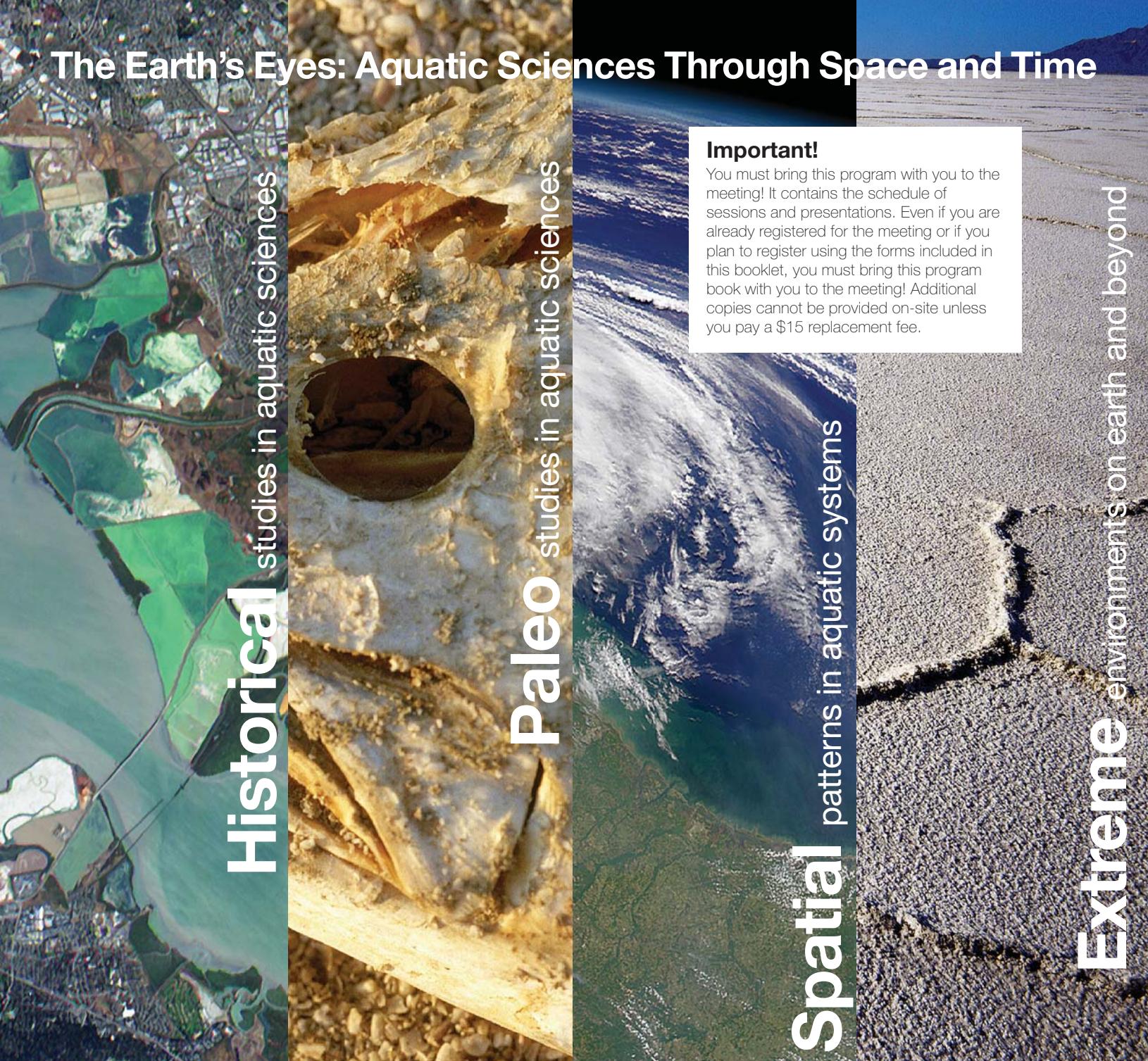


# The Earth's Eyes: Aquatic Sciences Through Space and Time



# 2003 Program Aquatic Sciences meeting

February 8-14, 2003 • Salt Lake City, Utah, USA • [www.aslo.org/slcc2003](http://www.aslo.org/slcc2003)

**ASLO**  
American Society of Limnology and Oceanography

The American Society of Limnology and Oceanography invites you to attend its 2003 Aquatic Sciences Meeting. If you have not done so already, please register before January 9, 2003, to receive the discounted registration fee!

Early Registration Deadline: **January 9, 2003**

## Important!

You must bring this program with you to the meeting! It contains the schedule of sessions and presentations. Even if you are already registered for the meeting or if you plan to register using the forms included in this booklet, you must bring this program book with you to the meeting! Additional copies cannot be provided on-site unless you pay a \$15 replacement fee.

## Contents

The Theme of ASLO 2003 .....	3
Conference Sub-themes .....	3
Sub-theme 1: Historical Studies in Aquatic Sciences .....	3
Sub-theme 2: Paleo Studies in Aquatic Sciences .....	3
Sub-theme 3: Spatial Patterns in Aquatic Systems .....	3
Sub-theme 4: Extreme Environments On Earth and Beyond .....	3
Opening Address .....	3
ASLO 2003 Plenary Speakers .....	4
About Salt Lake City .....	5
About the Conference Meeting Site .....	5
Conference Committee .....	6
Society Board Members .....	6
ASLO Staff Members .....	6
Future ASLO Meetings .....	7
Presentation Archive .....	7
For More Information .....	7
Commercial and Nonprofit Exhibits .....	7
ASLO Minorities Program .....	8
DIALOG Reception .....	8
Career Link Program .....	8
Opportunities and Information for Students .....	8
Conference Events .....	8
Registration .....	8
Opening Address .....	9
Opening Welcome Mixer Reception .....	9
Awards Presentation .....	9
Plenary Addresses .....	9
Annual Business Meeting .....	9
Poster Sessions and Receptions .....	9
Wednesday Evening Reception at Snowbird (Optional) .....	9
Workshops .....	9
Stable Isotopes Workshop .....	9
ICPMS Workshop .....	10
Public Policy Workshop .....	10
Workshop on NSF Funding Opportunities for Freshwater Research .....	10
Popular Science Communication Workshop .....	10
Other Open Meetings .....	10
Town Meeting on Emerging Research Issues for Limnology: An Opportunity For Community Input Related To NSF's Environmental Plans .....	10
Education and Human Resources Committee .....	10
Ocean Observatories Initiative Open Meeting .....	11
National Oceanographic Partnership Program (NOPP) Information Session .....	11
Field Trips and Special Activities .....	11
Antelope Island, Great Salt Lake and Prehistoric Lake Bonneville Field Trip .....	11
Bear Lake Ecology and Paleolimnology Field Trip .....	11
Soldier's Hollow Skiing Trip .....	11
Special Activities .....	11
Instructions for Presenters .....	12
Instructions for Poster Presenters .....	12
Instructions for Oral Presentations .....	13
Speaker Ready Room .....	13
Electronic Presentation Guidelines .....	13
Microsoft XP .....	13
"Pack & Go" .....	13
Laptop Support .....	13
Media Support .....	13
Additional Presentation Guidelines .....	13
Pre-Conference Presentation Uploading .....	13
Audio/Visual Equipment Information .....	14
Registration Information .....	14
Substitutions or Cancellations .....	14
Non-Refundable Fees for Duplicate Registrations and Abstract Changes .....	15
Registration Fees .....	15
Conference Check-In and Registration .....	15
Miscellaneous Information .....	15
Currency Exchange .....	15
Special Needs .....	15
Childcare .....	15
Message and Jobs Boards .....	16
E-mail Access .....	16
Donations to the Utah Food Bank .....	16
Hotel and Accommodation Information .....	16
Transportation Information .....	17
Meeting Schedule .....	18-19
Presentation Schedule .....	20
Monday, February 10, 2003 .....	20
Tuesday, February 11, 2003 .....	25
Wednesday, February 12, 2003 .....	36
Thursday, February 13, 2003 .....	47
Friday, February 14, 2003 .....	57
Author Index .....	60
Program Matrices .....	70-81
ASLO 2003 Registration Form .....	83
ASLO 2003 Wednesday Evening Reception and Field Trip Sign-up Form .....	84
ASLO 2003 Housing Reservation Form .....	85
ASLO Membership Application 2003 .....	86
Salt Lake City Downtown and Housing Map .....	87

## Welcome to the ASLO 2003 Aquatic Sciences Meeting in breathtaking Salt Lake City, Utah, the site of the 2002 Winter Olympic Games!

The ASLO 2003 organizing committee encourages you to join us in an exhilarating mountain atmosphere and invites your participation in a meeting that will provide an opportunity to use our eyes to look into the past, to examine where we are today and to look forward into the future. Sessions during this meeting carry out themes along axes of time, including paleo, historical and modern studies, and space, from landscape, seascape or extraterrestrial perspectives.

Make your plans to arrive early! This year's meeting will begin on Sunday afternoon with an opening keynote address. This session will be immediately followed by our opening welcome reception. Plan to arrive in time to register and hear this exciting talk before you attend the reception. One of four planned plenary lectures will be held Monday through Thursday mornings and will be followed by a coffee break. Poster sessions and receptions are scheduled to provide a second opportunity to make professional connections in a social setting. Daily conference events will be held at the Salt Palace Convention Center.

### The Theme of ASLO 2003

To paraphrase Thoreau, aquatic ecosystems are the landscape's most beautiful and expressive feature(s). They are the Earth's eyes; looking into which the beholder measures the depth of his own nature." ("The Ponds," *Walden*). This observation is extremely pertinent today, given the multitude of changes occurring on our planet and the significance of aquatic systems to those changes. Integrative historical and paleo studies help us better understand how the Earth system functions. Perhaps Winston Churchill put it best: "The farther backward you can look, the farther forward you are likely to see."

#### Conference Sub-themes

Special sessions for the ASLO 2003 Aquatic Sciences Meeting will be organized around the four sub-themes that follow. Special sessions are numbered according to their corresponding sub-theme, thus talks in all sessions that begin with SS1... represent Sub-theme 1, SS2... represent Sub-theme 2, SS3... represent Sub-theme 3, and SS4... represent Sub-theme 4. Poster sessions also are organized by theme. Posters that fall under Sub-theme 1 and Sub-theme 2 will be presented on Tuesday. Sub-theme 3 posters will be presented on Wednesday, and Sub-theme 4 posters will be presented on Thursday.

#### Sub-theme 1: Historical Studies in Aquatic Sciences

Human activities have altered the Earth's hydrosphere, biosphere and atmosphere. Documenting the impacts on, and the response(s) of, aquatic ecosystems to anthropogenic forcing is necessary both to understand past and present dynamics and to sustain aquatic environments and the resources they provide in the future. This sub-theme aims to cover a broad range of historical studies in aquatic sciences, including water quality and nutrient regimes, primary and secondary production, fisheries, harmful algal blooms, biodiversity, freshwater flow (surface and groundwater), dams and impoundments, watershed alteration and development, aquaculture, and invasive species.

#### Sub-theme 2: Paleo Studies in Aquatic Sciences

The study of aquatic ecosystems over geologic time scales provides insight to the vital interactions that drive global-scale patterns of climate and biotic evolution at micro and macro scales. This sub-theme will encompass paleo studies in the context of the evolution of biogeochemical cycles and aquatic biota, glacial-interglacial cycles, ocean-atmosphere dynamics, mass extinctions, and global change.

#### Sub-theme 3: Spatial Patterns in Aquatic Systems

Complex spatial patterns in aquatic systems occur at local, regional and global scales. These patterns result from dynamic interplays between biotic and abiotic forcing factors at small (sediment-water interface, connections between littoral and pelagic processes) to very large, global processes, such as ENSO events. Sessions in this sub-theme may include: watershed and regional oceanic responses to climate or anthropogenic forcing, emergent properties of aquatic ecosystems, biocomplexity, application of a regional landscape perspective to lake districts, or comparative studies of coastal ocean responses to perturbations.

#### Sub-theme 4: Extreme Environments On Earth and Beyond

The organisms that thrive in the conditions present in extreme environments may hold the key(s) to understanding life on early Earth, and elsewhere, as well as evolution of biogeochemical pathways. Sessions related to this sub-theme will examine distribution, physiology and diversity of organisms that thrive under harsh environmental conditions. Topics/habitats to be covered under this sub-theme include, but are not limited to: phylogenetic and functional diversity, extremophiles and extremozymes, symbiosis and syntrophy, deep sea hydrothermal vents and cold seeps, hot springs, polar environments, saline lakes, deep ocean environments, and systems beyond the Earth.

### Opening Address

**Speaker:** David J. Des Marais, Research Scientist, Space Science and Astrobiology, Ames Research Center, NASA

**Date:** Sunday, February 9, 2003

**Time:** 5:30 to 6:30 p.m.

**Location:** Salt Palace Convention Center – Grand Ballroom AB and North Foyer

A new addition to the program for 2003 is the opening keynote address on Sunday by Dave Des Marais of the Space Science and Astrobiology Branch of NASA's Ames Research Center. His talk will be entitled, "Astrobiology Extends Biology into Deep Time and Space."

**Description:** To understand our own origins and to search for biospheres beyond Earth, we need a more robust concept of life itself. We must learn how to discriminate between attributes that are fundamental to all living systems versus those that represent principally local outcomes of long-term survival on Earth. We should identify the most basic environmental needs of life, chart the distribution of other habitable worlds, and understand the factors that created their distribution. Studies of microbial communities and the geologic record will be summarized to offer clues about the early evolution of our own biosphere as well as the signatures of life that we might find in the heavens.

**Biography:** David Des Marais received a Ph.D. in geochemistry from Indiana University in 1974 and then was a postdoctoral research fellow at the Institute of Geophysics at U.C.L.A. Since 1976, he has been a research scientist in space science and astrobiology at Ames Research Center, NASA, Moffett Field, California. His long-term research interests have been the biogeochemical carbon cycle and the early evolution of Earth and its biosphere.

Des Marais' areas of specialization have included the stable isotope geochemistry of carbon in lunar samples, meteorites and oceanic basalts, the biogeochemistry of microbial communities in hypersaline environments, and the biogeochemistry of ancient (Precambrian) carbonates and organic matter. He has conducted geologic fieldwork in the U.S., Australia, Canada, and South Africa; and biological field studies in the U.S. and Mexico. Des Marais has authored or co-authored more than 120 peer-reviewed articles and book chapters. He is currently a member of the editorial boards of the two journals *Astrobiology* and *Geobiology*, and he has served on several NASA and NSF peer review panels, as well as NASA science definition teams and science working groups. He is the principal investigator of the Ames Research Center team of the NASA Astrobiology Institute. Des Marais serves as interdisciplinary scientist for astrobiology on both the Mars Exploration Rover 2003 science operations working group and the Mars 2005 CRISM infrared spectrometer.

## ASLO 2003 Plenary Speakers

Each plenary speaker will address one of the sub-themes and will open the meeting for that day. Each daily general session will be followed by a coffee break to encourage conversations and networking among scientists.

### Sub-theme 1: Historical Studies in Aquatic Sciences

Speaker: Sheri Fritz, Professor, Department of Geosciences and School of Biological Sciences, University of Nebraska, Lincoln, Nebraska  
 Date: Monday, February 10, 2003  
 Time: 9:30 – 10:15 a.m.  
 Location: Salt Palace Convention Center – Grand Ballroom AB and North Foyer

**Presentation:** Dr. Fritz's plenary presentation "Lakes Across Gradients of Space and Time" will discuss the perspectives that studying lacustrine stratigraphic records provide regarding the nature of long-term environmental change at time scales from decades to millennia and from tropical latitudes to the Arctic.

**Biography:** Sheri Fritz is a limnologist whose interests center on the interaction of lakes with the atmosphere and the land surface, both in contemporary times and during the Quaternary. She has worked in a variety of environments – from the American tropics to the mid-latitudes of North America and Europe to the Arctic; and from ultra-oligotrophic to hypereutrophic lakes and dilute freshwater to hypersaline systems. The majority of her research emphasizes climatic impacts on lake ecosystems and the lacustrine record of paleoclimate, including current projects in the North American continental interior, the Altiplano of Bolivia and Peru, and adjacent to the Greenland Ice Sheet. Her research combines studies of lacustrine stratigraphic records with descriptive and experimental studies of modern lakes as models for interpretation of fossil sequences, and she has been at the forefront of developing

diatoms as a tool for the reconstruction of past climate. She received her B.A. from Macalester College, her M.S. from Kent State, and her Ph.D. from the University of Minnesota. Dr. Fritz is currently a professor in the Department of Geosciences and School of Biological Sciences at the University of Nebraska in Lincoln, Nebraska.

### Sub-theme 2: Paleo Studies in Aquatic Sciences

Speaker: Donald E. Canfield, Institute of Biology, Odense University, Odense, Denmark  
 Date: Tuesday, February 11, 2003  
 Time: 8:30 – 9:15 a.m.  
 Location: Salt Palace Convention Center – Grand Ballroom AB and North Foyer

**Presentation:** Dr. Canfield's talk will be about "The Evolution of the Sulfur Cycle." Organisms metabolizing sulfur compounds were probably among the first to emerge in the early history of life on Earth. These organisms and their descendants have left isotopic and chemical traces allowing us to explore for their activity. As their activity is heavily influenced by environmental parameters, like sulfate concentration at oxygen availability, we can also gain a window into the evolution of Earth surface chemistry over time. Dr. Canfield's presentation will explore the early evolution of sulfur-metabolizing organisms and will also describe how we reconstruct Earth surface chemistry. It also will discuss the influence of surface chemistry on organismal activity.

**Biography:** Don Canfield is a professor of ecology at the Institute of Biology at Odense University, Odense, Denmark. Prior to his position at Odense, he was a BAT 1b scientist at the Max Planck Institute for Marine Microbiology in Bremen, Germany. He has also held positions at the Georgia Institute of Technology in Atlanta, Georgia, the University of Århus in Denmark, and at NASA-Ames Research Center located in Moffett Field, California. Canfield's funded research projects include Ancient Sulfur Biogeochemistry (1992 to 1995 – NASA), Biological and Chemical Dynamics of the Oxic/Anoxic Interface (1997 to 1999 – Danish National Science Foundation), and Earth System Science Center (1998 to 2002 – Danmarks Grundforskningsfond).

He received a B.S. in chemistry from Miami University, and two degrees in geochemistry, an M.Phil. and a Ph.D., from Yale University. His supervisor at Yale was Bob Berner. Canfield's honors and awards include the W.E. Ford Prize for Excellence in Mineralogy from Yale University, the Orville Prize for outstanding research in earth science from Yale University, the NRC Postdoctoral Fellowship from NASA-Ames Research Center, Honorary Research Fellow from the University of Leeds, and he was made a member of the Royal Danish Academy of Sciences and Letters in 2002.

Canfield is the editor of *Geobiology*, an associate editor for the *American Journal of Science* and *Limnology and Oceanography*, and an editorial advisor for *Aquatic Microbial Ecology*.

### Sub-theme 3: Spatial Patterns in Aquatic Systems

Speaker: Jim Elser, Professor and Director of Undergraduate Programs, Department of Biology, Arizona State University  
 Date: Wednesday, February 12, 2003  
 Time: 8:30 – 9:15 a.m.  
 Location: Salt Palace Convention Center – Grand Ballroom AB and North Foyer

**Presentation:** Dr. Elser will address, "Constraining complexity: biological stoichiometry here and now, its prospects for there and then." Ecological stoichiometry is the study of the balance of energy and multiple chemical elements in ecological interactions. While stoichiometric thinking can be identified in many sources, this approach has its primary roots in the water, especially in the classic ideas of A.C. Redfield and in its more recent manifestations in freshwater food web ecology. In this talk, Dr. Elser will describe new developments that show how stoichiometric theory can help in understanding diverse aspects of biological complexity across space and time. These include life-history evolution, aquatic-terrestrial contrasts, chaotic population dynamics, species coexistence, allometric scaling patterns, global change, and astrobiology. The wide-ranging potential of stoichiometric theory suggests that this approach can contribute to the development of a better integrated, consilient and coherent, framework - biological stoichiometry - for the analysis of biological complexity in its many forms: from the genome to the biosphere, from microbes to metazoans, and from the here and now into the distant there and then.

**Biography:** Jim Elser is professor and director of undergraduate programs in the Department of Biology at Arizona State University. He received a B.S. degree in biology from the University of Notre Dame, an M.S. degree in ecology from the University of Tennessee, and a Ph.D. in ecology from the University of California-Davis. Building on early work that won ASLO's Lindeman Award in 1990, Elser's research primarily involves the study of the interactions among nutrient supply and trophic interactions in aquatic food webs. Working with various colleagues, Elser has contributed to the development of the theory of ecological stoichiometry, the study of the balance of energy and multiple chemical elements in ecological interactions. This is the topic of a recent book co-authored with Robert Sterner (*Ecological Stoichiometry: The Biology of Elements from Molecules to the Biosphere*; Princeton Press). More recently, Elser's research has begun to extend stoichiometric theory to the study of terrestrial food webs and to better understand the interactions between evolutionary processes and ecosystem dynamics.

#### **Sub-theme 4: Extreme Environments On Earth and Beyond**

Speaker: Colleen Cavanaugh, Department of Molecular and Cellular Biology, Harvard University  
 Date: Thursday, February 13, 2003  
 Time: 8:30 – 9:15 a.m.  
 Location: Salt Palace Convention Center – Grand Ballroom AB and North Foyer

#### **About Salt Lake City**

A beautiful, safe, and vibrant city, Salt Lake combines unparalleled access to natural recreation, a bustling economy, dynamic nightlife, remarkable history, warm hospitality, and some of the greatest snow skiing on earth! Hosting the Olympic Winter Games of 2002 forever changed the community's cultural landscape and burgeoning skyline. In anticipation of the Olympics, several major attractions opened along with a brand new transportation infrastructure and abundant rooms in spectacular new and renovated hotels. Recent restaurant development makes Salt Lake the culinary capital of the

Rockies, while a revamp of Utah's liquor laws makes ordering a drink as easy as ordering a meal.

Salt Lake lies in a mountain valley with the Wasatch Mountains to the east and north. The Oquirrh (pronounced "oaker") Mountains border the western edge of the valley. Salt Lake's official elevation is 4,330 feet/1,320 meters above sea level. The city is situated on land once covered by the prehistoric Lake Bonneville. This ancient lake existed within portions of Utah, Nevada, and Idaho, with an elevation rising from 4,200 feet to 5,200 feet (1,280 meters to 1,585 meters) at some points. The eastern and northern portions of the city are located on a series of terraces, or former beaches, which are known locally as "the benches."

Attendees of the ASLO 2003 Aquatic Sciences Meeting will see why skiers come from around the world to ski world-class resorts and The Greatest Snow on Earth!™ An average 535 inches of light, dry powder snow falls on the Wasatch Range just 35 minutes from downtown. By contrast, the valley receives approximately 59 inches of snow during the season and the above-freezing temperatures keep roads free from ice and snow build-up. Average daytime highs are around 40 degrees (Fahrenheit), and average evening lows are about 22 degrees (Fahrenheit).

Please plan on bringing layered clothing and a warm jacket to be most comfortable during this cooler season. Casual jeans are acceptable in most area restaurants while more formal attire is appropriate, but not required, for cultural performances, fine restaurants, and some nightclubs.

Salt Lake still has unmatched access to the natural wonders of the western United States. Historic Temple Square and the Mormon Tabernacle Choir remain Salt Lake's number one tourist attraction. For more information on things to do and see in Salt Lake City, including attractions, skiing, sports and recreation, dining and nightlife, please visit the Salt Lake Convention and Visitors Bureau web site at [www.visitsaltlake.com](http://www.visitsaltlake.com).

#### **About the Conference Meeting Site**

This meeting is carefully planned to provide an appropriate atmosphere and numerous opportunities to interact with colleagues and friends. All plenary sessions, exhibits, posters, and the special and contributed sessions will take place at one venue, the Salt Palace Convention Center.

The Salt Palace, as it is referred to, boasts over 52,000 feet of very flexible meeting space, for a total of 53 possible meeting rooms including ballroom space. The curved metal trusses holding up the ceiling of the Salt Palace were actually built by the world's foremost designer of roller coasters, and a stunning snowflake motif in many of the windows and wall designs are there to remind you that visitors come to Salt Lake for the snow.

Housing arrangements for the 2003 Aquatic Sciences Meeting have been made at a variety of downtown hotels, all within walking distance of the convention center, and offer a wide range of room rates that will allow you to select the one that best fits your needs. Room rates range from \$61.00 USD per night to \$129.00 USD per night. Hotel reservation information and a housing form are included in this program with complete room rate and reservation instructions listed for each hotel. You also can make your reservations directly on-line.

## Conference Committee

### Meeting Co-Chairs:

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## Society Board Members

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Lynda Shapiro, Treasurer  
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Jonathan Cole, President-Elect  
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William Lewis, Past-President  
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Carol Folt, Member-at-Large  
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Samantha Joye, Member-at-Large  
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Morten Sondergaard, Member-at-Large  
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## ASLO Staff Members

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*Limnology & Oceanography*

Lucille Doucette, Journals Manager  
*Limnology & Oceanography*

Gregory Cutter, Editor, *L&O Bulletin*  
Old Dominion University

Paul F. Kemp, ASLO Web Editor and Editor-in-Chief, *L&O Methods*  
State University of New York

Susana Feng, Managing Editor  
*L&O Methods*

Helen Schneider Lemay, Business Manager  
sg Meeting & Marketing Services

## Future ASLO Meetings

ASLO 2004 Summer Meeting  
June 13-18, 2004  
Savannah, Georgia

Ocean Research Conference  
(Jointly sponsored by ASLO and The Oceanography Society)  
February 15-20, 2004  
Honolulu, Hawaii

## Presentation Archive

Abstracts of papers presented during the ASLO 2003 Aquatic Sciences Meeting will be published in the conference abstract book as well as archived on the ASLO web site following the meeting.

## For More Information

For more information on the ASLO 2003 Aquatic Sciences Meeting, please contact:

Helen Schneider Lemay  
Registration Coordinator and Meeting Manager  
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Waco, Texas 76710-4446  
Phone: 254-399-9635, Toll-Free: 800-929-ASLO  
Fax: 254-776-3767  
E-mail: business@aslo.org

## Commercial and Nonprofit Exhibits

An exhibit area will be set up at the Salt Palace Convention Center in Grand Ballroom E-J. Exhibits will be open to attendees on Tuesday, Wednesday, and Thursday, February 11, 12, and 13, 2003, from 8:00 a.m. to 7:30 p.m.

Exhibitors confirmed to date include:

Academia Book Exhibits  
Bruce Davis  
3512 Willow Green Court  
Oakton, VA 22124  
703-716-5537 Voice, 703-620-3676 Fax  
[www.acadbkex.com](http://www.acadbkex.com)

ACR Systems Inc.  
Michael P. Kilpatrick  
Bldg. 210, 12960 84th Ave.  
Surrey, BC V3W 1K7 Canada  
800-663-7845 Voice, 604-591-2252 Fax  
[www.acrsystems.com](http://www.acrsystems.com)

Estuarine Research Federation  
Joy Bartholomew  
P.O. Box 510  
Port Republic, MD 20676  
410-586-0997 Voice, 410-586-9226 Fax  
[www.erf.org](http://www.erf.org)

Fluid Imaging Technologies, Inc.  
Wayne Thibaudeau  
258 Cross Point Rd.  
Edgecomb, ME 04556  
207-882-1100 Voice, 207-882-4800 Fax  
[www.fluidimaging.com](http://www.fluidimaging.com)

In-Situ, Inc.  
Allison Johnson  
210 S. Third St.  
Laramie, WY 82070  
307-742-8213 Voice, 307-721-7598 Fax  
[www.in-situ.com](http://www.in-situ.com)

Island Press  
Krista Fisher  
1718 Connecticut Ave. N.W., Suite 300  
Washington, DC 20009  
202-232-7933 Voice, 202-234-1328 Fax  
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[www.wkap.nl](http://www.wkap.nl)

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[www.springer-ny.com](http://www.springer-ny.com)

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Yellow Springs, OH 45387  
937-767-7241, Ext. 363 Voice, 937-767-1058  
[www.yxi.com](http://www.yxi.com)

Exhibitors are invited to participate in the various social activities associated with the meeting by paying the additional spouse/guest fee of \$100.00 USD.

The cost to exhibit for a commercial (for-profit) company is \$1150.00 USD; non-profit organizations can exhibit for \$750.00 USD. Several opportunities also are available for sponsorship of various breaks, receptions and other functions throughout the meeting. Please contact the Exhibits/Sponsorship Coordinator at the ASLO Business Office, (800) 929-ASLO or (254) 399-9635 if you would like more information.

## **ASLO Minorities Program**

The 14<sup>th</sup> annual ASLO Minorities Program will be held in conjunction with the Salt Lake City Meetings. The initiative is a joint undertaking between Hampton University and ASLO and is funded by the Ocean Sciences Division of the National Science Foundation. Minority students will attend a pre-conference workshop, field trip, and give presentations in a student symposium. Dr. Barry Costa-Pierce, Director of Rhode Island Sea Grant, will give the keynote address entitled, "Ecological Aquaculture and Personal Reflections" at the pre-conference workshop at 7:00 p.m. on Saturday, February 8, 2003, at the Sheraton Hotel. Dr. Costa-Pierce is known as one of the world's leading authorities on "green" aquaculture and has recently published a critically acclaimed book on the topic. The Sunday field trip will include with sampling of the Great Salt Lake. All ASLO participants are invited to the student symposium that will be held on Tuesday, February 11, during the regular sessions, in the Room 151 – ABC of the Salt Palace Convention Center. The students will be aided in navigating their way through the conference by ASLO members who have volunteered to be meeting mentors. Anyone wishing to serve as a meeting mentor for a few of the students should contact: Dr. Ben Cuker, Marine Science, Hampton University, Hampton, VA 23668, phone (755) 727-5884, benjamin.cuker@hamptonu.edu.

## **DIALOG Reception**

for Recent Ph.D. Recipients and Near-Grads

Date: Tuesday, February 11, 2003  
 Time: 7:00 - 8:30 p.m.  
 Location: Best Western Salt Lake Plaza Hotel – Salt Lake Room (122 W. South Temple, Salt Lake City)

DIALOG, the Dissertations Initiative for the Advancement of Limnology and Oceanography, will hold a reception for past program participants and students and recent PhDs who are interested in joining this program. DIALOG consists of an online Ph.D. Dissertation Registry, a listserv to distribute information of interest to recent grads, and a biennial symposium to establish peer networks. The overall goal is to foster international, interdisciplinary understanding and peer networking.

This reception provides an opportunity for senior graduate students and recent PhDs to meet with their counterparts from around the world in a relaxed atmosphere, to learn about the DIALOG program and establish or renew collegial relationships with their peers. There will be light refreshments and a cash bar.

Information about the program also will be available at the meeting. Or, check out the website at <http://aslo.org/phd.html>.

## **Career Link Program**

Prospective employers and supervisors are invited to post announcements free of charge at the ASLO Student Booth. Students are invited to post resumes for viewing by employers and supervisors during the meeting. Electronic versions of ads and resumes will be distributed free of charge after the meeting. To learn more about the Career Link Program, please go to the following ASLO web site: [www.aslo.org](http://www.aslo.org) (Click on Student Information, then select Career Link Program).

## **Opportunities and Information for Students**

### **ASLO Student Meeting**

Date: Monday, February 10, 2003  
 Time: 6:30 – 8:00 p.m. (Immediately following the ASLO Business Meeting)  
 Location: Salt Palace Convention Center – Room 151 G

Student Meeting Agenda:

- Peter Jumars, ASLO President: "The Take and Give of Society Membership"
- Adrienne Froelich, ASLO Public Policy Representative: "Science and Public Policy - How Students Can Get Involved"
- Everett Fee, L&O Editor-in-Chief: "Getting Published: The Inside Scoop"

Student Representatives Cynthia Kicklighter and Colin Stedmon will be on hand to answer questions about serving on the ASLO Board.

### **Outstanding Student Poster Awards**

ASLO will present several awards for the most outstanding posters presented by student members. Posters in all areas of aquatic science are appropriate, including theory, modeling, and laboratory or field experimentation. To be eligible, the student must be an ASLO member and first author on research that has not been presented previously at ASLO or other scientific meetings. Presentations will be judged on the basis of innovation/scientific insight, quality of experimental design/methods, and clarity/effectiveness of presentation. All posters submitted by students will be considered for the student poster awards. There is no need to apply.

Student posters will be judged immediately following the conclusion of the poster set-up time on Monday afternoon, February 10, 2003. Therefore, posters that are not in place by this time will not be eligible for awards and will not be judged.

### **Volunteers Needed for Poster Judging**

Post docs and professionals who are members of ASLO are invited to serve as poster judges. Each judge will be responsible for evaluating 10 posters. Please indicate your area of expertise and interest in serving as a volunteer by sending an e-mail to Cynthia Kicklighter at [gt7853@prism.gatech.edu](mailto:gt7853@prism.gatech.edu).

### **Roommates Wanted**

Roommates Wanted is a free on-line service to those who are seeking roommates during ASLO's meetings. To participate, visit ASLO's website at [www.aslo.org](http://www.aslo.org), click on Student Information, then select Roommates Wanted.

## **Conference Events**

### **Registration**

Dates : Sunday, February 9, 2003 - 1:00 - 9:00 p.m.  
 Monday, February 10, 2003, through Thursday, February 13, 2003 - 7:00 a.m. - 5:00 p.m.  
 Friday, February 14, 2003 - 7:00 a.m. to 12:00 p.m.  
 Location: Salt Palace Convention Center - East Registration Area

Conference attendees are encouraged to register on Sunday afternoon so that they will have their program and materials prior to

the opening of the conference on Sunday evening and before the general session on Monday morning.

### **Opening Address**

Date: Sunday, February 9, 2003  
 Time: 5:30 to 6:30 p.m.  
 Location: Salt Palace Convention Center – Grand Ballroom AB and North Foyer

A new addition to the program for 2003 is the opening keynote address by Dave Des Marais from NASA's Ames Research Center. His talk will be immediately prior to the opening welcome mixer reception. Plan to arrive in time to register and hear his exciting talk before you attend the reception.

### **Opening Welcome Mixer Reception**

Date: Sunday, February 9, 2003  
 Time: 6:30 to 9:00 p.m.  
 Location: Salt Palace Convention Center - South Ballroom Foyer

Following the opening keynote address, attendees are invited to an opening welcome reception at the convention center. The conference registration area will be open during this time as well so that you can check-in for the meeting and receive your registration materials.

### **Awards Presentation**

Date: Monday, February 10, 2003  
 Time: 8:30 to 9:30 a.m.  
 Location: Salt Palace Convention Center – Grand Ballroom AB and North Foyer

Attendees of the ASLO 2003 Aquatic Sciences Meeting will attend a general session on Monday morning. During this first session of the meeting, prior to the first plenary talk, society award recipients will be recognized and honored.

### **Plenary Addresses**

Dates: Monday, February 10, through  
 Thursday, February 13, 2003  
 Location: Salt Palace Convention Center – Grand Ballroom AB and North Foyer

Plenary lectures are planned each morning, Monday through Thursday. Coffee breaks will follow these presentations to allow attendees time to discuss the points of the address further.

### **Annual Business Meeting**

Date: Monday, February 10, 2003  
 Time: 5:30 to 6:30 p.m.  
 Location: Salt Palace Convention Center – Room 151 G

ASLO's annual business meeting is scheduled for Monday evening at the Salt Palace Convention Center. All ASLO members and meeting participants are encouraged to attend.

### **Poster Sessions and Receptions**

Dates: Tuesday, February 11, through  
 Thursday, February 13, 2003  
 Time: 5:30 to 7:30 p.m.  
 Location: Salt Palace Convention Center - Grand Ballroom E-J

Poster sessions and receptions will take place in the Salt Palace Convention Center on Tuesday, Wednesday, and Thursday evenings. Poster sessions are an important part of the 2003 Aquatic Sciences Meeting and provide invaluable contributions to the theme. Posters will be on display and presented during the reception each evening from 5:30 to 7:30 p.m. Exhibits will be open during this time.

### **Wednesday Evening Reception at Snowbird (Optional)**

Date: Wednesday, February 12, 2003  
 Time: Participants will board the busses at Salt Palace Convention Center at 7:00 p.m. and are scheduled to return to the Salt Palace Convention Center at 10:30 p.m.  
 Departure: Salt Palace Convention Center – South side of building between West Temple and 200 West St.  
 Cost: \$45.00 per person (Includes transportation, admittance to the lodge, and hors d'oeuvres. Cocktails and beverages will be available on a cash basis.)

This special evening will begin with a pretty 30-minute drive to the Snowbird Ski Resort at night. Participants will be taken to the Gold Cliff Room at the Cliff Lodge located in the Wasatch National Forest at an altitude of 8,000 feet. Participants will experience a truly alpine setting with mountain scenes, tall pine and aspen trees. Original works of art and furnishings from around the world complement the natural surroundings to create a magically breathtaking atmosphere. The Cliff Lodge is known for its extensive collection of Persian rugs.

Tickets to attend this special reception must be purchased in advance of the meeting and will not be available for purchase on site. The number of reception tickets is very limited.

If you have already registered for the meeting and would like to purchase a ticket to the Snowbird reception and/or sign up for any of the field trips that are listed elsewhere in this program, please complete the form in this program or download the form at <http://www.aslo.org/slcc2003/files/aslo2003-activitiesform.pdf> and fax it back to the ASLO Business Office at (254) 776-3767 with payment information. Reservations cannot be accepted via e-mail or phone, nor can they be accepted without payment in advance.

### **Workshops**

Workshops scheduled in conjunction with the ASLO 2003 Aquatic Sciences Meeting will take place at the Salt Palace Convention Center. All of the workshops are free. Following is a list of the workshops scheduled to date, and we encourage you to continue to check the website for any additional information on the workshops.

### **Stable Isotopes Workshop**

Date: Sunday, February 9, 2003  
 Time: 1:00 to 2:00 p.m.  
 Location: Salt Palace Convention Center – Room 150 G

This one-hour seminar reviews the current uses of stable isotopes and isotope ratio mass spectrometry (IRMS) in aquatic sciences. It will review the fundamental principles of stable isotopes and the status of our ability to isotopically characterize all major and minor phases and components involved in natural cycles. Current instrumentation will be reviewed, with an emphasis on the principles of continuous flow techniques. Comprehensive bibliographies on

selected instrumental topics will be distributed. The lecture is open to everyone and will be given by Chuck Douthitt, a technical representative from ThermoFinnigan. He will be available afterwards to analyze specific technical questions. The workshop is free.

### **ICPMS Workshop**

Date: Sunday, February 9, 2003  
 Time: 2:30 to 3:30 p.m.  
 Location: Salt Palace Convention Center – Room 150 G

This one-hour seminar reviews the current uses of ICPMS in aquatic sciences, covering elemental analysis, elemental ratios, isotope ratios, speciation and laser ablation. It will review making these measurements in aqueous samples and in solid phases. Current instrumentation including magnetic sector ICPMS, quadrupole ( $\pm$  collision cells), and time of flight ICPMS will be reviewed. Comprehensive bibliographies on select instrumental topics will be distributed. The lecture is open to everyone and will be given by Chuck Douthitt, a technical representative from ThermoFinnigan. He will be available afterwards to analyze specific technical questions. The workshop is free.

### **Public Policy Workshop**

Date: Tuesday, February 11, 2003  
 Time: 12:15 to 2:15 p.m.  
 Location: Salt Palace Convention Center – Room 150 DEF

Have you ever wondered how environmental policies and regulations are formed? Do you want to be more involved in policy, but aren't sure where to start? Not sure if you should be communicating with Congress or a federal agency? ASLO Public Policy Representative Adrienne Froelich will address these issues and offer a hands-on policy experience for conference attendees interested in public policy.

The workshop will begin with a short presentation on the relationship between science, management and policy. Using examples from her experience working on Capitol Hill, Adrienne will provide tips on how individual researchers can get involved in public policy. Workshop participants will then have the opportunity to put those tips into practice during the second half of the workshop. Participants will work in small groups to draft a letter to government officials in response to a hypothetical policy situation and will formulate a strategy for distributing their letter. Pre-registration for this workshop is necessary so please contact Adrienne if you would like to participate by calling (202) 628-1500, Ext. 232, or by e-mail at afroelich@aslo.org.

### **Workshop on NSF Funding Opportunities for Freshwater Research**

Date: Tuesday, February 11, 2003  
 Time: 12:30 to 1:30 p.m.  
 Location: Salt Palace Convention Center – Room 250 DE

Bring your lunch and join NSF program officer(s) for an informal discussion of funding opportunities in freshwater research in the Biological Sciences and GeoSciences Directorates. New programs and Foundation-wide funding initiatives can also be discussed, along with general tips for writing successful research proposals.

### **Popular Science Communication Workshop**

Date: Wednesday, February 12, 2003  
 Time: 12:15 to 2:15 pm  
 Location: Salt Palace Convention Center – Room 250 C

Participants in this workshop will learn how to present science in an interesting way while retaining factual accuracy, the key to good science communication with a popular (general public) audience. Popular science communication aims to change scientific concepts and results from jargon-based language often understandable only to scientists, to news relevant to the lives of a general audience.

This workshop will explore science communication, specifically science writing, in language understandable to non-scientists. Participants will review examples of good science writing from newspapers like the New York Times and Washington Post and magazines like New Scientist and Science News; "dissect" the structure of science news and feature articles; discuss how popular coverage of science has changed over time; and learn the basics of this craft. They will have an opportunity to try their hands at writing a popular article about research being presented at the conference, and individual critiques will be provided to interested participants.

The workshop is free, and pre-registration is appreciated so that the workshop presenters will be able to plan accordingly. If you plan to attend, please contact Cheryl Dybas, National Science Foundation by e-mail at cdybas@nsf.gov or by phone at 703-292-8070.

### **Other Open Meetings**

#### **Town Meeting on Emerging Research Issues for Limnology: An Opportunity For Community Input Related To NSF's Environmental Plans**

Date: Tuesday, February 11, 2003  
 Time: 9:30 a.m. to 12:00 p.m.  
 Location: Salt Palace Convention Center – Room 250 AB

The National Science Foundation is seeking input from the scientific community on important basic research questions that need to be addressed in the coming decade, particularly with regard to better integrating physical, geological, and chemical limnology with ongoing programs. In December, ASLO convened a workshop of hydrologists, chemists, geologists, and ecologists to discuss emerging research issues in the field of freshwater science. A special session will be held on Tuesday morning to report the results of this workshop and to seek additional input from those attending the Salt Lake meeting. Participants can provide additional suggestions on critical research questions concerning inland waters and participate in a discussion of how ASLO can promote research and education efforts in limnology.

#### **Education and Human Resources Committee**

Date: Tuesday, February 11, 2003  
 Time: 7:00 to 8:30 p.m.  
 Location: Salt Palace Convention Center – Room 150 C

The ASLO Education and Human Resources Committee will meet to discuss: (1) progress on the K-16 Education Web Site; (2) mission statements for subcommittees; (3) federal job designation of "limnologist;" (4) the NSF/ASLO Workshop on Limnology, and, (5) other business. Non-members interested in these issues are welcome to attend.

### **Ocean Observatories Initiative Open Meeting**

Date: Tuesday, February 11, 2003  
 Time: 7:00 to 8:30 p.m.  
 Location: Salt Palace Convention Center – Room 150 G

This town meeting will update the community on the progress of the Ocean Observatories Initiative (OOI), NSF's proposed initiative to develop and construct the initial infrastructure for a network of seafloor observatories. It is envisioned that the OOI will provide the research community access to a broad range of long-term measurement from the air-sea interface to below the seafloor. This event will complement sessions associated with the meeting sub-themes "Spatial Patterns in Aquatic Systems" and "Extreme Environment on Earth and Beyond." Panelists will define key issues and discuss science objective and challenges associated with incorporating biogeochemical sensors and micro-/nanotechnology into observatory networks.

### **National Oceanographic Partnership Program (NOPP) Information Session**

Date: Thursday, February 13, 2003  
 Time: 7:00 to 8:30 p.m.  
 Location: Salt Palace Convention Center – Room 150 G

Federal officials from the NOPP Interagency Working Group (IWG) will be joined by NOPP Program Office staff and others to provide a brief overview of recent developments in the NOPP program. Future plans for NOPP will be discussed, including an update on the evolving plans to develop routine ocean observations of U.S. coastal as well as open ocean waters. There will be ample opportunity for questions and comments from meeting attendees.

### **Field Trips and Special Activities**

Although the meeting will take much of your time, we do not want you to miss out on any of the history, culture, beauty, and other places of interest that are unique to the Salt Lake City area. The field trips that follow are planned to give you a taste of what this area of Utah has to offer.

If you have already registered for the meeting and would like to sign up for any of the field trips, please complete the form in this program or download the form at <http://www.aslo.org/slcl2003/files/aslo2003-activitiesform.pdf> and fax it back to the ASLO Business Office at (254) 776-3767 with payment information. Reservations cannot be accepted via e-mail or phone, nor can they be accepted without payment in advance. All of the field trips listed below are dependent upon a minimum number of reservations and some have space limitations that apply.

### **Antelope Island, Great Salt Lake and Prehistoric Lake Bonneville Field Trip**

Date: Sunday, February 9, 2003  
 Cost: \$33.00 per person

Antelope Island lies in the Great Salt Lake and it can be accessed by car via a causeway. On this all-day field trip we will visit the State Park where bison, deer and perhaps bighorn sheep can be viewed. We can also view prehistoric beaches of Lake Bonneville that covered up to 50,000 km<sup>2</sup> of the Great Basin 32-14 thousand years ago. The trip will be led by geologists Drs. Don Currey and Des Moser. For more information go to <http://www.ugs.state.ut.us/online/PI-39/PI39PG1.HTM>

### **Bear Lake Ecology and Paleolimnology Field Trip**

Date: Sunday, February 9, 2003  
 Cost: \$36.00 per person

Bear Lake, spanning the Utah-Idaho border, lies 150 miles north of Salt Lake City. The lake hosts several endemic fishes and is an important fishery for both states. It is also a site of intensive paleolimnological studies on 120-m-long cores collected using the new Global Lake Drilling (GLAD800) drilling platform. Fish ecologist Chris Luecke and paleolimnologist Walt Dean will be your hosts for viewing this fascinating lake.

### **Soldier's Hollow Skiing Trip**

Dates: Friday night, February 14, 2003, and Saturday, February 15, 2003  
 Cost: \$135.00 per person

The Castle Inn is a beautiful bed and breakfast located near Midway, Utah, and near the Soldier Hollow Olympic cross country skiing venue. Ski rentals are available at the venue. Downhill skiers may also stay at the Inn and travel by their own vehicle to nearby downhill resorts (Deer Valley, Park City). A hot tub is available. Costs are for double occupancy. You will need to rent a vehicle and travel 55 minutes from Salt Lake City to the Inn. Price includes lodging on the night of the 14th and breakfast and skiing on the 15th.

### **Special Activities**

A number of special activity opportunities are being organized for ASLO 2003 Aquatic Sciences Meeting participants by Summit Destinations. Arrangements to participate in any of the following special activities can be made through Donna Dick at Summit Destinations. Please call (801) 536-5858 or (888) 777-3255 or send a fax to (801) 531-1633. Donna also can be contacted directly via e-mail at [donna@travel-zone.com](mailto:donna@travel-zone.com). Reservations are on an individual basis and must be made through Summit Destinations. Reservations cannot be made via the conference web site. Both prices and times shown are subject to change, therefore you must call Summit Destinations to make your reservations and to confirm rates, times, and arrangements.

Skiing in the Salt Lake City area will be a popular activity for this winter meeting. The four Salt Lake ski resorts: Alta Ski Area, Brighton Resort, Snowbird Ski and Summer Resort and Solitude Mountain Resort are accessible from the downtown and area hotels and motels. Check with your hotel for shuttle information. If you would like to learn more about any of the ski resorts in the area, visit <http://www.visitsaltlake.com/ski/resorts.html>

### **Downhill Skiing**

#### **Park City Mountain**

Full day pass:	.....	\$62 per person
Half day pass:	.....	\$47 per person
Lessons:	.....	Rates on request
Round trip transfer:	.....	\$30 per person

#### **Deer Valley**

Full day pass:	.....	\$67 per person
Half day pass:	.....	\$46 per person
Lessons:	.....	Rates on request
Round trip transfer:	.....	\$30 per person

**Alta**

Full day pass: ..... \$40 per person  
 Half day pass: ..... \$32.50 per person  
 Lessons: ..... Rates on request  
 Round trip transfer: ..... \$30 per person

**Snow Bird**

Full day pass (Tram and chair): ..... \$58 per person  
 Full day pass (Chair only) ..... \$49 per person  
 Half day pass: ..... N/A  
 Lessons: ..... Rates on request  
 Round trip transfer: ..... \$30 per person

**Snowboarding****Park City Mountain**

Full day pass: ..... \$62 per person  
 Half day pass: ..... \$47 per person  
 Lessons: ..... Rates on request  
 Round trip transfer: ..... \$30 per person

**The Canyons**

Full day pass: ..... \$57 per person  
 Half day pass: ..... \$47 per person  
 Lessons: ..... Rates on request  
 Round trip transfer: ..... \$30 per person

**Cross Country Skiing / Snowshoeing****Park City Mountain-White Pines**

Half day pass: ..... \$20 per person  
 Lessons: ..... \$25 per 90-minute session  
 Round trip transfer: ..... \$30 per person

**Snowmobiling**

Park City Mountain-Red Pines  
 9:30 a.m.: ..... \$125 per person  
 1:30 p.m.: ..... \$125 per person  
 Equipment rental: ..... \$10 for suit/boots/gloves per person  
 Round trip transfer: ..... \$30 per person

Ski and winter sports equipment rental available with 20% discount.

**Area Tours****Salt Lake City Tour**

Historical sites from the state Capital Building to Temple Square and Olympic Sites

Time: 9:00 a.m. - 1:30 p.m.  
 Fee: \$25.00 per person

**City Walking Tour**

Downtown historical and cultural sites

Time: 9:00 a.m. - 1:30 p.m.  
 Fee: \$20.00 per person

**City and Lake Tour**

Salt Lake City Tour plus an excursion to the south shore of the Great Salt Lake.

Time: 7:30 a.m. - 1:30 p.m.  
 Fee: \$35.00 per person

**Pioneer Trail Tour**

Retrace the journey of the Mormons as they settled the Salt Lake Valley. Spend time at Heritage State Park and Old Desert Village.

Time: 9:00 a.m. - 2:00 p.m.  
 Fee: \$35.00 per person

**Olympic Memories Tour**

See major venues of the 2002 Salt Lake City Winter Olympics including the Utah Olympic Winter Park.

Time: 9:00 a.m. - 1:00 p.m.  
 Fee: \$40.00 per person

**Park City Tour**

Famous mining town, great shopping and Olympic venues

Time: 2:30 - 6:30 p.m.  
 Fee: \$35.00 per person

Activity prices are based on prices in effect in 2002. There may be a small price increase for 2003. All services are subject to local taxes in effect at the time of the activity. Prepaid prices will vary from on-site prices due to advance purchase discounts and availability.

**Enjoy Your Visit to Salt Lake City**

Representatives from the Salt Lake Convention & Visitors Bureau (SLCVB) will be available on-site to provide assistance to ASLO 2003 Aquatic Science Meeting participants and guests. To learn more about the city in advance such as how to get around, things to do, area attractions, sightseeing opportunities, dining, nightlife, shopping, etc., please visit their award-winning web site at <http://www.visitsaltlake.com>.

**Instructions for Presenters****Instructions for Poster Presenters**

Poster sessions are an important part of the ASLO 2003 Aquatic Sciences Meeting and provide invaluable contributions to the theme and sub-themes. Posters will be on display in the poster reception/exhibit area of the Salt Palace Convention Center from 8:00 a.m. to 7:30 p.m. Tuesday, February 11, through Thursday, February 13. Poster sessions will coincide with the poster reception each evening from 5:30 to 7:30 p.m. Refreshments will be served during the poster sessions. Poster presenters will have a designated day to present their poster depending upon the poster session to which you are assigned. Authors should be available for discussion purposes during the poster session/reception on the day of their assigned session. All poster presenters were notified of their poster number, poster presentation time and day in advance of the meeting. If you did not receive such notification, please contact the conference management office at [business@aslo.org](mailto:business@aslo.org) or call 800-929-2756 or 254-399-9635.

When preparing your poster for presentation, please note that poster space will be exactly 4 ft. by 4 ft. (1.16m by 1.16m) in size. Posters must be prepared to these specifications so that they fit within the space assigned to them. Pushpins will be provided.

It is very important that poster presenters adhere to the designated set up and tear down instructions and times. Posters may be set up on Monday, February 10, 2003, from 3:00 to 5:00 p.m. You will set up your poster according to your assigned number and to the sequential numbers on the poster boards. Student posters will be judged immediately following the conclusion of the poster set-up time on Monday afternoon. Therefore, student posters that are not in place by this time will not be eligible for awards and will not be judged.

All posters must be set up and ready for viewing on Tuesday, February 11, prior to the beginning of the first poster session/reception in the poster reception area.

All posters must be dismantled on Thursday evening, February 13, from 7:30 to 9:30 p.m., after the conclusion of the last poster session. If a poster has not been dismantled by the presenting author by this time, it may be discarded by the convention decorator.

### **Instructions for Oral Presentations**

All concurrent sessions will take place at the Salt Palace Convention Center. With the exception of tutorials, oral presentations will be a total of 15 minutes in length, including set up, questions, and discussion. Please plan to allow at least five minutes for questions and discussion time. Session chairs have been instructed to strictly adhere to the schedule so that participants may move quickly among the concurrent session locations. If a presentation should be cancelled for any reason, this time will be used for additional discussion or a stretch break.

Presenters will not be allowed to provide their own laptop computer, and, in fact, personal laptop computers cannot be plugged into projectors in oral session rooms.

### **Speaker Ready Room**

A speaker ready room will be located in Room 250 F of the Salt Palace Convention Center for presenters to preview their materials and run-through their presentations. The speaker ready room will be open from 1:00 to 9:00 p.m. on Sunday and from 7:30 a.m. to 7:00 p.m. on Monday, Tuesday, Wednesday, and Thursday. The speaker ready room will not be open on Friday.

Audio-visual technicians will be available in Room 250 F during the hours specified.

You must bring your PowerPoint presentation to the speaker ready room at least 24 hours before your presentation. Qualified technicians can help you transfer your presentation from your laptop, if necessary.

Speakers will have the ability to review and make changes to their PowerPoint presentations in the speaker ready room. It is recommended that each presentation be reviewed no less than three hours before the start of the session.

If you are using slides, extra slide carousels will be provided in the speaker ready room. If you are using one of these carousels, please mark it with your name using the tape and markers that will be provided in the room.

### **Electronic Presentation Guidelines**

All PC computers in the speaker ready room will be installed with Microsoft Office 2000®. PowerPoint presentations created on the Macintosh platform should work, but Macintosh presentations should be reviewed in the speaker ready room to make sure all fonts and video clips are present in the form they were created in. Macintosh users should name their presentations with a .ppt suffix (example: presentation.ppt).

If you plan to do a PowerPoint presentation, it is highly recommended that you have a backup of your presentation in the form of slides or overhead transparencies.

### **Microsoft XP**

If you are using Microsoft Office XP, please save your PowerPoint presentation down to the PowerPoint 97-2000 version.

### **"Pack & Go"**

The "Pack & Go" utility within Microsoft PowerPoint is a useful tool to use when you place video and/or sound files within your presentation. It is also helpful when using non-standard fonts within your presentation. This utility will compress your presentation along with the associated files into a single compressed file. You can then copy your presentation onto a floppy disk, CD-R, CD-RW, or Zip disk and bring it to the speaker ready room, where it can be unpacked and reviewed. It is important to remember that Macintosh only offers this option in its Macintosh Office for OS X only.

### **Laptop Support**

A-V technicians will offer support to remove presentations from laptops. This action will require the installation of Zip Disk drivers or the installation of other drivers for removable media. It also might be required to configure the network card. If you plan on having to remove your presentation from your laptop, it is advisable to show up to the speaker ready room as soon as possible, to work out any unforeseen problems.

### **Media Support**

We recommend you bring at least 2 copies of your presentation to the meeting in case there is a problem with one of them. When bringing your presentation on a disk, it may be on a Zip 100, Zip 250, CD-R, CD-RW, Compact Flash, Memory Stick, or 1.44 floppy. It is recommended that at least one backup copy of your presentation be brought to the speaker ready room when you check in.

### **Additional Presentation Guidelines**

Keep animations to a minimum. When using a bulleted list of points, it may be useful to have the points appear.

Zip Disks, 1.44 Floppy, and CD's will be returned to the speaker.

All presentations will be deleted at the end of the day. All copies will be deleted at the end of the meeting.

### **Pre-Conference Presentation Uploading**

If you wish to send your presentation prior to the conference, pre-conference uploading instructions are available by following these steps:

1. Go to [www.avhqspeakerservices.com](http://www.avhqspeakerservices.com)
2. Select "Submit Your Presentation."

3. Select your show from the dropdown list of Available Conference/Shows.
4. Select "Presenter Login."
5. If it is your first visit, then Create User Profile. (You will be e-mailed a confirmation of your User ID and password to save for future reference.)
6. If it is the second visit, then login w/user name and password to get to "Submit YourPresentation."
7. You will be presented with two options: Update "Previously Added Presentation" or "Submit New Presentation."

You will receive confirmation of your submitted presentation. If there is a problem with uploading during the submission process, a technician will walk you through the steps on the telephone tech support line. Once uploaded, speaker technicians will open the presentation file to make sure everything will open and execute correctly. If any changes are made, they will notify the presenter via e-mail or phone and advise them as to whether it is correct or if further work is needed.

### **Abstracts**

Abstracts for this meeting will be posted on the ASLO 2003 Aquatic Sciences Meeting web site (<http://www.aslo.org/sl2003>), and a complete book of abstracts will be distributed to registered attendees at the meeting.

### **Further Information**

For any PowerPoint presentation or audio-visual related questions, please contact:

David Fuller  
National Account Executive  
AVHQ Dallas  
10540 N. Stemmons Freeway  
Dallas, Texas 75220  
Phone: 214-210-8025  
Fax: 214-210-8164  
E-mail: [dfuller@avhq.com](mailto:dfuller@avhq.com)

### **Audio/Visual Equipment Information**

All oral session rooms will be equipped with the following audio-visual equipment:

- 1 computer projector (PowerPoint)
- 1 PC computer
- 1 overhead projector
- 1 35 mm slide projector
- 1 screen
- 1 laser pointer
- 1 timer
- 1 lavalier microphone

Internet connectivity is not available in oral session rooms.

### **Rental of additional audio-visual equipment:**

Rental of a VCR, monitor, audio systems, provision of extra power outlets, extra tables, stands, etc. can be handled for an additional cost. If you did not request extra equipment at the time your

abstract was submitted, please contact David Fuller at AVHQ (Phone: 214-210-8025, Fax: 214-210-8164 or E-mail: [dfuller@avhq.com](mailto:dfuller@avhq.com)). Any costs for additional equipment will be billed to the abstract's presenting author.

### **Registration Information**

Online registration is preferred and highly recommended. You can register electronically on the conference web site (<http://www.aslo.org/sl2003>). Electronic registrations must include complete credit card information.

Every attempt has been made to allow secure transmissions of your credit card information and transaction, but ASLO assumes no liability for your credit card information when it is released electronically. All credit card transactions will be processed through the conference web site. Transactions are protected and encrypted using a secure socket layer (SSL) certificate provided by Verisign, Inc. SSL technology is the industry-standard method for protecting web communications. The SSL security protocol provides data encryption, server authentication, message integrity, and optional client authentication for a TCP/IP (internet) connection. Credit card verification and debit services will be provided by Authorize.net, a leading provider of Internet-based transaction services with thousands of online and traditional business customers around the world.

You will receive a separate electronic confirmation for each form that you submit.

If registration by electronic means is not possible, please complete the registration form included in this book and send to the address listed below with payment or charge card information. Please return mailed-in registrations to:

ASLO Business Office  
5400 Bosque Boulevard, Suite 680  
Waco, Texas 76710-4446

Please make checks payable to: ASLO (All payments must be in U.S. dollars drawn on a U.S. bank.)

Registrations complete with purchase order or credit card information can be faxed to: (254) 776-3767.

The full registration fee includes admission to all sessions, exhibits, evening sessions (unless otherwise specified), free workshops, Sunday welcome reception and poster receptions (Tuesday through Thursday), coffee breaks, book of abstracts, and the program book (sent to all registrants prior to the conference). Optional events such as the organized field trips and special activities and the Wednesday evening reception are not included.

**Substantial savings apply if the payment and registration form are received on or before January 9, 2003.**

### **Substitutions or Cancellations**

We understand that occasionally other responsibilities and personal obligations prevent you from attending a program for which you have registered. If you find that you will not be able to attend the ASLO meeting, we encourage you to send a substitute. Substitutions can be made at any time, even on-site at the conference.

If you find it necessary to cancel after you have already paid, we can refund your conference fee (less an \$80 USD processing fee) if we receive notice in writing on or before January 9, 2003. Due to

the limited number of enrollments available, registrants who cancel on or after January 10, 2003, will be not be eligible for any part of a refund.

To provide cancellation notice and request a refund, please send a letter to: Helen Schneider Lemay, ASLO Business Office, 5400 Bosque Boulevard, Suite 680, Waco, Texas 76710-4446, fax your request to (254) 776-3767, or via e-mail to business@aslo.org.

### **Non-Refundable Fees for Duplicate Registrations and Abstract Changes**

Duplicate registrations will be charged a non-refundable processing fee of \$60 USD to cover the costs associated with processing. If registering electronically, DO NOT submit mailed-in hard copies as well.

When presenters were notified of their presentation assignment, they were given an opportunity to review and make changes to their abstract (text, title and author information) regarding any typographical errors, minor corrections, or problems that may have occurred in the transmission of certain characters. However, it is no longer possible to make changes without payment of an abstract change fee. Any author who now requests changes will be charged an abstract change fee of \$60.00 USD.

### **Registration Fees**

Fees are stated in U.S. dollars and must be paid in U.S. dollars.

In order to register as an ASLO member, you must be a current member of the society at the time that you register. Registration fee refunds will not be issued to those who register as a non-member and then later join the society. Likewise, if you joined the society before the end of 2002 to take advantage of the member registration fee discount, your membership cannot be applied to 2003.

- ASLO Members: \$300.00 USD on or before January 9, 2003 (\$360.00 USD after January 9, 2003)
- Non-members (Those who are not a member of ASLO): \$350.00 USD by January 9, 2003 (\$410.00 USD after January 9, 2003)
- ASLO Student Members: \$200.00 USD by January 9, 2003 (\$260.00 USD after January 9, 2003)
- Non-Member Students: \$250.00 USD by January 9, 2003 (\$310.00 USD after January 9, 2003)
- One-day registrations: \$150.00 USD
- Spouse/Guest: \$100.00 USD (Spouse and guest fees cover only the conference social events such as the Sunday welcome reception, coffee services, and the poster receptions (Tuesday through Thursday). Optional events are not included. However, spouses and guests are encouraged to register for the special activities. Spouses and guests cannot be admitted to the sessions without paying the appropriate full registration fee.)

### **A late fee of \$60.00 USD will be added to all registrations received after January 9, 2003.**

Fees to attend ASLO's 2003 Aquatic Sciences Meeting must be paid in advance. Due to the limited numbers, registrations are not considered guaranteed until a check, money order, purchase order, or charge card information is received. All fax registrations must include complete credit card information, including number, expiration date, and cardholder name. VISA, MasterCard, and

American Express are accepted. Organizations can be billed only if a purchase order accompanies the registration either by fax or by mail.

Registration and any other fees listed on the conference registration form are payable in U. S. currency only.

If desired, confirmation will be sent to attendees upon receipt of each completed and paid registration.

### **Conference Check-In and Registration**

Registration prior to the meeting is strongly encouraged. By doing so, you will greatly reduce the amount of time necessary to complete the on-site registration process and pick up your meeting materials.

Meeting materials and name badges can be picked up on Sunday, February 9, 2003, at the Salt Palace Convention Center from 1:00 to 9:00 p.m. Registration will be opened each day at the convention center, from Monday, February 10, through Thursday, February 13, from 7:00 a.m. to 5:00 p.m., and on Friday, February 14, from 7:00 a.m. until the conclusion of the conference.

Name badges will be included in your registration materials and must be worn at all times throughout the meeting. Your conference receipt will be included in with your badge.

Maps showing the various session and meeting room locations will be included in the abstract book that you will receive on-site when you check-in for the meeting.

### **Miscellaneous Information**

#### **Currency Exchange**

Cash machines with 24-hour access are available at many convenient locations in Salt Lake City. Wells Fargo Bank, N.A. has an international teller window located at 79 South Main Street, downtown. They offer international banking services, and they buy and sell foreign currency bank notes in addition to providing international funds transfers and drafts. For additional information, please call 801-246-1069 or contact them by fax at 801-246-1800.

#### **Special Needs**

If you have a disability or limitation that may require special consideration in order to fully participate, please check the box on the registration form. Someone from the planning organization will contact you to see how we can accommodate your needs.

#### **Childcare**

On-site childcare will be provided by Guardian Angel Babysitting Service at the Salt Palace Convention Center beginning Saturday, February 8, through Friday, February 14, 2003. Hours of availability are 7:00 a.m. to 7:30 p.m., Saturday through Thursday, and on Friday from 7:00 a.m. to 12:00 p.m. Reservations are required.

Please contact Tara Sylvester by leaving a voice mail message at 801-598-1229 by January 15, 2003, to make arrangements. You also can contact Tara via fax at 435-658-1913. Please let her know that you will be attending the ASLO meeting at the Salt Palace Convention Center. She will call you back to confirm your reservation and to let you know what to bring for your child or children depending upon the age(s). Guardian Angel Babysitting will provide toys and activities throughout the day. The cost is \$12 per

hour for one child and \$1 more for each additional child. A three-hour minimum applies to both day and evening hours (after 5:00 p.m.). Parents will be asked to pay individually by day by cash, check, Visa, MasterCard or Discover.

Please note that any arrangements made represent a contractual agreement between the individual and Guardian Angel Babysitting Service. ASLO assumes no responsibility for the services rendered.

### **Message and Jobs Boards**

Messages for colleagues can be posted on message boards at the Salt Palace Convention Center. A bulletin board also will be available to post job listings. If you know of pertinent job announcements, you are encouraged to take advantage of this opportunity by posting them on this board. If you know of a job opportunity and would like to submit a listing but will not be able to attend the meeting, please e-mail a brief description to either of the ASLO student board representatives Cynthia Kicklighter (gt7853a@prism.gatech.edu) or Colin Stedmon (cst@dmu.dk) by January 17, 2003.

### **E-mail Access**

E-mail terminals to access electronic mail will be set up in Room 252 AB at the Salt Palace Convention Center during conference hours Monday through Friday. We also suggest you check with your hotel regarding the e-mail facilities and instructions on access.

### **Donations to the Utah Food Bank**

Food items that may be left over during ASLO 2003 functions at the Salt Palace Convention Center will be donated to the Utah Food Bank in the name of ASLO.

### **For More Information**

For more information on the ASLO 2003 Aquatic Sciences Meeting, address all correspondence and questions regarding registration, conference logistics, and hotel accommodations to:

Helen Schneider Lemay  
Registration Coordinator and Meeting Manager  
ASLO Business Office  
5400 Bosque Boulevard, Suite 680  
Waco, Texas 76710-4446  
Phone: 254-399-9635, Toll-Free: 800-929-ASLO  
Fax: 254-776-3767  
E-mail: business@aslo.org

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

### **Hotel and Accommodation Information**

ASLO has selected six (6) hotels, all within walking distance of the Salt Palace Convention Center, to host the ASLO meeting delegates. These hotels provide a range of sleeping room rates.

If you have not done so already, we remind you to make your hotel reservations through the Salt Lake Convention and Visitors Bureau Housing Bureau by calling toll-free from the U.S. (800) 217-0002 or

international (801) 521-9025; by faxing (801) 355-0250 or sending in your completed housing form in the mail to: SLCVB/ASLO Housing Bureau, 90 South West Temple, Salt Lake City, UT 84101. You can download the form at <http://www.aslo.org/slcl2003/files.html>. You also can submit your housing reservation via the Salt Lake Convention and Visitors Bureau Housing Bureau web site at <http://www.pkghrss.com/events/7740/7740.html>. Reservations must be made by phone, fax, mail or Internet by January 13, 2003, in order to guarantee the special meeting rates.

Reservations must be made by phone, fax, mail or Internet by January 13, 2003, in order to guarantee the special meeting rates.

### **Conference Hotels**

#### **Marriott Salt Lake City Downtown (Headquarters Hotel)**

75 South West Temple  
Salt Lake City, Utah 84101-1407  
Rate: \$119 USD per night, single/double occupancy

The Salt Lake City Marriott Downtown boasts the premier location in the heart of the city marketplace. Directly across the street from the Salt Palace Convention Center, one-half block from Historic Temple Square, and connected to the Crossroads shopping plaza which features 145 shops and a food court. The hotel offers "Elevations" restaurant, "Destinations Coffee Bar" featuring Starbucks coffee blends. Additional service amenities include a gift shop, 24-hour business center, indoor/outdoor pool, Hertz auto rental, high-speed Internet access, and concierge level. Airport shuttle is available.

#### **Wyndham Salt Lake City**

215 West South Temple  
Salt Lake City, Utah 84101-1333  
Rate: \$114 USD per night, single/double occupancy

The Wyndham Salt Lake City is a 381-room full service luxury hotel. The hotel is located just steps from the Salt Palace Convention Center (with no streets to cross), next to the Delta Center sports arena, one block from Temple Square, and, like other Salt Lake hotels, is convenient to seven major ski resorts. Every guest room offers the highest quality Serta Pillow-Top mattress, duvets, dedicated high-speed Internet access, two dual-line telephones, cordless phone, voice mail, Herman Miller ergonomic chair, recliner, bathroom amenities by Bath and Body Works, coffeemaker, hair dryer, iron/ironing board, and much more! Enjoy the indoor heated pool and sauna, exercise facilities, and panoramic views of the mountains. Airport shuttle is available.

#### **Shilo Inn Hotel - Salt Lake City**

206 South West Temple  
Salt Lake City, Utah 84101-1994  
Rate: \$104 USD per night, single/double occupancy

Located downtown, across the street from the Salt Palace Convention Center, guest rooms feature microwave, refrigerator, data ports, coffeemaker, ironing unit, first-run movies, hair dryer, and local newspaper. Restaurants, free guest parking, Lite American Breakfast, airport shuttle, private club, 24-hour pool, spa, sauna, fitness center, banquet meeting space, VIP penthouse, and gift shop.

**Hilton Salt Lake City Center**

255 South West Temple

Salt Lake City, Utah 84101-1910

Rate: \$129 USD per night, single/double occupancy

The Hilton Salt Lake City Center is located near the Salt Palace Convention Center in the heart of downtown. Each guest room features two phones with data port, large desk, coffee maker with complimentary coffee, iron and full-size ironing board, movies on command, ADA accessibility, and cable TV. Amenities include heated indoor swimming pool, sun deck, saunas, hot tub, health club, massage therapy clinic, and two restaurants. Try Spencer's for Steaks and Chops, or Trofi for casual dining. Airport shuttle is available.

**Best Western Salt Lake Plaza Hotel**

122 West South Temple

Salt Lake City, Utah 84101-1402

Rate: \$92 USD per night, single/double occupancy

The full-service Plaza Hotel offers the most central downtown location - directly across the street from the Salt Palace Convention Center, historic Temple Square and Symphony Hall (Abravanel Hall). The hotel is next to the world's largest genealogy library, a half block from the Crossroads Shopping Mall, and one and one-half blocks from the Delta Center. Guests will appreciate the friendly and caring staff. Amenities include full sized iron and ironing board, 25-inch cable TV, in-room pay-per-view movies, Nintendo, computer data ports, voice mail, electronic door locks, complimentary airport shuttle, and \$5 overnight guest parking.

**Quality Inn City Center**

154 West 600 South

Salt Lake City, Utah 84101-2701

Rate: \$61 USD per night, single occupancy and \$71 USD per night, double occupancy

The Quality Inn City Center is a beautiful six-acre garden property located just off the downtown "City Center." The hotel is within walking distance of the Salt Palace Convention Center, crossroads and ZCMI malls, historic Temple Square, and the Delta Center. Amenities include complimentary deluxe continental breakfast, Frequent Sleeper Corporate Club program, free USA Today daily, in-room coffee service, dataports and voice mail, hair dryers, irons, and ironing boards in each room, work out facility, seasonal pool and year-round hot tub, safe courtyard setting, free local, 800, and credit card access calls, free parking and airport shuttle, cable TV with pay-per-view movies and video games. Features Sophie Garcia's Mexican Restaurant and full catering services. AAA approved.

**Transportation Information****Special Airline Rates**

Located approximately 10 minutes from downtown Salt Lake City, Salt Lake International Airport serves over 700 daily flights. Delta Airlines is providing special rates for ASLO Aquatic Sciences Meeting attendees as the official airline for flights to Salt Lake. Simply contact Delta's toll-free number at (800) 241-6760. You also can call your travel agent. To take advantage of the discounted airfares being offered by Delta, please refer to Delta File Number: 189424A when making your reservations. Delta's new "bonus" program has increased the discount to 10% off the lowest applicable fare for tickets purchased less than 60 days prior to departure and 15% for tickets purchased at least 60 days prior to departure. By ensuring that the meeting number appears on your ticket, you will be supporting ASLO.

**Airport Shuttle Service**

Each of the six (6) conference hotels provides airport shuttle service. Please call your hotel to verify airport pick-up and return times. Three (3) of the hotels offer complimentary shuttle service: Quality Inn, Shilo, and Best Western. The three (3) remaining charge a fee: Hilton - \$6.00 USD each way; Marriott - \$7.00 USD each way or \$13.00 round trip, and Wyndham - \$7.00 USD each way or \$13.00 round trip. Shuttle vans are accessible outside of each airport terminal.

**Car Rental**

AVIS has been appointed the official car rental company for the American Society of Limnology and Oceanography meeting in Salt Lake City. To make reservations if you are calling from the U.S., please call (800) 331-1600. If you live outside the U.S., please visit the website [www.avis.com](http://www.avis.com) for a list of international numbers to call and select Customer Service. You may also contact your travel agent. The AVIS Worldwide Discount Number for the ASLO meeting is: D130903.

**Taxi - Bus Service to the Airport**

Taxi service from the Salt Lake International Airport to any of the six conference hotels will cost approximately \$15.00 USD. City bus service (Utah Transit Authority) is also available from the airport to downtown for a cost of \$1.25 USD. For more information on the bus system, please call (801) 743-3882 or visit them on the web: [www.rideuta.com](http://www.rideuta.com).

**Local City Transportation**

The Utah Transit Authority serves the Salt Lake area. For more information on the bus system including schedules and fares, please call (801) 743-3882 or visit them on the web: [www.rideuta.com](http://www.rideuta.com).

**Salt Lake Palace Convention Center Parking**

Public parking is available at the convention center for a daily fee of \$5.00 USD. This parking area is located beneath the convention center and is accessible from 200 South.

## Meeting Schedule

### Sunday, February 9, 2003

1:00 – 9:00 p.m.	<b>Registration</b> Salt Palace Convention Center – East Registration Area
1:00 – 2:00 p.m.	<b>Stable Isotopes Workshop</b> Salt Palace Convention Center – Room 150 G
2:00 – 5:30 p.m.	<b>Minorities Program Session</b> Salt Palace Convention Center – Room 250 C
2:30 – 3:30 p.m.	<b>ICPMS Workshop</b> Salt Palace Convention Center – Room 150 G
5:30 – 6:30 p.m.	<b>Opening Remarks</b> Samantha "Mandy" Joye, University of Georgia, 2003 Aquatic Sciences Meeting Co-chair  <b>Opening Address</b> David J. Des Marais, Research Scientist, Space Science and Astrobiology, NASA – Ames Research Center  Salt Palace Convention Center – Grand Ballroom AB and North Foyer
6:30 – 9:00 p.m.	<b>Opening Welcome Mixer Reception</b> Salt Palace Convention Center – South Ballroom Foyer

### Monday, February 10, 2003

7:00 a.m. – 5:00 p.m.	<b>Registration</b> Salt Palace Convention Center – East Registration Area
8:00 – 8:30 a.m.	<b>Complimentary Coffee Service</b> Salt Palace Convention Center - Grand Ballroom Foyer
8:30 – 9:30 a.m.	<b>Conference Welcome and Awards Presentation</b> Dr. Peter Jumars, University of Maine, ASLO President  <b>Opening Remarks and Introduction of Plenary Speaker</b> James "Jim" Cotner, University of Minnesota, 2003 Aquatic Sciences Meeting Co-chair  Salt Palace Convention Center – Grand Ballroom AB and North Foyer
9:30 – 10:15 a.m.	<b>Plenary Address</b> Dr. Sheri Fritz, Professor, Department of Geosciences and School of Biological Sciences, University of Nebraska, Lincoln, Nebraska  Salt Palace Convention Center – Grand Ballroom AB and North Foyer
10:15 – 10:45 a.m.	<b>Break</b> Salt Palace Convention Center – Levels 1 and 2
10:45 a.m. – 12:00 p.m.	<b>Morning Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
12:00 – 2:00 p.m.	<b>Lunch</b> Attendees on their own for lunch
2:00 – 3:15 p.m.	<b>Afternoon Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms

3:00 – 5:00 p.m.	<b>Poster Set-up</b> Salt Palace Convention Center – Grand Ballroom E-J
3:15 – 3:45 p.m.	<b>Break</b> Salt Palace Convention Center – Levels 1 and 2
3:45 – 5:00 p.m.	<b>Afternoon Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
5:30 – 6:30 p.m.	<b>ASLO Business Meeting</b> Salt Palace Convention Center – Room 151 G
6:30 – 8:00 p.m.	<b>ASLO Student Meeting</b> Salt Palace Convention Center – Room 151 G

### Tuesday, February 11, 2003

7:00 a.m. – 5:00 p.m.	<b>Registration</b> Salt Palace Convention Center – East Registration Area
8:00 a.m. – 7:30 p.m.	<b>Exhibits</b> Salt Palace Convention Center – Grand Ballroom E-J
8:30 – 9:15 a.m.	<b>Opening Remarks and Introduction of Plenary Speaker</b> Samantha "Mandy" Joye, University of Georgia, 2003 Aquatic Sciences Meeting Co-chair
9:15 – 9:30 a.m.	<b>Plenary Address</b> Dr. Donald E. Canfield, Institute of Biology, Odense University, Odense, Denmark
9:30 a.m. – 12:00 p.m.	Salt Palace Convention Center – Grand Ballroom AB and North Foyer
9:30 – 10:45 a.m.	<b>Break</b> Salt Palace Convention Center – Levels 1 and 2
9:30 a.m. – 5:15 p.m.	<b>Morning Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
10:45 – 11:00 a.m.	<b>Minority Student Symposium</b> Salt Palace Convention Center – Room 151 ABC
11:00 a.m. – 12:15 p.m.	<b>Town Meeting: Emerging Research Issues for Limnology</b> Salt Palace Convention Center – Room 250 AB
12:15 – 2:15 p.m.	<b>Break</b> Salt Palace Convention Center – Levels 1 and 2
12:15 – 2:15 p.m.	<b>Morning Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
12:30 – 1:30 p.m.	<b>Lunch</b> Attendees on their own for lunch
12:15 – 2:15 p.m.	<b>Public Policy Workshop</b> Salt Palace Convention Center – Room 150 DEF
2:15 – 3:30 p.m.	<b>NSF Funding Opportunities for Freshwater Research Workshop</b> Salt Palace Convention Center – Room 250 DE
3:30 – 4:00 p.m.	<b>Afternoon Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
4:00 – 5:15 p.m.	<b>Break</b> Salt Palace Convention Center – Levels 1 and 2
	<b>Afternoon Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms

5:30 – 7:30 p.m.	<b>Exhibits, Poster Session &amp; Reception</b> Salt Palace Convention Center – Grand Ballroom E-J
7:00 – 8:30 p.m.	<b>Education and Human Resources Committee Meeting</b> Salt Palace Convention Center – Room 150 C
7:00 – 8:30 p.m.	<b>Ocean Observatories Initiative Open Meeting</b> Salt Palace Convention Center – Room 150 G
7:00 – 8:30 p.m.	<b>DIALOG Reception</b> Best Western Salt Lake Plaza Hotel – Salt Lake Room

**Wednesday, February 12, 2003**

7:00 a.m. – 5:00 p.m.	<b>Registration</b> Salt Palace Convention Center – East Registration Area
8:00 a.m. – 7:30 p.m.	<b>Exhibits</b> Salt Palace Convention Center – Grand Ballroom E-J
8:30 – 9:15 a.m.	<b>Opening Remarks and Introduction of Plenary Speaker</b> Jim Cotner, University of Minnesota, 2003 Aquatic Sciences Meeting Co-chair
	<b>Plenary Address</b> Jim Elser, Professor and Director of Undergraduate Programs, Department of Biology, Arizona State University
	Salt Palace Convention Center – Grand Ballroom AB and North Foyer
9:15 – 9:30 a.m.	<b>Break</b> Salt Palace Convention Center – Levels 1 and 2
9:30 – 10:45 a.m.	<b>Morning Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
10:45 – 11:00 a.m.	<b>Break</b> Salt Palace Convention Center – Levels 1 and 2
11:00 a.m. – 12:15 p.m.	<b>Morning Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
12:15 – 2:15 p.m.	<b>Lunch</b> Attendees on their own for lunch
12:15 – 2:15 p.m.	<b>Popular Science Communication Workshop</b> Salt Palace Convention Center – Room 250 C
2:15 – 3:30 p.m.	<b>Afternoon Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
3:30 – 4:00 p.m.	<b>Break</b> Salt Palace Convention Center – Levels 1 and 2
4:00 – 5:15 p.m.	<b>Afternoon Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
5:30 – 7:30 p.m.	<b>Exhibits, Poster Session &amp; Reception</b> Salt Palace Convention Center – Grand Ballroom E-J
7:00 – 10:30 p.m.	<b>Optional Wednesday Evening Reception – Snowbird Ski Resort</b>  Busses depart from south side of building between West Temple and 200 West St. at 7:00 p.m. and will return to the same location at 10:30 p.m.

**Thursday, February 13, 2002**

7:00 a.m. – 5:00 p.m.	<b>Registration</b> Salt Palace Convention Center – East Registration Area
8:00 a.m. – 7:30 p.m.	<b>Exhibits</b> Salt Palace Convention Center – Grand Ballroom E-J
8:30 – 9:15 a.m.	<b>Opening Remarks and Introduction of Plenary Speaker</b> Samantha "Mandy" Joye, University of Georgia, 2003 Aquatic Sciences Meeting Co-chair

**Plenary Address**

Colleen Cavanaugh, Department of Molecular and Cellular Biology, Harvard University

Salt Palace Convention Center – Grand Ballroom AB and North Foyer

**Break**

Salt Palace Convention Center – Levels 1 and 2

**Morning Concurrent Sessions**

Salt Palace Convention Center – Various Rooms

**Break**

Salt Palace Convention Center – Levels 1 and 2

**11:00 a.m. – 12:15 p.m. Morning Concurrent Sessions**

Salt Palace Convention Center – Various Rooms

**12:15 – 2:15 p.m. Lunch**

Attendees on their own for lunch

**2:15 – 3:30 p.m. Afternoon Concurrent Sessions**

Salt Palace Convention Center – Various Rooms

**3:30 – 4:00 p.m. Break**

Salt Palace Convention Center – Levels 1 and 2

**4:00 – 5:15 p.m. Afternoon Concurrent Sessions**

Salt Palace Convention Center – Various Rooms

**5:30 – 7:30 p.m. Exhibits, Poster Session & Reception**

Salt Palace Convention Center – Grand Ballroom E-J

**7:00 – 8:30 p.m. National Oceanographic Partnership Program Information Session**

Salt Palace Convention Center – Room 150 G

**7:30 – 9:30 p.m. Exhibit and Poster Teardown**

Salt Palace Convention Center – Grand Ballroom E-J

**Friday, February 14, 2003**

7:00 a.m. – 12:00 p.m.	<b>Registration</b> Salt Palace Convention Center – East Registration Area
8:30 – 9:45 a.m.	<b>Morning Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
9:45 – 10:15 a.m.	<b>Break</b> Salt Palace Convention Center – Levels 1 and 2
10:15 – 11:30 a.m.	<b>Morning Concurrent Sessions</b> Salt Palace Convention Center – Various Rooms
11:30 a.m.	<b>Meeting Concludes</b>

**Presentation Schedule****Monday, February 10, 2003****CS05:****Benthic-Pelagic Coupling & Benthos**

Chair(s):	Brian Hentschel, hentsche@sunstroke.sdsu.edu
Location:	250 C
10:45 am	Luecke, C.: ASSESSING BENTHIC SUBSTRATES USING HYDROACOUSTIC TECHNOLOGY
11:00 am	Hentschel, B. T.; Herrick, B. S.: GROWTH RATES OF INTERFACE-FEEDING SPIONID POLYCHAETES IN SIMULATED TIDAL CURRENTS
11:15 am	Bell, E. M.; Weithoff, G.: BENTHIC RECRUITMENT OF ZOOPLANKTON IN AN ACIDIC LAKE
11:30 am	Shimeta, J.; Hippe, K. R.; Witucki, P. F.: INFLUENCES OF NUTRITIONAL STATE AND TEMPERATURE ON PARTICLE-CAPTURE MECHANICS IN THE PASSIVE SUSPENSION FEEDER, POLYDORA CORNUTA
11:45 am	Powers, L. A.; Michel, E.: IS SUBSTRATE ARCHITECTURE IMPORTANT? : SPATIAL VARIABILITY IN LAKE TANGANYIKA GASTROPOD DISTRIBUTIONS, RESULTS FROM THE NYANZA PROJECT

**CS25:  
Optics**

Chair(s):	Bruce Hargreaves, brh0@lehigh.edu
Location:	250 C
3:45 pm	Roesler, C. S.; Barnard, A. H.: TEMPORAL VARIABILITY IN ECOSYSTEM STRUCTURE IN THE EASTERN MAINE COASTAL CURRENT AS OBSERVED BY THE GULF OF MAINE OCEAN OBSERVING SYSTEM (GOMOOS)
4:00 pm	Barnard, A. H.; Roesler, C. S.: TEMPORAL VARIABILITY IN THE REMOTELY SENSED REFLECTANCE IN THE EASTERN MAINE COASTAL CURRENT AS OBSERVED BY THE GULF OF MAINE OCEAN OBSERVING SYSTEM (GOMOOS)
4:15 pm	Hargreaves, B. R.; Morrow, J. H.; Larson, G. L.; Girdner, S. F.; Collier, R. W.: ULTRAVIOLET MEASUREMENTS IN CRATER LAKE, OREGON (USA) YIELD NEW ESTIMATES OF UV ATTENUATION AND ABSORPTION BY PURE WATER
4:30 pm	Swift, T. J.; Losada, J. P.; Reuter, J. E.; Schladow, S. G.; Mitchell, B. G.; Goldman, C. R.: SEASONAL VARIATIONS OF OPTICALLY-ACTIVE COMPONENTS IN AN ULTRAOLIGOTROPHIC LAKE
4:45 pm	Craig, S. E.: INTERACTION OF LIGHT CLIMATE AND HYDROGRAPHY IN DETERMINING THE VERTICAL DISTRIBUTION OF PRIMARY PRODUCTION IN SCOTTISH FJORDS

**CS38:  
Wetlands Ecology**

Chair(s):	Kyle Zimmer, zimme076@umn.edu
Location:	250 C
2:00 pm	Whitmire, S. L.; Hamilton, S. K.: ANAEROBIC MICROBIAL DECOMPOSITION IN WETLANDS WITH DIFFERENT WATER SOURCES

2:15 pm	Benfield, M. C.; Niezgoda, G.; Sisak, M. M.; Bi, H.; Keenan, S. F.; Fry, B.; Baltz, D.: MOVEMENTS OF JUVENILE BLUE CRABS CALLINECTES SAPIDUS IN SALT MARSH HABITAT: A SHALLOW-WATER ULTRASONIC TELEMETRY STUDY
2:30 pm	Daoust, R. J.; Morris, J. T.: DETERMINANTS OF MACROPHYTE PRODUCTION AND ZONATION WITHIN AN OLIGOHALINE MARSH AT THE PLUM ISLAND ECOSYSTEM LTER SITE.
2:45 pm	McGuire, M. A.; Pillsbury, R. W.: FACTORS AFFECTING THE DISTRIBUTION OF WILD RICE ( <i>ZIZANIA PALUSTRIS</i> )
3:00 pm	Zimmer, K. D.: SESTON STOICHIOMETRY IN SHALLOW LAKES: A CONTRAST OF LAKES IN TURBID- AND CLEAR-WATER STATES

**CS40:****Physical Limnology - New Perspectives and Applications to Biogeochemistry and Productivity of Aquatic Ecosystems**

Chair(s):	Sally MacIntyre, sally@icess.ucsb.edu
Location:	250 DE
10:45 am	Hodges, B. R.: OPEN ISSUES IN 3D MODELING OF INLAND WATERS
11:00 am	Laval, B. E.; Forrest, A. L.: CIRCULATION IN PARTIALLY ICE-COVERED LAKES
11:15 am	Little, J. C.; Wuest, A.: MEROMIXIS – THE EFFECT OF WIND, RIVER INFLOW, AND PRIMARY PRODUCTIVITY
11:30 am	Rueda, F. J.; Cowen, E. A.: TRANSPORT TIME SCALES IN FRESHWATER EMBAYMENTS
11:45 am	Churchill, J. H.; Chen, C.; Wang, L.; Kerfoot, W. C.; Auer, M. T.: EXCHANGE OF WATER BETWEEN THE KEWEENAW WATERWAY AND LAKE SUPERIOR: MODELING AND OBSERVATIONS
2:00 pm	MacIntyre, S.; Clark, J.; Jellison, R.; Kling, G.: TURBULENCE IN SMALL TO MODERATE SIZED LAKES
2:30 pm	Cowen, E. A.; Rueda, F. J.; King, A. T.; Rusello, P. J.; Kull, K. L.: GRAVITY CURRENTS AND BOUNDARY MIXING DURING A WINTER COOLING PERIOD IN A LARGE LAKE
2:45 pm	Lorke, A.; Wüest, A.; Märki, M.; Müller, B.: BREATHING SEDIMENTS – THE CONTROL OF SEDIMENT-WATER FLUXES BY BOUNDARY-LAYER TURBULENCE
3:00 pm	Shaw, W.; MacIntyre, S.: MIXING IN THE SEASONAL THERMOCLINE OF A LARGE LAKE: INSTABILITIES OF THE INTERNAL WAVE FIELD
3:45 pm	Pálmarsson, S. Ó.; Schladow, S. G.: NEAR-BOUNDARY PARTICLE FLUX IN STRATIFIED LAKES
4:00 pm	Schladow, S. G.; Palmarsson, S. O.; Sunman, B.; Green, P. G.; Jackman, A. P.; Richards, R. C.: CHANGES IN LAKE PARTICULATE DISTRIBUTION ON HOURLY TIME SCALES
4:15 pm	Silsbe, G. M.; Hecky, R. E.; Guildford, S. J.: SPATIAL AND SEASONAL PATTERNS OF THE THERMAL STRUCTURE, DISSOLVED OXYGEN AND CHLOROPHYLL CONCENTRATIONS IN LAKE VICTORIA, EAST AFRICA
4:30 pm	King, A. T.; Rueda, F. J.; Cowen, E. A.; Johnson, R. L.: IMPACT OF SPATIAL AND TEMPORAL PATTERNS OF SUBMERGED AQUATIC VEGETATION ON TRANSPORT IN A FRESHWATER EMBAYMENT
4:45 pm	Kumagai, M.; Yasuaki, A.; Kanako, I.: INTERPRETATION IN PHYSICAL LIMNOLOGY ON INCREASE OF CHLORINE IN LAKE BIWA

• represents Tutorial presentations

**SS1.05:****The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems**

Chair(s):	Val Smith, vsmith@ku.edu Mandy Joye, mjoye@arches.uga.edu Robert Howarth, rwh2@cornell.edu
Location:	150 G
10:45 am	<u>Schindler, D. W.</u> : A MODERN HISTORY OF THE SCIENCE OF EUTROPHICATION IN LAKES <sup>(*)</sup>
11:15 am	<u>Hoover, D. J.</u> ; Tanaka, K.; Ringuet, S.; Mackenzie, F. T.: NUTRIENT LOADING AND RESPONSE IN SOUTHERN KANEHOE BAY, OAHU, HAWAII: POINT- AND NON-POINT-SOURCE INPUTS AND IMPACTS <sup>(*)</sup>
2:00 pm	<u>Alexander, R. B.</u> ; Smith, R. A.: HISTORICAL CHANGES IN SELECTED MEASURES OF TROPHIC CONDITIONS IN MAJOR RIVERS OF THE UNITED STATES DURING THE LATE 20TH CENTURY <sup>(*)</sup>
2:30 pm	<u>Fisher, T. R.</u> ; Boynton, W. R.; Hagy III, J. D.: THE HISTORY OF CULTURAL EUTROPHICATION IN THE CHOPTANK AND PATUXENT TRIBUTARIES OF CHESAPEAKE BAY <sup>(*)</sup>
3:00 pm	<u>Twilley, R. R.</u> ; Mancera_Pineda, J. E.; Rivera_Monroy, V. H.: VULNERABILITY OF TROPICAL ESTUARIES TO EUTROPHICATION <sup>(*)</sup>
3:45 pm	<u>Havens, K. E.</u> : TRENDS IN TOTAL PHOSPHORUS AT SEASONAL, YEARLY, AND DECADAL TIME SCALES IN LAKE OKEECHOBEE, FLORIDA (USA) <sup>(*)</sup>
4:15 pm	<u>Goldman, C. R.</u> : LESSONS IN CRITICAL ECOSYSTEM PROTECTION: THE ROLE OF SCIENCE IN MANAGEMENT DECISIONS AT LAKE TAHOE <sup>(*)</sup>
4:45 pm	<u>Smith, S. V.</u> ; Swaney, D. P.; Talaue-McManus, L.; Bartley, J. D.; Sandhei, P. T.; McLaughlin, C.; Dupra, V. C.; Crossland, C. J.; Buddemeier, R. W.; Maxwell, B. A.; Wulff, F.: HUMANS, HYDROLOGY, AND THE DISTRIBUTION OF INORGANIC NUTRIENT LOADING TO THE OCEAN <sup>(*)</sup>

**SS1.07:****Symposium Tribute to John J. Gilbert: 40 Years of Contributions to Limnology**

Chair(s):	Jeff Jack, jeff.jack@louisville.edu Craig Williamson, cew0@lehigh.edu
Location:	251 AB
10:45 am	<u>Starkweather, P. L.</u> : A MODEL FOR THE MULTI-DIMENSIONAL GROWTH OF AQUATIC SCIENCE: THE RESEARCH CAREER OF JOHN J. GILBERT <sup>(*)</sup>
11:00 am	<u>Moore, M. V.</u> : AN INSPIRATION FOR GLOBAL EDUCATION: LIMNOLOGY AT LAKE BAIKAL
11:15 am	<u>DeMott, W. R.</u> : EVIDENCE FOR AN INGESTION RATE VERSUS ASSIMILATION EFFICIENCY TRADE-OFF AMONG DAPHNIA SPECIES FEEDING ON DIGESTION-RESISTANT RESOURCES
11:30 am	<u>Wickham, S. A.</u> ; Beringer, U. G.: THE IMPACT OF COPEPODS AND LARVAL KRILL ON THE MICROBIAL FOOD WEB
11:45 am	<u>Walsh, E. J.</u> ; <u>Wallace, R. L.</u> : 'NO EXIT' — PHYLOGENY OF THE ASPLANCHNIDAE (ROTIFERA)
2:00 pm	<u>Magnien, R. E.</u> : JOHN GILBERT: INFLUENCES ON SCIENCE AND CAREERS

2:15 pm	<u>Williamson, C. E.</u> ; Leech, D. M.: ROTIFERS AND THE SOLAR BOTTLENECK: DOES UV TOLERANCE PROVIDE SMALL SPECIES WITH A REFUGE FROM PREDATORS?
2:30 pm	<u>Jack, J. D.</u> ; Sluss, T. D.: POTENTIAL ROLE FOR FOOD LIMITATION IN RIVERINE ZOOPLANKTON COMMUNITIES
2:45 pm	<u>Burks, R. L.</u> ; CUES, CUES AND MORE CUES: DAPHNIA SWIM AWAY FROM CHAOBORUS, CRUSHED-UP CONSPECIFICS AND PELAGIC LAKE WATER CHEMICAL CUES
3:00 pm	<u>Hampton, S. E.</u> : ENVIRONMENT-SPECIFIC PREDATION RISK AND DIEL HABITAT PARTITIONING BY THE INTRAGUILD PREDATORS NOTONECTA AND BUENOA IN MACROPHYTE-DOMINATED AND OPEN WATER
3:45 pm	<u>Gonzalez, M. J.</u> ; Paul, D. W.; Pollard, A. I.; Vanni, M. J.: EFFECTS OF PREDATION BY LARVAL GIZZARD SHAD (DOROSOMA CEPEDIANUM) ON RESERVOIR ZOOPLANKTON COMMUNITIES
4:00 pm	<u>Schroeder, T.</u> ; Gilbert, J. J.: INTRA- AND INTERSPECIFIC VARIATION OF DELAYED MIXIS IN MONOGONONT ROTIFERS
4:15 pm	<u>Noble, S. J.</u> ; Gonzalez, M. J.; Piechocinski, N. C.; Glaholt, S. P.: EFFECTS OF STORM EVENTS ON RESERVOIR ROTIFER POPULATION DYNAMICS
4:30 pm	<u>Fradkin, S. C.</u> ; Meyer, J.: LIMNOLOGY OF LAKE CRESCENT, WA
4:45 pm	<u>MacIsaac, H. J.</u> : CHANGES IN ZOOPLANKTON COMMUNITY COMPOSITION MEDIATED BY NONINDIGENOUS SPECIES

**SS2.03:****The Evolution, Ecology and Biogeochemical Impacts of Plankton from the Paleozoic to the Present**

Chair(s):	Elena Litchman, litchman@imcs.rutgers.edu Antonietta Quigg, aquigg@imcs.rutgers.edu
Location:	250 AB
10:45 am	<u>Falkowski, P.</u> : THE EVOLUTION OF MARINE PHYTOPLANKTON IN THE PHANAEROZOIC OCEANS: FROM DINOSAURS TO DIATOMS <sup>(*)</sup>
11:15 am	<u>Young, J. R.</u> ; Bown, P. R.; Medlin, L.; Probert, I.; Saez, A.; van Lenning, K.: COCCOLITHOPHORE PHYLOGENY - NEW PERSPECTIVES ON THEIR INITIAL RADIATION AND THE NEAR-EXTINCTION AT THE K/T BOUNDARY <sup>(*)</sup>
11:30 am	<u>Sunda, W. G.</u> ; Bucciarelli, E.: INFLUENCE OF NITROGEN LIMITATION ON ALGAL DMS DYNAMICS: CLIMATIC FEEDBACK IMPLICATIONS
11:45 am	<u>De La Rocha, C. L.</u> ; Passow, U.: THE ADVANTAGES OF SILICON LIMITATION
2:00 pm	<u>Milligan, A. J.</u> ; Varela, D. E.; Brzezinski , M. A.; Morel, F. M.: DYNAMICS OF SILICON METABOLISM AND 30Si DISCRIMINATION IN A MARINE DIATOM AS A FUNCTION OF PCO <sub>2</sub> .
2:15 pm	<u>Waite, A.</u> ; <u>Raven, J. A.</u> : EVOLUTION OF SILICIFICATION IN DIATOMS: AN EPIDEMIOLOGICAL ROLE FOR THE FRUSTULE? <sup>(*)</sup>
2:30 pm	<u>Colin, S. P.</u> ; Dam, H. G.: POTENTIAL EVOLUTION AND FITNESS RESPONSE OF MARINE COPEPOD POPULATIONS IN THE PRESENCE OF TOXIC DINOFLAGELLATES

(\*) represents Invited presentations

2:45 pm	Rynearson, T. A.; Armbrust, E. V.: GENETIC DIVERSITY AND SELECTION DURING A SPRING DIATOM BLOOM
3:00 pm	Starr, M.; Poulin, M.; Bérard-Thériault, L.; Roy, S.: THE REBIRTH OF THE DIATOM NEODENTICULA SEMINAE IN THE NW ATLANTIC : A SIGN OF CHANGES IN THE ARCTIC OCEAN?
3:45 pm	Litchman, E.; Klausmeier, C. A.; van de Schootbrugge, B.; Schofield, O. M.; Falkowski, P. G.: APPLYING PHYTOPLANKTON COMMUNITY MODELS TO UNDERSTANDING PHYTOPLANKTON DISTRIBUTIONS IN THE PALEOOCEAN <sup>(*)</sup>
4:00 pm	Quigg, A. S.; Ho, T. Y.; Finkel, Z. V.; Irwin, A. J.; Reinfelder, J. R.; Scofield, O.; Morel, F. M.; Falkowski, P. G.: AN EXTENDED REDFIELD RATIO FOR TRACE METALS IN MARINE PHYTOPLANKTON. <sup>(*)</sup>
4:15 pm	Saito, M. A.; Ho, T. Y.; Morel, F. M.: CADMIUM TOXICITY TO MARINE SYNECHOCOCCUS AT PICOMOLAR CONCENTRATIONS: VESTIGIAL INTERACTIONS INDICATIVE OF ANCIENT OCEAN CHEMISTRY
4:30 pm	Paterson, A.; Cumming, B. F.; Hall, R. I.; Smol, J. P.: TRACKING INCREASES OF TASTE AND ODOUR-CAUSING ALGAE IN CANADIAN SHIELD LAKES USING PALEOLIMNOLOGICAL APPROACHES

**SS3.01:**  
**Emergent Properties of Complex Aquatic Ecosystems:  
A Macroecological Perspective**

Chair(s):	Andrea Belgrano, belgrano@unm.edu
Location:	151 G
10:45 am	Gillooly, J. F.; Brown, J. H.; Savage, , V. M.; West, G. B.: THE PRIMARY DRIVERS IN AQUATIC ECOSYSTEMS? BODY SIZE, TEMPERATURE AND STOICHIOMETRY <sup>(*)</sup>
11:15 am	Li, W. K.: MACROECOLOGICAL PATTERNS OF PHYTOPLANKTON IN THE NORTHWESTERN NORTH ATLANTIC OCEAN <sup>(*)</sup>
11:30 am	Finkel, Z. V.; Irwin, A. J.; Falkowski, P. G.; Schofield, O.: EFFECT OF RESOURCE LIMITATION ON THE 3/4 SIZE SCALING OF METABOLIC RATES
11:45 am	Belgrano, A.; Allen, A. P.; Enquist, B. J.; Gillooly, J. F.: ALLOMETRIC SCALING OF MAXIMUM POPULATION DENSITY: A COMMON RULE FOR MARINE PHYTOPLANKTON AND TERRESTRIAL PLANTS
2:00 pm	Forget, M. H.; Vis, C.; Carignan, R.; Hudon, C.; Sathyendranath, S.; Platt, T.; Blais, A. M.: PHOTOSYNTHETIC PARAMETERS ESTIMATIONS USING DAILY WATERCOLUMN PRODUCTION IN DIFFERENT AQUATIC SYSTEMS
2:15 pm	Stenseth, N. C.: ECOLOGY AND CLIMATE – SOME PATTERNS AND CONSIDERATIONS RELATING TO MODELING CLIMATELY FORCING ON ECOLOGICAL PROCESSES <sup>(*)</sup>
2:30 pm	Hillebrand, H.: REGIONAL VERSUS LOCAL CONTROL OF AQUATIC BIODIVERSITY
2:45 pm	Dunne, J. A.; Williams, R. J.; Martinez, N. D.: NETWORK STRUCTURE AND THE ROBUSTNESS OF AQUATIC FOOD WEBS TO SPECIES LOSS
3:00 pm	Xenopoulos, M. A.; Lodge, D. M.: SPECIES-AREA RELATIONSHIPS FOR FRESHWATER FISH AT DIFFERENT SPATIAL SCALES

3:15 pm	Ciannelli, L.; Bailey, K. M.; Belgrano , A.; Stenseth, N. C.: PATTERNS AND MECHANISMS OF WALLEYE POLLOCK RECRUITMENT IN THE GULF OF ALASKA
3:45 pm	Viscido, S. V.; Parrish, J. K.; Grunbaum, D.: EMERGENT PROPERTIES OF FISH SCHOOLS: COMPARISON OF EXPERIMENTAL AND THEORETICAL RESULTS
4:00 pm	Lenz, P. H.; Hartline, D. K.: AN ADAPTATION OF THE NERVOUS SYSTEM CONTRIBUTING TO HABITAT PARTITIONING BY CALANOID COPEPODS
4:15 pm	Hansen, C.M.E.,; Tolotti, M.; Ettinger, R.; Tait, D.; Thies, H.; Psenner, R.: GEOGRAPHIC INFORMATION TECHNIQUES FOR DATA SYNTHESIS FROM REMOTE HIGH MOUNTAIN LAKES IN EUROPE
4:30 pm	Evans, D. W.; Thomas, D. N.; Williams , P. J.; Bowers, D. G.: MULTIVARIATE TECHNIQUES TO ACCURATELY CHARACTERISE CATCHMENTS
4:45 pm	Gresswell, R. E.; Torgersen, C. E.; Bateman, D. S.: PATTERNS OF FISH DISTRIBUTION AT THE WATERSHED SCALE

**SS3.02:**  
**Terrigenous Subsidies in Freshwater and Marine Systems**

Chair(s):	Bopi Biddanda, biddandb@gvsu.edu Jim Cotner, cotne002@tc.umn.edu
Location:	251 DE
10:45 am	Benner, R.; Hernes, P.: ORIGINS, TRANSFORMATIONS AND FATES OF TERRIGENOUS DOM IN THE OCEAN <sup>(*)</sup>
11:15 am	Cole, J. J.; Caraco, N. F.: TERRESTRIAL SUBSIDY TO ECOSYSTEM RESPIRATION IN A LARGE RIVER. <sup>(*)</sup>
11:30 am	Amon, R. M.; Meon, B.; Budeus, G.; Benner, R.. <sup>(*)</sup>
11:45 am	Lin, S.; Lin, I.; Wang, C.: DISTRIBUTION AND CONTROLS OF ORGANIC CARBON C-13 IN THE YANGTZE RIVER DELTA AND EAST CHINA SEA CONTINENTAL SHELF SEDIMENTS
2:00 pm	Mead, R. N.; Xu, Y.; Chong, J. T.; Jaffe, R.: CALIBRATION OF AN N-ALKANE PROXY FOR TRACING ORGANIC MATTER INPUTS TO WETLAND AND ESTUARINE SEDIMENTS/SOILS.
2:15 pm	Pace, M. L.; Cole , J. J.; Carpenter, S. R.; Van De Bogert, M.; Bade, D. L.: SIGNIFICANT TERRESTRIAL CARBON CONTRIBUTION TO LAKE POC AND DAPHNIA REVEALED BY WHOLE-LAKE CARBON-13 ADDITIONS <sup>(*)</sup>
2:30 pm	Horgan, M. J.; Vanni, M. J.: PHYTOPLANKTON AND NUTRIENT RESPONSES TO ADDITIONS OF NITRATE OR AMMONIA IN RESERVOIRS ALONG A LAND USE GRADIENT
2:45 pm	Apple, J. K.; delGiorgio, P. A.: DOM QUALITY MAY MEDIATE THE EFFECT OF NUTRIENT ENRICHMENT ON BACTERIOPHYTOMONAD COMMUNITY METABOLISM IN FRESH AND SALTWATER DOMINATED TIDAL CREEKS
3:00 pm	Romanuk, T. N.; Levings, C. D.: CASCADING EFFECTS OF REMOVAL OF MARINE SUPRALITTORAL VEGETATION ON ARTHROPOD COMMUNITIES AND JUVENILE SALMONIDS
3:15 pm	Colman, J. A.; Masterson, J. P.; Portnoy, J. W.; Lee, K.: USE OF 3-D SOLUTE TRANSPORT MODELING TO ESTIMATE GROUND-WATER NITROGEN LOADS TO A COASTAL EMBAYMENT OF THE CAPE COD NATIONAL SEASHORE, USA

<sup>(\*)</sup> represents Tutorial presentations

3:45 pm	<u>Hoover, D. J.</u> ; Mackenzie, F. T.; Ringuet, S.: FLUVIAL NITROGEN AND PHOSPHORUS IN HAWAII: LAND USE, STORM RUNOFF, AND IMPACTS ON COASTAL ECOSYSTEMS
4:00 pm	<u>Chambers, R. M.</u> ; <u>Pensa, M. A.</u> ; VanBenschoten, S. R.: TROPHIC TRANSITION IN A LAKE ON THE ATLANTIC COASTAL PLAIN: SEDIMENT DEPOSITION AND HISTORICAL PATTERNS OF LAND USE
4:15 pm	<u>Wetzel, R. G.</u> : ALLOCHTHONOUS ORGANIC MATTER, SOLAR RADIATION, AND PROTISTS: INTERDEPENDENT FULCRA OF LAKE AND RIVER METABOLISM <sup>(*)</sup>
4:30 pm	<u>Biddanda, B. A.</u> ; Cotner, J. B.: ENHANCEMENT OF DISSOLVED ORGANIC MATTER BIOAVAILABILITY BY SUNLIGHT AND ITS ROLE IN THE CARBON CYCLE OF THE GREAT LAKES
4:45 pm	<u>Tietjen, T. E.</u> ; Wetzel, R. G.: EXTRACELLULAR ENZYME-CLAY MINERAL COMPLEXES: ENZYME ADSORPTION, ALTERATION OF ENZYME ACTIVITY, AND PROTECTION FROM PHOTODEGRADATION

**SS3.03:****Landscape Ecology and Environmental Grain from a Microbial Perspective**

Chair(s):	Paul Kemp, paul.kemp@stonybrook.edu Josephine Aller, jyaller@notes.cc.sunysb.edu
Location:	151 DEF
10:45 am	<u>Lau, W.</u> ; Armbrust, E. V.: MONITORING BACTERIAL RESPONSE TO PHYTOPLANKTON-EXCRETED GLYCOLATE USING MOLECULAR PROBES AND THE ROLE OF GLYCOLATE IN INFLUENCING BACTERIAL COMMUNITY STRUCTURE
11:00 am	<u>Longnecker, K.</u> ; Sherr, E. B.; Sherr, B. F.: SPATIAL VARIABILITY ACROSS THE OREGON UPWELLING SYSTEM IN BACTERIAL CELL-SPECIFIC LEUCINE INCORPORATION RATES
11:15 am	Kemp, P. F.: BACTERIAL TELECOMMUNITIES AND ENVIRONMENTAL GRAIN
11:30 am	Siegel, D. A.; Langston, B. E.; Brzezinski, M. A.: POPULATION DYNAMICS OF MICROBES IN A DISCRETE WORLD: DIRECT NUMERICAL SIMULATIONS OF PHYTOPLANKTON COMPETITION

**SS3.06:****Landscape Context of Ultraviolet Radiation Effects on Aquatic Ecosystems**

Chair(s):	Wendy Palen, wpalen@u.washington.edu Sandra Cooke, sac6@lehigh.edu
Location:	151 ABC
10:45 am	<u>Williamson, C. E.</u> : CONTROL OF UNDERWATER UV AND TEMPERATURE ENVIRONMENTS IN LAKES AND RIVERS: THE IMPORTANCE OF LANDSCAPE LINKAGES <sup>(*)</sup>
11:15 am	<u>Osburn, C. L.</u> ; Saros, J. E.; Morris, D. P.; Boyd, T. J.: PHOTOREACTIVITY OF CHROMOPHORIC DISSOLVED ORGANIC MATTER (CDOM) IN NATURAL WATERS
11:30 am	Diamond, S. A.; Ankley, G. T.; Tietge, J. E.; Peterson, G. S.: RISK ASSESSMENT FOR THE EFFECTS OF SOLAR RADIATION ON AMPHIBIANS

11:45 am	<u>Brooks, M. L.</u> ; Meyer, J. S.: PHOTOREACTIVITY AND COPPER COMPLEXATION BY WETLAND VERSUS RIVERINE DOM
2:00 pm	<u>Cooke, S. L.</u> ; Williamson, C. E.: EFFECTS OF UV RADIATION AND CHROMOPHORIC DISSOLVED ORGANIC MATTER ADDITIONS ON ZOOPLANKTON IN A TRANSPARENT LAKE
2:15 pm	<u>Corn, P. S.</u> : INCREASING ULTRAVIOLET RADIATION AND AMPHIBIAN DECLINES <sup>(*)</sup>
2:30 pm	<u>Neale, P. J.</u> ; Lempa, J.; Tang, E. P.; Pakulski, J. D.; Baldwin, A. J.; Jeffrey, W. H.: UV INHIBITION OF BACTERIOPLANKTON PRODUCTION ALONG A TRANSPARENCY GRADIENT IN THE GULF OF MEXICO: BIOLOGICAL WEIGHTING FUNCTIONS AND EFFECTS OF SOLAR UV
2:45 pm	<u>Palen, W. J.</u> ; Schindler, D. E.; Adams, M. J.: LANDSCAPE VARIATION IN AMPHIBIAN SENSITIVITY TO UV-B RADIATION
3:00 pm	<u>Hansson, L. A.</u> : INDUCED OPTIMIZATION OF PIGMENTATION IN ZOOPLANKTON: BALANCING THE THREATS FROM PREDATION AND UV RADIATION <sup>(*)</sup>
3:45 pm	<u>Ochs, C. A.</u> ; Ogbebo, F. E.: INTERACTIONS OF BACTERIA AND PHYTOPLANKTON UNDER VARYING CONDITIONS OF NUTRIENTS AND SUNLIGHT
4:00 pm	<u>Moeller, R. E.</u> ; Hargreaves, B. R.; Morris, D. P.; Williamson, C. E.: SEASONAL, YEAR-TO-YEAR AND LONG TERM CONTROLS OF UV ATTENUATION IN TWO MID-LATITUDE LAKES OF CONTRASTING WETLAND DRAINAGE AND DISSOLVED ORGANIC CARBON CONTENT
4:15 pm	Clarke, M. A.; Gragg, R.; Cherrier, J.; Chanton, J.: DETERMINATION OF THE IMPACT OF ULTRAVIOLET RADIATION COMETABOLISM AND BIOAUGMENTATION ON THE DEGRADATION OF PETROLEUM BY MARINE BACTERIA

**SS3.09:****Cross-system Comparison of Sources, Composition, and Reactivity of DON**

Chair(s):	Margie Mulholland, mmulholl@odu.edu Deborah Bronk, bronk@vims.edu
Location:	150 DEF
10:45 am	<u>McCarthy, M. D.</u> : WHAT IS DISSOLVED ORGANIC NITROGEN? <sup>(*)</sup>
11:00 am	<u>Bronk, D. A.</u> : METHODS TO MEASURE DISSOLVED ORGANIC NITROGEN CONCENTRATIONS AND FLUX RATES: THE GOOD, THE BAD, AND THE UGLY
11:15 am	Steinberg, D. K.: THE ROLE OF GRAZERS IN THE PRODUCTION OF DON <sup>(*)</sup>
11:30 am	<u>Lewitus, A. J.</u> : USE OF DISSOLVED ORGANIC MATTER BY PHYTOPLANKTON <sup>(*)</sup>
11:45 am	Parker, A. E.: DIRECT MEASUREMENT OF CARBON AND NITROGEN CYCLING WITHIN THE ESTUARINE MICROBIAL LOOP
2:00 pm	<u>Sommerville, K.</u> ; Berges, J. A.; Savidge, G.; Preston, T.: THE IMPORTANCE OF DISSOLVED ORGANIC NITROGEN IN MACROALGAL DOMINATED COASTAL ECOSYSTEMS

MONDAY

(\*) represents Invited presentations

2:15 pm	Guldberg, L. B.; Finster, K.; Jørgensen, N. O.; Middelboe, M.; Lornstein, B.: UTILIZATION OF MARINE SEDIMENTARY DISSOLVED ORGANIC NITROGEN BY NATIVE ANAEROBIC BACTERIA	4:15 pm	DEDIEU, K.; RABOUILLE, C.; BOMBLED, B.: DISTRIBUTION AND DYNAMICS OF OXYGEN IN COASTAL SEDIMENTS: STUDY BY IN SITU MICRO-ELECTRODES
2:30 pm	Pantoja, S.; Rossel, P.; Castro, R.; Cuevas, L. A.; Daneri, G.: HIGH MICROBIAL DEGRADATION RATES OF LABILE DISSOLVED ORGANIC MATTER IN OXYGEN DEPLETED WATERS	4:30 pm	Neuhuber, S.; Taillefert, M.: HIGH RESOLUTION IN SITU MEASUREMENTS AND SPECIATION OF REDOX CHEMICAL SPECIES DURING A TIDAL CYCLE IN SALTMARSH SEDIMENTS
2:45 pm	Mulholland, M. R.; Lee, C.: PEPTIDE HYDROLYSIS AND DIPEPTIDE UPTAKE MARINE ENVIRONMENTS	4:45 pm	Fortin, C.; Denison, F. H.; Garnier-Laplace, J.: URANIUM BIOAVAILABILITY: INFLUENCE OF CALCIUM, MAGNESIUM AND HYDRONIUM IONS IN UPTAKE BY A GREEN ALGA.
3:00 pm	Hopkinson, C. S.; Vallino, J. J.: STOICHIOMETRY OF OCEANIC DOM POOLS AND DOM DECOMPOSITION	5:00 pm	Kostka, J. E.; Dollhopf, S. L.; Smith, A. C.; Adams, H.; Hyun, J.: INFLUENCE OF MACROBENTHOS ON BIOGEOCHEMICAL PROCESSES FROM THE MICRO- TO THE MACROSCALE: COUPLING OF THE IRON AND NITROGEN CYCLES IN SALTMARSH SEDIMENTS
3:45 pm	See, J. H.; Bronk, D. A.: C:N STOICHIOMETRY OF ESTUARINE HUMIC SUBSTANCES		
4:00 pm	Seitzinger, S. P.; Hartnett, H.; Spyres, G.; Wiegner, T.: FROM TREES TO SEAS: A CROSS SYSTEM COMPARISON OF DON COMPOSITION AND LABILITY <sup>(t)</sup>		
4:15 pm	Heil, C. A.; Mulholland, M. R.; Bernhardt, P.; Bronk, D. A.; O'Neil, J. M.; Vargo, G. A.; Walsh, J. J.; Fanning, K. A.: SPATIAL AND TEMPORAL PATTERNS OF DON CONCENTRATION ON THE CENTRAL WEST FLORIDA SHELF: CONTRIBUTIONS FROM OFFSHORE NITROGEN FIXATION AND ESTUARINE OUTFLOWS		

### SS3.16: Microscale Biogeochemical Processes in Aquatic Systems

Chair(s):	Martial Taillefert, mtaillef@eas.gatech.edu Pieter Visscher, visscher@uconnvm.uconn.edu
Location:	151 DEF
2:00 pm	Carey, E. A.; Taillefert, M.: THE ROLE OF SOLUBLE FE(III) IN THE FORMATION OF FES AND FES <sub>2</sub> IN SHALLOW SALTMARSH SEDIMENTS FROM SKIDAWAY ISLAND, GEORGIA, USA
2:15 pm	Waldbusser, G. G.; Marinelli, R. L.; Whitlatch, R. B.; Visscher, P. T.: DIVERSITY OF DEPOSIT FEEDERS AND BENTHIC METABOLISM: NONLINEAR EFFECTS
2:30 pm	Decho, A. W.: ROLE OF EPS MATRIX ON ENZYME STABILITY, PHOTOREACTIVITY AND CYCLING OF DOC WITHIN BIOFILMS <sup>(t)</sup>
2:45 pm	Torgersen, T.; Bean, J. R.; Branco, B. F.; Auer, S.: BLOOM COUPLING WITH THE BIOLOGICAL, CHEMICAL AND PHYSICAL DYNAMICS OF A SMALL POND OBSERVED WITH AN IN SITU PROFILER
3:00 pm	Stief, P.; Altmann, D.; Franke, U.; De Beer, D.: PROBING THE MICROENVIRONMENT OF THE SEDIMENT-DWELLING INSECT CHIRONOMUS RIPARIUS
3:15 pm	Roden, E. E.: CONTROL OF IRON REDOX CYCLING IN FRESHWATER WETLAND SEDIMENTS BY MICROSCALE FE(II)-O <sub>2</sub> REACTION DYNAMICS AT THE SEDIMENT-WATER INTERFACE
3:45 pm	Bendell-Young, L. I.: CONTRIBUTION OF INTERSTITIAL DISSOLVED FE AND MN CONCENTRATIONS TO SURFICIAL SEDIMENT GEOCHEMISTRY; A CROSS ECOSYSTEM COMPARISON
4:00 pm	Sansone, F. J.; Rothschild, C.; Silver, M. W.; Graham, A. W.: ORGANIC MATTER CYCLING IN MID-WATER SUSPENDED PARTICLE LAYERS, MONTEREY BAY, CALIFORNIA

### SS4.08: Life in Ice

Chair(s):	Jody W. Deming, jdeming@u.washington.edu
Location:	251 C
10:45 am	Eicken, H.: AN OVERVIEW OF PHYSICO-CHEMICAL AND GEOPHYSICAL CONSTRAINTS ON MICROBIAL LIFE IN FROZEN ENVIRONMENTS <sup>(t)</sup>
11:15 am	Priscu, J. C.; Christner, B. C.; Foreman, C. M.; Mikucki, J. A.; Voytek, M. A.; Wolf, C. F.: EARTH'S ICY BIOSPHERE
11:30 am	Stewart, F. J.; Fritsen, C. H.; Murray, A. E.; Carter, B. J.: PROKARYOTIC DIVERSITY IN ANTARCTIC SEA ICE: INTER-HABITAT VARIABILITY
11:45 am	Gast, R. J.; Moran, D. M.; Rose, J. M.; Dennett, M. R.; Caron, D. A.: LINKING PROTISTAN GENOTYPE, MORPHOLOGY AND PHYSIOLOGY FROM ICE AND WATER SAMPLES OF THE ROSS SEA, ANTARCTICA
2:00 pm	Arrigo, K. R.: UV PHOTOPROTECTION BY ANTARCTIC SEA ICE MICROALGAE
2:15 pm	Brinkmeyer, R.: DEGRADATION OF DIMETHYL SULFIDE AND DIBROMOMETHANE BY BACTERIA IN ARCTIC PACK ICE
2:30 pm	Krems, C.; Deming, J. W.; Eicken, H.: EXOPOLYMERIC SUBSTANCES, AN IMPORTANT COMPONENT OF MICROBIAL LIFE IN SEA ICE AT LOW TEMPERATURES.
2:45 pm	Meiners, K.: DISTRIBUTION OF EXOPOLYMERIC PARTICLES IN ARCTIC AND ANTARCTIC SEA ICE
3:00 pm	Mueller, D. R.; Vincent, W. F.: MICROBIAL HABITAT CHARACTERISTICS OF A HIGH ARCTIC ICE SHELF ECOSYSTEM

<sup>(t)</sup> represents Tutorial presentations

**Tuesday, February 11, 2003****CS04:  
Bacteria**

Chair(s):	Melissa Booth, booth@skio.peachnet.edu
Location:	251 C
11:00 am	<u>Booth, M. G.</u> ; Bronk, D. A.; Allen, A. E.; Sanderson, M. P.; Verity, P. G.; Frischer, M. E.: FACTORS REGULATING ASSIMILATORY NITRATE REDUCTASE (NASA) EXPRESSION IN MARINE BACTERIAL COMMUNITIES DETECTED BY DUAL MOLECULAR AND PHYSIO-CHEMICAL APPROACHES
11:15 am	<u>Gros, O.</u> ; Liberge, M.; Felbeck, H.: DETECTION OF THE FREE-LIVING FORM OF SULPHIDE-OXIDIZING GILL-ENDOSYMBIOTNS IN THE ENVIRONMENT: CASE STUDY OF CODAKIA ORBICULARIS
11:30 am	<u>Ludwig, R.</u> ; Jonkers, H. M.; Al-Horani, F. A.; de Beer, D.: EVIDENCE THAT CALCIFICATION IN A HYPERSALINE MAT IS PHOTOSYNTHESIS CONTROLLED
11:45 am	<u>Schultz, G. E.</u> ; Santschi, P. H.: IDENTIFICATION OF QUORUM-SENSING SYSTEMS IN FREE-LIVING BACTERIAL COMMUNITIES IN A MARINE ENVIRONMENT
12:00 pm	<u>Williamson, S. J.</u> ; Paul, J. H.: INORGANIC NUTRIENT STIMULATION OF LYtic PHAGE PRODUCTION BY GULF OF MEXICO BACTERIAL POPULATIONS

**CS11:  
Continental Shelf Processes**

Chair(s):	Solveig Buehring, sbuehrin@mpi-bremen.de
Location:	250 DE
4:00 pm	<u>Ehrenhauss, S.</u> ; Witte, U.; Buehring, S. I.; Janssen, F.; Huettel, M.: THE FATE OF PLANKTONIC DIATOMS IN PERMEABLE SEDIMENTS
4:15 pm	<u>Buehring, S. I.</u> ; Witte, U.; Ehrenhauss, S.; Kamp, A.: MICROBIAL AND GEOCHEMICAL TRANSFORMATIONS OF ALGAL MATTER ON PERMEABLE SEDIMENTS
4:30 pm	<u>Huettel, M. H.</u> ; Precht, E.; Franke, U.: SEDIMENT-WATER SOLUTE EXCHANGE CAUSED BY SURFACE GRAVITY WAVES
4:45 pm	<u>Sackmann, B. S.</u> ; Perry, M. J.: CLUSTER ANALYSIS OF OCEAN COLOR REMOTE SENSING REFLECTANCE OFF THE WASHINGTON COAST, USA: DEVELOPING SPECTRAL SIGNATURES TO AID FEATURE EXTRACTION AND TRACKING
5:00 pm	<u>O'Donnell, J.</u> ; Houk, A.: THE STRUCTURE AND VARIABILITY OF THE LONG/BLOCK ISLAND SOUND OUTFLOW PLUME

**CS12:  
Coral Reefs**

Chair(s):	Allison Beauregard, isopod@udel.edu
Location:	251 AB
9:30 am	<u>Beauregard, A. Y.</u> : EXTENSIVE DOC PRODUCTION BY CORAL-ZOOXANTHELLAE SYMBIOSSES
9:45 am	<u>Haught, K. J.</u> ; Muehlstein, L. K.: INFLUENCE OF A TROPICAL ALGAL OVERGROWTH ON LOCAL REEF FISH ASSEMBLAGE STRUCTURE

10:00 am	Koehl, M. A.; Hadfield, M. G.: DISSOLVED CHEMICAL CUES CAN AFFECT THE RETENTION OF BENTHIC LARVAE WITHIN CORAL REEFS AND LARVAL ATTACHMENT TO REEF SURFACES
10:15 am	<u>Guerra, O. J.</u> : MESOAMERICAN BARRIER REEF CORAL DISEASE CHARACTERIZATION
10:30 am	Muehlstein, L. K.; Beets, J. P.: STORM DISTURBANCE DECOUPLES THE LINKAGE BETWEEN TROPICAL MARINE ECOSYSTEMS

**CS16:  
Harmful Algal Blooms**

Chair(s):	Tammi Richardson, tammi@ocean.tamu.edu Andrew Juhl, juhl.andy@epa.gov
Location:	251 DE
9:30 am	<u>Etheridge, S. M.</u> ; Roesler, C. S.: TEMPORAL VARIATIONS IN OPTICAL PROPERTIES AND COMMUNITY STRUCTURE DURING A LONG ISLAND, NY BROWN TIDE COMPARED TO AN ADJACENT EMBAYMENT
9:45 am	<u>Juhl, A. R.</u> : THE RED-TIDE DINOFLAGELLATE, ALEXANDRUM MONILATUM, SUPPRESSES GROWTH OF MIXED, NATURAL PHYTOPLANKTON.
10:00 am	<u>Love, R. C.</u> ; Loder, T. C.: ALEXANDRUM SPP. POPULATION AND NUTRIENT DYNAMICS IN THE WESTERN GULF OF MAINE
10:15 am	<u>Graham, J. L.</u> ; Jones, J. R.; Jones, S. B.; Downing, J. A.; Clevenger, T. E.: ENVIRONMENTAL FACTORS INFLUENCING MICROCYSTIN DISTRIBUTION AND CONCENTRATION IN FOUR MIDWESTERN STATES IN THE U.S.A.
10:30 am	<u>Bearon, R. N.</u> ; Grunbaum, D.; Cattolico, R. A.: SWIMMING BEHAVIOR OF HETEROSIGMA AKASHIWO: VARIABILITY AMONG STRAINS WITH PARTICULAR REFERENCE TO DIEL VERTICAL MIGRATION
11:00 am	<u>Cherrier, C. T.</u> ; Downing, J. A.: PREDICTING CYANOBACTERIA ABUNDANCE IN NUTRIENT-RICH LAKES
11:15 am	<u>Redalje, D. G.</u> ; Lohrenz, S. E.; Tuel, M. D.; Natter, M. J.: GROWTH DYNAMICS OF HARMFUL ALGAL BLOOMS IN FLORIDA GULF OF MEXICO COASTAL WATERS
11:30 am	<u>Granéli, E.</u> ; Salomon, P.; Gisselson, L. Å.: IN SITU GROWTH RATES, CELL-SPECIFIC PHOTOSYNTHESIS AND PARASITE INFECTIONS OF DINOPHYYSIS NORVEGICA AND CERATIUM FURCA DURING A DRIFT STUDY IN THE NORTH SEA
11:45 am	Richardson, T. L.; Pinckney, J. L.: AN INITIAL ASSESSMENT OF GYROXANTHIN-RADIOLABELING AS A TOOL FOR DETERMINATION OF KARENIA BREVIS CARBON-SPECIFIC GROWTH RATES IN SITU
12:00 pm	Legrand, C.; Rengefors, K.; Fistarol, G. O.; Norén, F.; Johansson, M.: ALKALINE PHOSPHATASE PRODUCTION IN DIFFERENT MARINE DINOFLAGELLATES SPECIES – PHOSPHATE LIMITATION OR AN ADAPTIVE STRATEGY?

TUESDAY

(\*) represents Invited presentations

**CS17:  
Invasive Species & Species Replacement**

Chair(s):	Kim Schulz, kschulz@syr.edu Rob Hall, bhall@uwyo.edu
Location:	251 DE
2:15 pm	Kerfoot, W. C.; Lorence, C. S.; Weider, L. J.: RESURRECTION ECOLOGY: DOCUMENTING SPECIES REPLACEMENTS AND EVOLUTION
2:30 pm	Schulz, K. L.; Snyder, M. D.; Storch, A. J.; Caceres, C. E.; Teece, M. R.: EXOTIC INVERTEBRATE PREDATORS IN THE LAURENTIAN GREAT LAKES: ENERGETICS, SPINES, AND FOOD WEBS
2:45 pm	Pichlova, R.; Vanderploeg, H. A.; Cavaletto, J. F.; Stara, L.: Cercopagis pengoi after three years since invasion to Lake Michigan: changes of population and impact on food web
3:00 pm	van Overdijk, C. D.; Duggan, I. C.; Bailey, S. A.; Maclsaac, H. J.: NASTIES IN NOBOBS?: POTENTIAL FOR INTRODUCTION OF INVERTEBRATES TO THE GREAT LAKES FROM RESIDUAL BALLAST WATER
3:15 pm	Bailey, S. A.; Duggan, I. C.; van Overdijk, C. D.; Maclsaac, H. J.: SLEEPING STOW-AWAYS! DO RESTING EGGS ON TRANSOCEANIC VESSELS POSE AN INVASION RISK?
4:00 pm	Karatayev, A. Y.; Burlakova, L. E.; Padilla, D. K.: ZEBRA MUSSELS AS ECOSYSTEM ENGINEERS
4:15 pm	Culver, D. A.; Conroy, J. D.; Edwards, W. J.; Kane, D. D.; Pontius, R. A.; Richey, J. N.; Shea, J. F.; Zhang, H.: DO DREISSENID MUSSELS CAUSE THE LAKE ERIE
4:30 pm	Carter, R. L.; Lowe, R. L.: STACKED TROPHIC SYSTEMS: THE CONTRA-INDICATIONS OF TROPHIC STATUS IN THE LITTORAL OF NORTHERN LAKE MICHIGAN FOLLOWING INVASION BY ZEBRA MUSSELS
4:45 pm	Costello, J. H.; Gifford, D. J.; Sullivan, B. K.; Van Keuren, D.: SEASONAL CYCLE AND BLOOM INITIATION IN NARRAGANSETT BAY, USA, BY THE LOBATE CTENOPHORE MNEMIOPSIS LEIDYI.
5:00 pm	Hall, R. O.; Dybdahl, M. F.; VanderLoop, M. C.: EXTREMELY HIGH SECONDARY PRODUCTION BY EXOTIC NEW ZEALAND MUD SNAILS IN 3 GEOTHERMAL RIVERS

**CS35:  
Trophic Dynamics**

Chair(s):	Bob Sterner, stern007@umn.edu Kam Tang, kamtang@vims.edu
Location:	250 C
9:30 am	Tessier, A. J.; Bizina, E. V.; Hamilton, P. L.; Pelikan, K. M.: DOES TROPHIC CASCADE SELECT FOR TROPHIC FUNCTION: POWER AND EFFICIENCY REVISITED
9:45 am	Hudson, J. J.: EFFECTS OF CONSUMERS ON NUTRIENT KINETICS IN PLANKTONIC FOODS WEBS
10:00 am	Drazen, J. C.: ENERGY BUDGETS AND FEEDING RATES OF MACROURID FISHES
10:15 am	Bayley, S. E.; Norlin, J. I.: MAINTENANCE OF CLEAR WATER IN BOREAL WETLAND LAKES: THE ROLE OF ZOOPLANKTON, SUBMERSED AQUATIC PLANTS AND NUTRIENTS

10:30 am	Yoshida, T.; Shertzer, K. W.; Ellner, S. P.; Hairston, N. G.: EXPERIMENTAL EVIDENCE OF ALGAL EVOLUTION IN A LABORATORY PREDATOR-PREY SYSTEM (BRACHIONUS CALYCIFLORUS - CHLORELLA VULGARIS)
11:00 am	Tang, K. W.; Jakobsen, H. H.: GRAZING-INDUCED COLONY ENLARGEMENT IN PHAEOCYSTIS GLOBOSA (PRYMNESIOPHYCEAE)
11:15 am	Tittel, J.; Bissinger, V.; Zippel, B.; Gaedke, U.; Bell, E. M.; Lorké, A.: DEEP CHLOROPHYLL MAXIMA OR SURFACE CHLOROPHYLL MINIMA?
11:30 am	Ptacnik, R.; Dressmann, S.; Sommer, U.: EFFECTS OF MIXOTROPHIC FLAGELLATES ON NUTRIENT ALLOCATION IN MARINE PLANKTONIC FOOD WEBS
11:45 am	Moorthi, S. D.; Dietrich, D.; Berninger, U. G.: FEEDING STRATEGIES AND ECOLOGICAL IMPACT OF MIXOTROPHIC PROTISTS IN BENTHIC MARINE ECOSYSTEMS
12:00 pm	Lauber, C. L.; Sinsabaugh, R. L.: REMOVAL OF HUMIC COMPOUNDS INFLUENCES GLYCOSIDASE ACTIVITY IN AUTOCHTHONOUS AND ALLOCHTHONOUS DOC SYSTEMS

**CS36:  
Ultraviolet Radiation**

Chair(s):	Kenia Whitehead, kenia@u.washington.edu
Location:	151 DEF
4:00 pm	Jeffrey, W. H.; Kase, J. P.; Pakulski, J. D.: THE EFFECTS OF TEMPERATURE, NUTRIENTS AND GROWTH RATE ON THE RESPONSE TO ULTRAVIOLET RADIATION BY MARINE BACTERIOPLANKTON
4:15 pm	Roy, S.; Longhi, M. L.: LACK OF RESPONSE OF BIOMASS AND GROWTH OF PHYTOPLANKTON EXPOSED TO ENHANCED UV-B IN MESOCOSM EXPERIMENTS
4:30 pm	Longhi, M. L.; Roy, S.: THE INFLUENCE OF THE NUTRITIONAL STATE ON PHYTOPLANKTON RESPONSE TO ENHANCED UV-B AT THREE LATITUDES (CANADA, BRAZIL, ARGENTINA)
4:45 pm	Dee, G.; Gerrish, G.; Hesson, M. D.; Williamson, C. E.: DAPHNIA LIFE HISTORY STAGES VARY IN THEIR TOLERANCE TO UV RADIATION
5:00 pm	Whitehead, K.; Hedges, J. I.: PHOTODEGRADATION OF MYCOSPORINE-LIKE AMINO ACIDS (MAAS) DISSOLVED IN FRESH AND SEAWATER.

**SS1.05:  
The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems**

Chair(s):	Val Smith, vsmith@ku.edu
	Mandy Joye, mjoye@arches.uga.edu
Location:	Robert Howarth, rwh2@cornell.edu
	150 G
9:30 am	Howarth, R. W.: COASTAL NITROGEN POLLUTION: TOWARD A NATIONAL STRATEGY FOR THE US. (†)
10:00 am	Jones, J. R.; Knowlton, M. F.; Perkins, B. D.; Obrecht, D. V.; Thorpe, A. P.; Allen, S. B.: TROPHIC STATE OF MISSOURI RESERVOIRS: AN ANALYSIS OF REGIONAL AND SEASONAL PATTERNS (†)

(†) represents Tutorial presentations

11:00 am	<u>Lathrop, R. C.</u> ; Carpenter, S. R.: EUTROPHICATION OF LAKE MENDOTA AND DOWNSTREAM LAKES NEAR MADISON, WISCONSIN <sup>(*)</sup>
11:30 am	<u>Conley, D. J.</u> ; Clarke, A. M.; Juggins, S.; Telford, R. J.; Weckstrom, K.; Korholia, A.; Andren, E.: MONITORING LONG-TERM TRENDS IN EUTROPHICATION AND NUTRIENTS IN THE COASTAL ZONE <sup>(*)</sup>
2:15 pm	<u>Paerl, H. W.</u> ; Piehler, M. F.; Valdes, L. M.; Lebo, M. E.; Pinckney, J. L.: NUTRIENT DYNAMICS AND WATER QUALITY IN NORTH CAROLINA'S ESTUARIES: PAST, PRESENT AND FUTURE <sup>(*)</sup>
2:45 pm	<u>Joye, S. B.</u> ; Weston, N. B.; Moore, W. S.; Porubsky, W. P.: GROUNDWATER AS SOURCE OF NUTRIENTS AND ORGANIC MATTER IN FRESHWATER AND MARINE ECOSYSTEMS <sup>(*)</sup>
3:15 pm	<u>Foy, R. H.</u> : AGRICULTURE'S PHOSPHORUS TIME-BOMB AND LOUGH NEAGH – CAN DETONATION BE CONTROLLED? <sup>(*)</sup>
4:00 pm	<u>Martinelli, L. A.</u> ; Filoso, S.: THE CURRENT STATUS OF EUTROPHICATION IN FRESHWATER ECOSYSTEMS OF BRAZIL <sup>(*)</sup>

**SS2.02:****Lacustrine Hydrology Past and Present: Linking Lakes, Catchments, Atmosphere, and Ocean**

Chair(s):	Sherilyn C. Fritz, sfritz2@unl.edu
Location:	150 DEF
9:30 am	<u>Smith, A. J.</u> : THE LACUSTRINE SYSTEM AS PART OF A DYNAMIC REGIONAL HYDROLOGY: EXPLORING THE LINK BETWEEN LAKES AND HYDROLOGY THROUGH TIME <sup>(*)</sup>
10:00 am	<u>Baker, P. A.</u> ; Arnold, K. K.; Fritz, S. C.; Rigsby, C. A.: TROPICAL PALEOHYDROLOGY USING STABLE ISOTOPIC METHODS: SOUTH AMERICAN EXAMPLES FROM THE HOLOCENE AND LATEST PLEISTOCENE <sup>(*)</sup>
10:15 am	<u>Lyons, W. B.</u> ; Welch, K. A.; Graham, E. Y.; Tegt, S. K.: THE IMPORTANCE OF AEOLIAN TRANSPORT TO THE GEOCHEMISTRY OF MCMURDO DRY VALLEY LAKES, ANTARCTICA
10:30 am	<u>Dean, W. E.</u> ; Rosenberry, D. O.; Winter, T. C.: THE SIGNIFICANCE OF GROUND WATER TO THE ACCUMULATION OF IRON AND MANGANESE IN THE SEDIMENTS OF TWO HYDROLOGICALLY DISTINCT LAKES IN NORTH CENTRAL MINNESOTA
11:00 am	<u>Bloom, A. M.</u> ; Moser, K. A.; Porinchu, D. F.; MacDonald, G. M.: USING DIATOM-BASED INFERENCE MODELS TO DECIPHER THE PALEOHYDROLOGY OF THE YOUNGER DRYAS IN THE SIERRA NEVADA, CALIFORNIA, USA
11:15 am	<u>McGowan, S.</u> ; Hall, R. I.; Leavitt, P. R.: REGULATION OF LAKE STABLE STATES BY HYDROLOGIC VARIABILITY IN CENTRAL NORTH AMERICA: EVIDENCE FROM WHOLE-LAKE EXPERIMENTS
11:30 am	<u>Karst-Riddoch, T. L.</u> ; Sjuneskog, C.; Hall, R. I.; Sylvestre, F.; Sokal, M.; Wolfe, B.; English, M.; Edwards, T.; Clogg-Wright, K.; McGowan, S.; Leavitt, P. R.; Vardy, S.; Last, W. M.: LINKAGES BETWEEN HYDROLOGY AND LIMNOLOGY OVER THE LAST 300 YEARS IN THE PEACE-ATHABASCA DELTA, CANADA

11:45 am	<u>Hamilton, S. K.</u> ; Bunn, S. E.; Thoms, M. C.; Davis, L.: PERSISTENCE OF AQUATIC REFUGIA BETWEEN FLOODS IN A SEMI-ARID RIVER SYSTEM (COOPER CREEK, AUSTRALIA): MAJOR SOLUTE AND ISOTOPIC TRACER EVIDENCE
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**SS2.04: Nitrogen Paleo-Biogeochemistry**

Chair(s):	Joseph P. Montoya, j.montoya@biology.gatech.edu Mark A. Altabet, maltabet@umassd.edu
Location:	251 C
9:30 am	<u>Sigman, D. M.</u> : GLACIAL/INTERGLACIAL VARIATIONS IN THE OCEANIC NITROGEN CYCLE: AN OVERVIEW <sup>(*)</sup>
9:45 am	<u>Altabet, M. A.</u> ; Higginson, M. J.; Herbert, T. D.: DECADAL-TO ORBITAL-SCALE LINKS BETWEEN CLIMATE, PRODUCTIVITY AND DENITRIFICATION ON THE PERU MARGIN
10:00 am	<u>Brock, C. S.</u> ; Knezacek, N. E.; Graham, M. D.; <u>Leavitt, P. R.</u> : STABLE ISOTOPE EVIDENCE OF NITROGEN SATURATION IN RIVERINE LAKE ECOSYSTEMS BY 75 YEARS OF URBAN EFFLUENT.
10:15 am	<u>Elliott, E. M.</u> ; Brush, G. S.: DO NITROGEN ISOTOPES OF SEDIMENTED ORGANIC NITROGEN RECORD HISTORICAL CHANGES IN NITROGEN SOURCES TO WETLANDS?
10:30 am	<u>Wolfe, F. L.</u> ; Berman-Frank, I.; Haramaty, L.; Falkowski, P. G.: THE METALLIC SHIELD OF TRICHOESMUM: FIGHTING OXIDATIVE DAMAGE

**SS2.05: Geologic Record of Phosphorus Cycling**

Chair(s):	Ellery Ingall, ingall@eas.gatech.edu Caroline Slomp, slomp@geo.uu.nl
Location:	251 C
2:15 pm	<u>Colman, A. S.</u> : TEMPORAL VARIABILITY IN THE MARINE PHOSPHORUS CYCLE <sup>(*)</sup>
2:45 pm	<u>Wallmann, K.</u> : CONTROLS ON MARINE PRODUCTIVITY AND NUTRIENT INVENTORIES: A MODEL PERSPECTIVE <sup>(*)</sup>
3:00 pm	<u>Cade-Menun, B. J.</u> ; Paytan, A.; McLaughlin, K.: THE CHEMICAL NATURE OF ORGANIC PHOSPHORUS IN SETTLING OCEAN PARTICULATE MATTER
3:15 pm	<u>Ingall, E. D.</u> : ROLE OF MANGANESE IN REDOX DEPENDENT PHOSPHORUS CYCLING
4:00 pm	<u>Kolowith, L. C.</u> ; Ingall, E. D.: THE MARINE PHOSPHORUS CYCLE: A REVISED BUDGET
4:15 pm	<u>Slomp, C. P.</u> ; Van Cappellen, P.: THE GLOBAL MARINE PHOSPHORUS CYCLE: RESPONSE TO OCEAN ANOXIA AND SEA LEVEL RISE

TUESDAY

(\*) represents Invited presentations

**SS3.04:****The Biogeochemistry of Hg from Watershed to the Global Scale: A Tribute to the Contributions of W.F. Fitzgerald**

Chair(s):	W. Berry Lyons, lyons.142@osu.edu Rob Mason, mason@cbl.umces.edu
Location:	250 AB
4:00 pm	<u>Benoit, J. M.</u> ; Mason, R. P.; Gill, G. A.; Lyons, W. B.: A LEGACY OF INQUIRY: INSIGHT INTO BILL FITZGERALD'S CONTRIBUTIONS TO THE FIELD OF MERCURY BIOGEOCHEMISTRY FROM STUDENTS AND COLLEAGUES <sup>(t)</sup>
4:30 pm	Morel, F. M.; Kraepiel, A. M.; Keller, K.; Malcolm, E. G.: WHAT IS THE SOURCE OF METHYLMERCURY IN THE OCEANS? <sup>(t)</sup>
5:00 pm	Mason, R. P.; Laurier, F.; Whalin, L.: THE OCEAN AND THE GLOBAL MERCURY CYCLE

**SS3.08:****Organic Matter in Aquatic Systems: Sources, Characterization, Distribution, and Quantification**

Chair(s):	Juanita Urban-Rich, juanita.urban-rich@umb.edu Bob Chen, bob.chen@umb.edu Diane McKnight, diane.mcknight@colorado.edu
Location:	151 G
9:30 am	Aiken, G. R.: SOURCES AND TRANSFORMATION OF DISSOLVED ORGANIC MATTER IN AQUATIC SYSTEMS <sup>(t)</sup>
10:00 am	Nagata, T.; Kirchman, D. L.: DISSOLVED ORGANIC MATTER DERIVED FROM BACTERIA: TURNOVER, TRANSFORMATION AND STORAGE <sup>(t)</sup>
10:15 am	Zou, L.; Sun, M. Y.; Culp, R. A.; Wang, X. C.; Callahan, J.; Chen, R. F.: CARBON SOURCE AND FORMATION MECHANISM OF HMW-DOM IN ESTUARINE AND COASTAL WATERS: EVIDENCE FROM LIPID COMPOSITION AND COMPOUND-SPECIFIC ISOTOPIC RATIOS
10:30 am	Raymond, P. A.; Hopkinson, C. S.: SOURCES, AGES, AND TRANSFORMATIONS OF DISSOLVED ORGANIC CARBON IN THE PARKER RIVER WATERSHED AND ESTUARY
11:00 am	Sannigrahi, P.; Ingall, E. D.: SOURCES, FATES AND TRANSFORMATIONS OF DISSOLVED AND PARTICULATE MARINE ORGANIC MATTER: INSIGHTS FROM <sup>13</sup> C NMR SPECTROSCOPY
11:15 am	Hepburn, C.; Cherrier, J.; Chanton, J. P.; Gragg, R.: TRACING IN SITU PETROLEUM HYDROCARBON UTILIZATION USING NATURAL CARBON ISOTOPE ABUNDANCES
11:30 am	Behzad Mortazavi, B.; Jeff Chanton, J. P.: VALIDATION OF A TWO END-MEMBER MIXING MODEL USED FOR DETERMINING SOURCES OF DISSOLVED ORGANIC CARBON IN NEARSHORE AND OPEN OCEAN WATERS
11:45 am	Mannino, A.; Harvey, H. R.: BLACK CARBON IN ESTUARINE DISSOLVED ORGANIC MATTER
12:00 pm	Goldthwait, S. A.; Carlson, C. A.; Alldredge, A. L.; Henderson, G. K.: DOES FRAGMENTATION AFFECT MARINE SNOW REMINERALIZATION?

2:15 pm Gardner, B.; Chen, R. F.: IMPORTANCE OF SALT MARSHES AS SOURCES OF CDOM IN MICROESTUARIES

2:30 pm McKnight, D. M.; Fulton, J. R.; Foreman, C. M.; Cory, R. M.: CHANGES IN FULVIC ACID REDOX STATE THROUGH THE OXYCLINE OF A PERMANENTLY ICE-COVERED ANTARCTIC LAKE

2:45 pm Stedmon, C. A.; Markager, S.: SEASONAL AND SPATIAL VARIABILITY IN THE COMPOSITION OF DISSOLVED ORGANIC MATTER IN A TEMPERATE CATCHMENT AND ESTUARY

3:00 pm Spyres, G.; Seitzinger, S.; Hartnett, H.; Lauck, R.: THE CHEMICAL SIGNATURE AND BIOAVAILABILITY OF DISSOLVED ORGANIC MATTER IN URBAN AND RURAL RAINWATER

3:15 pm Simjouw, J. P.; Minor, E. C.; Mulholland, M.: MOLECULAR-LEVEL CHARACTERISTICS OF DISSOLVED ORGANIC MATTER IN CHINCOTEAGUE BAY PRIOR TO AND DURING AN AUREOCOCCUS ANOPHAGEFFERENS BLOOM.

4:00 pm McCarty, J. T.; Urban-Rich, J.: CHARACTERIZATION OF CHROMOPHORIC DISSOLVED ORGANIC MATTER PRODUCED DURING COPEPOD GRAZING

4:15 pm Maie, N.; Yang, C.; Miyoshi, T.; Parish, K.; Jaffé, R.: CHEMICAL CHARACTERISTICS OF HIGH MOLECULAR WEIGHT DISSOLVED ORGANIC MATTER (HMW DOM) IN THE FLORIDA COASTAL EVERGLADES

4:30 pm Guo, L.; Lahner, J. K.; White, D. M.; Garland, D. S.: ISOTOPIC AND MOLECULAR COMPOSITION OF SIZE FRACTIONATED NATURAL ORGANIC MATTER FROM CHENA RIVER WATERS

4:45 pm Chen, R. E.; Gardner, G. B.; Moran, M.; Zepp, R.; Wells, M. L.; Bissett, P.; Conmy, R.; Whelan, P.: CHROMOPHORIC DISSOLVED ORGANIC MATTER (CDOM) SOURCE CHARACTERIZATION IN THE LOUISIANA BIGHT

5:00 pm Young, K. C.; Docherty, K. M.; Maurice, P. A.; Bridgham, S. D.: THE DEPENDENCE OF DISSOLVED ORGANIC MATTER BIODEGRADATION ON MICROBIAL COMMUNITY STRUCTURE IN NORTHERN WETLANDS

**SS3.11:****Ecology and Management of the Riparian Habitat of Lakes**

Chair(s):	Mark Scheuerell, scheuerel@u.washington.edu Daniel Schindler, deschind@washington.edu
Location:	150 DEF

2:15 pm Naiman, R. J.: THE ECOLOGY OF INTERFACES: RIPARIAN ZONES<sup>(t)</sup>

2:45 pm Francis, T. B.: CONSEQUENCES OF LAKESHORE DEVELOPMENT FOR LITTORAL HABITATS IN THE PACIFIC NORTHWEST<sup>(t)</sup>

3:00 pm Jennings, M. J.; Emmons, E. E.: DOES RIPARIAN DEVELOPMENT AFFECT LITTORAL HABITAT STRUCTURE IN WISCONSIN LAKES?

3:15 pm Roth, B. M.; Kaplan, I. K.; Havlicek, T. D.; Willis, T. V.; Carpenter, S. R.; Turner, M. G.: EXPLORING THE EFFECTS OF NATURAL AND ANTHROPOGENIC PERTURBATIONS ON COARSE WOODY DEBRIS AND FISH POPULATION DYNAMICS WITH A LINKED TERRESTRIAL-AQUATIC MODEL<sup>(t)</sup>

<sup>(t)</sup> represents Tutorial presentations

4:00 pm	Sass, G. G.; Kitchell, J. F.; Carpenter, S. R.; Weis, J. J.: FISH COMMUNITY RESPONSES TO A WHOLE-LAKE MANIPULATION OF LITTORAL ZONE COARSE WOODY DEBRIS IN A NORTHERN WISCONSIN LAKE <sup>(*)</sup>
4:15 pm	Toft, J. D.; Koehler, M.; Simenstad, C.; Cordell, J.; Fresh, K.: SHORELINE AND DOCK MODIFICATIONS IN AN URBAN LAKE, WITH IMPLICATIONS FOR JUVENILE CHINOOK SALMON DIETS <sup>(*)</sup>
4:30 pm	Allen, S. B.; Jones, J. R.: RELATIONSHIPS BETWEEN WATERSHED LAND COVER AND NUTRIENT CONCENTRATIONS IN RESERVOIRS IN MISSOURI, USA
4:45 pm	Torgersen, C. E.; Baxter, C. V.; Li, H. W.: PATTERN DETECTION, SCOPE, AND SAMPLING IN STREAMS

### SS3.12: Trophic Focusing and Subsidy in Aquatic Ecosystems

Chair(s):	Amatzia Genin, amatzia@vms.huji.ac.il Mark Benfield, mbenfie@lsu.edu
Location:	251 AB
11:00 am	Scheuerell, M. D.; Moore, J. W.; Schindler, D. E.: DIFFERENTIAL IMPACTS OF ANADROMOUS SALMON ON RESIDENT STREAM FISHES IN SW ALASKA
11:15 am	Keenan, S. E.; Benfield, M. C.: ZOOPLANKTON IN PROXIMITY TO OFFSHORE PETROLEUM PLATFORMS: A POTENTIALLY ENHANCED FEEDING ENVIRONMENT FOR STRUCTURE-ASSOCIATED PELAGIC FISH?
11:30 am	Francis, S. A.; Jackson, G. A.; Hetland, R. D.: FLOW-INDUCED PATTERNS IN PARTICLE MOTION AND BIOLOGICAL ACTIVITY NEAR THE FLOWER GARDEN BANKS, NORTHWESTERN GULF OF MEXICO: A MODELING STUDY
11:45 am	Vanderploeg, H. A.; Johengen, T. H.; Lavrentyev, P. J.; Lang, G. A.; Liebig, J. R.; Chen, C.; Bundy, M. H.; Cavaletto, J. F.; Eadie, B. J.: FRONTS AND PLUMES AS ORGANIZERS OF SPATIAL DISTRIBUTION OF NUTRIENTS AND PLANKTON IN LAKE MICHIGAN: CONSEQUENCES TO THE FOOD WEB
12:00 pm	Romare, P.; Berg, S.; Lauridsen, T. L.; Jeppesen, E.: SPATIAL AND TEMPORAL DISTRIBUTION OF FISH AND ZOOPLANKTON IN A SHALLOW LAKE
2:15 pm	Sutor, M.; Cowles, T. J.; Kosro, P. M.: CONCURRENT FINESCALE VERTICAL MEASUREMENTS OF PHYTOPLANKTON, ZOOPLANKTON, AND PHYSICAL PARAMETERS IN THE OREGON UPWELLING SYSTEM
2:30 pm	Fisher, K. E.: REPRESENTING OBSERVED PLANKTON PATCHINESS IN MODEL INPUT FIELDS
2:45 pm	Taylor, L. E.; Abello, H. U.; Shellito, S. M.; Jumars, P. A.; Greenlaw, C. F.: MODULATION BY TIDES AND IRRADIANCE OF EMERGENCE IN A COASTAL AND ESTUARINE MYSID
3:00 pm	Dahl, L.: INTERMEDIATE-SCALE DISTRIBUTION PATTERNS OF FISH LARVAE &#8211; SPATIAL AND TEMPORAL VARIABILITY
3:15 pm	Grünbaum, D.; Strathmann, R. R.: DO BILATERAL LARVAL MORPHOLOGIES EXPLOIT TURBULENT EDDIES FOR VERTICAL TRANSPORT?
4:00 pm	Curtis, K. A.: BUOYANCY AND VERTICAL DISTRIBUTION OF SARDINE AND ANCHOVY EGGS

4:15 pm	Malkiel, E.; Abras, J.; Widder, E.; Katz, J.: MEASUREMENTS OF THE IN SITU PARTICLE DISTRIBUTION IN THE IMMEDIATE VICINITY OF COPEPODS USING HOLOGRAPHY
4:30 pm	Bochdansky, A. B.; Bollens, S. M.: EFFECTS OF SPATIAL HETEROGENEITY OF FOOD ON THE BEHAVIOR, FEEDING AND REPRODUCTION OF THE COPEPOD ACARTIURA SP.

**SS3.13:****Advances in Understanding Estuarine Ecosystems From Real-Time Remote Monitoring Data**

Chair(s):	Howard Glasgow, howard_glasgow@ncsu.edu Robert Magnien, rmagnien@dnr.state.md.us
Location:	250 DE
9:30 am	Glibert, P. M.; Codispoti, L. A.; Boicourt, W.; MacIntyre, L.; Roman, M. R.; Magnien, R.; Michael, B.; Trice, M.: NEW TECHNOLOGIES FOR COASTAL AND ESTUARINE MONITORING: APPLICATIONS FOR HARMFUL ALGAL BLOOMS <sup>(*)</sup>
10:00 am	Kelly, V.; Glibert, P. M.; Codispoti, L. A.; Cooper, E. R.; Alexander, J. A.: AUTONOMOUS NUTRIENT SAMPLERS HELP DEFINE HIGHER FREQUENCY NUTRIENT VARIABILITY IN TRIBUTARIES OF CHESAPEAKE BAY, USA <sup>(*)</sup>
10:15 am	Showers, W. J.; Usry, B.; DeMaster, D. J.: RIVERNET: A HIGH RESOLUTION WATER QUALITY MONITORING PROGRAM IN THE NEUSE RIVER BASIN, NC <sup>(*)</sup>
10:30 am	Trader, T. H.; Bendis, B. J.; Steidinger, K. A.: REAL-TIME REMOTE WATER QUALITY MONITORING IN THE ST. JOHNS RIVER, FLORIDA <sup>(*)</sup>
11:00 am	Reed, R. E.; Glasgow, H. B.; Toms, D. C.; Kinder, C. A.; Burkholder, J. M.: COMPARISON OF HIGH RESOLUTION DATA WITH PREDICTIONS BY THE EFDC/WASP MODEL: NEUSE RIVER MONITORING PROJECT, NORTH CAROLINA <sup>(*)</sup>
11:15 am	Magnien, R. E.; Michael, B. D.; Trice, M.; Boynton, W. R.; Stankelis, R. M.: A SPATIALLY AND TEMPORALLY INTENSIVE HABITAT MONITORING NETWORK FOR CHESAPEAKE BAY <sup>(*)</sup>
11:30 am	Springer, J. J.; Glasgow, H. B.; Reed, R. E.; Burkholder, J. M.: UTILIZATION OF A REAL-TIME REMOTE MONITORING NETWORK TO CHARACTERIZE A SEASONAL DINOFLAGELLATE BLOOM IN THE NEUSE ESTUARY <sup>(*)</sup>
11:45 am	Glasgow, H. B.; Burkholder, J. M.; Reed, R. E.; Toms, D. C.; Kinder, C. A.; Kleinman, J. E.; Allen, E. H.: INTEGRATING LONG-TERM DATASETS WITH REAL-TIME REMOTE MONITORING TECHNOLOGIES: PROVIDING NEW INSIGHTS INTO THE DYNAMIC FACTORS CONTROLLING ESTUARINE SYSTEMS <sup>(*)</sup>
12:00 pm	Bohlen, W. F.; Howard-Strobel, M. M.; Cohen, D. C.: A TIME SERIES TOUR OF ESTUARINE SEDIMENTATION <sup>(*)</sup>
2:15 pm	Saaman, E.; Deacutis, C. F.; Murray, D.; Prell, W.: SPATIAL DISTRIBUTION OF MID-DEPTH HYPOXIC WATERS IN A PARTIALLY-MIXED ESTUARY, NARRAGANSETT BAY IN SUMMER 2001 <sup>(*)</sup>

TUESDAY

(\*) represents Invited presentations

2:30 pm Berman, M. S.; Oviatt, C.; Melrose, D. C.: HYPOXIC CONDITIONS IN NARRAGANSETT BAY, SUMMER 2001, DETERMINED USING A NUSHUTTLE SAMPLING PLATFORM<sup>(\*)</sup>

2:45 pm Kester, D. R.; Bergondo, D. L.; Woods, W. L.: PROCESSES ASSOCIATED WITH EPISODIC HYPOXIA IN NARRAGANSETT BAY, RHODE ISLAND, DURING SUMMER 2001 DERIVED FROM REMOTE AUTOMATED TIME-SERIES MEASUREMENTS<sup>(\*)</sup>

#### **SS3.14: Novel Approaches to Modeling Food Web and Ecosystem Biogeochemistry**

Chair(s): Joe Vallino, jvallino@mbl.edu

Location: 250 C

4:00 pm ARHONDITSI, G. B.; BRETT, M. T.: A META-ANALYSIS OF NPZ-TYPE AQUATIC ECOSYSTEMS MODELS

4:15 pm Williams, P. J.; Evans, D. W.; Pritchard, I. D.; Thomas, D. N.; Bowers, D. G.: OBSERVATIONS OF OSCILLATIONS IN PLANKTON COMMUNITY METABOLISM

4:30 pm Edwards, A. M.; Platt, T.; Sathyendranath, S.: THE OCEANIC HIGH-NUTRIENT, LOW-CHLOROPHYLL REGIME: LIMITS ON BIOMASS AND NITRATE BEFORE AND AFTER IRON FERTILIZATION

4:45 pm Vallino, J. J.: MODELING MICROBIAL CONSORTIUMS AS DISTRIBUTED METABOLIC NETWORKS

5:00 pm Lopes, R. M.; Dam, H. G.; McManus, G. B.; Gaeta, S. A.; Rosetta, C.; Colin, S. P.; Smith, A. N.; Haley, S. T.: PLANKTONIC TROPHIC CASCADES IN THE SOUTHERN BRAZILIAN BIGHT

#### **SS4.03: What is Special About Food Webs in Extreme Environments?**

Chair(s): Ursula Gaedke, gaedke@rz.uni-potsdam.de

Jorg Tittel, tittel@gm.ufz.de

Guntram Weithoff

Elanor Bell, ebell@rz.uni-potsdam.de

Location: 250 C

2:15 pm Garstecki, I.; Newsham, K. K.: DIVERSITY-STABILITY RELATIONSHIPS IN FRESHWATER MICROBIAL FOOD WEBS FROM THE MARITIME ANTARCTIC

2:30 pm Kamjunke, N.; Gaedke, U.: TRUNCATED ENERGY FLOW IN THE PELAGIC FOOD WEB OF AN EXTREMELY ACIDIC LAKE

2:45 pm Zippe, B.: WHO IS THE WINNER? - PLANKTON FOOD WEB DYNAMICS IN AN ACIDIC MINING LAKE INFLUENCED BY WIND-INDUCED MIXING EVENTS

3:00 pm Breitbart, M.; Wegley, L.; Leeds, S.; Schoenfeld, T.; Rohwer, F.: THE IMPACT OF VIRUSES ON MICROBIAL PROCESSES IN HOT SPRINGS

3:15 pm Rautio, M.; Vincent, W. F.: WATER COLUMN-BENTHIC COUPLING IN SHALLOW FRESHWATER ECOSYSTEMS: PRELIMINARY RESULTS FROM THE CANADIAN SUBARCTIC AND HIGH ARCTIC

#### **SS4.04: Symbiosis and Syntrophy in Extreme Environments**

Chair(s): Nicole Dubilier, ndubilie@mpi-bremen.de

Douglas C. Nelson, dcnelson@ucdavis.edu

Location: 151 DEF

9:30 am Antje Boetius, A.: SYMBIOSIS AND SYNTROPHY IN EXTREME ENVIRONMENTS AND BEYOND: THE QUESTION OF MUTUAL BENEFITS<sup>(\*)</sup>

10:00 am Fisher, C. R.; Cordes, E. E.; Freytag, J. K.; Jones, C.; Breault, S.; Smail, E.; Dattagupta, S.; Nielson, K.: INTERNAL SYMBIONTS ARE NOT ENOUGH TO SUPPORT A CHEMOAUTOTROPHIC LIFE STYLE FOR LAMELLIBRACHIA LUYMESI

10:15 am Dattagupta, S.; Bergquist, D. C.; Smith, E. B.; Macko, S. A.; Fisher, C. R.: TISSUE STABLE ISOTOPE TURNOVER IN TRANSPLANTED HYDROCARBON SEEP MUSSELS: RELATION TO GROWTH AND PHYSIOLOGICAL CONDITION<sup>(\*)</sup>

10:30 am Scott, K. M.; Schwedock, J.; Schrag, D. P.; Cavanaugh, C. M.: KINETIC ISOTOPE EFFECT OF FORM IA RUBISCO FROM CHEMOAUTOTROPHIC BACTERIA

11:00 am Bergin, C.; Dando, P. R.; Dubilier, N.; MacGregor, B. J.: STABLE CARBON ISOTOPIC COMPOSITION OF RNA AND SSU RRNA IN THE HYDROTHERMAL VENT MUSSEL BATHYMODIOLUS AZORICUS HARBORING A DUAL ENDOSYMBIONT POPULATION

11:15 am Joyer, J. L.; Lee, R. W.: THE POSSIBLE ROLE OF TAURINE AND THIOTAURINE IN SULFIDE DETOXIFICATION IN A CHEMOAUTOTROPHIC BACTERIA-MOLLUSC SYMBIOSIS

11:30 am Blazejak, A.; Amann, R.; Dubilier, N.: ARE THE SULFIDE-OXIDIZING SYMBIONTS OF A GUTLESS OLIGOCHAETE FROM NEARLY ANOXIC SEDIMENTS OFF THE COAST OF PERU LIMITED BY OXYGEN?

11:45 am Bates, A. E.: THE RELATIVE IMPORTANCE OF GILL-ASSOCIATED BACTERIA TO LIMPET NUTRITION FROM DIFFERENT HYDROTHERMAL HABITATS ON THE JUAN DE FUCA RIDGE.

12:00 pm Goffredi, S. K.; Waren, A.; Orphan, V. J.; Van Dover, C. L.; Vrijenhoek, R. C.: A NEWLY DESCRIBED VENT SNAIL FROM THE INDIAN OCEAN; METAL- RICH AND ASSOCIATED WITH BOTH ENDO- AND EPIBIOTIC BACTERIA

12:15 pm Borowski, C.; Urakawa, H.; Giere, O.; Krieger, J.; Amann, R.; Dubilier, N.: DUAL SYMBIOSIS IN THE HYDROTHERMAL VENT GASTROPOD IFREMERIA NAUTILEI: EVIDENCE FOR TWO DIFFERENT AND UNUSUAL SYMBIONTS IN ISOLATED HOST POPULATIONS

12:30 pm Dubilier, N.; Perthalter, A.; Kuever, J.; Borowski, C.; Radajewski, S.; Murrell, J. C.; Amann, R.: SULFIDE-OXIDIZING SYMBIONTS IN A HYDROTHERMAL VENT SNAIL EXPRESS A GENE INVOLVED IN THE OXIDATION OF METHANE (PMOA)

12:45 pm Gomes da Silva, S.; Dubilier, N.; De Ridder, C.: Characterization of the symbiotic microbial community inhabiting the intestinal caecum of a deposit feeder echinoid by 16s rRNA phylogenetic analysis

<sup>(\*)</sup> represents Tutorial presentations

- 3:00 pm Buck, K. R.; Barry, J. P.; Hallam, S. J.; Bernhard, J. M.: ASSEMBLAGES ASSOCIATED WITH SHEATHED THIOTROPHIC BACTERIA FROM COLD SEEPS IN MONTEREY BAY
- 3:15 pm Kuever, J.; Meyer, B.: PHYLOGENY OF SULFUR-OXIDIZING AND SULFATE-REDUCING MICROORGANISM BASED ON THE *apsB* AND *apsA* GENE

**CS03:**  
**Applied and Management Issues (Posters)**

- Location: Grand Ballroom (E-J)
1. Twombly, S.; Cobb, J. S.; Kelly, S.: DECAPOD LIFE HISTORY CHARACTERISTICS: IMPLICATIONS FOR HARVESTING AND MANAGEMENT
  2. Mena, L.; Cepriano, L.; Denslow, N.; Schreibman, M.; McElroy, A.: Are Winter Flounder Affected by Sewage-derived Contaminants?
  3. Rios, J. V.; Walsh, E. J.; Gardea-Torresdey, J. L.: INDUCTION OF HEAT SHOCK PROTEIN 60 (HSP60) IN ROTIFERS EXPOSED TO ARSENIC AND HEAVY METALS
  4. Brooks, B. W.; Dzialowski, E. M.; Turner, P. K.; Stanley, J. K.; Glidewell, E. A.: FRESHWATER INVERTEBRATE RESPONSES TO PHARMACEUTICALS
  5. Bintz, J. C.: CHEMICAL REFERENCE MATERIALS: SETTING THE STANDARDS FOR OCEAN SCIENCE

**CS08:**  
**Biogeochemical Cycles (Posters)**

- Chair(s): Jay Cullen, jcullen@whoi.edu  
Martin Shafer, mmshafer@facstaff.wisc.edu  
Margaret Squires, ms24@ualberta.ca
- Location: Grand Ballroom (E-J)
6. Green, M. A.; Boudreau, C. L.; Jones, M. E.; Thomason, J.; MacNally, M.; Oulette, A.: SPATIO-TEMPORAL PATTERNS OF CARBON REMINERALIZATION IN CASCO BAY ESTUARY, GULF OF MAINE
  7. Fisher, J. C.; Yager, P. L.: TEMPORAL AND SPATIAL CHANGES IN DISSOLVED INORGANIC CARBON AND ALKALINITY IN THE ARCTIC HALOCLINE DURING ICE STATION SHEBA
  8. Jensen, A.; Gunnlaugsson, H. P.; Nørnberg, P.; Finster, K.: IRON REDUCTION AND IRON MINERAL FORMATION WITH NATURALLY OCCURRING IRON OXIDES UNDER IN SITU CONDITIONS
  9. Boyd, T. J.; Osburn, C. L.: CHANGES IN ALLOCHTHONOUS AND AUTOCHTHONOUS CDOM EXCITATION-EMISSION FLUORESCENCE MATRICES (EEMS) FROM BACTERIAL DEGRADATION
  10. Lenes, J. M.; Heil, C. A.; O'Neil, J. M.; Bronk, D. A.; Mulholland, M. R.; Virmani, J. I.: INSITU EVIDENCE OF PHOTOLYSIS OF REFRACTORY IRON
  11. Siefert, R. L.; Chen, Y.: LABILE IRON IN AEROSOLS COLLECTED OVER THE ATLANTIC AND PACIFIC OCEANS

**CS10:**  
**Climate Change, Interannual/Interdecadal Variation and Global Change (Posters)**

- Chair(s): Christian Fritsen, cfritsen@dri.edu  
Catherine O'Reilly, caoreilly@vassar.edu
- Location: Grand Ballroom (E-J)
12. Black, C. M.; Last, W. M.; Wolfe, B. B.; Hall, R. I.; Paterson, A. M.; Edwards, T. W.: PHYSICAL INDICATORS OF ICE-JAM INDUCED FLOODING IN CORES TAKEN FROM LAKES WITHIN THE PEACE-ATHABASCA DELTA, NORTHERN ALBERTA, CANADA
  13. Spruance, C. L.; Moser, K. A.: A PRELIMINARY ANALYSIS OF DIATOM DISTRIBUTIONS IN UNTA MOUNTAIN LAKES, UTAH, USA

**CS15:**  
**Fish (Posters)**

- Chair(s): Benjamen Kennedy, benk@cc.usu.edu
- Location: Grand Ballroom (E-J)
14. MacKenzie, R. A.; Dionne, M.: LINKAGES BETWEEN JUVENILE GROUND FISH, HABITAT, SUBSTRATE, AND HUMAN ACTIVITY IN THE GULF OF MAINE
  15. Stocks, K. I.: PATTERNS OF SEAMOUNT ENDEMISM IN FISHES OF THE HAWAIIAN AND EMPEROR SEAMOUNTS; A STUDY BASED ON THE SEAMOUNTSONLINE DATABASE
  16. Richardson, D. E.; Cowen, R. K.: DIVERSITY OF LEPTOCEPHALUS LARVAE AROUND THE ISLAND OF BARBADOS: RELEVANCE TO REGIONAL DISTRIBUTIONS

**CS16:**  
**Harmful Algal Blooms (Posters)**

- Chair(s): Tammi Richardson, tammi@ocean.tamu.edu  
Andrew Juhl, juhl.andy@epa.gov
- Location: Grand Ballroom (E-J)
17. Coyne, K. J.; Glasgow, H. B.; Burkholder, J. M.; Cary, S. C.: IDENTIFICATION AND LOCALIZATION OF BACTERIA INTIMATELY ASSOCIATED WITH TOXIC PFIESTERIA
  18. Bradt, S. R.; Haney, J. F.; Ikawa, M.; Sasner, J. J.: BENTHIC SEDIMENT TOXICITY AS A PREDICTOR OF MICROCYSTIN IN LAKE WATER AND PLANKTON
  19. Milroy, S. P.; Kirkpatrick, G. J.; Vargo, G. A.; Walsh, J. J.: MANNA FROM THE HEAVENS: ATMOSPHERIC DEPOSITION OF NITROGEN AND THE *KARENIA BREVIS* BLOOM OFF SARASOTA, FLORIDA (SEPTEMBER-OCTOBER 1999)
  20. Zhang, C.; Burkholder, J. M.; Glasgow, H. B.; Springer, J. J.: STIMULATORY EFFECTS OF EXOGENOUS SUBSTANCES PRODUCED BY A GYMNOAMOEBA ON GROWTH OF PFIESTERIA SHUMWAYAE (DINOPHYCEAE) MASTIGOTES
  21. Deonarine, S. N.; Gobler, C. J.; Leigh-Bell, J.; Wilhelm, S. W.; Downes-Gastrich, M.; Anderson, O. R.: ECOLOGY OF PHYTOPLANKTON COMMUNITIES DOMINATED BY AUREOCOCCUS ANOPHAGEFFERENS: IMPORTANCE OF NUTRIENTS, VIRUSES, AND MICROZOOPLANKTON

TUESDAY

(\*) represents Invited presentations

22. Higham, C. J.; Pederson, B. A.; Berg, B. A.; Dalpra, D. R.; Kirkpatrick, G. J.: EFFECTS OF SEAWATER DENSITY ON CULTURE GROWTH, CELL SIZE, CELL DENSITY AND TOXIN CONTENT OF THE FLORIDA (USA) RED TIDE MARINE DINOFLAGELLATE *KARENIA BREVIS*

**CS19:  
Macrophytes (Posters)**

- Location: Grand Ballroom (E-J)  
 23. Ross, C. L.; Kupper, F. C.; Jacobs, R. S.: THE BIOCHEMISTRY OF INDUCIBLE DEFENSE MECHANISMS IN THE MARINE CHLOROPHYTE *DASYCLADUS VERMICULARIS*

**CS21:  
Microbial Dynamics (Posters)**

- Chair(s): David Smith, dsmith@gso.uri.edu  
 Jessica Morgan, jmorgan@vims.edu  
 Location: Grand Ballroom (E-J)  
 24. Dantzler, M. M.; Kemp, P. F.; Aller, J. Y.; Dhadwal, H. S.: A CAPILLARY WAVEGUIDE BIOSENSOR FOR MARINE MICROBIAL PROCESS STUDIES  
 25. Claeßens-Kenning, M.; Wickham, S. A.; Packoff, G.: CONTROL MECHANISMS FOR CILIATES IN AN OLIGOTROPHIC/EUTROPHIC RESERVOIR &#8211; MEANING OF SPECIES COMPOSITION OF PREDATOR AND PREY  
 26. Rose, J. M.; Caron, D. A.; Sieracki, M. E.; Schaffner, R. A.; Thier, E. C.: CYTOMETRIC QUANTIFICATION OF HETEROTROPHIC PROTISTS IN CULTURE AND IN MARINE MICROBIAL COMMUNITIES  
 27. Yokokawa Taichi; Nagata Toshi, ..: ABUNDANCE AND GROWTH RATE OF PHYLOGENETICALLY DISTINCT SUBPOPULATIONS OF BACTERIOPLANKTON IN OTSUCHI BAY, JAPAN

**CS24:  
Nutrient Dynamics (Posters)**

- Chair(s): Nicole Goebel, nicole.goebel@uconn.edu  
 Michael Lipsen, mlipsen@eos.ubc.ca  
 Location: Grand Ballroom (E-J)  
 28. Shipe, R. E.; Carpenter, E. J.; Capone, D. G.: A SEASONAL STUDY OF SILICON PRODUCTION AND UPTAKE KINETICS IN THE WESTERN ATLANTIC OCEAN  
 29. Oza, H. I.; Anderson, M. A.: INTERNAL LOADING AND NUTRIENT BUDGET IN A SMALL SOUTHERN CALIFORNIA RESERVOIR  
 30. Swan, B. K.; Watts, J. M.; Reifel, K. M.; Hurlbert, S. H.: BIOTURBATION AND ITS ROLE IN SEDIMENT PHOSPHORUS REGENERATION IN THE SALTON SEA  
 31. Kim, J. S.; Oh, S. Y.; Oh, K. Y.; Wurtsbaugh, W. A.: NUTRIENT DYNAMICS IN A KOREAN WATERSHED WITH RICE PADDY FIELDS

32. Pershall, A. D.; Crenshaw, C. L.; Dahm, C. N.: CONCENTRATIONS OF 15N IN RIVER AND GROUND WATER FROM THE MIDDLE RIO GRANDE AND SURROUNDING BOSQUE ABOVE AND BELOW A WASTEWATER TREATMENT FACILITY

**CS27:  
Paleolimnology and Paleoceanography (Posters)**

- Location: Grand Ballroom (E-J)  
 33. Hicks, J. L.; Slate, J. E.: HISTORICAL ENVIRONMENTAL CHANGE IN LAKE DRUMMOND OF THE GREAT DISMAL SWAMP  
 34. Holmes, M. E.; Fischer, G.; Wefer, G.: NITROGEN ISOTOPES IN PLANKTON, SINKING PARTICLES AND SURFACE SEDIMENTS IN THE SOUTH ATLANTIC OCEAN

**CS30:  
Primary Production (Posters)**

- Location: Grand Ballroom (E-J)  
 35. Behrenfeld, M. J.; Boss, E.: AN OPTICAL INDEX OF PHYTOPLANKTON PHOTOACCLIMATION AND ITS RELATION TO LIGHT SATURATED PHOTOSYNTHESIS IN THE SEA

**CS35:  
Trophic Dynamics (Posters)**

- Chair(s): Bob Sterner, stern007@umn.edu  
 Kam Tang, kamtang@vims.edu  
 Location: Grand Ballroom (E-J)  
 36. Röllwagen Bollens, G. C.; Penry, D. L.; Bollens, S. M.: COPEPODS AS PROTOZOAN-METAZOAN FOOD WEB LINKS IN SAN FRANCISCO BAY: MICROPLANKTON PREY COMMUNITIES AND COPEPOD FEEDING DYNAMICS, 1997 – 2000  
 37. Kiffney, P. M.: NUTRIENT LIMITATION OF STREAM PERiphyton ALONG A LIGHT GRADIENT  
 38. Doyle, R. A.; Gillette, J. P.; Hairston, N. G.: HOW DOES WATER RETENTION TIME AFFECT ZOOPLANKTON AND PHYTOPLANKTON DYNAMICS?&#8212;A BROAD AND LOCAL SCALE LOOK AT LAKE ONTARIO EMBAYMENT PLANKTON COMMUNITIES  
 39. Burkart, G. A.; Evans, M. A.; Luecke, C.; Kling, G. W.: EFFECTS OF FERTILIZATION ON ENERGY FLOW THROUGH THE PELAGIC FOOD WEB OF TWO ARCTIC LAKES: THE IMPORTANCE OF LAKE MORPHOMETRY AND FOOD WEB STRUCTURE  
 40. Sterner, R. W.; Hood, J. M.: TEMPERATURE, HOMEOSTASIS, AND STOICHIOMETRY: THE STRUCTURE OF A GENERAL RELATION FOR ORGANISM GROWTH INCORPORATING TEMPERATURE AND P CONTENT

• represents Tutorial presentations

**CS37:  
Watershed Ecology and Ecosystems (Posters)**

- Location: Grand Ballroom (E-J)  
 41. Decker, J. D.: TEMPERATURE IMPACTS OF LAKE-STREAM INTERACTIONS IN SUBALPINE WATERSHEDS

**CS39:  
Zooplankton (Posters)**

- Chair(s): Cynthia Suchman, cynthia.suchman@noaa.gov  
 Sandra Connelly, sjc25@buffalo.edu  
 Deborah Steinberg, debbies@vims.edu  
 Michael Brett, mtbrett@u.washington.edu  
 Russel Hopcroft, hopcroft@ims.uaf.edu  
 Location: Grand Ballroom (E-J)  
 42. Barojas, A. R.; Kremer, P.: FERTILIZATION RATES OF THE PELAGIC TUNICATE SALPA ASPERA IN THE MID ATLANTIC BIGHT, USA  
 43. Rossberg, M. C.; Wickham, S. A.: CILIATE VERTICAL MIGRATION IN LAKE SPELDROP, GERMANY  
 44. Oppert, C. J.; Marcus, N. H.: SUBLETHAL RESPONSES OF SUCCESSIVE GENERATIONS OF ACARTIA TONSA REARED UNDER HYPOXIA  
 45. Liu, H.; Clarke, C.; Hopcroft, R. R.: GROWTH RATES OF NEOCALANUS FLEMINGERII IN THE NORTHERN GULF OF ALASKA IN 2001 AND 2002  
 46. Hall, C. J.; Mueller-Solger, A.; Alemdar, C.; Jassby, A.: FOOD RESOURCES FOR CALANOID COPEPODS IN THE SACRAMENTO-SAN JOAQUIN RIVER DELTA, CA.  
 47. Utz, L. R.; Coats, D. W.; Small, E. B.: HOST SPECIFICITY OF THE EPIBIOT ZOOTHAMNIUM SP. (CILIOPHORA: PERITRICHIA) ATTACHED TO CALANOID COPEPODS IN THE CHESAPEAKE BAY, USA  
 48. Madin, L. P.; Horgan, E. F.; Kremer, P.: BLOOM POPULATIONS OF SALPA ASPERA (TUNICATA, THALIACEA) IN THE MID ATLANTIC BIGHT, SUMMER 2002  
 49. Bollens, S. M.; Slaughter, A.; Avent, S.; Dorman, J.; Papastefanou, K.; Rollwagen Bollens, G. C.: ZOOPLANKTON RESPONSES TO VARIABLE WIND-DRIVEN CROSS-SHELF TRANSPORT OFF NORTHERN CALIFORNIA: RESULTS FROM COOP WEST  
 50. Herren, C.; Haddock, S.; Case, J.: Bioluminescent plankton communities in Monterey Bay: Is bioluminescent intensity as measured by a bathyphotometer a direct reflection of the plankton community?

**SS1.02:  
Coastal Indicators of Water Quality and Ecological Condition (Posters)**

- Chair(s): Hans W. Paerl, hans\_paelr@unc.edu  
 Gerald J. Niemi, gniemi@nri.umn.edu  
 Location: Grand Ballroom (E-J)  
 51. Koch, F.; Gobler, C. J.: PHYTOPLANKTON RESOURCE LIMITATION AND WATER QUALITY IN THE PECONIC ESTUARY, NY, USA: SPATIAL AND TEMPORAL TRENDS

**SS1.03:  
Groundwater/Surface Water Interactions (Posters)**

- Chair(s): Stephen Opsahl, sopsahl@jonesctr.org  
 Matthew A. Charette, mcharette@whoi.edu  
 Kevin Kroeger, kroeger@bu.edu  
 Location: Grand Ballroom (E-J)  
 52. McGowan, M. P.; Glenn, C. R.; McMurtry, G. M.: THE IMPACT OF GROUNDWATER AS A SOURCE OF NUTRIENTS INTO AN HAWAIIAN ESTUARY  
 53. Opsahl, S. P.: SOURCES AND BIOGEOCHEMICAL TRANSFORMATIONS OF ORGANIC MATTER AND NITROGEN AT KARST SURFACE WATER/GROUNDWATER INTERFACES  
 54. Poole, G. C.; O'Daniel, S.; Woessner, W. W.; Mertes, L.; Thomas, S. A.; Arrigoni, A. S.; Qin, X.: HYDROHEIC FLOW RESPONSE TO HISTORICAL CHANGES IN CHANNEL MORPHOLOGY AND FLOW REGULATION

**SS1.04:  
Impacts of Changing Land Use on Aquatic Ecosystems (Posters)**

- Chair(s): G.S. Kleppel, gkleppel@albany.edu  
 Location: Grand Ballroom (E-J)  
 55. Ogbebo, E. E.; Ochs, C. A.; Britson, C. A.; Threlkeld, S. T.: AN EMPIRICAL STUDY OF LIMNOLOGICAL RELATIONSHIPS IN LAKES AND PONDS OF NORTH MISSISSIPPI

**SS1.05:  
The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems (Posters)**

- Chair(s): Val Smith, vsmith@ku.edu  
 Mandy Joye, mjoye@arches.uga.edu  
 Robert Howarth, rwh2@cornell.edu  
 Location: Grand Ballroom (E-J)  
 56. Yoshiyama, K.; Sharp, J. H.: THE NEED FOR MORE COMPLEX NUTRIENT-PRIMARY PRODUCTION MODELS IN ESTUARINE EUTROPHICATION STUDIES  
 57. Quinones-Rivera, Z.; Wissel, B.; Justic, D.; Fry, B.: MODELING OXYGEN ISOTOPE DYNAMICS FOR THE HYPOXIC ZONE NEAR THE MOUTH OF THE MISSISSIPPI RIVER

**SS2.01:  
The Limits to Paleolimnology? Linking Sedimentary Records with Contemporary Process-based Studies (Posters)**

- Chair(s): Daniel Engstrom, dengstrom@smm.org  
 Richard Battarbee, r.battarbee@ucl.ac.uk  
 Location: Grand Ballroom (E-J)  
 58. Last, W. M.; Shang, Y.: LIMNOGEOLOGY AND PALEOLIMNOLOGY OF INGEBRIGHT AND NORTH INGEBRIGHT LAKES, SASKATCHEWAN, CANADA: THE ANCIENT A KEY TO THE MODERN  
 59. Poser, E. A.; Saros, J. E.; Wolfe, A. P.; Interlandi, S. J.: SYNCHRONOUS SHIFTS IN SEDIMENTARY DIATOM ASSEMBLAGES AND NUTRIENT RATIOS IN AN ALPINE LAKE

TUESDAY

(\*) represents Invited presentations

**SS2.02:****Lacustrine Hydrology Past and Present: Linking Lakes, Catchments, Atmosphere, and Ocean (Posters)**

- Chair(s): Sherilyn C. Fritz, sfritz2@unl.edu  
 Location: Grand Ballroom (E-J)  
 60. Stone, J. R.; Fritz, S. C.: MODELING CHANGES IN LAKE LEVEL AND ITS APPLICATION TO PLANKTIC:BENTHIC DIATOM RATIOS

**SS3.21:****Research Experiences of Undergraduates in Ocean Sciences (Posters)**

- Chair(s): Russell L. Cuhel, rcuhel@uwm.edu  
 Carmen Aguilar, aguilar@uwm.edu  
 Location: Grand Ballroom (E-J)  
 61. MacKinnon, P. D.; Luecke, C.: EFFECTS OF LANDSCAPE POSITION ON EMERGENCE AND GROWTH OF ARCTIC GRAYLING  
 62. Gutowska, M. A.; Robbins, A. L.; Brownstein, A.; Archer, J.; Brabban, A.; Thuesen, E. V.: HEAT SHOCK PROTEINS INDUCED BY OXYGEN STRESS IN THE JELLYFISH *AURElia LABIATA*.  
 63. Seydewitz, L.; Driscoll, M.; Wason, C.; Giguere, M.; Hocking, D.; Faltin, E.; Baker, J.; Bradt, S.; Novak, M.; Baker, A.; Blakemore, R.; Campbell, J.: PROJECT LAKE WATCH: MONITORING NEW HAMPSHIRE LAKES FROM CANOES AND SATELLITES  
 64. Faltin, E.; Hocking, D.; Wason, C.; Baker, J.; Giguere, M.; Seydewitz, L.; Driscoll, M.; Bradt, S.; Novak, M.; Blakemore, R.; Baker, A.; Campbell, J.: PROJECT LAKE WATCH: LOOKING AT LAKES WITH MICROSCOPES AND SATELLITES  
 65. Bjork, S. J.; MacIntyre, H. L.: THE EFFECTS OF GLUCOSE ON LIGHT ABSORPTION AND GROWTH OF THE ESTUARINE CRYPTOPHYTE *STOREATULA MAJOR*  
 66. Goepfert, T. J.; Dupont, C. L.; Lo, P.; Wei, L.; Ahner, B. A.: DIURNAL CYCLING OF INTRACELLULAR THIOLS IN CULTURE AND FIELD STUDIES  
 67. Hartman, N. T.; John, S.; Georickie, R.; Repeta, D. J.: PURIFICATION AND CHARACTERIZATION OF CHROMOPHORIC DISSOLVED ORGANIC MATTER (CDOM) IN THE WORLD'S OCEANS  
 68. Yates, M.; Sanford, L.: CHARACTERIZING SUSPENDED SEDIMENTS IN THE ESTUARINE TURBIDITY MAXIMUM ZONE OF THE CHESAPEAKE BAY  
 69. Hippe, K. R.; Witucki, P. F.; Shimeta, J.: SUSPENSION-FEEDING RATE AND BEHAVIOR OF THE SPIONID POLYCHAETE, *POLYDORA CORNUTA*, UNDER DIFFERENT FEEDING HISTORIES AND TEMPERATURES  
 70. Gifford, S. M.; Lind, O. T.: LIGHT LIMITATIONS OF ALgal PRODUCTION IN LAKES AND RESERVOIRS  
 71. Dionne, J. A.; Cornillon, P. C.: ON THE FORMATION AND EVOLUTION OF SHEAR FRONTS  
 72. Kameda, A. T.; Carter, B.; Ghadiri, A.; Feldman, R. F.; Murray, A. E.: USING ENVIRONMENTAL CONTIG ASSEMBLIES TO IDENTIFY MARINE PICOPLANKTON DIVERSITY AND OPEN READING FRAMES FOR DNA MICROARRAY DEVELOPMENT

73. Ashmankas, C.; Muenchow, A.: BAFFIN BAY DEEP WATER (+1000M) WARMING FROM 1924 TO 1997  
 74. Allen, J.; Franklin, L. A.; Neale, P. J.: SENSITIVITY OF PHOTOSYNTHETIC EFFICIENCY OF *T. PSEUDONANA* TO VARYING UV IRRADIANCE DURING SIMULATED VERTICAL MIXING AND STRATIFICATION  
 75. Beck, A. J.; Pagano, M.; Cochran, J. K.; Masque, P.; Collavini, F.; Frignani, M.; Belucci, L.: COMPARISON OF TWO CONTAMINATED ESTUARINE ECOSYSTEMS- THE VENICE LAGOON, ITALY, AND JAMAICA BAY, NY, USA: CHRONOLOGIES OF SEDIMENT AND TRACE METAL ACCUMULATION  
 76. McAndrew, P. M.; O'Reilly, C. M.; Polz, M. F.: BACTERIAL DIVERSITY WITHIN THE WATER COLUMN OF THE PELAGIC ZONE OF LAKE TANGANYIKA (NYANZA PROJECT, TANZANIA, AFRICA)  
 77. Bigrigg, J.; Binkowski, F. P.; Bruch, R.: FOOD HABIT STUDY OF LAKE STURGEON, *ACIPENSER FULVESCENTS*  
 78. Testa, J. M.; Charette, M. A.; Sholkovitz, E. R.; Allen, M. C.; Rago, A.; Herbold, C. W.: DISSOLVED IRON CYCLING IN THE SUBTERRANEAN ESTUARY OF A COASTAL BAY: WAQUOT BAY, MASSACHUSETTS  
 79. Campbell, J.; Moore, K. A.: THE EFFECT OF PERiphyton ACCUMULATION ON LIGHT ATTENUATION OF EELGRASS (*ZOSTERA MARINA* L.) OVER A DEPTH GRADIENT IN THE YORK RIVER, VA  
 80. Stefaniak, L. M.; Shulman, M. J.: ARE THERE COSTS TO BEING BORED? INTERACTIONS BETWEEN THE COMMON PERIWINKLE *LITTORINA LITTorea* AND A BORING SPONGE  
 81. Douglas, J.; Eckert, G. L.; Taggart, S. J.; Mondragon, J.; Irvine, G.: DISTRIBUTION AND RELATIVE ABUNDANCE OF LARVAL CRABS IN GLACIER BAY  
 82. Harris, R. T.: CLIMATE VARIABILITY OF THE LATE HOLOCENE: INVESTIGATING COASTAL CLIMATE CHANGE USING PALEO-INDIAN SHELL MIDDENS  
 83. Gregory, G. J.: TEMPORAL AND SEASONAL UREA CYCLING IN THE SARGASSO SEA  
 84. Streble, L.: SOLAR RADIATION AND MARINE INVERTEBRATE LARVAE IN PUGET SOUND  
 85. Bower, D. M.: THE EFFECT OF DIET AND LIGHT ON HETEROTROPHIC PROTIST GRAZERS *OXYRRHIS MARINA*, *NOCTILUCA SCINTILLANS*, AND *STROMBIDIOPSIS ACUMINATUM*  
 86. Kearney, K.; Boicourt, W.: A MODEL FOR NUTRIENT PATHWAYS IN THE CHOPTANK RIVER  
 87. Hartwell, R. J.; Cohen, A. S.; Lezzar, K. L.; Guiles, K. A.; Gans, C. R.; Ellis, G. S.; Michel, V.; Chororoka, K.; Eagle, M.; Zilifi, D.: ORGANIC CARBON VARIABILITY AS A PALEOCLIMATE INDICATOR IN CENTRAL LAKE TANGANYIKA (EAST AFRICAN RIFT VALLEY): RESULTS FROM THE 2000 & 2001 NYANZA PROJECT  
 88. Ow, L. N.; Washburn, L.; Siegel, D. A.; McPhee-Shaw, E. E.: MOORED OBSERVATIONS OF BIOLOGICAL AND PHYSICAL OCEANOGRAPHIC VARIABILITY NEAR KELP REEFS IN THE SANTA BARBARA CHANNEL

• represents Tutorial presentations

89. Wason, C.; Giguere, M.; Driscoll, M.; Seydewitz, L.; Hocking, D.; Faltin, E.; Baker, J.; Novak, M.; Bradt, S.; Campbell, J.; Blakemore, R.; Baker, A.: PROJECT LAKE WATCH: ON GOLDEN POND FOR LAKE TRUTHING LANDSAT AND MODIS
90. Van Alstine, J. M.; Cohen, A. S.: NYANZA PROJECT RESEARCH ON THE RELATIONSHIP OF OSTRACODE ABUNDANCE AND TAPHONOMY TO ENVIRONMENTAL VARIABLES ON THE LUCHE DELTA PLATFORM, LAKE TANGANYIKA
91. Bristow, G. M.; Taillefert, M.: IRON AND PHOSPHOROUS CYCLING IN INTERTIDAL SALT MARSH SEDIMENTS
92. Malone, S.; Pineiro, S. A.; Williams, H. N.: STUDY OF THE SALINITY AND TEMPERATURE GROWTH RANGES OF *BDELOVIBRIO* ISOLATES
93. Shoemaker, D.; Moline, M. A.; Case, J.; Haddock, S.; Herren, C.; Blackwell, S. M.: STRUCTURE OF BIOLUMINESCENT COMMUNITIES IN MONTEREY BAY, CALIFORNIA, USA.

TUESDAY

(\*) represents Invited presentations

**Wednesday, February 12, 2003****CS14:  
Estuarine and Near-Shore Processes**

Chair(s):	Gregg Snedden, gsnedde@lsu.edu
	Cynthia Kicklighter, gt7853a@prism.gatech.edu
Location:	150 DEF
9:30 am	Roman, M. R.; Zhang, X.; McGilliard, C.; Boicourt, W.: CENSUS OF MARINE LIFE (COML) IN CHESAPEAKE BAY: ANNUAL VARIABILITY IN THE SPATIAL PATTERNS OF PLANKTON ABUNDANCE
9:45 am	Zhang, X.; Roman, M.; McGilliard, C.; Boicourt, W.: SCALE ANALYSIS OF THE SPATIAL/TEMPORAL VARIABILITY AND COVARIANCE OF HYDROGRAPHIC VARIABLES WITH ZOOPLANKTON BIOMASS IN THE CHESAPEAKE BAY
10:00 am	Wheelock, K. V.; Cable, J. E.: SEDIMENT DEPOSITIONAL PATTERNS ON A FRESHWATER MARSH ADJACENT TO THE MISSISSIPPI RIVER, SOUTHERN LOUISIANA
10:15 am	Snedden, G. A.; Cable, J. E.; Walker, N. D.: Hydrologic Effects of Pulsed Riverine Flooding to a Deltaic Wetland in Coastal Louisiana
10:30 am	Bahr, M.; Teske, A.; Crump, B. C.: SEASONAL PATTERNS OF DIVERSITY OF SULFATE REDUCING BACTERIA IN A SALT MARSH: ANALYSIS BY SEQUENCING DISSIMILATORY SULFITE REDUCTASE GENES
11:00 am	Natunewicz, C. C.; Hare, J. A.: THE EFFECT OF THE ENSO CYCLE ON RECRUITMENT OF WINTER-SPAWNED FISH LARVAE
11:15 am	Engelsen, A.; Sundbäck, K.; Axelsson, L.: IN SITU PRIMARY PRODUVTIVITY AND LIGHT ADAPTATION OF MICROPHYTOBENTHOS ALONG A DEPTH GRADIENT IN A MICROTIDAL FJORD
11:30 am	Arnold, A. M.; Brush, G. S.: USING SEDIMENT CORES TO IDENTIFY FOOD WEB CHANGES IN THE CHESAPEAKE BAY
11:45 am	Kicklighter, C. E.; Hay, M. E.: THE ROLE OF BROMINATED COMPOUNDS AS PREDATOR DETERRENTS IN SOFT-SEDIMENT SPECIES
12:00 pm	Irvine, G. V.; Mann, D. H.; Short, J. W.: PERSISTENCE OF TEN-YEAR OLD EXXON VALDEZ OIL ON GULF OF ALASKA BEACHES: THE IMPORTANCE OF BOULDER ARMORING

**CS24:  
Nutrient Dynamics**

Chair(s):	Nicole Goebel, nicole.goebel@uconn.edu
	Michael Lipsen, mlipsen@eos.ubc.ca
Location:	150 DEF
2:15 pm	Vance-Harris, C. A.; Rao, A.: DENITRIFICATION IN SANDY SEDIMENTS OF THE GEORGIA CONTINENTAL SHELF, USA
2:30 pm	Thomas, S. A.; Valett, H. M.; Mulholland, P. J.; Webster, J. R.; Dahm, C. N.; Crenshaw, C. L.: NITRATE PROCESSING AND RETENTION STREAMS (NPARS): AN OVERVIEW OF SPATIAL AND TEMPORAL VARIATION

2:45 pm	Kebede-Westhead, E.; Pizarro, P.; Mulbry, W. W.; Wilkie, A. C.: PRODUCTION AND NUTRIENT REMOVAL BY PERiphyton GROWN IN DAIRY MANURE
3:00 pm	Vrede, T.; Ballantyne, A. P.; Lindahl, S.: THE EFFECTS OF REDUCED N:P RATIOS ON PRODUCTIVITY IN A EUTROPHIC LAKE: AN ISOTOPE TRACER STUDY
3:15 pm	Gettel, G. M.; Giblin, A. E.; Howarth, R. W.: IN-LAKE AND LANDSCAPE CONTROLS OF BENTHIC N-FIXATION AND PRIMARY PRODUCTION IN ARCTIC LAKES (ARCTIC LTER, TOOLIK FIELD STATION, ALASKA)
4:00 pm	Goebel, N. L.; Wing, S. R.; Boyd, P. W.: EFFECTS OF SILICIC ACID LOADING ON PHYTOPLANKTON DYNAMICS AND SPECIES COMPOSITION IN DOUBTFUL SOUND, FIORDLAND, NEW ZEALAND
4:15 pm	Hyfield, E. C.; Day, J. W.: SPATIAL AND TEMPORAL ANALYSES OF WATER QUALITY IN A DELTAIC ESTUARY OF THE MISSISSIPPI RIVER.
4:30 pm	Hamill, B. J.; Cherrier, J.: DOC AND DON PRODUCTION IN NEAR-SHORE SURFACE WATERS
4:45 pm	O'Neil, J. M.; Lenes, J. M.; Heil, C. A.; Bernhardt, P.; Mulholland, M. R.; Bronk, D. A.; Byrne, R. H.: DISSOLVED IRON UPTAKE BY THE CYANOBACTERIUM TRICHODESMIUM IN SURFACE WATERS OF THE GULF OF MEXICO
5:00 pm	Lipsen, M. S.; Crawford, D. C.; Harrison, P. J.: IRON LIMITATION AND MACRO-NUTRIENT DYNAMICS AT OCEAN STATION PAPA (OSP)

**CS39:  
Zooplankton**

Chair(s):	Cynthia Suchman, cynthia.suchman@noaa.gov
	Sandra Connelly, sjc25@buffalo.edu
	Deborah Steinberg, debbies@vims.edu
	Michael Brett, mtbrett@u.washington.edu
	Russel Hopcroft, hopcroft@ims.uaf.edu
Location:	251 DE
9:30 am	McConaugha, J. R.: OMNIVORY IN DECAPOD LARVAE: IMPLICATIONS FOR RECRUITMENT SUCCESS.
9:45 am	Welker, M.; Hartzendorf, T.; Lippert, I.; Carnecki, O.; Henning, M.: INHIBITION OF PROTEASE ACTIVITY IN DAPHNIA BY METABOLITES OF MICROCYSTIS: GRAZING EXPERIMENTS AND BIOCHEMICAL ANALYSES
10:00 am	Ravet, J. L.; Brett, M. T.: DIRECT AND INDIRECT EFFECTS OF ALGAL FOOD QUALITY UNDER PHOSPHORUS LIMITING CONDITIONS
10:15 am	Leising, A. W.; Pierson, J.; Frost, B. W.; Postel, J.; Horner, R.: MICROZOOPLANKTON AND COPEPOD GRAZING RATES DURING SPRING 2002, DABOB BAY, WA: DO THEY AVOID DIATOMS?
10:30 am	Gibson, D. M.; Kremer, P.: FEEDING RATES OF SALPA ASPERA IN THE MID ATLANTIC BIGHT, USA
11:00 am	Stegen, J. C.; Black, A. R.: THE PREDATOR-PREY RELATIONSHIP BETWEEN WATER MITES (PIONA SP.) AND THE ZOOPLANKTON OF SMALL FISHLESS PONDS
11:15 am	McGinnis, D. F.; Lorke, A.; Wüest, A.; Spaak, P.: HIGH-RESOLUTION OBSERVATIONS OF THE DIURNAL VERTICAL MIGRATION OF CHAOBORUS LARVAE USING AN ADCP

† represents Tutorial presentations

11:30 am	Kremer, P.: VIRTUAL VERTICAL MIGRATION: THE EFFECT OF TEMPERATURE ON THE METABOLIC RATE OF THE SALP, SALPA ASPERA	2:45 pm	Levine, P. L.; Herbst, D. B.: MONITORING BENTHIC PRODUCTIVITY OF THE ALKALI FLY AT MONO LAKE
11:45 am	Connelly, S. J.; Taylor, D. J.: MOLECULAR EVOLUTION IN ZOOPLANKTON THAT LACK A UV-R REFUGIUM	3:00 pm	Yamamoto, M.; Hiratsuka, J.; Ishitobi, Y.: ROLE OF SEAGRASS FISHERIES ON THE NUTRIENT REMOVAL FROM ESTUARINE LAGOON, LAKE NAKAUMI, JAPAN
12:00 pm	Duffy, M. A.; Woodruff, P. L.: THE SEASONAL PHENOLOGY OF PARASITISM IN DAPHNIA LAKE POPULATIONS	4:00 pm	Hurlbert, S. H.; Los Saltones Fieros, .: THE SALTON SEA: WHERE BIG ISSUES COLLIDE AND THE POLITICALLY CORRECT HIDE <sup>(*)</sup>
2:15 pm	Steinberg, D. K.; Markhaseva, E.; Cope, J. S.; Wilson, S. E.; Madin, L. P.: DIEL, SEASONAL, AND INTERANNUAL PATTERNS IN ZOOPLANKTON SPECIES COMPOSITION IN THE SUBTROPICAL ATLANTIC: A CENSUS OF MARINE LIFE	4:15 pm	Watts, J. M.; Swan, B. K.; Reifel, K. M.; Tiffany, M. A.; Hurlbert, S. H.: PHYTOPLANKTON AND PHOSPHORUS - UNCOUPLED IN A EUTROPHIC SALINE LAKE, THE SALTON SEA
2:30 pm	Richmond, C. E.; Marcus, N. H.; Sedlacek, C.; Miller, G. A.; Oppert, C.: HYPOXIA EFFECTS ON THE POPULATION DYNAMICS OF THE COPEPOD ACARTIA TONSA	4:30 pm	Gross, D. H.; Wurtsbaugh, W. A.: ANTHROPOGENIC EUTROPHICATION OF AN URBAN EMBAYMENT OF THE GREAT SALT LAKE, UTAH
2:45 pm	Manning, C. A.; Bucklin, A.: MULTIVARIATE ANALYSIS OF TEMPORAL AND SPATIAL PATTERNS OF PLANKTONIC COPEPOD ABUNDANCES IN THE WESTERN GULF OF MAINE	4:45 pm	Wurtsbaugh, W. A.; Lester, O.: SALINITY CONTROL OF NUTRIENT LIMITATION, N-FIXATION AND EUTROPHICATION IN THE GREAT SALT LAKE, UTAH
3:00 pm	Suchman, C. L.; Brodeur, R. D.: ABUNDANCE, DISTRIBUTION, AND FEEDING ECOLOGY OF LARGE MEDUSAE IN THE CALIFORNIA CURRENT UPWELLING SYSTEM	5:00 pm	Alcocer, J.; Escobar-Briones, E.: THE UNPLANNED, ACCELERATED DEMOGRAPHIC GROWTH OF MEXICO IS THREATENING ITS SALINE LAKES: A PROBLEM LACKING SOLUTION?
3:15 pm	Bi, H.; Benfield, M. C.: POPULATION DYNAMICS OF THE COPEPOD MONACILLA TYPICA IN THE NORTHERN GULF OF MEXICO		
4:00 pm	Kessler, K.; Lampert, W.: FITNESS OPTIMIZATION OF DAPHNIA IN A DEEP CHLOROPHYLL MAXIMUM		
4:15 pm	Jamieson, C. D.; Lampert, W.: COEXISTENCE OF TWO SIMILAR SIZED COPEPOD SPECIES, EUIDIAPATOMUS GRACILIS AND E. GRACILOIDES: NICHE PARTITIONING THROUGH DIFFERENTIAL PREDATOR AVOIDANCE		
4:30 pm	Feuchtmayr, H.; Grey, J.; Zöllner, E.; Santer, B.: ZOOPLANKTON INTERACTIONS IN AN ENCLOSURE EXPERIMENT DETERMINED BY STABLE ISOTOPE ANALYSES		
4:45 pm	Sommer, F.; Sommer, U.: COPEPOD GRAZING IN A MESOCOSM STUDY: FORAGING BEHAVIOUR EXPLAINS NITROGEN STABLE ISOTOPE SIGNATURE		
5:00 pm	Taub, F. B.: LATITUDINAL PATTERNS OF DAPHNIA SEASONAL ABUNDANCE		

### SS1.01: Saline Lakes: Responses to Anthropogenic Forcings and Appropriate Management Strategies

Chair(s):	Robert Jellison, jellison@lifesci.ucsb.edu Wayne Wurtsbaugh, wurts@cc.usu.edu
Location:	151 DEF
2:15 pm	Jellison, R.; Melack, J. M.: EFFECTS OF MEROMICTIC EPISODES AT MONO LAKE, CALIFORNIA AND THE POTENTIAL TO LESSEN THEIR OCCURRENCE AND IMPACTS THROUGH ACTIVE MANAGEMENT
2:30 pm	Roll, S. K.; Jellison, R.: THE NON-LINEAR RESPONSE OF ARTEMIA DEVELOPMENT TO FOOD AVAILABILITY RESULTS IN LARGE VARIATIONS IN PEAK ADULT ABUNDANCES IN HYPERHALINE MONO LAKE, CALIFORNIA

### SS1.02:

#### Coastal Indicators of Water Quality and Ecological Condition

Chair(s):	Hans W. Paerl, hans_pael@unc.edu Gerald J. Niemi, gniemi@nrri.umn.edu
Location:	251 AB
9:30 am	Malone, T. C.: ASSESSING THE STATUS OF COASTAL ECOSYSTEMS: ADEQUACY OF COASTAL OBSERVATIONS <sup>(*)</sup>
9:45 am	Summers, J. K.: SELECTING AND DEVELOPING INDICATORS FOR MONITORING CONDITION: THE NATIONAL COASTAL ASSESSMENT EXPERIENCE <sup>(*)</sup>
10:00 am	Druon, J. N.; Schrimpf, W.; Dobricic, S.; Stips, A.; Vogt, P.: THE PHYSICAL ENVIRONMENT AS A KEY FACTOR IN ASSESSING THE EUTROPHICATION STATUS AND VULNERABILITY OF SHALLOW SEAS: PSA AND EUTRISK (V2.0)
10:15 am	Jarecki, L. L.: MANGROVES AS FINE-SCALE INDICATORS OF HYDROLOGICAL VARIATION: A STUDY OF COASTAL SALT PONDS IN THE BRITISH VIRGIN ISLANDS <sup>(*)</sup>
10:30 am	Valdes, L. M.; Piehler, M. F.; Pinckney, J. L.; Twomey, L.; Paerl, H. W.: HISTORICAL RELATIONSHIPS BETWEEN PHYTOPLANKTON TAXONOMIC GROUPS AND ESTUARINE DYNAMICS: DEVELOPING BIO-INDICATORS OF ECOSYSTEM CONDITION AND CHANGE
11:00 am	Pigg, R. J.; Millie, D. F.; Steidinger, K. A.; Bendis, B. J.: RELATING PHYTOPLANKTON COMPOSITION TO ENVIRONMENTAL FORCING IN THE LOWER ST. JOHNS RIVER ESTUARY
11:15 am	Noble, R. I.; Blackwood, A. D.; Gregory, J. A.; Paerl, H. W.; Peierls, B. J.; Piehler, M. F.: UNDERSTANDING INTERACTIONS AMONG VIRAL, BACTERIAL, AND PHYTOPLANKTON ASSEMBLAGES AS INDICATORS OF ESTUARINE ECOSYSTEM HEALTH

WEDNESDAY

<sup>(\*)</sup> represents Invited presentations

11:30 am	<u>Gallegos, C. L.</u> : DEVELOPMENT OF AN OPTICAL INDICATOR OF HABITAT SUITABILITY FOR SUBMERGED AQUATIC VEGETATION IN ESTUARIES
11:45 am	<u>Cullen, J. J.</u> ; Cembella, A. D.; Ibarra, D. A.; Kirchhoff, S.; Davis, R. F.: OPTICAL MONITORING OF BIOLOGICAL VARIABILITY IN COASTAL WATERS
12:00 pm	<u>Kimor, B.</u> : PHYTOPLANKTON STUDIES OFF THE MEDITERRANEAN COAST OF ISRAEL BEFORE AND AFTER THE OPERATION OF THE ASWAN HIGH DAM (AHD) ON THE NILE
2:15 pm	<u>Hill, B. H.</u> ; Elonen, C. M.; Jicha, T. M.; Thompson, J. A.: EXTRACELLULAR ENZYME ACTIVITY AS A SURROGATE FOR NUTRIENTS AND NUTRIENT HISTORY IN GREAT LAKES WETLANDS
2:30 pm	<u>Hrabik, T. R.</u> ; Johnson, L. B.; Brady, V. J.; Breneman, D. H.; Ciborowski, J.; Richards, C.: QUANTIFYING THE INFLUENCE OF LANDSCAPE CHARACTERISTICS ON FISH COMMUNITIES IN COASTAL RIVERINE WETLANDS FOR USE AS INDICATORS
2:45 pm	<u>Kelly, J. R.</u> ; Yurista, P. M.; Morrice, J. M.: VARIABILITY, PATTERN, AND SENSITIVITY OF ECOLOGICAL INDICATORS FOR NEARSHORE REGIONS OF THE GREAT LAKES
3:00 pm	<u>Kingston, J. C.</u> ; Sgro, G. V.; Johansen, J. R.; Domzal, K. S.; Stoermer, E. F.; Axler, R. P.: DIATOM INDICATORS OF WATER QUALITY FOR THE COASTAL ZONE OF THE LAURENTIAN GREAT LAKES
3:15 pm	<u>Sierszen, M. E.</u> ; Brazner, J. C.; Morrice, J. M.; Peterson, G. S.; Trebitz, A. S.: FOOD WEB STRUCTURE AS A POTENTIAL INDICATOR OF NUTRIENT ENRICHMENT IN GREAT LAKES COASTAL WETLANDS
4:00 pm	<u>Simcik, M. E.</u> ; Adams, A. D.; Lehr, R. A.; Swackhamer, D. L.; Diamond, S. A.; Mount, D. R.: PHOTOTOXICITY OF POLYCYCLIC AROMATIC HYDROCARBONS IN COASTAL GREAT LAKES WATERS
4:15 pm	<u>Yurista, P. M.</u> ; Kelly, J. R.; Miller, S. E.: ZOOPLANKTON SIZE-SPECTRA AS AN INDICATOR IN GREAT LAKES COASTAL WATERS
4:30 pm	<u>Holden, P. A.</u> ; LaMontagne, M. G.: MICROBIAL COMMUNITY COMPOSITION AND DIVERSITY AS INDICATORS OF SALT MARSH ECOSYSTEM HEALTH
4:45 pm	<u>Ustin, S. L.</u> ; Lay, M.; Rosso, P. H.; Pushnik, J.; Zarco-Tejada, P.; Wilson, M.: REMOTE SENSING OF WETLAND CONDITIONS IN WEST COAST SALT MARSHES
5:00 pm	<u>Hollibaugh, J. T.</u> ; Vasquez, L. I.: COMPOSITION OF AMMONIA-OXIDIZING BACTERIA ASSEMBLAGES AS INDICATORS OF ESTUARINE PROCESSES

**SS1.05:  
The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems**

Chair(s):	Val Smith, vsmith@ku.edu Mandy Joye, mjoye@arches.uga.edu Robert Howarth, rwh2@cornell.edu
Location:	150 G
9:30 am	<u>Valiela, I.</u> ; Bowen, J. L.; Tomasky, G.; Cole, M. L.; Kroeger, K. D.; Carmichael, R. H.; Mazzilli, S.: HISTORY AND CURRENT STATUS OF EUTROPHICATION IN CAPE COD ESTUARIES: COUPLING OF LAND TO SEA <sup>(t)</sup>

10:00 am	<u>Turner, R. E.</u> ; Rabalais, N. N.; Justic, D.; Dortch, Q.: SYSTEM-WIDE EUTROPHICATION OF THE GULF OF MEXICO <sup>(t)</sup>
11:00 am	<u>Scavia, D.</u> ; Rabalais, N.; Turner, E.; Justic, D.; Wiseman, w.: PREDICTING GULF OF MEXICO HYPOXIA <sup>(t)</sup>
11:30 am	<u>Kinzie, R. A.</u> ; Mackenzie, F.; Stimson, J.; Smith, S. V.; Cox, E.; <u>Hoover, D.</u> : KANEOHE BAY: 23 YEARS AFTER <sup>(t)</sup>
2:15 pm	<u>Elmgren, R.</u> ; Larsson , U.: THE BALTIC EUTROPHICATION CASE HISTORY. <sup>(t)</sup>
2:45 pm	<u>Smith, V. H.</u> : EUTROPHICATION OF FRESHWATER AND MARINE ECOSYSTEMS <sup>(t)</sup>
3:15 pm	<u>Evans, G. L.</u> ; le B. Williams, P. J.; Mitchelson-Jacob, E. G.: CLIMATIC VERSUS ANTHROPOGENIC CONTROL OF NUTRIENTS IN THE IRISH SEA
3:30 pm	<u>Sandow, M.</u> ; Stibor, H.; Sommer, U.: SILICATE INDUCED CHANGES IN MARINE PELAGIC FOODWEBS
4:00 pm	<u>Lee, R. S.</u> ; Allen, S. E.; Bird, T.; Denman, K. L.; Dower, J. F.; Harris, S.; Ingram, R. G.; Pawlowicz, R.: BIOPHYSICAL COUPLING IN THE STRAIT OF GEORGIA
4:15 pm	<u>Spaak, P.</u> ; Keller, B.: HOW WELL DOES A RESTING EGG BANK, IN THE LAKE SEDIMENT, REFLECT ITS CORRESPONDING PELAGIC POPULATION IN A RESTORED EUTROPHICATED LAKE?
4:30 pm	<u>Walker, H.</u> ; Kiddon, J.; Deacutis, C.; Cobb, D.; Kester, D.; Ovatt, C.; Paul, J.; Brown, B.: MONITORING SPATIAL AND TEMPORAL VARIATIONS OF DISSOLVED OXYGEN IN ESTUARINE BOTTOM WATERS OF THE NORTHEASTERN U.S.
4:45 pm	<u>Hyacinthe, C.</u> ; Van Cappellen, P.: SEDIMENTARY PHOSPHORUS SINK IN AN EUTROPHIC ESTUARY (SCHELDT ESTUARY, BELGIUM AND THE NETHERLANDS)
5:00 pm	<u>Abraham, J.</u> ; Kiesling, R. L.; Dworkin, S. I.: ASSESSMENT OF THE EUTROPHICATION HISTORY OF A SOUTHERN TEMPERATE RESERVOIR: GEOCHEMICAL RESULTS

**SS1.06:**

**Carbon Cycles in Large Lakes**

Chair(s):	Tom Johnson, tcj@d.umn.edu
	Val Klump, vklump@uwm.edu
Location:	151 DEF
9:30 am	<u>Berman , T.</u> ; Parparov, A.; Yacoby, Y. Z.: ESTIMATES OF BACTERIAL COMMUNITY GROWTH EFFICIENCIES AND CELL DOUBLING TIMES IN LAKE KINNERET, ISRAEL
9:45 am	<u>Graneli, W.</u> ; Kritzberg, E.; Pers, B. C.: THE CARBON BUDGET OF A LARGE OLIGOTROPHIC LAKE WITH LONG WATER RESIDENCE TIME – THE IMPORTANCE OF PHOTOOXIDATION AND ALLOCHTHONOUS CARBON
10:00 am	<u>Waples, J. T.</u> ; Klump, J. V.: NET ANNUAL PRIMARY PRODUCTION:RESPIRATION RATIOS ALONG A STRONG TROPHIC GRADIENT IN GREEN BAY, LAKE MICHIGAN <sup>(t)</sup>
10:15 am	<u>Klump, J. V.</u> ; Fitzgerald, S. A.: CARBON DEPOSITION, BURIAL, STOICHIOMETRY AND BIOGEOCHEMICAL CYCLING IN GREAT LAKES ENVIRONMENTS
10:30 am	<u>Alin, S. R.</u> ; Johnson, T. C.: CARBON STORAGE AND EVASION RATES IN LARGE LAKES
11:00 am	<u>Bootsma, H. A.</u> ; Hecky, R. E.: LINKING CARBON FLUX AND SILICA DYNAMICS IN LAKE MALAWI <sup>(t)</sup>

<sup>(t)</sup> represents Tutorial presentations

11:15 am	<u>Verburg, P.</u> ; Hecky, R. E.; Kling, H.: WARMING OF LAKE TANGANYIKA AND CONSEQUENCES <sup>(*)</sup>
11:30 am	Orlandini, K. A.; Penrose, W. R.; Waples, J. T.: PARTICLE DYNAMICS DURING A WHITING EVENT: THE APPLICATION OF NOVEL RADIOCHEMICAL TECHNIQUES USING DOUBLE NUCLIDE CHAIN DISEQUILIBRIA <sup>(*)</sup>
<b>SS1.08:</b> <b>Leave No Scientist Behind: How to Get Aquatic Sciences Into K-12 Classrooms</b>	
Chair(s):	Lesley K. Smith, smithlk@cires.colorado.edu
	George I. Matsumoto, mage@mbari.org
Location:	250 C
9:30 am	Dunton, K. H.; Schonberg, S. V.: IS THE ARCTIC MELTING AWAY? LINKING CLIMATE CHANGE RESEARCH ON THE ALASKAN SHELF WITH K-12 OUTREACH <sup>(*)</sup>
10:00 am	Panayotou, D. Y.; Brunello, T. J.; Goldman, C. R.: THE TAHOE-BAIKAL INSTITUTE: HOW SCIENCE AND EDUCATION GO HAND IN HAND <sup>(*)</sup>
10:30 am	Hall, F. R.; Buxton, C.: USING ORCEANOGRAPHY TO IMPROVE THE SCIENCE CONTENT AND PEDAGOGY SKILLS OF PRESERVIC ELEMENTARY SCHOOL TEACHERS
11:00 am	Cuker, B. E.; Cutter, G. A.: INCORPORATING RESEARCH INTO A MULTIDISCIPLINARY EDUCATIONAL PROGRAM FOR MINORITY STUDENTS
11:15 am	Cherrier, J.: A MODEL FOR INCLUSIVE LEARNING IN THE OCEAN SCIENCES
11:30 am	Salinas, J. T.: A TEN-YEAR PARTNERSHIP BETWEEN GOVERNMENT, INDUSTRY, AND EDUCATION: A SUCCESSFUL AND GROWING AQUATIC RESEARCH CONNECTION
11:45 am	Goehrung, L.; Robigou, V.; Keener-Chavis, P.:
12:00 pm	ROBIGOUE, V.: THE MANY ROLES OF SCIENTISTS IN THE REVEL PROJECT
2:15 pm	Matsumoto, G. I.; Kochevar, R.: LINKING RESEARCH AND INFORMAL EDUCATION, DIFFERENT METHODS TO REACH DIFFERENT AUDIENCES.
2:30 pm	Brabander, D. J.; Beattie, R. B.; Stevenson, R. D.; Shailer, M.; Chen, R. F.: PARTICIPATORY ACTIVITIES FOR CORE OCEAN SCIENCE AND ENVIRONMENTAL SCIENCE CONCEPTS: AN EXAMPLE AND CALL TO ACTION
2:45 pm	Greely, T. M.: OCEAN SCIENTISTS CONTRIBUTING TO SCIENCE EDUCATION THROUGH K-12 OUTREACH
3:00 pm	Keener-Chavis, P.: OCEAN EXPLORATION: FORMING COLLABORATIONS AMONG SCIENTISTS AND EDUCATORS
3:15 pm	Cook, S. B.; Rom, E. L.: THE CENTERS FOR OCEAN SCIENCE EDUCATION EXCELLENCE (COSEE) INITIATIVE: AN OVERVIEW OF INITIAL AWARDS AND PROGRAM EXPECTATIONS
4:00 pm	deCharon, A. V.; Roesler, C. S.; Sieracki, M. E.: PHYTOPIA: AN EDUCATIONAL CD-ROM TO EXPLORE THE BOTTOM OF THE FOOD WEB

4:15 pm	Singer, J.: NSF-CCLI (COURSE, CURRICULUM AND LABORATORY IMPROVEMENT) PROGRAM AND OTHER PROGRAMS THAT SUPPORT EDUCATION
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**SS3.04:****The Biogeochemistry of Hg from Watershed to the Global Scale: A Tribute to the Contributions of W.F. Fitzgerald**

Chair(s):	W. Berry Lyons, lyons.142@osu.edu
	Rob Mason, mason@cbl.umces.edu
Location:	250 AB
9:30 am	Shotyk, W.; Givelet, N.; Goodsite, M. E.; Roos-Barracough, F.; Norton, S. A.; Martinez-Cortizas, A.: MILLENNIAL-SCALE RECORDS OF ATMOSPHERIC HG FLUXES RECORDED BY PEAT PROFILES IN EUROPE AND NORTH AMERICA: NATURAL VARIATIONS AND HUMAN IMPACTS
9:45 am	Tseng, C. M.; Lamborg, C.; Hammerschmidt, C. R.; Fitzgerald, W. F.: ELEMENTAL MERCURY CYCLING IN TOOLIK LAKE, ALASKA
10:00 am	Hines, N. A.; Brezonik, P. L.: ELEMENTAL MERCURY DYNAMICS IN NORTHERN MINNESOTA: WATER TO AIR EXCHANGE AND PHOTO-GENERATION OF ELEMENTAL MERCURY
10:15 am	Donald, O. F.; Amouroux, D.; Krupp, E.; Tessier, E.; Pechevran, C.; Pavageau, M. P.; Church, T. M.: THE CYCLING OF VOLATILE METALS OTHER THAN HG
10:30 am	Lamborg, C. H.; Fitzgerald, W. F.; Balcom, P. H.; Hammerschmidt, C. R.: ORGANIC COMPLEXATION OF MERCURY AND THE "SUBSTRATE HYPOTHESIS"
11:00 am	Fitzgibbon, T. O.; Lyons, W. B.: A PRELIMINARY STUDY OF THE FLUX OF HG FROM SELECTED OHIO RIVERS TO LAKE ERIE
11:15 am	Balcom, P. H.; Fitzgerald, W. F.; Lamborg, C. H.; Rolphus, K. R.; Vandal, G. M.; Hammerschmidt, C. R.: MERCURY SOURCES AND CYCLING IN THE CONNECTICUT RIVER AND ESTUARY: IMPLICATIONS FOR LONG ISLAND SOUND
11:30 am	Hammerschmidt, C. R.; Balcom, P. H.; Lamborg, C. H.; Chung, M. Z.; Visscher, P. T.; Fitzgerald, W. F.: METHYLMERCURY IN SEDIMENT OF LONG ISLAND SOUND
11:45 am	Warner, K. A.; Bonzongo, J. C.; Roden, E. E.; Green, A.; Lyons, W. B.; Ward, G. M.; Chaubey, I.: DISTRIBUTION OF MERCURY IN THE MOBILE - ALABAMA RIVER BASIN IN RELATION TO LAND USE AND PHYSICOCHEMICAL PARAMETERS
12:00 pm	Gigliani, A. D.; Gustin, M. S.: DEVELOPMENT OF A MERCURY MASS BALANCE FOR THE INCLINE CREEK WATERSHED, LAKE TAHOE, NV
2:15 pm	Amouroux, D.; Donald, O. F.; Krupp, E.; Pechevran, C.; Besson, T.; Fitzgerald, W. F.: ISOTOPIC FRACTIONATION OF MERCURY SPECIES IN TOP PREDATOR FISHES (TUNA AND WHALE) FROM WORLD OCEAN: PRELIMINARY RESULTS
2:30 pm	Engstrom, D. R.; Fitzgerald, W. F.; Lamborg, C. H.; Tseng, C. M.; Balcom, P. H.: MODERN AND HISTORIC ATMOSPHERIC MERCURY FLUXES IN NORTHERN ALASKA: GLOBAL SOURCES AND ARCTIC DEPLETION

WEDNESDAY

(\*) represents Invited presentations

**SS3.08:****Organic Matter in Aquatic Systems: Sources, Characterization, Distribution, and Quantification**

Chair(s):	Juanita Urban-Rich, juanita.urban-rich@umb.edu Bob Chen, bob.chen@umb.edu Diane McKnight, diane.mcknight@colorado.edu
Location:	151 G
9:30 am	Anssi Vähätalo, A. V.; Band, L. E.; Wetzel, R. G.: PHOTOCHEMICAL REACTIVITY, DECOMPOSITION, AND TRANSPORT OF CDOM IN THE DRAINAGE BASIN OF THE NEUSE RIVER, NORTH CAROLINA
9:45 am	Azetsu-Scott, K.; Passow, U.: ASCENDING MARINE PARTICLES: SIGNIFICANCE OF TRANSPARENT EXOPOLYMER PARTICLES (TEP) IN THE UPPER OCEAN
10:00 am	Maurice, P. A.; Young, K. C.; Docherty, K. M.; Bridgham, S. D.: THE EFFECTS OF BIODEGRADATION ON MOLECULAR WEIGHT DISTRIBUTIONS OF DISSOLVED ORGANIC MATTER
10:15 am	Del Vecchio, R.; Subramaniam, A.; Vodacek, A.; Ziolkowski, L.; Miller, W. L.; Blough, N. V.: INHERENT AND APPARENT OPTICAL PROPERTIES OF SURFACE WATERS FROM THE MIDDLE ATLANTIC BIGHT: SPATIAL AND SEASONAL VARIATION, RELATION TO REMOTE SENSING REFLECTANCE
10:30 am	Madey, G. R.; Huang, Y. P.; Xiang, X. R.; Chanowich, E. M.; Cabaniss, S. E.; Maurice, P. A.: AGENT-BASED SIMULATION OF BIOCOMPLEXITY: INTERACTIONS OF NOM, MINERAL SURFACES, AND MICROORGANISMS IN SOILS
11:00 am	Frost, P. C.; Johnston, C. A.; Young, K. C.; Bridgham, S. D.; Maurice, P. A.; Lamberti, G. A.; Lodge, D. M.: LANDSCAPE CONTROL OF DOC QUANTITY AND QUALITY IN NORTHERN MICHIGAN STREAMS
11:15 am	Pullin, M. J.; Young, K. C.; Golden, S. M.; Progess, C. A.; Maurice, P. A.: A MULTI-METHOD ANALYSIS OF THE CHEMICAL AND BIOLOGICAL PROCESSES THAT INFLUENCE STREAM WATER DOM COMPOSITION
11:30 am	Shank, G. C.; Whitehead, R. F.; Skrabal, S. A.; Kieber, R. J.: THE STRONG COPPER COMPLEXING ABILITY OF HUMIC SUBSTANCES AND THE PHOTOREACTIVITY OF STRONG COPPER BINDING LIGANDS IN ESTUARINE WATERS
11:45 am	Spencer, R. G.; Anestis, A. K.; Baker, A.; Cowie, G. L.; Uher, G.; Upstill-Goddard, R. C.: DISSOLVED ORGANIC MATTER CYCLING IN THE TYNE ESTUARY, U.K.

**SS3.18:****Biogeochemistry of the Tropical and Subtropical North Atlantic**

Chair(s):	Craig A. Carlson, carlson@lifesci.ucsb.edu Dennis Hansell, dhansell@rsmas.miami.edu
Location:	251 C
9:30 am	Capone, D. G.; Burns, J. A.; Carpenter, E. J.; Montoya, J. P.; Subramaniam, A.: N <sub>2</sub> FIXATION BY TRICHOODESMIUM IN THE TROPICAL N. ATLANTIC OCEAN
9:45 am	Hansell, D. A.; Bates, N. R.; Olson, D. B.: EXCESS NITRATE AND NITROGEN FIXATION IN THE SUBTROPICAL NORTH ATLANTIC

10:00 am	Knapp, A. N.; Sigman, D. M.: STABLE ISOTOPIC COMPOSITION OF DISSOLVED ORGANIC NITROGEN FROM THE SURFACE WATERS OF BATS
10:15 am	Fernández I., C.; Raimbault, P.; Rimmelin, P.; Garcia, N.; Boudjellal, B.; Caniaux, G.: ON THE IMPACT OF NITRIFICATION AND DON EXCRETION ON NEW AND REGENERATED PRODUCTION IN THE EASTERN NORTH ATLANTIC (15°20'-21°20'W; 38°-45°N).
10:30 am	Davey, M. S.; Mills, M.; Ridame, C.; Croot, P.; La Roche, J.; Geider, R. D.: ASSESSMENT OF NUTRIENT LIMITATION ON PHYTOPLANKTON COMMUNITIES ACROSS THE TROPICAL ATLANTIC
11:00 am	Lomas, M. W.: SHALLOW REMINERALIZATION AND PHYTOPLANKTON COMMUNITY STRUCTURE AT THE BERMUDA ATLANTIC TIME-SERIES STUDY
11:15 am	Dam, H. G.: ZOOPLANKTON-MEDIATED BIOGENIC FLUXES IN THE OCEAN
11:30 am	Wassmann, P.; Wexels Riser, C.: BIOGENIC MATTER RETENTION IN THE PELAGIAL THROUGH VERTICAL FLUX MEDIATION BY COPEPODS
11:45 am	Nelson, N. B.; Carlson, C. A.; Steinberg, D. K.: SPATIAL DISTRIBUTION AND DYNAMICS OF CDOM IN THE SARGASSO SEA
12:00 pm	Carlson, C. A.; Goldberg, S. J.; Nelson, N. B.; Steinberg, D. K.: SPATIAL VARIABILITY OF DOC QUALITY AND QUANTITY IN THE SARGASSO SEA
2:15 pm	Kiene, R. P.; Malmstrom, R. R.; Slezak, D.: SIGNIFICANT CONTRIBUTION BY DMSP TO BACTERIAL CARBON AND SULFUR FLUXES IN THE SUBTROPICAL NORTH ATLANTIC OCEAN
2:30 pm	Slezak, D.; Toole, D. A.; Kiene, R. P.: IMPACT OF THE MIXED LAYER DEPTH AND UV RADIATION ON THE CONCENTRATIONS OF DMS AND DMSP IN THE SUBTROPICAL NORTH ATLANTIC GYRE
2:45 pm	Bergquist, B. A.; Boyle, E. A.; Wu, J. F.; Siefert, R.; Chen, Y.: IRON DISTRIBUTION AND DISSOLUTION IN THE EUPHOTIC ZONE OF THE SUBTROPICAL NORTH ATLANTIC AND NORTH PACIFIC
3:00 pm	Neuer, S.: THE BIOGEOCHEMISTRY OF THE EASTERN SUBTROPICAL ATLANTIC: INSIGHTS FROM TIME-SERIES STATION ESTOC
3:15 pm	Le Fouest, V.; Zakardjian, B.; Saucier, F. J.; Starr, M.: A COUPLED 3-D HIGH-RESOLUTION CLIMATE-DRIVEN ECOSYSTEM MODEL FOR THE GULF OF ST. LAWRENCE, CANADA

**SS3.20:****Landscape and Land-use Influences on Methylmercury Contamination of Aquatic Resources**

Chair(s):	James Wiener, wiener.jame@uwlax.edu David Krabbenhoft, dpkrabbe@usgs.gov
Location:	250 AB
4:00 pm	Hurley, J. P.; Babiarz, C. L.; Stoor, R. W.: TRANSPORT AND TRANSFORMATION OF METHYL MERCURY IN CONTRASTING NORTHERN TEMPERATE WATERSHEDS: INTEGRATING NEW KNOWLEDGE TOWARD SOUND MANAGEMENT PRACTICE <sup>(+)</sup>

<sup>(+)</sup> represents Tutorial presentations

4:30 pm	<u>Lucotte Marc, M.</u> ; Bérubé Dominique, .; Canuel René, .: VULNERABILITY INDEXES OF VARIOUS CASES OF MERCURY CONTAMINATION : GEOGRAPHICAL AND HUMAN CONSIDERATIONS BEYOND COMPLEX BIOGEOCHEMICAL STUDIES
4:45 pm	<u>Brigham, M. E.</u> ; Krabbenhoft, D. P.; Chalmers, A. T.; Stephens, V. C.: ASSESSING MERCURY BIOACCUMULATION IN DIVERSE STREAM ECOSYSTEMS OF THE UNITED STATES
5:00 pm	<u>Jeremiason, J. D.</u> ; Swain, E. B.; Nater, E. A.; Cotner, J. B.; Johnson, B. D.; Engstrom, D. R.; Almendinger, J. E.: SULFATE ADDITION ENHANCES CONCENTRATIONS AND EXPORT OF METHYLMERCURY FROM A TREATED WETLAND

**SS4.05:****Microbial Genomics: Resolving the Adaptive Strategies of Bacteria from Extreme Environments**

Chair(s):	Craig Cary, caryc@udel.edu
Location:	151 ABC
9:30 am	<u>Murray, A. E.</u> ; Carter, B.; Cooper, R.; Kameda, A.: GENOMICS APPLICATIONS TO THE STUDY OF DIVERSITY AND GENE EXPRESSION IN ANTARCTIC PICOPLANKTON
9:45 am	<u>Heidelberg, J. F.</u> ; Suzuki, M.; Eisen, J. A.; Preston, C.; Fraser, C. M.; DeLong, E. F.: EXPLORING GENOMIC POTENTIAL AND MICROBIAL DIVERSITY OF MICROBIAL COMMUNITIES
10:00 am	<u>Webb, E. A.</u> ; Carpenter, F. C.; Waterbury, J. B.: DEFINING THE IRON SCAVENGING MECHANISM OF OLIGOTROPHIC MARINE CYANOBACTERIA
10:15 am	<u>Campbell, B. J.</u> ; Cary, S. C.: MOLECULAR ANALYSES OF KEY AUTOTROPHIC ENZYMES INDICATE THE IMPORTANCE OF THE REDUCTIVE TCA CYCLE IN CHEMOAUTOTROPHIC COMMUNITIES AT DEEP-SEA HYDROTHERMAL VENTS
10:30 am	<u>Cary, S. C.</u> ; Campbell, B. J.; Ghadiri, A.; Feldman, R. A.; Stein, J.; Murray, A. E.; Garcia-Frias, J.; Gao, G.; Daniel, R.; Luther, G.: METAGENOMIC ANALYSIS OF THE EPISYMBIOT COMMUNITY ASSOCIATED WITH ALVINELLA POMPEJANA, A DEEP-SEA HYDROTHERMAL VENT POLYCHAETE

**SS4.07:****Microbiology and Biogeochemistry of Cold Seeps**

Chair(s):	Antje Boetius, aboetius@mpi-bremen.de
Location:	Mandy Joye, mjoye@arches.uga.edu
10:15 am	<u>Linker, P.</u> ; Sahling, H.; Pfannkuche, O.; Sommer, S.: BIOGEOCHEMICAL FLUXES AND BENTHIC COMMUNITY STRUCTURE ABOVE SURFACE METHANE HYDRATE DEPOSITS (HYDRATE RIDGE, OR) <sup>(*)</sup>
11:00 am	<u>Ziebis, W.</u> ; Boetius, A.; Knittel, K.; Levin, L. A.; Richnow, H. H.: MICROHABITATS AT PACIFIC METHANE SEEPS: INTERACTION OF MICROBIOLOGICAL, GEOCHEMICAL AND BIOLOGICAL PROCESSES <sup>(*)</sup>
11:15 am	<u>Seifert, R.</u> ; Blumberg, M.; Thiel, V.; Pape, T.; Nauhaus, K.; Widdel, F.; Michaelis, W.: MOLECULAR EVIDENCE FOR METHANE CONSUMING MICROORGANISMS IN RECENT AND ANCIENT SETTINGS

11:30 am	<u>Nauhaus, K.</u> ; Treude, T.; Knittel, K.; Boetius, A.; Michaelis, W.; Joergensen, B. B.; Widdel, F.: MICROBIAL REEFS ABOVE METHANE SEEPS IN THE BLACK SEA
11:45 am	<u>Stadnitskaia, A.</u> ; Baas, M.; Ivanov, M. K.; Weering, van, T. C.; Damsté, J. S.: NOVEL ARCHAEOAL MACROCYCLIC DIETHER CORE MEMBRANE LIPIDS IN METHANE-INDUCED CARBONATES ASSOCIATED WITH ACTIVE FLUID VENTING IN THE SOROKIN TROUGH, NE BLACK SEA
12:00 pm	<u>Joye, S. B.</u> ; Carini, S. A.; Samarkin, V.; Hollibaugh, J. T.; Jellison, R.: SPATIAL AND SEASONAL PATTERNS OF THE ANAEROBIC OXIDATION OF METHANE IN MONO LAKE, CALIFORNIA.
2:15 pm	<u>Niemann, H.</u> ; Elvert, E.; Nadaling, T.; Boetius, A.: ANAEROBIC OXIDATION OF METHANE IN SEDIMENTS OF HAAKON MOSBY MUD VOLCANO (HMMV: 72° N, 14° E ; 1250M WATER DEPTH)
2:30 pm	<u>Loeskemann, T.</u> ; Knittel, K.; Nadalig, T.; Boetius, A.; Amann, R.: ANAEROBIC OXIDATION OF METHANE (AOM) - MICROBIAL DIVERSITY AND COMMUNITY STRUCTURE AT THE HAAKON MOSBY MUD VOLCANO (1250 M WATER DEPTH, BARENTS SEA)
2:45 pm	<u>Girquis, P. R.</u> ; DeLong, E. E.: ANAEROBIC ENRICHMENT OF METHANE-OXIDIZING ARCHAEOAL/BACTERIAL CONSORTIA IN DEEP-SEA MARINE SEDIMENTS
3:00 pm	<u>MacDonald, I. R.</u> ; Sobecky, P.; Montoya, J.; Joye, S.: RESEARCH ISSUES IN THE HYDROCARBON SEEP SYSTEM OF THE NORTHERN GULF OF MEXICO <sup>(*)</sup>
3:15 pm	<u>Formolo, M. J.</u> ; Lyons, T. W.; Zhang, C.; Tyrina, N.; Hoke, K.: SULFUR CYCLING IN GAS HYDRATE SYSTEMS OF THE GULF OF MEXICO
4:00 pm	<u>Lapham, L. L.</u> ; Coffin, R. B.; Martens, C. S.: CONTROLS ON THE ISOTOPIC COMPOSITION OF DISSOLVED METHANE IN THE POREWATERS OF SEDIMENTS CONTAINING DISSEMINATED GAS HYDRATE OFF OF CASCADIA MARGIN
4:15 pm	<u>Luff, R.</u> ; Wallmann, K.: NUMERICAL MODELING OF FLUID FLOW, METHANE FLUXES, CARBONATE PRECIPITATION AND BIOGEOCHEMICAL TURNOVER IN GAS HYDRATE-BEARING SEDIMENTS AT HYDRATE RIDGE
4:30 pm	<u>Schweizer, M.</u> ; Kasten, S.; Pfeifer, K.; Hensen, C.; Zabel, M.: GAS HYDRATE DECOMPOSITION RECORDED BY AUTHIGENIC BARITE PRECIPITATIONS: A PROCESS STUDY FROM THE NORTHERN CONGO FAN
4:45 pm	<u>Schlüter, M.</u> : MODELLING OF BIOGEOCHEMICAL PROCESSES AT SEEPS AND POCKMARKS CHARACTERIZED BY FLUID FLOW OF PORE WATER AND SUBMARINE GROUNDWATER
5:00 pm	<u>Mendoza, G.</u> ; <u>Levin, L.</u> ; Ziebis, W.: SULFOPHILIC DORVILLEID POLYCHAETE ASSEMBLAGES AT PACIFIC METHANE SEEPS: EVOLUTIONARY RELEASE?

**SS4.11:****Biochemistry in Extreme Environments**

Chair(s):	Cordelia Arndt, coarndt@uni-greifswald.de
Location:	Horst Felbeck, hfelbeck@ucsd.edu
11:00 am	151 ABC
11:00 am	<u>Poertner, H. O.</u> : ANIMALS IN EXTREME ENVIRONMENTS: BIOCHEMICAL ADAPTATIONS AND BEYOND <sup>(*)</sup>

WEDNESDAY

<sup>(\*)</sup> represents Invited presentations

- 11:30 am Bernhard, J. M.; Grzymski, J.; Schofield, O.; Bowser, S. S.: THE PEROXISOME PUZZLE: DO FORAMINIFERS LIVING IN SULFIDE-ENRICHED SEDIMENTS RESPIRE USING PEROXISOMAL OXYGEN?
- 11:45 am Felbeck, H.; Arndt, C.; Feldman, r. a.; Bench, s.; Bensen, D.; Stein, J. L.; Schweder, T.: BIOCHEMICAL ADAPTATIONS OF THE BACTERIAL Symbionts OF THE HYDROTHERMAL VENT TUBEWORM RIFTIA PACHYPTILA PREDICTED FROM GENOMIC AND PROTEOMIC DATA
- 12:00 pm Gaill, F.: MOLECULAR ADAPTATION TO THE TEMPERATURE IN DEEP SEA VENT ORGANISMS
- 2:15 pm Lee, R. W.: THERMAL TOLERANCES OF DEEP-SEA HYDROTHERMAL VENT ANIMALS
- 2:30 pm Seibel, B. A.; Rosenthal, J. J.; Bezanilla, F.: LOSS OF THE BURST LOCOMOTORY SYSTEM IN ANTARCTIC PTEROPODS: TRADE-OFFS WITH COMPENSATORY ENHANCEMENT OF SUSTAINABLE PERFORMANCE AT COLD TEMPERATURES
- 2:45 pm Antipov, A.; Sorokin, D. Y.; Kuenen, J. G.: POLYFUNCTIONAL REDUCTASE FROM (HALO)ALKALIPHILIC BACTERIUM «THIOALKALIVIBRIO NITRATIREDUCENS» ALEN 2
- 3:00 pm Teske, A.; Kormas, K.; Smith, D. C.; Spivack, A. J.; D'Hondt, S. L.; Hinrichs, K.; Holm, N.; Cragg, B. A.; Joergensen, B. B.; The ODP Leg 201 Scientific Shipboard Party, : MICROBIAL COMMUNITIES AND THEIR ACTIVITIES IN DEEP MARINE SUBSURFACE SEDIMENTS(\*)
- 4:00 pm Krueger, M.; Nauhaus, K.; Treude, T.; Boetius, A.; Widdel, F.: NEW INSIGHTS INTO THE PHYSIOLOGY OF THE ANAEROBIC OXIDATION OF METHANE
- 4:15 pm Lomstein, B. A.; Böttcher, M.; Jørgensen, B. B.: BACTERIAL INFLUENCE ON AMINO ACID ENANTIOMERIZATION IN A DEEP MARINE SEDIMENT

#### **CS05: Benthic-Pelagic Coupling & Benthos (Posters)**

- Chair(s): Brian Hentschel, hentsche@sunstroke.sdsu.edu
- Location: Grand Ballroom (E-J)
94. Moore, J. G.; Wurtsbaugh, W. A.: NITROGEN SOURCES FOR EPIPHYTIC ALGAE IN AN OLIGOTROPHIC LAKE: THE IMPORTANCE OF MACROPHYTE-DERIVED NUTRIENTS
95. Gascón, S.; Brucet, S.; Boix, D.; Sala, J.; Trobajo, R.; Quintana, X. D.: COMPARISON OF THE SPATIAL AND TEMPORAL VARIATION OF ZOOPLANKTON AND MACROZOOBENTHOS IN MEDITERRANEAN SALT MARSHES
96. Barry, J. P.; Stokes, M. D.; Buck, K. R.; Okuda, C.: MEASUREMENTS OF SEDIMENT COMMUNITY OXYGEN CONSUMPTION IN MONTEREY CANYON FROM 100 TO 3000 M USING A NEW IN SITU, OPTRODE-BASED RESPIROMETER

#### **CS06: Benthos (Posters)**

- Location: Grand Ballroom (E-J)
97. Burgmer, T.; Hillebrand, H.; Reiss, J.; Wickham, S. A.: EFFECT OF MACROZOOBENTHIC GRAZING ON AUTOTROPHS AND HETEROTROPHS IN PERIPHYTIC COMMUNITIES

#### **CS14: Estuarine and Near-Shore Processes (Posters)**

- Chair(s): Gregg Snedden, gsnedde@lsu.edu  
Cynthia Kicklighter, gt7853a@prism.gatech.edu
- Location: Grand Ballroom (E-J)
98. Jones, M. B.; Epifanio, C. E.: BRACHYURAN, POST-LARVAL PATCHES: CHARACTERIZATION AND TRANSPORT IN THE DELAWARE BAY
99. Achudume, A. D.; Wilborn, U.; J. Pyrtle, A. S.: PRELIMINARY INVESTIGATION OF RADIONUCLIDES AND GEOCHEMISTRY IN THE SAVANNAH (GEORGIA) RIVERINE-ESTUARINE SYSTEM
100. Yarbro, L. A.; Carlson, P. R.; McRae, G.: STOICHIOMETRIC RATIOS OF NITROGEN AND PHOSPHORUS IN FLORIDA (USA) ESTUARIES: INDICATORS OF REGIONAL ECOLOGICAL DIFFERENCES OR ANTHROPOGENIC IMPACTS?
101. Page, H. M.; Dugan, J. E.; Culver, C. C.; Schroeder, D. M.; Bram, J.; Mardian, B.: PATTERNS OF RECRUITMENT, DISTRIBUTION, AND ABUNDANCE OF INVERTEBRATES AND FISHES ON OFFSHORE PLATFORMS: RELATIONSHIPS TO GRADIENTS IN OCEANOGRAPHIC CONDITIONS
102. Lavrentyev, P. J.; First, M. R.; Gardner, W. S.; McCarthy, M. J.; Jochem, F.: MICROBIAL FOOD WEB STRUCTURE AND NITROGEN CYCLING RATES IN THE NORTHWESTERN GULF OF MEXICO AND TEXAS COASTAL WATERS.
103. An, S.; Choi, J.; Kim, G.; Kwon, Y.; Yang, W.; Lee, C.; Lee, S.; Gardner, W.; McCarthy, M.: POSSIBILITIES OF SEAGRASS (*ZOSTERA JAPONICA*) TRANSPLANTATION AND ALTERED NUTRIENT FLUXES IN CONSTRUCTED TIDAL FLAT.
104. Orrico, C. O.; Moline, M. A.; Agrawal, Y.; Bergmann, T.; Kerfoot, J.; Schaffner, A.; Schofield, O. M.: IN SITU CLASSIFICATION OF PHYTOPLANKTON IN OPTICALLY COMPLEX COASTAL WATERS
105. Wilborn, U.; Achudume, A.; Pyrtle, A. J.: SAVANNAH (GEORGIA) ESTUARY SEDIMENT GEOCHEMISTRY

#### **CS18: Land-Water Margins (Posters)**

- Location: Grand Ballroom (E-J)
106. Kipphut, G. W.; Colburn, W. C.; Richard, H. M.: CARBON DIOXIDE AND METHANE CONCENTRATIONS AND SOURCES IN RESERVOIR AND STREAM ENVIRONMENTS OF THE LOWER TENNESSEE RIVER VALLEY

(\*) represents Tutorial presentations

**CS22:  
Modeling Approaches (Posters)**

- Location: Grand Ballroom (E-J)
107. Incze, L. S.; Wolff, N.; Boyce, A.: USING SPATIAL ANALYSIS (GIS) TO DEFINE SETTLEMENT LIMITS: APPLICATION TO RECRUITMENT AND POPULATION MODELS FOR A COASTAL INVERTEBRATE
108. Darrow, B. P.; Walsh, J. J.: PAR WARS, EPISODE II: ATTACK OF THE CLOUDS.

**CS25:  
Optics (Posters)**

- Chair(s): Bruce Hargreaves, brh0@lehigh.edu
- Location: Grand Ballroom (E-J)
109. Strand, M. P.: MEASURED OPTICAL PROPERTIES OF THE WATER IN THE SURF ZONE
110. Zaneveld, J. R.; Boss, E.: THE INFLUENCE OF BOTTOM MORPHOLOGY ON REFLECTANCE: THEORY AND 2-D GEOMETRY MODEL.
111. Blouin, F.; Roy, S.: SPATIAL AND TEMPORAL VARIABILITY IN PIGMENT COMPOSITION AND PHYTOPLANKTON SPECIFIC ABSORPTION COEFFICIENT IN THE ESTUARY AND GULF OF ST. LAWRENCE (CANADA)
112. Orellana, M. V.; Petersen, T. W.; Diercks, A. H.; van den Engh, G.: OPTICAL CHARACTERISTICS OF SINGLE MARINE MICROGELS

**CS29:  
Phytoplankton & Primary Production (Posters)**

- Chair(s): James Grover, grover@uta.edu  
Steven Lohrenz, Steven.Lohrenz@usm.edu  
Heidi Sosik, hsosik@whoi.edu  
Virginia Armbrust, armbrust@ocean.washington.edu
- Location: Grand Ballroom (E-J)
113. Latz, M. I.; Rohr, J.; Allen, J.; Sarkar, S.: EFFECT OF FLOW INTERMITTENCY ON POPULATION GROWTH OF THE DINOFLAGELLATE LINGULODINIUM POLYEDRUM
114. Singler, H. R.; Villareal, T. A.: LIGHT AND FE EFFECTS ON NITRITE EXCRETION OF VERTICALLY MIGRATING RHIZOSOLENIA MATS
115. Needoba, J. A.; Tada, K.; Harrison, P. J.: THE INFLUENCE OF NITROGEN, SILICON, AND IRON LIMITATION ON THE ELEMENTAL COMPOSITION OF A MARINE DIATOM
116. O'Brien, S. G.; Armbrust, E. V.; Olson, R. J.: EUKARYOTIC NANOPLANKTON DIVERSITY IN SARGASSO SEA EDDIES
117. Thomas, C. S.; Van Heukelem, L.: VITAMIN E ACETATE AS AN INTERNAL STANDARD FOR USE WITH PIGMENT ANALYSIS BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY
118. Klausmeier, C. A.; Litchman, E. G.; Levin, S. A.; Daufresne, T.: OPTIMAL STOICHIOMETRY OF PHYTOPLANKTON

119. Landry, D. M.; Palenik, B. P.; Kristiansen, S.: ANTIBODY DETECTION OF A CELL SURFACE NITROGEN REGULATED PROTEIN OF THE COCCOLITHOPHORID EMILIANIA HUXLEYI

120. Anderson, C. R.; Siegel, D. A.; Brzezinski, M. A.; Guillocheau, N.; Toole, D. A.: A TIME SERIES ASSESSMENT OF PHYTOPLANKTON COMMUNITY STRUCTURE IN THE SANTA BARBARA CHANNEL

**CS31:  
Remote Sensing and Technological Tools (Posters)**

- Chair(s): Tiffany Moisan, tmoisan@osb.wff.nasa.gov
- Location: Grand Ballroom (E-J)
121. Subramaniam, A.; Lutz, V. A.; Negri, R. M.; Silva, R. I.: SCALES OF TEMPORAL AND SPATIAL VARIABILITY IN CHLOROPHYLL CONCENTRATION ON THE ARGENTINE CONTINENTAL SHELF
122. Keith, D. J.; Latimer, J. A.; Yoder, J. A.: THE SPATIAL DISTRIBUTION OF PHYTOPLANKTON CHLOROPHYLL CONCENTRATIONS IN NARRAGANSETT BAY USING AIRCRAFT REMOTE SENSING
123. Van Heukelem, L.; Hooker, S. B.; Clastre, H.; Berthon, J.; Barlow, R.: OPPORTUNITIES PROVIDED BY A PIGMENT ROUND-ROBIN (SEAHARRE-1) TO IDENTIFY METHODOLOGICAL PROCEDURES IMPORTANT TO THE REDUCTION OF UNCERTAINTY

**CS33:  
Sediment-Water Interactions (Posters)**

- Chair(s): Mark Alperin, alperin@email.unc.edu
- Location: Grand Ballroom (E-J)
124. Koretsky, C. M.; Ndenga, N.; Miller, D.; Haas, J.: TRACE METAL ASSOCIATION WITH IRON AND MANGANESE (HYDR)OXIDES IN THE KALAMAZOO RIVER WATERSHED (KALAMAZOO, MI, USA)

**CS34:  
Stream Dynamics (Posters)**

- Location: Grand Ballroom (E-J)
125. Harner, M. J.; Molles, Jr., M. C.: ANALYSIS OF HISTORICAL AERIAL PHOTOGRAPHS OF THE MIDDLE RIO GRANDE IN NEW MEXICO FROM 1935-1996
126. Zeglin, L. H.; Pershall, A. D.; Crenshaw, C. L.; Dahm, C. N.: HOW CHANGING LAND USE AFFECTS STREAM NUTRIENT AVAILABILITY AND UPTAKE IN ARID ENVIRONMENTS

**SS1.08:  
Leave No Scientist Behind: How to Get Aquatic Sciences Into K-12 Classrooms (Posters)**

- Chair(s): Lesley K. Smith, smithlk@cires.colorado.edu  
George I. Matsumoto, mage@mbari.org
- Location: Grand Ballroom (E-J)
127. Smith, L. K.; Laursen, S.; Rundle, M.; Buhr, S. M.; Avery, S.: THE ROLE OF UNIVERSITIES IN WATER EDUCATION OUTREACH

(\*) represents Invited presentations

WEDNESDAY

128. Schaefer, K. A.; Blankenstein, H. L.; Nowocin, K. J.; Morton, S. L.: THE USE OF VOLUNTEERS TO MONITOR HARMFUL PHYTOPLANKTON
129. Thorrold, A. L.; Crago, T. I.; Madin, K. A.; Murphy, S. A.: MODELS FOR INVOLVING SCIENTISTS IN OUTREACH EFFORTS: A MULTI-PRONGED APPROACH
130. Chen, R. E.; Dong, H.; Lukas, G.; Stevenson, R. D.; Brabander, D. J.; Beattie, R.: AN INNOVATIVE WEB-BASED SURVEY FOR ESTABLISHING CORE-LEARNING GOALS FOR ALL OCEAN AND ENVIRONMENTAL SCIENCE STUDENTS

**SS3.01:  
Emergent Properties of Complex Aquatic Ecosystems: A Macroecological Perspective (Posters)**

- Chair(s): Andrea Belgrano, belgrano@unm.edu
- Location: Grand Ballroom (E-J)
131. Houser, L. T.; Epifanio, C. E.: THE IMPORTANCE OF SWIMMING BEHAVIOR IN MAINTAINING PATCHES OF LARVAL CRABS: CAN BIOCHEMICAL CUES HAVE AN AFFECT?
132. Blackwell, S.; Moline, M. A.; Case, J.; Haddock, S.; Herren, C.; Schaffner, A.; Bissett, W. P.: DEFINING THE RELEVANT SCALES OF BIOLUMINESCENCE STRUCTURE IN THE COASTAL OCEAN.

**SS3.03:  
Landscape Ecology and Environmental Grain from a Microbial Perspective (Posters)**

- Chair(s): Paul Kemp, paul.kemp@stonybrook.edu  
Josephine Aller, jyaller@notes.cc.sunysb.edu
- Location: Grand Ballroom (E-J)
133. Bult, C.; Diaz-Avalos, C.; Montagnes, D. J.: SPATIAL STRUCTURE OF PLANKTONIC CILIATE PATCHES IN A TROPICAL COASTAL LAGOON: AN APPLICATION OF GEOSTATISTICAL METHODS

**SS3.04:  
The Biogeochemistry of Hg from Watershed to the Global Scale: A Tribute to the Contributions of W.F. Fitzgerald (Posters)**

- Chair(s): W. Berry Lyons, lyons.142@osu.edu  
Rob Mason, mason@cbl.umces.edu
- Location: Grand Ballroom (E-J)
134. Rearick, M. S.; Heyes, A.; Gilmour, C. C.; Mason, R. P.: FIELD MEASUREMENTS OF DISSOLVED SULFIDE IN SEDIMENT PORE WATERS OF A BOREAL FOREST LAKE AND WETLAND USING DIFFUSIVE GRADIENTS IN THIN FILMS

**SS3.05:  
Significance of Small-scale Benthic Processes for Large Ecosystems (Posters)**

- Chair(s): Douglas C. Miller, dmiller@udel.edu  
Kevin R. Carman, zocarm@lsu.edu
- Location: Grand Ballroom (E-J)

135. Marinelli, R. L.; Woodin, S. A.; Boudreau, B. P.: BIOMOLECULAR COMPLEXITY IN MARINE SEDIMENTS: A WORKSHOP REPORT
136. Liess, A.; Hillebrand, H.: EXPERIMENTAL TEST OF ECOLOGICAL STOICHIOMETRY IN BENTHIC FOOD WEBS
137. Meile, C.; Van Cappellen, P.; Tuncay, K.; Koretsky, C.: SCALE-DEPENDENT QUANTITATIVE REPRESENTATIONS OF BIOLOGICALLY-INDUCED SOLUTE MIXING IN MARINE SEDIMENTS

**SS3.06:  
Landscape Context of Ultraviolet Radiation Effects on Aquatic Ecosystems (Posters)**

- Chair(s): Wendy Palen, wpalen@u.washington.edu  
Sandra Cooke, sac6@lehigh.edu
- Location: Grand Ballroom (E-J)
138. Prosser, C.; Pullin, M. J.; Maurice, P. A.: PHOTOAGGREGATION OF NATURAL ORGANIC MATTER IN THE PRESENCE OF Fe: POTENTIAL EFFECTS ON METAL CYCLING IN SURFACE WATERS
139. Franklin, L. A.; Neale, P. J.: BIOLOGICAL WEIGHTING FUNCTIONS FOR THE EFFECT OF UV RADIATION ON CARBON ALLOCATION IN MICROALGAE

**SS3.07:  
Does Microbial Diversity Matter in Ecosystem Function? (Posters)**

- Chair(s): Bess Ward, bbw@princeton.edu
- Location: Grand Ballroom (E-J)
140. Judd, K. E.; Crump, B. C.; Kling, G. W.: DISSOLVED ORGANIC CARBON IN SOILS, STREAMS, AND LAKES OF AN ARCTIC CATCHMENT: LINKING BIOAVAILABILITY, CHEMISTRY, AND MICROBIAL COMMUNITY COMPOSITION
141. Schwalbach, M. S.; Fuhrman, J. A.: AEROBIC, ANOXYGENIC PHOTOPHYSIS: QUANTIFICATION IN CALIFORNIA COASTAL WATERS AND POSSIBLE ECOLOGICAL ROLES IN MARINE BACTERIOPLANKTON
142. Schnetzer, A.; Caron, D. A.; Countway, P. D.: A MOLECULAR APPROACH TO ASSESS THE IMPACT OF ZOOPLANKTON GRAZING
143. Tan, G. P.; Sullivan, M. B.; Rosenkrantz, J. E.; Waterbury, J. B.; Chisholm, S. W.: PROCHLOROCOCCUS AND SYNECHOCOCCUS CYANOPHAGE DIVERSITY
144. Wilkerson, F. P.; Dugdale, R. C.; Hogue, V.; Marchi, A.; Lassiter, A. M.: THE SPATIAL PATTERNS OF DIATOM BASED NEW PRODUCTION IN THE COASTAL UPWELLING REGION OFF BODEGA, CA.
145. Palenik, B. P.; Paulsen, I.; Brahamsha, B.; Hance, M. E.; Lee, K. H.; McCaren, J.: INSIGHTS INTO SYNECHOCOCCUS ECOLOGY FROM GENOMIC LEVEL CHARACTERIZATION
146. Proctor, L. M.; MacAuley, S.; Childs, C.: RELATIONSHIP BETWEEN DENITRIFICATION RATES AND ABUNDANCE/ DIVERSITY OF DENITRIFIERS IN GULF OF MEXICO HYPOXIC ZONE SEDIMENTS

† represents Tutorial presentations

147. Jochem, F. J.: GROWTH RATES AND GRAZING LOSSES OF BACTERIA SUB-POPULATIONS WITH DIFFERENT APPARENT DNA CONTENT IN THE GULF OF MEXICO
148. Solomon, C. M.; Glibert, P. M.; Alexander, J. A.: SEASONAL AND SPATIAL VARIABILITY OF UREASE ACTIVITY IN THE CHESAPEAKE BAY AND ONE OF ITS TRIBUTARIES
149. Chistoserdov, A. Y.; Madrid, V. M.; Aller, J. Y.; Aller, R. C.: METABOLIC POTENTIAL OF MICROBIAL COMMUNITIES FROM MOBILE DELTAIC SEDIMENTS.

**SS3.08:**  
**Organic Matter in Aquatic Systems: Sources, Characterization, Distribution, and Quantification (Posters)**

- Chair(s): Juanita Urban-Rich, juanita.urban-rich@umb.edu  
 Bob Chen, bob.chen@umb.edu  
 Diane McKnight, diane.mcknight@colorado.edu
- Location: Grand Ballroom (E-J)
150. Jolliff, J. K.; Walsh, J. J.; He, R.; Weisberg, R. H.; Stovall-Leonard, A.; Conmy, R.; Coble, P. G.; Nababan, B.; Muller-Karger, F.: A THREE-DIMENSIONAL SIMULATION OF THE DISPERSAL AND PHOTOLYSIS OF CDOM OVER THE WEST FLORIDA CONTINENTAL SHELF
151. Curless, S. E.; Sharp, J. H.: IMPROVED SIMULTANEOUS DOC/TDN ANALYSIS.
152. Klamberg, J. L.; Nelson, N. B.; Siegel, D. A.: ONE-DIMENSIONAL MODELING OF SEASONAL COLORED DISSOLVED ORGANIC MATTER DYNAMICS IN THE SARGASSO SEA.
153. Golden, S. M.; Maurice, P. A.; Bridgman, S. D.: CONTROLS ON DISSOLVED ORGANIC MATTER IN WETLANDS: IMPORTANCE OF HYDROLOGIC FLOW PATHS
154. Urban-Rich, J. L.; Fernandez, D.; McCarty, J. T.; Acuna, J. L.: FLUORESCENT AND ABSORPTION CHARACTERISTICS OF DOM IN LARVACEAN GRAZING EXPERIMENTS.

**SS3.09:**  
**Cross-system Comparison of Sources, Composition, and Reactivity of DON (Posters)**

- Chair(s): Margie Mulholland, mmulholl@odu.edu  
 Deborah Bronk, bronk@vims.edu
- Location: Grand Ballroom (E-J)
155. Reimer, J. J.; Gobler, C. J.; Kustka, A.; Sanudo-Wilhelmy, S. A.: DYNAMICS OF DISSOLVED ORGANIC CARBON, NITROGEN, AND TRICHODESMIUM ABUNDANCE ACROSS THE EQUATORIAL ATLANTIC AND THE CONTINENTAL SHELF OFF NORTHERN AUSTRALIA

**SS3.10:**  
**Emergent Properties and Biocomplexity of Tropical Ecosystems (Posters)**

- Chair(s): Ilka C. Feller, feller@serc.si.edu
- Location: Grand Ballroom (E-J)
156. Jacobson/Meyers, M. E.; Lee, C. L.; Frischer, M.; Burns, J.; Jennisn, B. J.; Romero, I.; Smallwood, B. J.: PHOSPHATASE ACTIVITY, BACTERIAL BIOMASS AND BACTERIAL TYPES MEASURED ACROSS MANGROVE ENVIRONMENTS IN TIME AND SPACE.

**SS3.12:**  
**Trophic Focusing and Subsidy in Aquatic Ecosystems (Posters)**

- Chair(s): Amatzia Genin, amatzia@vms.huji.ac.il  
 Mark Benfield, mbenfie@lsu.edu
- Location: Grand Ballroom (E-J)
157. Cavaletto, J. E.; Vanderploeg, H. A.; Agy, M. A.; Lavrentyev, P. J.; Liebig, J. R.; Lang, G. A.; Bundy, M. H.: INSHORE OR OFFSHORE: WHERE ARE THE COPEPODS DURING THE WINTER AND EARLY SPRING IN SOUTHERN LAKE MICHIGAN?
158. Kline, T. C.: INFERRED REDISTRIBUTION AND SUBSIDY OF PELAGIC PRODUCTION ACROSS THE GULF OF ALASKA SHELF AND PRINCE WILLIAM SOUND USING NATURAL STABLE ISOTOPE ABUNDANCE

**SS3.15:**  
**Coupling Seagrass Dynamics to Water Column and Sediment Geochemistry (Posters)**

- Chair(s): Peter Eldridge, eldrige.pete@epamail.epa.gov  
 James Kaldy, kaldy.jim@epa.gov
- Location: Grand Ballroom (E-J)
159. Hu, X.; Burdige, D. J.: DISSOLVED CARBOHYDRATES AND DISSOLVED ORGANIC CARBON IN CARBONATE SEDIMENTS, LEE STOCKING ISLAND, BAHAMAS

**SS3.17:**  
**Spatial Patterns in Marine Fluxes: Global Perspectives from the JGOFS Program (Posters)**

- Chair(s): Adrian Burd, adrian@plankton.marsci.uga.edu
- Location: Grand Ballroom (E-J)
160. Achilles, K. M.; Lipschultz, F.; Hutchins, D. A.; Luther, G. W.; Church, T. M.: IMPORTANCE OF IRON FOR TRICHODESMIUM IN THE NORTH ATLANTIC
161. Daniels, R. M.; Ducklow, H. W.; Richardson, T. L.; Jackson, G. A.; Roman, M. R.: PLANKTON FOOD WEB STRUCTURE RECOVERED FROM THE JGOFS NORTH ATLANTIC BLOOM EXPERIMENT (MAY, 1989) USING AN INVERSE METHOD

WEDNESDAY

**SS3.18:****Biogeochemistry of the Tropical and Subtropical North Atlantic  
(Posters)**

- Chair(s): Craig A. Carlson, carlson@lifesci.ucsb.edu  
Dennis Hansell, dhansell@rsmas.miami.edu
- Location: Grand Ballroom (E-J)
162. Kustka, A. B.; Cole, J. J.; Sanudo-Wilhelmy, S. A.: FE REQUIREMENTS OF NH<sub>4</sub><sup>+</sup> AND N<sub>2</sub> SUPPORTED TRICHODESMIUM CULTURES, ESTIMATED FE REQUIREMENTS OF FIELD POPULATIONS, AND FIELD MEASUREMENTS OF FE QUOTA AND GROWTH
163. Cooley, S. R.; Yager, P. L.: DISTINGUISHING SUMMERTIME BIOLOGICAL INORGANIC CARBON DRAWDOWN FROM PHYSICAL EFFECTS IN THE WESTERN TROPICAL ATLANTIC OCEAN
164. Finzi, J. A.; Carpenter, E. J.; Chen, Y.; Gunderson, T. E.; Michaels, A. F.; Schimmoeller, R. M.; Siefert, R. L.; Capone, D. G.: EFFECT OF NUTRIENT AND NATURAL DUST AMENDMENT ON PICOPLANKTON DENSITIES AND PRIMARY PRODUCTION IN SURFACE WATERS OF THE OLIGOTROPHIC NORTH PACIFIC AND ATLANTIC

**SS3.20:****Landscape and Land-use Influences on Methylmercury Contamination of Aquatic Resources (Posters)**

- Chair(s): James Wiener, wiener.jame@uwlax.edu  
David Krabbenhoft, dpkrabbe@usgs.gov
- Location: Grand Ballroom (E-J)
165. Bayer, A. K.; Branfireun, B. A.: BIOGEOCHEMICAL AND GEOMORPHOLOGICAL CONTROLS ON MERCURY DYNAMICS IN A MACROTIDAL SALT MARSH, BAY OF FUNDY, CANADA.

WEDNESDAY

↳ represents Tutorial presentations

**Thursday, February 13, 2003****CS08:  
Biogeochemical Cycles**

Chair(s):	Jay Cullen, jcullen@whoi.edu Martin Shafer, mmshafer@facstaff.wisc.edu Margaret Squires, ms24@ualberta.ca
Location:	250 C
9:30 am	Baines, S. B.; Fisher, N. S.; Cutter, L. S.; Martina, D. A.; Cutter, G. A.: DIRECT UPTAKE OF DISSOLVED ORGANIC SELENIUM BY RIVERINE PHYTOPLANKTON INFERRED FROM SELENITE:C UPTAKE RATIOS AND SE:C IN SUSPENDED PARTICLES
9:45 am	Cutter, G. A.; Cutter, L. S.; Doblin, M. A.: DISSOLVED ORGANIC SELENIDE CYCLING IN CONTRASTING ECOSYSTEMS: OPEN OCEAN VERSUS TIDAL FRESHWATERS
10:00 am	Dupont, C. L.; Nelson, R. K.; Moffett, J. W.; Ahner, B. A.: EXUDATION OF NOVEL THIOLS BY COPPER-STRESSED EMILIANIA HUXLEYI
10:15 am	Shafer, M. M.; Overdier, J. T.; Tang, D.; Karner, D.: #65279; COUPLING CHEMICAL SPECIATION TO BIOAVAILABILITY: STUDIES OF COPPER IN THREE MARINE ESTUARIES (SAN DIEGO BAY, CA; NORFOLK HARBOR, VA; CAPE FEAR, NC)
10:30 am	Cullen, J. T.; Moffett, J. W.: THE PHYSICOCHEMICAL SPECIATION OF FE IN THE TROPICAL AND NORTHWEST ATLANTIC
11:00 am	Brzezinski, M. A.; Jones, J. L.; Bidle, K.; Azam, F.: THE BALANCE BETWEEN SILICA PRODUCTION AND SILICA DISSOLUTION IN THE SEA. INSIGHTS FROM MONTEREY BAY, CALIFORNIA APPLIED TO THE GLOBAL DATA SET
11:15 am	Moisan, J. R.; Cornuelle, B. D.; DiLorenzo, E.; Haidvogel, D. B.; McWilliams, J. C.; Miller, A. J.; Stolzenbach, K. D.; Wilkin, J.: RESOLVING NITROGEN, CARBON AND OXYGEN CYCLES FOR THE U.S. CONTINENTAL MARGIN WITH COUPLED CIRCULATION/BIOGEOCHEMICAL MODELS
11:30 am	Risgaard-Petersen, N.: HOW DOES BENTHIC MICRO ALGAE AFFECT THE N-CYCLE?
11:45 am	Ho, T.; Seyfarth, W. R.; Morel, F. M.: THE CORRELATION BETWEEN CALCIFICATION AND P ACQUISITION IN EMILIANIA HUXLEYI
12:00 pm	Yager, P. L.; Goodrich, A.: CONTRIBUTIONS TO THE INORGANIC CARBON BUDGET OF ARCTIC OCEAN SURFACE WATERS: IMPLICATIONS FOR FRESHWATER INPUTS AND THE BALANCE OF AUTOTROPHY AND HETEROCHROPHY.
2:15 pm	Squires, M. M.; Devito, K. J.; Petrone, R.; Macrae, M.: EFFECT OF DROUGHT ON GREENHOUSE GAS EMISSIONS FROM POND/PEATLAND SYSTEMS WITH CONTRASTING HYDROLOGIC REGIMES, N. ALBERTA
2:30 pm	Hughes, C.; Malin, G.; Turley, C. M.; Keely, B. J.; Nightingale, P. D.; Liss, P. S.: OCEANIC ALKYL IODIDES: IS DEATH AND DECAY THE ANSWER?
2:45 pm	Stewart, G. M.; Fisher, N. S.; Cochran, J. K.; Fowler, S. W.; Teyssie, J. L.; Cotret, O.; Masque, P.: RADIOACTIVE POLONIUM, LEAD AND THORIUM AS TRACERS OF ORGANIC CARBON FLUX IN THE SURFACE OCEAN

3:00 pm Tang, D.; Shafer, M. M.; Karner, D. A.; Overdier, J.; Armstrong, D. e.: DISSOLVED GLUTATHIONE IN THE SURFACE WATERS OF SAN DIEGO BAY, CA, AND ITS RELEASE FROM PHYTOPLANKTON IN RESPONSE TO COPPER STRESS.

3:15 pm Van Mooy, B.; Hullar, M. A.; Devol, A. H.; Stahl, D. A.; Hollander, D. J.; Evans, C. T.: MICROBIAL FATE OF PHOSPHATE IN THE OLIGOTROPHIC SURFACE WATERS OF THE GULF OF MEXICO

**CS15:  
Fish**

Chair(s):	Benjamen Kennedy, benk@cc.usu.edu
Location:	251 C
9:30 am	Cowen, R. K.; Paris, C. B.: THE ROLE OF LONG DISTANCE DISPERSAL VERSUS LOCAL RETENTION IN REPLENISHING MARINE POPULATIONS
9:45 am	Hunt von Herbing, I. V.: SEPARATING THE PHYSICAL AND PHYSIOLOGICAL EFFECTS OF TEMPERATURE ON SWIMMING IN MARINE FISH LARVAE.
10:00 am	Paris, C. B.; Cowen, R. K.; Lindeman, K. C.; Claro, R.: MODELING LARVAL TRANSPORT FROM GROPER (SERRANIDAE) AND SNAPPER (LUTJANIDAE) SPAWNING AGGREGATIONS IN THE MESOAMERICAN REGION
10:15 am	De Robertis, A.; Ryer, C. H.; Veloza, A.; Brodeur, R. D.: DIFFERENTIAL EFFECTS OF TURBIDITY ON PREY CONSUMPTION OF PISCIVOROUS AND PLANKTIVOROUS FISH
10:30 am	Kennedy, B. M.; Luecke, C.: BENTHIC HABITAT SELECTION OF ENDEMIC WHITEFISH IN RELATION TO FOOD AVAILABILITY AND PREDATION RISK IN BEAR LAKE, UT-ID

**CS21:  
Microbial Dynamics**

Chair(s):	David Smith, dcsmith@gso.uri.edu Jessica Morgan, jmorgan@vims.edu
Location:	151 DEF
2:15 pm	Button, D. K.; Gustafson, E.; Zhao, X.; Perney, G.: APPLICATION OF SPECIFIC AFFINITY THEORY TO CARBON FLYWHEEL HELPS EXPLAIN CONSTANT POPULATIONS, SMALL SPECIES NUMBERS AND LARGE TEMPERATURE EFFECTS.
2:30 pm	McManus, G. B.; Zhang, H.: STROMBIDIUM OCULATUM, A PLANKTONIC TIDE POOL CILIATE THAT OBTAINS "SLAVE" CHLOROPLASTS FROM MACROALGAE
2:45 pm	Morgan, J. A.; Quinby, H. L.; Hansell, D. A.; Ducklow, H. W.: BACTERIAL ABUNDANCE AND PRODUCTION IN THE BLACK SEA
3:00 pm	Staroscik, A. M.; Smith, D. C.: SEASONAL DYNAMICS OF BACTERIAL AND PHYTOPLANKTON COMMUNITY STRUCTURE OVER THE WINTER/SPRING PERIOD IN NARRAGANSETT BAY, RHODE ISLAND, USA
3:15 pm	Cottrell, M. T.; Kirchman, D. L.: VARIATION IN SINGLE-CELL ACTIVITY, CELL VOLUME AND ABUNDANCE OF THE MAJOR BACTERIAL GROUPS IN THE DELAWARE ESTUARY

THURSDAY

(\*) represents Invited presentations

4:00 pm	Kørboe, T.; Tang, K.; Grossart, H. P.; Ploug, H.: MICROBIAL DYNAMICS ON MARINE SNOW: COLONIZATION, GROWTH, DETACHMENT, AND GRAZING MORTALITY OF ATTACHED MICROORGANISMS
4:15 pm	Smith, D. C.; Staroscik, A. M.: FIELD EVIDENCE FOR SELECTIVE FEEDING OF THE HETEROTROPHIC DINOFLAGELLATE NOCTILUCA SCINTILLANS ON BACTERIA
4:30 pm	Leeds, S.; Breitbart, M.; Zurita, I.; Bartlett, D.; Azam, F.; Rohwer, F.: ENVIRONMENTAL RESERVOIRS OF DISEASE-CAUSING EXOTOXIN GENES
4:45 pm	Hewson, I.; Fuhrman, J. A.: VIRUS EFFECTS ON BACTERIAL COMMUNITIES IN SHALLOW COASTAL BENTHOS
5:00 pm	Wommack, K. E.; Williamson, K. E.; Winget, D. M.; White, R.; Helton, R. R.; Kirchman, D. L.: AN IMPROVED METHOD FOR ESTIMATION OF VIRIOPHYTOPLANKTON PRODUCTION

**CS29:  
Phytoplankton & Primary Production**

Chair(s):	James Grover, grover@uta.edu Steven Lohrenz, Steven.Lohrenz@usm.edu Heidi Sosik, hsosik@whoi.edu Virginia Armbrust, armbrust@ocean.washington.edu
Location:	151 ABC
9:30 am	Sommer, U.; Sommer, F.; Hansen, T.: MESOZOOPHYTOPLANKTON IMPACT ON PHYTOPLANKTON NUTRIENT STATUS
9:45 am	Grover, J. P.; Chrzanowski, T. H.: LIMITING RESOURCES, DISTURBANCE, AND DIVERSITY IN PHYTOPLANKTON COMMUNITIES
10:00 am	Lohrenz, S. E.; Kelly, K. A.; Fahnenstiel, G. L.; Millie, D. F.: PHYTOPLANKTON TAXON-SPECIFIC DIFFERENCES IN LIGHT ABSORPTION AND RELATIONSHIPS TO COMMUNITY STRUCTURE IN LAKE MICHIGAN
10:15 am	Dousova, H.; Behrenfeld, M. J.; Prasil, O.; Worthington, K. K.: PHOTOACCLIMATION STRATEGIES OF MARINE PHYTOPLANKTON UNDER SIMULATED NATURAL LIGHT CONDITIONS
10:30 am	Grant, T.; Anderson, J. T.: THE ROLE OF MIXOTROPHY IN A COASTAL ESTUARINE ECOSYSTEM
11:00 am	Gorbunov, M. Y.; Falkowski, P.; Kolber, Z.; Gervais, F.; Riebesell, U.; Smetacek, V.; Finkel, Z.; Quigg, A.: CELL-SPECIFIC PHOTOSYNTHETIC CHARACTERISTICS AND THE FLORISTIC SHIFT IN PHYTOPLANKTON COMMUNITY DURING AN IRON-STIMULATED BLOOM IN THE SOUTHERN OCEAN
11:15 am	Peterson, T. D.; Harrison, P. J.: EDDY EDGE ENRICHMENT: INFLUENCE OF WATER MASS MIXING ON PHYTOPLANKTON DYNAMICS AT OCEAN FRONTS
11:30 am	Holl, C. M.; Montoya, J. P.: INTERACTIONS BETWEEN NITRATE UPTAKE AND NITROGEN FIXATION IN TRICHODESMIUM
11:45 am	Schapira, M. N.; Gentilhomme, V.; Seuront, L.: DIFFERENTIAL INFLUENCE OF MICROSCALE TURBULENCE ON TWO DIFFERENT MARINE PHYTOPLANKTONIC SPECIES

12:00 pm	Rick, J. J.; Rick, S.: PHYTOPLANKTON COMMUNITY RESPONSE TO NUTRIENT ENRICHMENT IN AN ESTUARINE COASTAL REGION INFLUENCED BY PULSED RIVER DIVERSIONS (CAERNARVON, LOUISIANA)
2:15 pm	von Dassow, P.: DINOFLAGELLATE BIOLUMINESCENCE STIMULATED BY DEVELOPING FLOW FIELDS
2:30 pm	Prasil, O.; Behrenfeld, M. J.: THE POSSIBLE SOURCES OF THE OBSERVED POSITIVE CORRELATION BETWEEN LIGHT LIMITED AND LIGHT SATURATED PHOTOSYNTHESIS
2:45 pm	Corno, G.; Griffiths, B.; Matear, R. J.: SILICATE AND PHYTOPLANKTON FLUORESCENCE IN THE SOUTHERN OCEAN: AN EXCITING PROSPECTIVE
3:00 pm	Perry, M. J.; Eriksen, C. C.; Sackmann, B. S.: SEAGLIDER AUTONOMOUS OBSERVATIONS OF PHYTOPLANKTON ABUNDANCE IN WATERS OFF THE WASHINGTON COAST, USA, IN SPRING 2002
3:15 pm	Olson, R. J.; Sosik, H. M.: IMAGING IN FLOW TO IMPROVE THE RESOLUTION OF PUMP-DURING-PROBE MEASUREMENTS OF PHYTOPLANKTON PHOTOSYNTHETIC CHARACTERISTICS
4:00 pm	Sosik, H. M.; Olson, R. J.; Neubert, M. G.; Shalapyonok, A.; Solow, A. R.: GROWTH RATES OF COASTAL PHYTOPLANKTON FROM TIME-SERIES MEASUREMENTS WITH A SUBMERSIBLE FLOW CYTOMETER
4:15 pm	MacIntyre, H. L.; Kana, T. M.; Suggett, D.; Geider, R. J.: A COMPARISON OF ESTIMATES OF MICROALgal PHOTOSYNTHESIS, AS MEASURED BY $^{14}\text{C}$ UPTAKE, $^{16}\text{O}/^{18}\text{O}$ EXCHANGE AND ACTIVE FLUORESCENCE
4:30 pm	Middelburg, J. J.; Nieuwenhuize, J.; Gattuso, J. P.; Pizay, M. D.; Loijens, M.; Wollast, R.: PRIMARY PRODUCTION BASED ON THE $^{14}\text{C}$ , $^{18}\text{O}$ AND OXYGEN LIGHT-DARK METHODS: AGREEMENT DEPENDS ON THE ECOSYSTEM
4:45 pm	Roberts, B. J.; Cole, J. J.; Pace, M. L.; Bade, D. L.; Van de Bogert, M. C.: DIEL RESPIRATION MEASURED USING STABLE OXYGEN ISOTOPES IN FERTILIZED, CLEAR, AND COLORED LAKES
5:00 pm	Armbrust, E. V.; Shalapyonok, A.; Olson, R. J.: GENETIC DIVERSITY OF EUKARYOTIC PICO- AND NANO-PHYTOPLANKTON COMMUNITIES IN THE SARGASSO SEA

**CS33:  
Sediment-Water Interactions**

Chair(s):	Mark Alperin, alperin@email.unc.edu
Location:	250 C
4:00 pm	Alperin, M. J.; Nie, Y.: SEDIMENT-WATER COLUMN INTERACTIONS IN A SHALLOW, EUTROPHIC ESTUARY: A MULTI-SPECIES REACTION-TRANSPORT MODEL FOR SEDIMENT AND THE LOWER BENTHIC BOUNDARY LAYER
4:15 pm	Devol, A. H.; Christensen, J. P.: PORE-WATER OXYGEN DISTRIBUTIONS IN WESTERN ARCTIC OCEAN MARGIN SEDIMENTS.

† represents Tutorial presentations

4:30 pm	<u>Green, M. A.</u> ; Jones, M. E.; Boudreau, C. L.: INFLUENCE OF CARBONATE DISSOLUTION ON SURVIVAL OF SHELL-BEARING MEIOBENTHOS IN NEARSHORE SEDIMENTS
4:45 pm	<u>Blodau, C.</u> : SPATIAL PATTERNS OF NEUTRALIZATION PROCESSES IN ACIDIC MINE LAKES: CONTROLLED BY GROUND WATER INFLOW

**CS39:**  
**Zooplankton**

Chair(s):	Cynthia Suchman, cynthia.suchman@noaa.gov Sandra Connelly, sjc25@buffalo.edu Deborah Steinberg, debbies@vims.edu Michael Brett, mtbrett@u.washington.edu Russel Hopcroft, hopcroft@ims.uaf.edu
Location:	251 DE
9:30 am	<u>Brett, M. T.</u> ; Ballantyne, A. P.; Müller-Navarra, D. C.: BIOCHEMICAL CONTROL OF HERBIVOROUS ZOOPLANKTON GROWTH: DAPHNIA PULEX RESPONSES TO NATURAL SESTON COMPOSITION IN SEATTLE AREA LAKES
9:45 am	<u>Anson, J. M.</u> ; Schindler, D. E.; Scheuerell, M. D.; Hampton, S. E.: PREDATOR SWITCHING AND COMMUNITY CONSEQUENCES OF INTERANNUAL VARIABILITY IN DAPHNIA POPULATIONS
10:00 am	<u>Lloyd, S. S.</u> ; Roman, M. R.: EGG PRODUCTION BY THE COPEPOD EURYTEMORA AFFINIS IN THE CHESAPEAKE BAY TURBIDITY MAXIMUM REGION AS A FUNCTION OF FOOD QUALITY
10:15 am	<u>Hopcroft, R. R.</u> ; Clarke, C.; Pinchuk, A. I.; Byrd, A. G.: EGG PRODUCTION RATES OF METRIDIA PACIFICA AND METRIDIA OKHOTENSIS IN THE GULF OF ALASKA
10:30 am	<u>Caceres, C. E.</u> ; Tessier, A. J.: TO BE (DORMANT) OR NOT TO BE (DORMANT): LIFE HISTORY TRADEOFFS IN DAPHNIA PULICARIA

**SS1.02:**  
**Coastal Indicators of Water Quality and Ecological Condition**

Chair(s):	Hans W. Paerl, hans_paelr@unc.edu Gerald J. Niemi, gniemi@nri.umn.edu
Location:	251 AB
9:30 am	<u>Kerkhof, Lee, J.</u> ; McGuinness, L. ..; Tran, H., ..: ASSESSING ACTIVE BACTERIA BY FINGERPRINTING RIBOSOMES DURING A DAY/NIGHT CYCLE AT LEO-15
9:45 am	<u>Milbrandt, E. C.</u> ; Shapiro, L. S.: GENETIC DIVERSITY OF BACTERIA IN RESTORED AND MATURE ESTUARINE SEDIMENTS
10:00 am	<u>Scholin, C.</u> ; Massion, E.; Jensen, S.; Marin III, R.; Cline, D.; Roman, R.: APPLICATION OF MOLECULAR PROBES AND THE ENVIRONMENTAL SAMPLE PROCESSOR (ESP) FOR REMOTE DETECTION OF MICROORGANISMS IN SITU
10:15 am	<u>Berg, P.</u> ; Røy, H.; Janssen, F.; Meyer, V.; Jørgensen, B. B.; Hüttel, M.; de Beer, D.: MEASURING OXYGEN UPTAKE BY MARINE SEDIMENTS USING A NEW EDDY CORRELATION TECHNIQUE

10:30 am	<u>Fossing, H.</u> ; Berg, P.: THE RESPONSE OF MARINE AND ESTUARINE SEDIMENTS TO REDUCED ORGANIC LOADS
11:00 am	<u>Lee, C. L.</u> ; Romero, I.; Vargas, M.; Jacobson, N.; Rudnick, G.; Smallwood , B. J.; Jacobson/Meyers, M. E.: SEDIMENT ENZYME ANALYSIS AS A TOOL TO DETERMINE NUTRIENT AVAILABILITY CHANGES ACROSS ENVIRONMENTS IN TIME AND SPACE IN A MANGROVE ECOSYSTEM.
11:15 am	<u>Dugdale, R. C.</u> ; Wilkerson, F. P.; Hogue, V.; Marchi, A.; Lassiter, A. M.: AMMONIUM INHIBITION OF NITRATE UPTAKE AND DIATOM BLOOMS IN ESTUARINE AND COASTAL REGIONS.
11:30 am	<u>Wei, L.</u> ; Donat, J. R.; Fones, G.; Ahner, B. A.; Ahner, B. A.: PHYTOCHELATIN PRODUCTION IN RESPONSE TO HEAVY METAL STRESS IN MARINE PHYTOPLANKTON
11:45 am	<u>Marshall, H. L.</u> ; Morris, J. T.: XANTHOPHYLL PIGMENTS AND THEIR APPLICATION TO REMOTE SENSING OF ENVIRONMENTAL QUALITY
12:00 pm	<u>Kimmel, D. G.</u> ; Roman, M. R.: WEATHER PATTERNS AS INDICATORS OF MESOZOOPLANKTON DYNAMICS IN THE CHESAPEAKE BAY
2:15 pm	<u>Kiesling, T. L.</u> ; Fell, J.; Ortner, P. B.: COMMUNITY DYNAMICS OF COPEPOD NAUPLII IN FLORIDA BAY
2:30 pm	<u>Jung, S.</u> ; Houde, E. D.: FISH BIOMASS SIZE SPECTRA AS INTEGRATIVE INDICATORS OF ECOSYSTEM STATE AND COMMUNITY STRUCTURE IN CHESAPEAKE BAY
2:45 pm	<u>Chasar, L. C.</u> ; Chanton, J. P.; Koenig, C. C.; Coleman, F. C.: EVALUATING THE IMPACT OF LONG-TERM ENVIRONMENTAL DISTURBANCE ON THE TROPHIC STRUCTURE OF FLORIDA BAY
3:00 pm	<u>Gobler, C. J.</u> ; Sanudo-Wilhelmy, S. A.; Sieracki, M. E.; Buck, N. J.: IMPACTS OF NUTRIENT LOADING ON PHYTOPLANKTON COMMUNITIES ACROSS LONG ISLAND SOUND
3:15 pm	<u>Cuhel, R. L.</u> ; Janssen, J.; Aguilar, C.: THE 1998 EL NINO IN LAKE MICHIGAN: DELAYED SPRING PRODUCTIVITY MAXIMUM ASSOCIATED WITH LARVAL PERCH RECRUITMENT SUCCESS
4:00 pm	<u>Sylvan, J. B.</u> ; Quigg, A.; Tozzi, S.; Natale, F.; Kolber, Z.; Ammerman, J. W.: EXTENSIVE EVIDENCE OF SUMMER PHOSPHORUS LIMITATION IN THE MISSISSIPPI RIVER PLUME
4:15 pm	<u>Green, P. G.</u> ; Higashi, R. M.; Fan, T. W.: MOBILIZATION OF METALS FROM SALT MARSH SEDIMENTS BY EURYHALINE PLANTS
4:30 pm	<u>O'Malley, R.</u> ; <u>Cavender-Bares, K. K.</u> : THE HEINZ CENTER#8217;S STATE OF THE NATION#8217;S ECOSYSTEMS REPORT: KEY DATA GAPS AND RESEARCH ISSUES FOR COASTS AND OCEANS
4:45 pm	<u>Davis, J. L.</u> ; Young-Williams, A. C.; Hines, A. H.; Zmora, O.: ASSESSING THE FEASIBILITY OF STOCK ENHANCEMENT IN THE CASE OF THE CHESAPEAKE BAY BLUE CRAB ( <i>CALLINECTES SAPIDUS</i> )
5:00 pm	<u>Young-Williams, A. C.</u> ; Davis, J. L.; Hines, A. H.; Zohar, Y.: FISHERIES AND POPULATION STUDIES IN CRUSTACEANS: COMPARING THE EFFICIENCY OF TWO TYPES OF LONG-TERM INTERNAL TAGS IN JUVENILE BLUE CRABS ( <i>CALLINECTES SAPIDUS</i> )

THURSDAY

(\*) represents Invited presentations

**SS1.04:****Impacts of Changing Land Use on Aquatic Ecosystems**

Chair(s):	G.S. Kleppel, gkleppel@albany.edu
Location:	150 DEF
9:30 am	<u>Scott, G.L.</u> ; Fulton, M. H.; Siewicki, T.; Holland, F.; Chandler, G. T.; Porter, D.; Van Dolah, R. F.; Kelsey, H.: URBANIZATION IN COASTAL REGIONS OF THE SOUTHEASTERN U.S.A.: IMPACTS ON ESTUARINE ECOSYSTEM HEALTH <sup>(t)</sup>
10:00 am	<u>DeVoe, M. R.</u> : THE LAND USE-COASTAL ECOSYSTEM STUDY: MINIMIZING ECOLOGICAL IMPACTS IN RAPIDLY URBANIZING COASTAL REGIONS
10:15 am	<u>Sibley, S.</u> ; Windom, H.; Ruppel, C.: HETEROGENEITY IN SALTMARSH HYDROLOGY AND IMPACT ON DISSOLVED URANIUM
10:30 am	<u>Bratvold, D.</u> ; Nemeth, F. S.; Kauffman, J.; McKellar, H.: DISTRIBUTIONS AND FLUXES OF NUTRIENTS, CHLOROPHYLL, AND SUSPENDED SOLIDS IN THE OKATEE RIVER ESTUARY, SC: POTENTIAL IMPLICATIONS OF UPLAND DEVELOPMENT AND MARSH
11:00 am	<u>Weston, N. B.</u> ; Joye, S. B.; Porubsky, W. P.: SHALLOW MARSH GROUNDWATER BIOGEOCHEMISTRY AND DISSOLVED ORGANIC MATTER LABILITY
11:15 am	<u>Lopez-de-Victoria, G.</u> ; Tuerk, K.; Hoover, B.; Aelion, M.: MICROBIAL DENITRIFICATION RATES IN A SUBURBAN ESTUARY ALONG THE SOUTH CAROLINA COAST
11:30 am	Chandler, T.; Decho, A.; Fulton, M.; <u>Lee, R.</u> ; Maruya, K.; Scott, G.: ECOTOXICOLOGY RISKS OF LAND-BASED POLLUTION SOURCES ENTERING ESTUARINE TIDAL CREEKS
11:45 am	Kleppel, G. S.; Hartwell, A. L.: URBAN TYPOLOGY AND ECOSYSTEM FUNCTION: DO SMALL TOWNS AND SUBURBS HAVE DIFFERENT IMPACTS ON FRESHWATER WETLANDS?
12:00 pm	<u>Leland, H. V.</u> ; Hawkins, C. P.; Selle, A. R.; Griffith, M. B.; Viger, J. M.: BIOLOGICAL INTEGRITY OF STREAMS IN THE SOUTHERN ROCKY MOUNTAINS
2:15 pm	Hawkins, C. P.; Leland, H. V.; Selle, A. R.; Griffith, M. B.; Viger, J. M.: DEVELOPMENT OF A PREDICTIVE MODEL FOR ASSESSING THE BIOLOGICAL INTEGRITY OF STREAMS IN THE SOUTHERN ROCKY MOUNTAINS
2:30 pm	<u>Wilson, F. K.</u> ; Jackson-Pringle, J. A.: USE OF REMOTE SENSING/GIS TO DETERMINE THE EFFECTS OF LAND-COVER/LAND-USE CHANGE ON THE HEALTH OF OTTER POINT CREEK, MD, USA
2:45 pm	<u>Brattebo, B. O.</u> ; Brett, M. T.: STREAM WATER PHOSPHORUS TRANSPORT DURING STORM EVENTS OVER A RANGE OF LAND USE CONDITIONS
3:00 pm	<u>Kremer, J. N.</u> ; Currie, W.; Brawley, J.: EVALUATING THE GENERALITY OF A MODEL OF ESTUARINE RESPONSES TO NITROGEN LOADING.
3:15 pm	<u>Beighley, R. E.</u> ; Melack, J. M.; Dunne, T.: ANNUAL AND INTERANNUAL STREAMFLOW VARIABILITY FOR COASTAL WATERSHEDS WITH A MEDITERRANEAN CLIMATE IN RELATION TO LAND USE CHANGE AND CLIMATE VARIABILITY
4:00 pm	Burkholder, J. M.; Glasgow, H. B.; Reed, R. E.; Kinder, C. A.; Melia, G. M.; Toms, D. C.; Cooney, D. A.: WATER QUALITY TRENDS IN THE NEUSE ESTUARY BASED ON A DECADAL, INTENSIVE DATASET

4:15 pm

Crenshaw, M. C.; Brugam, R. B.: PALEOLIMNOLOGICAL PERSPECTIVE OF LOCAL AND REGIONAL PROCESSES INFLUENCING FLOODPLAIN LAKES

4:30 pm

Andrade, E.; Blanton, J. O.; Ferreira, M. A.: A DIGITAL ELEVATION MODEL OF A TIDAL CREEK AND ITS RELATIONSHIP TO TIDAL CIRCULATION**SS2.01:****The Limits to Paleolimnology? Linking Sedimentary Records with Contemporary Process-based Studies**

Chair(s):	Daniel Engstrom, dengstrom@smm.org
Location:	Richard Battarbee, r.battarbee@ucl.ac.uk
2:15 pm	<u>Anderson, N. J.</u> ; Engstrom, D. R.: THE LIMITS TO PALEOLIMNOLOGY - ARE WE STUCK IN THE MUD? <sup>(t)</sup>
2:45 pm	<u>Jordan, P.</u> ; Rippey, B.; Anderson, N. J.: TESTING LAKE PHOSPHORUS MODELS USING PALAEOLIMNOLOGICAL RECONSTRUCTIONS <sup>(t)</sup>
3:00 pm	<u>Tripplett, L. D.</u> ; Edlund, M. B.; Engstrom, D. R.: A WHOLE-BASIN SEDIMENT AND POLLUTANT MASS BALANCE FROM A NATURALLY IMPOUNDED LARGE RIVER SYSTEM IN THE UPPER MISSISSIPPI RIVER BASIN
3:15 pm	<u>Leavitt, P. R.</u> : CHANGE, CHANCE AND CAUSATION: THE ROLE OF PALEOECOLOGY IN DEFINING ECOSYSTEM VARIABILITY.
4:00 pm	<u>Michel, T. J.</u> ; Saros, J. E.; Interlandi, S. J.; Wolfe, A. P.: RECONSTRUCTING NUTRIENT CONCENTRATIONS IN LAKES OF THE BEARTOOTH MOUNTAINS (MT/WY) USING ALGAL RESOURCE PHYSIOLOGIES
4:15 pm	Kamenik, C.; Schmidt, R.: CHRYSOPHYTE STOMATOCYSTS AND DATE OF SPRING MIXING: IMPROVING A CLIMATE RECONSTRUCTION MODEL USING SEDIMENT TRAPS
4:30 pm	<u>Jankowski, T.</u> ; Straile, D.: A COMPARISON OF EGG-BANK AND LONG-TERM PLANKTON DYNAMICS OF TWO DAPHNIA SPECIES: POTENTIALS AND LIMITS OF RECONSTRUCTION
4:45 pm	<u>Battarbee, R. W.</u> : DECADAL CHANGE IN LAKE ECOSYSTEMS: PAST, PRESENT AND FUTURE

**SS3.05:****Significance of Small-scale Benthic Processes for Large Ecosystems**

Chair(s):	Douglas C. Miller, dmiller@udel.edu
Location:	Kevin R. Carman, zocarm@lsu.edu
9:30 am	150 G
9:45 am	<u>Maddi, P.</u> ; Carman, K. R.; Fry, B.; Wissel, B.: USE OF PRIMARY PRODUCTION BY MEIOFAUNA IN A LOUISIANA MUD-FLAT FOOD WEB
	<u>Levin, L. A.</u> ; Currin, C.; Neira, C.; McMillan, P.; Mendoza, G.; Whitcraft, C.; Gonzales, J.; Carman, K.: IMPROVED UNDERSTANDING OF LARGE-SCALE TROPHIC SUCCESSION THROUGH SMALL-SCALE ISOTOPIC ENRICHMENT EXPERIMENTS

<sup>(t)</sup> represents Tutorial presentations

10:00 am	<u>Demopoulos, A. W.</u> ; Smith, C. R.; Fry, B.; Crawford, L.: BENTHIC COMMUNITY COMPOSITION AND FOOD-WEB STRUCTURE IN NATIVE AND INTRODUCED MANGROVE FORESTS: COMPARISONS BETWEEN PUERTO RICO AND HAWAII <sup>(*)</sup>	4:45 pm	D'Andrea, A. F.: IMPACTS OF BIOTURBATION BY BURROWING SHRIMP ON CHLOROPHYLL A PROFILES IN SEDIMENTS OF YAQUINA BAY, OR – IMPLICATIONS FOR INTERTIDAL BENTHIC ALGAL PRODUCTIVITY
10:15 am	<u>Lee, A. R.</u> ; Pinckney, J. L.: A SPATIAL STUDY OF BENTHIC MICROALGAE IN AN INTERTIDAL SANDFLAT AT EAST BEACH, GALVESTON BAY, TEXAS		
10:30 am	<u>Linares, F.</u> : DISSOLVED FREE AMINO ACIDS (DFAA) AS A NITROGEN SOURCE FOR MICROPHYTOBENTHOS IN SEDIMENTS	9:30 am	<u>Jackson, G. A.</u> : BACKGROUND TO SYSTEM COMPLEXITY AND FUNCTION IN THE MICROBIAL WORLD <sup>(*)</sup>
11:00 am	<u>Sundback, K.</u> ; Linares, F.; Larson, F.; Wulff, A.; Engelsen, A.: NITROGEN FLUX, DENITRIFICATION AND MICROPHYTOBENTHIC NITROGEN RETENTION IN SEDIMENTS ALONG A DEPTH GRADIENT IN A MICROTIDAL FJORD	10:00 am	Kemp, P. F.; <u>Aller, J. Y.</u> : IS BACTERIAL DIVERSITY UNDERESTIMATED? A META-ANALYSIS OF PUBLISHED DATA
11:15 am	<u>Larson, F. M.</u> ; Sundbäck, K.: RESILIENCE AFTER HYPOXIA IN THE MICROSCOPIC COMMUNITY OF A SHALLOW-WATER MICROTIDAL SEDIMENT SYSTEM	10:15 am	<u>Crump, B. C.</u> ; Hopkinson, C. S.; Hobbie, J. E.: ESTUARINE BACTERIOPLANKTON: PHYSICAL AND BIOLOGICAL INFLUENCES ON GROWTH AND DIVERSITY
11:30 am	<u>Hatch, L. K.</u> ; O'Connor, B. L.; Brezonik, P. L.: DENITRIFICATION IN AGRICULTURAL STREAMS: A COMPARISON OF IN SITU METHODS	10:30 am	<u>Voytek, M. A.</u> ; Kirshtein, K. D.: SPATIAL AND TEMPORAL PATTERNS OF GENOTYPIC DIVERSITY IN AMMONIUM-OXIDIZING BACTERIA IN THE CHESAPEAKE BAY AND ONE OF ITS TRIBUTARIES
11:45 am	<u>Baker, M. A.</u> ; Hall, R. O.; Wurtsbaugh, W.: NITRATE UPTAKE DURING SNOWMELT IN A MOUNTAIN STREAM-LAKE ECOSYSTEM	11:00 am	Collier, J. L.; Baker, K. M.: DIVERSITY AND DISTRIBUTION OF UREA-DEGRADING MICROORGANISMS IN CHESAPEAKE BAY
12:00 pm	<u>Rick, S.</u> ; Twilley, R. R.; Baker, J. A.: BENTHIC NUTRIENT FLUXES IN A COASTAL WATERSHED INFLUENCED BY PULSED RIVER DIVERSIONS (CAERNARVON, LOUISIANA)	11:15 am	<u>Falcon, L. I.</u> ; Carpenter, E. J.; Cipriano, F.; Bergman, B.; Capone, D. G.: N <sub>2</sub> FIXATION BY UNICELLULAR CYANOBACTERIA IN THE TROPICAL NORTH ATLANTIC OCEAN
2:15 pm	<u>Marcarelli, A. M.</u> ; Wurtsbaugh, W. A.; Baker, M. A.: A COMPARATIVE STUDY OF NITROGEN-FIXATION RATES IN OLIGOTROPHIC LAKES AND STREAMS OF THE SAWTOOTH MOUNTAINS, IDAHO	11:30 am	<u>Burns, J. A.</u> ; Capone, D. G.: RESPONSE OF NITROGENASE ACTIVITY AND DIAZOTROPHIC COMMUNITY STRUCTURE TO REMOVAL OF AMMONIUM AND ADDITION OF GLUCOSE
2:30 pm	<u>Thomas, F. I.</u> ; Cornelisen, C. D.: HYDRODYNAMIC EFFECTS ON NUTRIENT UPTAKE BY THE BENTHOS: LINKS BETWEEN SMALL-SCALE PROCESSES AND NUTRIENT TRANSPORT IN ESTUARINE AND NEARSHORE SYSTEMS	11:45 am	<u>Jenkins, B. D.</u> ; Steward, G. F.; Short, S. M.; Ward, B. B.; Zehr, J. P.: DYNAMICS OF ESTUARINE DIAZOTROPH COMMUNITIES ASSAYED WITH DNA MACROARRAYS
2:45 pm	<u>Engstrom, S. J.</u> ; Marinelli, R. L.: RECRUITMENT RESPONSES TO SMALL SCALE GRADIENTS IN SEDIMENTARY HABITATS: A NEW EXPERIMENTAL METHOD AND INITIAL RESULTS	12:00 pm	Francis, C. A.; Cornwell, J. C.; Ward, B. B.: LINKING NITRITE REDUCTASE DIVERSITY TO ENVIRONMENTAL GRADIENTS AND ECOSYSTEM FUNCTION IN THE CHESAPEAKE BAY
3:00 pm	<u>Ackerman, J. D.</u> : BIOPHYSICAL STRUCTURING OF HYDRAULIC HABITATS: SUBSTRATE-FLOW-PERIPHYTON INTERACTIONS IN STREAMS	2:15 pm	Franck, V. M.; Brzezinski, M. A.: SPECIES-SPECIFIC SILICA PRODUCTION ESTIMATES FROM DIATOM ASSEMBLAGES IN THE EASTERN TROPICAL PACIFIC
3:15 pm	<u>Hamblen, J. M.</u> ; Burns, I. S.; Conklin, M. H.: TRIGGERS OF AEROBIC MICROBIAL METABOLISM WITHIN PARAFLUVIAL SEDIMENTS DURING MONSOONAL RAINS IN A SEMI-ARID RIPARIAN SYSTEM, UPPER SAN PEDRO RIVER, ARIZONA	2:30 pm	<u>Allen, A. E.</u> ; Ward, B. B.; Booth, M. G.; Frischer, M. E.; Verity, P. G.; Bronk, D. A.: RELATIONSHIP BETWEEN WATER COLUMN NITRATE UPTAKE AND COMMUNITY STRUCTURE BASED ON ASSIMILATORY NITRATE REDUCTASE GENES IN HETEROTROPHIC BACTERIA AND DIATOM
4:00 pm	<u>Hunt, H. L.</u> ; Chant, R. J.: TIDAL TRANSPORT OF POSTLARVAL BIVALVES IN A FLOOD-DOMINATED ESTUARY	2:45 pm	Taroncher-Oldenburg, G.; Francis, C. A.; Ward, B. B.: FUNCTIONAL DIVERSITY OF THE NITRITE REDUCTASE GENE (NIRS) ALONG THE ESTUARINE GRADIENT OF THE CHOPTANK RIVER/CHESAPEAKE BAY
4:15 pm	<u>Fries, J. S.</u> ; Taghon, G. L.; . .: EFFECT OF RIPPLES AND BEDLOAD ON FINE PARTICLE DEPOSITION TO PERMEABLE SEDIMENT BEDS	3:00 pm	<u>Song, B.</u> ; Ward, B. B.: HIGH AFFINITY NITRATE TRANSPORTERS IN MARINE PHYTOPLANKTON
4:30 pm	<u>Buesing, N.</u> ; Gessner, M. O.: CONTRIBUTION OF MICROBIAL SECONDARY PRODUCTION TO THE CARBON FLOW IN A LITTORAL REED BED	3:15 pm	Takabayashi, M.; Wilkerson, F. P.: EVALUATING CARBON AND NITROGEN ASSIMILATION BY DIATOMS USING MOLECULAR PROBES

THURSDAY

<sup>(\*)</sup> represents Invited presentations

3:30 pm	<u>Amarti, C.; Durkin, S.; Jeffrey, W. H.: ASSESSING THE FUNCTIONAL DIVERSITY OF MICROBIAL EXTRACELLULAR ENZYMES: EVIDENCE FOR GEOGRAPHIC PATTERNS AND IMPLICATIONS FOR DOC CYCLING</u>	11:15 am	<u>Gill, G. A.; Heim, W.; Coale, K.; Stephenson, M.; Foe, C.: MERCURY CYCLING AND TRANSPORT IN THE SAN FRANCISCO BAY-DELTA ECOSYSTEM AND ITS TRIBUTARIES: THE CALFED MERCURY PROJECT</u>
4:00 pm	<u>Twining, B. S.; Baines, S. B.; Fisher, N. S.; Landry, M. R.: OPENING THE 'BLACK BOX': ELEMENTAL STOICHIOMETRIES OF AUTOTROPHIC AND HETEROTROPHIC PROTISTS IN THE SOUTHERN OCEAN</u>	11:30 am	<u>Alpers, C. N.; Marvin-DiPasquale, M. C.; Kuwabara, J. S.; Stewart, R.; Saiki, M.; Krabbenhoff, D. P.; Taylor, H. E.; Kester, C. L.; Rye, R. O.: STUDIES OF MERCURY TRANSPORT, TRANSFORMATION, AND BIOACCUMULATION IN THE BEAR RIVER, CALIFORNIA: A WATERSHED Affected BY HISTORICAL GOLD MINING</u>
4:15 pm	<u>Teubner, K.; Donabaum, K.; Kabas, W.; Kirschner, A. T.; Pfister, G.; Salbrechter, M.; Dokulil, M. T.: ENHANCED PHOSPHORUS ACCUMULATION EFFICIENCY BY THE PELAGIC COMMUNITY AT REDUCED PHOSPHORUS SUPPLY: A LAKE EXPERIMENT FROM BACTERIA TO METAZOAN ZOOPLANKTON.</u>	11:45 am	<u>Domagalski, J. L.; Alpers, C. N.: MERCURY AND METHYLMERCURY CONCENTRATIONS AND LOADS WITHIN THE CACHE CREEK WATERSHED, CALIFORNIA, JANUARY 2000 THROUGH MAY 2001</u>
4:30 pm	<u>Bouman, H. A.; Platt, T.; Sathyendranath, S.; Li, W. K.; Horne, E. P.: THE RELATIONSHIP BETWEEN PHYTOPLANKTON COMMUNITY STRUCTURE AND THE PHOTOSYNTHESIS-IRRADIANCE PARAMETERS IN MID-LATITUDE COASTAL AND SHELF WATERS</u>	12:00 pm	<u>Thomas, B. A.; Gustin, M. S.: IDENTIFYING THE SOURCES OF TOTAL AND METHYL MERCURY IN THE ANTHROPOGENICALLY IMPACTED STEAMBOAT CREEK, NEVADA, USA</u>
4:45 pm	<u>Iglesias-Rodriguez, M. D.; Falkowski, P. G.; Medlin, L. K.; Hayes, P. K.: EXTENSIVE INTRASPECIFIC GENETIC DIVERSITY IN THE MARINE COCCOLITHOPHORID EMILIANIA HUXLEYI: IMPLICATIONS IN CARBON CYCLE STUDIES</u>	2:15 pm	<u>Stamenkovic, J.; Gustin, M. S.; Dennett, K. E.: NET METHYLMERCURY PRODUCTION IN CONSTRUCTED WETLANDS WITH THREE EXPERIMENTAL DESIGNS AT STEAMBOAT CREEK (NEVADA, USA)</u>
5:00 pm	<u>Kolber, Z. S.; Koblizek, M.; Falkowski, P. G.: AEROBIC PHOTOSYNTHETIC PHOTOHETEROTROPHS: A DEAD CLADE WALKING?</u>	2:30 pm	<u>Rudd, J. W.; St.Louis, V. L.; Kelly, C. A.; Bodaly, R. A.; Paterson, M.; Heyes, A.: THE RISE AND FALL OF MERCURY METHYLATION IN AN EXPERIMENTAL PEATLAND RESERVOIR.</u>
<b>SS3.20:</b> <b>Landscape and Land-use Influences on Methylmercury Contamination of Aquatic Resources</b>		2:45 pm	<u>Paterson, M. J.; Bodaly, R. A.; Hall, B.; Majewski, A. R.; Peech, K. A.; Rolphus, K. R.; St. Louis, V.: METHYLMERCURY IN NEW RESERVOIRS: THE FLOODED UPLANDS DYNAMICS EXPERIMENT</u>
Chair(s): James Wiener, wiener.jame@uwlax.edu David Krabbenhoff, dpkrabbe@usgs.gov		3:00 pm	<u>Rolphus, K. R.; Hurley, J. P.; Krabbenhoff, D. P.: MERCURY FLUXES AND SEDIMENT TRENDS FROM INUNDATED SOILS OF UPLAND BOREAL FOREST RESERVOIRS</u>
Location: 250 AB		3:15 pm	<u>Hall, B. D.; St.Louis, V. L.; Bodaly, R. A.; Rudd, J. W.; Kelly, C. A.: INCREASES IN EXPORTS OF METHYLMERCURY FROM RESERVOIRS CREATED OVER UPLAND FOREST AND WETLAND LANDSCAPES</u>
9:30 am	<u>Krabbenhoff, D. P.; Orem, W.; Aiken, G. R.; Gilmour, C. C.: LAND MANAGEMENT AND ECOSYSTEM EFFECTS OF METHYLMERCURY PRODUCTION AND BIOACCUMULATION IN THE FLORIDA EVERGLADES</u>	4:00 pm	<u>Gilmour, C. C.; Hurley, J. P.; Hintelmann, H.; Krabbenhoff, D. P.; Babiarz, C. L.; Heyes, A.; Harris, R.; Turner, M.; Bodaly, D.; Rudd, J. W.: METHYLATION OF HG DEPOSITED TO AQUATIC LANDSCAPES: A PRELIMINARY BUDGET FOR MEHG FORMED FROM HG STABLE ISOTOPE ADDITIONS TO METAALICUS LAKE 658</u>
9:45 am	<u>Lange, T. R.; Richard, D. A.; Sargent, B. E.: INTERACTIONS OF TROPHIC POSITION AND HABITAT WITH MERCURY BIOACCUMULATION IN FLORIDA EVERGLADES LARGEMOUTH BASS</u>	4:15 pm	<u>Blanchfield, P. J.; Paterson, M. J.; Podemski, C. L.; Hintelmann, H. H.; Rudd, J. W.: HOW DO CHANGES IN ATMOSPHERIC MERCURY DEPOSITION AFFECT METHYL MERCURY ACCUMULATION BY BIOTA? INITIAL RESULTS FROM THE METAALICUS EXPERIMENT</u>
10:00 am	<u>Wiener, J. G.; Jeremiason, J. D.; Knights, B. C.; Rolphus, K. R.; Sandheinrich, M. B.: CONNECTED WETLANDS INFLUENCE METHYLMERCURY CONCENTRATIONS IN LACUSTRINE FOOD WEBS IN THE VOYAGEURS NATIONAL PARK (MINNESOTA, USA)</u>	4:30 pm	<u>Heyes, A.; Gilmour, C. C.; Mason, R. P.; Heyes, D. B.; Miller, C. L.; Rearick, M. R.: THE INFLUENCE OF MICROBIAL ACTIVITY AND HG GEOCHEMISTRY ON THE PRODUCTION OF METHYLMERCURY IN BOREAL WATERSHEDS</u>
10:15 am	<u>Sandheinrich, M. B.; Drevnick, P. E.; Wiener, J. G.; Knights, B. C.; Jeremiason, J. D.: VARIATION IN REPRODUCTIVE HORMONES OF MALE NORTHERN PIKE ACROSS A LANDSCAPE GRADIENT IN METHYLMERCURY EXPOSURE</u>	4:45 pm	<u>Branfireun, B. A.; Krabbenhoff, D. P.; Heyes, A.: ASSESSING THE INFLUENCE OF BOREAL UPLAND ENVIRONMENTS ON MERCURY TRANSPORT AND SPECIATION: AN EXPERIMENTAL STABLE ISOTOPIC APPROACH</u>
10:30 am	<u>Marvin-DiPasquale, M. C.; Kieu, L. H.; Agee, J. L.; Harms, H. A.; Jaffe, B. E.: THE RHIZOSPHERE: A DYNAMIC ZONE FOR MERCURY TRANSFORMATIONS IN SALT MARSHES</u>		
11:00 am	<u>Kelly, C. A.; Rudd, J. W.; Holoka, M.: THE EFFECT OF PH ON HG(II) UPTAKE BY AN AQUATIC BACTERIUM AND IMPLICATIONS FOR HG CYCLING IN LAKES</u>		

† represents Tutorial presentations

**SS4.01:****Saline Lakes - Microbial Ecology and Biogeochemistry**

Chair(s):	James T. Hollibaugh, aquadoc@uga.edu
Location:	151 DEF
9:30 am	Oremland, R. S.: A PARADOX: ARSENIC OXYANIONS ARE IMPORTANT FACTORS IN THE MICROBIAL BIOENERGETICS OF MONO LAKE, CALIFORNIA <sup>(*)</sup>
9:45 am	Steward, G. E.; Zehr, J. P.; Jenkins, B. D.; Montoya, J. P.; Jellison, R. S.; Hollibaugh, J. T.: DIVERSE NITROGEN-FIXERS, BUT UNDETECTABLE NITROGEN FIXATION IN ALKALINE, HYPERSALINE, MEROMICTIC MONO LAKE, CALIFORNIA
10:00 am	Giri, B. J.; Bano, N.; Hollibaugh, J. T.: PHYLOGENETIC DIVERSITY OF RUBISCO GENE ALONG REDOX GRADIENT IN MONO LAKE, USA
10:15 am	Carini, S. A.; Joye, S. B.: PATTERNS OF AEROBIC METHANE OXIDATION AND METHANOTROPH COMMUNITY COMPOSITION DURING DEVELOPMENT OF THERMAL STRATIFICATION IN MONO LAKE, CALIFORNIA
10:30 am	Scholten, J. M.; Joye, S. B.; Hollibaugh, J. T.; Stams, A. J.; Murrell, C. J.: ANAEROBIC DEGRADATION OF GLYCINE-BETAINES IN MONO LAKE, A MODERATELY, HYPERSALINE, ALKALINE ENVIRONMENT.
11:00 am	Van Hove, P.; Vincent, W. F.; Wilmette, A.: DISTRIBUTION AND MOLECULAR ECOLOGY OF PICOCYANOBACTERIA IN HIGH ARCTIC MEROMICTIC LAKES
11:15 am	Doran, P. T.; Priscu, J. C.; McKay, C. P.; Fritsen, C. H.: LAKE VIDA: AN ICE-SEALED SALINE LAKE IN ANTARCTICA
11:30 am	Foreman, C. M.; Lyons, W. B.; Wolf, C. F.; Priscu, J. C.: MICROBIAL BIOGEOCHEMISTRY OF LAKES IN THE McMurdo DRY VALLEYS OF ANTARCTICA
11:45 am	Saros, J. E.; Osburn, C. L.; Fritz, S. C.: THE ROLE OF DISSOLVED ORGANIC MATTER IN REGULATING PRIMARY PRODUCTION IN SALINE LAKES OF THE GREAT PLAINS (USA)
12:00 pm	Sorokin, D. Y.; Muyzer, G.; Kuenen, J. G.: CULTURABLE FORMS OF SULFUR-OXIDIZING BACTERIA IN HYPERSALINE LAKES IN SOUTH SIBERIA AND MONGOLIA

**SS4.06:****Diversity, Ecology, and Biogeochemistry of Microbial Mats and Stromatolites**

Chair(s):	Ferran Garcia-Pichel, ferran@asu.edu
	Tori Hoehler, thoeehler@mail.arc.nasa.gov
	Brad Bebout, bbebout@mail.arc.nasa.gov
Location:	251 DE
11:00 am	Visscher, P. T.: UNDERSTANDING MICROBIAL MATS: SPATIAL AND TEMPORAL FLUCTUATIONS OF METABOLIC PROCESSES <sup>(*)</sup>
11:30 am	Des Marais, D. J.; Bebout, B. M.; Carpenter, S.; Discipulo, M.; Turk, K.: CARBON AND OXYGEN BUDGETS OF HYPERSALINE CYANOBACTERIAL MATS: EFFECTS OF DIEL CYCLE AND TEMPERATURE

11:45 am	Albert, D. B.; Hoehler, T. M.; DesMarais, D. J.; Turk, K. A.; Bebout, B. M.: ORGANIC ACID FLUXES FROM CYANOBACTERIAL MATS OVER DIEL CYCLES WITH NIGHTTIME ANOXIA
12:00 pm	Bebout, B. M.; Carpenter, S. P.; Hogan, M. E.: THE EFFECTS OF LOW SULFATE CONCENTRATIONS ON MODERN MICROBIAL MAT COMMUNITIES: A LONG TERM MANIPULATION
2:15 pm	Thamdrup, B.; Bebout, B. M.; Des Marais, D. J.: THE EFFECT OF SULFATE CONCENTRATION ON SULFUR CYCLING IN A PHOTOTROPHIC HYPERSALINE MICROBIAL MAT
2:30 pm	Lee, R. Y.; Joye, S. B.: THE IMPORTANCE OF MICROBIAL MATS IN THE C AND N CYCLE OF MANGROVE ECOSYSTEMS
2:45 pm	Lawson, J. L.; Doran, P. T.: STABLE ISOTOPE GEOCHEMISTRY OF MICROBIAL MATS AND SEDIMENTS IN TAYLOR VALLEY, ANTARCTICA
3:00 pm	Jonkers, H. M.; Ludwig, R.; DeWit, R.; DeBeer, D.: CARBON CYCLING IN A HYPERSALINE MICROBIAL MAT: A FUNCTIONAL ANALYSIS
3:15 pm	Henley, W.; Schneegurt, M.; Buchheim, M.; Miller, R.; Kirkwood, A.: SALT PLAINS MICROBIAL OBSERVATORY: ISOLATION AND CHARACTERIZATION OF HALOTOLERANT PROKARYOTES AND EUKARYOTES
3:30 pm	Treude, T.; Nauhaus, K.; Gieseke, A.; Knittel, K.; Boetius, A.; Joergensen, B. B.; Michaelis, W.: METHANOTROPHIC MICROBIAL MATS FORMING REEFS IN THE ANOXIC BLACK SEA
4:00 pm	Sørensen, K. B.; Canfield, D. E.; Teske, A.; Oren, A.: A MICROBIAL GARDEN WITHIN A GYPSUM CRUST. A BIOGEOCHEMICAL AND PHYLOGENETIC STUDY OF AN ENDOEVAPOTITIC, STRATIFIED BACTERIAL COMMUNITY FROM A SOLAR SALTERN
4:15 pm	Habicht, K. S.; Wieland, A.; Glud, R. N.; Kühl, M.: SULFUR CYCLING AND SULFUR ISOTOPE FRACTIONATION IN A HYPERTHERMAL MICROBIAL MAT OF YELLOWSTONE N.P.
4:30 pm	Kalanetra, K. M.; Nelson, D. C.; Joye, M. B.: NOVEL, VACUOLATE, SULFUR-OXIDIZING BACTERIA FROM COLD SEEPS AND HYDROTHERMAL VENTS
4:45 pm	Ward, D. M.: MATS AS MODELS FOR STUDYING THE DIVERSITY, ECOLOGY, EVOLUTION AND PHYSIOLOGY OF MICROORGANISMS WITHIN MODERN AND ANCIENT MICROBIAL COMMUNITIES <sup>(*)</sup>

**SS4.10:****Geomicrobiology of Hydrothermal Vents**

Chair(s):	Katrina J. Edwards, kedwards@whoi.edu
	Stefan M. Sievert, ssievert@whoi.edu
Location:	250 DE
9:30 am	Baross, J. A.: HYDROTHERMAL VENT MICROBIOLOGY: THE COEVOLUTION OF MICROORGANISMS AND THEIR GEO-ENVIRONMENT <sup>(*)</sup>
10:00 am	Holland, M. E.; Shock, E. L.: CALCULATING THE EXTREMES OF MICROBIAL HABITATS IN DEEP-SEA HYDROTHERMAL SYSTEMS <sup>(*)</sup>

THURSDAY

<sup>(\*)</sup> represents Invited presentations

- 10:15 am Edgcomb, V. P.; Kysela, D. K.; Teske, A.; Gomez, A. D.; Sogin, M. L.: EUKARYOTES IN HYDROTHERMAL ENVIRONMENTS<sup>(\*)</sup>
- 10:30 am Amend, J. P.; Rusch, A.; Rogers, K. L.: HYPERTHERMOPHILES FROM VULCANO (ITALY): COMMUNITY COMPOSITION, NOVEL ISOLATES, AND GEOCHEMICAL CONSTRAINTS<sup>(\*)</sup>
- 11:00 am Skoog, A.; Vlahos, P.; Amend, J.: CONCENTRATION, DISTRIBUTION AND COMPOSITION OF DISSOLVED NEUTRAL ALDOSES IN A SHALLOW HYDROTHERMAL SYSTEM.
- 11:15 am Svensson, E. L.; Skoog, A.; Amend, J. P.: CONCENTRATION, DISTRIBUTION AND COMPOSITION OF DISSOLVED AMINO ACIDS IN A SHALLOW HYDROTHERMAL SYSTEM
- 11:30 am Aguilar, C.; Cuhel, R. L.: MICROBIOGEOCHEMICAL ECOPHYSIOLOGY OF THE YELLOWSTONE LAKE GEOTHERMAL ECOSYSTEM
- 11:45 am Blake, R. E.; Coomber, S.; Surkov, A.: MICROBIAL ACTIVITY, P CYCLING, AND BIOMASS TEMPERATURE RECORDED IN DELTA O-18 OF PO4 IN DEEP-SEA HYDROTHERMAL VENT SYSTEMS
- 12:00 pm Emerson, D.: NEUTROPHILIC, MICROAEROBIC FE-OXIDIZING BACTERIA ISOLATED FROM THE LOIHI HYDROTHERMAL SITE.
- 2:15 pm Rogers, D. R.; Edwards, K. J.: GEOMICROBIOLOGY OF BASALT WEATHERING: THE IRON STORY
- 2:30 pm Moyer, C. L.: SPATIAL AND TEMPORAL TRANSITIONS BETWEEN IRON- & SULFUR-OXIDIZING BACTERIA IN RESPONSE TO SEISMIC ACTIVITY AND VOLCANIC ERUPTIONS AT TWO DIFFERENT VENT SYSTEMS<sup>(\*)</sup>
- 2:45 pm Sievert, S. M.; Wirsén, C. O.; Taylor, C. D.: DIVERSITY OF MICROORGANISMS INVOLVED IN FILAMENTOUS SULFUR FORMATION AT HYDROTHERMAL VENTS
- 3:00 pm Takai, K.: MODE OF SUBVENT BIOSPHERE IN VARIOUS DEEP-SEA HYDROTHERMAL SYSTEMS<sup>(\*)</sup>
- 3:15 pm Lam, P.; Cowen, J. P.; Jones, R. D.; Popp, B. N.: COMMUNITIES OF AUTOTROPHIC AMMONIA-OXIDIZING BACTERIA IN A SEDIMENTED VERSUS AN UNSEDIMENTED HYDROTHERMAL VENT SYSTEMS
- 3:30 pm Popp, B. N.; Cowen, J. P.; Jones, R. D.; Lam, P.; Rust, T. M.: THE FATE OF AMMONIUM IN HYDROTHERMAL PLUMES

#### **CS04: Bacteria (Posters)**

- Chair(s): Melissa Booth, booth@skio.peachnet.edu
- Location: Grand Ballroom (E-J)
166. Salerno, J. L.; Van Dover, C. L.: NUTRITIONAL CONTRIBUTION OF DUAL SYMBIOSIS DURING ONTOGENESIS IN DEEP-SEA MUSSELS
167. Braxton, J. H.; Booth, M. G.; Broftt, J. E.; Frischer, M. E.: DETECTION AND IDENTIFICATION OF HETEROOTROPHIC BACTERIA EXPRESSING NITRATE REDUCTASE IN TWO FRESHWATER LAKES OF THE ADIRONDACKS

#### **CS12: Coral Reefs (Posters)**

- Chair(s): Allison Beauregard, isopod@udel.edu
- Location: Grand Ballroom (E-J)
168. Mydlarz, L. D.; Jacobs, R. S.: PHYSIOLOGICAL AND ECOLOGICAL SIGNIFICANCE OF TERPENE SYNTHESIS IN THE SYMBIOTIC ASSOCIATION OF THE GORGONIAN CORAL PSEUDOPECTEROGRAPHIA ELISABETHAE
169. Wegley, L.; Casas, V.; Kline, D.; Breitbart, M.; Rohwer, F.: BACTERIAL COMMUNITIES ASSOCIATED WITH HEALTHY AND DISEASED ACROPORA spp.

#### **CS23: Molecular Biology (Posters)**

- Chair(s): Slava Epstein, s.epstein@neu.edu
- Location: Grand Ballroom (E-J)
170. Zrotalova, K.; Dousova, H.; Tichy, M.; Komenda, J.; Prasil, O.: MOLECULAR STUDY ON THE ACCLIMATION OF PHOTOSYNTHESIS IN TWO MARINE PHYTOPLANKTON SPECIES
171. Countway, P. D.; Caron, D. A.; Gast, R. J.; Dennett, M. R.; Schnetzer, A.; Travao, M. J.: COMMUNITY FINGERPRINTS OF EUKARYOTIC MARINE MICROBES AT A COASTAL TIME-SERIES STATION
172. McCarren, J.; Brahamsha, B.: GENE CLUSTERS REQUIRED FOR SWIMMING MOTILITY IN MARINE SYNECHOCOCCUS
173. Caron, D. A.; Gast, R. J.; Countway, P. D.; Schnetzer, A.; Moran, D. M.; Dennett, M. R.; Travao, M.: UNICELLULAR EUKARYOTIC BIODIVERSITY IN ENVIRONMENTAL SAMPLES FROM THE WESTERN NORTH ATLANTIC AND EASTERN NORTH PACIFIC

#### **CS26: Organic Carbon Dynamics (Posters)**

- Location: Grand Ballroom (E-J)
174. Hung, C. C.; Guo, L.; Schultz, Jr., G. E.; Pinckney, J. L.; Santschi, P. H.: PRODUCTION AND FLUX OF CARBOHYDRATE SPECIES IN MARINE ENVIRONMENTS
175. Lorenson, T. D.; Ussler III, W.; Dougherty, J. A.; Paull, C. K.; Mitra, S.; Keaten, R.; Kvenvolden, K. A.; Leifer, I.; Harris, J.: DISSOLVED METHANE CONCENTRATIONS ADJACENT TO NATURAL OIL AND GAS SEEPS OFFSHORE POINT CONCEPTION, CALIFORNIA
176. Stets, E. G.; Cotner, J. B.: EVIDENCE OF P-LIMITED BACTERIAL CARBON CONSUMPTION IN LAKE SUPERIOR
177. Gustafson, E.; Zhao, X.; Perney, G.; Robertson, B.; Button, D.: MICROBIAL ADAPTATIONS TO EXTREMELY OLIGOTROPHIC ENVIRONMENTS
178. Sepulveda, J. C.; Pantoja, S. C.; Gonzalez, H. E.: DECOMPOSITION OF SINKING PROTEINACEOUS MATERIAL IN THE OXYGEN MINIMUM ZONE (OMZ) OFF NORTHERN CHILE

<sup>(\*)</sup> represents Tutorial presentations

**CS36:  
Ultraviolet Radiation (Posters)**

- Chair(s): Kenia Whitehead, kenia@u.washington.edu  
 Location: Grand Ballroom (E-J)
179. Young, D.; Holm, J.; Riedel, A.; Huebner, J.; Loadman, N.; Bollman, R.: MORPHOLOGICAL AND BEHAVIORAL RESPONSES OF BROOK STICKLEBACK (*CULAEA INCONSTANS*) TO INCREASED UV-B EXPOSURE UNDER LABORATORY CONDITIONS
180. Huebner, J.; McClintock, L.; Loadman, N.; Young, D.; Bollman, R.: VERTICAL AND HORIZONTAL MOVEMENT OF FOUR SPECIES OF CLADOCERANS IN RESPONSE TO UV AND FISH IN LABORATORY CONDITIONS
181. Sanders, R. W.; Sung, T.: TOLERANCE TO UV-B RADIATION IN A MARINE CILIATE: DARK REPAIR & PHOTOPROTECTION (DRPP) VERSUS PHOTOENZYMIC REPAIR
182. Loadman, N.; Prosick, T.; Huebner, J.; Bollman, R.; Young, D.: EFFECTS OF UV RADIATION, COMPETITION AND UV-IRRADIATED FOOD ON SURVIVAL AND REPRODUCTION IN *DAPHNIA MAGNA* AND *DAPHNIA PULEX* IN LABORATORY EXPERIMENTS
183. Pakulski, J. D.; Baldwin, A. J.; Lempa, J.; Neale, P. J.; Jeffrey, W. H.: RESPONSE OF HETEROTROPHIC BACTERIA TO ULTRAVIOLET RADIATION IN THE GULF OF MEXICO

**CS40:  
Physical Limnology - New Perspectives and Applications to Biogeochemistry and Productivity of Aquatic Ecosystems (Posters)**

- Chair(s): Sally MacIntyre, sally@icess.ucsb.edu  
 Location: Grand Ballroom (E-J)
184. Pasour, V. B.; Valdivia, F. R.; Ellner, S. P.; Cowen, E. A.: INTERACTION OF PLANKTON BEHAVIOR AND HYDRODYNAMICS in a Freshwater Embayment
185. Hansen, A. A.; Noernberg, P.; Merrison, J.; Lomstein, B. A.; Finster, K.: MARS SIMULATION FACILITY FOR MICROBIOLOGICAL EXPERIMENTS
187. Delavan, S. K.; Hodges, B. R.: LIMITATIONS OF THE SHALLOW WATER EQUATIONS FOR MODELING STRATIFIED WATER BODIES
188. Childress, T. D.; Seitz, R. D.: THE EFFECTS OF SHORELINE DEVELOPMENT ON THE BENTHIC COMMUNITY AND ITS PREDATORS
189. Davis, J. M.; Moser, K. A.; Chan, M. A.; Graham, T.; Southam, G.: POTHOLE OF THE COLORADO PLATEAU: PHYSICAL AND CHEMICAL PROPERTIES OF A UNIQUE AQUATIC ENVIRONMENT

**SS4.01:  
Saline Lakes - Microbial Ecology and Biogeochemistry (Posters)**

- Chair(s): James T. Hollibaugh, aquadoc@uga.edu  
 Location: Grand Ballroom (E-J)
190. Tiffany, M. A.; González, M. R.; Swan, B. K.; Watts, J. M.; Reifel, K. M.; Hurlbert, S. H.: PHYTOPLANKTON DYNAMICS OF THE SALTON SEA, A LARGE SALINE LAKE IN CALIFORNIA
191. Pineiro, S. A.; Stine, O. C.; Smith, R.; Williams, H. N.: MOLECULAR DIVERSITY OF *BDELOVIBRIO*-LIKE ORGANISMS (BLO) FROM THE GREAT SALT LAKE, UTAH
192. Budinoff, C. R.; Hollibaugh, J. T.: ECOLOGY AND PHYSIOLOGY OF A PHYLOGENETICALLY UNIQUE *SYNECHOCOCCUS* FROM MONO LAKE
193. Hollibaugh, J. T.; Humayoun, S.; Bano, N.; Jellison, R. E.: DIVERSITY OF BACTERIA IN ALKALINE, HYPERSALINE MONO LAKE, CALIFORNIA, DURING A PERIOD OF MEROMIXIS<sup>(\*)</sup>

**SS4.03:  
What is Special About Food Webs in Extreme Environments? (Posters)**

- Chair(s): Ursula Gaedke, gaedke@rz.uni-potsdam.de  
 Location: Grand Ballroom (E-J)
194. Dreher, N.; Spindler Joris, J.: FAST PLANKTON COMMUNITY RESPONSES IN A CHANGING PH AND PHOSPHORUS ENVIRONMENT.
195. Knick, K. E.; Van Dover, C. L.: CHARACTERIZATION OF MUSSEL BEDS AT BLAKE RIDGE METHANE HYDRATE SEEP
196. Blankenship, L. E.; Yayanos, A. A.: DETERMINING THE TROPHIC LINKS OF LYSIANASSOID AMPHIPODS INHABITING THE TONGA AND KERMADEC TRENCHES VIA MITOCHONDRIAL DNA-BASED TECHNIQUES
197. Brucet, S.; Quintana, X. D.; Guisande, C.; Badosa, A.; López-Flores, R.; Moreno-Amich, R.: INTRASPECIFIC FOOD NICHE PARTITIONING AMONG ZOOPLANKTON SPECIES IN MEDITERRANEAN SALT MARSHES.

**SS4.04:  
Symbiosis and Syntrophy in Extreme Environments (Posters)**

- Chair(s): Nicole Dubilier, ndubilie@mpi-bremen.de  
 Location: Grand Ballroom (E-J)
198. Freytag, J. K.; Smith, R. M.; Breault, S. R.; Jones, C. S.; Hourdez, S. M.; Flores, J. F.; Fisher, C. R.: DIFFERENT SULFIDE ACQUISITION STRATEGIES ALLOW CO-OCCURRING HYDROCARBON SEEP TUBEWORM SPECIES TO EXPLOIT DIFFERENT SULFIDE SOURCES

THURSDAY

<sup>(\*)</sup> represents Invited presentations

199. Nielson, K. E.; Gilhooly, W. P.; Formolo, M. J.; Lyons, T. W.; Macko, S. A.; Fisher, C. R.: SULFUR GEOCHEMICAL EVIDENCE FOR ENHANCED SULFATE TRANSPORT BY VESTIMENTIFERAN TUBEWORMS
200. Horak, R. E.; Forsyth, M.; Van Dover, C. L.: DOES SULFIDE OXIDATION IN MARINE BEGGIATOA spp. PRODUCE LIGHT?

**SS4.05:**  
**Microbial Genomics: Resolving the Adaptive Strategies of Bacteria from Extreme Environments (Posters)**

- Chair(s): Craig Cary, caryc@udel.edu  
 Location: Grand Ballroom (E-J)
201. Simbahan, Jessica.; Redfield, Elizabeth.; Schelert, James.; Blum, Paul.: MICROBIAL ECOLOGY OF A MERCURY HOT SPRINGS
202. Schoenfeld, T.; Rohwer, F.; Godiska, R.; Patterson, M.; Sheets, L.; Mead, D. A.: COMMUNITY GENOMICS OF A BOILING THERMAL POOL

**SS4.06:**  
**Diversity, Ecology, and Biogeochemistry of Microbial Mats and Stromatolites (Posters)**

- Chair(s): Ferran Garcia-Pichel, ferran@asu.edu  
 Location: Grand Ballroom (E-J)
203. Glazer, B. T.; Luther III, G. W.; Cary, S. C.: DIURNAL CHARACTERIZATION OF CHEMICAL AND MICROBIAL COMPONENTS IN A MID-ATLANTIC SALTMARSH MICROBIAL MAT
204. Wade, B. D.; Garcia-Pichel, F.: EVALUATION OF DNA EXTRACTION METHODS FOR MOLECULAR ANALYSES OF MICROBIAL COMMUNITIES IN MODERN CALCAREOUS MICROBIALITES
205. Rothrock, M. J.; Garcia-Pichel, F.: COMMUNITY STRUCTURE AND DIVERSITY OF CYANOBACTERIAL AND BACTERIAL POPULATIONS IN INTERTIDAL MICROBIAL MATS
206. Marschall, S. M.; Fritsen, C. H.; Mosier, A. C.: VIRUSES WITHIN BENTHIC CYANOBACTERIAL MAT, DRY VALLEY LAKES, ANTARCTICA
207. Baumgartner, L. K.; Buckley, D. H.; Reid, R. P.; Visscher, P. T.: THE EFFECTS OF COMMUNITY STRUCTURE ON BIOGEOCHEMICAL PROCESSES WITHIN STROMATOLITES

THURSDAY

**SS4.07:**  
**Microbiology and Biogeochemistry of Cold Seeps (Posters)**

- Chair(s): Antje Boetius, aboetius@mpi-bremen.de  
 Location: Grand Ballroom (E-J)
208. Mills, H. J.; Martinez, R. J.; Hodges, C.; Wilson, K.; Macdonald, I.; Sobecky, P. A.: MOLECULAR DIVERSITY AND ACTIVITY OF MICROBIAL COMMUNITIES ASSOCIATED WITH SHALLOW, EXPOSED GAS HYDRATES IN THE GULF OF MEXICO
209. Haese, R. R.; Meile, C.; Van Cappellen, P.; De Lange, G.: METHANE DYNAMICS IN COLD SEEPS OF THE EASTERNMEDITERRANEAN SEA: MODEL RESULTS
210. Cordes, E. E.; Arthur, M.; Freytag, J. K.; Bergquist, D. C.; Shea, K.; Arvidson, R.; Fisher, C. R.: STEADY-STATE DIAGENETIC MODEL OF HYDROGEN SULFIDE SUPPLY TO AGGREGATIONS OF THE HYDROCARBON SEEP VESTIMENTIFERAN LAMELLIBRACHIA LUYMESI
211. Zhang, C.; Sassen, R.; Lyons, T.; Pancost, R.: LIPID BIOMARKERS AND CARBON ISOTOPE COMPOSITIONS OF BEGGIATOA MATS IN THE GULF OF MEXICO HYDROCARBON SEEPS

**SS4.08:**  
**Life in Ice (Posters)**

- Chair(s): Jody W. Deming, jdeming@u.washington.edu  
 Location: Grand Ballroom (E-J)
212. Baldwin, A. J.; Paniker, L.; Jeffrey, W. H.; Mitchell, D. L.: BACTERIAL SURVIVAL AND DIVERSITY IN GREENLAND ICE
213. Mikucki, J. A.; Foreman, C. F.; Raymond, J. A.; Turner, P. L.; Priscu, J. C.: BLOOD FALLS, ANTARCTICA: A UNIQUE SUBGLACIAL TRANSITION ZONE

**SS4.11:**  
**Biochemistry in Extreme Environments (Posters)**

- Chair(s): Cordelia Arndt, coarndt@uni-greifswald.de  
 Location: Grand Ballroom (E-J)
214. CARO, A.; GOT , P.; GROS, O.: A COMBINATION OF SEVERAL FLUORESCENT DYES TO ASSESS THE VIABILITY OF A SULPHIDE-OXYDIZING ENDOSYMBIOTIC BACTERIA
215. Shank, T. M.: FROM CHEMICAL SPECIATION TO GENOMIC FINGERPRINTS: IDENTIFYING THE SPATIAL AND TEMPORAL MECHANISMS STRUCTURING COMMUNITIES ON THE EAST PACIFIC RISE

(†) represents Tutorial presentations

**Friday, February 14, 2003****CS10:****Climate Change, Interannual/Interdecadal Variation and Global Change**

Chair(s): Christian Fritsen, cfritsen@dri.edu

Catherine O'Reilly, caoreilly@vassar.edu

Location: 250 DE

8:30 am Fritsen, C. H.; Stewart, F. S.; Marschall, S. M.; Memmott, J. C.; Hartsough, P. C.; Cunningham, L. M.; Boc, J.; Blees, M. K.; Adkins, P.: INTERANNUAL VARIATION IN WINTER SEA ICE BIOTA: RESPONSE TO INTERANNUAL VARIABILITY IN SEA ICE FORMATION ALONG THE WESTERN ANTARCTIC PENINSULA

8:45 am Schindler, D. E.; Rogers, D. E.; Scheuerell, M. D.; Abrey, C. A.: DETECTING CLIMATIC EFFECTS ON ECOLOGICAL DYNAMICS IN SYSTEMS WITH DENSITY-DEPENDENCE: AN EXAMPLE FROM RECENT CLIMATE CHANGE IN ALASKA

9:00 am McMaster, N. L.; Schindler, D. W.: PHYSICAL AND CHEMICAL LIMNOLOGY OF ALPINE PONDS: AN INCREASE IN EXTREMES WITH CLIMATE CHANGE

9:15 am Harvey, M.; Gilbert, D.; Galbraith, P. S.; Chabot, D.: INTERANNUAL CHANGES IN THE MACROZOOPLANKTON COMMUNITY STRUCTURE IN THE GULF OF ST. LAWRENCE ASSOCIATED WITH INTERDECADAL CHANGES IN THE CIL CORE TEMPERATURE

9:30 am Rusak, J. A.; Kratz, T. K.; Benson, B. J.; Montz, P. M.; Meinke, T. M.; Carpenter, S. R.: PHYSICAL AND BIOLOGICAL RESPONSES TO CLIMATE WARMING IN NORTH-TEMPERATE LAKES

10:15 am Sharp, J. H.: BROAD USE OF COMPARABLE ANALYTICAL METHODS: THE NEED FOR BETTER INTERCALIBRATIONS IN ROUTINE AQUATIC STUDIES

10:30 am Lehman, P. W.: THE INFLUENCE OF CLIMATE ON MECHANISTIC PATHWAYS THAT AFFECT FOOD WEB PRODUCTION IN NORTHERN SAN FRANCISCO BAY ESTUARY

10:45 am O'Reilly, C. M.; Alin, S. R.; Plisnier, P. D.; Cohen, A. S.; McKee, B. A.: CLIMATE WARMING DECREASES AQUATIC ECOSYSTEM PRODUCTIVITY OF LAKE TANGANYIKA, EAST AFRICA

11:00 am Sullivan, M. C.; Cowen, R. K.: ATMOSPHERE-OCEAN FORCING OF RECRUITMENT IN A NORTHWEST ATLANTIC FLATFISH

11:15 am Winder, M.; Schindler, D. E.; Hampton, S. E.: CLIMATIC IMPACTS ON INTERANNUAL ZOOPLANKTON VARIABILITY

**CS23:****Molecular Biology**

Chair(s): Slava Epstein, s.epstein@neu.edu

Location: 151 ABC

8:30 am Zehr, J. P.; Jenkins, B. D.; Short, S. M.; Steward, G. F.; Ward, B. B.; Jackson, G. A.: BIOMOLECULAR COMPLEXITY, BIOINFORMATICS AND MICROMANAGEMENT OF MICROARRAYS OF NITROGENASE GENES

8:45 am Stoeck, T.; Taylor, G.; Epstein, S.: RIBOSOMAL RNA DIVERSITY OF PROTISTS IN MARINE SUBOXIC AND ANOXIC ENVIRONMENTS

9:00 am Smith, M. C.; Paul, J. H.; Fries, D. P.: DEVELOPING NASBA FOR REAL TIME DETECTION OF MICROBIAL RNA TARGETS IN THE MARINE ENVIRONMENT

9:15 am Foster, R. A.; Carpenter, E. J.; Cipriano, F.: UNVEILING THE PHYLOGENY OF CYANOBIONTS IN TROPICAL MARINE DINOPHYSOID, RADIOLARIAN, AND TINTINNID HOSTS

9:30 am Morris, R. M.; Rappe, M. S.; Urbach, E.; Wright, T. D.; Vergin, K. L.; Connon, S. A.; Giovannoni, S. J.: DIRECT CELL COUNTS REVEAL MESOPELAGIC DISTRIBUTION OF THE GREEN NON-SULFUR (GNS) RELATED SAR202 BACTERIOPLANKTON GROUP

**CS31:****Remote Sensing and Technological Tools**

Chair(s): Tiffany Moisan, tmoisan@osb.wff.nasa.gov

Location: 150 DEF

8:30 am Fries, D.; Farmer, A.; Broadbent, H.; Steimle, G.; Janowiak, M.; Natarajan, S.; Ivanov, S.: PCB MEMS (MICROELECTROMECHANICAL SYSTEMS) FOR MARINE SENSING

8:45 am Katz, J.; Malkiel, E.; Sheng, J.; Strickler, J. R.: DIGITAL HOLOGRAPHIC CINEMATOGRAPHY APPLIED TO DETERMINE ZOOPLANKTON FLOW FIELDS

9:00 am Allison, D. B.; Stramski, D.; Mitchell, B. G.: SATELLITE OBSERVATIONS OF VARIATIONS IN PARTICULATE ORGANIC CARBON IN THE SOUTHERN OCEAN

9:15 am Balch, W. M.; Drapeau, D. T.; Bowler, B. C.; Booth, E. S.; Goes, J. I.; Gordon, H. R.: REMOTE SENSING CALCIUM CARBONATE FROM SPACE- USE OF A FIVE YEAR COASTAL TIME SERIES TO UNDERSTAND COCCOLITHOPHORE ECOLOGY

9:30 am Moisan, T. A.; Ellisman, M. E.; Sosinsky, G.: CHARACTERIZING PHAEOCYSTIS ANTARCTICA CHLOROPLASTS USING ELECTRON TOMOGRAPHY

**SS1.03:****Groundwater/Surface Water Interactions**

Chair(s): Stephen Opsahl, sopsahl@jonesctr.org

Matthew A. Charette, mcharette@whoi.edu

Kevin Kroeger, kroeger@bu.edu

Location: 251 AB

8:30 am Burnett, W. C.; Bokuniewicz, H.; Huettel, M.; Moore, W. S.; Taniguchi, M.: GROUNDWATER-SEAWATER INTERACTIONS IN THE COASTAL ZONE<sup>(\*)</sup>

9:00 am Cable, J. E.; Martin, J. B.; Swarzenski, P. W.; Steward, J.: GROUND WATER ADVECTION AND SHALLOW PORE WATER MIXING IN SEDIMENTS OF A COASTAL LAGOON, FLORIDA

9:15 am Sholkovitz, E. R.; Charette, M. A.; Allen, M. C.; Herbold, C. W.; Rago, A.; Testa, J. M.: THE BIOGEOCHEMISTRY OF THE SUBTERRANEAN ESTUARY UNDER WAQUOT BAY: CYCLES OF FE, MN, P, BA AND U.

FRIDAY

<sup>(\*)</sup> represents Invited presentations

9:30 am	Kroeger, K. D.; Charette, M. A.; Testa, J. M.; Allen, M. C.; Rago, A.; Herbold, C. W.; Sholkovitz, E. R.: NITROGEN CYCLING IN A SUBTERRANEAN ESTUARY
10:00 am	Snyder, M. T.; Taillefert, M.; Ruppel, C.: REDOX CHEMICAL ZONATION AT THE SALINITY TRANSITIONS OF A SURFICIAL COASTAL AQUIFER
10:15 am	Charette, M. A.; Sholkovitz, E. R.; Herbold, C. W.: A DYE-DILUTION BASED SEEPAGE METER FOR THE AUTONOMOUS TIME-SERIES MEASUREMENT OF SUBMARINE GROUNDWATER DISCHARGE
10:30 am	Chanton, J. P.; Burnett, W. C.; Dulaiova, H.; Corbett, D. R.; Taniguchi, M.: SEEPAGE RATE VARIABILITY IN FLORIDA BAY DRIVEN BY ATLANTIC TIDAL HEIGHT
10:45 am	Krest, J. M.; Harvey, J. W.: USING NATURAL DISTRIBUTIONS OF SHORT-LIVED RADIUM ISOTOPES TO QUANTIFY GROUNDWATER DISCHARGE AND RECHARGE IN THE EVERGLADES <sup>(*)</sup>
11:00 am	McCorkle, D. C.; Gramling, C. M.; Mulligan, A. E.; Woods, T. L.: A CARBON ISOTOPE METHOD TO QUANTIFY ARTESIAN GROUNDWATER DISCHARGE AT THE LAND-SEA INTERFACE
11:15 am	Gramling, C. M.; Charette, M. A.; McCorkle, D. C.; Herbold, C.: MULTI-TRACER MEASUREMENTS OF GROUNDWATER DISCHARGE TO COASTAL WATERS

### **SS3.05: Significance of Small-scale Benthic Processes for Large Ecosystems**

Chair(s):	Douglas C. Miller, dmiller@udel.edu
Location:	Kevin R. Carman, zocarm@lsu.edu
150 G	
8:30 am	Thistle, D.: HARPACTICOID COPEPOD EMERGENCE AT A SHELF SITE IN SUMMER AND WINTER: IMPLICATIONS FOR HYDRODYNAMIC AND MATING HYPOTHESES
8:45 am	Escobar-Briones, E.; Diaz, C.; Salas, J. A.; Hernandez, D. R.: PELAGIC-BENTHIC COUPLING INSIGHTS TO LONG-TERM VARIABILITY IN TROPICAL DEEP-SEA BENTHOS
9:00 am	Nunnally, C. C.; Rowe, G. T.: MACROBENTHIC ECOLOGY OF COLD SEEPS IN THE NORTHERN GULF OF MEXICO
9:15 am	Ward, J. E.; Levinton, J. S.; Shumway, S. E.: PRE-INGESTIVE FEEDING STRATEGIES OF BIVALVES: CONNECTING PALLIAL CAVITY FUNCTION TO ECOSYSTEM PROCESSES
9:30 am	Levinton, J. S.; Wong, W. H.: THE BENTHIC-ZOOPLANKTON TROPHIC LOOP: FEEDING AND ASSIMILATION OF MESOZOOPLANKTON BY BENTHIC SUSPENSION FEEDERS AND IMPLICATIONS FOR FOOD WEB STRUCTURE
10:15 am	Porter, E. T.; Kim, E. H.; Mason, R. P.; Reardon, M.; Sanford, L. P.; Soulen, H.: THE EFFECT OF HARD CLAMS ( <i>MERCENARIA MERCENARIA</i> ) AND MUDDY SEDIMENT RESUSPENSION ON WATER COLUMN DYNAMICS IN SCALED BENTHIC-PELAGIC COUPLING EXPERIMENTS
10:30 am	Kelaher, B. P.; Levinton, J. S.: IMPORTANCE AND CAUSES OF ASYNCHRONOUS POPULATION DYNAMICS IN SOFT-SEDIMENT COMMUNITIES

10:45 am	Butler, M. J.; Dolan, T. W.: FROM INDIVIDUALS TO ECOSYSTEMS USING SPATIALLY-EXPLICIT INDIVIDUAL-BASED MODELING
11:00 am	Dierssen, H. M.; Zimmerman, R. C.: LARGE-SCALE BENTHIC ECOLOGY: SEAGRASS PRIMARY PRODUCTION FROM SPACE

### **SS3.07: Does Microbial Diversity Matter in Ecosystem Function?**

Chair(s):	Bess Ward, bbw@princeton.edu
Location:	151 G
8:30 am	Suzuki, M. T.; Preston, C. M.; Béjà, O.; DeLong, E. F.: TOWARDS ABSOLUTE QUANTIFICATION OF RIBOSOMAL DNA, RIBOSOMAL RNA, AND EXPRESSED GENES IN NATURAL SAMPLES: PROTEORHODOPSIN GENES AND MESSENGER RNA AS A TEST CASE
8:45 am	Koblizek, M.; Falkowski, P. G.; Kolber, Z. S.: MARINE AEROBIC PHOTOSYNTHETIC BACTERIA: NEW METABOLIC STRATEGY IN THE OCEAN
9:00 am	Jayakumar, D. A.; Francis, C. A.; Shailaja, M. S.; Naik, H.; Naqvi, S. W.; Ward, B. B.: DIVERSITY OF NITRITE REDUCTASE GENES IN THE ARABIAN SEA WATER COLUMN
9:15 am	Malmstrom, R. R.; Kiene, R. P.; Kirchman, D. L.: ASSIMILATION OF DMSP BY A LARGE AND DIVERSE GROUP OF MARINE BACTERIA
9:30 am	Gulmann, L. K.; Molineaux, L. S.: METABOLIC CONTRIBUTIONS FROM DIGESTIVE Symbionts OF THE FIDDLER CRAB UCA PUGNAX

### **SS3.10: Emergent Properties and Biocomplexity of Tropical Ecosystems**

Chair(s):	Illa C. Feller, feller@serc.si.edu
Location:	251 C
8:30 am	Lovelock, C. E.; Ball, M. C.; Engelbrecht, B. M.; Feller, I. C.: PRODUCTIVITY IN MANGROVE CANOPIES ACROSS ENVIRONMENTAL GRADIENTS <sup>(*)</sup>
9:00 am	Feller, I. C.; Lovelock, C. E.; McKee, K. L.: EFFECTS OF NUTRIENT OVER-ENRICHMENT ON EMERGENT PROPERTIES OF MANGROVE ECOSYSTEMS <sup>(*)</sup>
9:15 am	Scharler, U. M.; Ulanowicz, R. E.: SYSTEM-LEVEL DIFFERENCES AMONG THREE MANGROVE COMMUNITIES ON TWIN CAYS, BELIZE <sup>(*)</sup>

### **SS3.15: Coupling Seagrass Dynamics to Water Column and Sediment Geochemistry**

Chair(s):	Peter Eldridge, eldridge.pet@epamail.epa.gov
	James Kaldy, kaldy.jim@epa.gov
Location:	250 AB
8:30 am	Aumack, C. F.; Dunton, K. H.; Maffione, R. A.: LINKING WATER TURBIDITY AND TSS LOADING TO KELP PRODUCTION WITHIN THE STEFANSSON SOUND BOULDER PATCH

8:45 am	<u>Cornelisen, C. D.</u> ; Thomas, F. I.: APPLICATION OF ISOTOPE LABELS FOR ISOLATING THE EFFECTS OF HYDRODYNAMIC REGIME ON NUTRIENT UPTAKE BY MAJOR COMPONENTS OF A SEAGRASS COMMUNITY <sup>(*)</sup>	9:00 am	Omorige, E. O.; Crumbliss, L. L.; Bebout, B. M.; Zehr, J. P.: NIFH DIVERSITY AND EXPRESSION IN LYNGBYA SP. AND MICROCOLEUS SP. MICROBIAL MATS FROM GUERRERO NEGRO, MEXICO.
9:00 am	<u>Cifuentes, L. A.</u> ; Kaldy, J.; Jones, W. B.: USING STABLE CARBON ISOTOPES TO LINK BACTERIA AND SEAGRASSES: FIELD AND LABORATORY EXPERIMENTS <sup>(*)</sup>	9:15 am	Dillon, J. G.; Miller, S. R.; Bebout, B.; Crump, A.; Sogin, M.; Stahl, D. A.: DIVERSITY OF SULFATE-REDUCING PROKARYOTES ACROSS A REDOX BOUNDARY IN A HYPERSALINE MICROBIAL MAT
9:15 am	<u>Jaffe, R.</u> ; Mead, R. N.; Yunping, X.: SEDIMENTARY ORGANIC MATTER SOURCES IN FLORIDA BAY AS REVEALED THROUGH MOLECULAR MARKER ANALYSIS AND COMPOUND SPECIFIC STABLE ISOTOPE MEASUREMENTS.	9:30 am	Groetschel, S.: CAPACITIES OF MICROBIAL MATS: UNEXPECTED DEPENDENCE OF PHOTOSYNTHESIS ON OXYGEN CONCENTRATION
9:30 am	<u>Zimmerman, R. C.</u> ; Burdige, D. J.: OCEANIC AND DIAGENETIC CONTROLS OF SEAGRASS DISTRIBUTIONS ON THE BAHAMAS BANKS <sup>(*)</sup>	9:45 am	Pringault, O.; Buffan-Dubau, E.; De Wit, R.: ARTIFICIAL COLD-ADAPTED MICROBIAL MATS CULTURED FROM ANTARCTIC LAKE SAMPLES: SHORT-TERM TEMPERATURE EFFECTS ON THE OXYGEN TURN-OVER
10:15 am	<u>Burdige, D. J.</u> ; Zimmerman, R. C.: SEDIMENT-SEAGRASS INTERACTIONS AND CARBONATE DISSOLUTION: SCALING UP THE LOCAL RATES OF THESE PROCESSES TO EXAMINE REGIONAL CARBON BUDGETS <sup>(*)</sup>	10:15 am	Miller, S. R.: EVIDENCE FOR THE ADAPTIVE EVOLUTION OF THE CARBON FIXATION GENE rbcL DURING DIVERSIFICATION IN TEMPERATURE TOLERANCE OF A CLADE OF HOT SPRING CYANOBACTERIA
10:30 am	<u>Peyer, S. M.</u> ; Young, D.; Lee, R. W.: EFFECTS OF SULFIDE ON PHOTOSYNTHESIS AND RESPIRATION IN ZOSTERA MARINA AND Z. JAPONICA	10:30 am	Pinckney, J. L.; Stepe, T. F.; Paerl, H. W.: PHOTOACCLIMATION RESPONSES OF MICROBIAL MATS ALONG A DEPTH GRADIENT IN A HYPERSALINE POND, SAN SALVADOR ISLAND, BAHAMAS
10:45 am	<u>Kaldy, J. E.</u> ; Eldridge, P. M.; Burd, A. B.: SEAGRASS STRESS RESPONSE MODEL: THE IMPORTANCE OF LIGHT, TEMPERATURE, SEDIMENTATION AND GEOCHEMISTRY <sup>(*)</sup>	10:45 am	Gooseff, M. N.; McKnight, D. M.; Runkel, R. L.; Duff, J. H.: DENITRIFICATION IN A GLACIAL MELTWATER STREAM, McMURDO DRY VALLEYS, ANTARCTICA
		11:00 am	Elser, J. J.; Schampel, J.; Watts, J.; Garcia-Pichel, F.; Wade, B.; Farmer, J.; Souza, V.; Eguíarate, L.: EFFECTS OF GRAZERS AND PO4 ENRICHMENT ON BIOMASS, C:N:P STOICHIOMETRY, AND MICROBIAL COMMUNITY STRUCTURE OF ONCOID STROMATOLITES AT CUATRO CIENEGAS, COAHUILA, MEXICO
		11:15 am	Schampel, J. H.; Watts, J.; Roopnarine, P. D.; Tang, C. M.; Carson, E.; Dowling, T. E.; Elser, J. J.: EFFECTS OF PO4 ENRICHMENT OF ONCOID STROMATOLITES ON SNAIL GROWTH, RNA:DNA RATIO, AND POPULATION DYNAMICS AT CUATRO CIENEGAS, COAHUILA, MEXICO
8:30 am	<u>Spear, J. R.</u> ; Ley, R. E.; Berger, A. B.; Pace, N. R.: THE ARCHAEA OF A HYPERSALINE MICROBIAL MAT		
8:45 am	<u>Buckley, D. H.</u> ; Baumgartner, L. K.; Visscher, P. T.: ARCHAEL DIVERSITY AND PHYSIOLOGICAL ECOLOGY OF METHANOGENS WITH RESPECT TO DEPTH IN INTERTIDAL MICROBIAL MATS FROM THE SIPPEWISSETT SALT MARSH (FALMOUTH MA)		

**SS4.06:**  
**Diversity, Ecology, and Biogeochemistry of Microbial Mats and Stromatolites**

Chair(s): Ferran Garcia-Pichel, ferran@asu.edu

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Location: 251 DE

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**Author Index****A**

Abello, H. U. 29  
 Abraham, J. 38  
 Abras, J. 29  
 Abrey, C. A. 57  
 Achilles, K. M. 45  
 Achudume, A. 42  
 Achudume, A. D. 42  
 Ackerman, J. D. 51  
 Acuna, J. L. 45  
 Adams, A. D. 38  
 Adams, H. 24  
 Adams, M. J. 23  
 Adkins, P. 57  
 Aelion, M. 50  
 Agee, J. L. 52  
 Agrawal, Y. 42  
 Aguilar, C. 49, 54  
 Agy, M. A. 45  
 Ahner, B. A. 34, 47, 49  
 Aiken, G. R. 28, 52  
 Al-Horani, F. A. 25  
 Albert, D. B. 53  
 Alcocer, J. 37  
 Alemdar, C. 33  
 Alexander, J. A. 29, 45  
 Alexander, R. B. 21  
 Alin, S. R. 38, 57  
 Alldredge, A. L. 28  
 Allen, A. E. 25, 51  
 Allen, A. P. 22  
 Allen, E. H. 29  
 Allen, J. 34, 43  
 Allen, M. C. 34, 57, 58  
 Allen, S. B. 26, 29  
 Allen, S. E. 38  
 Aller, J. Y. 32, 45, 51  
 Aller, R. C. 45  
 Allison, D. B. 57  
 Almendinger, J. E. 41  
 Alperin, M. J. 48  
 Alpers, C. N. 52  
 Altabet, M. A. 27  
 Altmann, D. 24  
 Amann, R. 30, 41  
 Amend, J. P. 54  
 Amend, J. 54  
 Amend, J. P. 54  
 Ammerman, J. W. 49  
 Amon, R. M. 22  
 Amouroux, D. 39  
 An, S. 42  
 Anderson, C. R. 43  
 Anderson, J. T. 48  
 Anderson, M. A. 32  
 Anderson, N. J. 50  
 Anderson, O. R. 31  
 Andrade, F. 50  
 Andren, E. 27  
 Anestis, A. K. 40  
 Ankley, G. T. 23

Anson, J. M. 49  
 Anssi Vähätilo, A. V. 40  
 Antipov, A. 42  
 Apple, J. K. 22  
 Archer, J. 34  
 ARHONDITSIS, G. B. 30  
 Armbrust, E. V. 22, 23, 43, 48  
 Armstrong, D. e. 47  
 Arndt, C. 42  
 Arnold, A. M. 36  
 Arnold, K. K. 27  
 Arnosti, C. 52  
 Arrigo, K. R. 24  
 Arrigoni, A. S. 33  
 Arthur, M. 56  
 Arvidson, R. 56  
 Ashmankas, C. 34  
 Auer, M. T. 20  
 Auer, S. 24  
 Aumack, C. F. 58  
 Avent, S. 33  
 Avery, S. 43  
 Axelsson, L. 36  
 Axler, R. P. 38  
 Azam, F. 47, 48  
 Azetsu-Scott , K. 40

**B**

Baas, M. 41  
 Babiarz, C. L. 40, 52  
 Bade, D. L. 22, 48  
 Badosa, A. 55  
 Bahr, M. 36  
 Bailey, K. M. 22  
 Bailey, S. A. 26  
 Baines, S. B. 47, 52  
 Baker, A. 34, 35, 40  
 Baker, J. 34, 35, 51  
 Baker, J. A. 51  
 Baker, K. M. 51  
 Baker, M. A. 51  
 Baker, P. A. 27  
 Balch, W. M. 57  
 Balcom, P. H. 39  
 Baldwin, A. J. 23, 55, 56  
 Ball, M. C. 58  
 Ballantyne, A. P. 36, 49  
 Baltz, D. 20  
 Band, L. E. 40  
 Bano, N. 53, 55  
 Barlow, R. 43  
 Barnard, A. H. 20  
 Barojas, A. R. 33  
 Baross, J. A. 53  
 Barry, J. P. 31, 42  
 Bartlett, D. 48  
 Bartley, J. D. 21  
 Bateman, D. S. 22  
 Bates, A. E. 30  
 Bates, N. R. 40  
 Battarbee, R. W. 50  
 Baumgartner, L. K. 56, 59  
 Baxter, C. V. 29  
 Bayer, A. K. 46

Bayley, S. E. 26  
 Bean, J. R. 24  
 Bearon, R. N. 25  
 Beattie , R. B. 39  
 Beattie, R. 44  
 Beauregard, A. Y. 25  
 Bebout, B. 53, 59  
 Bebout, B. M. 53, 59  
 Beck, A. J. 34  
 Beets, J. P. 25  
 Behrenfeld, M. J. 32, 48  
 Behzad Mortazavi, B. 28  
 Beighley, R. E. 50  
 Béjà, O. 58  
 Belgrano , A. 22  
 Belgrano, A. 22  
 Bell, E. M. 20, 26  
 Bellucci, L. 34  
 Bench, s. 42  
 Bendell-Young, L. I. 24  
 Bendis, B. J. 29, 37  
 Benfield, M. C. 20, 29, 37  
 Benner, R. 22  
 Benoit, J. M. 28  
 Bensen, D. 42  
 Benson, B. J. 57  
 Bérard-Theriault, L. 22  
 Berg, B. A. 32  
 Berg, P. 49  
 Berg, S. 29  
 Berger, A. B. 59  
 Berges, J. A. 23  
 Bergin, C. 30  
 Bergman, B. 51  
 Bergmann, T. 42  
 Bergondo, D. L. 30  
 Bergquist, B. A. 40  
 Bergquist, D. C. 30, 56  
 Berlininger, U. G. 21  
 Berman , T. 38  
 Berman, M. S. 30  
 Berman-Frank, I. 27  
 Bernhard, J. M. 31, 42  
 Bernhardt, P. 24, 36  
 Berninger, U. G. 26  
 Berthon, J. 43  
 Bérubé Dominique, 41  
 Besson, T. 39  
 Bezanilla, F. 42  
 Bi, H. 20, 37  
 Biddanda, B. A. 23  
 Bidle, K. 47  
 Bigrigg, J. 34  
 Binkowski, F. P. 34  
 Bintz, J. C. 31  
 Bird, T. 38  
 Bissett, P. 28  
 Bissett, W. P. 44  
 Bissinger, V. 26  
 Bizina, E. V. 26  
 Bjork, S. J. 34  
 Black, A. R. 36  
 Black, C. M. 31  
 Blackwell, S. 35, 44  
 Blackwell, S. M. 35

Blackwood, A. D. 37  
 Blais, A. M. 22  
 Blake, R. E. 54  
 Blakemore, R. 34, 35  
 Blanchfield, P. J. 52  
 Blankenship, L. E. 55  
 Blankenstein, H. L. 44  
 Blanton, J. O. 50  
 Blazejak , A. 30  
 Blees, M. K. 57  
 Blodau, C. 49  
 Bloom, A. M. 27  
 Blough, N. V. 40  
 Blouin, F. 43  
 Blum, Paul, 56  
 Blumenberg, M. 41  
 Boc, J. 57  
 Bochdansky, A. B. 29  
 Bodaly, D. 52  
 Bodaly, R. A. 52  
 Boetius, A. 30, 41, 42, 53  
 Bohlen, W. F. 29  
 Boicourt, W. 29, 34, 36  
 Boix, D. 42  
 Bokuniewicz, H. 57  
 Bollens, S. M. 29, 32, 33  
 Bollman, R. 55  
 BOMBLED, B. 24  
 Bonzongo, J. C. 39  
 Booth, E. S. 57  
 Booth, M. G. 25, 51, 54  
 Bootsma, H. A. 38  
 Borowski, C. 30  
 Boss, E. 32, 43  
 Böttcher, M. 42  
 Boudjellal, B. 40  
 Boudreau, B. P. 44  
 Boudreau, C. L. 31, 49  
 Bouman, H. A. 52  
 Bowen, J. L. 38  
 Bower, D. M. 34  
 Bowers, D. G. 22, 30  
 Bowler, B. C. 57  
 Bown, P. R. 21  
 Bowser, S. S. 42  
 Boyce, A. 43  
 Boyd, P. W. 36  
 Boyd, T. J. 23, 31  
 Boyle, E. A. 40  
 Boynton, W. R. 21, 29  
 Brabander, D. J. 39, 44  
 Brabban, A. 34  
 Bradt, S. 31, 34, 35  
 Bradt, S. R. 31  
 Brady, V. J. 38  
 Brahamsha, B. 44, 54  
 Bram, J. 42  
 Branco, B. F. 24  
 Branfireun, B. A. 46, 52  
 Brattebo, B. O. 50  
 Bratvold, D. 50  
 Brawley, J. 50  
 Braxton, J. H. 54  
 Brazner, J. C. 38  
 Breault, S. 30, 55

Breault, S. R. 55  
 Breitbart, M. 30, 48, 54  
 Breneman, D. H. 38  
 BRETT, M. T. 30  
 Brett, M. T. 36, 49, 50  
 Brezonik, P. L. 39, 51  
 Bridgman, S. D. 28, 40, 45  
 Brigham, M. E. 41  
 Brinkmeyer, R. 24  
 Bristow, G. M. 35  
 Britson, C. A. 33  
 Broadbent, H. 57  
 Brock, C. S. 27  
 Brodeur, R. D. 37, 47  
 Broftt, J. E. 54  
 Bronk, D. A.  
     23, 24, 25, 31, 36, 51  
 Brooks, B. W. 31  
 BROOKS, M. L. 23  
 Brown, B. 38  
 Brown, J. H. 22  
 Brownstein, A. 34  
 Brutet, S. 42, 55  
 Bruch, R. 34  
 Brugam, R. B. 50  
 Brunello, T. J. 39  
 Brush, G. S. 27, 36  
 Brzezinski, M. A. 21  
 Brzezinski, M. A.  
     23, 43, 47, 51  
 Buccarelli, E. 21  
 Buchheim, M. 53  
 Buck, K. R. 31, 42  
 Buck, N. J. 49  
 Buckley, D. H. 56, 59  
 Bucklin, A. 37  
 Buddemeier, R. W. 21  
 Budeus, G. 22  
 Budinoff, C. R. 55  
 Buehring, S. I. 25  
 Buesing, N. 51  
 Buffan-Dubau, E. 59  
 Buhr, S. M. 43  
 Bulit, C. 44  
 Bundy, M. H. 29, 45  
 Burn, S. E. 27  
 Burd, A. B. 59  
 Burdige, D. J. 45, 59  
 Burgmer, T. 42  
 Burkart, G. A. 32  
 Burkholder, J. M. 29, 31, 50  
 Burks, R. L. 21  
 Burlakova, L. E. 26  
 Burnett, W. C. 57, 58  
 Burns , J. A. 51  
 Burns, I. S. 51  
 Burns, J. 40, 45  
 Burns, J. A. 40  
 Butler, M. J. 58  
 Button, D. 47, 54  
 Button, D. K. 47  
 Buxton, C. 39  
 Byrd, A. G. 49  
 Byrne, R. H. 36

**C**  
 Cabaniss, S. E. 40  
 Cable, J. E. 36, 57  
 Caceres, C. E. 26, 49  
 Cade-Menun, B. J. 27  
 Callahan, J. 28  
 Campbell, B. J. 41  
 Campbell, J. 34, 35  
 Canfield, D. E. 53  
 Caniaux, G. 40  
 Canuel René, 41  
 Capone, D. G. 32, 40, 46, 51  
 Caraco, N. F. 22  
 Carey, E. A. 24  
 Carignan, R. 22  
 Carini, S. A. 41, 53  
 Carlson, C. A. 28, 40  
 Carlson, P. R. 42  
 Carman, K. 50  
 Carman, K. R. 50  
 Carmichael, R. H. 38  
 Carneki, O. 36  
 CARO, A. 56  
 Caron, D. A. 24, 32, 44, 54  
 Carpenter, E. J.  
     32, 40, 46, 51, 57  
 Carpenter, F. C. 41  
 Carpenter, S.  
     22, 27, 28, 29, 53, 57  
 Carpenter, S. P. 53  
 Carpenter, S. R.  
     22, 27, 28, 29, 57  
 Carson, E. 59  
 Carter , B. J. 24  
 Carter, B. 34, 41  
 Carter, R. L. 26  
 Cary, S. C. 31, 41, 56  
 Casas, V. 54  
 Case, J. 33, 35, 44  
 Castro, R. 24  
 Cattolico, R. A. 25  
 Cavaletto, J. F. 26, 29, 45  
 Cavanaugh, C. M. 30  
 Cavender-Bares, K. K. 49  
 Cembella, A. D. 38  
 Cepriano, L. 31  
 Chabot, D. 57  
 Chalmers, A. T. 41  
 Chambers, R. M. 23  
 Chan, M. A. 55  
 Chandler, G. T. 50  
 Chandler, T. 50  
 Chanowich, E. M. 40  
 Chant, R. J. 51  
 Chanton, J. 23, 28, 49, 58  
 Chanton, J. P. 28, 49, 58  
 Charette, M. A. 34, 57, 58  
 Chasar, L. C. 49  
 Chaubey, I. 39  
 Chen, C. 20, 29  
 Chen, R. F. 28, 39, 44  
 Chen, Y. 31, 40, 46  
 Cherrier, C. T. 25  
 Cherrier, J. 23, 28, 36, 39  
 Childress, T. D. 55

Childs, C. 44  
 Chisholm, S. W. 44  
 Chistoserdov, A. Y. 45  
 Choi, J. 42  
 Chong, J. T. 22  
 Chororoka, K. 34  
 Christensen, J. P. 48  
 Christner, B. C. 24  
 Chrzanowski, T. H. 48  
 Chung, M. Z. 39  
 Church, T. M. 39, 45  
 Churchill, J. H. 20  
 Ciannelli, L. 22  
 Cibrorowski, J. 38  
 Cifuentes, L. A. 59  
 Cipriano, F. 51, 57  
 Claefens-Kenning, M. 32  
 Clark, J. 20  
 Clarke, A. M. 27  
 Clarke, C. 33, 49  
 Clarke, M. A. 23  
 Claro, R. 47  
 Claustre, H. 43  
 Clevenger, T. E. 25  
 Cline, D. 49  
 Clogg-Wright, K. 27  
 Coale, K. 52  
 Coats, D. W. 33  
 Cobb, D. 38  
 Cobb, J. S. 31  
 Coble, P. G. 45  
 Cochran, J. K. 34, 47  
 Codispoti, L. A. 29  
 Coffin, R. B. 41  
 Cohen, A. S. 34, 35, 57  
 Cohen, D. C. 29  
 Colburn, W. C. 42  
 Cole , J. J. 22  
 Cole, J. J. 22, 46, 48  
 Cole, M. L. 38  
 Coleman, F. C. 49  
 Colin, S. P. 21, 30  
 Collavini, F. 34  
 Collier, J. L. 51  
 Collier, R. W. 20  
 Colman, A. S. 27  
 Colman, J. A. 22  
 Conklin, M. H. 51  
 Conley, D. J. 27  
 Connmy, R. 28, 45  
 Connelly, S. J. 37  
 Connon, S. A. 57  
 Conroy, J. D. 26  
 Cook, S. B. 39  
 Cooke, S. L. 23  
 Cooley, S. R. 46  
 Coomber, S. 54  
 Cooney, D. A. 50  
 Cooper, E. R. 29  
 Cooper, R. 41  
 Cope, J. S. 37  
 Corbett, D. R. 58  
 Cordell, J. 29  
 Cordes, E. E. 30, 56  
 Corn, P. S. 23

Cornelisen, C. D. 51, 59  
 Cornillon, P. C. 34  
 Corno, G. 48  
 Cornuelle, B. D. 47  
 Cornwell, J. C. 51  
 Cory, R. M. 28  
 Costello, J. H. 26  
 Cotner, J. B. 23, 41, 54  
 Cotret, O. 47  
 Cottrell, M. T. 47  
 Countway, P. D. 44, 54  
 Cowen, E. A. 20, 55  
 Cowen, J. P. 54  
 Cowen, R. K. 31, 47, 57  
 Cowie, G. L. 40  
 Cowles, T. J. 29  
 Cox, E. 38  
 Coyne, K. J. 31  
 Cragg, B. A. 42  
 Crago, T. I. 44  
 Craig, S. E. 20  
 Crawford, D. C. 36  
 Crawford, L. 51  
 Crenshaw, C. L. 32, 36, 43  
 Crenshaw, M. C. 50  
 Croot, P. 40  
 Crossland, C. J. 21  
 Crumbliss, L. L. 59  
 Crump, A. 59  
 Crump, B. C. 36, 44, 51  
 Cuevas, L. A. 24  
 Cuhel, R. L. 49, 54  
 Cuker, B. E. 39  
 Cullen, J. J. 38  
 Cullen, J. T. 47  
 Culp, R. A. 28  
 Culver, C. C. 42  
 Culver, D. A. 26  
 Cumming, B. F. 22  
 Cunningham, L. M. 57  
 Curless, S. E. 45  
 Currie, W. 50  
 Currin, C. 50  
 Curtis, K. A. 29  
 Cutter, G. A. 39, 47  
 Cutter, L. S. 47

**D**

Dahl, L. 29  
 Dahm, C. N. 32, 36, 43  
 Dalpra, D. R. 32  
 Dam, H. G. 21, 30, 40  
 Damsté, J. S. 41  
 Dando, P. R. 30  
 D'Andrea, A. F. 51  
 Daneri, G. 24  
 Daniel, R. 41  
 Daniels, R. M. 45  
 Dantzler, M. M. 32  
 Daoust, R. J. 20  
 Darrow, B. P. 43  
 Dattagupta, S. 30  
 Daufresne, T. 43  
 Davey, M. S. 40

- Davis, J. L. 49  
 Davis, J. M. 55  
 Davis, L. 27  
 Davis, R. F. 38  
 Day, J. W. 36  
 De Beer, D. 24  
 de Beer, D. 25, 49  
 De La Rocha, C. L. 21  
 De Lange, G. 56  
 De Ridder, C. 30  
 De Robertis, A. 47  
 De Wit, R. 59  
 Deacutis, C. 29, 38  
 Deacutis, C. F. 29  
 Dean, W. E. 27  
 DeBeer, D. 53  
 deCharon, A. V. 39  
 Decho, A. 24, 50  
 Decho, A. W. 24  
 Decker, J. D. 33  
 DEDIEU, K. 24  
 Dee, G. 26  
 Del Vecchio, R. 40  
 Delavan, S. K. 55  
 delGiorgio, P. A. 22  
 DeLong, E. E. 41  
 DeLong, E. F. 41, 58  
 DeMaster, D. J. 29  
 Deming, J. W. 24  
 Demopoulos, A. W. 51  
 DeMott, W. R. 21  
 Denison, F. H. 24  
 Denman, K. L. 38  
 Dennett, K. E. 52  
 Dennett, M. R. 24, 54  
 Denslow, N. 31  
 Deonarine, S. N. 31  
 Des Marais, D. J. 53  
 DesMarais, D. J. 53  
 Devito, K. J. 47  
 DeVoe, M. R. 50  
 Devol, A. H. 47, 48  
 DeWit, R. 53  
 Dhadwal, H. S. 32  
 D'Hondt, S. L. 42  
 Diamond, S. A. 23, 38  
 Díaz, C. 58  
 Díaz-Avalos, C. 44  
 Diercks, A. H. 43  
 Dierssen, H. M. 58  
 Dietrich, D. 26  
 Dillon, J. G. 59  
 DiLorenzo, E. 47  
 Dionne, J. A. 34  
 Dionne, M. 31  
 Discipulo, M. 53  
 Doblin, M. A. 47  
 Dobricic, S. 37  
 Docherty, K. M. 28, 40  
 Dokulil, M. T. 52  
 Dolan, T. W. 58  
 Dollhopf, S. L. 24  
 Domagalski, J. L. 52  
 Domzal, K. S. 38  
 Donabaum, K. 52  
 Donald, O. F. 39  
 Donat, J. R. 49  
 Dong, H. 44  
 Doran, P. T. 53  
 Dorman, J. 33  
 Dortch, Q. 38  
 Dougherty, J. A. 54  
 Douglas, J. 34  
 Dousova, H. 48, 54  
 Dower, J. F. 38  
 Dowling, T. E. 59  
 Downes-Gastrich, M. 31  
 Downing, J. A. 25  
 Doyle, R. A. 32  
 Drapeau, D. T. 57  
 Drazen, J. C. 26  
 Dreher, N. 55  
 Dressmann, S. 26  
 Drevnick, P. E. 52  
 Driscoll, M. 34, 35  
 Druon, J. N. 37  
 Dubilier, N. 30  
 Ducklow, H. W. 45, 47  
 Duff, J. H. 59  
 Duffy, M. A. 37  
 Dugan, J. E. 42  
 Dugdale, R. C. 44, 49  
 Duggan, I. C. 26  
 Dulaiova, H. 58  
 Dunne, J. A. 22  
 Dunne, T. 50  
 Dunton, K. H. 39, 58  
 Dupont, C. L. 34, 47  
 Dupra, V. C. 21  
 Durkin, S. 52  
 Dworkin, S. I. 38  
 Dybdahl, M. F. 26  
 Dzialowski, E. M. 31
- E**  
 Eadie, B. J. 29  
 Eagle, M. 34  
 Eckert, G. L. 34  
 Edgcomb, V. P. 54  
 Edlund, M. B. 50  
 Edwards, A. M. 30  
 Edwards, K. J. 54  
 Edwards, T. 27, 31  
 Edwards, T. W. 31  
 Edwards, W. J. 26  
 Eguiarte, L. 59  
 Ehrenhauss, S. 25  
 Eicken, H. 24  
 Eisen, J. A. 41  
 Eldridge, P. M. 59  
 Elliott, E. M. 27  
 Ellis, G. S. 34  
 Ellisman, M. E. 57  
 Ellner, S. P. 26, 55  
 Elmgren, R. 38  
 Elonen, C. M. 38  
 Elser, J. J. 59  
 Elvert, E. 41  
 Emerson, D. 54  
 Emmons, E. E. 28  
 Engelbrecht, B. M. 58  
 Engelsen, A. 36, 51  
 English, M. 27  
 Engstrom, D. R. 39, 41, 50  
 Engstrom, S. J. 51  
 Enquist, B. J. 22  
 Epifanio, C. E. 42, 44  
 Epstein, S. 57  
 Eriksen, C. C. 48  
 Escobar-Briones, E. 37, 58  
 Etheridge, S. M. 25  
 Ettinger, R. 22  
 Evans, C. T. 47  
 Evans, D. W. 22, 30  
 Evans, G. L. 38  
 Evans, M. A. 32
- F**  
 Fahnenstiel, G. L. 48  
 Falcon, L. I. 51  
 Falkowski, P.  
     21, 22, 27, 48, 52, 58  
 Falkowski, P. G. 22, 27, 52, 58  
 Faltin, E. 34, 35  
 Fan, T. W. 49  
 Fanning, K. A. 24  
 Farmer, A. 57  
 Farmer, J. 59  
 Felbeck, H. 25, 42  
 Feldman, R. A. 41  
 Feldman, r. a. 42  
 Feldman, R. F. 34  
 Fell, J. 49  
 Feller, I. C. 58  
 Fernandez, D. 45  
 Fernández I. , C. 40  
 Ferreira, M. A. 50  
 Feuchtmayr, H. 37  
 Filoso, S. 27  
 Finkel, Z. 22, 48  
 Finkel, Z. V. 22  
 Finster, K. 24, 31, 55  
 Finzi, J. A. 46  
 First, M. R. 42  
 Fischer, G. 32  
 Fisher, C. R. 30, 55, 56  
 Fisher, J. C. 31  
 Fisher, K. E. 29  
 Fisher, N. S. 47, 52  
 Fisher, T. R. 21  
 Fistarol, G. O. 25  
 Fitzgerald , W. F. 39  
 Fitzgerald, S. A. 38  
 Fitzgerald, W. F. 39  
 Fitzgibbon, T. O. 39  
 Flores, J. F. 55  
 Foe, C. 52  
 Fones, G. 49  
 Foreman, C. F. 56  
 Foreman, C. M. 24, 28, 53  
 Forget, M. H. 22  
 Formolo, M. J. 41, 56  
 Forrest, A. L. 20
- G**  
 Gaedke, U. 26, 30  
 Gaeta, S. A. 30  
 Gaill, F. 42  
 Galbraith, P. S. 57  
 Gallegos, C. L. 38  
 Gans, C. R. 34  
 Gao, G. 41  
 Garcia, N. 40  
 Garcia-Frias, J. 41  
 Garcia-Pichel, F. 56, 59  
 Gardea-Torresdey, J. L. 31  
 Gardner, B. 28  
 Gardner, G. B. 28  
 Gardner, W. 42  
 Gardner, W. S. 42  
 Garland, D. S. 28  
 Garnier-Laplace, J. 24  
 Garstecki, T. 30  
 Gascón, S. 42  
 Gast, R. J. 24, 54  
 Gattuso, J. P. 48  
 Geider, R. D. 40  
 Geider, R. J. 48  
 Gentilhomme, V. 48  
 Georick, R. 34  
 Gerrish, G. 26  
 Gervais, F. 48  
 Gessner, M. O. 51  
 Gettel, G. M. 36  
 Ghadiri, A. 34, 41  
 Giblin, A. E. 36

- Gibson, D. M. 36  
 Giere, O. 30  
 Gieseke, A. 53  
 Gifford, D. J. 26  
 Gifford, S. M. 34  
 Giglini, A. D. 39  
 Giguere, M. 34, 35  
 Gilbert, D. 57  
 Gilbert, J. J. 21  
 Gilhooly, W. P. 56  
 Gill, G. A. 28, 52  
 Gillette, J. P. 32  
 Gillooly, J. F. 22  
 Gilmour, C. C. 44, 52  
 Giovannoni, S. J. 57  
 Girdner, S. F. 20  
 Girguis, P. R. 41  
 Giri, B. J. 53  
 Gisselson, L. Å. 25  
 Givelet, N. 39  
 Glaholt, S. P. 21  
 Glasgow, H. B. 29, 31, 50  
 Glazer, B. T. 56  
 Glenn, C. R. 33  
 Glibert, P. M. 29, 45  
 Glidewell, E. A. 31  
 Glud, R. N. 53  
 Gobler, C. J. 31, 33, 45, 49  
 Godiska, R. 56  
 Goebel, N. L. 36  
 Goehring, L. 39  
 Goepfert, T. J. 34  
 Goes, J. I. 57  
 Goffredi, S. K. 30  
 Goldberg, S. J. 40  
 Golden , S. M. 45  
 Golden, S. M. 40  
 Goldman, C. R. 20, 21, 39  
 Goldthwait, S. A. 28  
 Gomes da Silva, S. 30  
 Gomez, A. D. 54  
 Gonzales, J. 50  
 Gonzalez, H. E. 54  
 Gonzalez, M. J. 21  
 González, M. R. 55  
 Goodrich, A. 47  
 Goodsite, M. E. 39  
 Gooseff, M. N. 59  
 Gorbunov, M. Y. 48  
 Gordon, H. R. 57  
 GOT , P. 56  
 Gragg, R. 23, 28  
 Graham, A. W. 24  
 Graham, E. Y. 27  
 Graham, J. L. 25  
 Graham, M. D. 27  
 Graham, T. 55  
 Gramling, C. M. 58  
 Granéli, E. 25  
 Graneli, W. 38  
 Grant, T. 48  
 Greely, T. M. 39  
 Green, A. 39  
 Green, M. A. 31, 49  
 Green, P. G. 20, 49  
 Greenlaw, C. F. 29  
 Gregory, G. J. 34  
 Gregory, J. A. 37  
 Gresswell, R. E. 22  
 Grey, J. 37  
 Griffith, M. B. 50  
 Griffiths, B. 48  
 Groetzschel, S. 59  
 Gros, O. 25  
 GROS, O. 56  
 Gross, D. H. 37  
 Grossart, H. P. 48  
 Grover, J. P. 48  
 Grunbaum, D. 22, 25  
 Grünbaum, D. 29  
 Grzymski, J. 42  
 Guerra, O. J. 25  
 Guildford, S. J. 20  
 Guiles, K. A. 34  
 Guillocheau, N. 43  
 Guisande, C. 55  
 Guldberg, L. B. 24  
 Gulmann, L. K. 58  
 Gunderson, T. E. 46  
 Gunnlaugsson, H. P. 31  
 Guo, L. 28, 54  
 Gustafson, E. 47, 54  
 Gustin, M. S. 39, 52  
 Gutowska, M. A. 34
- H**  
 Haas, J. 43  
 Habicht, K. S. 53  
 Haddock, S. 33, 35, 44  
 Hadfield, M. G. 25  
 Haese, R. R. 56  
 Hagy III, J. D. 21  
 Haidvogel, D. B. 47  
 Hairston, N. G. 26, 32  
 Haley, S. T. 30  
 Hall, B. 52  
 Hall, B. D. 52  
 Hall, C. J. 33  
 Hall, F. R. 39  
 Hall, R. I. 22, 27, 31  
 Hall, R. O. 26, 51  
 Hallam, S. J. 31  
 Hamblen, J. M. 51  
 Hamill, B. J. 36  
 Hamilton, P. L. 26  
 Hamilton, S. K. 20, 27  
 Hammerschmidt , C. R. 39  
 Hammerschmidt, C. R. 39  
 Hampton, S. E. 21, 49, 57  
 Hance, M. E. 44  
 Haney, J. F. 31  
 Hansell, D. A. 40, 47  
 Hansen, A. A. 55  
 Hansen, C.M.E., 22  
 Hansen, T. 48  
 Hansson, L. A. 23  
 Haramaty, L. 27  
 Hare, J. A. 36  
 Hargreaves, B. R. 20, 23  
 Harms, H. A. 52  
 Harmer, M. J. 43  
 Harris, J. 54  
 Harris, R. 34, 52  
 Harris, R. T. 34  
 Harris, S. 38  
 Harrison, P. J. 36, 43, 48  
 Hartline, D. K. 22  
 Hartman, N. T. 34  
 Hartnett, H. 24, 28  
 Hartsough, P. C. 57  
 Hartwell, A. L. 50  
 Hartwell, R. J. 34  
 Hartendorf, T. 36  
 Harvey, H. R. 28  
 Harvey, J. W. 58  
 Harvey, M. 57  
 Hatch, L. K. 51  
 Haught, K. J. 25  
 Havens, K. E. 21  
 Havlicek, T. D. 28  
 Hawkins, C. P. 50  
 Hay, M. E. 36  
 Hayes, P. K. 52  
 He, R. 45  
 Hecky, R. E. 20, 38, 39  
 Hedges, J. I. 26  
 Heidelberg, J. F. 41  
 Heil, C. A. 24, 31, 36  
 Heim, W. 52  
 Helton, R. R. 48  
 Henderson, G. K. 28  
 Henley, W. 53  
 Henning, M. 36  
 Hensen, C. 41  
 Hentschel, B. T. 20  
 Hepburn, C. 28  
 Herbert, T. D. 27  
 Herbold, C. 34, 57, 58  
 Herbold, C. W. 34, 57, 58  
 Herbst, D. B. 37  
 Hernandez, D. R. 58  
 Hernes, P. 22  
 Herren, C. 33, 35, 44  
 Herrick, B. S. 20  
 Hesson, M. D. 26  
 Hetland, R. D. 29  
 Hewson, I. 48  
 Heyes, A. 44, 52  
 Heyes, D. B. 52  
 Hicks, J. L. 32  
 Higashi, R. M. 49  
 Higginson, M. J. 27  
 Higham, C. J. 32  
 Hill, B. H. 38  
 Hillebrand, H. 22, 42, 44  
 Hines, A. H. 49  
 Hines, N. A. 39  
 Hinrichs, K. 42  
 Hintemann, H. 52  
 Hintemann, H. H. 52  
 Hippe, K. R. 20, 34  
 Hiratsuka, J. 37  
 Ho, T. 22, 47  
 Ho, T.Y. 22
- I**  
 Ibarra, D. A. 38  
 Iglesias-Rodriguez, M. D. 52  
 Ikawa, M. 31  
 Incze, L. S. 43

Ingall, E. D. 27, 28  
 Ingram, R. G. 38  
 Interlandi, S. J. 33, 50  
 Irvine, G. 34, 36  
 Irvine, G. V. 36  
 Irwin, A. J. 22  
 Ishitobi, Y. 37  
 Ivanov, M. K. 41  
 Ivanov, S. 57

**J**

J. Pyrtle, A. S. 42  
 Jack, J. D. 21  
 Jackman, A. P. 20  
 Jackson, G. A. 29, 45, 51, 57  
 Jackson-Pringle, J. A. 50  
 Jacobs, R. S. 32, 54  
 Jacobson, N. 49  
 Jacobson/Meyers, M. E. 45, 49  
 Jaffe, B. E. 52  
 Jaffe, R. 22, 59  
 Jaffé, R. 28  
 Jakobsen, H. H. 26  
 Jamieson, C. D. 37  
 Jankowski, T. 50  
 Janowiak, M. 57  
 Janssen, F. 25, 49  
 Janssen, J. 49  
 Jarecki, L. L. 37  
 Jassby, A. 33  
 Jayakumar, D. A. 58  
 Jeff Chanton, J. P. 28  
 Jeffrey, W. H.  
     23, 26, 52, 55, 56  
 Jellison, R. 20, 37, 41, 53, 55  
 Jellison, R. E. 55  
 Jellison, R. S. 53  
 Jenkins, B. D. 51, 53, 57  
 Jennings, M. J. 28  
 Jenissen, B. J. 45  
 Jensen, A. 31  
 Jensen, S. 49  
 Jeppesen, E. 29  
 Jeremiason, J. D. 41, 52  
 Jicha, T. M. 38  
 Jochem, F. 42, 45  
 Jochem, F. J. 45  
 Joergensen, B. B. 41, 42, 53  
 Johansen, J. R. 38  
 Johansson, M. 25  
 Johengen, T. H. 29  
 John, S. 34  
 Johnson, B. D. 41  
 Johnson, L. B. 38  
 Johnson, R. L. 20  
 Johnson, T. C. 38  
 Johnston, C. A. 40  
 Jolliff, J. K. 45  
 Jones, C. 30, 55  
 Jones, C. S. 55  
 Jones, J. L. 47  
 Jones, J. R. 25, 26, 29  
 Jones, M. B. 42  
 Jones, M. E. 31, 49

Jones, R. D. 54  
 Jones, S. B. 25  
 Jones, W. B. 59  
 Jonkers, H. M. 25, 53  
 Jordan, P. 50  
 Jørgensen, B. B. 42, 49  
 Jørgensen, N. O. 24  
 Joye, M. B. 53  
 Joye, S. 27, 41, 50, 53  
 Joye, S. B. 27, 41, 50, 53  
 Joyner, J. L. 30  
 Judd, K. E. 44  
 Juggins, S. 27  
 Juhl, A. R. 25  
 Jumars, P. A. 29  
 Jung, S. 49  
 Justic, D. 33, 38

**K**

Kabas, W. 52  
 Kalanetra, K. M. 53  
 Kaldy, J. 59  
 Kaldy, J. E. 59  
 Kameda, A. 34, 41  
 Kameda, A. T. 34  
 Kamenik, C. 50  
 Kamjunke, N. 30  
 Kamp, A. 25  
 Kana, T. M. 48  
 Kanako, I. 20  
 Kane, D. D. 26  
 Kaplan, I. K. 28  
 Karatayev, A. Y. 26  
 Karner, D. 47  
 Karner, D. A. 47  
 Karst-Riddoch, T. L. 27  
 Kase, J. P. 26  
 Kasten, S. 41  
 Katz, J. 29, 57  
 Kauffman, J. 50  
 Kearney, K. 34  
 Keaten, R. 54  
 Kebede-Westhead, E. 36  
 Keely, B. J. 47  
 Keenan, S. F. 20, 29  
 Keener-Chavis, P. 39  
 Keith, D. J. 43  
 Kelaher, B. P. 58  
 Keller, B. 38  
 Keller, K. 28  
 Kelly, C. A. 52  
 Kelly, J. R. 38  
 Kelly, K. A. 48  
 Kelly, S. 31  
 Kelly, V. 29  
 Kelsey, H. 50  
 Kemp, P. F. 23, 32, 51  
 Kennedy, B. M. 47  
 Kerfoot, J. 42  
 Kerfoot, W. C. 20, 26  
 Kerkhof, Lee, J. 49  
 Kessler, K. 37  
 Kester, C. L. 52  
 Kester, D. 30, 38

Kester, D. R. 30  
 Kicklighter, C. E. 36  
 Kiddon, J. 38  
 Kieber, R. J. 40  
 Kiene, R. P. 40, 58  
 Kiesling, R. L. 38  
 Kiesling, T. L. 49  
 Kieu, L. H. 52  
 Kiffney, P. M. 32  
 Kim, E. H. 58  
 Kim, G. 42  
 Kim, J. S. 32  
 Kimmel, D. G. 49  
 Kimor, B. 38  
 Kinder, C. A. 29, 50  
 King, A. T. 20  
 Kingston, J. C. 38  
 Kinzie, R. A. 38  
 Kiørboe, T. 48  
 Kipphut, G. W. 42  
 Kirchhoff, S. 38  
 Kirchman, D. L. 28, 47, 48, 58  
 Kirkpatrick, G. J. 31, 32  
 Kirkwood, A. 53  
 Kirschner, A. T. 52  
 Kirshtein, K. D. 51  
 Kitchell, J. F. 29  
 Klamberg, J. L. 45  
 Klausmeier, C. A. 22, 43  
 Kleinman, J. E. 29  
 Kleppel, G. S. 50  
 Kline, D. 54  
 Kline, T. C. 45  
 Kling, G. 20, 32, 44  
 Kling, G. W. 32, 44  
 Kling, H. 39  
 Klump, J. V. 38  
 Knapp, A. N. 40  
 Knezacek, N. E. 27  
 Knick, K. E. 55  
 Knights, B. C. 52  
 Knittel, K. 41, 53  
 Knowlton, M. F. 26  
 Koblizek, M. 52, 58  
 Koch, F. 33  
 Kochevar, R. 39  
 Koehl, M. A. 25  
 Koehler, M. 29  
 Koenig, C. C. 49  
 Kolber, Z. 48, 49, 52, 58  
 Kolber, Z. S. 52, 58  
 Kolowith, L. C. 27  
 Komenda, J. 54  
 Koretsky, C. 43, 44  
 Koretsky, C. M. 43  
 Korhola, A. 27  
 Kormas, K. 42  
 Kosro, P. M. 29  
 Kostka, J. E. 24  
 Krabbenhoft, D. P. 41, 52  
 Kraepiel, A. M. 28  
 Kratz, T. K. 57  
 Krembs, C. 24  
 Kremer, J. N. 50  
 Kremer, P. 33, 36, 37

**L**

La Roche, J. 40  
 Lahner, J. K. 28  
 Lam, P. 54  
 Lamberti, G. A. 40  
 Lamborg, C. 39  
 Lamborg, C. H. 39  
 LaMontagne, M. G. 38  
 Lampert, W. 37  
 Landry, D. M. 43  
 Landry, M. R. 52  
 Lang, G. A. 29, 45  
 Lange, T. R. 52  
 Langston, B. E. 23  
 Lapham, L. L. 41  
 Larson, F. 51  
 Larson, F. M. 51  
 Larson, G. L. 20  
 Larsson , U. 38  
 Lassiter, A. M. 44, 49  
 Last, W. M. 27, 31, 33  
 Lathrop, R. C. 27  
 Latimer, J. A. 43  
 Latz, M. I. 43  
 Lau, W. 23  
 Lauber, C. L. 26  
 Lauck, R. 28  
 Lauridsen, T. L. 29  
 Laurier, F. 28  
 Laursen, S. 43  
 Laval, B. E. 20  
 Lavrentyev, P. J. 29, 42, 45  
 Lawson, J. L. 53  
 Lay, M. 38  
 le B. Williams, P. J. 38  
 Le Fouest, V. 40  
 Leavitt, P. R. 27, 50  
 Lebo, M. E. 27  
 Lee, A. R. 51  
 Lee, C. 24, 42, 45, 49  
 Lee, C. L. 45, 49  
 Lee, K. 22, 44  
 Lee, K. H. 44  
 Lee, R.

- 30, 38, 42, 50, 53, 59  
 Lee, R. S. 38  
 Lee, R. W. 30, 42, 59  
 Lee, R. Y. 53  
 Lee, S. 42  
 Leech, D. M. 21  
 Leeds, S. 30, 48  
 Legrand, C. 25  
 LEHMAN, P. W. 57  
 Lehr, R. A. 38  
 Leifer, I. 54  
 Leigh-Bell, J. 31  
 Leising, A. W. 36  
 Leland, H. V. 50  
 Lempa, J. 23, 55  
 Lenes, J. M. 31, 36  
 Lenz, P. H. 22  
 Lester, O. 37  
 Levin, L. 41, 50  
 Levin, L. A. 41, 50  
 Levin, S. A. 43  
 Levine, P. L. 37  
 Levings, C. D. 22  
 Levinton, J. S. 58  
 Lewitus, A. J. 23  
 Ley, R. E. 59  
 Lezzar, K. L. 34  
 Li, H. W. 29  
 Li, W. K. 22, 52  
 Liberge, M. 25  
 Liebig, J. R. 29, 45  
 Liess, A. 44  
 Lin, I. 22  
 Lin, S. 22  
 Linares, F. 51  
 Lind, O. T. 34  
 Lindahl, S. 36  
 Lindeman, K. C. 47  
 Linke, P. 41  
 Lippert, I. 36  
 Lipschultz, F. 45  
 Lipsen, M. S. 36  
 Liss, P. S. 47  
 Litchman, E. 22, 43  
 Litchman, E. G. 43  
 Little, J. C. 20  
 Liu, H. 33  
 Lloyd, S. S. 49  
 Lo, P. 34  
 Loadman, N. 55  
 Loder, T. C. 25  
 Lodge, D. M. 22, 40  
 Loesekann, T. 41  
 Lohrenz, S. E. 25, 48  
 Loijens, M. 48  
 Lomas, M. W. 40  
 Lomstein, B. 24, 42, 55  
 Lomstein, B. A. 42, 55  
 Longhi, M. L. 26  
 Longnecker, K. 23  
 Lopes, R. M. 30  
 Lopez-de-Victoria, G. 50  
 López-Flores, R. 55  
 Lorence, C. S. 26  
 Lorenson, T. D. 54
- Lorke, A. 20, 26, 36  
 Los Saltos Fieros, 37  
 Losada, J. P. 20  
 Love, R. C. 25  
 Lovelock, C. E. 58  
 Lowe, R. L. 26  
 Lucotte Marc, M. 41  
 Ludwig, R. 25, 53  
 Luecke, C. 20, 32, 34, 47  
 Luff, R. 41  
 Lukas, G. 44  
 Luther, G. 41, 45  
 Luther, G. W. 45  
 Luther III, G. W. 56  
 Lutz, V. A. 43  
 Lyons, T. 41, 56  
 Lyons, T. W. 41, 56  
 Lyons, W. B. 27, 28, 39, 53
- M**
- MacAuley, S. 44  
 MacDonald, G. M. 27  
 Macdonald, I. 56  
 Macdonald, I. R. 41  
 MacGregor, B. J. 30  
 MacIntyre, H. L. 34, 48  
 MacIntyre, L. 29  
 MacIntyre, S. 20  
 MacIsaac, H. J. 21, 26  
 Mackenzie, F. 21, 23, 38  
 Mackenzie, F. T. 21, 23  
 MacKenzie, R. A. 31  
 MacKinnon, P. D. 34  
 Macko, S. A. 30, 56  
 MacNally, M. 31  
 Macrae, M. 47  
 Maddi, P. 50  
 Madey, G. R. 40  
 Madin, K. A. 44  
 Madin, L. P. 33, 37  
 Madrid, V. M. 45  
 Maffione, R. A. 58  
 Magnien, R. 21, 29  
 Magnien, R. E. 21, 29  
 Maie, N. 28  
 Majewski, A. R. 52  
 Malcolm, E. G. 28  
 Malin, G. 47  
 Malkiel, E. 29  
 malkiel, E. 57  
 Malmstrom, R. R. 40, 58  
 Malone, S. 35  
 Malone, T. C. 37  
 Mancera\_Pineda, J. E. 21  
 Mann, D. H. 36  
 Manning, C. A. 37  
 Mannino, A. 28  
 Marcarelli, A. M. 51  
 Marchi, A. 44, 49  
 Marcus, N. H. 33, 37  
 Mardian, B. 42  
 Marin III, R. 49  
 Marinelli, R. L. 24, 44, 51  
 Markager, S. 28
- Markhaseva, E. 37  
 Märki, M. 20  
 Marschall, S. M. 56, 57  
 Marshall, H. L. 49  
 Martens, C. S. 41  
 Martin, J. B. 57  
 Martina, D. A. 47  
 Martinelli, L. A. 27  
 Martinez, N. D. 22  
 Martinez, R. J. 56  
 Martinez-Cortizas, A. 39  
 Maruya, K. 50  
 Marvin-DiPasquale, M. C. 52  
 Mason, R. P. 28, 44, 52, 58  
 Masque, P. 34, 47  
 Massion, E. 49  
 Masterson, J. P. 22  
 Matear, R. J. 48  
 Matsumoto, G. I. 39  
 Maurice, P. A. 28, 40, 44, 45  
 Maxwell, B. A. 21  
 Mazzilli, S. 38  
 McAndrew, P. M. 34  
 McCaren, J. 44, 54  
 McCarthy, M. D. 23  
 McCarthy, M. J. 42  
 McCarty, J. T. 28, 45  
 McClintock, L. 55  
 McConaughay, J. R. 36  
 McCorkle, D. C. 58  
 McElroy, A. 31  
 McGilliard, C. 36  
 McGinnis, D. F. 36  
 McGowan, M. P. 33  
 McGowan, S. 27  
 McGuire, M. A. 20  
 McKittrick, M. 42  
 McKay, C. P. 53  
 McKee, B. A. 57  
 McKee, K. L. 58  
 McKellar, H. 50  
 McKnight, D. M. 28, 59  
 McLaughlin, C. 21  
 McLaughlin, K. 27  
 McManus, G. B. 30, 47  
 McMaster, N. L. 57  
 McMillan, P. 50  
 McMurry, G. M. 33  
 McPhee-Shaw, E. E. 34  
 McRae, G. 42  
 McWilliams, J. C. 47  
 Mead, D. A. 56  
 Mead, R. N. 22, 59  
 Medlin, L. 21, 52  
 Medlin, L. K. 52  
 Meile, C. 44, 56  
 Meiners, K. 24  
 Meinke, T. M. 57  
 Melack, J. M. 37, 50  
 Melia, G. M. 50  
 Melrose, D. C. 30  
 Memmott, J. C. 57  
 Mena, L. 31  
 Mendoza, G. 41, 50  
 Meon, B. 22
- Merrison, J. 55  
 Mertes, L. 33  
 Meyer, B. 31  
 Meyer, J. 21  
 MEYER, J. S. 23  
 Meyer, V. 49  
 Michael, B. 29  
 Michael, B. D. 29  
 Michaelis, W. 41, 53  
 Michaels, A. F. 46  
 Michel, E. 20  
 Michel, T. J. 50  
 Michel, V. 34  
 Middelboe, M. 24  
 Middelburg, J. J. 48  
 Mikucki, J. A. 24, 56  
 Milbrandt, E. C. 49  
 Miller, A. J. 47  
 Miller, C. L. 52  
 Miller, D. 43  
 Miller, G. A. 37  
 Miller, R. 53  
 Miller, S. E. 38  
 Miller, S. R. 59  
 Miller, W. L. 40  
 Millie, D. F. 37, 48  
 Milligan, A. J. 21  
 Mills, H. J. 56  
 Mills, M. 40  
 Milroy, S. P. 31  
 Minor, E. C. 28  
 Mitchell, B. G. 20, 57  
 Mitchell, D. L. 56  
 Mitchelson-Jacob, E. G. 38  
 Mitra, S. 54  
 Miyoshi, T. 28  
 Moeller, R. E. 23  
 Moffett, J. W. 47  
 Moisan, J. R. 47  
 Moisan, T. A. 57  
 Moline, M. A. 35, 42, 44  
 Molles, Jr., M. C. 43  
 Mondragon, J. 34  
 Montagnes, D. J. 44  
 Montoya, J. 40, 41, 48, 53  
 Montoya, J. P. 40, 48, 53  
 Montz, P. M. 57  
 Moore, J. G. 42  
 Moore, J. W. 29  
 Moore, K. A. 34  
 Moore, M. V. 21  
 Moore, W. S. 27, 57  
 Moorthi, S. D. 26  
 Moran, D. M. 24, 54  
 Moran, M. 28  
 Morel, F. M. 21, 22, 28, 47  
 Moreno-Amich, R. 55  
 Morgan, J. A. 47  
 Morrice, J. M. 38  
 Morris, D. P. 23  
 Morris, J. T. 20, 49  
 Morris, R. M. 57  
 Morrow, J. H. 20  
 Morton, S. L. 44  
 Moser, K. A. 27, 31, 55

Mosier, A. C. 56  
 Mount, D. R. 38  
 Moyer, C. L. 54  
 Muehlstein , L. K. 25  
 Muehlstein, L. K. 25  
 Mueller, D. R. 24  
 Mueller-Solger, A. 33  
 Muenchow, A. 34  
 Mulbry, W. W. 36  
 Mulholland, M. 24, 28, 31, 36  
 Mulholland, M. R. 24, 31, 36  
 Mulholland, P. J. 36  
 Müller, B. 20  
 Muller-Karger, F. 45  
 Müller-Navarra, D. C. 49  
 Mulligan, A. E. 58  
 Mullineaux, L. S. 58  
 Murphy, S. A. 44  
 Murray, A. E. 24, 34, 41  
 Murray, D. 29  
 Murrell, C. J. 53  
 Murrell, J. C. 30  
 Muyzer, G. 53  
 Mydlarz, L. D. 54

**N**

Nababan, B. 45  
 Nadalig, T. 41  
 Nadaling, T. 41  
 Nagata, T. 28  
 Nagata Toshi, 32  
 Naik, H. 58  
 Naiman, R. J. 28  
 Naqvi, S. W. 58  
 Natale, F. 49  
 Natarajan, S. 57  
 Nater, E. A. 41  
 Natter, M. J. 25  
 Natunewicz, C. C. 36  
 Nauhaus, K. 41, 42, 53  
 Ndenga, N. 43  
 Neale, P. J. 23, 34, 44, 55  
 Needoba, J. A. 43  
 Negri, R. M. 43  
 Neira, C. 50  
 Nelson, D. C. 53  
 Nelson, N. B. 40, 45  
 Nelson, R. K. 47  
 Nemeth, F. S. 50  
 Neubert, M. G. 48  
 Neuer, S. 40  
 Neuhuber, S. 24  
 Newsham, K. K. 30  
 Nie, Y. 48  
 Nielson, K. 30, 56  
 Nielson, K. E. 56  
 Niemann, H. 41  
 Nieuwenhuize, J. 48  
 Niezgoda, G. 20  
 Nightingale, P. D. 47  
 Noble, R. T. 37  
 Noble, S. J. 21  
 Noernberg, P. 55  
 Norén, F. 25

Norlin, J. I. 26  
 Nørnberg , P. 31  
 Norton, S. A. 39  
 Novak, M. 34, 35  
 Nowocin, K. J. 44  
 Nunnally, C. C. 58

**O**

Obrecht, D. V. 26  
 O'Brien, S. G. 43  
 Ochs, C. A. 23, 33  
 O'Connor, B. L. 51  
 O'Daniel, S. 33  
 O'Donnell, J. 25  
 Ogbebo, F. E. 23, 33  
 Oh, K. Y. 32  
 Oh, S. Y. 32  
 Okuda, C. 42  
 Olson, D. B. 40  
 Olson, R. J. 43, 48  
 O'Malley, R. 49  
 Omoregie, E. O. 59  
 O'Neil, J. M. 24, 31, 36  
 Oppert, C. 33, 37  
 Oppert, C. J. 33  
 Opsahl, S. P. 33  
 O'Reilly, C. M. 34, 57  
 Orellana, M. V. 43  
 Orem, W. 52  
 Oremland, R. S. 53  
 Oren, A. 53  
 Orlandini, K. A. 39  
 Orphan, V. J. 30  
 Orrico, C. O. 42  
 Ortner, P. B. 49  
 Osburn, C. L. 23, 31, 53  
 Oulette, A. 31  
 Ovaitt, C. 38  
 Overdier, J. 47  
 Overdier, J. T. 47  
 Oviatt, C. 30  
 Ow, L. N. 34  
 Oza, H. I. 32

**P**

Pace, M. L. 22, 48  
 Pace, N. R. 59  
 Packoff, G. 32  
 Padilla, D. K. 26  
 Paerl, H. W. 27, 37, 59  
 Pagano, M. 34  
 Page, H. M. 42  
 Pakulski, J. D. 23, 26, 55  
 Palen, W. J. 23  
 Palenik, B. P. 43, 44  
 Palmarsson, S. O. 20  
 Pálmarsson, S. Ó. 20  
 Panayotou, D. Y. 39  
 Pancost, R. 56  
 Paniker, L. 56  
 Pantoja, S. 24, 54  
 Pantoja, S. C. 54  
 Papastefanou, K. 33

Pape, T. 41  
 Paris, C. B. 47  
 Parish, K. 28  
 Parker, A. E. 23  
 Parparov, A. 38  
 Parrish, J. K. 22  
 Pasour, V. B. 55  
 Passow, U. 21, 40  
 Paterson, A. 22, 31  
 Paterson, A. M. 31  
 Paterson, M. 52  
 Paterson, M. J. 52  
 Patterson, M. 56  
 Paul, D. W. 21  
 Paul, J. 25, 38, 57  
 Paul, J. H. 25, 57  
 Pauli, C. K. 54  
 Paulsen, I. 44  
 Pavageau, M. P. 39  
 Pawlowicz, R. 38  
 Paytan, A. 27  
 Pecheyran, C. 39  
 Pederson, B. A. 32  
 Peech, K. A. 52  
 Peierls, B. J. 37  
 Pelikan, K. M. 26  
 Penrose, W. R. 39  
 Penny, D. L. 32  
 Pensa, M. A. 23  
 Perkins, B. D. 26  
 Perney, G. 47, 54  
 Pernthaler, A. 30  
 Perry, M. J. 25, 48  
 Pers, B. C. 38  
 Pershall, A. D. 32, 43  
 Petersen, T. W. 43  
 Peterson, G. S. 23, 38  
 Peterson, T. D. 48  
 Petrone, R. 47  
 Peyer, S. M. 59  
 Pfannkuche, O. 41  
 Pfeifer, K. 41  
 Pfister, G. 52  
 Pichlova, R. 26  
 Piechocinski, N. C. 21  
 Piehler, M. F. 27, 37  
 Pierson, J. 36  
 Pigg, R. J. 37  
 Pillsbury, R. W. 20  
 Pinchuk, A. I. 49  
 Pinckney, J. L.  
     25, 27, 37, 51, 54, 59  
 Pineiro, S. A. 35, 55  
 Pizarro, P. 36  
 Plizay , M. D. 48  
 Platt, T. 22, 30, 52  
 Plisnier, P. D. 57  
 Ploug, H. 48  
 Podemski, C. L. 52  
 Poertner, H. O. 41  
 Pollard, A. I. 21  
 Polz, M. F. 34  
 Pontius, R. A. 26  
 Poole, G. C. 33  
 Popp, B. N. 54

Porinchu, D. F. 27  
 Porter, D. 50  
 Porter, E. T. 58  
 Portnoy, J. W. 22  
 Porubsky, W. P. 27, 50  
 Poser, E. A. 33  
 Postel, J. 36  
 Poulin, M. 22  
 Powers, L. A. 20  
 Prasil, O. 48, 54  
 Precht, E. 25  
 Prell, W. 29  
 Preston, C. 41, 58  
 Preston, C. M. 58  
 Preston, T. 23  
 Pringault, O. 59  
 Priscu, J. C. 24, 53, 56  
 Pritchard, I. D. 30  
 Probert, I. 21  
 Proctor, L. M. 44  
 Progess, C. 40, 44  
 Progess, C. A. 40  
 Prosick, T. 55  
 Psenner, R. 22  
 Ptacnik, R. 26  
 Pullin, M. J. 40, 44  
 Pushnik, J. 38  
 Pyrtle, A. J. 42

**Q**

Qin, X. 33  
 Quigg , A. S. 22  
 Quigg, A. 48, 49  
 Quinby, H. L. 47  
 Quinones-Rivera, Z. 33  
 Quintana, X. D. 42, 55

**R**

Rabalais, N. 38  
 Rabalais, N. N. 38  
 RABOUILLE, C. 24  
 Radajewski, S. 30  
 Rago, A. 34, 57, 58  
 Raimbault, P. 40  
 Rao, A. 36  
 Rappe, M. S. 57  
 Rautio, M. 30  
 Raven, J. A. 21  
 Ravet, J. L. 36  
 Raymond, J. A. 56  
 Raymond, P. A. 28  
 Reardon, M. 58  
 Rearick, M. R. 52  
 Rearick, M. S. 44  
 Redalje, D. G. 25  
 Redfield, Elizabeth, 56  
 Reed, R. E. 29, 50  
 Reid, R. P. 56  
 Reifel, K. M. 32, 37, 55  
 Reimer, J. J. 45  
 Reinfelder, J. R. 22  
 Reiss, J. 42  
 Rengefors, K. 25

- Repeta, D. J. 34  
 Reuter, J. E. 20  
 Richard, D. A. 52  
 Richard, H. M. 42  
 Richards, C. 38  
 Richards, R. C. 20  
 Richardson, D. E. 31  
 Richardson, T. L. 25, 45  
 Richey, J. N. 26  
 Richmond, C. E. 37  
 Richnow, H. H. 41  
 Rick, J. J. 48  
 Rick, S. 48, 51  
 Ridame, C. 40  
 Riebesell, U. 48  
 Riedel, A. 55  
 Rigsby, C. A. 27  
 Rimmelin, P. 40  
 Ringuet, S. 21, 23  
 Rios, J. V. 31  
 Rippey, B. 50  
 Risgaard-Petersen, N. 47  
 Rivera-Monroy, V. H. 21  
 Robbins, A. L. 34  
 Roberts, B. J. 48  
 Robertson, B. 54  
 ROBIGOU, V. 39  
 Robigou, V. 39  
 Roden, E. E. 24, 39  
 Roesler, C. S. 20, 25, 39  
 Rogers, D. E. 57  
 Rogers, D. R. 54  
 Rogers, K. L. 54  
 Rohr, J. 43  
 Rohwer, F. 30, 48, 54, 56  
 Rolflus, K. R. 39, 52  
 Roll, S. K. 37  
 Rollwagen Bollens, G. C. 32, 33  
 Rom, E. L. 39  
 Roman, M. 29, 36, 45, 49  
 Roman, M. R. 29, 36, 45, 49  
 Roman, R. 49  
 Romanuk, T. N. 22  
 Romare, P. 29  
 Romero, I. 45, 49  
 Roopnarine, P. D. 59  
 Roos-Barracough, F. 39  
 Rose, J. M. 24, 32  
 Rosenberry, D. O. 27  
 Rosenkrantz, J. E. 44  
 Rosenthal, J. J. 42  
 Rosetta, C. 30  
 Ross, C. I. 32  
 Rossberg, M. C. 33  
 Rossel, P. 24  
 Rosso, P. H. 38  
 Roth, B. M. 28  
 Rothrock, M. J. 56  
 Rothschild, C. 24  
 Rowe, G. T. 58  
 Røy, H. 49  
 Roy, S. 22, 26, 43  
 Rudd, J. W. 52  
 Rudnick, G. 49  
 Rueda, F. J. 20  
 Rundle, M. 43  
 Runkel, R. L. 59  
 Ruppel, C. 50, 58  
 Rusak, J. A. 57  
 Rusch, A. 54  
 Rusello, P. J. 20  
 Rust, T. M. 54  
 Rye, R. O. 52  
 Ryer, C. H. 47  
 Ryneanson, T. A. 22
- S**
- Saarman, E. 29  
 Sackmann, B. S. 25, 48  
 Saez, A. 21  
 Sahling, H. 41  
 Saiki, M. 52  
 Saito, M. A. 22  
 Sala, J. 42  
 Salas, J. A. 58  
 Salbrechter, M. 52  
 Salerno, J. L. 54  
 Salinas, J. T. 39  
 Salomon, P. 25  
 Samarkin, V. 41  
 Sanders, R. W. 55  
 Sanderson, M. P. 25  
 Sandhei, P. T. 21  
 Sandheinrich, M. B. 52  
 Sandow, M. 38  
 Sanford, L. 34, 58  
 Sanford, L. P. 58  
 Sannigrahi, P. 28  
 Sansone, F. J. 24  
 Santer, B. 37  
 Santschi, P. H. 25, 54  
 Sanudo-Wilhelmy, S. A. 46  
 Sanudo-Wilhelmy, S. A. 45, 49  
 Sargent, B. E. 52  
 Sarkar, S. 43  
 Saros, J. E. 23, 33, 50, 53  
 Sasner, J. J. 31  
 Sass, G. G. 29  
 Sassen, R. 56  
 Sathyendranath, S. 22, 30, 52  
 Saucier, F. J. 40  
 Savage, , V. M. 22  
 Savidge, G. 23  
 Scavia, D. 38  
 Schaefer, K. A. 44  
 Schaffner, A. 42, 44  
 Schaffner, R. A. 32  
 Schampel, J. 59  
 Schampel, J. H. 59  
 Schapira, M. N. 48  
 Scharler, U. M. 58  
 Schelert, James, 56  
 Scheuerell, M. D. 29, 49, 57  
 Schimmoeller, R. M. 46  
 Schindler, D. E. 23, 29, 49, 57  
 Schindler, D. W. 21, 57  
 Schladow, S. G. 20  
 Schlueter, M. 41  
 Schmidt, R. 50
- Schnegurt, M. 53  
 Schnetzer, A. 44, 54  
 Schoenfeld, T. 30, 56  
 Schofield, O. 22, 42  
 Schofield, O. M. 22, 42  
 Scholin, C. 49  
 Scholten, J. M. 53  
 Schonberg, S. V. 39  
 Schrag, D. P. 30  
 Schreibman, M. 31  
 Schrimpf, W. 37  
 Schroeder, D. M. 42  
 Schroeder, T. 21  
 Schultz, G. E. 25  
 Schultz, Jr., G. E. 54  
 Schulz, K. L. 26  
 Schwalbach, M. S. 44  
 Schweder, T. 42  
 Schwedock, J. 30  
 Schweizer, M. 41  
 Scofield, O. 22  
 Scott, , G. I. 50  
 Scott, G. 50  
 Scott, K. M. 30  
 Sedlacek, C. 37  
 See, J. H. 24  
 Seibel, B. A. 42  
 Seifert, R. 41  
 Seitz, R. D. 55  
 Seitzinger, S. 24, 28  
 Seitzinger, S. P. 24  
 Selle, A. R. 50  
 Sepulveda, J. C. 54  
 Seuront, L. 48  
 Seydewitz, L. 34, 35  
 Seyfarth, W. R. 47  
 Sgro, G. V. 38  
 Shafer, M. M. 47  
 Shailaja, M. S. 58  
 Shailer, M. 39  
 Shalapyonok, A. 48  
 Shang, Y. 33  
 Shank, G. C. 40  
 Shank, T. M. 56  
 Shapiro, L. S. 49  
 Sharp, J. H. 33, 45, 57  
 Shaw, W. 20  
 Shea, J. F. 26  
 Shea, K. 56  
 Sheets, L. 56  
 Shellito, S. M. 29  
 Sheng, J. 57  
 Sherr, B. F. 23  
 Sherr, E. B. 23  
 Shertzer, K. W. 26  
 Shimeta, J. 20, 34  
 Shipe, R. F. 32  
 Shock, E. L. 53  
 Shoemaker, D. 35  
 Sholkovitz, E. R. 34, 57, 58  
 Short, J. W. 36  
 Short, S. M. 51, 57  
 Shotyk, W. 39  
 Showers, W. J. 29  
 Shulman, M. J. 34
- Shumway, S. E. 58  
 Sibley, S. 50  
 Siebert, R. 31, 40, 46  
 Siebert, R. L. 31, 46  
 Siegel, D. A. 23, 34, 43, 45  
 Sieracki, M. E. 32, 39, 49  
 Sierszen, M. E. 38  
 Sievert, S. M. 54  
 Siewicki, T. 50  
 Sigman, D. M. 27, 40  
 Silsbe, G. M. 20  
 Silva, R. I. 43  
 Silver, M. W. 24  
 Simbahani, Jessica, 56  
 Simcik, M. F. 38  
 Simenstad, C. 29  
 Simjouw, J. P. 28  
 Singer, J. 39  
 Singler, H. R. 43  
 Sinsabaugh, R. L. 26  
 Sisak, M. M. 20  
 Sjunneskog, C. 27  
 Skoog, A. 54  
 Skrabal, S. A. 40  
 Slate, J. E. 32  
 Slaughter, A. 33  
 Slezak, D. 40  
 Slomp, C. P. 27  
 Sluss, T. D. 21  
 Smail, E. 30  
 Small, E. B. 33  
 Smallwood , B. J. 49  
 Smallwood, B. J. 45  
 Smetacek, V. 48  
 Smith, A. C. 24  
 Smith, A. J. 27  
 Smith, A. N. 30  
 Smith, C. R. 51  
 Smith, D. C. 42, 47, 48  
 Smith, E. B. 30  
 Smith, L. K. 43  
 Smith, M. C. 57  
 Smith, R. 21, 55  
 Smith, R. A. 21  
 Smith, R. M. 55  
 Smith, S. V. 21, 38  
 Smith, V. H. 38  
 Smol, J. P. 22  
 Snedden, G. A. 36  
 Snyder, M. D. 26  
 Snyder, M. T. 58  
 Sobecky, P. 41, 56  
 Sobecky, P. A. 56  
 Sogin, M. 54, 59  
 Sogin, M. L. 54  
 Sokal, M. 27  
 Solomon, C. M. 45  
 Solow, A. R. 48  
 Sommer, F. 37, 48  
 Sommer, S. 41  
 Sommer, U. 26, 37, 38, 48  
 Sommerville, K. 23  
 Song, B. 51  
 Sørensen, K. B. 53  
 Sorokin, D. Y. 42, 53

Sosik, H. M. 48  
 Sosinsky, G. 57  
 Soulén, H. 58  
 Southam, G. 55  
 Souza, V. 59  
 Spaak, P. 36, 38  
 Spear, J. R. 59  
 Spencer, R. G. 40  
 Spindler Joris, J. 55  
 Spivack, A. J. 42  
 Springer, J. J. 29, 31  
 Spruance, C. L. 31  
 Spyres, G. 24, 28  
 Squires, M. M. 47  
 St. Louis, V. 52  
 St.Louis, V. L. 52  
 Stadnitskaia, A. 41  
 Stahl, D. A. 47, 59  
 Stamenkovic, J. 52  
 Stams, A. J. 53  
 Stankelis, R. M. 29  
 Stanley, J. K. 31  
 Stara, L. 26  
 Starkweather, P. L. 21  
 Staroscik, A. M. 47, 48  
 Starr , M. 22  
 Starr, M. 40  
 Stedmon, C. A. 28  
 Stefaniak, L. M. 34  
 Stegen, J. C. 36  
 Steidinger, K. A. 29, 37  
 Steimle, G. 57  
 Stein, J. 41, 42  
 Stein, J. L. 42  
 Steinberg, D. K. 23, 37, 40  
 Stenseth, N. C. 22  
 Stephens, V. C. 41  
 Stephenson, M. 52  
 Steppe, T. F. 59  
 Sterner, R. W. 32  
 Stets, E. G. 54  
 Stevenson , R. D. 39  
 Stevenson, R. D. 44  
 Steward, G. F. 51, 53, 57  
 Steward, J. 57  
 Stewart, F. J. 24  
 Stewart, F. S. 57  
 Stewart, G. M. 47  
 Stewart, R. 52  
 Stibor, H. 38  
 Stief, P. 24  
 Stimson, J. 38  
 Stine, O. C. 55  
 Stips, A. 37  
 Stocks, K. I. 31  
 Stoek, T. 57  
 Stoermer, E. F. 38  
 Stokes, M. D. 42  
 Stolzenbach, K. D. 47  
 Stone, J. R. 34  
 Stoor, R. W. 40  
 Storch, A. J. 26  
 Stovall-Leonard, A. 45  
 Straile, D. 50

Stramski, D. 57  
 Strand, M. P. 43  
 Strathmann, R. R. 29  
 Streble, L. 34  
 Strickler, J. R. 57  
 Subramiam, A. 40, 43  
 Suchman, C. L. 37  
 Suggett, D. 48  
 Sullivan, B. K. 26  
 Sullivan, M. B. 44  
 Sullivan, M. C. 57  
 Summers, J. K. 37  
 Sun, M. Y. 28  
 Sunda, W. G. 21  
 Sundback, K. 51  
 Sundbäck, K. 36, 51  
 Sung, T. 55  
 Sunman, B. 20  
 Surkov, A. 54  
 Sutor, M. 29  
 Suzuki, M. 41, 58  
 Suzuki, M. T. 58  
 Svensson, E. I. 54  
 Swackhamer, D. L. 38  
 Swain, E. B. 41  
 Swan, B. K. 32, 37, 55  
 Swaney, D. P. 21  
 Swarzenski, P. W. 57  
 Swift, T. J. 20  
 Sylvan, J. B. 49  
 Sylvestre, F. 27

**T**

Tada, K. 43  
 Taggart, S. J. 34  
 Taghon, G. L. 51  
 Taillefert, M. 24, 35, 58  
 Tait, D. 22  
 Takabayashi, M. 51  
 Takai, K. 54  
 Talaue-McManus, L. 21  
 Tan, G. P. 44  
 Tanaka, K. 21  
 Tang, C. M. 59  
 Tang, D. 47  
 Tang, E. P. 23  
 Tang, K. 26, 48  
 Tang, K. W. 26  
 Taniguchi, M. 57, 58  
 Taroncher-Oldenburg, G. 51  
 Taub , F. B. 37  
 Taylor, C. D. 54  
 Taylor, D. J. 37  
 Taylor, G. 57  
 Taylor, H. E. 52  
 Taylor, L. E. 29  
 Teece, M. R. 26  
 Tegt, S. K. 27  
 Telford, R. J. 27  
 Teske, A. 36, 42, 53, 54  
 Tessier, A. J. 26, 49  
 Tessier, E. 39

Testa, J. M. 34, 57, 58  
 Teubner, K. 52  
 Teyssie, J. L. 47  
 Thamdrup, B. 53  
 The ODP Leg 201 Scientific  
 Shipboard Party, 42  
 Thiel, V. 41  
 Thier, E. C. 32  
 Thies, H. 22  
 Thistle, D. 58  
 Thomas, B. A. 52  
 Thomas, C. S. 43  
 Thomas, D. N. 22, 30  
 Thomas, F. I. 51, 59  
 Thomas, S. A. 33, 36  
 Thomason, J. 31  
 Thompson, J. A. 38  
 Thoms, M. C. 27  
 Thorpe, A. P. 26  
 Thorrold, A. L. 44  
 Threlkeld, S. T. 33  
 Thuesen, E. V. 34  
 Tichy, M. 54  
 Tietge, J. E. 23  
 Tietjen, T. E. 23  
 Tiffany, M. A. 37, 55  
 Tittel, J. 26  
 Toft, J. D. 29  
 Tolotti, M. 22  
 Tomasky, G. 38  
 Toms, D. C. 29, 50  
 Toole, D. A. 40, 43  
 Torgersen, C. E. 22, 29  
 Torgersen, T. 24  
 Tozzi, S. 49  
 Trader, T. H. 29  
 Tran, H. 49  
 Travao, M. 54  
 Travao, M. J. 54  
 Trebitz, A. S. 38  
 Treude, T. 41, 42, 53  
 Trice, M. 29  
 Triplett, L. D. 50  
 Trobajo, R. 42  
 Tseng, C. M. 39  
 Tuel, M. D. 25  
 Tuerk, K. 50  
 Tuncay, K. 44  
 Turk, K. 53  
 Turk, K. A. 53  
 Turley, C. M. 47  
 Turner, E. 38  
 Turner, M. 28, 52  
 Turner, M. G. 28  
 Turner, P. K. 31  
 Turner, P. L. 56  
 Turner, R. E. 38  
 Twilley, R. R. 21, 51  
 Twining, B. S. 52  
 Twombly, S. 31  
 Twomey , L. 37  
 Tyrina, N. 41

**U**

Uher, G. 40  
 Ulanowicz, R. E. 58  
 Upstill-Goddard, R. C. 40  
 Urakawa, H. 30  
 Urbach, E. 57  
 Urban-Rich, J. 28, 45  
 Urban-Rich, J. L. 45  
 Usry, B. 29  
 Ussler III, W. 54  
 Ustin, S. L. 38  
 Utz, L. R. 33

**V**

Valdes, L. M. 27, 37  
 Valdivia, F. R. 55  
 Valett, H. M. 36  
 Valielia, I. 38  
 Vallino, J. J. 24, 30  
 Van Alstine, J. M. 35  
 Van Cappellen, P.  
 27, 38, 44, 56  
 Van De Bogert, M. 22  
 Van de Bogert, M. C. 48  
 van de Shootbrugge, B. 22  
 van den Engh, G. 43  
 Van Dolah, R. F. 50  
 Van Dover, C. L.  
 30, 54, 55, 56  
 Van Heukelem, L. 43  
 Van Hove, P. 53  
 Van Keuren, D. 26  
 van Lenning, K. 21  
 Van Mooy, B. 47  
 van Overdijk, C. D. 26  
 VanBenschoten, S. R. 23  
 Vance-Harris, C. A. 36  
 Vandal, G. M. 39  
 VanderLoop, M. C. 26  
 Vanderploeg, H. A. 26, 29, 45  
 Vanni, M. J. 21, 22  
 Vardy, S. 27  
 Varela, D. E. 21  
 Vargas, M. 49  
 Vargo, G. A. 24, 31  
 Vasquez, L. I. 38  
 Veloza, A. 47  
 Verburg, P. 39  
 Vergin, K. L. 57  
 Verity, P. G. 25, 51  
 Viger, J. M. 50  
 Villareal, T. A. 43  
 Vincent, W. F. 24, 30, 53  
 Virmani, J. I. 31  
 Vis, C. 22  
 Viscido, S. V. 22  
 Visscher, P. T.  
 24, 39, 53, 56, 59  
 Vlahos, P. 54  
 Vodacek, A. 40  
 Vogt, P. 37

von Dassow, P. 48  
 Voytek, M. A. 24, 51  
 Vrede, T. 36  
 Vrijenhoek, R. C. 30

**W**

Wade, B. 56, 59  
 Wade, B. D. 56  
 Waite, A. 21  
 Waldbusser, G. G. 24  
 Walker, H. 38  
 Walker, N. D. 36  
 Wallace, R. L. 21  
 Wallmann, K. 27, 41  
 Walsh, E. J. 21, 31  
 Walsh, J. J. 24, 31, 43, 45  
 Wang, C. 22  
 Wang, L. 20  
 Wang, X. C. 28  
 Waples, J. T. 38, 39  
 Ward, B. B. 51, 57, 58  
 Ward, D. M. 53  
 Ward, G. M. 39  
 Ward, J. E. 58  
 Waren, A. 30  
 Warner, K. A. 39  
 Washburn, L. 34  
 Wason, C. 34, 35  
 Wassmann, P. 40  
 Waterbury, J. B. 41, 44  
 Watts, J. 32, 37, 55, 59  
 Watts, J. M. 32, 37, 55  
 Webb, E. A. 41  
 Webster, J. R. 36  
 Weckstrom, K. 27  
 Weering, van, T. C. 41  
 Wefer, G. 32  
 Wegley, L. 30, 54  
 Wei, L. 34, 49  
 Weider, L. J. 26  
 Weis, J. J. 29  
 Weisberg, R. H. 45  
 Weithoff, G. 20

Welch, K. A. 27  
 Welker, M. 36  
 Wells, M. L. 28  
 West, G. B. 22  
 Weston, N. B. 27, 50  
 Wetzel, R. G. 23, 40  
 Wexels Riser, C. 40  
 Whalin, L. 28  
 Wheelock, K. V. 36  
 Whelan, P. 28  
 Whitcraft, C. 50  
 White, D. M. 28  
 White, R. 48  
 Whitehead, K. 26  
 Whitehead, R. F. 40  
 Whitlatch, R. B. 24  
 Whitmire, S. L. 20  
 Wickham, S. A. 21, 32, 33, 42  
 Widdel, F. 41, 42  
 Widder, E. 29  
 Wiegner, T. 24  
 Wieland, A. 53  
 Wiener, J. G. 52  
 Wilborn, U. 42  
 Wilhelm, S. W. 31  
 Wilkerson, F. P. 44, 49, 51  
 Wilkie, A. C. 36  
 Wilkin, J. 47  
 Williams , P. J. 22  
 Williams, H. N. 35, 55  
 Williams, P. J. 30  
 Williams, R. J. 22  
 Williamson, C. E. 21, 23, 26  
 Williamson, K. E. 48  
 Williamson, S. J. 25  
 Willis, T. V. 28  
 Wilmette, A. 53  
 Wilson, F. K. 50  
 Wilson, K. 56  
 Wilson, M. 38  
 Wilson, S. E. 37  
 Winder , M. 57  
 Windom, H. 50

Wing, S. R. 36  
 Winget, D. M. 48  
 Winter, T. C. 27  
 Wirsén, C. O. 54  
 Wiseman, w. 38  
 Wissel, B. 33, 50  
 Witte, U. 25  
 Witucki, P. F. 20, 34  
 Woessner, W. W. 33  
 Wolf, C. F. 24, 53  
 Wolfe, A. P. 33, 50  
 Wolfe, B. 27, 31  
 Wolfe, B. B. 31  
 Wolfe, F. L. 27  
 Wolff, N. 43  
 Wollast, R. 48  
 Wommack, K. E. 48  
 Wong, W. H. 58  
 Woodin, S. A. 44  
 Woodruff, P. L. 37  
 Woods, T. L. 58  
 Woods, W. L. 30  
 Worthington, K. K. 48  
 Wright, T. D. 57  
 Wu, J. F. 40  
 Wuest, A. 20  
 Wüest, A. 20, 36  
 Wulff, A. 51  
 Wulff, F. 21  
 Wurtsbaugh, W. 32, 37, 42, 51  
 Wurtsbaugh, W. A.  
     32, 37, 42, 51

**X**

Xenopoulos, M. A. 22  
 Xiang, X. R. 40  
 Xu, Y. 22

**Y**

Yacoby, Y. Z. 38  
 Yager, P. L. 31, 46, 47

Yamamoto, M. 37  
 Yang, C. 28  
 Yang, W. 42  
 Yarbro, L. A. 42  
 Yasuaki, A. 20  
 Yates, M. 34  
 Yayanos, A. A. 55  
 Yoder, J. A. 43  
 Yokokawa Taichi, 32  
 Yoshida, T. 26  
 Yoshiyama, K. 33  
 Young, D. 55, 59  
 Young, J. R. 21  
 Young, K. C. 28, 40  
 Young-Williams, A. C. 49  
 Yunping, X. 59  
 Yurista, P. M. 38

**Z**

Zabel, M. 41  
 Zakardjian, B. 40  
 Zaneveld, J. R. 43  
 Zarco-Tejada, P. 38  
 Zeglin, L. H. 43  
 Zehr, J. P. 51, 53, 57, 59  
 Zepp, R. 28  
 Zhang, C. 31, 41, 56  
 Zhang, H. 26, 47  
 Zhang, X. 36  
 Zhao, X. 47, 54  
 Ziebis, W. 41  
 Ziliqi, D. 34  
 Zimmer, K. D. 20  
 Zimmerman, R. C. 58, 59  
 Ziolkowski, L. 40  
 Zippel, B. 26, 30  
 Zmora, O. 49  
 Zohar, Y. 49  
 Zöllner, E. 37  
 Zou, L. 28  
 Zrotalova, K. 54  
 Zurita, I. 48

**Program Matrix - Saturday**

7:00 PM	ASLO Minorities Program - Keynote Address - Sheraton Hotel Dr. Barry Costa-Pierce, Director of Rhode Island Sea Grant <i>Ecological Aquaculture and Personal Reflections</i>
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**Program Matrix - Sunday**

1:00-9:00 PM	Registration - East Registration Area
1:00-9:00 PM	Speaker Ready Room - Room 250 F
1:00-2:00 PM	Stable Isotopes Workshop - Room 150 G
2:30-3:30 PM	ICPMS Workshop - Room 150 G
2:00-5:30 PM	ASLO Minorities Program - General Session - Room 250 C
5:30-6:30 PM	Opening Address - Grand Ballroom AB & North Foyer David J. Des Marais, Research Scientist, Space Science & Astrobiology, Ames Research Center, NASA <i>Astrobiology Extends Biology into Deep Time and Space</i>
	Opening Welcome Mixer Reception - South Ballroom Foyer
6:30-9:00 PM	

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.

ASLO Minorities Program - Keynote Address - Sheraton Hotel Dr. Barry Costa-Pierce, Director of Rhode Island Sea Grant <i>Ecological Aquaculture and Personal Reflections</i>	7:00 PM
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Registration - East Registration Area	1:00-9:00 PM
Speaker Ready Room - Room 250 F	1:00-9:00 PM
Stable Isotopes Workshop - Room 150 G	1:00-2:00 PM
ICPMS Workshop - Room 150 G	2:30-3:30 PM
ASLO Minorities Program - General Session - Room 250 C	2:00-5:30 PM
Opening Address - Grand Ballroom AB & North Foyer David J. Des Marais, Research Scientist, Space Science & Astrobiology, Ames Research Center, NASA <i>Astrobiology Extends Biology into Deep Time and Space</i>	5:30-6:30 PM
Opening Welcome Mixer Reception - South Ballroom Foyer	6:30-9:00 PM

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.

**Program Matrix - Monday**

7 AM-5 PM	Registration - East Registration Area				
7 AM-5 PM	Email Room - Room 252 AB				
7:30 AM-7 PM	Speaker Ready Room - Room 250 F				
8:00-8:30 AM	Complimentary Coffee Service - Grand Ballroom Foyer				
8:30-9:30 AM	Conference Welcome & Awards Presentation - Grand Ballroom AB & North Foyer				
9:30-10:15 AM	Plenary Address - Historical Studies in Aquatic Sciences - Grand Ballroom AB & North Foyer Sheri Fritz, Professor, University of Nebraska, Lincoln, Nebraska				
	Lakes Across Gradients of Space and Time				
10:15-10:45	BREAK				
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	SS3.09	SS1.05	SS3.06	SS3.03	SS3.01
Title	Cross-system Comparison of Sources, Composition, and Reactivity of DON	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Landscape Context of Ultraviolet Radiation Effects on Aquatic Ecosystems	Landscape Ecology and Environmental Grain from a Microbial Perspective	Emergent Properties of Complex Aquatic Ecosystems: A Macroecological Perspective
10:45 AM	McCarthy, M. D.	Schindler, D. W.	Williamson, C. E.	Lau, W.	Gillooly, J. F.
11:00 AM	Bronk, D. A.	Schindler, D. W.	Williamson, C. E.	Longnecker, K.	Gillooly, J. F.
11:15 AM	Steinberg, D. K.	Hoover, D. J.	Osburn, C. L.	Kemp, P. F.	Li, W. K.
11:30 AM	Lewitus, A. J.	Hoover, D. J.	Diamond, S. A.	Siegel, D. A.	Finkel, Z. V.
11:45 AM	Parker, A. E.		Brooks, M. L.		Belgrano, A.
12:00-2:00 PM	LUNCH				
12:00-6:00 PM	Exhibitor Set-Up - Grand Ballroom E-J				
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	SS3.09 (con't.)	SS1.05 (con't.)	SS3.06 (con't.)	SS3.16	SS3.01 (con't.)
Title	Cross-system Comparison of Sources, Composition, and Reactivity of DON	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Landscape Context of Ultraviolet Radiation Effects on Aquatic Ecosystems	Microscale Biogeochemical Processes in Aquatic Systems	Emergent Properties of Complex Aquatic Ecosystems: A Macroecological Perspective
2:00 PM	Sommerville, K.	Alexander, R. B.	Cooke, S. L.	Carey, E. A.	Forget, M. H.
2:15 PM	Kai, F.	Alexander, R. B.	Corn, P. S.	Waldbusser, G. G.	Stenseth, N. C.
2:30 PM	Pantoja, S.	Fisher, T. R.	Neale, P. J.	Decho, A. W.	Hillebrand, H.
2:45 PM	Mulholland, M. R.	Fisher, T. R.	Palen, W. J.	Torgersen, T.	Dunne, J. A.
3:00 PM	Hopkinson, C. S.	Twilley, R. R.	Hansson, L. A.	Stieff, P.	Xenopoulos, M. A.
3:15 PM*		Twilley, R. R.		Roden, E. E.	Ciannelli, L.
3:00-5:00 PM	Poster Set-Up - Grand Ballroom E-J				
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	SS3.09 (con't.)	SS1.05 (con't.)	SS3.06 (con't.)	SS3.16 (con't.)	SS3.01 (con't.)
Title	Cross-system Comparison of Sources, Composition, and Reactivity of DON	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Landscape Context of Ultraviolet Radiation Effects on Aquatic Ecosystems	Microscale Biogeochemical Processes in Aquatic Systems	Emergent Properties of Complex Aquatic Ecosystems: A Macroecological Perspective
3:45 PM	See, J. H.	Havens, K. E.	Ochs, C. A.	Bendell-Young, L. I.	Viscido, S. V.
4:00 PM	Seitzinger, S. P.	Havens, K. E.	Moeller, R. E.	Sansone, F. J.	Lenz, P. H.
4:15 PM	Heil, C. A.	Goldman, C. R.	Clarke, M. A.	Dedieu, K.	Hansen, C.M.E., .
4:30 PM		Goldman, C. R.		Neuhuber, S.	Evans, D. W.
4:45 PM		Smith, S. V.		Fortin, C.	Gresswell, R. E.
5:00 PM		Smith, S. V.		Kostka, J. E.	
5:30-6:30 PM	ASLO Business Meeting - Room 151 G				
6:30-8:00 PM	ASLO Student Meeting - Room 151 G				

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.

\*The afternoon break is scheduled from 3:15-3:45. However, due to presentation assignments some sessions may go over by 15 minutes.

<b>Registration - East Registration Area</b>						<b>7 AM-5 PM</b>
Email Room - Room 252 AB						<b>7 AM-5 PM</b>
Speaker Ready Room - Room 250 F						<b>7:30 AM-7 PM</b>
Complimentary Coffee Service - Grand Ballroom Foyer						<b>8:00-8:30 AM</b>
Conference Welcome & Awards Presentation - Grand Ballroom AB & North Foyer						<b>8:30-9:30 AM</b>
Plenary Address - Historical Studies in Aquatic Sciences - Grand Ballroom AB & North Foyer Sheri Fritz, Professor, University of Nebraska, Lincoln, Nebraska						<b>9:30-10:15 AM</b>
<i>Lakes Across Gradients of Space and Time</i>						
<b>BREAK</b>						<b>10:15-10:45</b>
<b>250 AB</b>	<b>250 C</b>	<b>250 DE</b>	<b>251 AB</b>	<b>251 C</b>	<b>251 DE</b>	
SS2.03	CS05	CS40	SS1.07	SS4.08	SS3.02	Session
The Evolution, Ecology and Biogeochemical Impacts of Plankton from the Paleozoic to the Present	Benthic-Pelagic Coupling & Benthos	Physical Limnology - New Perspectives and Applications to Biogeochemistry and Productivity of Aquatic Ecosystems	Symposium Tribute to John J. Gilbert: 40 Years of Contributions to Limnology	Life in Ice	Terrigenous Subsidies in Freshwater and Marine Systems	Title
Falkowski, P. Falkowski, P. Young, J. R. Sunda, W. G. De La Rocha, C. L.	Luecke, C. Hentschel, B. T. Bell, E. M. Shimeta, J. Powers, L. A.	Hodges, B. R. Laval, B. E. Little, J. C. Rueda, F. J. Churchill, J. H.	Starkweather, P. L. Moore, M. V. DeMott, W. R. Wickham, S. A. Wallace, R. L.	Eicken, H. Eicken, H. Priscu, J. C. Stewart, F. J. Gast, R. J.	Benner, R. Benner, R. Cole, J. J. Amon, R. M. Lin, S.	10:45 AM 11:00 AM 11:15 AM 11:30 AM 11:45 AM
<b>LUNCH</b>						<b>12:00-2:00 PM</b>
<b>Exhibitor Set-Up - Grand Ballroom E-J</b>						<b>12:00-6:00 PM</b>
<b>250 AB</b>	<b>250 C</b>	<b>250 DE</b>	<b>251 AB</b>	<b>251 C</b>	<b>251 DE</b>	
SS2.03 (con't.)	CS38	CS40 (con't.)	SS1.07 (con't.)	SS4.08 (con't.)	SS3.02 (con't.)	Session
The Evolution, Ecology and Biogeochemical Impacts of Plankton from the Paleozoic to the Present	Wetlands Ecology	Physical Limnology - New Perspectives and Applications to Biogeochemistry and Productivity of Aquatic Ecosystems	Symposium Tribute to John J. Gilbert: 40 Years of Contributions to Limnology	Life in Ice	Terrigenous Subsidies in Freshwater and Marine Systems	Title
Milligan, A. J. Raven, J. A. Colin, S. P. Rynearson, T. A. Starr, M.	Whitmire, S. L. Benfield, M. C. Daoust, R. J. McGuire, M. A. Zimmer, K. D.	MacIntyre, S. MacIntyre, S. Cowen, E. A. Lorke, A. Shaw, W.	Magnien, R. E. Williamson, C. E. Jack, J. D. Burks, R. L. Hampton, S. E.	Arrigo, K. R. Brinkmeyer, R. Krembs, C. Meiners, K. Mueller, D. R.	Mead, R. N. Pace, M. L. Horgan, M. J. Apple, J. K. Romanuk, T. N. Colman, J. A.	2:00 PM 2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM*
<b>Poster Set-Up - Grand Ballroom E-J</b>						<b>3:00-5:00 PM</b>
<b>250 AB</b>	<b>250 C</b>	<b>250 DE</b>	<b>251 AB</b>	<b>251 C</b>	<b>251 DE</b>	
SS2.03 (con't.)	CS25	CS40 (con't.)	SS1.07 (con't.)		SS3.02 (con't.)	Session
The Evolution, Ecology and Biogeochemical Impacts of Plankton from the Paleozoic to the Present	Optics	Physical Limnology - New Perspectives and Applications to Biogeochemistry and Productivity of Aquatic Ecosystems	Symposium Tribute to John J. Gilbert: 40 Years of Contributions to Limnology		Terrigenous Subsidies in Freshwater and Marine Systems	Title
Litchman, E. Quigg, A. S. Saito, M. A. Smol, J. P.	Roesler, C. S. Barnard, A. H. Hargreaves, B. R. Swift, T. J. Craig, S. E.	Pálmarsson, S. Ó. Schladow, S. G. Silsbe, G. M. King, A. T. Kumagai, M.	Gonzalez, M. J. Schroeder, T. Noble, S. J. Fradkin, S. C. MacIsaac, H. J.		Hoover, D. J. Pensa, M. A. Wetzel, R. G. Biddanda, B. A. Tietjen, T. E.	3:45 PM 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM
<b>ASLO Business Meeting - Room 151 G</b>						<b>5:30-6:30 PM</b>
<b>ASLO Student Meeting - Room 151 G</b>						<b>6:30-8:00 PM</b>

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.

\*The afternoon break is scheduled from 3:15-3:45. However, due to presentation assignments some sessions may go over by 15 minutes.

**Program Matrix - Tuesday**

7 AM-5 PM	Registration - East Registration Area				
7 AM-5 PM	Email Room - Room 252 AB				
7:30 AM-7 PM	Speaker Ready Room - Room 250 F				
8 AM-7:30 PM	Poster Session & Exhibits - Grand Ballroom E-J				
8:30-9:15 AM	Plenary Address - Paleo Studies in Aquatic Sciences - Grand Ballroom AB & North Foyer Donald E. Canfield, Institute of Biology, Odense University, Odense, Denmark <i>The Evolution of the Sulfur Cycle</i>				
9:15-9:30 AM	BREAK				
Session	150 DEF SS2.02	150 G SS1.05	151 ABC	151 DEF SS4.04	151 G SS3.08
Title	Lacustrine Hydrology Past and Present: Linking Lakes, Catchments, Atmosphere, and Ocean	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Minority Student Symposium	Symbiosis and Syntrophy in Extreme Environments	Organic Matter in Aquatic Systems: Sources, Characterization, Distribution, and Quantification
9:30 AM	Smith, A. J.	Howarth, R. W.		Boetius, A.	Aiken, G. R.
9:45 AM	Smith, A. J.	Howarth, R. W.		Boetius, A.	Aiken, G. R.
10:00 AM	Baker, P. A.	Jones, J. R.		Fisher, C. R.	Nagata, T.
10:15 AM	Lyons, W. B.	Jones, J. R.		Dattagupta, S.	Zou, L.
10:30 AM	Dean, W. E.			Scott, K. M.	Raymond, P. A.
10:45-11 AM	BREAK				
Session	150 DEF SS2.02 (con't.)	150 G SS1.05 (con't.)	151 ABC	151 DEF SS4.04 (con't.)	151 G SS3.08 (con't.)
Title	Lacustrine Hydrology Past and Present: Linking Lakes, Catchments, Atmosphere, and Ocean	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Minority Student Symposium	Symbiosis and Syntrophy in Extreme Environments	Organic Matter in Aquatic Systems: Sources, Characterization, Distribution, and Quantification
11:00 AM	Bloom, A. M.	Lathrop, R. C.		Bergin, C.	Sannigrahi, P.
11:15 AM	McGowan, S.	Lathrop, R. C.		Joyner, J. L.	Cherrier, J.
11:30 AM	Karst-Riddoch, T. L.	Conley, D. J.		Blazejak, A.	Behzad Mortazavi, B.
11:45 AM	Hamilton, S. K.	Conley, D. J.		Bates, A. E.	Mannino, A.
12:00 PM				Goffredi, S. K.	Goldthwait, S. A.
12:15-2:15 PM	LUNCH				
12:15-2:15 PM	Public Policy Workshop - Room 150 DEF				
12:30-1:30 PM	Workshop on NSF Funding Opportunities for Freshwater Research - Room 250 DE				
Session	150 DEF SS3.11 (con't.)	150 G SS1.05 (con't.)	151 ABC	151 DEF SS4.04 (con't.)	151 G SS3.08 (con't.)
Title	Ecology and Management of the Riparian Habitat of Lakes	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Minority Student Symposium	Symbiosis and Syntrophy in Extreme Environments	Organic Matter in Aquatic Systems: Sources, Characterization, Distribution, and Quantification
2:15 PM	Naiman, R. J.	Paerl, H. W.		Borowski, C.	Gardner, B.
2:30 PM	Naiman, R. J.	Paerl, H. W.		Dubilier, N.	McKnight, D. M.
2:45 PM	Francis, T. B.	Joye, S. B.		Gomes da Silva, S.	Stedman, C. A.
3:00 PM	Jennings, M. J.	Joye, S. B.		Buck, K. R.	Spynes, G.
3:15 PM	Roth, B. M.	Foy, R. H.		Kuever, J.	Simjouw, J. P.
3:30 PM*		Foy, R. H.			
Session	150 DEF SS3.11 (con't.)	150 G SS1.05 (con't.)	151 ABC	151 DEF CS36	151 G SS3.08 (con't.)
Title	Ecology and Management of the Riparian Habitat of Lakes	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Minority Student Symposium	Ultraviolet Radiation	Organic Matter in Aquatic Systems: Sources, Characterization, Distribution, and Quantification
4:00 PM	Sass, G. G.	Martinelli, L. A.		Jeffrey, W. H.	McCarty, J. T.
4:15 PM	Toft, J. D.	Martinelli, L. A.		Roy, S.	Maie, N.
4:30 PM	Allen, S. B.			Longhi, M. L.	Guo, L.
4:45 PM	Torgersen, C. E.			Dee, G.	Chen, R. F.
5:00 PM				Whitehead, K.	Young, K. C.
5:30-7:30 PM	Poster Session, Exhibits & Reception - Grand Ballroom E-J				
7:00-8:30 PM	Education and Human Resource Committee - Room 150 C				
7:00-8:30 PM	Ocean Observatories Initiative Open Meeting - Room 150 G				
7:00-8:30 PM	DIALOG Reception - Best Western Salt Lake Plaza Hotel				

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.  
\*The afternoon break is scheduled from 3:30-4:00. However, due to presentation assignments some sessions may go over by 15 minutes.

Posters	CS03	CS08 (con't.)	CS16	CS21 (con't.)	CS27
	1. Twombly, S.	11. Siebert, R. L.	17. Coyne, K. J.	25. CleaBens-Kenning, M.	33. Hicks, J. L.
	2. Mena, L.		18. Bradt, S. R.	26. Rose, J. M.	34. Holmes, M. E.
	3. Rios, J. V.		19. Milroy, S. P.	27. Yokokawa, T.	
	4. Brooks, B. W.	CS10	20. Zhang, C.		CS30
	5. Bintz, J. C.	12. Black, C. M.	21. Deonarine, S. N.	28. Shipe, R. F.	35. Behrenfeld, M. J.
		13. Spruance, C. L.	22. Higham, C. J.	29. Ozia, H. I.	
		CS15		30. Swan, B. K.	36. Rollwagen Bollens, G. C.
	6. Boudreau, C. L.	14. MacKenzie, R. A.	CS19	31. Kim, J. S.	37. Kiffney, P. M.
	7. Fisher, J. C.	15. Stocks, K. I.	23. Ross, C. I.	32. Pershall, A. D.	38. Doyle, R. A.
	8. Jensen, A.	16. Richardson, D. E.		CS21	39. Burkart, G. A.
	9. Boyd, T. J.			24. Dantzler, M. M.	40. Sterner, R. W.
	10. Lenes, J. M.				

Registration - East Registration Area						7 AM-5 PM
Email Room - Room 252 AB						7 AM-5 PM
Speaker Ready Room - Room 250 F						7:30 AM-7 PM
Poster Session & Exhibits - Grand Ballroom E-J						8 AM-7:30 PM
Plenary Address - Paleo Studies in Aquatic Sciences - Grand Ballroom AB & North Foyer Donald E. Canfield, Institute of Biology, Odense University, Odense, Denmark <i>The Evolution of the Sulfur Cycle</i>						8:30-9:15 AM
BREAK						9:15-9:30 AM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
	CS35	SS3.13	CS12	SS2.04	CS16	Session
Town Meeting on Emerging Research Issues for Limnology	Trophic Dynamics	Advances in Understanding Estuarine Ecosystems From Real-Time Remote Monitoring Data	Coral Reefs	Nitrogen Paleo-Biogeochemistry	Harmful Algal Blooms	Title
	Tessier, A. J. Hudson, J. J. Drazen, J. C. Bayley, S. E. Yoshida, T.	Glibert, P. M. Glibert, P. M. Kelly, V. Showers, W. J. Trader, T. H.	Beauregard, A. Y. Haught, K. J. Koehl, M. A. Guerra, O. J. Muehlstein, L. K.	Sigman, D. M. Altabet, M. A. Leavitt, P. R. Elliott, E. M. Wolfe, F. L.	Etheridge, S. M. Juhl, A. R. Love, R. C. Graham, J. L. Bearon, R. N.	9:30 AM 9:45 AM 10:00 AM 10:15 AM 10:30 AM
BREAK						10:45-11 AM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
	CS35 (con't.)	SS3.13 (con't.)	SS3.12	CS04	CS16 (con't.)	Session
Town Meeting on Emerging Research Issues for Limnology	What is Special About Food Webs in Extreme Environments?	Advances in Understanding Estuarine Ecosystems From Real-Time Remote Monitoring Data	Trophic Focusing and Subsidy in Aquatic Ecosystems	Bacteria	Harmful Algal Blooms	Title
	Tang, K. W. Tittel, J. Ptacnik, R. Moorthi, S. D. Lauber, C. L.	Reed, R. E. Magnien, R. E. Springer, J. J. Glasgow, H. B. Bohlen, W. F.	Scheuerell, M. D. Keenan, S. F. Francis, S. A. Vanderploeg, H. A. Romare, P.	Booth, M. G. Gros, O. Ludwig, R. Schultz, G. E. Williamson, S. J.	Cherrier, C. T. Redalje, D. G. Granelli, E. Richardson, T. L. Rengefors, K.	11:00 AM 11:15 AM 11:30 AM 11:45 AM 12:00 PM
LUNCH						12:15-2:15 PM
Public Policy Workshop - Room 150 DEF						12:15-2:15 PM
Workshop on NSF Funding Opportunities for Freshwater Research - Room 250 DE						12:30-1:30 PM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
	SS4.03	SS3.13 (con't.)	SS3.12 (con't.)	SS2.05	CS17	Session
	What is Special About Food Webs in Extreme Environments?	Advances in Understanding Estuarine Ecosystems From Real-Time Remote Monitoring Data	Trophic Focusing and Subsidy in Aquatic Ecosystems	Geologic Record of Phosphorus Cycling	Invasive Species & Species Replacement	Title
	Garstecki, T. Kamjunke, N. Zippel, B. Breitbart, M. Rautio, M.	Deacutis, C. F. Berman, M. S. Kester, D. R.	Sutor, M. Fisher, K. E. Jumars, P. A. Dahl, L. Grünbaum, D.	Colman, A. S. Colman, A. S. Wallmann, K. Cade-Menun, B. J. Ingall, E. D.	Kerfoot, W. C. Schulz, K. L. Pichlova, R. Duggan, I. C. Bailey, S. A.	2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM*
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.04	SS3.14	CS11	SS3.12 (con't.)	SS2.05 (con't.)	CS17 (con't.)	Session
The Biogeochemistry of Hg from Watershed to the Global Scale: A Tribute to the Contributions of WF Fitzgerald	Novel Approaches to Modeling Food Web and Ecosystem Biogeochemistry	Continental Shelf Processes	Trophic Focusing and Subsidy in Aquatic Ecosystems	Geologic Record of Phosphorus Cycling	Invasive Species & Species Replacement	Title
Benoit, J. M. Benoit, J. M. Morel, F. M. Morel, F. M. Mason, R. P.	Arhonditsis, G. B. Williams, P. J. Edwards, A. M. Vallino, J. J. Dam, H. G.	Ehrenhauss, S. Buehring, S. I. Huettel, M. H. Sackmann, B. S. O'Donnell, J.	Curtis, K. A. Malkiel, E. Bochdansky, A. B.	Kolowith, L. C. Slomp, C. P.	Karatayev, A. Y. Culver, D. A. Carter, R. L. Costello, J. H. Hall, R. O.	4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM
Poster Session, Exhibits & Reception - Grand Ballroom E-J						5:30-7:30 PM
Education and Human Resource Committee - Room 150 C						7:00-8:30 PM
Ocean Observatories Initiative Open Meeting - Room 150 G						7:00-8:30 PM
DIALOG Reception - Best Western Salt Lake Plaza Hotel						7:00-8:30 PM

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.

\*The afternoon break is scheduled from 3:30-4:00. However, due to presentation assignments some sessions may go over by 15 minutes.

CS37	SS1.02	SS1.05	SS3.21 (con't.)	SS3.21 (con't.)	SS3.21 (con't.)	Posters
41. Decker, J. D.	51. Koch, F.	56. Yoshiyama, K.	62. Gutowska, M. A.	74. Allen, J.	86. Kearney, K.	
		57. Fry, B.	63. Seydewitz, L.	75. Beck, A. J.	87. Hartwell, R. J.	
CS39	SS1.03		64. Faltnit, E.	76. McAndrew, P. M.	88. Ow, L. N.	
42. Barojas, A. R.	52. McGowan, M. P.	SS2.01	65. Bjork, S. J.	77. Bigrigg, J.	89. Wason, C.	
43. Rossberg, M. C.	53. Opsahl, S. P.		66. Goepfert, T. J.	78. Testa, J. M.	90. Van Alstine, J. M.	
44. Oppert, C. J.	54. Poole, G. C.		67. Hartman, N. T.	79. Campbell, J.	91. Bristow, G. M.	
45. Liu, H.			68. Yates, M.	80. Stefański, L. M.	92. Malone, S.	
46. Hall, C. J.	SS1.04	SS2.02	69. Witucki, P. F.	81. Douglas, J.	93. Shoemaker, D.	
47. Utz, L. R.	55. Ogbebo, F. E.	60. Stone, J. R.	70. Gifford, S. M.	82. Harris, R. T.		
48. Madin, L. P.			71. Dionne, J. A.	83. Gregory, G. J.		
49. Bollens, S. M.		SS3.21	72. Kameda, A. T.	84. Streble, L.		
50. Herren, C.			73. Mackinnon, P. D.	85. Bower, D. M.		

**Program Matrix - Wednesday**

7 AM-5 PM	Registration - East Registration Area				
7 AM-5 PM	Email Room - Room 252 AB				
7:30 AM-7 PM	Speaker Ready Room - Room 250 F				
8 AM-7:30 PM	Poster Session & Exhibits - Grand Ballroom E-J				
8:30-9:15 AM	Plenary Address - Spatial Patterns in Aquatic Systems - Grand Ballroom AB & North Foyer Jim Elser, Professor & Director of Undergraduate Programs, Arizona State University <i>Constraining Complexity: Biological Stoichiometry Here and Now, Its Prospects For There and Then</i>				
9:15-9:30 AM	BREAK				
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	CS14	SS1.05	SS4.05	SS1.06	SS3.08
Title	Estuarine and Near-Shore Processes	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Microbial Genomics: Resolving the Adaptive Strategies of Bacteria from Extreme Environments	Carbon Cycles in Large Lakes	Organic Matter in Aquatic Systems: Sources, Characterization, Distribution, and Quantification
9:30 AM	Roman, M. R.	Valiela, I.	Murray, A. E.	Berman, T.	Vähätalo, A.
9:45 AM	Zhang, X.	Valiela, I.	Heideberg, J. F.	Graneli, W.	Passow, U.
10:00 AM	Wheelock, K. V.	Turner, R. E.	Webb, E. A.	Waples, J. T.	Maurice, P. A.
10:15 AM	Snedden, G. A.	Turner, R. E.	Campbell, B. J.	Klump, J. V.	Del Vecchio, R.
10:30 AM	Bahr, M.		Cary, S. C.	Alin, S. R.	Madey, G. R.
10:45-11 AM	BREAK				
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	CS14 (con't.)	SS1.05 (con't.)	SS4.11	SS1.06 (con't.)	SS3.08 (con't.)
Title	Estuarine and Near-Shore Processes	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Biochemistry in Extreme Environments	Carbon Cycles in Large Lakes	Organic Matter in Aquatic Systems: Sources, Characterization, Distribution, and Quantification
11:00 AM	Natunewicz, C. C.	Scavia, D.	Poertner, H. O.	Bootsma, H. A.	Frost, P. C.
11:15 AM	Engelsen, A.	Scavia, D.	Poertner, H. O.	Verburg, P.	Pullin, M. J.
11:30 AM	Arnold, A. M.	Hoover, D.	Bernhard, J. M.	Orlandini, K. A.	Shank, G. C.
11:45 AM	Kicklighter, C. E.	Hoover, D.	Felbeck, H.		Spencer, R. G.
12:00 PM	Irvine, G. V.		Gaill, F.		
12:15-2:15 PM	LUNCH				
12:15-2:15 PM	Popular Science Communication Workshop - Room 250 C				
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	CS24	SS1.05 (con't.)	SS4.11 (con't.)	SS1.01	
Title	Nutrient Dynamics	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Biochemistry in Extreme Environments	Saline Lakes: Responses to Anthropogenic Forcings and Appropriate Management Strategies	
2:15 PM	Vance-Harris, C. A.	Elmgren, R.	Lee, R. W.	Jellison, R.	
2:30 PM	Thomas, S. A.	Elmgren, R.	Seibel, B. A.	Roll, S. K.	
2:45 PM	Kebede-Westhead, E.	Smith, V. H.	Antipov, A.	Levine, P. L.	
3:00 PM	Ballantyne, A. P.	Smith, V. H.	Teske, A.	Yamamoto, M.	
3:15 PM	Gettel, G. M.	Evans, G. L.	Teske, A.		
3:30 PM*		Sandow, M.			
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	CS24 (con't.)	SS1.05 (con't.)	SS4.11 (con't.)	SS1.01 (con't.)	
Title	Nutrient Dynamics	The History and Current Status of Eutrophication in Freshwater and Marine Ecosystems	Biochemistry in Extreme Environments	Saline Lakes: Responses to Anthropogenic Forcings and Appropriate Management Strategies	
4:00 PM	Goebel, N. L.	Lee, R. S.	Krueger, M.	Hurlbert, S. H.	
4:15 PM	Hyfield, E. C.	Spaak, P.	Lomstein, B. A.	Watts, J. M.	
4:30 PM	Hamill, B. J.	Walker, H.		Gross, D. H.	
4:45 PM	O'Neil, J. M.	Hyacinthe, C.		Lester, O.	
5:00 PM	Lipsen, M. S.	Abraham, J.		Alcocer, J.	
5:30-7:30 PM	Poster Session, Exhibits & Reception - Grand Ballroom E-J				
7-10:30 PM	Wednesday Evening Reception - Snowbird Ski Resort (Optional)				

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\*The afternoon break is scheduled from 3:30-4:00. However, due to presentation assignments some sessions may go over by 15 minutes.

Posters	CS05	CS14 (con't.)	CS18	CS29	CS31
	94. Moore, J. G.	101. Page, H. M.	106. Kipphut, G. W.	113. Latz, M. I.	121. Subramaniam, A.
	95. Brucet, S.	102. Lavrentyev, P. J.		114. Singler, H. R.	122. Keith, D. J.
	96. Barry, J. P.	103. An, S.	CS22	115. Needoba, J. A.	123. Van Heukelen, L.
	CS06	104. Orrico, C. O.	105. Wilborn, U.	107. Incze, L. S.	116. O'Brien, S. G.
	97. Burgmer, T.			108. Darrow, B. P.	117. Thomas, C. S.
	CS14		CS34	118. Klausmeier, C. A.	119. Landry, D. M.
	98. Jones, M. B.	125. Harner, M. J.	CS25	120. Anderson, C. R.	SS1.08
	99. Achudume, A. D.	126. Zeglin, L. H.			127. Smith, L. K.
	100. Yarbro, L. A.			111. Blouin, F.	128. Schaefer, K. A.
				112. Orellana, M. V.	129. Thorrold, A. L.

Registration - East Registration Area						7 AM-5 PM
Email Room - Room 252 AB						7 AM-5 PM
Speaker Ready Room - Room 250 F						7:30 AM-7 PM
Poster Session & Exhibits - Grand Ballroom E-J						8 AM-7:30 PM
Plenary Address - Spatial Patterns in Aquatic Systems - Grand Ballroom AB & North Foyer						8:30-9:15 AM
Jim Elser, Professor & Director of Undergraduate Programs, Arizona State University						
<i>Constraining Complexity: Biological Stoichiometry Here and Now, Its Prospects For There and Then</i>						
BREAK						9:15-9:30 AM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.04	SS1.08	SS4.07	SS1.02	SS3.18	CS39	Session
The Biogeochemistry of Hg from Watershed to the Global Scale: A Tribute to the Contributions of WF Fitzgerald	Leave No Scientist Behind: How to Get Aquatic Sciences Into K-12 Classrooms	Microbiology and Biogeochemistry of Cold Seeps	Coastal Indicators of Water Quality and Ecological Condition	Biogeochemistry of the Tropical and Subtropical North Atlantic	Zooplankton	Title
Givelet, N. Tseng, C. M. Hines, N. A. Church, T. M. Lamborg, C. H.	Dunton, K. H. Dunton, K. H. Panayotou, D. Y. Panayotou, D. Y. Hall, F. R.		Malone, T. C. Summers, J. K. Druon, J. N. Linke, P. Linke, P.	Capone, D. G. Hansell, D. A. Jarecki, L. L. Valdes, L. M.	McConaughay, J. R. Welker, M. Knapp, A. N. Fernández I., C. Leising, A. W. Davey, M. S.	9:30 AM 9:45 AM 10:00 AM 10:15 AM 10:30 AM
BREAK						10:45-11 AM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.04 (con't.)	SS1.08 (con't.)	SS4.07 (con't.)	SS1.02 (con't.)	SS3.18 (con't.)	CS39 (con't.)	Session
The Biogeochemistry of Hg from Watershed to the Global Scale: A Tribute to the Contributions of WF Fitzgerald	Leave No Scientist Behind: How to Get Aquatic Sciences Into K-12 Classrooms	Microbiology and Biogeochemistry of Cold Seeps	Coastal Indicators of Water Quality and Ecological Condition	Biogeochemistry of the Tropical and Subtropical North Atlantic	Zooplankton	Title
Fitzgibbon, T. O. Balcom, P. H. Hammerschmidt, C. R. Warner, K. A. Gigliini, A. D.	Cuker, B. E. Cherrier, J. Salinas, J. T. Goehring, L. Robigou, V.	Ziebis, W. Seifert, R. Nauhaus, K. Stadnitskaia, A. Joye, S. B.	Pigg, R. J. Noble, R. T. Gallegos, C. L. Cullen, J. J. Kimer, B.	Lomas, M. W. Dam, H. G. Wassmann, P. Nelson, N. B. Caron, C. A.	Stegen, J. C. Lorke, A. Kremer, P. Connelly, S. J. Duffy, M. A.	11:00 AM 11:15 AM 11:30 AM 11:45 AM 12:00 PM
LUNCH						12:15-2:15 PM
Popular Science Communication Workshop - Room 250 C						12:15-2:15 PM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.04 (con't.)	SS1.08 (con't.)	SS4.07 (con't.)	SS1.02 (con't.)	SS3.18 (con't.)	CS39 (con't.)	Session
The Biogeochemistry of Hg from Watershed to the Global Scale: A Tribute to the Contributions of WF Fitzgerald	Leave No Scientist Behind: How to Get Aquatic Sciences Into K-12 Classrooms	Microbiology and Biogeochemistry of Cold Seeps	Coastal Indicators of Water Quality and Ecological Condition	Biogeochemistry of the Tropical and Subtropical North Atlantic	Zooplankton	Title
Donard, O. F. Engstrom, D. R.	Matsumoto, G. I. Brabander, D. J. Greely, T. M. Keener-Chavis, P. Cook, S. B.	Niemann, H. Loesekann, T. Girguis, P. R. MacDonald, I. R. Formolo, M. J.	Hill, B. H. Hrabik, T. R. Kelly, J. R. Kingston, J. C. Sierszen, M. E.	Kiene, R. P. Slezak, D. Bergquist, B. A. Neuer, S. Le Fouest, V.	Steinberg, D. K. Richmond, C. E. Manning, C. A. Suchman, C. L. Bi, H.	2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM*
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.20	SS1.08 (con't.)	SS4.07 (con't.)	SS1.02 (con't.)		CS39 (con't.)	Session
Landscape and Land-use Influences on Methylmercury Contamination of Aquatic Resources	Leave No Scientist Behind: How to Get Aquatic Sciences Into K-12 Classrooms	Microbiology and Biogeochemistry of Cold Seeps	Coastal Indicators of Water Quality and Ecological Condition		Zooplankton	Title
Hurley, J. P. Hurley, J. P. Lucotte Marc, M. Brigham, M. E. Jeremiasion, J. D.	Roesler, C. S. Singer, J.	Lapham, L. L. Luff, R. Schweizer, M. Schlueter, M. Levin, L.	Simcik, M. F. Yurista, P. M. Holden, P. A. Ustin, S. L. Hollibaugh, J. T.		Kessler, K. Jameson, C. D. Feuchtmayr, H. Sommer, F. Taub, F. B.	4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM
Poster Session, Exhibits & Reception - Grand Ballroom E-J						5:30-7:30 PM
Wednesday Evening Reception - Snowbird Ski Resort (Optional)						7-10:30 PM

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\*The afternoon break is scheduled from 3:30-4:00. However, due to presentation assignments some sessions may go over by 15 minutes.

SS1.08 (con't.)	SS3.04	SS3.07	SS3.08	SS3.10	SS3.17	Posters
130. Chen, R. F.	134. Rearick, M. S.	140. Judd, K. E. 141. Schwalbach, M. S.	150. Jolliff, J. K. 151. Curless, S. E.	156. Jacobson/Meyers, M.	160. Achilles, K. M. 161. Daniels, R. M.	
SS3.01	SS3.05	142. Schnetzer, A.	152. Klamberg, J. L.		SS3.12	
131. Houser, L. T.	135. Marinelli, R. L.	143. Tan, G. P.	153. Golden , S. M.	157. Cavalletto, J. F.	SS3.18	
132. Blackwell, S.	136. Liess, A. 137. Meile, C.	144. Wilkerson, F. P. 145. Palenik, B. P.	154. Urban-Rich, J. L.	158. Kline, T. C.	162. Kustka, A. B. 163. Cooley, S. R.	
SS3.03	SS3.06	146. Proctor, L. M.	SS3.09	SS3.15	164. Finzi, J. A.	
133. Bult, C.	138. Proges, C. 139. Franklin, L. A.	147. Jochem, F. J. 148. Solomon, C. M. 149. Chistoserdov, A. Y.	155. Reimer, J. J.	159. Hu, X.	SS3.20	
					165. Bayer, A. K.	

**Program Matrix - Thursday**

7 AM-5 PM	Registration - East Registration Area				
7 AM-5 PM	Email Room - Room 252 AB				
7:30 AM-7 PM	Speaker Ready Room - Room 250 F				
8 AM-7:30 PM	Poster Session & Exhibits - Grand Ballroom E-J				
8:30-9:15 AM	Plenary Address - Extreme Environments On Earth and Beyond - Grand Ballroom AB & North Foyer Colleen Cavanaugh, Dept. of Molecular & Cellular Biology, Harvard University				
9:15-9:30 AM	BREAK				
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	SS1.04	SS3.05	CS29	SS4.01	SS3.07
Title	Impacts of Changing Land Use on Aquatic Ecosystems	Significance of Small-scale Benthic Processes for Large Ecosystems	Phytoplankton & Primary Production	Saline Lakes - Microbial Ecology and Biogeochemistry	Does Microbial Diversity Matter in Ecosystem Function?
9:30 AM	Scott, G. I.	Carman, K. R.	Sommer, U.	Oremland, R. S.	Jackson, G. A.
9:45 AM	Scott, G. I.	Levin, L. A.	Grover, J. P.	Steward, G. F.	Jackson, G. A.
10:00 AM	DeVoe, M. R.	Demopoulos, A. W.	Lohrenz, S. E.	Giri, B. J.	Aller, J. Y.
10:15 AM	Sibley, S.	Lee, A. R.	Dousova, H.	Carini, S. A.	Crump, B. C.
10:30 AM	Bratvold, D.	Linares, F.	Grant, T.	Scholten, J. M.	Voytek, M. A.
10:45-11 AM	BREAK				
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	SS1.04 (con't.)	SS3.05 (con't.)	CS29 (con't.)	CS4.01 (con't.)	SS3.07 (con't.)
Title	Impacts of Changing Land Use on Aquatic Ecosystems	Significance of Small-scale Benthic Processes for Large Ecosystems	Phytoplankton & Primary Production	Saline Lakes - Microbial Ecology and Biogeochemistry	Does Microbial Diversity Matter in Ecosystem Function?
11:00 AM	Weston, N. B.	Sundback, K.	Gorbunov, M. Y.	Van Hove, P.	Collier, J. L.
11:15 AM	Lopez-de-Victoria, G.	Larson, F. M.	Peterson, T. D.	Doran, P. T.	Falcon, L. I.
11:30 AM	Lee, R.	Hatch, L. K.	Holl, C. M.	Foreman, C. M.	Burns, J. A.
11:45 AM	Kleppel, G. S.	Baker, M. A.	Schapira, M. N.	Saros, J. E.	Jenkins, B. D.
12:00 PM	Leland, H. V.	Rick, S.	Rick, J. J.	Muyzer, G.	Francis, C. A.
12:15-2:15 PM	LUNCH				
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	SS1.04 (con't.)	SS3.05 (con't.)	CS29 (con't.)	CS21	SS3.07 (con't.)
Title	Impacts of Changing Land Use on Aquatic Ecosystems	Significance of Small-scale Benthic Processes for Large Ecosystems	Phytoplankton & Primary Production	Microbial Dynamics	Does Microbial Diversity Matter in Ecosystem Function?
2:15 PM	Hawkins, C. P.	Marcarelli, A. M.	von Dassow, P.	Button, D. K.	Franck, V. M.
2:30 PM	Wilson, F. K.	Thomas, F. I.	Prasil, O.	McManus, G. B.	Allen, A. E.
2:45 PM	Brattebo, B. O.	Engstrom, S. J.	Corno, G.	Morgan, J. A.	Ward, B. B.
3:00 PM	Kremer, J. N.	Ackerman, J. D.	Perry, M. J.	Staroscik, A. M.	Song, B.
3:15 PM	Beighley, R. E.	Hamblen, J. M.	Olson, R. J.	Cottrell, M. T.	Takabayashi, M.
3:30 PM*					Arnosti, C.
	150 DEF	150 G	151 ABC	151 DEF	151 G
Session	SS1.04 (con't.)	SS3.05 (con't.)	CS29 (con't.)	CS21 (con't.)	SS3.07 (con't.)
Title	Impacts of Changing Land Use on Aquatic Ecosystems	Significance of Small-scale Benthic Processes for Large Ecosystems	Phytoplankton & Primary Production	Microbial Dynamics	Does Microbial Diversity Matter in Ecosystem Function?
4:00 PM	Burkholder, J. M.	Hunt, H. L.	Sosik, H. M.	Kiorboe, T.	Twining, B. S.
4:15 PM	Crenshaw, M. C.	Fries, J. S.	MacIntyre, H. L.	Smith, D. C.	Teubner, K.
4:30 PM	Andrade, F.	Buesing, N.	Middelburg, J. J.	Rohwer, F.	Bouman, H. A.
4:45 PM		D'Andrea, A. F.	Roberts, B. J.	Hewson, I.	Iglesias-Rodriguez, M. D.
5:00 PM			Armburst, E. V.	Wommack, K. E.	Kolber, Z. S.
5:30-7:30 PM	Poster Session, Exhibits & Reception - Grand Ballroom E-J				
7:00-8:30 PM	National Oceanographic Partnership Program (NOPP) Information Session - Room 150 G				
7:30-9:30 PM	Poster & Exhibit Tear-Down - Grand Ballroom E-J				

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.

\*The afternoon break is scheduled from 3:30-4:00. However, due to presentation assignments some sessions may go over by 15 minutes.

Posters	CS04	CS23	CS26	CS36	CS40
	166. Salerno, J. L. 167. Braxton, J. H.	170. Zrotalova, K. 171. Countway, P. D. 172. McCarron, J.	174. Hung, C. C. 175. Lorenson, T. D. 176. Stets, E. G.	179. Young, D. 180. Huebner, J. 181. Sanders, R. W.	184. Pasour, V. B. 185. Hansen, A. A. 187. Delavan, S. K.
	CS12	173. Caron, D. A.	177. Gustafson, E. 178. Sepulveda, J. C.	182. Loadman, N. 183. Pakulski, J. D.	188. Childress, T. D. 189. Davis, J. M.
	168. Mydlarz, L. D. 169. Wegley, L.				

Registration - East Registration Area						7 AM-5 PM
Email Room - Room 252 AB						7 AM-5 PM
Speaker Ready Room - Room 250 F						7:30 AM-7 PM
Poster Session & Exhibits - Grand Ballroom E-J						8 AM-7:30 PM
Plenary Address - Extreme Environments On Earth and Beyond - Grand Ballroom AB & North Foyer						8:30-9:15 AM
Colleen Cavanaugh, Dept. of Molecular & Cellular Biology, Harvard University						
BREAK						9:15-9:30 AM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.20	CS08	SS4.10	SS1.02	CS15	CS39	Session
Landscape and Land-use Influences on Methylmercury Contamination of Aquatic Resources	Biogeochemical Cycles	Geomicrobiology of Hydrothermal Vents	Coastal Indicators of Water Quality and Ecological Condition	Fish	Zooplankton	Title
Krabbenhoft, D. P.	Baines, S. B.	Baross, J. A.	Kerkhof, Lee, J.	Cowen, R. K.	Brett, M. T.	9:30 AM
Lange, T. R.	Cutter, G. A.	Baross, J. A.	Milbrandt, E. C.	Hunt von Herbing, I. V.	Anson, J. M.	9:45 AM
Wiener, J. G.	Dupont, C. L.	Holland, M. E.	Scholin, C.	Paris, C. B.	Lloyd, S. S.	10:00 AM
Sandheinrich, M. B.	Shaffer, M. M.	Edgcomb, V. P.	Berg, P.	De Robertis, A.	Hopcroft, R. R.	10:15 AM
Marvin-Dipasquale, M. C.	Cullen, J. T.	Amend, J. P.	Fossing, H.	Kennedy, B. M.	Caceres, C. E.	10:30 AM
BREAK						10:45-11 AM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.20 (con't.)	CS08 (con't.)	SS4.10 (con't.)	SS1.02 (con't.)	SS4.06		Session
Landscape and Land-use Influences on Methylmercury Contamination of Aquatic Resources	Biogeochemical Cycles	Geomicrobiology of Hydrothermal Vents	Coastal Indicators of Water Quality and Ecological Condition	Diversity, Ecology, and Biogeochemistry of Microbial Mats and Stromatolites		Title
Kelly, C. A.	Brzezinski, M. A.	Skog, A.	Lee, C. L.	Visscher, P. T.		11:00 AM
Gill, G. A.	Moisan, J. R.	Svensson, E. I.	Dugdale, R. C.	Visscher, P. T.		11:15 AM
Alpers, C. N.	Risgaard-Petersen, N.	Aguilar, C.	Wei, L.	Des Marais, D. J.		11:30 AM
Domagalski, J. L.	Ho, T.	Blake, R. E.	Marshall, H. L.	Albert, D. B.		11:45 AM
Thomas, B. A.	Yager, P. L.	Emerson, D.	Kimmel, D. G.	Beabout, B. M.		12:00 PM
LUNCH						12:15-2:15 PM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.20 (con't.)	CS08 (con't.)	SS4.10 (con't.)	SS1.02 (con't.)	SS2.01	SS4.06 (con't.)	Session
Landscape and Land-use Influences on Methylmercury Contamination of Aquatic Resources	Biogeochemical Cycles	Geomicrobiology of Hydrothermal Vents	Coastal Indicators of Water Quality and Ecological Condition	The Limits to Paleolimnology? Linking Sedimentary Records with Contemporary Process-based Studies	Diversity, Ecology, and Biogeochemistry of Microbial Mats and Stromatolites	Title
Stamenkovic, J.	Squires, M. M.	Rogers, D. R.	Kiesling, T. L.	Anderson, N. J.	Thamdrup, B.	2:15 PM
Rudd, J. W.	Hughes, C.	Moyer, C. L.	Jung, S.	Anderson, N. J.	Lee, R. Y.	2:30 PM
Paterson, M. J.	Stewart, G. M.	Sievert, S. M.	Chasar, L. C.	Jordan, P.	Lawson, J. L.	2:45 PM
Rolphus, K. R.	Tang, D.	Takai, K.	Gobler, C. J.	Triplett, L. D.	Jonkers, H. M.	3:00 PM
Hall, B. D.	Van Mooy, B.	Lam, P.	Cuhel, R. L.	Leavitt, P. R.	Henley, W.	3:15 PM
			Popp, B. N.		Treude, T.	3:30 PM*
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.20 (con't.)	CS33		SS1.02 (con't.)	SS2.01	SS4.06 (con't.)	Session
Landscape and Land-use Influences on Methylmercury Contamination of Aquatic Resources	Sediment-Water Interactions		Coastal Indicators of Water Quality and Ecological Condition	The Limits to Paleolimnology? Linking Sedimentary Records with Contemporary Process-based Studies	Diversity, Ecology, and Biogeochemistry of Microbial Mats and Stromatolites	Title
Gilmour, C. C.	Alperin, M. J.		Sylvan, J. B.	Michel, T. J.	Sørensen, K. B.	4:00 PM
Paterson, M. J.	Devol, A. H.		Green, P. G.	Kamenik, C.	Habicht, K. S.	4:15 PM
Heyes, A.	Green, M. A.		Cavender-Bares, K. K.	Jankowski, T.	Kalantra, K. M.	4:30 PM
Branfireun, B. A.	Blodau, C.		Davis, J. L.	Battarbee, R. W.	Ward, D. M.	4:45 PM
			Young-Williams, A. C.			5:00 PM
Poster Session, Exhibits & Reception - Grand Ballroom E-J						5:30-7:30 PM
National Oceanographic Partnership Program (NOPP) Information Session - Room 150 G						7:00-8:30 PM
Poster & Exhibit Tear-Down - Grand Ballroom E-J						7:30-9:30 PM

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.

\*The afternoon break is scheduled from 3:30-4:00. However, due to presentation assignments some sessions may go over by 15 minutes.

SS4.01	SS4.03	SS4.04	SS4.06	SS4.07	SS4.08	Posters
190. Tiffany, M. A.	194. Dreher, N.	198. Freytag, J. K.	203. Glazer, B. T.	208. Mills, H. J.	212. Baldwin, A. J.	
191. Pineiro, S. A.	195. Knick, K. E.	199. Nielson, K. E.	204. Wade, B. D.	209. Van Cappellen, P.	213. Mikucki, J. A.	
192. Budinoff, C. R.	196. Blankenship, L. E.	200. Horak, R. E.	205. Rothrock, M. J.	210. Cordes, E. E.		
193. Hollibaugh, J. T.	197. Brucet, S.		206. Marschall, S. M.	211. Zhang, C.	SS4.11	
			207. Baumgartner, L. K.		214. Caro, A.	
		SS4.05			215. Shank, T. M.	
		201. Simbahana, J.				
		202. Schoenfeld, T.				

**Program Matrix - Friday**

7 AM-12 PM		Registration - East Registration Area				
7:00-11:30 AM		Email Room - Room 252 AB				
		150 DEF	150 G	151 ABC	151 DEF	151 G
Session		CS31	SS3.05	CS23		SS3.07
Title		Remote Sensing and Technological Tools	Significance of Small-scale Benthic Processes for Large Ecosystems	Molecular Biology		Does Microbial Diversity Matter in Ecosystem Function?
8:30 AM	Farmer, A.	Thistle, D.	Zehr, J. P.			Suzuki, M. T.
8:45 AM	Katz, J.	Escobar-Briones, E.	Epstein, S.			Koblizek, M.
9:00 AM	Allison, D. B.	Nunnally, C. C.	Smith, M. C.			Jayakumar, D. A.
9:15 AM	Balch, W. M.	Ward, J. E.	Foster, R. A.			Malmstrom, R. R.
9:30 AM	Moisan, T. A.	Levinton, J. S.	Morris, R. M.			Gulmann, L. K.
9:45 AM*						
		150 DEF	150 G	151 ABC	151 DEF	151 G
Session		SS3.05				
Title		Significance of Small-scale Benthic Processes for Large Ecosystems				
10:00 AM*						
10:15 AM		Porter, E. T.				
10:30 AM		Kelaher, B. P.				
10:45 AM		Butler, M. J.				
11:00 AM		Dierssen, H. M.				
11:15 AM						

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.

\*The break is scheduled from 9:45-10:15. However, due to presentation assignments some sessions may go over by 15 minutes.

Registration - East Registration Area						7 AM-12 PM
Email Room - Room 252 AB						7:00-11:30 AM
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.15		CS10	SS1.03	SS3.10	SS4.06	Session
Coupling Seagrass Dynamics to Water Column and Sediment Geochemistry		Climate Change, Interannual/Interdecadal Variation and Global Change	Groundwater/Surface Water Interactions	Emergent Properties and Biocomplexity of Tropical Ecosystems	Diversity, Ecology, and Biogeochemistry of Microbial Mats and Stromatolites	Title
Aumack, C. F. Cornelisen, C. D. Cifuentes, L. A. Jaffe, R. Zimmerman, R. C.		Fritsen, C. H. Schindler, D. E. McMaster, N. L. Harvey, M. Rusak, J. A.	Burnett, W. C. Burnett, W. C. Cable, J. E. Sholkovitz, E. R. Kroeger, K. D.	Lovelock, C. E. Lovelock, C. E. Feller, I. C. Scharer, U. M.	Spear, J. R. Buckley, D. H. Omoregie, E. O. Dillon, J. G. Groetschel, S. Pringault, O.	8:30 AM 8:45 AM 9:00 AM 9:15 AM 9:30 AM 9:45 AM*
250 AB	250 C	250 DE	251 AB	251 C	251 DE	
SS3.15		CS10	SS1.03		SS4.06	Session
Coupling Seagrass Dynamics to Water Column and Sediment Geochemistry		Climate Change, Interannual/Interdecadal Variation and Global Change	Groundwater/Surface Water Interactions		Diversity, Ecology, and Biogeochemistry of Microbial Mats and Stromatolites	Title
Burdige, D. J. Peyer, S. M. Kaldy, J. E.		Sharp, J. H. Lehman, P. W. O'Reilly, C. M. Sullivan, M. C. Winder, M.	Taillefert, M. Charette, M. A. Chanton, J. P. Krest, J. M. McCorkle, D. C. Gramling, C. M.		Miller, S. R. Pinckney, J. L. Gooseff, M. N. Elser, J. J. Schampel, J. H.	10:00 AM* 10:15 AM 10:30 AM 10:45 AM 11:00 AM 11:15 AM

All sessions and activities are located at the Salt Palace Convention Center, unless otherwise noted.

\*The break is scheduled from 9:45-10:15. However, due to presentation assignments some sessions may go over by 15 minutes.



## ASLO 2003 Registration Form

If you are unable to register electronically on the web at <http://www.aslo.org/slcl2003>, please mail completed registration form and payment to: ASLO, 5400 Bosque Boulevard, Suite 680, Waco, Texas 76710-4446, USA. Registrations complete with purchase order or credit card information that are not accompanying an abstract submission can be faxed to: (254) 776-3767.

Please make checks payable in U.S. dollars and drawn on a U.S. bank to: ASLO

Please print or type.

LAST NAME	FIRST NAME	MIDDLE INITIAL
NAME FOR BADGE		
INSTITUTE OR ORGANIZATION		
DEPARTMENT OR FIRST ADDRESS LINE		
LAST ADDRESS LINE		
CITY	STATE/PROVINCE	ZIP
E-MAIL	PHONE	FAX

### Fees (in U.S. dollars and per person):

- ASLO Member (received on or before January 9, 2003) ..... \$300.00 USD \_\_\_\_\_
  - Non-ASLO Member (received on or before January 9, 2003) ..... \$350.00 USD \_\_\_\_\_
  - ASLO Student Member (received on or before January 9, 2003) ..... \$200.00 USD \_\_\_\_\_
  - Non-ASLO Student Member (received on or before January 9, 2003) ..... \$250.00 USD \_\_\_\_\_
  - Spouse/Guest (received on or before January 9, 2003. Spouses/guests are not admitted to the sessions.) ..... \$100.00 USD \_\_\_\_\_
- Spouse/Guest Name: \_\_\_\_\_
- One-Day Registrations (received on or before January 9, 2003) ..... \$150.00 USD \_\_\_\_\_
  - Late Fee (Must be added to all registrations that are mailed after January 9, 2003) ..... \$60.00 USD \_\_\_\_\_

Total in U.S. Dollars \_\_\_\_\_

- I am a member of ASLO.
- I am not a member of ASLO, and I would like to receive more information.

### Payment:

- Amount Enclosed
- Bill My Organization. (*You must submit a purchase order.*)
- Credit Card Payment
  - Visa       MasterCard       American Express

NAME ON CARD \_\_\_\_\_

CARD NUMBER \_\_\_\_\_ EXP. DATE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

### Confirmation:

A confirmation will be sent to the e-mail address on this form unless you specify otherwise.

I prefer that my registration confirmation be sent via:

- Fax       Mail       E-mail

### Special Needs:

- If you have a disability or physical limitation that may require special consideration so that you might fully participate in this meeting, please check here. You will be contacted by someone from the planning organization to see how we can accommodate your special needs.

## ASLO 2003 Wednesday Evening Reception and Field Trip Sign-up Form

If you have already registered for the meeting and would like to purchase a ticket to the Snowbird reception and/or sign up for any of the field trips, please complete this form and fax it back to the ASLO Business Office at (254) 776-3767 with payment information. You also can mail the form with a check to ASLO 2003, 5400 Bosque Boulevard, Suite 680, Waco, Texas 76710-4446.

Please make checks payable in U. S. dollars and drawn on a U.S. bank to: ASLO

Reservations cannot be accepted via email or phone, nor can they be accepted without payment in advance.

All of the activities listed are dependent upon a minimum number of reservations and some have space limitations that apply.

Please print or type.

LAST NAME	FIRST NAME	MIDDLE INITIAL
NAME FOR BADGE		
INSTITUTE OR ORGANIZATION		
DEPARTMENT OR FIRST ADDRESS LINE		
LAST ADDRESS LINE		
CITY	STATE/PROVINCE	ZIP
E-MAIL	PHONE	FAX

### Fees (in U.S. dollars):

- Snowbird Ski Resort Reception (Wednesday Evening, February 12, 2003)  
\_\_\_\_ Number of tickets @ \$45.00 USD per person = ..... \$ ..... USD
- Antelope Island, Great Salt Lake and Prehistoric Lake Bonneville Field Trip (Sunday, February 9, 2003)  
\_\_\_\_ Number of tickets @ \$33.00 USD per person = ..... \$ ..... USD
- Bear Lake Ecology and Paleolimnology Field Trip (Sunday, February 9, 2003)  
\_\_\_\_ Number of tickets @ \$36.00 USD per person = ..... \$ ..... USD
- Soldier's Hollow Skiing Trip (Friday Night, February 14, 2003 and Saturday, February 15, 2003)  
\_\_\_\_ Number of tickets @ \$135.00 USD per person = ..... \$ ..... USD

**Total in U.S. Dollars** \$ ..... USD

### Payment Information:

Check Enclosed (Please provide checks drawn on a US bank in US dollars payable to: ASLO.)

Credit Card Payment:

VISA       MasterCard       American Express

#### Send remittance to: ASLO

American Society of Limnology and Oceanography  
5400 Bosque Blvd., Suite 680  
Waco, Texas 76710-4446  
Voice: 800-929-ASLO or 254-399-9635  
Fax: 254-776-3767  
E-mail: business@aslo.org

CARDHOLDER NAME

CARD NUMBER

EXP. DATE

SIGNATURE

**ASLO 2003 Housing Reservation Form** (Do not send with meeting registration. Send to address below.)**Guest Information**

ARRIVAL DATE \_\_\_\_\_ DEPARTURE DATE \_\_\_\_\_

FIRST NAME \_\_\_\_\_ M.I. \_\_\_\_\_ LAST NAME \_\_\_\_\_

E-MAIL ADDRESS \_\_\_\_\_

DAYTIME PHONE \_\_\_\_\_ FAX \_\_\_\_\_

ORGANIZATION \_\_\_\_\_

ADDRESS \_\_\_\_\_

ADDRESS 2 \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

COUNTRY \_\_\_\_\_

# of Standard, One-Bedded Rooms (1-2 people) \_\_\_\_\_ # of Standard, Two-Bedded Rooms\* (2-4 people) \_\_\_\_\_

\*Two-Bedded Rooms are limited in most hotels. We suggest selecting 2-bedded rooms only when they are required. This improves your chances of obtaining reservations in one of your hotel choices.

Please select three hotel choices from the Official Conference Hotels (see Pages 18-19).

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

Please attach separate rooming list with names of all occupants.

- Check here if you have a disability requiring special services       Non smoking request  
 Special requests: \_\_\_\_\_

**Deposit Information**

All reservations requests must be accompanied by a credit card guarantee or check for one night's deposit of one night's room rental plus tax for each room reserved. Housing forms received without a valid guarantee/deposit will not be processed. Faxed requests must include a valid credit card. If the charge to the credit card is denied, we reserve the right to release your reservation. Check deposits must be mailed with a completed housing form.

- One night's check deposit enclosed and made payable to SLCVB/ASLO Housing Bureau. Mail housing forms to: SLCVB/ASLO Housing Bureau, 90 South West Temple, Salt Lake City, UT 84101.
- I hereby authorize SLCVB/ASLO Housing Bureau or any one of the hotels listed on this form, to process a charge to my credit card for each room deposit in accordance with the policies and information provided herein.

Visa     Discover     Diner's Club     MasterCard     American Express

CARD NUMBER \_\_\_\_\_ EXP. DATE \_\_\_\_\_

NAME ON CREDIT CARD \_\_\_\_\_ CARDHOLDER'S SIGNATURE \_\_\_\_\_

**Reservations Instructions**

Reservations can be made in the following ways:

Internet: [www.aslo.org/slc2003](http://www.aslo.org/slc2003)

Telephone: Toll free (US): 800-217-0002  
International: 801-521-9025

Fax: 801-355-0250

Mail: SLCVB/ASLO Housing Bureau  
90 South West Temple  
Salt Lake City, UT 84101

**Deadline**

Reservations must be made by phone, fax, mail or Internet by Jan. 13, 2003, in order to guarantee convention rates.

**Cancellation Policy**

One night's room and tax will be forfeited entirely if cancellation occurs within 24 hours of arrival.

**Confirmations**

The SLCVB/ASLO Housing Bureau will send you a confirmation of your reservation. Please review all information for accuracy. E-mail confirmations will be sent if an e-mail address is provided (preferred), or they can be faxed or mailed. If you do not receive a confirmation or have questions, please call the SLCVB/ASLO Housing Bureau. **You will not receive a confirmation from the hotel.**

**Tax Rates**

All rates are per room and are subject to 11.2% tax (subject to change).

**Requests**

Special requests cannot be guaranteed, however hotels will do their best to honor all requests. Hotels will assign specific rooms upon check-in, based on availability.

## ASLO Membership Application 2003

Thank you for your interest in ASLO. To become a member of this society, complete the information below and send with your dues payment to:  
ASLO, 5400 Bosque Blvd., Suite 680, Waco, Texas 76710-4446, USA.

Please print or type.

LAST NAME	FIRST NAME	MIDDLE INITIAL
INSTITUTE/ORGANIZATION		
ADDRESS LINE 1		
ADDRESS LINE 2		
CITY	STATE/PROVINCE	POST CODE
E-MAIL	PHONE	FAX
HIGHEST DEGREE	YEAR DEGREE ATTAINED	
GENDER (M OR F)	BIRTH YEAR	FIELD (LIM = LIMNOLOGY; OCE = OCEANOGRAPHY; IF LISTING BOTH, ENTER PRIMARY FIRST.)

**Discipline:** \_\_\_\_\_
 
IF LISTING MORE THAN ONE, LIST IN ORDER OF PRIORITY.

 B = Biological  
 C = Chemical
 
 G = Geological  
 O = Optical
 

P = Physical

**Environmental Specialty:** \_\_\_\_\_
 
ENTER NO MORE THAN FOUR IN ORDER OF PRIORITY.

 1 = Lakes/Reservoirs/Ponds  
 2 = Rivers/Streams  
 3 = Great Lakes
 
 4 = Wetlands  
 5 = Estuaries  
 6 = Coastal Ocean
 
 7 = Open Ocean  
 8 = Most / All
 
DISCIPLINARY SPECIALTY (PROVIDE NO MORE THAN A 30-CHARACTER DESCRIPTION.)
**Membership Categories:**

- Regular Member with Subscription to the Journal, *Limnology and Oceanography*
  - Printed Version - North America ..... \$90.00
  - Printed Version - Outside North America ..... \$110.00
  - Electronic Version Only ..... \$75.00
- Regular Member without Journal Subscription ..... \$50.00
- Student Member with Subscription to the Journal, *Limnology and Oceanography* (5-year limit for graduate students)
  - Printed Version ..... \$75.00
  - Electronic Version Only ..... \$35.00
- Student Member without Journal Subscription ..... \$25.00
- Emeritus Member (for Emeritus Members wishing to receive to the Journal) ..... \$70.00
- Emeritus Member ..... No Charge
- Limnology & Oceanography: Methods* (Six-month subscription, January 1 to June 30, 2003 only) ..... Free!

NOTE: Subscription to printed version includes access to electronic version.

**Payment Information:**
 Check Enclosed
 

(Please provide checks drawn on a US or Canadian bank in US dollars payable to: ASLO.)

 Credit Card Payment:
 
 VISA
 
 MasterCard
 
 American Express
 
**Send remittance to: ASLO**

American Society of Limnology and Oceanography  
 5400 Bosque Blvd., Suite 680  
 Waco, Texas 76710-4446  
 Voice: 800-929-ASLO or 254-399-9635  
 Fax: 254-776-3767  
 E-mail: business@aslo.org

CARDHOLDER NAME

CARD NUMBER

EXP. DATE

SIGNATURE

## Salt Lake City Downtown and Housing Map



— Indicates Free Ride Zone. It's free to ride the bus and TRAX in the area shown.  
 - - - - - Indicates TRAX light-rail route.

- 1-Wyndham Hotel  
 2-Best Western Salt Lake Plaza Hotel  
 3-Salt Lake City Marriott Downtown-HQ

- 4-Shilo Hotel – Salt Lake City  
 5-Hilton Salt Lake City Center  
 6-Quality Inn City Center



American Society of  
Limnology and Oceanography

5400 Bosque Blvd., Suite 680  
Waco, TX 76710-4446 USA