY OF PHYTOPLANKTON ACCLIMATION AND ADAPTATION

- Chair(s): María Aranguren-Gassis, University of Vigo (aranguren@uvigo.es)
María Huete-Ortega, University of Cambridge (mh921@cam.ac.uk)
- Location: Esquimalt
- 1:30 PM **Aranguren-Gassis, M.**; Huete Ortega, M.: LINKING -OMICS APPROACHES TO ECO-PHYSIOLOGICAL TRAITS ON PHYTOPLANKTON, AN OVERVIEW^{††}
- 1:45 PM **Mock, T.**: NEW INSIGHTS INTO THE EVOLUTION OF DIATOM GENOMES TO COPE WITH HIGHLY VARIABLE ENVIRONMENTAL CONDITIONS[†]
- 2:00 PM **Schaum, E.**; Buckling, A.; Smirnov, N.; Studholme, D.; Yvon-Durocher, G.: MINIONS OF THE OCEAN - MOLECULAR AND PHYSIOLOGICAL UNDERPINNINGS OF RAPID THERMAL ADAPTATION IN A MARINE DIATOM[†]
- 2:15 PM **Garcés, E.**; Alacid, E.; Gallisai, R.; López-Puerto, L.; Jiménez-Alesanco, A.; Closa, D.: MARINE TOXIC DINOFLAGELLATE RELEASE EXTRACELLULAR VESICLES

SSO49 ADVANCES IN METHODS AND TECHNOLOGIES FOR STUDYING METHANE CYCLING IN FRESHWATER ECOSYSTEMS

- Chair(s): Tonya Del Sontro, University of Quebec at Montreal (tdelsontro@gmail.com)
Frederic Thalasso Siret, Cinvestav (thalasso@cinvestav.mx)
Jake Beaulieu, US Environmental Protection Agency (beaulieu.jake@epa.gov)
Karla C. Martinez Cruz, University of Magallanes (karla.martinez@umag.cl)
Kyle Delwiche, MIT (kyled@mit.edu)
Armando Sepulveda-Jauregui, University of Chile (armando.sepulveda@umag.cl)
Jeremy Wilkinson, University of Koblenz at Landau (wilkinson@uni-landau.de)
- Location: Esquimalt
- 8:30 AM **Stanley, E.**: THE MYRIAD MEANS OF METHANE MEASUREMENT[†]
- 9:00 AM **Thalasso, F.**; Gerardo Nieto, O.; Vega-Peñaranda, A.; Gonzalez-Valencia, R.: CONTINUOUS MEASUREMENT OF METHANE AND CARBON DIOXIDE FLUXES FROM LAKES BY AN OPEN DYNAMIC CHAMBER METHOD.
- 9:15 AM **Liu, L.**; Delwiche, K.; Lorke, A.: USING X-RAY COMPUTED TOMOGRAPHY TO UNDERSTAND HOW SEDIMENT GAS STORAGE AFFECTS EBULLITION DYNAMICS IN FRESHWATER SYSTEMS
- 9:30 AM **Gälfalk, M.**; Olofsson, G.; Bastviken, D.: AN OPTICAL METHOD FOR HIGH-RESOLUTION METHANE IMAGING IN LANDSCAPES[†]
- 9:45 AM **Dunbabin, M.**; Grinham, A.: ROBOTS AND BUBBLES: THE KEY TO PERSISTENT MONITORING OF EBULLITION
- 10:30 AM **Whiticar, M.**: STABLE ISOTOPE CHARACTERIZATION OF METHANE: SOME OUTSTANDING CHALLENGES
- 10:45 AM **Bodmer, P.**; Steinle, L.; Attermeyer, K.; Bednařík, A.; Thuile Bistarelli, L.; Bors, C.; Catalán, N.; Cauvy-Fraunié, S.; Colls, M.; de Eyto, E.; Doyle, B.; Evtimova, V.; Fenoglio, S.; Freixa, A.; Fuß, T.; Gaffney, P.; Gilbert, P.; Gutmann Roberts, C.; Herrero Ortega, S.; Klaus, M.; Lamonica, D.; Mor, J.; Nagler, M.; Niedrist, G.; Nydahl, A.; Pegg, J.; Piano, E.; Pilotto, F.; Romero, F.; Romero González-Quijano, C.; Rulik, M.; Simov, N.; Lorke, A.: SEDIMENT METHANE PRODUCTION AND OXIDATION IN STREAMS ACROSS EUROPE: MAGNITUDES AND DRIVERS
- 11:00 AM **D'Ambrosio, S.**; Nielson, J.; Henderson, S.; Harrison, J.: INSIGHTS FROM A NOVEL APPROACH FOR DETERMINING METHANE FLUXES FROM LAKE AND RESERVOIR SEDIMENTS
- 11:15 AM **Berberich, M.**; Beaulieu, J.; Hamilton, T.; Buffam, I.: SPATIAL VARIABILITY OF METHANE PRODUCTION AND METHANOGEN COMMUNITIES WITHIN A EUTROPHIC RESERVOIR: EVALUATING THE IMPORTANCE OF ORGANIC MATTER SOURCE AND QUANTITY
- 11:30 AM **Miller, B.**; Chen, H.; Holtgrieve, G.: DIEL GREENHOUSE GAS FLUXES AND NET ECOSYSTEM PRODUCTION IN AQUATIC ENVIRONMENTS ON THE THREE GORGES FLOODPLAIN DURING LOW AND HIGH RESERVOIR STORAGE
- 11:45 AM **Marcon, L.**; Bleninger, T.; **Männich, M.**: SEASONAL AND DIURNAL BUBBLING EVENTS IN A BRAZILIAN SUBTROPICAL RESERVOIR

[†] REPRESENTS TUTORIAL PRESENTATIONS

SSO54 LINKING MICROBIAL ECOLOGY TO CARBON BIOGEOCHEMISTRY ACROSS SPATIAL SCALES

Chair(s): Sophie Crevecoeur, Université du Québec à Montréal, Groupe de Recherche Interuniversitaire en Limnologie et en Environnement Aquatique (GRIL) (sophie.crevecoeur@gmail.com)
Paula Reis, UQAM (paulacr@gmail.com)
Trista Vick Major, University of Montana (tristyv@gmail.com)

Location: Carson Hall A

8:30 AM **Conrad, R.:** EFFECT OF DESICCATION ON STRUCTURE AND FUNCTION OF METHANOGENIC MICROBIAL COMMUNITIES IN WETLAND ENVIRONMENTS¹

8:45 AM **Bertolet, B.;** West, W.; Armitage, D.; Jones, S.: MICROBIAL REGULATORS OF METHANOGENESIS IN TEMPERATE LAKE SEDIMENTS

9:00 AM **Reis, P.;** Thottathil, S.; Ruiz-González, C.; Prairie, Y.: LINKING METHANE OXIDATION TO METHANOTROPHIC COMMUNITIES IN NORTHERN LAKES

9:15 AM **Graham, E.;** Tfaily, M.; Crump, A.; Bramet, L.; Fansler, S.; Purvine, S.; Nicora, C.; Arntzen, E.; Resch, C.; Kennedy, D.; Stegen, J.: METABOLOME BIOCHEMISTRY, NOT MICROBIOME COMPOSITION OR EXPRESSION, CORRESPONDS TO ELEVATED BIOGEOCHEMICAL FUNCTION IN THE HYPORHEIC ZONE

9:30 AM **Vick-Majors, T.;** Guillemette, F.; del Giorgio, P.: LINKAGES BETWEEN MICROBIAL COMMUNITIES AND DISSOLVED ORGANIC MATTER COMPOSITION ALONG A RIVER-RESERVOIR CONTINUUM

9:45 AM **Grater, E.;** Guillemette, F.; del Giorgio, P.: ASSESSING THE METABOLIC STRATEGIES AND RESPONSES OF MICROBIAL COMMUNITIES TO ANTHROPOGENIC DISTURBANCES ALONG THE ST LAWRENCE RIVER

10:30 AM **Ramin, K.;** Theroux, S.; Sutula, M.; Allison, S.: SHIFTING MICROBIAL DIVERSITY AND FUNCTION RELATED TO NUTRIENT INPUTS

10:45 AM **Azam, F.:** MICROBIAL STRUCTURING OF MARINE ECOSYSTEMS

11:00 AM **Deng, L.;** Bölsterli, D.; Su, C.; Roy, H.; Bernasconi, S.; Lever, M.: ROLE OF BIOTURBATION IN CONTROLLING MICROBIAL COMMUNITY COMPOSITION AND BIOGEOCHEMICAL CYCLES IN MARINE SURFACE SEDIMENT

11:15 AM **Dore, J.;** Amenabar, M.; D'Hondt, S.; Boyd, E.: LIMITATIONS TO MICROBIAL ANABOLISM IN ULTRA-OLIGOTROPHIC SUBSEAFLOOR SEDIMENTS OF THE NORTH ATLANTIC SUBTROPICAL GYRE

11:30 AM **Gutierrez Rodriguez, A.;** Safi, K.; Gall, M.; Rudminat, F.; Latasa, M.; Hoffmann, L.; Forcen Vazquez, A.; Nodder, S.: PHYTOPLANKTON COMMUNITY COMPOSITION, PRODUCTION AND CONSUMPTION RATES ACROSS THE CAMPBELL PLATEAU IN SUBANTARCTIC HNLC WATERS SOUTHEAST OF NEW ZEALAND

11:45 AM **Vanharanta, M.:** VIABILITY OF PHYTOPLANKTON COMMUNITIES IN THE BALTIC SEA DURING SPRING

SSO57 SMALL THINGS CAN TELL BIG STORIES: ALGAE AS INDICATORS IN AQUATIC HABITATS

Chair(s): Andrew Bramburger, University of Minnesota Duluth (abrambur@d.umn.edu)
Euan Reavie, UMN Duluth (ereavie@d.umn.edu)
Sylvia Lee, USEPA (Lee.Sylvia@epa.gov)

Location: Carson Hall A

1:30 PM **Lee, S.;** Bishop, I.; Spaulding, S.; Mitchell, R.; Yuan, L.: HARMONIZING AND REVISING DIATOM TAXONOMY IN EXISTING BIOASSESSMENT DATASETS FOR USE AS INDICATORS

1:45 PM **Reavie, E.;** Cai, M.: DIATOM-STRESSOR RELATIONSHIPS IN THE GREAT LAKES

2:00 PM **Bramburger, A.;** Sheik, C.; Reavie, E.: APPLICATIONS OF NOVEL PHYTOPLANKTON METRICS IN GREAT LAKES BIOLOGICAL MONITORING

2:15 PM **Gauthier, J.;** Walsh, D.; Selbie, D.; Domaizon, I.; Gregory-Eaves, I.: ENVIRONMENTAL DNA PRESERVED IN LAKE SEDIMENTS: CALIBRATING A NEW TOOL FOR PALEOLIMNOLOGY

2:30 PM **Wachnicka, A.;** Browder, J.; Jackson, T.; Louda, W.; Abdelrahman, O.; Avila, C.; Kelble, C.; Stabenau, E.; Madden, C.: IMPACTS OF HURRICANE IRMA ON ALGAL DYNAMICS AND WATER QUALITY IN BISCAYNE BAY, FLORIDA (U.S.A.)

2:45 PM **Furey, P.;** Welter, J.; Sander, D.; Collis, L.; Benstead, J.; Cross, W.; Hood, J.; Huryn, A.; Johnson, P.; Ólafsson, J.; Gíslason, G.: CLIMATE WARMING AND EUTROPHICATION INTERSECT TO REGULATE BIOFILM ACCRUAL AND SPECIES COMPOSITION IN A STREAMSIDE CHANNEL EXPERIMENT IN ICELAND

SSO58 BIOGEOCHEMICAL TRANSFORMATIONS ACROSS TERRESTRIAL-AQUATIC INTERFACES

Chair(s): Amanda C. Spivak, Woods Hole Oceanographic Institution (aspivak@whoi.edu)
David T. Ho, University of Hawaii (ho@hawaii.edu)

Location: Carson Hall C

8:30 AM **Bianucci, L.;** Balaguru, K.; Smith, R.; Leung, L.: CONTRIBUTION OF HURRICANE-INDUCED SEDIMENT RESUSPENSION TO COASTAL OXYGEN DYNAMICS

8:45 AM **Schafer, T.;** Ward, N.; Julian, P.; Reddy, R.; Osborne, T.: EFFECTS OF HURRICANE IRMA ON WATER QUALITY AND DOM CYCLING ALONG A SALINITY GRADIENT IN NORTHERN FLORIDA

9:00 AM **Lee, D.;** Wilson, B.; Servais, S.; Charles, S.; Mazzei, V.; Davis, S.; Troxler, T.; Gaiser, E.; Kline, M.; Robinson, M.; Kominoski, J.: SALTWATER INTRUSION LEGACIES ALTER ECOSYSTEM CARBON CYCLING IN EXPERIMENTAL WETLANDS: INSIGHTS INTO FRESHWATER RESTORATION AND RECOVERY

9:15 AM **Spivak, A.;** Gosselin, K.; Sylva, S.: SHALLOW PONDS IMPACT CARBON STORAGE AND METABOLISM IN SALT MARSH ECOSYSTEMS

9:30 AM **Czapla, K.;** Anderson, I.: THE RESILIENCE OF SALT MARSHES TO NITROGEN ENRICHMENT DRIVEN BY LOCATION-SPECIFIC PHYSICAL AND CHEMICAL FACTORS

9:45 AM **Baines, S.;** Moley, P.; Alldred, M.; Haviland, J.; Desmond, J.; Shah, H.; Reigle, R.: PLANT TRAITS EXPLAIN SEASONAL DENITRIFICATION IN SPARTINA WETLANDS

10:30 AM **Strope, E.;** McCarthy, M.; Newell, S.; Mutchler, T.: SEDIMENT NITROGEN (N) CYCLING IN SEAGRASS BEDS: DOES DRIFT MACROALGAE MODIFY N CYCLING RATES?

10:45 AM **Wild-Allen, K.;** Baird, M.; Mongin, M.; Skerratt, J.; Robson, B.: THE SUPPLY OF TERRESTRIAL NITROGEN TO THE GREAT BARRIER REEF AND ITS IMPACT ON PRIMARY PRODUCTION.

11:00 AM **Kominoski, J.;** Gaiser, E.; Castañeda-Moya, E.; Davis, S.; Dessu, S.; Lee, D.; Marazzi, L.; Rivera-Monroy, V.; Sola, A.; Surratt, D.; Travieso, R.; Troxler, T.: ENHANCED MARINE AND FRESHWATER CONNECTIVITY INCREASE SPATIOTEMPORAL SYNCHRONY OF PHOSPHORUS AND AQUATIC HETEROTROPHY IN COASTAL WETLANDS

¹ REPRESENTS INVITED PRESENTATIONS

- 11:15 AM **Phelps, S.**; Osborne, T.; Harris, W.; Bochnak, A.: DISSOLUTION OF GEOLOGIC PHOSPHATE DEPOSITION IN HUMIC LAKES - A CONTROL ON NUTRIENT STATUS AND LEGACY NUTRIENT IMPLICATIONS
- 11:30 AM **Polukhin, A.**: ACIDIFICATION STATE OF THE SIBERIAN SHELF SEAS: THE LATEST OBSERVATIONS
- 11:45 AM **Wang, Z.**; Costa, M.: VALIDATION OF SENTINEL-3 IMAGERY REFLECTANCE USING FERRY-BASED AUTONOMOUS, CONTINUOUS IN-SITU REFLECTANCE DATA

SSO59 BIODIVERSITY - ECOSYSTEM FUNCTIONING UNDER STOCHASTIC ENVIRONMENTAL FORCING

Chair(s): Maren Striebel, University of Oldenburg (striebel@limnology.eu)
Alexander Wacker, University Potsdam (wackera@uni-potsdam.de)
Dominik Martin-Creuzburg, University of Constance (dominik.martin-creuzburg@uni-konstanz.de)
Andrea Gall, University of Oldenburg (andrea.gall@uol.de)
Gabriel Singer, IGB Berlin (Gabriel.singer@igb-berlin.de)

Location: Oak Bay 1&2

- 8:30 AM **Raymond, P.**: SCALING WATERSHED BIOGEOCHEMISTRY AND ECOSYSTEM FUNCTION^T
- 9:00 AM **Frauendorf, T.**; MacKenzie, R.; El-Sabaawi, R.: IMPLICATIONS OF CLIMATE DRIVEN CHANGE IN FLOW ON TROPICAL STREAM ECOSYSTEM STRUCTURE AND FUNCTION
- 9:15 AM **Pires, A.**; Srivastava, D.; Marino, N.; MacDonald, A.; Figueiredo-Barros, M.; Farjalla, V.: INTERACTIVE EFFECTS OF CLIMATE CHANGE AND BIODIVERSITY LOSS ON ECOSYSTEM FUNCTIONING
- 9:30 AM **Gall, A.**; Wacker, A.; Singer, G.; Hillebrand, H.; Striebel, M.: TRAIT-BASED BIODIVERSITY AND TROPHIC DYNAMICS UNDER EXTERNAL FORCING
- 9:45 AM **Striebel, M.**; Hillebrand, H.; Andersen, T.; Hall, J.; Hessen, D.; Kyle, M.; Lindholm, M.; MacNeill, K.; Moorthi, S.; Ptacnik, R.; Ptacnikova, R.; Rasconi, S.; Skjelbred, B.; Thrane, J.; Vrede, T.; Winter, A.: HIGH DIVERSITY ASSURES ECOSYSTEM FUNCTIONING UNDER NOVEL CONDITIONS

SSO64 PAST, PRESENT, AND FUTURE PHOSPHORUS CYCLING: FROM THE MINE TO THE DEEP SEA

Chair(s): José Manuel Mogollón, Leiden University (j.m.mogollon@cml.leidenuniv.nl)
Lauriane Vilmin, Utrecht University (l.m.vilmin@uu.nl)
Peter Kraal, Royal NIOZ (p.kraal@uu.nl)

Location: Saanich 1&2

- 10:30 AM **Haygarth, P.**: LONG TERM CHANGES IN THE PHOSPHORUS BIOGEOCHEMICAL CYCLE^T
- 11:00 AM **Toor, G.**; Yang, Y.: MANAGING AND MANIPULATING PHOSPHORUS TRANSPORT IN URBAN STORMWATER RUNOFF TO REDUCE WATER QUALITY IMPACTS IN RECEIVING WATERS
- 11:15 AM **Waters, K.**; Willby, N.; Yasserli, S.; Perkins, R.; Madgwick, G.; Sime, I.; Spears, B.: THE NEXT STEP: ASSESSING ECOLOGICAL RECOVERY IN LAKES TREATED WITH PHOSLOCK
- 11:30 AM **Nguyen, T.**; Némery, J.; Gratiot, N.; Garnier, J.; Tran, V.; Nguyen, A.: PHOSPHORUS ADSORPTION-DESORPTION IN THE SALINITY GRADIENT: CASE STUDY OF SAIGON RIVER, SOUTHERN OF VIETNAM
- 11:45 AM **Harrison, J.**; Beusen, A.; Metson, G.: MODELING PHOSPHORUS IN RIVERS AT THE GLOBAL SCALE: RECENT SUCCESSES, REMAINING CHALLENGES, AND NEAR-TERM OPPORTUNITIES^T

- 1:30 PM **Némery, J.**; Garnier, J.: THE FATE OF PHOSPHORUS IN ANTHROPIZED RIVER BASINS: A CROSS-VIEW BETWEEN INDUSTRIALIZED AND EMERGING COUNTRIES^T
- 1:45 PM **McCrackin, M.**; Muller-Karulis, B.; Gustafsson, B.; Howarth, R.; Humborg, C.; Svanbäck, A.; Swaney, D.: A SIMPLE MODEL OF LEGACY PHOSPHORUS IN THE BALTIC SEA DRAINAGE BASIN
- 2:00 PM **Minardo, C.**; Curie, F.; Jullian, Y.; Gassama, N.; Moatar, F.: HIGH TEMPORAL RESOLUTION EUTROPHICATION MODEL FOR LARGE HYDROGRAPHIC NETWORKS
- 2:15 PM **Vilmin, L.**; Mogollón, J.; van Hoek, W.; Beusen, A.; Bouwman, A.: ASSESSING TRANSFERS OF DIFFERENT PHOSPHORUS FORMS IN GLOBAL WATERSHEDS USING PROCESS-BASED MODELS
- 2:30 PM **Mogollón, J.**; Vilmin, L.; Beusen, A.; Bouwman, A.: SPATIOTEMPORAL VARIATIONS IN NITROGEN:PHOSPHORUS RATIOS IN FRESHWATER AND COASTAL SYSTEMS

SSO78 FRESHWATER CYANOHABS: BEYOND EUTROPHICATION

Chair(s): Gretchen Rollwagen-Bollens, Washington State University (rollboll@wsu.edu)
Anas Ghadouani, University of Western Australia (anas.ghadouani@uwa.edu.au)

Location: Lecture Theater

- 8:30 AM **Xiao, M.**; O'Brien, K.; Adams, M.; Hamilton, D.; Burford, M.: ARE NEW APPROACHES TO PREDICTING CYANOBACTERIAL BLOOMS AND SPECIES DOMINANCE NEEDED? – AN ANALYSIS OF DATA ON FACTORS DRIVING GROWTH RESPONSES.
- 8:45 AM **Deutsch, E.**; **Alameddine, I.**: USING STRUCTURAL EQUATION MODELING TO UNDERSTAND MICROCYSTIS DOMINANCE IN A SEMI-ARID HYPEREUTROPHIC RESERVOIR
- 9:00 AM **Ghadouani, A.**; Sinang, S.; Song, H.; Barrington, D.; Reichwaldt, E.; Coggins, L.: CAN MULTIPLE STRESSORS IN URBAN SYSTEMS INDUCE TOXIN PRODUCTION?
- 9:15 AM **Wilkinson, G.**; Moody, E.; Fleck, R.; Grigel, H.: PREDICTING TOXIC ALGAL BLOOMS IN EUTROPHIC RECREATIONAL LAKES
- 9:30 AM **Rollwagen-Bollens, G.**; Lee, T.; Rose, V.; Zimmerman, J.; Bollens, S.: GOING BEYOND EUTROPHICATION AS THE DRIVER OF CYANOBACTERIA HARMFUL ALGAL BLOOMS: VANCOUVER LAKE, WASHINGTON, USA AS A CASE STUDY
- 9:45 AM **Weinke, A.**; Knapp, K.; Liu, Q.; Biddanda, B.: COMPLEX INTERACTIONS OF SEASONAL STRATIFICATION, HYPOXIA, WIND-EVENTS, AND INTRUSIONS MAY PROMOTE LATE-SUMMER HABS IN A GREAT LAKES ESTUARY

SSO86 CONNECTING THE DOTS: SIGNALS OF GLOBAL CHANGE EFFECTS IN FRESHWATER AND MARINE ECOSYSTEMS

Chair(s): John F. Schalles, Creighton University (JohnSchalles@creighton.edu)
Tom W. Bell, University of California, Los Angeles (tbell@ucsb.edu)

Location: Saanich 1&2

- 8:30 AM **Schalles, J.**; O'Donnell, J.; Hladik, C.; Nealy, N.; Mizoguchi, T.; Pennings, S.: MULTIDECADAL BIOMASS DECLINES AND CONTROLLING VARIABLES FOR THE KEYSTONE SALT MARSH SPECIES, SPARTINA ALTERNIFLORA, IN COASTAL GEORGIA

^T REPRESENTS TUTORIAL PRESENTATIONS

- 8:45 AM **Bell, T.**; Allen, J.; Cavanaugh, K.; Siegel, D.: SEPARATING POTENTIAL GLOBAL CHANGE TRENDS FROM LOW FREQUENCY CLIMATE OSCILLATIONS IN NORTHEAST PACIFIC KELP FORESTS
- 9:00 AM **Johannessen, S.**; Macdonald, R.; Wright, C.: A YEAR WITH NO WINTER: THE EFFECTS OF THE 2013-2015 NORTH PACIFIC WARM ANOMALY ON PARTICLE FLUX AND COMPOSITION IN A CANADIAN FJORD
- 9:15 AM **Shatwell, T.**; Gessner, M.; Conrad, J.; Hölker, F.: MODELLING EFFECTS OF ARTIFICIAL LIGHT AT NIGHT ON LAKE TROPHIC INTERACTIONS MEDIATED BY DIEL VERTICAL MIGRATION
- 9:30 AM **Ohlberger, J.**; Schindler, D.; Cline, T.; Ward, E.; Lewis, B.: DEMOGRAPHIC CHANGES IN CHINOOK SALMON AND SOCKEYE SALMON ACROSS THE NORTHEAST PACIFIC
- 9:45 AM **Chezik, K.**; Wilson, S.; Moore, J.: SPATIAL PATTERNS OF PHENOLOGICAL MATCH-MISMATCH IN PINK SALMON

SSO94 ZOOPLANKTON

- Chair(s): Shelley E. Arnott, Queen's University (arnotts@queensu.ca)
- Location: Colwood 1&2
- 8:30 AM **Saiz, E.**; Calbet, A.; Griffell, K.: TRAIT-DEPENDENT EFFECTS OF CALORIC RESTRICTION IN MARINE COPEPODS
- 8:45 AM **Karakas, F.**; Maas, A.; Murphy, D.: SWIMMING OF AN ATLANTID HETEROPOD
- 9:00 AM **Buermans, J.**; Lemon, D.; Taylor, C.; Lembke, C.; DeCollibus, C.; Jarvis, T.: INTEGRATING ECHOSOUNDERS IN OCEAN GLIDERS: SYNOPTIC MEASURES OF WATER COLUMN PHYSICS AND BIOLOGY
- 9:15 AM **Guan, L.**; Sastri, A.; Hsieh, C.; Dewey, R.: DETECTING MULTI-SCALE TEMPORAL DYNAMICS OF ACOUSTICALLY ESTIMATED ZOOPLANKTON BIOMASS IN SAANICH INLET (BRITISH COLUMBIA, CANADA) VIA HIGH-RESOLUTION OCEAN OBSERVATORY SYSTEM
- 9:30 AM **Clardy, T.**; Heinle, M.; Al-Nuwairah, M.; Qurban, M.: SEASONAL PATTERNS IN THE COASTAL ZOOPLANKTON COMMUNITIES OF THE ARABIAN GULF
- 9:45 AM **Balazy, K.**; Trudnowska, E.; Błachowiak-Samołyk, K.: AVAILABILITY OF KEY ZOOPLANKTON SPECIES IN THE CONTEXT OF PLANKTIVOROUS SEABIRD PREDATORS IN THE ARCTIC – STEP TOWARDS TESTING MATCH/MISMATCH HYPOTHESIS

- 10:30 AM **Chara-Serna, A.**; Casper, A.: LONG TERM SPATIO-TEMPORAL DYNAMICS OF ZOOPLANKTON IN A LARGE FLOODPLAIN RIVER
- 10:45 AM **Gantz, C.**; Strecker, A.: USING LANDSCAPE GENETIC APPROACHES TO UNCOVER DISPERSAL AND GENETIC DIVERSITY PATTERNS IN A LARGE HYDROLOGIC PROJECT IN THE AMERICAN WEST

SSO97 AQUATIC INVASION ECOLOGY

- Chair(s): Jonathan B. Shurin, University of California-San Diego (jshurin@ucsd.edu)
- Location: Colwood 1&2
- 11:15 AM **Branstrator, D.**; TenEyck, M.; Etterson, M.; Reavie, E.; Cangelosi, A.: USING MESOCOSMS TO QUANTIFY RISK-RELEASE RELATIONSHIPS FOR INVASIVE SPECIES: IMPLICATIONS FOR SHIP BALLAST WATER STANDARDS
- 11:30 AM **Dexter, E.**; Bollens, S.; Hampton, S.; Katz, S.; Rollwagen-Bollens, G.: DISENTANGLING THE ECOLOGICAL INTERACTIONS AND ABIOTIC DRIVERS OF ZOOPLANKTON COMMUNITY DYNAMICS IN THE HEAVILY INVADED COLUMBIA RIVER ESTUARY.
- 11:45 AM **Petruzzella, A.**; Rodrigues, T.; van Leeuwen, C.; Esteves, F.; Barros, M.; Bakker, E.: DIVERSITY DOES MATTER: MECHANISMS OF INVASION RESISTANCE OF TROPICAL FRESHWATER PLANT COMMUNITIES
- 1:30 PM **Brown, M.**; Boscarino, B.; Buffington, K.; Razavi, R.; Cleckner, L.: BLOODY MURDER: FOOD WEB RESPONSES FOLLOWING THE ESTABLISHMENT OF AN AQUATIC INVASIVE SPECIES, THE BLOODY-RED SHRIMP, HEMIMYSIS ANOMALA
- 1:45 PM **Sanchez, M.**; Lovas-Kiss, A.; Martín, V.; Green, A.: AQUATIC INVASIONS AND THEIR INTERACTIONS WITH WATERBIRDS: INSIGHTS FROM HIGHLY INVASIVE CRAYFISH AND OTHER INVASIVE ORGANISMS
- 2:00 PM **Shurin, J.**; Aranguren-Riano, N.; Jones, N.; Pedroza-Ramos, A.: ECOSYSTEM IMPACTS OF THE WORLD'S LARGEST INVASIVE ANIMAL
- 2:15 PM **Brown, B.**; Bell, S.; Creed, R.: USING METACOMMUNITY THEORY TO UNDERSTAND INVASION OF SYMBIONTS WITH THEIR INVASIVE HOSTS
- 2:30 PM **Youngbull, C.**; Zane, L.; Ze, R.; McNeil, R.; Devlin, S.; Luikart, G.; Elser, J.: PORTABLE DIGITAL PCR FOR ONSITE DETECTION OF AQUATIC INVASIVE SPECIES
- 2:45 PM **Huete-Ortega, M.**; Davey, M.; Allen, M.; Sweet, J.; Smith, A.: ENVIRONMENTAL RISK ASSESSMENT OF NON-NATIVE AND GENETIC MODIFIED MICROALGAL CULTIVATIONS FOR BIOTECHNOLOGICAL APPLICATIONS

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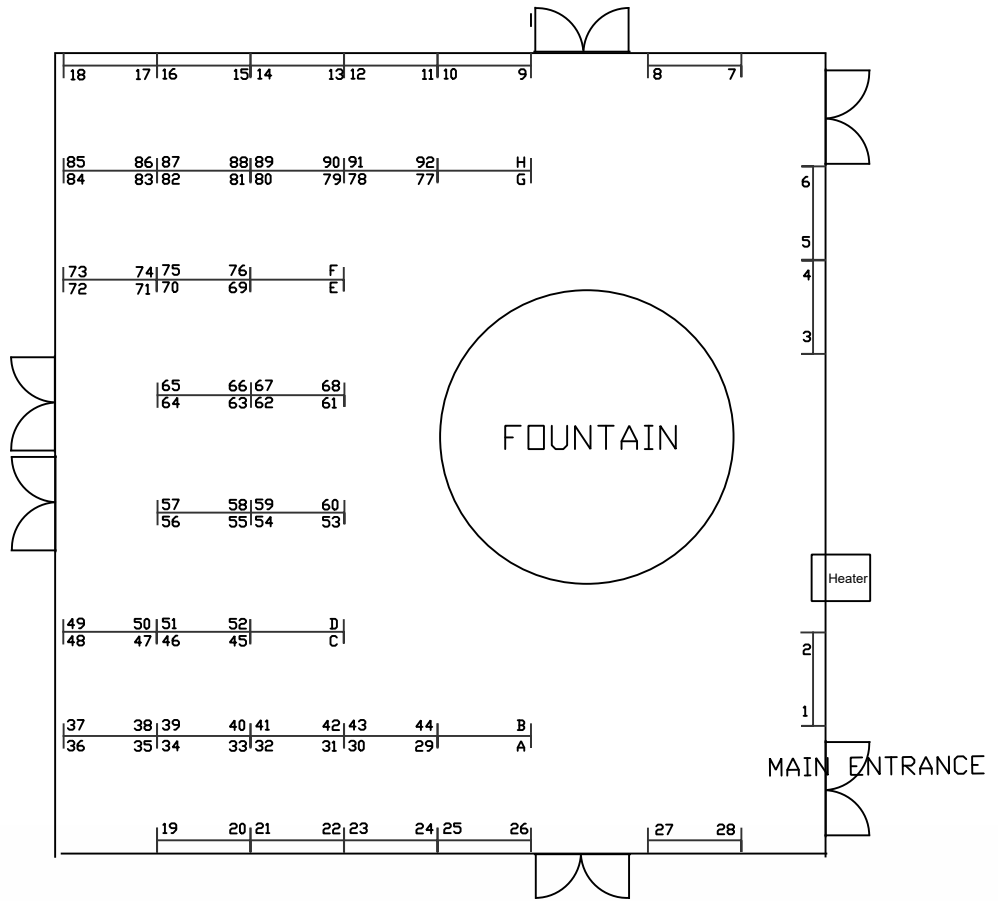
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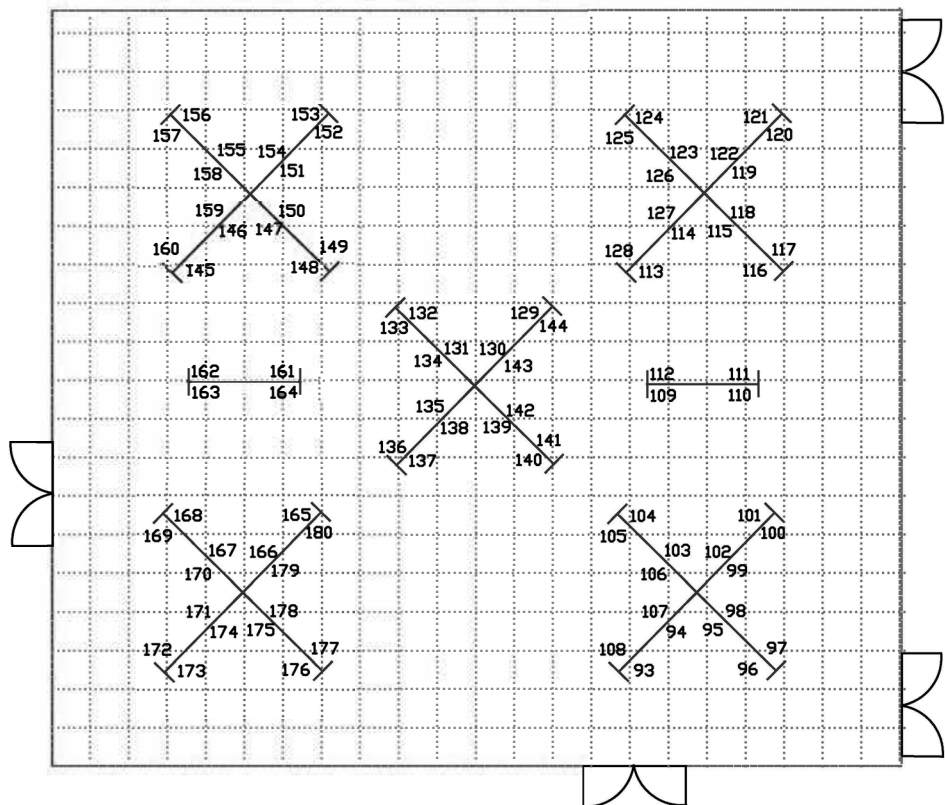
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POSTER HALL MAP

LOWER PAVILION



UPPER PAVILION



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