

**the American Society
of Limnology and
Oceanography**

**conference
program**

An Invitation to Participate!

The American Society of Limnology and Oceanography invites you to attend its 1999 Aquatic Sciences Meeting. Register early for the best registration rates!

***Early registration deadline:
January 4, 1999.***

Registration should be done via the web site if possible.

***Bring this final
program brochure with
you to the meeting!***

Additional copies will be available on-site at a cost of \$15.00 each.

***Visit the meeting web site
for more information.***

**Limnology and
Oceanography:
Navigating into
the Next Century**

**February 1-5, 1999
Santa Fe, New Mexico**

<http://www.aslo.org/santafe99>

ASLO

Celebrating 50 years of unity
across the aquatic sciences.

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We Welcome Your Participation!

The American Society of Limnology and Oceanography welcomes your participation in its 1999 Aquatic Sciences Meeting.

This year's theme, "Limnology and Oceanography: Navigating into the Next Century," will be highlighted throughout the week-long meeting. Plenary speakers

will address ways in which the lessons learned over the past 50 years of aquatic sciences can help us to plan for the future of our sciences. Please continue to check the conference web site at www.aslo.org/santafe99 for complete up-to-date information.

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Address all correspondence and questions regarding registration, conference logistics, and hotel accommodations to:

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www.aslo.org/santafe99

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.

Future ASLO Meetings

If you are interested in organizing a future ASLO meeting, contact:

Asit Mazumder, Secretary and ASLO Meetings Committee Chair

University of Montreal
(514) 343-2286 Voice
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mazumdea@ere.umontreal.ca

Future ASLO Meeting Schedule

2000	5-9 June	Copenhagen, Denmark
2001	12-16 February	Albuquerque, NM
2002	Summer	Joint meeting with Estuarine Research Federation
2003	10-14 February	Albuquerque, NM
2004	Summer	Possible joint meeting with multi-societies

Conference Venue

The beauty of Santa Fe unfolds! At an elevation of 7,000 feet, this unique southwestern city is nestled within the foothills of the Sangre de Cristo Mountains and sits on the margin of the Rio Grande rift. With a record of history that can be traced back 400 years, Santa Fe has a fascinating background of culture and agriculture. In addition to its blend of Pueblo Indian, Hispanic, and Anglo influence, it is also a major artistic center unique to North America. Santa Fe is located 60 miles north of Albuquerque.

The weather in February will be cool with a chance of occasional snow. Temperatures range from average daytime highs of 40° (F)/4° (C) down to evening lows of 19° (F)/-7° (C). Because of its elevation and dry air, Santa Fe enjoys a delightful climate with over 300 days of sunshine per year.

Plenary Addresses

Plenary addresses will be given by the following speakers on Monday, February 1, 1999, in the Sweeney Convention Center Ballroom.

Time: **9:30 to 10:15 a.m.**

Speaker: **Richard T. Barber**, *Duke University*

Title: HOW WILL OCEANIC ECOSYSTEMS RESPOND TO THE CLIMATE OF THE 21ST CENTURY?

Time: **10:30 to 11:15 a.m.**

Speaker: **Sallie W. Chisholm**, *Massachusetts Inst. of Technology*

Title: DEALING WITH DIVERSITY: STRUCTURE AND FUNCTION IN OCEAN ECOSYSTEMS

Time: **11:15 a.m. to 12:00 p.m.**

Speaker: **Gene E. Likens**, *Institute of Ecosystem Studies*

Title: LIMNOLOGY AND FRESHWATER ECOSYSTEMS IN THE 21ST CENTURY

Historical Gala

A special Wednesday evening event will feature the personal stories of scientific discoveries by some eminent aquatic scientists. Three speakers will offer their thoughts on what it was like "being there" from a scientific and human perspective. A selection of local wines will be served along with light hors d'oeuvres. This event will provide an excellent opportunity to reflect on the past and future of our field. This is an optional event that requires a ticket in advance.

Date: **Wednesday, February 3, 1999**

Time: **8:00 to 10:00 p.m. - Eldorado Hotel**

Chair: **Val Smith**, *University of Kansas*

Presenters: **Karl Banse**, *University of Washington*:
VIEWS THROUGH A PORTHOLE

W.T. Edmondson, *University of Washington*:
HOW AND WHY I BECAME A LIMNOLOGIST

Alice Alldredge, *Univ. of California at Santa Barbara*:
PERSPECTIVES FROM MIDCAREER:
OCEANOGRAPHY AS PATH AND PASSION

ASLO Business Meeting

The business meeting is scheduled on Monday, February 1, from 5:30 to 6:30 p.m. in the Mesa Ballroom of the Hilton Hotel. All ASLO members and meeting participants are encouraged to attend. Following the meeting, a networking area will be available so that you can meet with old friends and make acquaintances with new ones. Light refreshments will be served.

About the 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 a portion of the special and contributed sessions will take place at the Sweeney Convention Center, 201 West Marcy, in Santa Fe. The Hilton Hotel of Santa Fe, 100 Sandoval, and The Eldorado Hotel, 309 West San Francisco, will serve jointly as headquarter hotels for the meeting and will house some of the special and contributed sessions along with many other meeting activities. These three facilities are in close proximity (within a short walking distance) to provide attendees with a convenient setting. Both the Hilton and the Eldorado, as well as other hotels throughout the city, will provide housing.

Special Sessions on Aquatic Sciences in Education

This year's meeting will include two sessions devoted to educational research projects involving aquatic science disciplines.

Session: **Ocean and Freshwater Research in the Service of Education**

Date: **Wednesday Morning, February 3, 1999**

Location: **Eldorado Hotel (Zia A/B/C)**

Chairs: **Nancy Marcus**, *Florida State University*
David F. Brakke, *Towson University*
Bart De Stasio, *Lawrence University*

Abstract: Both the activity of ocean and freshwater research and the findings obtained by it are being used to enhance learning about the ocean and other natural waters, the methods of science, and the societal significance of scientific research. Citizens should be offered the education necessary to understand aquatic processes sufficiently to make informed environmental economic decisions and to appreciate the societal significance of ocean and freshwater research. Papers in this session will discuss the use of ocean and freshwater research in the classroom for K-12 and undergraduate science classes and in informal education of the general public. Papers on new innovative teaching methods are encouraged.

Session: **Multidisciplinary Research Experiences of Undergraduates in Ocean Sciences**

Date: **Wednesday Evening, February 3, 1999**

Location: **Sweeney Convention Center, Poster Session**

Chairs: **Russell L. Cuhel**, *Great Lakes Water Institute, University of Wisconsin-Milwaukee*
Carmen Aguilar, *Great Lakes Water Institute, University of Wisconsin-Milwaukee*

Abstract: The NSF-Ocean Sciences Research Experience for Undergraduates Program (REU) injects eight to ten inexperienced undergraduate sophomores and juniors into research labs at over a dozen sites nationwide during the summer. These students carry out a broad range of research projects involving all disciplines common to oceanography, infusing a refreshing naivete and robust energy into their laboratories. The posters in this session present a selection of student achievements in active aquatic science laboratories during the summer of 1998 and exemplify the potential of future ocean science graduate student and workforce applicants.

Daily Thematic Sessions

Theme: TS01
Working Together in Aquatic Sciences: Toward a Global Perspective

Date: Tuesday Afternoon, February 2, 1999

Summary: The last decade of the 20th century has been characterized by an emphasis on global issues, resulting in the development of international programs launched by the international scientific community. The efforts of the scientific community to work together towards the globalization of the aquatic sciences has not been matched, however, by changes in the structure of funding and the possibilities for networking offered by government agencies in charge of funding and coordinating scientific research. These deficiencies in addressing global issues in a coherent manner must be faced directly to ensure scientific efficiency and effectiveness in the next century. There is a need, therefore, to identify the key issues that must be addressed in the globalization of aquatic sciences, and the bottle necks that presently limit this globalization (e.g. a more flexible funding system for transboundary cooperation, connection of databases on research funded by public resources in different countries, etc.). A special thematic session has been planned that will address the identification of needs for globalization and the present limitations that hamper multinational scientific cooperation in the aquatic sciences.

Chair: William Lewis, University of Colorado

Presenters: Hugh Ducklow, College of William and Mary/VIMS: INTERNATIONAL COLLABORATION IN OCEANOGRAPHY: A PERSONAL VIEW

Thomas Malone, Horn Point Lab/Univ. of Maryland: THE COASTAL COMPONENT OF THE GLOBAL OCEAN OBSERVING SYSTEM: WHAT IS IT AND WHY DO IT?

Frederick Grassle, Rutgers University: TOWARD A GLOBAL PARTNERSHIP FOR THE STUDY OF MARINE BIODIVERSITY

Stephen Hamilton, Michigan State University: COLLABORATIVE LIMNOLOGICAL RESEARCH IN LATIN AMERICA: A PERSONAL PERSPECTIVE ON OPPORTUNITIES AND IMPEDIMENTS FOR NORTH AMERICAN SCIENTISTS

Robert Wetzel, University of Alabama: ESSENTIAL COMMITMENTS TO INTERNATIONAL LIMNOLOGY

Theme: TS02
50 Years of Aquatic Sciences: Historical Perspectives

Date: Wednesday Afternoon, February 3, 1999

Summary: Derek de Solla Price wrote "...historical understanding may be looked on as an attempt to predict the past, and if that can be done, the same...analysis may be used to make reasonably good guesses about the afflictions of the present." Donald Worster wrote that it is important to take a historical perspective on ecology because, as with any new teacher "...before committing ourselves too firmly to its tutelage, ...we (should) do some digging into its previous life." "In that inquiry we might learn more about the kind of science ecology has been, ...(and) what ecology has not told us about nature." In sum, examining the historical development of a science can give us important clues about ways to advance and strengthen the science of the future. This

session will draw together historical analyses and narratives concerning the aquatic sciences.

Chair: Nancy Slack, Russell Sage College

Presenters: John Magnuson, Univ. of Wisconsin-Madison: WISCONSIN'S BIRGE & JUDAY, AND HASLER, LIVING WITH HISTORY

Nancy Slack, Russell Sage College: THE G. EVELYN HUTCHINSON RESEARCH SCHOOL: CONTRIBUTIONS TO LIMNOLOGY AND OCEANOGRAPHY

Keith Benson, University of Washington: THE MARINE BIOLOGY ORIGINS OF AMERICAN OCEANOGRAPHY

R. Rainger, Texas Tech University: CHANGING EMPHASES IN AMERICAN OCEANOGRAPHY: ROGER REVELLE, THE SCRIPPS INSTITUTION, AND MARINE BIOLOGY, 1945-1955

Warren Wooster, University of Washington: POSTWAR DEVELOPMENT OF INTERNATIONAL OCEANOGRAPHY

Theme: TS03
New Tools and Paradigms for Beginning the New Millenium

Date: Thursday Afternoon, February 4, 1999

Summary: The choice of particular research approaches and paradigms by individual scientists has a major impact on the development of research directions, and will continue to do so during the next century. Ways of viewing and approaching science are often simply inherited from schools of research during scientific training, without open questioning, verbalization or analysis. The identification of how research approaches and paradigms are chosen is one of the key components of success or failure sciences. Strengthening the contribution of the Aquatic Sciences during the next century, and rising to its challenges, means that we must be aware of the strengths and weaknesses of our most basic tools: our scientific approaches and paradigms. The ASLO 1999 committee has organized a special thematic session to highlight the importance of scientific approaches and paradigms in facing the challenges of the next century.

Chairs: Steve Brandt, NOAA-Great Lake Envir. Research Lab
John Hobbie, Marine Biological Laboratory

Presenters: Farooq Azam, Scripps Institution of Oceanography: INTEGRATING MICROBIAL PROCESSES INTO OCEANOGRAPHY: DO WE NEED A NEW CONCEPTUAL FRAMEWORK?

Ken Tenore, Chesapeake Biological Laboratory: VALUES IN THE PRACTICE OF SCIENCE: THEIR PAST AND FUTURE ROLES

Michael Pace, Institute of Ecosystem Studies: THE FUTURE OF LIMNOLOGY AND OCEANOGRAPHY: INTELLECTUAL INTEGRATION AS A PATH TO SCIENTIFIC PROGRESS

Robert Costanza, University of Maryland: PRINCIPLES FOR SUSTAINABLE GOVERNANCE OF THE OCEANS

Candace Oviatt, University of Rhode Island: MARINE ECOLOGY NEEDS TO EMBRACE THE EXPERIMENTAL ECOSYSTEM APPROACH

Workshops

Several outstanding workshops have been planned to enhance learning and understanding. Descriptions, times, and locations are listed below. Fees are not required for any of the workshops, but you must let the ASLO Business Office know if you plan to participate. If you have already registered for the meeting and would like to sign up for one of the workshops, send an e-mail to business@aslo.org or lyndaw@sgmeet.com to indicate the workshop(s) in which you would like to participate. You also can fax your choices to (254) 776-3767.

Workshop: Fostering Broad-based Education in the Aquatic Sciences: Using Local Resources and Science Fairs to Enhance Aquatic Science Education

Date: **Sunday, January 31, 1999, 9:00-11:30 a.m.**

Location: **Eldorado Hotel (Anasazi South)**

Chair: **Bart De Stasio, Lawrence University**

Description: If you have wanted to make your courses relevant to local issues, or feel that making connections with local elementary and secondary schools is important, then this is the workshop for you. This workshop will focus on programs and initiatives that have successfully broadened the traditional focus of aquatic science education. Part of the morning will be led by Bart De Stasio on using local resources and the JASON Project to enhance and extend student learning in introductory courses. The DIALOG II group, led by Sheryl Ann McCarthy, will lead the rest of the session which will cover implementation of a program for supporting local elementary and secondary school science fairs to foster wider interest in aquatic sciences. The morning will conclude with a round-table brainstorming session on ways ASLO might foster a broader educator network linking local efforts that support the general educational goals of ASLO.

Workshop: Innovative Course Designs for Non-Major Introductory Aquatic Science Courses

Date: **Sunday, January 31, 1999, 1:00-4:00 p.m.**

Location: **Eldorado Hotel (Anasazi South)**

Chair: **Nancy H. Marcus, Florida State University**

Description: Not sure how to structure your course for non-science majors? What should you cover, and what should you omit? The afternoon session will be a hands-on workshop led by Nancy Marcus on innovative ways to design or revise introductory courses. Based on a recent workshop at William and Mary College, the session will include ways to incorporate active learning approaches into courses, and alternative methods for assessing student learning. This National Association of Geoscience Teacher's sponsored workshop, partially supported by the National Science Foundation, also will provide materials that can be used to help participants implement changes in their own courses.

Workshop: BI-OMP Session

Date: **Sunday, January 31, 1999, 1:00-4:00 p.m.**

Location: **Eldorado Hotel (Anasazi North)**

Chair: **Marc Frischer, Skidaway Institute of Oceanography**

Description: A session for BI-OMP investigators, students, and staff. Contact the session chair at frischer@skio.peachnet.edu for more information.

Workshop: L&O Workshop

Date: **Tuesday, February 2, 1999, 12:45-1:45 p.m.**

Location: **Eldorado Hotel (Zia A/B/C)**

Chair: **Everett Fee, Limnology and Oceanography**

Description: Pick up a quick lunch and bring it to this lunch time workshop focusing on recent changes at L&O. These include: a new editor in chief, a substantial increase in the number of associate editors (from 14 to 20), an important new position (assistant to the editor) that effectively replaces that of managing editor, and copy editing being handled by the publisher (Allen Press) instead of "in-house." L&O administrative procedures have also been completely overhauled. This workshop will be your opportunity to meet the new editorial team, discuss any of these changes, and ponder future initiatives (e.g., moving L&O onto the WWW).

Workshop: GEO/NSF Town Meeting

Date: **Tuesday, February 2, 1999, 7:00-9:00 p.m.**

Location: **Sweeney Convention Center- Room #1.**

Chairs: **Robert Correll, National Science Foundation**
Richard Greenfield, National Science Foundation

Description: The National Science Foundation's Directorate for Geosciences (GEO) is undertaking a major long-range planning effort to develop a vision of the cutting-edge issues for the geosciences during the first decade of the 21st century. The focus of GEO Vision 2000 is to develop a comprehensive view of the sciences for planet Earth and the scope of programs and activities that GEO should address during the period 2001 to 2010. The vision will identify new scientific areas to address, the balance between research (science and facilities), education and outreach activities, the required enabling technologies and facilities, and the organization and management strategies best suited to achieve the vision.

GEO Vision 2000 will be developed through extensive input from the geosciences community including the GEO Vision 2000 Working Group, the Advisory Committee for the Geosciences, outreach activities such as the GEO Vision 2000 Town Meetings scheduled for professional society meetings such as this one, and comments via the web (www.geo.nsf.gov).

Workshop: Cross-Boundary Transfers of Aquatic Species: Planning for an International Workshop

Date: **Wednesday, February 3, 1999, 12:45-1:45 p.m.**

Location: **Eldorado Hotel (Zia A/B/C)**

Chair: **David Reid, NOAA/GLERL**

Description: In August 1998 a Working Group on Aquatic Invasive Species was established by the Internationalis Societe Limnologia (SIL). One of the first challenges to the new Working Group is to organize and convene an international workshop or conference on the problems and risks posed by cross-boundary transfers of aquatic invasive species, and to improve and encourage scientific networking, data exchange, and visiting scientist exchanges. The Steering Committee of the SIL Working Group has proposed to organize such a workshop under the auspices of the ASLO 2000 Meeting.

Workshop: Popular Science Communication

Date: **Thursday, February 4, 1999, 7:00-9:00 p.m.**

Location: **Sweeney Convention Center - Room #1**

Chair: **Cheryl Dybas, National Science Foundation**

Description: Presenting science in an interesting way, while retaining accuracy, is the key to good science communication. Popular science communication aims to change scientific concepts and results from jargon

understandable only to other scientists, to news relevant to the lives of a general audience. This session will explore science communication, specifically science writing, in language understandable to a nonscientific audience. Participants will review examples of good science writing, “dissect” the structure of science news and feature stories, and learn something of the basics of this craft. They will have an opportunity to try their hands at writing a popular story about research being presented at the conference, and individual critiques will be provided to interested participants.

Workshop: **Coastal Ocean Sciences**
 Date: **Thursday, February 4, 1999, 7:00-9:00 p.m.**
 Location: **Sweeney Convention Center-Room #2**
 Chair: **Dr. Donald Scavia, NOAA-NOS and National Centers for Coastal Ocean Science**
 Description: The National Centers for Coastal Ocean Science, in NOAA’s National Ocean Service, will host a town

meeting to solicit views and perspectives from the research community attending the 1999 ASLO meeting. This will be an opportunity to discuss new approaches to academic-federal partnerships for coastal monitoring, research, and assessment. Several agencies are contemplating coastal programs and initiatives in the near future and we hope to have broad representation from those agencies on hand. This town meeting will be a chance for the broad community to provide input to future agency developments.

Workshop: **Late-Breaking Science**
 Date: **Thursday, February 4, 1999, time to be determined**
 Location: **Hilton Hotel, Ortiz**
 Chair: **Steve Brandt, NOAA-Great Lakes Environmental Research Laboratory**
 Description: ASLO 99 will have this room available for discussions on late-breaking issues and opportunities. Please contact the workshop chair at brandt@gl.erl.noaa.gov if you would like to reserve the room.

Field Trips

Field Trip: **Museum Tour**
 Date: **Sunday, February 7, 1999, 10:00 a.m.-1:00 p.m.**
 Description: **A lectured tour of the Georgia O’Keeffe Museum by Ellen Bradbury-Reid, editor of the book about O’Keeffe, “The Far Away and Nearby”**
 Following an orientation, you will tour the museum led by art historian, David Bell. After the tour of the O’Keeffe Museum, David will lead our group to the fine arts museum for an additional tour and lecture. We will then board a bus for the Folk Art Museum and the Museum of Indian Arts and Cultures for additional lectures and tours. Tour includes all entry fees, transportation and study leaders.
 Cost: \$40.00 per person.

Field Trip: **Saline Pueblos and Lakes Tour**
 Date: **Sunday, February 7, 1999, 8:00 a.m. through Sunday afternoon.**
 Description: Visit these once thriving Native American trade communities of Tiwa and Tompiro speaking Puebloans in this remote frontier area of New Mexico. Early in the 17th century Spanish Franciscans influenced this area with missionary efforts and by the late 1670’s the Saline District was depopulated of both Native American and Spaniards. Today there remains austere yet beautiful reminders of this earliest contact between Pueblo Indians and Spanish Colonials. This field trip will tour the ruins of four mission churches and a partially excavated pueblo of Las Humanas. Tour includes all entry fees, transportation, study leader and lunch.
 Cost: \$95.00 per person.

Field Trip: **Rio Grande Gorge and Taos Day**
 Date: **Sunday, February 7, 1999, All day excursion**
 Description: Join a geologist study leader on an all day excursion to Taos and the Rio Grande Gorge. The route will take you on back roads through several small Hispanic farming villages. The first stop will be the Ortega’s Weaving Shop where generations of the Ortega family have worked the looms for decades. Stop at the historic and sacred Santuario de Chimayo, a small gem of folk art and architecture. Thousands of people visit this site

each year for the “healing dirt”. We will then follow the high road to Taos, climbing into the Sangre de Cristo Mountains to pass through remote villages of Hispanic settlers. After dining at a well known restaurant in Taos, the journey will continue to the Rio Grande Gorge Bridge for a geological walking tour and lecture. The day will end in Taos with a guided tour of the Millicent Rodgers Museum. Tour includes all entry fees, transportation, study leader and lunch.

Cost: \$85.00 per person.
 Field Trip: **Ski Trip**
 Description: The Santa Fe Mountain has a summit of 12,000 feet and slopes of 1,650 vertical feet making it a resort that is well suited to both beginners and more experienced skiers. A shuttle bus will take skiers to the mountain on Sunday morning and will continue to make rounds every half hour throughout the day. If you are interested in skiing while you are in Santa Fe, you can find additional information at (www.skisantafe.com/grates.html). Prices are still being finalized. Depending on your experience level and your equipment needs, prices range from \$34 to \$60 per day plus a fee for utilizing the hotel/resort shuttle.

The Santa Fe Ski Shuttle picks up daily between 8:00 and 8:15 a.m. and between 11:00 to 11:15 a.m. seven days a week. Reservations are required both for trips to the mountain and back. It is recommended that you call a few days in advance to make reservations. Return times are 1:00, 3:30, 4:00 and 5:00 p.m. Round trip fees to ride the shuttle are as follows:

Adult	\$10.00
Children (12 and under)	\$8.00
Senior Citizens (65 and older)	\$8.00
Disabled Persons	\$8.00

Hotels that are served by the Santa Fe Ski Shuttle:
 Hilton of Santa Fe · Eldorado Hotel · Hotel Santa Fe Inn of the Governors · St. Francis Hotel · Hotel Loretto Radisson Hotel and Suites on the Plaza · Fort Marcy Hotel Suites Compound

Please note that shuttle times and rates are subject to change. For more information on the Santa Fe Ski Shuttle, please call (505) 820-7541.

Special Activities

Activity: **Dance (No Fee Required)**
 Date: **Thursday Evening, February 4, 1999**
 Time: **9:00 p.m. to 12:00 a.m. - Eldorado Hotel**
 Description: Join your colleagues for an evening of fun and relaxation. Admission is free.

Special Student Events

Special student activities are being planned including mixers, workshops, a ski trip, and a booth at the meeting.

Event: **Student Continental Breakfast**
 Date: **Monday Morning, February 1, 1999, 6:30 to 7:40 a.m.**

Description: A special continental breakfast for ASLO students is planned on Monday morning, February 1, from 6:30 to 7:40 a.m. at the Hilton Hotel in the Mesa Ballroom prior to the plenary session at the Sweeney Convention Center. This breakfast is designed to allow students to meet other students, arrange activities during the meeting, and hear from the two student representatives on the ASLO board.

Event: **Student Santa Fe Mountain Ski Trip**
 Date: **Saturday, February 6, 1999**

Description: More information on skiing in Santa Fe can be obtained in the section marked "Ski Trip." If you need additional information on the Student Santa Fe Mountain Ski Trip, please consult the ASLO student web site: (www.aslo.org/studentinfo).

Students are encouraged to attend the ASLO business meeting on Monday, February 1, at 5:30 p.m. This gathering will offer an opportunity for students to get together to bring up society-related ideas and concerns.

For up-to-date information on the events being organized, please contact Karla Heidelberg (karla@hpl.umces.edu) or see the ASLO student web page (www.aslo.org/studentinfo).

Commercial and Nonprofit Exhibits

Academia Book Exhibits

Academic Press

ASLO Booth *

ASLO Student Booth

Biospherical Instruments Inc.

CORE

Environmental Isotope Laboratory

Estuarine Research Federation

Harbor Branch Oceanographic Inst.

HOBILabs

Hearts & Flowers Butterfly Farm

Hydrolab Corporation

NASA-Goddard Space Flight Center

NRC Canada-Research Press

Ocean Innovations

The Oceanography Society

Precision Measurement Engineering

Satlantic Inc.

Scientific Book Displays

Turner Designs

WET Labs, Inc.

An exhibit area will be set up at the Sweeney Convention Center in conjunction with the poster display area. Exhibits will be open to attendees from 8:00 a.m. to 7:00 p.m. on Tuesday, Wednesday, and Thursday. Exhibitors are invited to participate in the various social activities associated with the meeting by paying the additional spouse/guest fee of \$50.

** Be sure to visit the ASLO booth during the meeting. Located just inside the exhibit/poster area at the Sweeney Convention Center, you will find the booth to be a valuable source for information, relaxation, and networking.*

Evening Receptions

ASLO will host an **Opening Welcome Mixer Reception** for all participants on Sunday, January 31, from 5:30 to 9:00 p.m. in the Anasazi Ballroom of the Eldorado Hotel.

Poster Receptions will take place on Tuesday, Wednesday, and Thursday evenings from 5:00 to 7:00 in the exhibit/poster display area at the Sweeney Convention Center. These receptions are designed to allow you to continue the day's discussion, meet with colleagues, and develop new contacts. The receptions will be concurrent with the poster sessions. Light snacks will be available, and a cash bar will be set up. A ticket will be placed in your registration packet and will be good for one beverage at any of the poster session receptions. There will not be a reception on Monday evening so that attendees can participate in ASLO's business meeting.

Minorities Program

The Committee on Under-Represented Minorities in Limnology and Oceanography (CURMLO) is holding its program for the year in conjunction with the ASLO 1999 Aquatic Sciences Meeting. The initiative is a shared undertaking between Hampton University and ASLO and is funded by the Ocean Sciences Division of the National Science Foundation. Minority students will give brief presentations in student symposiums scheduled at the Hilton Hotel on Tuesday and Wednesday mornings, February 2 and 3, 1999. These symposiums will provide students with opportunities to give results from projects, theses, or planned research. All ASLO members are encouraged to come. A list of speakers and titles of their presentations will be available on a flyer at the meeting registration desk.

Students participating in this program will be aided by ASLO member volunteers who will serve as meeting mentors. If you would like to recommend a student for the program, or if you are interested in serving as one of the meeting mentors, please contact:

Ben Cuker
 Marine Science Department, Hampton University
 Hampton, VA 23668
 Phone: 804-727-5884 · Fax: 804-727-5084
 E-mail: cuker@cs.hamptonu.edu

Student Poster Awards

ASLO will present seven awards for the most outstanding posters presented by students. All posters submitted by students who are first authors will be considered; there is no need to apply. Posters will be judged on the basis of innovation, scientific insight, quality of experimental design and methods, and clarity and effectiveness of the presentation. To receive the award, students must be ASLO members, and the poster cannot have been presented previously at an ASLO or other scientific meeting. The Office of Naval Research has contributed funds for six awards of \$500 each, and the Sea Grant Association has contributed funds for one award of \$500. Award recipients will be announced at the ASLO booth at the close of the Tuesday, Wednesday, and Thursday poster sessions.

If you are interested in serving as a judge for the outstanding student poster awards, please contact Susan Weiler (weiler@whitman.edu).

Sustaining Institutional Member

Turner Designs

James Trujillo
 845 West Maude Avenue
 Sunnyvale, CA 94086
 (408) 749-0994 Voice
jtrujill@turnerdesigns.com E-mail
www.turnerdesigns.com Web

For more than 25 years, Turner Designs has manufactured field, laboratory, and on-line fluorometers used in applications such as chlorophyll/algae measurement, fluorescent dye tracer studies, and hydrocarbon monitoring.

Hotel and Accommodation Information

All reservations MUST be coordinated through the Santa Fe Convention & Visitors Bureau only. Complete the attached hotel reservation form and return it to the Convention & Visitors Bureau – Housing Coordinator directly. **Hotel reservations forms must be returned by January 4, 1999 to ensure conference rates. After this date regular rates may be charged.**

To make hotel reservations after January 4, 1999, please contact Lester Lemay at the ASLO Business Office, via e-mail at lesl@sgmeet.com, by phone (800) 929-ASLO or (254) 399-9635, or via fax (254) 776-3767.

The rates applicable to sleeping rooms have been confirmed at the prices listed below. All hotels have a limited number of rooms available, and rooms can be reserved at the discounted rates two (2) days before and after the meeting. The rates listed below are subject to a lodging tax and state sales tax presently at 6.25% and 4%, respectively.

The general session, exhibits, posters and some of the breakout sessions will be held at the Sweeney Center. The remainder of the breakout sessions will be held at the two co-headquarters hotels—the Eldorado and the Hilton. These three facilities are located within one-half and two and one-half blocks of each other and require only a few minutes walking time. Morning and afternoon breaks will be located at the Sweeney Center, the Eldorado and the Hilton Hotels during the meeting hours. All special activities will be held at either of the co-headquarters hotels—the Eldorado or the Hilton.

Once your reservation has been processed, an acknowledgment will be sent to you via mail from the Convention & Visitors Bureau Housing Coordinator.

Participating Hotels

Note: Rates shown do not include taxes. The current tax is 10.25 %
Headquarter Hotels:

*Eldorado Hotel (Co-headquarters hotel)

\$119 single or double occupancy
Add \$20 for additional adults over two sharing a room.
309 West San Francisco Street.

Santa Fe's original four-star, four-diamond hotel, the Eldorado is located one block from the historic Plaza, adjacent to the Hilton Hotel and a short walk to the Sweeney Center. This is a large modern hotel with indoor pool and many shops and restaurants. Parking is \$8.00 per 24-hour period to hotel guests and \$10.00 per day for non-guests. Check them out at www.eldoradohotel.com.

*Hilton of Santa Fe (Co-headquarters hotel)

\$116 single or double occupancy
Add \$10 for additional adults over two sharing a room.
100 Sandoval Street.

Two-story territorial-style building just steps from the historic Plaza, adjacent to the Eldorado and within in a short walk to the Sweeney Center. There are several restaurants located at the Hilton. Visit their web site at www.hiltonofsantafe.com. Parking is \$5.00 per day.

Other Participating Hotels:

*Hotel Loretto (Formerly Inn at Loretto)

\$99 single or double occupancy
Add \$15 for additional adults over two sharing a room.
211 Old Santa Fe Trail.

The Hotel Loretto is a tiered-design Pueblo style hotel with restaurants and shops as part of the hotel itself. It is located one block from the Plaza and a short walk to the meeting facilities. Overnight parking for guests is \$5.00 per day.

Fort Marcy Hotel Suites Compound

\$89 single, \$99 double occupancy
Add \$20 for additional adults over two sharing a room.
320 Artist Road.

Four blocks off of the Plaza, this compound offers various size bedroom suites. Parking is complimentary and the hotel owns a van for complimentary shuttle service to the meeting sites.

Radisson Hotel

\$94 single or double occupancy
Add \$20 for additional adults over two sharing a room.
750 North St. Francis Drive.

The Radisson is located outside of the downtown area and offers complimentary parking. Whenever possible, it will provide complimentary shuttle service via its van to the meeting sites.

Fairfield Inn by Marriott

\$49 single or double occupancy
Add \$5 for additional adults over two sharing a room.
4150 Cerrillos Road.

The Fairfield Inn is located outside of the downtown area and offers complimentary parking.

Radisson Hotel & Suites on the Plaza (formerly the Hotel Plaza Real)

\$89 single or double occupancy
Add \$10 for additional adults over two sharing a room.
125 Washington Avenue.

Territorial-style architecture offering continental breakfast but no restaurant on the premises. Parking is \$10.00 per night.

*Inn of the Governors

\$109 single or double occupancy
Add \$15 for additional adults over two sharing a room.
234 Don Gaspar.

Southwestern ambiance and an ideal location—just a short walk from the Plaza. Parking is complimentary.

*Villas de Santa Fe

\$99 single or double occupancy
(formerly the Homewood Suites)
Add \$10 for additional adults over two sharing a room.
400 Griffin Street.

This all-suite hotel offers rooms with kitchens and has a small convenience store as part of the hotel. The Villas de Santa Fe is located five blocks from the Plaza. Parking is complimentary.

*Hotel Santa Fe

\$99 single or double occupancy
Add \$10 for additional adults over two sharing a room.
1501 Paseo De Peralta.

Santa Fe's only Native-American owned hotel, this facility offers complimentary parking and shuttle service to the meeting.

*St. Francis Hotel

\$95 single or double occupancy
Add \$15 for additional occupants over two sharing a room (applies to ages 13 and over).
210 Don Gaspar Avenue.

National historic landmark building that was renovated in the 1980's and located on the Plaza just a short walk to the meeting. Parking is complimentary.

Note: Hotels marked with an asterisk () are downtown properties and are within walking distance of the Sweeney Center, Eldorado and Hilton hotels. The remaining participating hotels are located within 5-15 minutes of the downtown area and some provide complimentary shuttle service. This may not be convenient for all events, however. We recommend renting a car if you plan to stay outside the downtown area. Parking at the Sweeney is \$.60 per half hour or \$6.00 per day.*

Travel Information

Special Airline Rates

Save! Special arrangements have been made with United Airlines and Delta Airlines so conference attendees can save an additional 5% below the lowest applicable airline fares or 10% if tickets are purchased at least 60 days in advance. Just one quick phone call to the conference service desk at either of the airlines listed will put you in touch with availability and information on these additional savings.

For United Airlines, Shuttle by United or United Express (U.S., Canada and Puerto Rico), call 1-800-521-4041 and specify Meeting Plus ID code 524YN.

To reach Delta Airlines from Canada and the U.S., including Alaska, Hawaii, San Juan (Puerto Rico), the U.S. Virgin Islands, and Nassau call 1-800-241-6760 and specify File Number 116233A. For non-US travelers, please call your nearest Delta ticket agent and specify File Number 116233A.

The closest major airport is the Albuquerque International Airport located approximately 45 minutes to one hour away from Santa Fe. Aspen Air and United Airlines fly directly to Santa Fe. Airline discounts still apply if booked through a university travel agent.

Ground Transportation

Special rental car rates are available from Alamo and Avis Car Rental when making your United Airlines ticket reservations; just ask for special rates. If flying Delta airlines or to contact Avis Car Rental directly, call 1-800-331-1600 and specify conference group I.D. #D130903.

Shuttle bus service between the Albuquerque International Airport and Santa Fe is provided by Shuttle Jack. Shuttle Jack makes stops at the Eldorado Hotel and the Hotel Loretto. One-way cost of transportation is currently \$20. Reservations are required to guarantee service. To make and confirm reservations please call Shuttle Jack at 1-505-982-4311.

Registration Information

The full registration fee includes admission to all sessions, exhibits, workshops and evening sessions (unless otherwise specified), Sunday welcome reception and poster receptions (Tuesday through Thursday), dance, coffee breaks, book of abstracts, and the program book. The Historical Gala is an optional event, and the cost is additional.

To register for the meeting, please complete the registration form electronically through the conference web site (www.aslo.org/santafe99). Electronic registrations must include complete credit card information.

While every attempt has been made to allow secure transmissions of your credit card information and transaction, ASLO assumes no liability for your credit card information when it is released electronically.

If you are unable to register electronically, 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 (Only U.S. dollars drawn on a U.S. bank will be accepted.)**

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

Substantial savings apply if the payment and registration form are received on or before January 4, 1999.

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. 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.

If you find it necessary to cancel after you have already paid, we can refund your conference fee (less the \$60 processing fee) if we receive notice in writing prior to January 4, 1999. Registrants who cancel after January 4, 1999, will not be eligible for any part of a refund.

Registration Fees

ASLO Members: \$220.00 USD on or before January 4, 1999 (\$270.00 USD after January 4, 1999)

Non-members (those who are not a member of ASLO): \$270.00 USD by January 4, 1999 (\$320.00 USD after January 4, 1999)

ASLO Students: \$170.00 USD by January 4, 1999 (\$220.00 USD after January 4, 1999)

Non-member Students (those who are not a member of ASLO): \$200.00 USD by January 4, 1999 (\$250.00 USD after January 4, 1999)

One-day registrations: \$95.00 USD

Spouse/Guest: \$50.00 USD (Spouse and guest fees include social events only. Spouses and guests cannot be admitted to the sessions.)

Wednesday Evening Historical Gala: \$20.00 per person (**Sold Out**)

Museum Tour: \$40.00 per person

Saline Pueblos and Lakes Tour: \$95.00 per person

Rio Grande Gorge and Taos Day: \$85.00 per person

A **Late Fee** of \$50.00 is included in the registration fee if received after January 4, 1999.

Fees to attend the Aquatic Sciences Meeting of ASLO 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.

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 special needs.

Childcare

Persons requiring childcare services in Santa Fe are advised to directly contact Magical Happenings at 505-982-1570 for information and to make arrangements. (After-hours contact Linda Iverson, 505-982-9327.) Any arrangements made represent a contractual

agreement between the individual and the childcare agency/provider. ASLO assumes no responsibility for the services rendered.

To obtain more information:

For more information or if you have questions regarding registration, please call (800) 929-ASLO (within the U.S., Canada, or Caribbean) or (254) 399-9635 outside these areas, or you may send a message via fax to (254) 776-3767. You also can send a message via e-mail to the following: business@aslo.org

Foreign Currency Exchange

Foreign currency exchange may be made at the following locations:

First Security Bank

121 Sandoval Street
Santa Fe
(800) 677-2962 or (505) 245-0770
Hours: Monday - Thursday, 9:00 a.m. - 3:00 p.m.,
Friday 9:00 a.m. - 6:00 p.m.

NationsBank

1234 St. Michael's Drive
Santa Fe
(505) 471-1234
Hours: Monday - Thursday, 9:00 a.m. - 4:00 p.m.,
Friday 9:00 a.m. - 6:00 p.m.

Norwest Bank

Albuquerque International Airport
Albuquerque
Hours: Monday - Friday, 9:00 a.m. - 1:00 p.m.

Conference Information

Registration Times and Location

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, name badges, and registration packets can be picked up on Sunday, January 31, at the Eldorado Hotel from 1:00-9:00 p.m. in the Zia Room. Registration will be opened at the Sweeney Convention Center on Monday, February 1, through Friday, February 5, from 7:00 a.m. to 5:00 p.m.

Name badges will be included in your registration packet and must be worn at all times throughout the meeting.

Maps showing registration and other meeting locations will be included in the abstract book that you will receive on-site.

Message and Jobs Boards

Messages will be posted on a message board located by the ASLO booth in the exhibits area of the Sweeney 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 the ASLO Business Office (business@aslo.org) by January 15, 1999.

Restaurants and Information on Local Activities

Information about local activities and restaurants in and around Santa Fe can be found through the hotel concierge at any of the hotels. Fliers also will be available at the conference registration desk.

Instructions for Oral Sessions, Poster Presenters, and Session Chairs

Meeting Rooms

All meeting rooms will be equipped with one slide projector, carousels, one overhead projector, and one screen. Plenary presentations will take place in the Sweeney Center Ballroom, and concurrent sessions will be divided among the Hilton Hotel, Sweeney Center, and the Eldorado Hotel. 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.

Oral Sessions

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. The time limit will be strictly enforced to facilitate movement among the other sessions.

Speaker Ready Room

A speaker ready room will be located in the Aspen Room at the Hilton Hotel. This room will be open from 3:00 to 10:00 p.m. on Sunday and from 7:00 a.m. to 10:00 p.m. on Monday, Tuesday, Wednesday, and Thursday. This room will be available for slide viewing and for preparing other materials relative to the presentations.

E-mail Access

Attendees will have facilities to access electronic mail in Room 5 of the Sweeney Convention Center during conference hours Monday through Friday. Also, dataports will be available in the guestrooms at each of the headquarter hotels. We suggest you check with your hotel regarding the e-mail facilities and instructions on access.

Poster Sessions and Poster Presentations

Poster sessions are an important part of the 1999 Aquatic Science Meeting and provide invaluable contributions to the theme. Poster space will be 4 ft. by 4 ft. (1.16m by 1.16m) in size. All poster sessions will be at the Sweeney Center. Posters will be set up from 7:00 to 8:00 a.m. on either Tuesday (February 2, 1999), Wednesday (February 3, 1999), or Thursday (February 4, 1999) depending upon the session to which one's poster is assigned. Authors should be available for discussion purposes during the reception/poster session on the day of their assigned session. A poster presentation schedule will be available for viewing on the web and also is shown in this program brochure.

Posters will be on display on Tuesday, Wednesday, and Thursday from 8:00 a.m. to 7:00 p.m. A poster must be taken down from 7:30 to 9:30 p.m. on the day to which it is assigned. Because the area must be prepared for the next day's posters, any that are not retrieved by 9:30 p.m. will be discarded.

A reception for all attendees will take place in the exhibit/poster display area from 5:00 to 7:00 each of those evenings.

Previewing Abstracts

Abstracts for this meeting can be found on the ASLO web site (www.aslo.org/santafe99). A complete book of the abstracts will be handed out to every attendee in Santa Fe.

Running Meeting Schedule

Saturday, January 30, 1999

4:00 - 9:30 p.m. Minorities Program
Hotel Loretto

12:00 - 2:00 p.m.

Lunch
Attendees on their own

2:00 - 5:00 p.m.

Concurrent Sessions
Hilton, Sweeney & Eldorado

3:00 - 3:30 p.m.

Break

5:00 - 9:00 p.m.

Exhibitor Set Up
Sweeney Center Ballroom

Sunday, January 31, 1999

8:00 a.m. - 4:00 p.m. Minorities Program
Hotel Loretto

5:30 - 6:30 p.m.

ASLO Business Meeting
Hilton

9:00 - 11:30 a.m. Workshop:
Broad-based Education
Eldorado

Tuesday, February 2, 1999

1:00 - 9:00 p.m. Registration
Eldorado

7:00 a.m. - 5:00 p.m.

Registration
Sweeney Center Lobby

1:00 - 4:00 p.m. Workshop:
Innovative Course Design
Eldorado

7:00 a.m. - 8:30 a.m.

Coffee Service (cash basis)
Hilton, Sweeney & Eldorado

1:00 - 4:00 p.m. Workshop:
BI-OMP Session
Eldorado

7:00 - 8:00 a.m.

Exhibit/Poster Set Up
Sweeney Center Ballroom

Various times Field trips
Off-site

8:00 a.m. - 7:00 p.m.

Exhibits/Posters
Sweeney Center Ballroom

5:30 - 9:00 p.m. Welcome Reception
Eldorado

8:00 a.m. - 12:00 p.m.

Minority Student Symposium
Hilton

8:30 a.m. - 12:30 p.m.

Concurrent Sessions
Hilton, Sweeney & Eldorado

10:00 - 10:30 a.m.

Break

12:30 - 2:00 p.m.

Lunch
Attendees on their own

Monday, February 1, 1999

6:30 - 7:40 a.m. Student Continental Breakfast (Complimentary)
Hilton

12:45 - 1:45 p.m.

Workshop:
L&O Workshop
Eldorado

7:00 a.m. - 5 p.m. Registration
Sweeney Center Lobby

2:00 - 5:00 p.m.

Concurrent Sessions (cont.)
Hilton, Sweeney & Eldorado

7:00 - 8:15 a.m. Coffee Service (Complimentary)
Sweeney Center Ballroom

3:00 - 3:30 p.m.

Break

5:00 - 7:00 p.m.

Exhibit/Poster Sessions and Reception
Sweeney Center

8:15 - 9:30 a.m. Welcome/Awards
Sweeney Center Ballroom

7:00 - 9:00 p.m.

Workshop:
GEO/NSF Town Meeting
Sweeney Center

9:30 - 10:15 a.m. Plenary #1 (Barber)
Sweeney Center Ballroom

10:15 - 10:30 a.m.

Break

7:30 - 9:30 p.m.

Poster Tear Down
Sweeney Center

10:30 - 11:15 a.m. Plenary #2 (Chisholm)
Sweeney Center Ballroom

11:15 a.m.-12:00 p.m. Plenary #3 (Likens)
Sweeney Center Ballroom

Wednesday, February 3, 1999

7:00 a.m.-5:00 p.m.	Registration <i>Sweeney Center Lobby</i>
7:00 - 8:00 a.m.	Exhibit/Poster Set Up <i>Sweeney Center Ballroom</i>
7:00 - 8:30 a.m.	Coffee Service (cash basis) <i>Hilton, Sweeney & Eldorado</i>
8:00 a.m. - 7:00 p.m.	Exhibits/Posters <i>Sweeney Center Ballroom</i>
8:00 a.m. - 12:00 p.m.	Minority Student Symposium <i>Hilton</i>
8:30 a.m. - 12:30 p.m.	Concurrent Sessions <i>Hilton, Sweeney & Eldorado</i>
10:00 - 10:30 a.m.	Break
12:30 - 2:00 p.m.	Lunch <i>Attendees on their own</i>
12:45 - 1:45 p.m.	Workshop: Cross-Boundary Transfers <i>Eldorado</i>
2:00 - 5:00 p.m.	Concurrent Sessions (cont.) <i>Hilton, Sweeney & Eldorado</i>
3:00 - 3:30 p.m.	Break
5:00 - 7:00 p.m.	Exhibits/Poster Sessions and Reception <i>Sweeney Center</i>
7:30 - 9:30 p.m.	Poster Tear Down <i>Sweeney Center</i>
8:00 - 10:00 p.m.	Historical Gala (Optional) <i>Eldorado</i>

Thursday, February 4, 1999

7:00 a.m. - 5:00 p.m.	Registration <i>Sweeney Center Lobby</i>
7:00 - 8:00 a.m.	Exhibit/Poster Set Up <i>Sweeney Center Ballroom</i>
7:00 a.m. - 8:30 a.m.	Coffee Service (cash basis) <i>Hilton, Sweeney & Eldorado</i>
8:00 a.m. - 7:00 p.m.	Exhibits/Posters <i>Sweeney Center Ballroom</i>

8:30 a.m. - 12:30 p.m.	Concurrent Sessions <i>Hilton, Sweeney & Eldorado</i>
10:00 - 10:30 a.m.	Break
12:30 - 2:00 p.m.	Lunch <i>Attendees on their own</i>
2:00 - 5:00 p.m.	Concurrent Sessions (cont.) <i>Hilton, Sweeney & Eldorado</i>
3:00 - 3:30 p.m.	Break
5:00 - 7:00 p.m.	Exhibit/Poster Sessions and Reception <i>Sweeney Center</i>
7:00 - 9:00 p.m.	Workshop: Popular Science <i>Sweeney Center</i>
7:00 - 9:00 p.m.	Workshop: Coastal Ocean Sciences <i>Sweeney Center</i>
7:30 - 9:30 p.m.	Poster Tear Down <i>Sweeney Center</i>
9:00 p.m. - 12:00 a.m.	Dance <i>Eldorado</i>
TBD	Workshop: Late Breaking Science <i>Hilton</i>

Friday, February 5, 1999

7:00 a.m.-5:00 p.m.	Registration <i>Sweeney Center Lobby</i>
7:00 a.m. - 8:30 a.m.	Coffee Service (cash basis) <i>Hilton, Sweeney & Eldorado</i>
8:30 a.m. - 12:30 p.m.	Concurrent Sessions <i>Hilton, Sweeney & Eldorado</i>
10:00 - 10:30 a.m.	Break
12:30 - 2:00 p.m.	Lunch <i>Attendees on their own</i>
2:00 - 5:00 p.m.	Concurrent Sessions (cont.) <i>Hilton, Sweeney & Eldorado</i>
3:00 - 3:30 p.m.	Break

Monday Morning Plenary Session

- 6:30 a.m. Student Continental Breakfast (Complimentary)
Hilton, Mesa Ballroom
- 7:00 a.m. Coffee Service (Complimentary)
Sweeney Center

Plenary Session

Location: Sweeney Center, Ballroom

8:15 a.m. PLENARY SESSION WELCOME

8:30 a.m. AWARDS

9:30 a.m. Barber, R. T.: HOW WILL OCEANIC ECOSYSTEMS RESPOND TO THE CLIMATE OF THE 21ST CENTURY?

All of the coupled ocean/atmosphere/carbon scenarios predict changes in processes and properties that will alter the character of the ocean by the middle of the next century. Models differ in where and how strong the oceanic changes will be, but there is consensus on the modes and direction of change. Within 50 years there will be significant changes in heat content, stability, precipitation, carbonate chemistry and eolian inputs. Increased stability will cause reductions in wind mixing, convective overturn and upwelling. Nutrient limitation in the low-latitude ocean will be increased, but light limitation at high latitudes will be decreased. How will these pervasive changes play out? How will pelagic diversity respond, and how will biogeochemical functions change in various regions? Experience with regional climate variability provides a basis for making initial predictions, but much more focused work by a broad range of aquatic biologists is needed. A general mobilization of effort, from molecular biologists to population biologists, is required to complement the recent advances in physical understanding and predict how oceanic ecosystems will respond to the climate of the 21st century.

10:15 a.m. Break

10:30 a.m. Chisholm, S.W.: DEALING WITH DIVERSITY: STRUCTURE AND FUNCTION IN OCEAN ECOSYSTEMS

The last few decades of research in biological oceanography have made it clear that the species composition of pelagic foodwebs are intimately coupled with the biogeochemical 'functions' of the oceans in the biosphere, and that the causality in this coupling goes both ways. Yet models designed to predict these functions—i.e. the flow of energy and elements through oceanic ecosystems—do not include detailed structure within trophic levels or species because the complexity involved is intellectually daunting, computationally intractable, and impossible to validate in the field. Looking toward a future in which the prospect of geo-engineering the oceans is looming, it is critical that we confront the discordance between our understanding of the complexity of these systems and our inability to incorporate that understanding in quantitative predictive models.

11:15 a.m. Likens, G. E.: LIMNOLOGY AND FRESHWATER ECOSYSTEMS IN THE 21ST CENTURY

Increased stress on freshwater ecosystems combined with increased need for high-quality fresh water will present major challenges for limnology in the Twenty-First Century. Will the conceptual integration, intellectual depth, diversity, modernization and number of trained professionals in limnology, broadly defined, be adequate to address these challenges? These and other issues will be discussed to explore how limnology may need to change to meet these challenges of the future.

Monday Afternoon Oral Sessions

Presenting authors are underlined. Complete abstract and author information can be found at www.aslo.org/santafe99.

SS01:

Physics and Biology of Plankton Feeding Ecology

Chairs: John F. Dower, *University of British Columbia*
Thomas J. Miller, *University of Maryland*

Location: Sweeney, #1

2:00 p.m. Gargett, A. E.; Li, M.; Denman, K.: MECHANISMS OF PHYSICAL "CONTROL" OF ZOOPLANKTON PRODUCTION IN A STRONGLY ESTUARINE SYSTEM

2:15 p.m. Edwards, C. A.; Powell, T. M.: THE EFFECT OF REALISTIC OCEAN MIXING ON NPZ OSCILLATIONS

2:30 p.m. Beisner, B. E.; Anderies, J. M.: A STOCHASTIC MODEL OF PHYTOPLANKTON COMMUNITY STRUCTURE IN FLUCTUATING ENVIRONMENTS

2:45 p.m. Leising, A. W.: STARVATION, SATIATION, AND AREA-RESTRICTED SEARCH IN ACARTIA CLAUSI

3:00 p.m. Break

3:30 p.m. Brewer, M. C.; Plath, K.: FORAGING IN A HETEROGENEOUS ENVIRONMENT: THE ABILITY OF DAPHNIA TO EXPLOIT ALGAL PATCHES

3:45 p.m. Jiang, H.; Meneveau, C.; Osborn, T. R.: NUMERICAL STUDY OF THE FEEDING CURRENT AROUND A COPEPOD

4:00 p.m. Ginn, J. A.; Miller, T. J.; Sandford, L. P.: EFFECTS OF SMALL-SCALE TURBULENCE ON INGESTION RATES AND SWIM SPEEDS OF MNEMIOPSIS LEIDYII

4:15 p.m. Visser, A. W.; Jonsson, P. R.: ON THE REORIENTATION OF NON-SPHERICAL PREY PARTICLES IN A FEEDING CURRENT

4:30 p.m. Rapoza, R. C.; Costello, J. H.: PLANKTONIC FEEDING AND EVOLUTIONARY SIGNIFICANCE OF THE LOBATE BODY PLAN WITHIN THE CTENOPHORA

4:45 p.m. Miller, T. J.; Dower, J. F.: BIOLOGICAL - PHYSICAL INTERACTIONS IN THE FEEDING ECOLOGY OF LARVAL FISH.

SS06:

Ecosystems As Hi-Tech Water Purification Biomachinery

Chairs: Serg Andrew Ostroumov, *Moscow University*
Steven C. McCutcheon, *U.S. Env. Protection Agency*

Location: Hilton, Mesa C

2:00 p.m. Richardson, C. J.; Qian, S.: PHOSPHORUS ASSIMILATIVE CAPACITY IN FRESHWATER WETLANDS: A NEW PARADIGM FOR MAINTAINING ECOSYSTEM STRUCTURE AND FUNCTION

2:15 p.m. Smith, L. K.; Sartoris, J. J.; Thullen, J. S.: NITROGEN REMOVAL MECHANISMS IN A SOUTHERN CALIFORNIA CONSTRUCTED WASTEWATER TREATMENT WETLAND

2:30 p.m. Bonner, J. S.; Mills, M. A.; Simon, M. A.; Autenrieth, R. J. L.; McDonald, T. J.: BIODEGRADATION OF PETROLEUM IN A WETLAND

2:45 p.m. Steinberg, C. E. W.; Haitzer, M.; Perminova, I. V.; Yashchenko, N. Y.; Petrosyan, V. S.: TOWARDS A QUANTATIVE STRUCTURE ACTIVITY RELATIONSHIP (QSAR) OF DISSOLVED HUMIC SUBSTANCES AS DETOXIFYING AGENTS IN FRESHWATERS

3:00 p.m. Break

3:30 p.m. Tebo, B. M.: THE ROLE OF BACTERIA IN THE NATURAL ATTENUATION OF METAL POLLUTION IN AQUATIC ENVIRONMENTS

3:45 p.m. Angel, D. L.; Post, A.; Brenner, S.: DISSOLVED EFFLUENTS RELEASED FROM MARICULTURE IN THE RED SEA ARE EPHEMERAL, POSSIBLY DUE TO ASSOCIATED BIOTA

4:00 p.m. Admiraal, W. W.; Barranguet, C. C.; Ivorra, N. N.; Plans, M. M.: INTERACTIONS OF MICRO-BENTHIC COMMUNITIES WITH DISSOLVED METALS IN RIVER WATER

4:15 p.m. Pusch, M.; Hoffmann, A.; Fischer, H.: ORGANIC CARBON RETENTION AND DEGRADATION BY UNIONID MUSSELS IN A LOWLAND RIVER (SPREE, GERMANY)

4:30 p.m. Newell, R. I.; Cornwell, J. C.; Owens, M. S.; Tuttle, J. H.: ROLE OF BENTHIC SUSPENSION-FEEDERS IN MAINTAINING ESTUARINE WATER QUALITY

4:45 p.m. Ostroumov, S. A.: THE ABILITY OF MUSSELS TO FILTER AND PURIFY THE SEA WATER IS INHIBITED BY SURFACTANTS

SS14:

Early Signs of Ecosystem Response to Global ClimateChange: Life in the 21st Century

Chairs: Stephan I. Zeeman, *University of New England*;
Jim Schumacher, *Two Crow Environmental Consultants*

Location: Hilton, Mesa A

2:00 p.m. Epple, M. A.Y.; Jochem, F. J.: EFFECTS OF UV-RADIATION ON BALTIC SEA PHYTOPLANKTON

2:15 p.m. Vinebrooke, R. D.; Leavitt, P. R.: ALPINE LITTORAL FOODWEB RESPONSES TO ALLOCHTHONOUS DISSOLVED ORGANIC MATTER, INORGANIC NUTRIENTS, AND ULTRAVIOLET RADIATION: POTENTIAL IMPACTS OF CLIMATIC WARMING

2:30 p.m. Weller, G. E.: REGIONAL IMPACTS OF CLIMATE CHANGE IN THE WESTERN ARCTIC

2:45 p.m. Tynan, C. T.: ECOSYSTEM SHIFT OF THE SOUTHEAST BERING SEA SHELF

3:00 p.m. Break

3:30 p.m. Stockwell, D. A.; Whitledge, T. E.; Stabeno, P. J.: APPARENT NUTRIENT/PHYTOPLANKTON RESPONSES TO UNUSUAL PHYSICAL CONDITIONS IN THE SOUTHEAST BERING SEA DURING 1997-1998

3:45 p.m. Zeeman, S.I.: COCCOLITHOPHORE BLOOMS IN THE BERING SEA: CHANGES IN TROPHIC STRUCTURE

4:00 p.m. Coyle, K. O.; Pinchuk, A. I.: ZOOPLANKTON COMMUNITY STRUCTURE AT THE INNER FRONT OF THE SOUTHEASTERN BERING SEA DURING A TWO YEAR PERIOD OF CLIMATIC EXTREMES

4:15 p.m. Pinchuk, A. I.; Coyle, K. O.: INTERANNUAL DIFFERENCES IN THE DISTRIBUTION AND ABUNDANCE OF EUPHAUSIIDS AND COPEPODS AT THE STRUCTURAL FRONT OF THE SOUTHEASTERN BERING SEA DURING A TWO YEAR PERIOD OF CLIMATIC EXTREMES

4:30 p.m. Napp, J. M.; Brodeur, R. D.; Schumacher, J. D.; Stabeno, P. J.; Jorgensen, E. M.: ARE RECENT EASTERN BERING SEA ECOSYSTEM ANOMALIES EARLY EVIDENCE FOR CLIMATE CHANGE? WHAT DO RECORDS OF ZOOPLANKTON BIOMASS AND SPECIES COMPOSITION TELL US?

4:45 p.m. Hunt, G. L.; Baduini, C.; Coyle, K. O.: EFFECTS OF INTERANNUAL VARIATION IN WEATHER PATTERNS ON THE FORAGING ECOLOGY AND SURVIVAL OF SHEARWATERS IN THE SOUTHEASTERN BERING SEA

Monday Afternoon Oral Sessions

SS17:

Biofilms and Mucilage In Benthic and Pelagic Systems

- Chairs: Alan W. Decho, *University of South Carolina*
Alice Alldredge, *University of California*
- Location: Sweeney, #2
- 2:00 p.m. Orellana, M.; Verdugo, P.: MARINE POLYMER GELS AND THEIR ROLE IN OCEANIC PROCESSES.
- 2:15 p.m. Fonda, S.: MUCUS MACROAGGREGATES IN THE NORTHERN ADRIATIC: PAST HISTORY AND RECENT FINDINGS.
- 2:30 p.m. Quéric, N. V.; Mueller-Niklas, G.: OXYGEN DEPLETION IN FLOATING MARINE SNOW AGGREGATES AS A POTENTIAL SOURCE FOR LARGE SCALE MORTALITY IN THE SHALLOW ECOSYSTEM OF THE NORTHERN ADRIATIC SEA
- 2:45 p.m. Baty, A. M.; Eastburn, C. C.; Techkarnjanaruk, S.; Goodman, A. E.; Geesey, G. G.: THE FATE OF A CHITINOLYTIC MARINE BACTERIA ASSOCIATED WITH A PURE CHITIN THIN FILM IN A SEAWATER ENVIRONMENT

3:00 p.m. Break

- 3:30 p.m. Passow, U. D.; Alldredge, A. L.: GRAZING OF EUPHAUSIDS ON TRANSPARENT EXOPOLYMER PARTICLES
- 3:45 p.m. Alber, M.; Thoresen, M.: VISUALIZING MUCUS ALONG AN ESTUARINE GRADIENT
- 4:00 p.m. Decho, A. W.: NEW APPROACHES IN THE CHEMICAL CHARACTERIZATION OF NATURAL MICROBIAL EXTRACELLULAR POLYMERS
- 4:15 p.m. Arnosti, C.: CHARACTERIZATION OF EXTRACELLULAR ENZYMATIC HYDROLYSIS RATES AND SUBSTRATE SPECIFICITIES IN BIOFILMS
- 4:30 p.m. Wetzel, R. G.; Francoeur, S. N.; Espeland, E. M.: MICROSCALE ARCHITECTURE OF PERIPHYTON COMMUNITIES
- 4:45 p.m. Espeland, E. M.; Francoeur, S. N.; Wetzel, R. G.: DETERMINATION OF ALKALINE PHOSPHATASE PROFILES WITHIN HETEROTROPHIC/AUTOTROPHIC BIOFILMS

SS32:

Stable Isotope Natural Abundance: Applications in Marine and Freshwater Research

- Chairs: Greg Rau, *University of California at Santa Cruz*
Brian Fry, *U.S. Geological Survey*
- Location: Eldorado, Anasazi South
- 2:00 p.m. Popp, B. N.; Hanson, K. L.; Bidigare, R. R.; Laws, E. A.; Wakeham, S. G.: ISOTOPIC FRACTIONATION IN THE ALKENONE-CONTAINING ALGAE
- 2:15 p.m. Bidigare, R. R.; Hanson, K. L.; Popp, B. N.; Landry, M. R.; Buesseler, K. O.; Wakeham, S. G.; Freeman, K. H.; Millero, F. J.: IRON-STIMULATED CHANGES IN CARBON ISOTOPIC FRACTIONATION AND EXPORT BY EQUATORIAL PACIFIC PHYTOPLANKTON
- 2:30 p.m. Riebesell, U.: CARBON ISOTOPE FRACTIONATION IN MARINE MICROALGAE: EFFECT OF LIGHT- VS. NUTRIENT-LIMITED GROWTH
- 2:45 p.m. Wolf-Gladrow, D. A.; Burkhardt, S.; Riebesell, U.: CARBON ISOTOPIC FRACTIONATION IN MICROALGAE: THE EFFECT OF INTRACELLULAR COMPARTMENTS
- 3:00 p.m. Break

- 3:30 p.m. Burkhardt, S.; Riebesell, U.; Zondervan, I.: SPECIES-SPECIFIC RESPONSE OF STABLE CARBON ISOTOPE FRACTIONATION BY MARINE PHYTOPLANKTON TO VARIATION IN DAYLENGTH, GROWTH RATE, AND CO₂ AVAILABILITY
- 3:45 p.m. Thoms, S.; Pahlow, M.: A 4 COMPARTMENT MODEL OF PHYTOPLANKTON CHLOROPLASTS FOR THE CARBON CONCENTRATING MECHANISM
- 4:00 p.m. Savidge, W. B.: THE INTRAMOLECULAR ISOTOPIC COMPOSITION OF GLUTAMATE AS AN INDICATOR OF AMINO ACID METABOLISM IN AUTOTROPHS AND HETEROTROPHS
- 4:15 p.m. Rau, G. H.; Chavez, F. P.; Friederich, G. E.: CARBON SUPPLY/DEMAND VERSUS 13C FRACTIONATION BY PHYTOPLANKTON: A STUDY IN MONTEREY BAY, CA
- 4:30 p.m. Tortell, P.; Rau, G.; Morel, F.: INORGANIC CARBON METABOLISM AND 13C/12C FRACTIONATION BY PHYTOPLANKTON IN COASTAL AND OCEANIC PACIFIC WATERS
- 4:45 p.m. Hollander, D. J.; Werne, J. P.: UNPREDICTED CARBON AND NITROGEN ISOTOPIC CYCLING IN THE CARIACO BASIN FROM THE YOUNGER DRYAS TO PRESENT: IMPLICATIONS FOR INTERPRETATION OF ISOTOPIC VARIABILITY IN UPWELLING SYSTEMS

SS34:

Composition and Reactivity of DOC: Comparisons Across Freshwater and Marine Environments

- Chairs: Richard D. Robarts, *National Water Research Institute*
Jim Bauer, *College of William and Mary*
- Location: Eldorado, Zia A/B/C
- 2:00 p.m. Repeta, D. J.; Quan, T.; Accardi, A.; Aluwihare, L. I.: CHEMICAL CHARACTERIZATION OF DISSOLVED ORGANIC MATTER IN LAKES, RIVERS, AND THE OCEAN
- 2:30 p.m. Boehme, J. R.; Coble, P. G.: HIGH-ENERGY LASER FRAGMENTATION OF DISSOLVED ORGANIC MATTER: A NEW APPROACH FOR STUDYING CHEMICAL CHARACTERISTICS OF DISSOLVED ORGANIC MATTER.
- 2:45 p.m. Twardowski, M. S.; Desiderio, R. A.; Donaghay, P. L.; Cowles, T. J.: USING FINESCALE, IN SITU OPTICAL MEASUREMENTS TO CHARACTERIZE DOM POOL SIGNATURES IN COASTAL WATERS
- 3:00 p.m. Break
- 3:30 p.m. Piatina, T.; Hering, J.: DIRECT QUANTIFICATION OF METAL-ORGANIC INTERACTIONS BY SIZE-EXCLUSION CHROMATOGRAPHY AND INDUCTIVELY COUPLED PLASMA MASS-SPECTROMETRY
- 3:45 p.m. Rao, U. R.; Hollander, D. J.; Gray, K. A.; Sirivedhin, T.: COMPARATIVE ISOTOPIC, ELEMENTAL, AND MOLECULAR ANALYSES OF THE SEASONAL CHANGES IN THE DOM AND POM RESERVOIRS IN AN ANTHROPOGENICALLY INFLUENCED RIPARIAN WETLAND
- 4:00 p.m. Conmy, R. N.; Coble, P. G.; DelCastillo, C. E.: RAPID MULTISPECTRAL IN SITU CHARACTERIZATION OF COLORED DISSOLVED ORGANIC MATTER
- 4:15 p.m. Cole, J. J.; Caraco, N. F.; del Giorgio, P. A.; Pace, M. L.: DOM SUBSIDIZES HETEROTROPHY IN AQUATIC ECOSYSTEMS: MULTIPLE LINES OF EVIDENCE FROM FRESH- AND SALT WATERS.
- 4:45 p.m. McCallister, S.; Bauer, J. E.; Ducklow, H. W.: BIOAVAILABILITY OF DISSOLVED ORGANIC MATTER IN THE YORK RIVER ESTUARY: AN ENZYMATIC AND STOICHIOMETRIC STUDY

Monday Afternoon Oral Sessions

SS41:

Probing Into Physiological State in Situ at the Individual Cell Level

Chairs: Paul del Giorgio, *University of Maryland*
 Lisa Campbell, *Texas A&M University*
 David Bird, *University of Quebec at Montreal*
 Frank J. Jochem, *Institut für Meereskunde*

Location: Sweeney, #3

- 2:00 p.m. Fuhrman, J.; Ouverney, C.: WHICH MICROBES ARE ACTIVE, AND WHAT KINDS ARE THEY?
- 2:15 p.m. Frischer, M. E.; Verity, P. G.; Williams, S. C.; Hong, Y.: SIMULTANEOUS USE OF VITAL STAINS AND MOLECULAR PROBES TO ESTIMATE THE IN SITU PHYSIOLOGICAL STATUS OF INDIVIDUAL CELLS IN DIVERSE MARINE ENVIRONMENTS
- 2:30 p.m. Hagström, Å.: MARINE BACTERIOPANKTON LIVE DEAD OR DORMANT?
- 2:45 p.m. del Giorgio, P.: LINKING SINGLE-CELL ACTIVITY TO COMMUNITY GROWTH EFFICIENCY IN COASTAL BACTERIOPANKTON ASSEMBLAGES

3:00 p.m. Break

- 3:30 p.m. Smith, E. M.; Kemp, W.: BACTERIAL COMMUNITY RESPIRATION AS A FUNCTION OF INDIVIDUAL CELL ACTIVITY
- 3:45 p.m. Gasol, J. M.; del Giorgio, P. A.; Peters, F.; Pedrós-Alió, C.: BACTERIAL ASSEMBLAGE HETEROGENEITY ASSESSED BY FLOW CYTOMETRY AND NUCLEIC ACID STAINS: WHAT DO DIFFERENT SUBPOPULATIONS MEAN ?
- 4:00 p.m. Veldhuis, M. M.; Kraay, G. G.; Timmermans, K. K.: PHYTOPLANKTON IN THE OCEAN: ARE THEY ALL ALIVE?
- 4:15 p.m. Giovannoni, S.; Rappe, M.; Lanoil, B.: WHAT WE HAVE LEARNED FROM A DECADE OF STUDYING PICOPLANKTON DIVERSITY USING MOLECULAR TECHNIQUES, AND THE APPLICATION OF THIS KNOWLEDGE TO THE IDENTIFICATION OF SINGLE CELLS
- 4:30 p.m. Pernthaler, J.; Amann, R.: BIOMASSES OF SPECIFIC BACTERIAL POPULATIONS IN THE PLANKTON: COMBINING WHOLE CELL IDENTIFICATION AND IMAGE ANALYZED MICROSCOPY
- 4:45 p.m. Taylor, L. T.; Preston, C. M.; DeLong, E. F.: VISUALIZATION AND ENUMERATION OF MARINE PICOPLANKTON USING RNA TARGETED POLYRIBONUCLEOTIDE PROBES

SS44:

Recent Advances in Integrating Ecosystem Models and Observations

Chairs: Alain F. Vézina, *Institut Maurice Lamontagne*
 Yvette Spitz, *Oregon State University*

Location: Eldorado, Anasazi North

- 2:00 p.m. Niquil, N.: ADVANTAGES AND LIMITS OF THE USE OF INVERSE ANALYSIS FOR THE STUDY OF THE PLANKTONIC FOOD WEB IN THE LAGOON OF TAKAPOTO ATOLL (TUAMOTU ARCHIPELAGO, FRENCH POLYNESIA)
- 2:15 p.m. Jackson, G. A.; Burd, A. B.: INFERRING CARBON FLOWS IN THE PLANKTON FOOD WEB OF FLORIDA BAY, USA, USING AN INVERSE ANALYSIS
- 2:30 p.m. Vézina, A. F.; Savenkoff, C.: INVERSE ANALYSIS OF PELAGIC ECOSYSTEMS: LESSONS LEARNED FROM APPLICATIONS TO JGOFs DATA
- 2:45 p.m. Athias, V.; Mazzega, P.; Jeandel, C.: TESTING NONLINEAR GLOBAL OPTIMIZATION ALGORITHMS FOR THE INVERSION OF IN SITU DATA FROM DISSOLVED-PARTICULATE EXCHANGES

3:00 p.m. Break

- 3:30 p.m. Cottingham, K. L.; Dennis, B.; Ives, A. R.; Carpenter, S. R.: MULTIVARIATE STOCHASTIC MODEL FOR ESTIMATING ECOLOGICAL INTERACTIONS: OVERVIEW AND APPLICATION TO DATA FROM WHOLE-LAKE EXPERIMENTS
- 3:45 p.m. Armstrong, R. A.; Pascual, M.; Cavender-Bares, K. K.; Chisholm, S. W.: BEYOND SIMPLE POWER LAWS: A NEW STATISTICAL METHOD FOR FITTING GENERAL DISTRIBUTIONS TO SIZE-SPECTRAL DATA FROM PLANKTON COMMUNITIES
- 4:00 p.m. Spitz, Y. H.; Abbott, M. R.; Moisan, J. R.: LESSONS LEARNED FROM CONFIGURING ECOSYSTEM MODEL PATHWAYS AND ESTIMATING MODEL PARAMETERS WITH ASSIMILATION OF OBSERVATIONS FROM LONG-TERM TIME SERIES
- 4:15 p.m. Vallino, J. J.: IMPROVING MARINE ECOSYSTEM MODELS: USE OF DATA ASSIMILATION AND MESOCOSM EXPERIMENTS
- 4:30 p.m. Friedrichs, M. A.M.; Hofmann, E. E.: ASSIMILATION OF BIOLOGICAL DATA INTO A BIOLOGICAL-PHYSICAL MODEL OF THE CENTRAL EQUATORIAL PACIFIC
- 4:45 p.m. Schartau, M. M.; Willebrand, J. J.: PARAMETER OPTIMIZATION AT BATS USING THE ADJOINT METHOD

SS45:

Competitive Interactions Between Planktonic and Attached Algae in Shallow Aquatic Ecosystems

Chair: Karl E. Havens, *S. Florida Water Management District*

Location: Sweeney, #4

- 2:00 p.m. MacIntyre, H. L.; Chiscano, C.; Koch, E. W.; Vecchio, J.: PARTITIONING OF PRIMARY PRODUCTION BETWEEN THE WATER COLUMN AND BENTHOS IN THE CHOPTANK RIVER (MD, USA), A SHALLOW-WATER ESTUARINE ENVIRONMENT
- 2:15 p.m. Thomas, S.; Cecchi, P. M.; Corbin, D.; Lemoalle, J.: THE MINOR IMPORTANCE OF PERIPHYTIC COMMUNITIES ON TOTAL PRIMARY PRODUCTION IN A SMALL AFRICAN TROPICAL RESERVOIR : AN ECOSYSTEM STUDY (BROBO, IVORY COAST).
- 2:30 p.m. Graham, M. D.; Vinebrooke, R. D.; Leavitt, P. R.: INFLUENCE OF HERBIVORY AND UV RADIATION ON INTERACTIONS BETWEEN PHYTOPLANKTON AND PERIPHYTON IN A PRAIRIE WETLAND
- 2:45 p.m. Vadeboncoeur, Y.; Lodge, D. M.; Carpenter, S. C.: WHOLE-LAKE FERTILIZATION EFFECTS ON BENTHIC VS. PELAGIC PRIMARY PRODUCTION

3:00 p.m. Break

- 3:30 p.m. Havens, K. E.; Steinman, A. D.; Hwang, S.: PHOSPHORUS CYCLING AMONG PERIPHYTON & PLANKTON IN A SHALLOW SUBTROPICAL LAKE
- 3:45 p.m. Sharfstein, B.; Havens, K.; East, T.; Rodusky, A.: LITTORAL PERIPHYTON RESPONSES TO NITROGEN AND PHOSPHORUS: AN EXPERIMENTAL STUDY IN A SUBTROPICAL LAKE
- 4:00 p.m. Tyler, A. C.; McGlathery, K. J.; Anderson, I. C.: THE INFLUENCE OF MICRO- AND MACROALGAE ON DON FLUXES IN A SHALLOW COASTAL LAGOON
- 4:15 p.m. Hauxwell, J.; Cebrian, J.; Valiela, I.: EFFECT OF MACROALGAL SHADING ON EELGRASS BIOMASS AND GROWTH: UNDERSTANDING EELGRASS DECLINE ASSOCIATED WITH EUTROPHICATION
- 4:30 p.m. Colman, J. A.: RELATION OF HYPOLIMNETIC OXYGEN DEFICIT, TROPHIC STATE, AND OXYGEN FLUXES TO NITELLA GROWTH IN WALDEN POND, CONCORD, MASSACHUSETTS, USA

Monday Afternoon Oral Sessions

SS47:

Spatial and Temporal Dimensions of Large River Ecosystems

Chair: Dixon H. Landers, *U.S. Environmental Protection Agency*

Location: Hilton, Mesa B

2:00 p.m. Gregory, S. V.: ANALYSIS OF ECOLOGICAL PATTERNS AND HISTORICAL CHANGE IN MANAGEMENT AND RESTORATION OF LARGE RIVERS

2:30 p.m. Squires, M. M.; Lesack, L. F. W.: RELATIVE CONTRIBUTIONS OF DOC, SESTONIC CHLOROPHYLL, AND SUSPENDED SEDIMENTS TO LIGHT (PAR) ATTENUATION IN LAKES OF THE MACKENZIE DELTA

2:45 p.m. Andrus, C. W.; Greene, M. C.: COMPARISONS OF SUMMER FISH ASSEMBLAGES BETWEEN OFF-CHANNEL AND MAIN CHANNEL HABITATS OF THE WILLAMETTE RIVER, OREGON, USA.

3:00 p.m. Break

3:30 p.m. Hein, T.; Wanek, W.; Heiler, G.; Holarek, C.; Riedler, P.; Schrutka, S.; Schiemer, F.: HYDROLOGICAL CONNECTIVITY: DRIVING FORCE FOR THE DYNAMICS OF ORGANIC MATTER POOLS IN FLOODPLAINS OF THE RIVER DANUBE, AUSTRIA

3:45 p.m. Brezonik, P.; Easter, W.; Gerlach, L.; Hatch, L.; Mulla, D.; Perry, J.: WATERSHEDS AND AGROECOREGIONS: COMPLIMENTARY LANDSCAPE UNITS IN THE MINNESOTA RIVER BASIN

4:00 p.m. Fernald, A. G.; Landers, D. H.; Wigington, Jr., P. J.: HYPORHEIC FLOW AND CHANNEL CONSTRAINTS ALONG THE UPPER WILLAMETTE RIVER, OREGON

4:15 p.m. Bukaveckas, P. A.; Koch, R.; Sellers, T.; Shostell, J.; Williams, J.: NUTRIENT LIMITATION OF PHYTOPLANKTON GROWTH IN ADVECTIVE ENVIRONMENTS: IMPLICATIONS FOR DOWNSTREAM FLUXES OF N, P, AND SI.

4:30 p.m. Hamilton, S. K.: POTENTIAL EFFECTS OF A MAJOR NAVIGATION PROJECT (THE PARAGUAY-PARANA HIDROVIA) ON INUNDATION IN THE PANTANAL FLOODPLAINS

4:45 p.m. Landers, D. H.; Andrus, C. W.; Erway, M. M.; Cline, S.: SPATIAL AND TEMPORAL DIMENSIONS OF OFF-CHANNEL HABITAT DIVERSITY AND FUNCTION IN THE WILLAMETTE RIVER, OREGON, USA

Tuesday Morning Oral Sessions

Presenting authors are underlined. Complete abstract and author information can be found at www.aslo.org/santafe99.

SS02:

Life At and Below the Kolmogorov Scale: Interactions Between Physical, Chemical and Biological Processes

Chairs: Celia Marrase, *Institut de Ciències del Mar (CSIC)*
Francesc Peters, *Institut de Ciències del Mar (CSIC)*

Location: Hilton, Mesa B

8:30 a.m. Yamazaki, H.; Squires, K.: FLOWS AROUND A MICRO-ORGANISM IN OCEANIC TURBULENCE

8:45 a.m. Krause, D. C.; Lavallee, D.: FRACTAL AND NONFRACTAL PATTERNS RELATED TO PLANKTON DYNAMICS

9:00 a.m. Kiorboe, T.; Visser, A.; Saiz, E.: HYDROMECHANICAL PREDATOR AND PREY PERCEPTION IN COPEPODS

9:15 a.m. Alcaraz, M.; Marrase, C.; Peters, F.; Arin, L.: ZOOPLANKTON RESPONSE TO SMALL-SCALE TURBULENCE: COMMUNITY STRUCTURE AND RATE PROCESSES

9:30 a.m. Marrase, C.: TURBULENCE AND PLANKTON INTERACTIONS

9:45 a.m. Costello, J. H.; Raposa, R. C.: HYDRODYNAMIC CAMOUFLAGE AND PREDATION BY THE LOBATE CTENOPHORE MNEMIOPSIS LEIDYI

10:00 a.m. Break

10:30 a.m. Strickler, J.; Abib, A. H.; Squires, K. D.; Yamazaki, H.; Liu, J. C.: TURBULENCE, RANDOMNESS, AND THE COPEPOD AMIDST

10:45 a.m. Miranda, R. C.; Neves, R. J.: NITROGEN BIOGEOCHEMICAL CYCLE ON THE NORTH ATLANTIC OCEAN

11:00 a.m. Ploug, H.: DIFFUSION AND SHEAR IN THE PELAGIC ENVIRONMENT - IMPLICATIONS FOR THE BIOLOGICAL PROCESSES IN THE OCEAN.

11:15 a.m. Karp-Boss, L.; Jumars, P. A.; Boss, E.: EFFECTS OF SIMPLE SHEAR FLOW ON SWIMMING ORIENTATIONS OF DINOFLAGELLARES

11:30 a.m. Juhl, A. R.: THE EFFECT OF TURBULENCE ON POPULATION GROWTH AND THE CELL CYCLE OF RED-TIDE DINOFLAGELLATES.

11:45 a.m. Latz, M. I.; Rohr, J.: NEAR-INSTANTANEOUS EFFECT OF TURBULENCE ON LUMINESCENT DINOFLAGELLATES

12:00 p.m. Peters, F.; Marrase, C.; Havskum, H.; Rassoulzadegan, F.; Dolan, J.; Gasol, J.; Alcaraz, M.; Estrada, M.: GRAZING AND THE INDIRECT EFFECTS OF TURBULENCE ON BACTERIAL GROWTH

12:15 p.m. Waters, R. L.; Seymour, J.; Pearson, L.; Nelson, C.; Bass, L.; Mitchell, J. G.: THE ROLE OF SMALL-SCALE TURBULENCE IN STRUCTURING THE BIOLOGICAL MICROENVIRONMENT.

SS05:

Thin Layers: Formation, Maintenance, and Impacts on Water Column Ecology

Chairs: Percy L. Donaghay, *University of Rhode Island*
Dian J. Gifford, *University of Rhode Island*

Location: Hilton, Mesa A

8:30 a.m. Osborn, T. R.: THIN LAYERS, FINESTRUCTURE, AND MICROSTRUCTURE

8:45 a.m. Deksheniaks, M. M.; Donaghay, P. L.; Osborn, T. R.: FACTORS CONTROLLING THE CIRCULATION IN EAST SOUND AND THE CONCOMITANT GENERATION OF THIN LAYERS

9:00 a.m. Donaghay, P.: NO ABSTRACT TITLE

9:15 a.m. Cowles, T. J.; Desiderio, R. A.; Twardowski, M. S.; Wingard, C. E.; Eisner, L. B.: TEMPORAL EVOLUTION IN THE COMPOSITION AND STRUCTURE OF SMALL-SCALE PLANKTONIC LAYERS

9:30 a.m. Maffione, R. A.: THIN LAYERS AND THEIR POTENTIAL EFFECTS ON WATER LEAVING RADIANCE

9:45 a.m. Bivens, J. R.; Weidemann, A. W.; Pegau, W. S.; Barnard, A. H.; Redalje, D. G.: OPTICAL VARIABILITY: A NEW ANGLE

10:00 a.m. Break

10:30 a.m. Holliday, D. V.; Greenlaw, C. F.; McGehee, D. E.: ACOUSTICAL MONITORING OF THE DYNAMICS OF THIN LAYERS AND AGGREGATIONS OF PLANKTON AND FISH

10:45 a.m. Herren, C. M.; Alldredge, A. L.; Case, J. F.; Holliday, D. V.: BIOLUMINESCENCE AND ZOOPLANKTON DISTRIBUTIONS IN EAST SOUND, WA, A THIN LAYERS STUDY SITE

11:00 a.m. MacIntyre, S.; Alldredge, A. L.: LAYERING OF MARINE SNOW IN EAST SOUND, WASHINGTON

11:15 a.m. Smith, D. C.: BACTERIAL GROWTH AND ABUNDANCE IN BIOLOGICAL THIN-LAYERS

11:30 a.m. Johnson, G. L.; MacIntyre, S.: PHYSIOLOGICAL ANALYSIS OF PHOTOACCLIMATION IN PHYTOPLANKTON UTILIZING SCALES OF MIXING DETERMINED FROM MICROSTRUCTURE PROFILES

11:45 a.m. Gifford, D.; Donaghay, P.: MICROZOOPLANKTON GRAZING ON A LAYER OF PHYTOPLANKTON IN EAST SOUND, WA

SS07:

Regional and Global Scale Biogeochemical Patterns Altered by Human Activities: Changes and Consequences

Chair: Sybil Seitzinger, *Rutgers University*

Location: Sweeney, #4

8:30 a.m. Galloway, J. N.: PEOPLE AND NITROGEN: A GLOBAL INTERACTION

9:00 a.m. Seitzinger, S. P.; Kroeze, C.: GLOBAL DISTRIBUTION OF N INPUTS TO COASTAL MARINE ECOSYSTEMS IN 1990 AND PROJECTIONS FOR THE YEAR 2050

9:15 a.m. Richey, J. E.: FROM THE AMAZON TO SOUTHEAST ASIA: HUMAN INVOLVEMENT IN LARGE SCALE DRAINAGE BASINS

9:30 a.m. Lammers, R. B.; Vorosmarty, C. J.; Peterson, B. J.; Shiklomanov, A. I.; Fekete, B. M.: HISTORICAL ANALYSIS OF DISCHARGE FROM PAN-ARCTIC RIVER SYSTEMS

9:45 a.m. Howarth, R. W.; Butler, T. J.; Kolberg, K. A.; Roberts, B. J.: CLIMATIC WARMING MAY EXACERBATE EUTROPHICATION IN PARTIALLY MIXED ESTUARIES: THE HUDSON RIVER EXAMPLE

10:00 a.m. Break

10:30 a.m. O'Reilly, C. M.; Cohen, A. S.: IMPLICATIONS OF LAND USE CHANGE FOR LAKE PRODUCTIVITY: DEFORESTATION IN LAKE TANGANYIKA, EAST AFRICA

10:45 a.m. Jordan, T. E.; Weller, D. E.; Correll, D. L.: RELATING WATERSHED DISCHARGES AND ANTHROPOGENIC INPUTS OF NITROGEN

11:00 a.m. Kopaska, J. A.; Menzel, B. W.; Downing, J. A.: LAND USE EFFECTS ON NUTRIENT EXPORT FROM MIDWESTERN U.S. AGRICULTURAL WATERSHEDS

Tuesday Morning Oral Sessions

- 11:15 a.m. Arbuckle, K. E.; Downing, J. A.: THE INFLUENCE OF LANDUSE ON LAKE N:P IN A PREDOMINANTLY AGRICULTURAL LANDSCAPE
- 11:30 a.m. Valiela, I.; Tomasky, G.; Geist, M.; Bowen, J.; Cole, M.; Kroeger, K.: REGIONAL NITROGEN LOADS TO COASTAL WATERSHEDS: EFFECTS OF CHANGES ON LAND USES, SOURCES, AND HABITAT MOSAICS
- 11:45 a.m. Carrubba, L.; Richardson, T.: MODELING THE EFFECTS OF SUBURBANIZATION ON A RURAL WATERSHED, MADISON COUNTY, GEORGIA
- 12:00 p.m. Blomqvist, S.: BIOGEOCHEMICAL DISTRIBUTION PATTERNS OF IRON AND PHOSPHATE IN FRESHWATER AND MARINE SYSTEMS ARE RELATED TO NUTRIENT LIMITATION
- 12:15 p.m. Branfireun, B. A.; Roulet, N. T.; Nilsson, M.; Bishop, K.; Granberg, G.: SULFATE STIMULATION OF MERCURY METHYLATION IN BOREAL WETLANDS IN CANADA AND SWEDEN

SS19:

The Legacy of Reservoirs

- Chairs: Edward Callender, *U.S. Geological Survey*
G. Richard Marzolf, *U. S. Geological Survey*
- Location: Sweeney, #3
- 8:30 a.m. Van Metre, P. C.; Wilson, J. T.; Callender, E.; Fuller, C. C.: SIMILAR RATES OF DECREASE OF PERSISTENT, HYDROPHOBIC AND PARTICLE-REACTIVE CONTAMINANTS IN RESERVOIR SEDIMENT CORES
- 8:45 a.m. Lewis, G. P.; Taylor, B. E.; Dixon, P. M.; Pinder, J. E.; Hinton, T. H.: EVALUATING THE WHOLE-ECOSYSTEM DECLINE OF RADIOCESIUM IN A FORMER REACTOR COOLING RESERVOIR: EVIDENCE FROM SEDIMENTS AND WATER
- 9:00 a.m. Dean, W. E.; Brachfeld, S.: A HOLOCENE RECORD OF MAJOR AND TRACE COMPONENTS IN THE SEDIMENTS OF AN URBAN IMPOUNDMENT ON THE MISSISSIPPI RIVER: LAKE PEPIN, MINNESOTA
- 9:15 a.m. Almendinger, J. E.; Engstrom, D. R.: TWO CENTURIES OF HUMAN IMPACT ON SEDIMENT AND NUTRIENT LOADING TO THE UPPER MISSISSIPPI RIVER: THE LEGACY OF LAKE PEPIN
- 9:30 a.m. Kipphut, G. W.; White, D. S.; Kind, T. C.; Hendricks, S. P.; White, S. B.: TRANSPORT AND UTILIZATION OF ORGANIC CARBON IN A LARGE RESERVOIR
- 9:45 a.m. Andrews, E. D.: SAND WAVES IN THE COLORADO RIVER BELOW GLEN CANYON DAM, AZ
- 10:00 a.m. Break**
- 10:30 a.m. Bowser, C. J.; Marzolf, R.: FLOW-DISCHARGE CALIBRATION USING CONDUCTIVITY IN THE COLORADO RIVER DOWNSTREAM FROM THE GLEN CANYON DAM
- 10:45 a.m. Tietjen, T. E.; Schlickeisen, E. B.; Groeger, A. W.; Kelley, B. G.: LONGITUDINAL NUTRIENT LIMITATION OF PHYTOPLANKTON AND BACTERIA ALONG A RESERVOIR GRADIENT
- 11:00 a.m. Giani, A. A.; Pinto-Coelho, R. R.: PHYTOPLANKTON AND ZOOPLANKTON CHANGES IN A TROPICAL RESERVOIR AS CONSEQUENCE OF EUTROFICATION PROCESS
- 11:15 a.m. Miller, K. F.; Waldron, M. C.; Hooper, R. P.: BIOTIC CONTROL OF SUMMER DISSOLVED OXYGEN CONCENTRATIONS AND A POTENTIAL MEASURE OF PHYTOPLANKTON GROWTH RATES IN NAVIGATION POOLS OF THE UPPER OHIO RIVER, USA
- 11:30 a.m. Green, W. R.: USE OF RELATIONS BETWEEN RESERVOIR FLUSHING RATE AND WATER QUALITY TO IMPROVE WATER-QUALITY ASSESSMENT

- 11:45 a.m. Pinto-Coelho, R. R.; Mourthe, C.; Figueredo, C. C.; Boechat, I. I.: A MODEL COMPARING THE EFFECTS OF PHOPHORUS LOAD (INTERNAL AND EXTERNAL) IN TEMPERATE AND TROPICAL RESERVOIRS AND LAKES.
- 12:00 p.m. Schmidt, J.: DECIDING THE FATE OF RESERVOIRS: THE ROLE OF DOWNSTREAM RIVER RESTORATION OBJECTIVES
- 12:15 p.m. Threlkeld, S. T.: DAMS AS EXPERIMENTAL MANIPULATIONS: SPATIAL AND TEMPORAL GRADIENTS IN RESERVOIRS AND IN FLOODPLAIN LAKES

SS27:

Aquatic Ecosystems in Extreme Environments

- Chairs: John C. Priscu, *Montana State University*
Christian H. Fritsen, *Montana State University*
Charles Fisher, *The Pennsylvania State University*
- Location: Sweeney, #2
- 8:30 a.m. Paerl, H. W.; Pinckney, J. L.; Steppe, T. F.; Olson, J. B.: MICROBIAL CONSORTIA: STRATEGIES FOR GROWTH AND SURVIVAL IN EXTREME ENVIRONMENTS
- 8:45 a.m. Yayanos, A. A.: THE STRESSES AND STRAINS ON LIFE IN THE DEEP SEA: THE INFLUENCE OF PRESSURE, TEMPERATURE, NUTRITION AND RADIATION ON DEEP-SEA BACTERIA
- 9:00 a.m. Brandes, J. A.; Boctor, N. Z.; Cody, G. D.; Hazen, R. M.; Yoder, Jr, H. S.: THE ROLE OF MINERALS IN HYDROTHERMAL SYSTEMS IN GOVERNING BIOMOLECULE STABILITY
- 9:15 a.m. Delaney, J. R.: VOLCANOES, OCEANS AND LIFE IN OUR SOLAR SYSTEM
- 9:30 a.m. Escorcia, S. P.; MacDonald, I. R.; Joye, S. B.: SPATIAL AND INTER-ANNUAL VARIATION OF SULFIDE FLUXES IN CHEMOSYNTHETIC COMMUNITIES IN THE GULF OF MEXICO
- 9:45 a.m. MacDonald, I. R.; Sager, W. W.; Guinasso, Jr., N. L.: DISTINCT SEAFLOOR ENVIRONMENTS CAUSED BY RAPID GAS FLUX ON THE GULF OF MEXICO SLOPE
- 10:00 a.m. Break**
- 10:30 a.m. Nelson, D. C.; McHatton, S. C.; Ahmad, A. A.; Barry, J. P.: MATS OF VACUOLATE FILAMENTOUS SULFUR BACTERIA: ADAPTATION TO ANOXIA AT VENTS AND SEEPS?
- 10:45 a.m. Bernhard, J. M.; Bowser, S. S.; Buck, K. R.: MEIOFAUNA OF THE SANTA BARBARA BASIN BEGGIATO MAT: A SYMBIOSIS-DOMINATED COMMUNITY
- 11:00 a.m. Atkins, M. S.; Teske, A. P.: THE APPLICATION OF MOLECULAR-BASED METHODS, PARTICULARLY DENATURING GRADIENT GEL ELECTROPHORESIS, IN ASSESSING THE DIVERSITY OF FLAGELLATES AT DEEP-SEA HYDROTHERMAL VENTS
- 11:15 a.m. Hand, S. C.: ARREST OF GENE EXPRESSION DURING ANOXIA: LESSONS FROM INVERTEBRATE DORMANCY.
- 11:30 a.m. Girguis, P. R.; Childress, J. J.: METABOLITE FLUX OF THE HYDROTHERMAL VENT TUBEWORM RIFTIA PACHYPTILA: A MODEL OF EXTREME ADAPTATIONS
- 11:45 a.m. Fisher, C. R.; MacDonald, I. R.; Hourdez, S.; Macko, S.; McMullin, E.; Joye, M.: HESIOCAECA METHANICOLA, A CLATHRATE DWELLING POLYCHAETE
- 12:00 p.m. Ellis-Evans, C.: FUNCTIONALLY SIGNIFICANT TOP-DOWN GRAZING AND PREDATION PRESSURE WITHIN MICROBIALLY DOMINATED ANTARCTIC FRESHWATER LAKE COMMUNITIES

Tuesday Morning Oral Sessions

SS32-II:

Stable Isotope Natural Abundance: Applications in Marine and Freshwater Research

Chairs: Greg Rau, *University of California at Santa Cruz*
Brian Fry, *U.S. Geological Survey*

Location: Eldorado, Anasazi South

8:30 a.m. Werne, J. P.; Hollander, D. J.: COMPOUND-SPECIFIC ISOTOPE RECORDS OF PLANKTONIC ECOSYSTEM VARIABILITY IN THE CARIACO BASIN, YOUNGER DRYAS TO PRESENT

8:45 a.m. Needoba, J. A.; Harrison, P. J.: INFLUENCE OF IRRADIANCE AND CELL SIZE ON NITROGEN ISOTOPE FRACTIONATION BY TWO DIATOMS GROWN ON NITRATE

9:00 a.m. Montoya, J. P.; Altabet, M. A.: NITROGEN ISOTOPE ABUNDANCES IN PELAGIC ECOSYSTEMS: BIOLOGICAL CONTROLS ON THE DELTA-15N OF THE OLIGOTROPHIC OCEAN

9:15 a.m. Childress, J. J.; Thuesen, E. V.; Macko, S. A.: INSIGHTS INTO THE TROPHIC STRUCTURE IN A 2000 M WATER COLUMN FROM STABLE C AND N ISOTOPE STUDIES

9:30 a.m. McClelland, J. W.; Holmes, R. M.; Kroger, K.; Valiela, I.: NATURAL ABUNDANCE 15N OF NITRATE, AMMONIUM, DON, AND PON AS INTEGRATIVE MEASURES OF ECOSYSTEM PROCESSES: A CASE STUDY OF THE CHILDS RIVER ESTUARY, CAPE COD, MA

9:45 a.m. Clesceri, E. J.; Martens, C. S.; Alperin, M. J.; Albert, D. B.: STABLE ISOTOPIIC TRACING OF PARTICULATE ORGANIC MATTER IN SESTON AND SEDIMENTS FROM AN EUTROPHIC ESTUARY IN NORTH CAROLINA, USA

10:00 a.m. Break

10:30 a.m. Macrellis, A. N.; Ostrom, N. E.; McCusker, E. M.; Ostrom, P. H.: GEOCHEMICAL AND ISOTOPE DYNAMICS OF DISSOLVED INORGANIC NITROGEN IN LAKE MICHIGAN

10:45 a.m. McCusker, E. M.; Ostrom, P. H.; Ostrom, N. E.; Macrellis, A. N.: SEASONAL CARBON AND NITROGEN ISOTOPE DYNAMICS OF PARTICULATE AND DISSOLVED ORGANIC MATTER IN GRAND TRAVERSE BAY, LAKE MICHIGAN

11:00 a.m. Smith, M. A.; Hollander, D. J.: ANAEROBIC PROCESSES AS A POTENTIAL CONTROL ON CARBON-ISOTOPE CYCLING IN SEVERELY EUTROPHIC LAKES: A CASE STUDY OF LAKE MENDOTA (WISCONSIN, USA)

11:15 a.m. Martens, C. S.; Albert, D. B.; Alperin, M. J.: STABLE ISOTOPE TRACING OF METHANE PRODUCTION AND OXIDATION IN THE GASSY SEDIMENTS OF ECKERNFORDE BAY, GERMAN BALTIC SEA

11:30 a.m. Molina, M.; Cox, J. E.; Burke, R. A.: EXAMINATION OF SEDIMENTARY MICROBIAL LIPIDS USING COMPOUND SPECIFIC ISOTOPIC ANALYSIS TO DETERMINE CARBON TRANSFORMATION ALONG AN ESTUARINE CONTINUUM

11:45 a.m. Pease, T. K.; Hee, C.; Alperin, M.; Martens, C.: BIOGEOCHEMICAL EFFECTS ON PHYTOPLANKTON AND SEAGRASS CARBON REMINERALIZATION: A LABORATORY DEGRADATION EXPERIMENT

12:00 p.m. Boschker, H. T. S.; de Brouwer, J. F. C.; Cappenberg, T. E.: THE CONTRIBUTION OF LOCAL MACROPHYTE MATERIAL TO MICROBIAL BIOMASS IN SALT MARSH SEDIMENTS: 13C ANALYSIS OF PLFA

12:15 p.m. Middelburg, J. J.; Herman, P. M. J.; Boschker, E.; Barranguet, C.: THE FATE OF INTERTIDAL MICROPHYTOBENTHOS: AN IN SITU 13C LABELLING STUDY

SS34-II:

Composition and Reactivity of DOC: Comparisons Across Freshwater and Marine Environments

Chairs: Richard D. Robarts, *National Water Research Institute*
Jim Bauer, *College of William and Mary*

Location: Eldorado, Zia A/B/C

8:30 a.m. Aluwihare, L. I.; Repeta, D. J.: CYCLING AND REACTIVITY OF HIGH MOLECULAR WEIGHT DISSOLVED ORGANIC CARBON IN THE OCEAN

8:45 a.m. Hill, J. K.; Wheeler, P. A.: VARIATIONS IN CONCENTRATIONS AND C:N RATIOS OF DISSOLVED AND PARTICULATE ORGANIC CARBON AND NITROGEN IN OREGON COASTAL AND OFFSHORE WATER

9:00 a.m. Hee, C.; Pease, T.; Alperin, M.; Albert, D.: AN ISOTOPIIC APPROACH TO MONITORING THE PASSAGE OF CARBON THROUGH THE DOC POOL IN ANAEROBIC MARINE SEDIMENT

9:15 a.m. Kastler, J. A.: UPTAKE OF DISSOLVED AND SEDIMENTARY ORGANIC CARBON IN AN ESTUARINE ENVIRONMENT

9:30 a.m. Moran, M.; Sheldon, W. M.; Zepp, R. G.: TRANSFORMATIONS OF ESTUARINE CHROMOPHORIC DISSOLVED ORGANIC MATTER BY BIOLOGICAL AND PHOTOCHEMICAL PROCESSES

9:45 a.m. Zepp, R. G.; Moran, M.; Gao, H.: DYNAMICS OF COLORED ORGANIC MATTER IN A COASTAL ESTUARY: CHANGES IN SPECTRAL AND PHOTOCHEMICAL PROPERTIES

10:00 a.m. Break

10:30 a.m. Waiser, M. J.; Robarts, R. D.: DOM FROM SELECTED PRAIRIE AQUATIC ECOSYSTEMS: A COMPARISON OF COMPOSITION AND REACTIVITY.

10:45 a.m. Mayer, L. M.; Schick, L. L.; Loder, T. C.: DISSOLVED PROTEIN FLUORESCENCE IN TWO MAINE ESTUARIES

11:00 a.m. Bourbonniere, R. A.; Edmondson, K. M.: FRACTIONATION PATTERNS INDICATE DISSOLVED ORGANIC MATTER CHARACTER IN CANADIAN INLAND WATERS

11:15 a.m. Mannino, A.; Harvey, R.: STRUCTURAL COMPOSITION OF HIGH MOLECULAR WEIGHT DISSOLVED ORGANIC MATTER ALONG AN ESTUARINE GRADIENT: SOURCES AND IMPLICATIONS FOR DOM REACTIVITY

11:30 a.m. Chen, R. F.; Gardner, G. B.; Zhang, Y.; Vlahos, P.: CHROMOPHORIC DISSOLVED ORGANIC MATTER IN THE CHESAPEAKE BAY

11:45 a.m. Chasar, L. S.; Chanton, J. P.; Glaser, P.; Siegel, D. I.; Rivers, J. S.; Wolgast, D.: MICROBIAL RESPIRATION WITHIN 3000-5000 YEAR-OLD PEAT IS DRIVEN BY RECENTLY FIXED SURFICIAL DOC ADVECTED AS DEEP AS THREE METERS INTO THE PEAT COLUMN

12:00 p.m. Burdige, D. J.: THE COMPOSITION AND REACTIVITY OF DISSOLVED ORGANIC MATTER (DOM) IN MARINE SEDIMENT PORE WATERS

12:15 p.m. Clark, L. L.; Ingall, E. D.; Benner, R.: MARINE DISSOLVED ORGANIC PHOSPHORUS: NEW INSIGHTS FROM NUCLEAR MAGNETIC RESONANCE

Tuesday Morning Oral Sessions

SS40:

Mechanisms Regulating Microbial Diversity and Population Dynamics

- Chairs: T. F. Thingstad, *University of Bergen*
M. G. Hoefle, *GBF-National Research Center for Biotechnology*
Anthony V. Palumbo, *Oak Ridge National Laboratory*
- Location: Hilton, Mesa C
- 8:30 a.m. Giovannoni, S. J.; Carlson, C. A.; Vergin, K. L.: THE ECOLOGICAL IMPLICATIONS OF SPATIAL AND TEMPORAL STRUCTURE IN OPEN OCEAN PICOPANKTON COMMUNITIES
- 9:00 a.m. Stürmeyer, H. H.; Pernthaler, J. J.; Glöckner, F. O.; Amann, R. R.: DIVERSITY AND COMMUNITY STRUCTURE OF HETEROTROPHIC BACTERIOPANKTON IN THE NORTH SEA
- 9:15 a.m. Sobecky, P. A.; Cain, C. C.; Bellamy, M.: MOLECULAR ASSESSMENT OF PLASMID DIVERSITY IN MARINE MICROBIAL COMMUNITIES
- 9:30 a.m. Cary, C.; Campbell, B.; Cottrell, M.; Schmidt, M.; Hutchins, D.: CHANGES IN BACTERIAL COMMUNITY COMPOSITION IN RESPONSE TO ADDITIONS OF FE IN 3 DIFFERENT HIGH NUTRIENT LOW CHLOROPHYLL (HNLC) REGIONS.
- 9:45 a.m. Rocap, G.; Chisholm, S. W.: COEXISTENCE OF ECOTYPES WITH DISPARATE PHOTOPHYSIOLOGIES INFERRED FROM GENETIC DIVERSITY IN NATURAL POPULATIONS OF PROCHLOROCOCCUS
- 10:00 a.m. Break**
- 10:30 a.m. Toledo, G. G.; Brahamsha, B. B.; Palenik, B. B.: GENETIC DIVERSITY OF MARINE SYNECHOCOCCUS ISOLATES FROM THE CALIFORNIA CURRENT
- 10:45 a.m. MacGregor, B. J.; Stahl, D. A.; Van Mooy, B.; Hollander, D.; Baker, B.; Mellon, M. T.; Paerl, H. W.; Zehr, J. P.: NITROGEN FIXATION IN OFFSHORE LAKE MICHIGAN: STABLE ISOTOPE AND MICROBIOLOGICAL EVIDENCE
- 11:00 a.m. Höfle, M.; Haas, H.; Dominik, K.: SEASONAL SUCCESSIONS OF BACTERIOPANKTON COMMUNITIES IN A EUTROPHIC LAKE AS DETERMINED BY 5S rRNA ANALYSIS
- 11:15 a.m. Weinbauer, M.; Höfle, M.: UNDERSTANDING THE DISTRIBUTION, POPULATION DYNAMICS AND LIFE STRATEGIES OF INDIVIDUAL BACTERIAL SPECIES USING MOLECULAR PROBES
- 11:30 a.m. Juergens, K.; Langenheder, S.; Pernthaler, J.; Amann, R.: CHANGES IN MORPHOLOGY AND TAXONOMIC COMPOSITION OF PLANKTONIC BACTERIAL COMMUNITIES DUE TO ENHANCED PROTOZOAN GRAZING
- 11:45 a.m. Riemann, L.; Steward, G. F.; Azam, F.: BACTERIAL COMMUNITY DYNAMICS AND PARTICLE COLONIZATION DURING A MESOCOSM DIATOM BLOOM
- 12:00 p.m. Muyzer, G.; Garcia-Pichel, F.; Nuebel, U.; Kuehl, M.; Minz, D.: MICROBIAL MATS: MODEL SYSTEMS FOR ECOLOGICAL STUDIES
- 12:15 p.m. Zhou, J.; Palumbo, A. V.; O'Neill, R. V.; Xia, B.; Figueras, J. B.; Tiedje, J. M.: THE IMPORTANCE OF SPATIAL HETEROGENEITY IN CONTROLLING MICROBIAL DIVERSITY

SS43:

Applications Of New Satellite and Aircraft Sensors in Oceanography and Limnology

- Chairs: James A. Yoder, *University of Rhode Island*
Mary Elena Carr, *California Institute of Technology*
Curtiss O. Davis, *Naval Research Laboratory*
A.G. Dekker, *Vrije Universiteit*
- Location: Sweeney, #1
- 8:30 a.m. Yentsch, C. S.; Phinney, D. A.; O'Reilly, J. E.: SLOPE WATER CHLOROPHYLL BLOOMS OBSERVED WITH SEAWIFS - CAPE HATTERAS TO THE GULF OF MAINE
- 8:45 a.m. Bontempi, P. S.; Yoder, J. A.: PERMANENT AND TRANSIENT SPATIAL PATTERNS IN CHLOROPHYLL A AS REMOTELY SENSED BY CZCS, OCTS, AND SEAWIFS
- 9:00 a.m. Hood, R. R.; May, L. R.; Subramaniam, A.; Carpenter, E. J.; Capone, D. G.: MODELING NITROGEN AND CARBON FIXATION OF TRICHODESMIUM: SHIPBOARD AND REMOTE SENSING APPLICATIONS
- 9:15 a.m. Tenenbaum, J.; Monger, B.: SEASONAL CHANGES IN SEAWIFS DERIVED CHLOROPHYLL CONCENTRATION WITHIN OBJECTIVELY PRESCRIBED HYDROGRAPHIC PROVINCES IN THE GULF OF MAINE REGION
- 9:30 a.m. Fisher, K. E.; Monger, B. C.: SPATIAL PATTERNS IN ESTIMATED PHYTOPLANKTON BIOMASS ON GEORGES BANK COMPARED AMONGST A STEADY STATE N SUPPLY MODEL, SEAWIFS OBSERVATIONS OF OCEAN COLOR, AND ALONGTRACK FLUORESCENCE DATA
- 9:45 a.m. Johannessen, S. C.; Miller, W. L.; Cullen, J. J.: PHOTOCHEMISTRY FROM SPACE: INTEGRATING FIELD DATA WITH THEORY
- 10:00 a.m. Break**
- 10:30 a.m. Dadou, I. C.; Ransau, S. S.; Garçon, V. V.: MESOSCALE PATTERNS IN REMOTE SENSING DATA OF THE BRAZIL-MALVINAS CONFLUENCE REGION
- 10:45 a.m. Polovina, J. J.; Howell, E.; Foley, D.: INTERANNUAL VARIATION IN N. PACIFIC SURFACE CHLOROPHYLL OBSERVED FROM OCTS AND SEAWIFS, 1996-98
- 11:00 a.m. Carr, M.; Kearns, E.: USING SATELLITES TO PREDICT FISHERIES SUCCESS IN EASTERN BOUNDARY CURRENT REGIONS
- 11:15 a.m. Kahru, M.; Mitchell, B.; McClain, C. R.: BUILDING A SEASONAL TO DECADAL-SCALE TIME SERIES OF OCEAN COLOR DATA FOR THE CALIFORNIA CURRENT
- 11:30 a.m. Garcia-Gorritz, E.; Carr, M.: PHYSICAL CONTROL OF CHLOROPHYLL DISTRIBUTION PATTERNS IN THE ALBORAN SEA
- 11:45 a.m. Peterson, A. R.; Siegel, D. A.; Garver, S. A.: OPTIMAL TUNING OF SEMI-ANALYTICAL OCEAN COLOR ALGORITHMS FOR THE GLOBAL OCEAN
- 12:00 p.m. Mertes, L. A.; Warrick, J.: MEASURING THE IMPACT OF COASTAL WATERSHEDS ON NEARSHORE WATERS OF CALIFORNIA WITH SEAWIFS DATA
- 12:15 p.m. Trees, C. C.; Mueller, J. L.; Maske, H.; Scott, P.; Zaneveld, R.: REMOTELY SENSED PIGMENT ALGORITHMS IN THE GULF OF CALIFORNIA: A COMPARISONS BETWEEN OCEANIC AND COASTAL AREAS

Tuesday Morning Oral Sessions

CS56:

DOM: Sources and Cycling

- Chair: Cheryl Kelley, *University of Missouri at Columbia*
- Location: Eldorado, Anasazi North
- 8:30 a.m. Sharp, J. H.; Savidge, K. B.: METHODS COMPARISONS FOR MEASUREMENT OF DISSOLVED ORGANIC CARBON AND NITROGEN IN AQUATIC SYSTEMS.
- 8:45 a.m. Willey, J. D.; Kieber, R. J.; Avery, G. B.; Eyman, M. S.: RAINWATER DISSOLVED ORGANIC CARBON AS A PART OF THE GLOBAL CARBON CYCLE
- 9:00 a.m. Pabich, W. J.; Valiela, I.; Hemond, H. F.: VADOSE ZONE THICKNESS AS A CONTROL ON DISSOLVED ORGANIC CARBON (DOC) DELIVERY TO GROUNDWATER, WAQUOIT BAY WATERSHED, CAPE COD
- 9:15 a.m. Kolar, I. E.; Brugger, A. V.; Reitner, B.; Quèric, N. V.; Herndl, G. J.: TEMPORAL AND SPATIAL DISTRIBUTION OF BIODEGRADABLE DOC IN THE HYPORHEIC ZONE OF AN OLIGOTROPHIC RIVER AND ITS ADJACENT GROUNDWATER
- 9:30 a.m. Kaldy, J. E.; Eldridge, P. M.; Cifuentes, L. A.: DOC RELEASE FROM THE SEAGRASS THALASSIA TESTUDINUM TO THE SEDIMENTS: INVERSE MODELING AND EXPERIMENTAL DATA
- 9:45 a.m. Heilman, M. A.; Carlton, R. G.: MASS FLOW IN SUBMERSED, RHIZOMATOUS POTAMOGETON AND ITS EFFECTS ON PLANT AERATION AND LITTORAL METHANE RELEASE

10:00 a.m. **Break**

- 10:30 a.m. Vlahos, P.; Chen, R. F.; Gardner, G. B.: DELIVERY OF DISSOLVED ORGANIC CARBON TO THE MID-ATLANTIC BIGHT FROM THE CHESAPEAKE AND DELAWARE ESTUARIES
- 10:45 a.m. Otero, E.; Culp, R.; Noakes, J.; Hodson, R. E.: DELTA 13C AND CONCENTRATION OF DISSOLVED ORGANIC CARBON AND HUMIC SUBSTANCES FROM THE SATILLA AND ALTAMAHA ESTUARIES, SOUTHEASTERN, USA
- 11:00 a.m. Callahan, J.; Chen, R. F.: CHARACTERIZATION OF DISSOLVED ORGANIC MATTER IN SURFACE WATERS OF BOSTON HARBOR AND CHESAPEAKE BAY
- 11:15 a.m. Sayama, M.: DON FLUX AND METABOLISM AT SEDIMENT-WATER INTERFACE IN A COASTAL MARINE ENVIRONMENT
- 11:30 a.m. Teece, M. A.; Fogel, M. L.; Benner, R.: STABLE CARBON ISOTOPE COMPOSITION OF INDIVIDUAL CARBOHYDRATES IN OCEANIC DISSOLVED ORGANIC MATTER: ELUCIDATION OF POTENTIAL SOURCES.
- 11:45 a.m. Kelley, C. A.; Martens, C. S.; Coffin, R. B.; Cifuentes, L. A.: ALLOCHTHONOUS VS. AUTOCHTHONOUS BACTERIAL CARBON SOURCES: A COMPARISON BETWEEN THE NORTHERN GULF OF MEXICO AND A COASTAL MARINE BASIN (CAPE LOOKOUT BIGHT, NC)
- 12:00 p.m. Nagata, T.; Kirchman, D. L.: ROLE OF LIPOSOME-LIKE PARTICLES IN THE PRESERVATION OF PROTEINS IN SEAWATER
- 12:15 p.m. Sinsabaugh, R.; Foreman, C.; Yeager, P.: GLYCOSIDASES, PEPTIDASES, AND DISSOLVED ORGANIC MATTER (DOM) PROCESSING

Tuesday Afternoon Oral Sessions

Special Thematic Session TS01:

Working Together in Aquatic Sciences: Toward a Global Perspective

- Chair: William Lewis, *University of Colorado*
- Location: Eldorado, Anasazi South
- 2:00 p.m. Ducklow, H. W.: INTERNATIONAL COLLABORATION IN OCEANOGRAPHY: A PERSONAL VIEW.
- 2:30 p.m. Malone, T. C.: THE COASTAL COMPONENT OF THE GLOBAL OCEAN OBSERVING SYSTEM: WHAT IS IT AND WHY DO IT?
- 3:00 p.m. **Break**
- 3:30 p.m. Grassle, J. F.: TOWARD A GLOBAL PARTNERSHIP FOR THE STUDY OF MARINE BIODIVERSITY
- 4:00 p.m. Hamilton, S. K.: COLLABORATIVE LIMNOLOGICAL RESEARCH IN LATIN AMERICA: A PERSONAL PERSPECTIVE ON OPPORTUNITIES AND IMPEDIMENTS FOR NORTH AMERICAN SCIENTISTS
- 4:30 p.m. Wetzel, R. G.: ESSENTIAL COMMITMENTS TO INTERNATIONAL LIMNOLOGY

SS01-II:

Physics and Biology of Plankton Feeding Ecology

- Chairs: John F. Dower, *University of British Columbia*
Thomas J. Miller, *University of Maryland*
- Location: Hilton, Mesa C
- 2:00 p.m. Davis, M. W.: DOES TURBULENCE ENHANCE FEEDING IN LARVAL AND JUVENILE FISHES: THEORETICAL AND EXPERIMENTAL ARTIFACT OR IS IT REAL?

- 2:15 p.m. Quinlan, J. A.; Werner, F. E.; Lough, R.; Buckley, L. J.; Gallager, S. M.: EXAMINING THE COHORT LEVEL IMPLICATIONS OF SMALL SCALE TURBULENCE, PREY FIELD AND SELECTIVITY: A STUDY OF LARVAL COD AND HADDOCK ON GEORGES BANK
- 2:30 p.m. Pithakpol, S.; Tada, K.; Montani, S.: THE GROWTH OF A COMMON HETEROTROPHIC RED TIDE DINOFLAGELLATE, NOCTILUCA SCINTILLANS, FED ON NUTRIENTS STRESSED ALGAE
- 2:45 p.m. Jakobsen, H.: GROWTH AND GRAZING RESPONSES IN TWO CHLOROPLAST RETAINING DINOFLAGELLATES: EFFECT OF LIGHT INTENSITY AND PREY SPECIES
- 3:00 p.m. **Break**
- 3:30 p.m. Incze, L. S.; Hebert, D.; Wolff, N.; Oakey, N.; Dye, F.: VERTICAL RESPONSES OF COPEPOD TAXA AND STAGES TO WIND-INDUCED TURBULENCE: MEASUREMENTS ON GEORGES BANK DURING GLOBEC
- 3:45 p.m. Currie, W. J. S.; Roff, J. C.: THE TURBULENT LIFE OF PLANKTON: DO THEY REALLY GO WITH THE FLOW?
- 4:00 p.m. Sullivan, B. K.; Klein-MacPhee, G.; Klos, E.: GROWTH AND PREDATION BY PLANKTONIC HYDROIDS: A CLEAR CASE OF MIXING AND TURBULENT CONTROL TESTED IN MESOCOSMS
- 4:15 p.m. Dower, J. F.; Pepin, P.; Leggett, W. C.: MESO-SCALE PATTERNS OF FEEDING AND GROWTH OF LARVAL FISH IN COASTAL NEWFOUNDLAND AS A FUNCTION OF TURBULENCE AND PREY AVAILABILITY
- 4:30 p.m. Koehl, M.; Cooper, T.; McCay, M.; Wang, G.: SMALL-SCALE HYDRODYNAMICS OF COPEPOD FEEDING APPENDAGES: HOW DO FLAPPING HAIRY LEGS PRODUCE NET FLOW AT LOW AND TRANSITIONAL REYNOLDS NUMBERS?

Tuesday Afternoon Oral Sessions

SS15:

Evidence (or Effects) of Global Change in High Latitude Aquatic Environments

- Chairs: Barry Sherr, *Oregon State University*;
Ev Sherr, *Oregon State University*
- Location: Eldorado, Anasazi North
- 2:00 p.m. Aagaard, K.; Carmack, E. C.: A CHANGING ARCTIC OCEAN AND CONSEQUENCES FOR BIOLOGICAL PRODUCTION
- 2:30 p.m. McPhee, M.; Morison, J.: RECENT CHANGES IN THE ARCTIC OCEAN ENVIRONMENT
- 2:45 p.m. Hobbie, J. E.; Peterson, B. J.; Bettez, N.; Deegan, L.; O'Brien, J.; Kipphut, G. W.: IMPACT OF GLOBAL CHANGE ON BIOGEOCHEMISTRY AND ECOSYSTEMS OF ARCTIC FRESHWATERS
- 3:00 p.m. Break**
- 3:30 p.m. Anderson, J.: SETTING BASELINES FOR FUTURE CHANGES IN ARCTIC LAKES: LIMNOLOGICAL AND PALAEO-LIMNOLOGICAL INVESTIGATIONS OF LAKES IN THE KANGERLUSSUAQ AREA OF WEST GREENLAND
- 3:45 p.m. Clough, L. M.; Ambrose, Jr., W. G.; Sun, M. Y.; von Quillfeldt, C. H.; Grable, M.; Deming, J.: WILL DECREASING ICE CONCENTRATIONS BENEFIT OR HARM THE ARCTIC BENTHOS?
- 4:00 p.m. Hershey, A. E.; Bothwell, M. L.; Ulseth, A.; Lee, J. F.: UV EFFECTS ON ALGAE AND INSECTS IN TWO ARCTIC ALASKAN STREAMS

SS23:

On the Global Significance of Small Copepods

- Chairs: Ulrich Bathmann, *Alfred-Wegener-Institut*
Sigrid Schnack-Schiel, *Alfred-Wegener-Institut*
G.-A. Paffenhofer, *Skidaway Institute of Oceanography*
- Location: Hilton, Mesa B
- 2:00 p.m. Calbet, A.; Landry, M. R.; Scheinberg, R.: COPEPOD INGESTION RATES IN A SUBTROPICAL BAY: SPECIFIC RESPONSES TO A MIDSUMMER INCREASE IN THE NANOPLANKTON STANDING STOCK
- 2:15 p.m. Satapoomin, S.; Nielsen, T.; Schou, O.: ROLE OF ONCAEA SPP. IN THE TROPICAL ANDAMAN SEA
- 2:30 p.m. Nielsen, T.; Satapoomin, S.; Hansen, B.; Sabatini, M.: THE ROLE OF OITHONA SPP. IN ARCTIC, TEMPEARTE AND TROPICAL ECOSYSTEMS
- 2:45 p.m. Mazzocchi, M.; Ribera d'Alcala', M.: THE ECOLOGICAL SIGNIFICANCE OF THE GENUS CLAUSOCALANUS (COPEPODA, CALANOIDA) IN THE MEDITERRANEAN SEA
- 3:00 p.m. Break**
- 3:30 p.m. Roff, J. C.; Hopcroft, R. R.: GROWTH RATES IN TROPICAL MARINE ZOOPLANKTON: SIZE DOES MATTER
- 3:45 p.m. Paffenhofer, G. A.: ABUNDANT PLANKTONIC COPEPODS IN WARM OCEANS: OCEANIC VERSUS NERITIC REGIONS
- 4:00 p.m. Rose, K. N.; Hopcroft, R. R.; Roff, J. C.: FLUORESCENT EXOSKELETONS. A NOVEL METHOD FOR THE CALCULATION OF CRUSTACEAN GROWTH RATES.
- 4:15 p.m. Hopcroft, R. R.; Lombard, D. L.; Chavez, F. P.: THE SIGNIFICANCE OF SMALL COPEPODS OFF CENTRAL CALIFORNIA
- 4:30 p.m. Lopes, R. M.; Dubischar, C.; Bathmann, U. V.; Pollard, R.: DISTRIBUTION OF SMALL COPEPODS AT THE ANTARCTIC POLAR FRONT
- 4:45 p.m. Schnack-Schiel, S. B.; Metz, C.: FEEDING BEHAVIOUR AND GRAZING IMPACT OF SMALL ANTARCTIC COPEPOD SPECIES

SS27-II:

Aquatic Ecosystems in Extreme Environments

- Chairs: John C. Priscu, *Montana State University*
Christian H. Fritsen, *Montana State University*
Charles Fisher, *The Pennsylvania State University*
- Location: Sweeney, #2
- 2:00 p.m. McKnight, D.; Tate, C.; Niyogi, D.: CRYPTOBIOTIC PRESERVATION OF CYANOBACTERIAL MAT IN GLACIAL MELTWATER STREAMS IN THE MCMURDO DRY VALLEYS
- 2:15 p.m. Priscu, J. C.; Fritsen, C. H.; Paerl, H. W.; Adams, E. E.: MICROBIAL LIFE IN PERENNIAL ANTARCTIC LAKE ICE
- 2:30 p.m. Takacs, C. D.; Priscu, J. C.: BACTERIAL DISSOLVED ORGANIC CARBON DEMAND IN MCMURDO DRY VALLEY LAKES, ANTARCTICA
- 2:45 p.m. Sattler, B.; Puxbaum, H.; Limbeck, A.; Psenner, R.: MICROBIAL PROCESSES IN CLOUDS
- 3:00 p.m. Break**
- 3:30 p.m. Shick, J. M.; Romaine-Lioud, S.; Gattuso, J. P.: UVB RADIATION STIMULATES ACCUMULATION OF MYCOSPORINE-LIKE AMINO ACIDS (MAAS) IN THE CORAL STYLOPHORA PISTILLATA, BUT NOT WHEN THE SHIKIMATE PATHWAY IS INHIBITED
- 3:45 p.m. Roesler, C. S.; Culbertson, C. W.; McLeroy-Etheridge, S. L.; Oremland, R.: PHYSIOLOGICAL CHARACTERISTICS OF A NOVEL EUKARYOTIC PHOTOTROPH ISOLATED FROM THE HALOALKALINE MONO LAKE, CALIFORNIA
- 4:00 p.m. Jellison, R.; Melack, J. M.; Jehl, J. R.: ECOLOGICAL CONSEQUENCES OF THE ONSET OF MEROMIXIS DURING RESTORATION OF MONO LAKE, CALIFORNIA, USA
- 4:15 p.m. Larson, G. L.: LIMNOLOGICAL CHARACTERISTICS OF AN EXTREMELY DEEP AND CLEAR CALDERA LAKE
- 4:30 p.m. Peeken, I. I.: ALGAE COMPOSITION OF SEA-ICE AND WATER SAMPLES IN THE HIGH ARCTIC AS DETERMINED FROM PHOTOSYNTHETIC PIGMENTS

SS34-III:

Composition and Reactivity of DOC: Comparisons Across Freshwater and Marine Environments

- Chairs: Richard D. Robarts, *National Water Research Institute*
Jim Bauer, *College of William and Mary*
- Location: Eldorado, Zia A/B/C
- 2:00 p.m. Opsahl, S.; Benner, R.; Amon, R.: MAJOR FLUX OF TERRIGENOUS DISSOLVED ORGANIC MATTER THROUGH THE ARCTIC OCEAN
- 2:15 p.m. Mitra, S.; Bianchi, T. B.; Guo, L.; Santschi, P.: SOURCES, AGE, AND TRANSPORT OF TERRESTRIALLY-DERIVED COLLOIDAL ORGANIC MATTER IN THE CHESAPEAKE BAY AND MID-ATLANTIC BIGHT, USA
- 2:30 p.m. Quayle, W. C.: CHEMISTRY AND SOURCE OF DISSOLVED SACCHARIDES AND AMINO ACIDS IN MARITIME ANTARCTIC LAKES
- 2:45 p.m. Loh, A.; Bauer, J. E.; Wolgast, D. M.: FLUXES AND RATIOS OF DISSOLVED AND PARTICULATE ORGANIC C, N AND P IN THE EASTERN NORTH PACIFIC AND SOUTHERN OCEANS
- 3:00 p.m. Break**
- 3:30 p.m. Bronk, D. A.; Sanderson, M. P.; Koopmans, D. J.: CHARACTERIZATION AND BIOAVAILABILITY OF DISSOLVED ORGANIC NITROGEN IN TWO GEORGIA RIVERS
- 3:45 p.m. Skold, M. E. V.; Ranville, J. F.; Macalady, D. L.; Ross, P.: COPPER COMPLEXATION AND AQUATIC TOXICITY AS INFLUENCED BY AQUATIC NATURAL ORGANIC MATTER

Tuesday Afternoon Oral Sessions

- 4:00 p.m. McCarthy, M. D.; Hedges, J. I.; Benner, R.; Fogel, M.: MOLECULAR-LEVEL STABLE CARBON AND NITROGEN ISOTOPIC COMPOSITION OF AMINO ACIDS IN OCEANIC DISSOLVED ORGANIC MATTER
- 4:15 p.m. Raymond, P. R.; Bauer, J. E.: ESTIMATION OF NET METABOLISM IN THE YORK RIVER ESTUARY USING INORGANIC CARBON MEASUREMENTS
- 4:30 p.m. Edmonds, J. W.; Grimm, N. B.; Fisher, S. G.: SPATIAL AND TEMPORAL PATTERNS IN DISSOLVED ORGANIC MATTER CHEMICAL COMPLEXITY ALONG A NATIVE DESERT TO URBAN STREAM GRADIENT: CAUSES AND CONSEQUENCES
- 4:45 p.m. Chin, W.; Verdugo, P.: MODELING OF SPONTANEOUS ASSEMBLY OF MARINE DISSOLVED POLYMERS INTO POLYMER MICROGELS

SS41-II: Probing Into Physiological State "In Situ" at the Individual Cell Level

- Chairs: Paul del Giorgio, *University of Maryland*
Lisa Campbell, *Texas A&M University*
David Bird, *University of Quebec at Montreal*
Frank J. Jochem, *Institut für Meereskunde*
- Location: Sweeney, #3
- 2:00 p.m. Hodson, R. E.; Chen, F.; Dustman, W.: APPLICATION OF IN SITU REVERSE TRANSCRIPTION TO ESTUARINE BACTERIAL COMMUNITY ANALYSIS
- 2:15 p.m. Poulton, N. J.; Anderson, D. M.: SPECIES-SPECIFIC ISOLATION AND PHYSIOLOGICAL CHARACTERIZATION OF THE DINOFAGELLATE ALEXANDRIUM FUNDYENSE SEPARATED FROM FIELD SAMPLES USING IMMUNOMAGNETIC BEADS
- 2:30 p.m. Rynearson, T. A.; Armbrust, E. V.: POPULATION STRUCTURE OF DIATOM BLOOMS USING DNA FINGERPRINTS
- 2:45 p.m. Ouverney, C. C.; Fuhrman, J. A.: SIMULTANEOUS IN SITU MEASUREMENTS OF SPECIFIC NUTRIENT UPTAKE BY SPECIFIC MARINE BACTERIAPLANKTON CELLS
- 3:00 p.m. Break**
- 3:30 p.m. Jochem, F. J.; Smith, G.; Gao, A.; Robertson, D.; Cabello-Pasini, A.; Kohrs, D. G.; Alberte, R. S.: IN-SITU PROBING FOR PHYTOPLANKTON GROWTH AND ENZYME ACTIVITY IN SINGLE CELLS - FLOW CYTOMETRY OF DNA CELL CYCLES AND NITRATE REDUCTASE
- 3:45 p.m. Bird, D. F.; Vidondo, B. F.; Gasol, J.; Vaqué, D.; Agustí, S.: NUTRIENT RATIO EFFECTS ON BACTERIAL AND VIRAL REPRODUCTION IN THE WESTERN MEDITERANEAN
- 4:00 p.m. Dyhrman, S. T.; Palenik, B.: THE DEVELOPMENT OF THE ALKALINE PHOSPHATASE SUBSTRATE ELF AS A DIAGNOSTIC TOOL FOR PHOSPHATE STRESS.
- 4:15 p.m. Gisselson, L. Å.; Granéli, E. E.; Carlsson, P. P.: APPLICABILITY OF CELL CYCLE ANALYSIS USING MICROSCOPY-BASED DNA QUANTIFICATION TO ESTIMATE IN SITU GROWTH RATE OF THE DINOFAGELLATE DINOPHYSIS ACUMINATA

SS43-II: Applications Of New Satellite and Aircraft Sensors in Oceanography and Limnology

- Chairs: James A. Yoder, *University of Rhode Island*
Mary Elena Carr, *California Institute of Technology*
Curtiss O. Davis, *Naval Research Laboratory*
A.G. Dekker, *Vrije Universiteit*
- Location: Sweeney, #1

- 2:00 p.m. Carder, K. L.; Hu, C.; Strub, A.: APPLICATION OF A SEMI-ANALYTIC SEAWIFS ALGORITHM FOR CHLOROPHYLL-A AND GELBSTOFF
- 2:15 p.m. English, D. C.; Carder, K. L.; Perry, M.; Talbot, M. K.; Roesler, C. S.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: THE EFFECT OF SUBSURFACE BUBBLES IN THE WAKES OF LARGE SHIPS ON REMOTE SENSING REFLECTANCE
- 2:30 p.m. Davis, C. O.; Kapus, M. E.; Rhea, W. J.: A TIME SERIES OF HYPERSPECTRAL IMAGERY OF A FJORD ENVIRONMENT, EAST SOUND, ORCAS ISLAND, WASHINGTON
- 2:45 p.m. Hu, C.; Biggs, D.; Nadeau, D.; Muller-Karger, F.: RIVERINE IMPACT ON THE DISTRIBUTION OF CHLOROPHYLL-A AND COLORED DISSOLVED ORGANIC MATTER (CDOM) IN THE NORTHEASTERN GULF OF MEXICO (NEGOM)
- 3:00 p.m. Break**
- 3:30 p.m. Dekker, A. A.; Peters, S. S.; Rijkeboer, M. M.; Hoogenboom, E. H.: GENERIC REMOTE SENSING ALGORITHMS FOR LAKES, RIVERS AND COASTAL WATERS: DO THEY EXIST?
- 3:45 p.m. DiGiacomo, P. M.; Holt, B.: SEAWIFS OBSERVATIONS OF COASTAL OCEAN EDDIES IN THE SOUTHERN CALIFORNIA BIGHT
- 4:00 p.m. Toole, D. A.; Siegel, D. A.: EMPIRICAL AND MECHANISTIC APPROACHES TO UNDERSTANDING OCEAN COLOR VARIABILITY IN THE SANTA BARBARA CHANNEL
- 4:15 p.m. Ringold, P. L.; Barker, J.; Bradshaw, G. A.; Carson, . W.; Fiorella, M.; McAllister, L.; Bollman, M.: FINE RESOLUTION REMOTELY SENSED IMAGERY AS A FOUNDATION FOR RIPARIAN MONITORING IN PACIFIC NORTHWEST FORESTED LANDSCAPES
- 4:30 p.m. Melack, J. M.; Gastil, M. M.: MEASUREMENT AND ANALYSIS OF CHLOROPHYLL DISTRIBUTIONS IN MONO LAKE WITH AIRBORNE IMAGING SPECTROMETRY

SS49: Ecological Stoichiometry in Aquatic Ecosystems: New Directions for Navigating the Food Web in the Next Century

- Chairs: James J. Elser, *Arizona State University*
David M. Karl, *University of Hawaii*
- Location: Sweeney, #4
- 2:00 p.m. Karl, D. M.; Bjorkman, K.; Hebel, D.; Houlihan, T.; Tupas, L.: SEASONAL AND INTERANNUAL VARIABILITY IN C-N-P STOICHIOMETRY OF DISSOLVED AND PARTICULATE MATTER IN THE SUBTROPICAL NORTH PACIFIC OCEAN
- 2:30 p.m. Downing, J. A.; Osenberg, C. W.; Sarnelle, O.: MARINE PHYTOPLANKTON GROWTH LIMITATION VARIES WITH N:P STOICHIOMETRY: A META-ANALYSIS OF NUTRIENT ENRICHMENT EXPERIMENTS
- 2:45 p.m. Marino, R.; Howarth, R. W.; Chan, F.; Pelletier, D. M.; Pace, M. L.: AN EXPERIMENTAL TEST OF THE EFFECT OF LOW MOLYBDENUM AVAILABILITY IN SEAWATER AS A CONTROL ON PLANKTONIC N FIXATION IN ESTUARIES
- 3:00 p.m. Break**
- 3:30 p.m. Vanni, M. J.; Headworth, J. L.: NUTRIENT RECYCLING AND TRANSPORT BY OMNIVOROUS FISH ALONG A LAKE PRODUCTIVITY GRADIENT
- 3:45 p.m. Elser, J. J.; O'Brien, J.; Dobberfuhl, D. R.: THE EVOLUTION OF TROPHIC DYNAMICS AND CONSUMER-DRIVEN NUTRIENT RECYCLING: ECOLOGICAL STOICHIOMETRY OF A KEYSTONE HERBIVORE AT TEMPERATE AND ARCTIC LATITUDES

Tuesday Afternoon Oral Sessions

- 4:00 p.m. McTavish, K. A.; Gettel, G. M.; Pastor, J. J.; Stech, H. W.: TROPHIC STRUCTURE AND OTHER ECOSYSTEM PROPERTIES GENERATED BY A STOICHIOMETRIC FOOD WEB MODEL
- 4:15 p.m. Bentzen, E.; Lean, D.; Taylor, W. D.; Hickie, B.: RELATIONSHIP BETWEEN ZOOPLANKTON LIPID IN LAKES OF CONTRASTING FOOD WEB STRUCTURE AND LAKE NUTRIENT STATUS
- 4:30 p.m. Tibbets, T. M.; Elser, J. J.: ECOLOGICAL STOICHIOMETRY OF CONSUMERS AND RESOURCES IN ARCTIC AND TEMPERATE STREAMS
- 4:45 p.m. Stelzer, R. S.; Lamberti, G. A.: PERIPHYTON CHEMICAL QUALITY LIMITS GROWTH RATES OF A HERBIVOROUS SNAIL

CS67:

Zooplankton: Temporal and Spatial Dynamics

- Chair: Sultan Hameed, *State Univ. of New York at Stony Brook*
- Location: Hilton, Mesa A
- 2:00 p.m. Crawford, T. N.: SOME LIKE IT COLD! THE EFFECTS OF TEMPERATURE ON THE HYPOXIC STRESS OF EURYPANOPEOUS DEPRESSUS
- 2:15 p.m. McLaughlin, E. N.; Breitbart, D. L.; Decker, M.; Purcell, J. E.: BEHAVIORAL RESPONSES AND TOLERANCE OF THE CTENOPHORE MNEMIOPSIS LEIDYI TO DISSOLVED OXYGEN AND TEMPERATURE IN A STRATIFIED WATER COLUMN

- 2:30 p.m. Raskoff, K. A.: VERTICAL DISTRIBUTIONS AND ECOLOGICAL INTERACTIONS OF THE MESOPELAGIC HYDROMEDUSAE OF MONTEREY BAY, CALIFORNIA
- 2:45 p.m. Robison, B. H.; Reisenbichler, K. R.; Sherlock, R. E.: A LONG-TERM, TIME-SERIES STUDY OF THE PHYSONECT SIPHONOPHORE NANOMIA BIJUGA
- 3:00 p.m. Break**
- 3:30 p.m. Hameed, S.; Piontkovski, S.; Conversi, A.: IMPACT OF THE ATMOSPHERIC CENTERS OF ACTION ON THE GULF STREAM AND ZOOPLANKTON ABUNDANCE IN THE NORTH ATLANTIC
- 3:45 p.m. Piontkovski, S.; Hameed, S.; Conversi, A.: ATMOSPHERIC CENTERS OF ACTION AND INTERANNUAL CHANGES OF ZOOPLANKTON ABUNDANCE
- 4:00 p.m. Wishner, K. E.; Outram, D.; Donaghay, P. L.: CHARACTERISTICS OF A ZOOPLANKTON SOURCE REGION DURING SPRING 1997 ON GEORGES BANK
- 4:15 p.m. Carlotti, F.: A LAGRANGIAN ENSEMBLE MODEL OF CALANUS FINMARCHICUS COUPLED WITH A 1-D ECOSYSTEM MODEL
- 4:30 p.m. Rocha, A. M.: ABUNDANCE AND DISTRIBUTION OF ICHTHYOPLANKTON AT THE ENTRANCE OF NARRAGANSETT BAY
- 4:45 p.m. Fussmann, G.; Ellner, S.; Hairston, Jr., N. G.: EVALUATING COMPLEX DYNAMICS AND CHAOS IN NATURAL ECOLOGICAL SYSTEMS: A ROTIFER CHEMOSTAT PROJECT

Tuesday Poster Sessions

Authors will be at their posters from 5:00 to 7:00 p.m. in the Sweeney Center Ballroom. Poster teardown begins at 7:30 p.m.

SS01:

Physics and Biology of Plankton Feeding Ecology

1. Stiansen, J. E.; Sundby, S. S.; Ellertsen, B. B.; Fossum, P. P.: A FIELD INVESTIGATION OF SMALL SCALE TURBULENCE ON THE INGESTION RATE OF COD LARVAE
2. Bochdansky, A. B.; Deibel, D.; Bushell, V.: INTERACTIONS OF CALANUS AND FRAGILARIOPSIS DURING THE SPRING BLOOM: CLEARANCE RATE REDUCTION DUE TO LONGER DIATOM CHAINS?

SS02:

Life At and Below the Kolmogorov Scale: Interactions Between Physical, Chemical and Biological Processes

3. Harris, R. P.; Irigoin, X.; Head, B.; Niehoff, B.; Hirche, H.: DOES TURBULENCE PLAY A ROLE IN THE FEEDING AND REPRODUCTION OF CALANUS FINMARCHICUS ?
4. Malits, A. A.; Arin, L. L.; Marrasé, C. C.; Peters, F. F.; Sala, M. M. M.: EFFECT OF INTERMITTENT TURBULENCE ON THE MICROPLANKTON DYNAMICS
5. Yen, J.; Strickler, J.; Doall, M. H.: BREAKING THE CODE: DECIPHERING BIOLOGICAL SIGNALS FROM SMALL-SCALE TURBULENCE

SS05:

Thin Layers: Formation, Maintenance, and Impacts on Water Column Ecology

6. Boss, E.; Twardowski, M. S.; Barnard, A.; Pegau, W.: CONSERVATIVE AND NON-CONSERVATIVE BEHAVIOR OF OPTICAL PROPERTIES IN AN INLET
7. Sullivan, J. M.; Donaghay, P. L.; Deksheniaks, M. M.: EXAMINATION OF THE TEMPORAL AND SPATIAL COHERENCE OF OPTICAL THIN-LAYERS USING AUTONOMOUS PROFILERS

8. Rines, J. E.; Sullivan, J. M.; Donaghay, P. L.; McFarland, M. N.: OBSERVATIONS ON THE EFFECTS OF WIND-FORCED TURBULENCE ON THE STRUCTURAL INTEGRITY OF CHAIN-FORMING DIATOMS
9. Wingard, C. E.; Cowles, T. J.: THIN LAYERS: INTERACTIONS BETWEEN INTERNAL WAVES AND PLANKTONIC DISTRIBUTIONS ON SCALES OF CENTIMETERS TO METERS
10. Eisner, L. B.; Twardowski, M. S.; Cowles, T. J.: PHYTOPLANKTON PIGMENT COMPOSITION IN RELATION TO FINESCALE OPTICAL PROPERTIES IN EAST SOUND, ORCAS ISLAND, WASHINGTON

SS06:

Ecosystems As Hi-Tech Water Purification Biomachinery

11. Dittrich, M.; Wang, Y.; Müller, B.; Wehrli, B.: CALCITE DISSOLUTION IN A STRATIFIED LAKE - A STUDY BY MICROELECTRODES AND MODELING
12. Steingruber, S.; Wehrli, B.; Gächter, R.: NITROGEN REMOVAL IN A WETLAND POND
13. Owens, M. S.; Cornwell, J. C.; Kana, T. M.; Bryner, J.; Haberkern, E. K.: DO TIDAL FRESHWATER AND OLIGOHALINE HABITATS IMPROVE DOWNSTREAM WATER QUALITY: EXAMPLES FROM A CHESAPEAKE BAY SUBESTUARY
14. Arias, M. Y.; Obraztsova, A. Y.; Tebo, B. M.: HEXAVALENT CHROMIUM REMOVAL BY SULFATE AND FACULTATIVE IRON-REDUCING BACTERIA ISOLATED FROM MARINE SEDIMENTS
15. Ostroumov, S. A.: INTEGRITY-ORIENTED APPROACH TO ECOLOGICAL BIOMACHINERY FOR SELF-PURIFICATION AND BIOREMEDIATION IN AQUATIC ECOSYSTEMS: STOPPING AN ECOLOGICAL TIME BOMB

Tuesday Poster Sessions

SS07:

Regional and Global Scale Biogeochemical Patterns Altered by Human Activities: Changes and Consequences

16. Huh, C.; Chen, H.; Su, C.: ANTHROPOGENIC LEAD IN EAST CHINA SEA SEDIMENTS: SOURCE, TRANSPORT PATHWAY AND INPUT HISTORY
17. Newton, J. A.; Albertson, S. L.: EVALUATING CAUSES FOR CHANGES IN BOTTOM-WATER DISSOLVED OXYGEN CONCENTRATIONS IN HOOD CANAL, A TEMPERATE FJORD-LIKE ESTUARY IN WASHINGTON STATE
18. Fugate, D. C.: COMPARISON OF SEDIMENTARY PATTERNS IN MARSH SYSTEMS OF DREDGED AND NATURAL ESTUARIES
19. Mayer, M. S.; Mills, E. L.; Moore, A.: THE EFFECT OF WATERSHED SIZE AND LANDUSE ON THE WATER AND NUTRIENT INPUTS OF TRIBUTARIES TO ONEIDA LAKE
20. Albertson, S. L.; Newton, J.; Edie, M.: INVESTIGATION OF PRESENT VERSUS HISTORIC CIRCULATION IN HOOD CANAL WITH A THREE-LAYER BOX MODEL

SS14:

Early Signs of Ecosystem Response to Global Climate Change: Life in the 21st Century

21. Connelly, X. M.; Armstrong, R. A.: EFFECTS OF ULTRAVIOLET RADIATION ON THE PHOTOPROTECTIVE PIGMENTS OF THE RED MANGROVE (RHIZOPHORA MANGLE)

SS15:

Evidence (or Effects) of Global Change in High Latitude Aquatic Environments

22. Panzenböck, M.: CARBON FLUX FROM PHYTO- TO BACTERIOPLANKTON IN A HIGH ARCTIC LAKE ON FRANZ-JOSEPH-LAND
23. Beer, L. L.; Tilney, P.; Ambrose, Jr., W. G.; Clough, L. M.: IMPACTS OF ICE ALGAE ON THE EPIBENTHOS OF THE CHUKCHI SEA

SS17:

Biofilms and Mucilage In Benthic and Pelagic Systems

24. Kovac, S.; Ivosevic, N.; Svetlicic, V.; Zutic, V.: INTERFACIAL CHARACTERISTICS OF MARINE ALGAE AND BACTERIA USING ADHESION BASED ELECTROCHEMICAL SENSOR
25. Drake, L. A.; Zimmerman, R. C.; Cummings, M. E.; Dobbs, F. C.: EPIPHYTE LOAD ON SEAGRASS LEAVES: EFFECTS OF LEAF AGE AND INFLUENCE ON INHERENT OPTICAL PROPERTIES
26. Törnblom, E.; Søndergaard, M.: ACTIVITY AND BIOMASS OF BACTERIA ATTACHED TO EELGRASS, ZOSTERA MARINA L. AND OF PELAGIC BACTERIA: A SYSTEMS COMPARISON
27. Francoeur, S. N.; Espeland, E. M.; Wetzel, R. G.: MOLECULAR FLUX IN PERIPHYTON COMMUNITIES: COUPLING STRUCTURE TO FUNCTION
28. Ivosevic, N.; Baldi, F.; Minacci, A.; Pepi, M.; Svetlicic, V.: IMPORTANCE OF HYDROPHILIC POLYSACCHARIDE CAPSULE FOR MARINE BACTERIAL ADHESION TO N-ALKANE PHASE
29. Karlsson, A.; Törnblom, E.; Bostrom, B.: ACTIVITY AND BIOMASS OF ATTACHED AND FREE-LIVING BACTERIAL COMMUNITIES IN THE LITTORAL ZONE OF LAKE ERKEN

SS23:

On the Global Significance of Small Copepods

30. Herman, A. W.: INTERCALIBRATION METHODS FOR PLANKTON NETS AND OPTICAL PLANKTON COUNTERS USED IN HIGH RESOLUTION SAMPLING
31. Albers, C.; Kattner, G.: LIPID COMPOSITIONS OF DOMINANT ARCTIC AND ANTARCTIC OITHONIDAE AND ONCAEIDAE

SS27:

Aquatic Ecosystems in Extreme Environments

32. Pichahchy, A. E.: HYPERSALINE, ANOXIC BRINE POOLS ON THE TEXAS-LOUISIANA GULF SLOPE: A UNIQUE AND EXTREME ENVIRONMENT FOR LIFE?
33. Belzile, C.; Johannessen, S.; Gosselin, M.; Demers, S.; Miller, W.: TRANSMISSION OF ULTRAVIOLET IRRADIANCE THROUGH FIRST-YEAR SEA ICE IN THE NORTH WATER POLYNYA (76-79 deg. N) IN LATE SPRING.
34. Campbell, B. J.; Jeanthon, C.; Prieur, D.; Cary, C.: PHYLOGENETIC ANALYSIS OF BACTERIAL SYMBIONTS OF ALVINELLA POMPEJANA, A EURYTHERMAL POLYCHAETE INHABITING EXTREME HYDROTHERMAL VENT ENVIRONMENTS
35. Fritsen, C. H.; Adams, E. E.; Edens, M. Q.; Priscu, J. C.: LIGHT-FOCUSING IN ASSOCIATION WITH SMALL-SCALE STRUCTURES IN FRESHWATER AND SALINE ICE COVERS
36. Haecky, P.; Andersson, A.: PRIMARY AND BACTERIAL PRODUCTION IN SEA ICE IN THE GULF OF BOTHNIA
37. Buck, K. R.; Barry, J. P.; Rabalais, N. N.; Bernhard, J. M.: MEIOFAUNA FROM LOW OXYGEN MARINE ENVIRONMENTS
38. Gerein, K. M.; Evans, M. S.: THE EFFECT OF PHYSICAL, CHEMICAL AND BIOLOGICAL FACTORS ON THE PHYTOPLANKTON COMMUNITIES OF PRAIRIE SALINE LAKES

SS32:

Stable Isotope Natural Abundance: Applications in Marine and Freshwater Research

39. Rust, T. M.; Popp, B. N.: DISTRIBUTIONS AND ISOTOPIC COMPOSITIONS OF NITROUS OXIDE IN THE SUBANTARCTIC SOUTHERN OCEAN
40. Schell, D. M.; Schwaner, T. D.: NITROGEN ISOTOPE RATIOS AND QUICK DEATH IN TASMANIA
41. Adams, T. S.; Sterner, R. W.: THE EFFECT OF DIETARY NITROGEN CONTENT ON DEL 15N ENRICHMENT ACROSS TROPHIC LEVELS
42. Voss, M.; Montoya, J.: NITROGEN ISOTOPE PATTERNS IN THE OXYGEN DEFICIENT WATERS OF THE EASTERN TROPICAL Pacific Ocean (ETNP)
43. Freudenthal, T.; Neuer, S.; Wefer, G.: NITROGEN ISOTOPES OF SINKING PARTICULATE MATTER ALONG A PRODUCTIVITY GRADIENT IN THE CANARY BASIN
44. Benthien, A.; Andersen, N.; Mueller, P. J.; Schneider, R. R.; Wefer, G.: ALKENONE DELTA C-13 DERIVED PCO2 LEVELS IN SURFACE WATERS OF THE SOUTH ATLANTIC: HOLOCENE VS. LAST GLACIAL MAXIMUM
45. Roberts, B. J.; Ostrom, N. E.; Howarth, R. W.; Bergsma, T. T.: ARE RESPIRATION RATES EQUAL OVER DIEL CYCLES IN AQUATIC ECOSYSTEMS?: A NEW METHOD AND APPLICATION USING NATURAL ABUNDANCE OXYGEN ISOTOPES

Tuesday Poster Sessions

46. Kline, T. C.: SHIFTS IN NATURAL CARBON AND NITROGEN ISOTOPE COMPOSITION BASED FOOD WEB DEPENDENCIES PROVIDE EVIDENCE OF BIOPHYSICAL COUPLING IN PRINCE WILLIAM SOUND, ALASKA
47. Fry, B.; Bern, A. L.; Ross, M. S.; Meeder, J. F.: STABLE ISOTOPE STUDIES OF NITROGEN USE BY THE RED MANGROVE, RHIZOPHORA MANGLE L., IN SOUTH FLORIDA
48. Knoff, A. J.; Erwin, M.; Macko, S. A.: AN ANALYSIS OF THE DIET OF LAUGHING GULLS (LARUS ATRICILLA) IN COASTAL VIRGINIA USING THE STABLE ISOTOPIC COMPOSITIONS OF CARBON, NITROGEN, AND SULFUR IN SEVERAL TISSUE TYPES
- SS34:**
Composition and Reactivity of DOC: Comparisons Across Freshwater and Marine Environments
49. Sanderson, M. P.; Lomas, M. W.; Glibert, P. M.; Bronk, D. A.: TOTAL DISSOLVED NITROGEN ANALYSIS: COMPARISON BETWEEN THE PERSULFATE, UV, AND HIGH TEMPERATURE OXIDATION METHODS
50. Lobbes, J.; Gerhard, K.: COMPOSITIONAL CHARACTERISTICS OF RIVERINE ORGANIC MATTER ENTERING THE ARCTIC OCEAN
51. Deflandre, B.; Gagné, J.: A RAPID METHOD FOR DETERMINING DISSOLVED ORGANIC CARBON IN MARINE SEDIMENT PORE WATERS USING NANOLITER SAMPLE VOLUMES
52. Zanardi, E.; Moore, C.; Clark, C.; Zika, R.: FLUORESCENCE LIFETIMES OF SIZE-FRACTIONATED CDOM IN A SOUTH FLORIDA RIVERINE TO MARINE TRANSITION ZONE
53. Engbrodt, R.; Bussmann, I.; Kattner, G.: REACTIVITY AND SELECTIVITY OF XAD RESINS FOR THE EXTRACTION OF POLAR MARINE HUMIC SUBSTANCES
54. Morell, J. M.; Corredor, J. E.: PHOTOMINERALIZATION OF ORINOCO RIVER PLUME DOM: A LATITUDE-DEPENDENT EMPIRICAL MODEL FOR THE ASSESSMENT OF POTENTIAL AMMONIUM YIELD
55. Bauer, J. E.; Raymond, P. R.; Wolgast, D. M.; Hopkinson, C. S.: 14C AND 13C EVIDENCE FOR UTILIZATION OF TERRIGENOUS DOC IN ESTUARIES
- SS40:**
Mechanisms Regulating Microbial Diversity and Population Dynamics
56. Palenik, B. P.; Toledo, G.; Brahamsha, B.; Goericke, R.: PHYSIOLOGICAL CHARACTERIZATION OF SYNECHOCOCCUS STRAINS FROM THE CALIFORNIA CURRENT
57. Worm, J.; Jensen, L.; Nybroe, O.; Søndergaard, M.: CROSS-FEEDING AND COMPETITION BETWEEN PROTEOLYTIC AND NON- PROTEOLYTIC PSEUDOMONAS BACTERIA.
58. Wilhelm, S. W.; Smith, R. E. H.: VIRAL ECOLOGY AND IMPACTS ON THE BACTERIAL COMMUNITY IN LAKE ERIE
59. Zani, S.; Mellon, M. T.; Allen, A. E.; Booth, M. G.; Frischer, M. E.; Zehr, J. P.: CHARACTERIZATION OF ASSIMILATORY NITRATE REDUCTASE GENES OF MARINE MICROBIAL COMMUNITIES
60. Chen, F.; Lu, J.; Hodson, R. E.: RuBisCO GENES REVEAL A CLOSE RELATIONSHIP BETWEEN SYNECHOCOCCUS STRAINS WH7803 AND WH8101
61. Shapiro, L. P.; Berardesco, G.; Johnson, M. D.: ANALYSIS OF BACTERIA LIVING IN ASSOCIATION WITH MARINE PHYTOPLANKTON BY DIRECT PCR AMPLIFICATION AND DGGE ANALYSIS
62. Chen, F.; Lu, J.; Hodson, R. E.: DISTRIBUTION OF CYANOPHAGES AND TOTAL VIRUSES ALONG GEORGIA COASTAL RIVERS
63. Methe', B. A.; Zehr, J. P.: COMPARISON OF BACTERIAL DIVERSITY IN ADIRONDACK LAKES BASED ON 16S RIBOSOMAL RNA AND DNA DERIVED SEQUENCES: IMPLICATIONS FOR RNA AND DNA-BASED AMPLIFICATION APPROACHES
64. Keough, B. P.; Hicks, R. E.: DISTRIBUTION OF ARCHAEOAL NUCLEIC ACIDS IN PICOPLANKTON FROM GREAT LAKES OF THE WORLD
65. Rohwer, E.; Segall, A.; Breitbart, M.; Steward, G. F.; Azam, F.: THE COMPLETE GENOMIC SEQUENCE OF ROSEOPHAGESP14
66. Middelboe, M.; Hagström, Å.: EFFECTS OF VIRUSES ON BACTERIAL POPULATION DYNAMICS
67. Suzuki, M. T.; Taylor, L. T.; DeLong, E. F.: QUANTITATIVE ANALYSIS OF SMALL SUBUNIT RIBOSOMAL RNA GENES IN MIXED MICROBIAL POPULATIONS USING 5' NUCLEASE ASSAYS.
- SS41:**
Probing Into Physiological State "In Situ" at the Individual Cell Level
68. Howard-Jones, M. H.; Frischer, M. E.; Williams, S. C.; Verity, P. G.: DISTINGUISHING BETWEEN LIVING AND NON-LIVING CELLS : DEVELOPMENT OF A MODIFIED VITAL STAIN AND PROBE METHOD
69. Binder, B. J.; Liu, Y.: INFLUENCE OF DIFFERENT GROWTH-LIMITING FACTORS ON THE RELATIONSHIP BETWEEN MACROMOLECULAR COMPOSITION AND GROWTH RATE IN A MARINE SYNECHOCOCCUS SPP.
70. Karner, M. B.; Taylor, T. L.; DeLong, E. F.; Karl, D. M.: BACTERIAL AND ARCHAEOAL DISTRIBUTIONS AT THE HAWAI'I OCEAN TIME-SERIES STATION, ALOHA, IN THE NORTH PACIFIC OCEAN
71. Olson, R. J.; Sosik, H. M.: AN IN SITU FLOW CYTOMETER FOR THE OPTICAL ANALYSIS OF INDIVIDUAL PARTICLES IN SEAWATER
72. Dijkman, N. A.; Kroon, B. M. A.: PHOTOCHEMICAL VIEW ON P-I CURVES
73. Schaefer, M. C.; Wilkerson, F. P.; Hogue, V.: DEVELOPMENT OF MOLECULAR PROBES FOR FUNCTIONAL GENES OF GLUTAMINE SYNTHETASE IN MARINE PHYTOPLANKTON
74. Sullivan, J. B.; Chen, F.; Hodson, R. E.: CONSTITUTIVE PRODUCTION OF NITRITE REDUCTASE IN PSEUDOMONAS STUTZERI DETECTED BY IN SITU RT-PCR
75. Alfrieder, A.; Paul, J. H.: GENETIC DIVERSITY OF RIBULOSE-1,5-BISPHOSPHATE CARBOXYLASE/OXYGENASE IN MARINE PHYTOPLANKTON INVESTIGATED BY DENATURING GRADIENT GEL ELECTROPHORESIS OF PCR-AMPLIFIED GENE FRAGMENTS
76. Berman-Frank, I. R.; Rosenberg, T.; Vardi, A.; Hadas, O.; Kaplan, A.; Levine, A.: CO2 LIMITATION INDUCES OXIDATIVE STRESS AND PROGRAMMED CELL DEATH IN THE DINOFLAGELLATE PERIDINIUM GATUNENSE
77. Lesser, M. P.; Gorbunov, M.; Zbigniew, K.; Falkowski, P.: ACTIVE CHLOROPHYLL FLUORESCENCE AND CORALS: A NON-DESTRUCTIVE MEASUREMENT OF ENVIRONMENTAL STRESS IN SITU
78. Paul, J. H.; Ewert, M.; Wawrik, B.; Stokes, R.: NOVEL RNA TECHNOLOGY FOR MICROBIAL DETECTION IN AQUATIC ENVIRONMENTS

Tuesday Poster Sessions

SS43:

Applications Of New Satellite and Aircraft Sensors in Oceanography and Limnology

79. Siegel, D. A.: ORTHOGONAL VIEWS OF THE GLOBAL OCEAN BIOSPHERE USING SEAWIFS
80. Yoder, J. A.; Kennelly, M. A.: WIND STRESS AND SATELLITE CHLOROPHYLL DISTRIBUTIONS WITHIN THE NORTH ATLANTIC BASIN.
81. Schollaert, S. E.; Yoder, J. A.; Merrill, J. T.: CHARACTERIZING SATELLITE-DERIVED AEROSOL OPTICAL THICKNESSES IN THE NORTH ATLANTIC WITH GROUND-TRUTH AEROSOL CONCENTRATIONS
82. Stegmann, P. M.: LARGE-SCALE DUST PLUMES AS SEEN FROM SATELLITE
83. Mobley, C. D.: EFFECTS OF NON-LAMBERTIAN BOTTOM BOUNDARIES ON UPWELLING RADIANCES
84. Strutton, P. G.; Chavez, F. P.; McPhaden, M. J.: REMOTE SENSING OF BIOLOGICAL-PHYSICAL COUPLING IN THE EQUATORIAL PACIFIC
85. Barnard, A. H.; Zaneveld, J. V.; Pegau, W.; Cowles, T. J.: ASSESSING A KEY IMPLICIT ASSUMPTION IN OCEAN COLOR REMOTE SENSING ALGORITHMS: OPTICAL HOMOGENEITY.
86. Kudela, R. M.; Chavez, F. P.: THE EL NINO ADVANTAGE: BIO-OPTICAL VARIABILITY IN CENTRAL CALIFORNIA OBSERVED IN THE ABSENCE OF A STRONG UPWELLING SIGNAL
87. Warrington, D. S.; Wells Budd, J.; Stumpf, R. P.: REMOTE SENSING OF GREAT LAKES WATER QUALITY USING SEAWIFS (SEA-VIEWING WIDE FIELD-OF-VIEW SENSOR) IMAGERY
88. Rhea, W. J.; Lamela, G. M.; Snyder, W. A.; Barnard, A. H.: SHIP BOARD MEASUREMENTS OF IN-WATER PROPERTIES AND REMOTE SENSING REFLECTANCE FOR AIRCRAFT SENSOR VALIDATION IN EAST SOUND, ORCAS ISLAND, WASHINGTON
89. Filippi, A. M.; Carder, K. L.; Davis, C. O.: AQUATIC IMAGING SPECTROSCOPY ISSUES: NRL PHILLS SENSOR CALIBRATION USING A COASTAL TREE-SHADOW METHOD
90. Stumpf, R.; Ransibrahmanakul, V.; Arnone, R.; Steward, R.; Carder, K.; Tester, P.; Tomas, C.: SEAWIFS ALGORITHMS FOR APPLICATION TO TURBID COASTAL WATERS OF THE US SOUTHEAST AND GULF OF MEXICO

SS44:

Recent Advances in Integrating Ecosystem Models and Observations

91. Yamashiki, Y. Y.; Kumagai, M. M.; Matsui, S. S.: DEVELOPMENT OF THREE DIMENSIONAL HYDRODYNAMIC AND ECOLOGICAL MODEL AND ITS APPLICATION INTO STRATIFIED LAKE
92. Stacey, M. T.; Batchelder, H. P.; Powell, T. M.; Twombly, S.: ESTIMATION OF ZOOPLANKTON VITAL RATES USING AN AUGMENTED KALMAN FILTER
93. Gunson, J.; Oschlies, A.; Garçon, V.: ASSIMILATION OF SATELLITE COLOUR DATA WITH A COUPLED PHYSICAL-BIOLOGICAL MODEL OF THE NORTH ATLANTIC OCEAN
94. Michels, E.; Cottenie, K.; De Meester, L.; Coppin, P.: MODELLING "EFFECTIVE GEOGRAPHIC DISTANCE" BETWEEN A SET OF INTERCONNECTED PONDS: FIRST VALIDATION USING FIELD DATA ON DISPERSAL RATES

95. Cottenie, K.; Michels, E.; De Meester, L.: THE IMPLICATIONS OF CONNECTIVITY AND ECOLOGICAL DIFFERENCES IN A SET OF INTERCONNECTED PONDS ON THE STRUCTURING OF LOCAL ZOOPLANKTON COMMUNITIES
96. Meixner, T.; Bastidas, L. A.; Gupta, H. V.; Bales, R. C.: MULTI-CRITERIA PARAMETER SENSITIVITY AND ESTIMATION WITH THE ALPINE HYDROCHEMICAL MODEL

SS47:

Spatial and Temporal Dimensions of Large River Ecosystems

97. Erway, M. M.; Landers, D. H.; VanSickle, J.; Trobaugh, D.: PHYSICO-CHEMICAL CHARACTERISTICS AND RELATIONSHIPS OF OFF-CHANNEL HABITATS OF THE WILLAMETTE RIVER, OREGON
98. Lavigne, H. R.; Greene, M.; Landers, D. H.: DIEL MOVEMENT OF ADULT LARGESCALE SUCKER IN THE ALLUVIAL UPPER WILLAMETTE RIVER, OREGON, DURING REGULATED SUMMER LOW-FLOW
99. Santoro, E.; Sharp, J. H.: LONG TERM IMPROVEMENT IN WATER QUALITY IN THE DELAWARE ESTUARY
100. Schrutka, S.; Holarek, C.; Heiler, G.; Hein, T.; Queric, N. V.; Schiemer, F.: HYDROLOGICAL CONNECTIVITY: MAIN FACTOR FOR METAZOOPLANKTON GRAZING IN FLOODPLAINS OF THE RIVER DANUBE, AUSTRIA
101. Riedler, P.; Schagerl, M.; Heiler, G.; Hein, T.; Holarek, C.; Schrutka, S.; Schiemer, F.: HYDROLOGICAL CONNECTIVITY: A KEY-FACTOR FOR PHYTOPLANKTON COMMUNITIES IN FLOODPLAINS OF THE RIVER DANUBE, AUSTRIA

SS49:

Ecological Stoichiometry in Aquatic Ecosystems: New Directions for Navigating the Food Web in the Next Century

102. Schwalbach, M. S.; Sterner, R. W.: TEMPORAL SCALES OF MINERAL NUTRIENT SUPPLY AND ZOOPLANKTON GROWTH RATE.
103. Lampman, G.; Caraco, N.; Cole, J.: A METHOD FOR MEASUREMENT OF PARTICULATE C AND P ON THE SAME FILTERED SAMPLE
104. Sundareshwar, P. V.; Morris, J. T.: DIFFERENTIAL NUTRIENT LIMITATION AMONG TROPHIC GROUPS IN A PRISTINE SALT MARSH ESTUARY, SOUTH CAROLINA, USA
105. Urabe, J.; Sterner, R. W.: FOOD QUALITY AND LIFE QUALITY OF DAPHNIA

CS56:

DOM: Sources and Cycling

106. Grembowicz, K. P.; Shiller, A. M.: VALIDATION OF FLOW FIELD-FLOW FRACTIONATION AS A SUITABLE TOOL FOR CHARACTERIZING FLUVIAL COLLOIDS
107. Sebetich, M. J.; Horner-Neufeld, G.: DECOMPOSITION OF TERRESTRIAL LEAVES AND ACORNS IN A MESOTROPHIC LAKE IN NORTHERN NEW JERSEY, USA

Tuesday Poster Sessions

CS67:

Zooplankton: Temporal and Spatial Dynamics

108. Chandra, S.; Brett, M. T.; Navarra, D. C.; Liston, A. M.; Ayers, S.: A SEASONAL COMPARISON OF POLYUNSATURATED FATTY ACID (PUFA) CONCENTRATIONS IN TWO DIFFERENT AQUATIC SYSTEMS
109. Scheurer, D. L.; Gardner, R. H.: SPATIAL HETEROGENEITY AND TROPHIC DYNAMICS OF A PELAGIC MODEL
110. Ramirez, J. T.; Garcia, J. R.: SPATIAL DISTRIBUTION AND TAXONOMIC STRUCTURE OF LARVAL REEF FISHES ACROSS A NERITIC-OCEANIC GRADIENT, AT SOUTHWEST PUERTO RICO
111. Earle, J. D.; Buchanan, M.; Krestian, B. J.; Black, A. R.: THE PREY SIZE PREFERENCE OF THE AQUATIC MITE FORELIA CONSUMING DAPHNIA PULEX
112. Gonzalez Sagrario, M.; Escalante, A. H.: DYNAMICS OF CLADOCERA AND ROTIFERA PLANKTONIC SPECIES IN A POLYMIC TIC LAKE(LAKE OF THIRD ORDER) IN SOUTHERN SOUTH AMERICA
113. Rapin, M. K.; Wishner, K. F.: SEASONAL AND SPATIAL TRENDS OF MACROZOOPLANKTON DISTRIBUTIONS IN THE ARABIAN SEA OXYGEN MINIMUM ZONE

Wednesday Morning Oral Sessions

Presenting authors are underlined. Complete abstract and author information can be found at www.aslo.org/santafe99.

SS03:

Hydrodynamics and Material Transport Across Boundary Layers: The Interface Between Biology and Physics

- Chairs: Walter Dodds, *Kansas State University*
Frank Sansone, *University of Hawaii*
- Location: Eldorado, Anasazi North
- 8:30 a.m. Frick, W. E.; Sigleo, A. C.: A CONCEPTUAL MODEL OF TRANSPORT AND ENTRAINMENT ACROSS BOUNDARY LAYERS
- 8:45 a.m. Crawford, S. M.; Sanford, L. P.: DIFFUSIONAL VERSUS KINETIC CONTROL OF BOUNDARY FLUXES ACROSS SOLID-WATER INTERFACES
- 9:00 a.m. Porter, E. T.; Sanford, L. P.; Crawford, S. M.; Gust, G.; Porter, F.: SCALING WATER COLUMN MIXING AND BOUNDARY-LAYER FLOW IN STUDIES OF BENTHIC-PELAGIC COUPLING
- 9:15 a.m. Schaffner, L. C.: DISTURBANCE PROCESSES IN THE BENTHIC BOUNDARY LAYER OF AN ESTUARINE TURBIDITY MAXIMUM: IMPLICATIONS FOR BENTHIC COMMUNITY STRUCTURE AND FUNCTION
- 9:30 a.m. Ackerman, J. D.; Loewen, M. R.; Hamblin, P. H.: ZEBRA MUSSEL IMPACTS ON THE OFFSHORE ENVIRONMENT OF LAKE ERIE: BENTHIC-PELAGIC COUPLING
- 9:45 a.m. Edwards, W. J.; Culver, D. A.: THE ROLE OF TURBULENT MIXING IN BENTHIC-PELAGIC COUPLING IN THE WESTERN BASIN OF LAKE ERIE (USA)
- 10:00 a.m. Break**
- 10:30 a.m. Finelli, C. M.; Hart, D. D.: SEPARATING THE ECOLOGICAL EFFECTS OF MEAN FLOW SPEED FROM TURBULENCE INTENSITY: AN EXPERIMENTAL APPROACH
- 10:45 a.m. Kozerski, H. P.; Koehler, J. J.; Wanner, S. S.: SESTON SEDIMENTATION IN MOVING WATERS, AN APPROACH USING A NEW PLATE TRAP
- 11:00 a.m. Ockenfeld, K.; Koehler, J.: CHANGES OF SPECIFIC PRIMARY PRODUCTION ALONG A LAKE-RIVER-SYSTEM
- 11:15 a.m. Thomas, S. A.; Minshall, G. W.; Newbold, J. D.; Cushing, C. E.: BENTHIC - WATER COLUMN EXCHANGE OF FINE PARTICULATE ORGANIC MATTER IN LOTIC ECOSYSTEMS
- 11:30 a.m. Brugger, A.; Reitner, B.; Kolar, I.; Quéric, N.; Herndl, G. J.: DYNAMICS OF BACTERIA AND ORGANIC CARBON IN RIVER SEDIMENTS: IMPORTANCE OF PARTICULATE ORGANIC CARBON
- 11:45 a.m. Huettel, M. H.; Rusch, A. C.: FLOW-INDUCED TRANSPORT OF PLANKTONIC ALGAE INTO SANDY SEDIMENTS
- 12:00 p.m. Sansone, F. J.; Falter, J. L.; Haberstroh, P. R.: WAVE-INDUCED POREWATER-SEAWATER MIXING IN PERMEABLE SEDIMENTS
- 12:15 p.m. Falter, J. L.; Sansone, F. J.: FACTORS CONTROLLING PORE WATER GEOCHEMISTRY AND REDOX STRUCTURE WITHIN A WAVE-DRIVEN SEDIMENT

SS08:

Management of Estuarine and Coastal Waters for the 21st Century: Coordination Among Agencies, Academia, and Industry

- Chairs: Jonathan H. Sharp, *University of Delaware*
Martin E. Lebo, *Weyerhaeuser Company*
Daniel Bottom, *Oregon Dept. of Fish and Wildlife*
- Location: Sweeney, #3
- 8:30 a.m. Magnien, R. E.; Boynton, W. R.: THE MARRIAGE OF MONITORING AND RESEARCH IN SUPPORT OF CHESAPEAKE BAY MANAGEMENT DECISIONS
- 8:45 a.m. Stram, D. L.; Kincaid, C. R.; Campbell, D. E.; Martinez, R.: NUMERICAL MODELING OF ANTHROPOGENIC IMPACTS ON THE RIO CHONE ESTUARY, ECUADOR
- 9:00 a.m. Nemazie, D. A.; Wenzel, L.: MARYLAND'S TRIBUTARY STRATEGY PROGRAM: ENGAGING STAKEHOLDERS IN A MULTI-AGENCY EFFORT TO REDUCE NUTRIENT LOADS INTO CHESAPEAKE BAY
- 9:15 a.m. Collier, C. R.; Webber, P. J.; Sharp, J. H.; Gallagher, T. W.; Mooney, K. G.: TEAM EFFORT TO IMPROVE WATER QUALITY OF THE TIDAL DELAWARE RIVER
- 9:30 a.m. Leonard, D. L.: MITIGATING THE IMPACTS OF AQUACULTURE ON ESSENTIAL FISH HABITAT
- 9:45 a.m. Whittemore, R. C.: PROTECTING THE GULF OF MAINE FROM LAND-BASED ACTIVITIES - AN EXERCISE IN INTERNATIONAL COOPERATION AND PARTNERSHIPS
- 10:00 a.m. Break**
- 10:30 a.m. Jones, K. K.; Bottom, D. L.; Moore, K. S.: MULTI-SCALE COOPERATIVE INVENTORY PROJECT: AN INTEGRAL COMPONENT OF THE OREGON PLAN FOR SALMON AND WATERSHEDS
- 10:45 a.m. Wen, M. E.; Pelletier, C. A.: MONITORING SUBMARINE TAILINGS OUTFALLS IN AN INCREASINGLY SKEPTICAL WORLD
- 11:00 a.m. Roelke, D. L.; Kennedy, C. D.; Weidemann, A. D.: SIGNAL TO NOISE RATIO AND SPECTRAL RESOLUTION REQUIREMENTS OF DISCRIMINANT AND FOURTH-DERIVATIVE ANALYSIS OF PHYTOPLANKTON ABSORPTION SPECTRA
- 11:15 a.m. Lebo, M. E.: COOPERATIVE EFFORTS BY A FOREST PRODUCTS COMPANY TO ADDRESS EUTROPHICATION IN EASTERN NORTH CAROLINA, USA
- 11:30 a.m. Berman, M. S.; Deacutis, C.: A COOPERATIVE STUDY OF NARRAGANSETT BAY, RHODE ISLAND, USA
- 11:45 a.m. Muggli, D. L.; Mastrangelo, L.; Pelletier, P.: PERFORMANCE VERIFICATION OF THE OUTFALL/DIFFUSER SYSTEM AT COLOSO IN CHILE VIA AN OCEANOGRAPHIC DYE SURVEY: AN EXAMPLE OF ENVIRONMENTALLY SOUND WASTE MANAGEMENT
- 12:00 p.m. Field, K.; Bernhard, A.; Barry, A.: GENETIC MARKERS FROM ANAEROBIC BACTERIA USED TO DISCRIMINATE HUMAN AND CATTLE FECAL CONTAMINATION OF ESTUARINE WATERS WITHOUT CULTURING INDICATOR ORGANISMS
- 12:15 p.m. Rudnick, S. M.; Chen, R. F.; Gardner, G. B.: TIME-RESOLVED, LASER-INDUCED FLUORESCENCE MONITORING AND MODELING OF PYRENE CONCENTRATION AND DISTRIBUTION IN BOSTON HARBOR

Wednesday Morning Oral Sessions

SS21:

Nutritional Ecology of Planktonic and Benthic Invertebrates

Chairs: Gary S. Kleppel, *University of South Carolina*
Brian T. Hentschel, *Rutgers University*

Location: Hilton, Mesa C

- 8:30 a.m. Jumars, P. A.; Mayer, L. W.: TANKS-IN-SERIES MODELS OF ANIMAL DIGESTION TO PREDICT PERFORMANCE
- 8:45 a.m. Anderson, T. R.: STOICHIOMETRIC MODELS OF ZOOPLANKTON NUTRITION
- 9:00 a.m. Jonasdottir, S. H.: FOOD QUALITY VS. PRODUCTION OF MARINE COPEPODS
- 9:15 a.m. Schulz, K. L.; Sterner, R. W.; Hessen, D. O.; Elser, J. J.: NUTRITIONAL 'ZONES OF EXCLUSION' - DO THEY EXIST OUTSIDE THE LABORATORY?
- 9:30 a.m. Brett, M. T.; M ller-Navarra, D. C.; Park, S.: AN EMPIRICAL ANALYSIS OF MINERAL P LIMITATION'S IMPACT ON ALGAL FOOD QUALITY FOR FRESHWATER ZOOPLANKTON
- 9:45 a.m. Bock, M. J.; Mayer, L. M.; Weston, D. P.: DIETARY EFFECTS ON THE DIGESTIVE CHEMISTRY OF BENTHIC POLYCHAETES: ENZYMES AND SURFACTANTS

10:00 a.m. Break

- 10:30 a.m. Bundy, M. H.; Sanders, J. G.; Paffenhofer, G. A.; Oppert, C. J.: POPULATION RESPONSES OF THE CALANOID COPEPOD ACARTIA TONSA TO DIFFERENCES IN FOOD QUALITY: MESOCOSM AND LABORATORY EXPERIMENTS
- 10:45 a.m. Boersma, M.; Sch ps, C.: FACTORS DETERMINING FOOD QUALITY FOR HERBIVOROUS ZOOPLANKTON
- 11:00 a.m. Koski, M.; Engstrom, J.; Viitasalo, M.: THE EFFECT OF BLUE-GREEN ALGAE ON EGG PRODUCTION AND HATCHING SUCCESS OF A CALANOID COPEPOD EURYTEMORA AFFINIS
- 11:15 a.m. Dam, H. G.; Colin, S. P.; Ledger, J. F.: EFFECTS OF THE DINOFLAGELLATE PROROCENTRUM MINIMUM ON FEEDING, FECUNDITY AND EGG HATCHING OF THE COPEPOD ACARTIA TONSA
- 11:30 a.m. Irigoin, X. X.; Meyer-Harms, B. B.; Harris, R. R.; Head, R. R.: SEASONAL VARIATIONS IN THE SELECTIVE FEEDING BEHAVIOUR OF CALANUS HELGOLANDICUS.
- 11:45 a.m. Kleppel, G. S.; Limbeck, S. J.: ANOMOLOUSLY LOW EGG PRODUCTION RATES BY ACARTIA TONSA IN FLORIDA BAY: LINKS TO SESTON NUTRITIONAL QUALITY
- 12:00 p.m. Yahel, G.; Sharp, J. H.; Savidge, K. B.; Marie, D.; Vaultot, D.; Hese, C.; Lazar, B.; Genin, A.: PHYTOPLANKTON, BACTERIA AND DOC REMOVAL BY CORAL REEF INVERTEBRATES
- 12:15 p.m. Selph, K.; Landry, M.: ENHANCED BACTERIAL GROWTH IN THE PRESENCE OF MARINE NANOFLAGELLATES GROWN IN CONTINUOUS CULTURE

SS32-III:

Stable Isotope Natural Abundance: Applications in Marine and Freshwater Research

Chairs: Greg Rau, *University of California at Santa Cruz*
Brian Fry, *U.S. Geological Survey*

Location: Eldorado, Anasazi South

- 8:30 a.m. Tobias, C. R.; Macko, S. A.; Anderson, I. A.: TRACKING THE FATE OF GROUNDWATER NITRATE DURING DISCHARGE TO A MESOHALINE MARSH: RESULTS FROM AN ISOTOPICALLY ENRICHED INSITU TRACER EXPERIMENT

- 8:45 a.m. Sickman, J. O.; Chang, C. C.Y.; Kendall, C.; Melack, J. M.: DETERMINATION OF NITRATE SOURCES IN CATCHMENTS DURING SNOWMELT USING OXYGEN AND NITROGEN ISOTOPES OF NITRATE; SIERRA NEVADA, CALIFORNIA

- 9:00 a.m. Finlay, J. C.; Power, M. E.; Cabana, G.: EFFECTS OF WATER VELOCITY ON ALGAL CARBON ISOTOPE RATIOS: IMPLICATIONS FOR RIVER FOOD WEB STUDIES

- 9:15 a.m. Cabana, G.; Rainey, W.; Finlay, J.; Power, M.; Kendall, C.; Schmitt, C.: NITROGEN ISOTOPE RATIOS: INDICATORS OF SOURCE OF N OR N TRANSFORMATIONS?

- 9:30 a.m. Cifuentes, L. A.; Kaldy, J. E.; Eldridge, P. E.: AN INVERSE MODEL OF CARBON CYCLING IN THE NUECES ESTUARY, TEXAS: IMPORTANCE OF ISOTOPIC CONSTRAINTS

- 9:45 a.m. Chanton, J. P.; Chasar, L. S.; Petrosky, T.; Koenig, C.; Coleman, F.; Bevis, T.; Prasad, A.: PAST AND PRESENT TROPHIC STRUCTURE OF FLORIDA BAY: STABLE ISOTOPE ANALYSES

10:00 a.m. Break

- 10:30 a.m. Larsen, B.: EUTROPHICATION SIGNALS IN COASTAL BALTIC SEA SEDIMENTS

- 10:45 a.m. MacAvoy, S. E.; Macko, S. A.; McIninch, S.; Garman, G. C.: QUANTIFYING THE CONTRIBUTION OF ANADROMOUS CLUPEID FISH TO THE DIET OF AN INTRODUCED, APEX PREDATOR (BLUE CATFISH, ICTALURUS FURCATUS) IN TIDAL FRESHWATER USING STABLE ISOTOPES

- 11:00 a.m. Thorrold, S. R.; Swart, P. K.: STABLE ISOTOPE AND TRACE ELEMENT MARKERS IN OTOLITHS: NATURAL TAGS OF NATAL LOCATION AND MIGRATION PATTERNS OF MARINE FISH

- 11:15 a.m. Masterson, C. F.; Skubinna, J. P.; Ostrom, N. E.; Ostrom, P. H.; Hall, D. J.; Coon, T. G.: USING STABLE ISOTOPES TO INVESTIGATE SEASONAL VARIATION IN THE FOOD WEB OF GRAND TRAVERSE BAY, LAKE MICHIGAN

- 11:30 a.m. Harvey, C. J.; Kitchell, J. F.: FOOD WEB STRUCTURE AND SPATIAL HETEROGENEITY IN WESTERN LAKE SUPERIOR

- 11:45 a.m. Ryals, K. G.; Luecke, C.: STABLE ISOTOPE ANALYSIS AS AN INDICATOR OF WALLEYE PRODUCTIVITY IN FOUR UTAH RESERVOIRS.

- 12:00 p.m. Bindler, R.; Renberg, I.; H gberg, P.: RECORDS OF ¹³C, ¹⁵N, AND ³⁴S IN SEDIMENTS OF AN ACIDIFIED LAKE IN SOUTHERN SWEDEN: THE IMPORTANCE OF LONG-TERM MECHANISMS FOR THE EVOLUTION OF LAKE pH

- 12:15 p.m. Jahren, A.; Arens, N.; Cabena, L.: VASCULAR LAND PLANT ISOLATES FROM NEAR-SHORE SEDIMENTS: IMPLICATIONS FOR DELTA-¹³C DETERMINATION OF THE PALEOATMOSPHERE

SS38:

Microbial Control of Oceanic Carbon Biogeochemistry

Chairs: Fereidoun Rassoulzadegan, *Univ. Pierre & Marie Curie*
Farooq Azam, *University of California at San Diego*

Location: Hilton, Mesa A

- 8:30 a.m. Biddanda, B. A.; Ogdahl, M. L.; Cotner, J. B.: CARBON FLUX THROUGH BACTERIOPLANKTON IN LAKES AND THE OCEAN: REGULATION BY SYSTEM PRODUCTIVITY

- 8:45 a.m. Rivkin, R. B.; Legendre, L.; Anderson, M.: BIOGEOCHEMICAL CYCLING OF BIOGENIC CARBON IN OCEANS: AN ALTERNATIVE ROLE FOR THE MICROBIAL FOOD WEB

Wednesday Morning Oral Sessions

- 9:00 a.m. Ho, T.; Scranton, M. I.; Taylor, G. T.; Iabichella, M.: THE IMPORTANCE OF MANGANESE CYCLING FOR ORGANIC CARBON DECOMPOSITION IN THE WATER COLUMN OF THE CARIACO BASIN
- 9:15 a.m. Covert, J. S.; Lala, P. N.; Moran, M. A.: COMPOSITION OF MARINE BACTERIAL COMMUNITIES UTILIZING HIGH AND LOW MOLECULAR WEIGHT FRACTIONS OF DISSOLVED ORGANIC MATTER
- 9:30 a.m. Steward, G. F.; Long, R. A.; Azam, F.: MEASURING BACTERIAL GROWTH RATES IN AQUATIC ENVIRONMENTS: A NEW APPROACH
- 9:45 a.m. Pelegri, S. P.; Rassoulzadegan, F.: COLLOIDAL AND DISSOLVED ORGANIC CARBON REGULATION BY AN HETEROTROPHIC NANOFLLAGELLATE
- 10:00 a.m. Break**
- 10:30 a.m. Brussaard, C. P.D.; Bratbak, G.: VIRAL CONTROL OF PHYTOPLANKTON BLOOMS
- 10:45 a.m. Mulholland, M. R.; Capone, D. G.: NITROGEN AND CARBON UTILIZATION BY TRICHODESMIUM SPP.
- 11:00 a.m. Legendre, L.; Rassoulzadegan, F.: STABLE VERSUS UNSTABLE PLANKTONIC FOOD WEBS IN OCEANS
- 11:15 a.m. Thingstad, T. F.; Havskum, H. H.: WHY SI SHOULD INTERFERE WITH BACTERIAL ABILITY TO CONSUME GLUCOSE ADDED TO MESOCOSMS.
- 11:30 a.m. Havskum, H.; Thingstad, F.; Scharek, R.; Peters, F.; Alcaraz, M.; Schluter, L.; Dolan, J.: ENRICHMENTS WITH PHYTOPLANKTON NUTRIENTS CAN LEAD TO A REPLACEMENT OF ALGAE BY BACTERIA
- 11:45 a.m. Taylor, G. T.T.; Scranton, M. I.; Iabichella, M.; Chistoserdov, A. Y.; Madrid, V. M.: CHEMOLITHOTROPHY IN THE CARIACO BASIN, A SIGNIFICANT SUBOXIC SOURCE OF ORGANIC CARBON PRODUCTION
- 12:00 p.m. Friedrich, J.; Zepp, K.; Pimenov, N.; Wehrli, B.: BIOGEOCHEMICAL AND MICROBIAL PROCESSES AT THE AEROBIC-ANAEROBIC INTERFACE OF THE BLACK SEA
- 12:15 p.m. Huot, Y.; Cullen, J. J.; Jeffrey, W. H.; Davis, R. F.: A MODEL FOR DNA DAMAGE AND REPAIR IN BACTERIOPANKTON AS INFLUENCED BY VERTICAL MIXING

**SS50:
Atmospheric Deposition: Effects on Marine, Estuarine, and Freshwater Systems**

- Chairs: Jonathan P. Zehr, *Rensselaer Polytechnic Institute*
Gregory B. Lawrence, *U.S. Geological Survey*
- Location: Sweeney, #1
- 8:30 a.m. Galloway, J. N.: EARTH TO AIR TO WATER: THE CHANGING INFLUENCE OF ATMOSPHERIC DEPOSITION ON AQUATIC ECOSYSTEMS
- 9:00 a.m. Johansen, A. M.; Siefert, R. L.; Hoffmann, M. R.: LABILE FERROUS IRON OVER THE TROPICAL ATLANTIC OCEAN
- 9:15 a.m. Herut, B.; Zohary, T.; Robarts, R.; Kress, N.: DO DUST PARTICLES (USING LOESS AS PROXY) PLAY AN IMPORTANT ROLE IN REMOVING DISSOLVED PHOSPHATE FROM THE EASTERN MEDITERRANEAN?
- 9:30 a.m. Peierls, B. L.; Paerl, H. W.: ATMOSPHERIC DEPOSITION OF NITROGEN TO COASTAL WATERS: BIOGEOCHEMICAL AND ECOLOGICAL IMPACTS

- 9:45 a.m. Bowen, J. L.; Kroeger, K. D.; Valiela, I.: HISTORICAL CHANGES IN ATMOSPHERIC NITROGEN DEPOSITION, AND ITS IMPACT ON COASTAL SYSTEMS

10:00 a.m. Break

- 10:30 a.m. Baker, J. E.: DEPOSITION OF GASEOUS NITROGEN SPECIES AND ORGANIC CONTAMINANTS FROM THE ATMOSPHERE TO THE CHESAPEAKEBAZ
- 10:45 a.m. Chaky, D. A.; Chillrud, S. N.; Bopp, R. F.; Kroenke, A. E.; Shuster, E. L.; Walsh, D. C.; Estabrooks, F. D.: ATMOSPHERIC DEPOSITION OF ORGANIC CONTAMINANTS AND TRACE METALS IN THE NEW YORK CITY AREA: INSIGHTS FROM DATED SEDIMENT CORES
- 11:00 a.m. Arnott, S. E.; Yan, N. D.; Keller, W.; Nicholls, K.; Gunn, J. M.: INTERRUPTION OF BIOTIC RECOVERY FROM ACIDIFICATION BY MULTIPLE, DROUGHT-INDUCED STRESSORS
- 11:15 a.m. Shaw, W. H.; Bulaveckas, P. A.: FACTORS AFFECTING PLANKTONIC SPECIES RICHNESS IN ACIDIC LAKES
- 11:30 a.m. Baron, J. S.; Wolfe, A. P.; Nydick, K. R.; Moraska, B. M.; Johnson, B. R.; Minear, T.: ECOSYSTEM RESPONSES TO ELEVATED NITROGEN DEPOSITION IN THE COLORADO FRONT RANGE
- 11:45 a.m. Campbell, D. H.; Kendall, C.; Tonnessen, K. A.; Chang, C. C.; Silva, S. R.: BIOGEOCHEMICAL PROCESSES CONTROLLING NITROGEN RELEASE FROM ALPINE ECOSYSTEMS: DETERMINATION USING ISOTOPES OF NITRATE
- 12:00 p.m. Reddy, M. M.; Aiken, G. R.: SPECIATION AND FRACTIONATION MODELING STUDIES-DISSOLVED ORGANIC CARBON (DOC)-MERCURY INTERACTION
- 12:15 p.m. Heves, A.; Gilmour, C. C.: THE BIOGEOCHEMICAL CONTROLS ON MERCURY METHYLATION ACROSS ECOSYSTEMS

**SS53:
Ocean and Freshwater Research in the Service of Education**

- Chairs: Nancy Marcus, *Florida State University*
David F. Brakke, *Towson University*
Bart De Stasio, *Lawrence University*
- Location: Eldorado, Zia A/B/C
- 8:30 a.m. Cohen, A. S.: THE NYANZA PROJECT: A RESEARCH EXPERIENCE FOR UNDERGRADUATES (REU) IN TROPICAL LAKE STUDIES
- 8:45 a.m. Canuel, E. A.: THE F.I.R.S.T. PROGRAM: FEMALE INITIATION INTO RESEARCH IN SCIENCE AND TECHNOLOGY
- 9:00 a.m. Ambler, J. W.: CHESAPEAKE BAY SYSTEM, A MODEL ECOSYSTEM
- 9:15 a.m. Moore, M. V.; Metaxas, P. T.: A NOVEL VENUE FOR MARINE SCIENCE EDUCATION: LOGAN AIRPORT, BOSTON
- 9:30 a.m. Brakke, D. F.: USING LITERATURE TO TEACH SCIENCE: THOREAU AND LAKES IN THE LANDSCAPE
- 9:45 a.m. Greely, T. M.; Schmidt, N.; Simoniello, C.: OCEAN EDUCATION AT USF: WAVES OF FUN, MULTIDISCIPLINARY LEARNING FOR STUDENTS AND TEACHERS
- 10:00 a.m. Break**
- 10:30 a.m. Cuhel, R. H.; Aguilar, C.: INTERDISCIPLINARY TEAM PROJECTS: A 21ST CENTURY APPROACH TO RESEARCH EXPERIENCE FOR UNDERGRADUATES.

Wednesday Morning Oral Sessions

- 10:45 a.m. Cole, M. L.; Valiela, I.: AN APPROACH TO TEACHING ECOLOGY: LINKING THEORY, RESEARCH, AND MANAGEMENT ISSUES
- 11:00 a.m. Mayer, M. S.: HAVE STUDENTS USE GEOGRAPHIC INFORMATION SYSTEMS AND USGS STREAMFLOW DATA TO EXAMINE THE EFFECT OF LAND USE AND WATERSHED SIZE ON THE WATER AND NUTRIENT BUDGETS OF A LOCAL LAKE
- 11:15 a.m. Axler, R. P.; Munson, B.; Hagley, C. A.; Host, G.; Merrick, G.; Owen, C. J.: WATER ON THE WEB (WOW): MONITORING MINNESOTA'S LAKES ON THE INTERNET
- 11:30 a.m. Johnson, L. B.; Host, G. E.; Richards, C.; White, M.; Sjerven, G.: LAKE SUPERIOR DECISION SUPPORT FOR LAND USE PLANNING
- 11:45 a.m. Bornhold, E. A.; Needoba, J. A.: THE FORMATION OF AN ACTIVE YOUTH ORGANIZATION TO PROMOTE COASTAL ZONE EDUCATION IN BRITISH COLUMBIA, CANADA

CS59: Human Impacts on Aquatic Ecosystems

- Chair: John O'Brien, *University of Kansas*
- Location: Sweeney, #4
- 8:30 a.m. O'Brien, W. J.; Barfield, M. J.: MODELING THE EFFECTS OF CULTURAL EUTROPHICATION AND CLIMATE CHANGE ON OXYGEN DEPLETION IN ARCTIC LAKES
- 8:45 a.m. Patoine, A.; Pineda-Alloul, B.; Prepas, E. E.: ZOOPLANKTON ABUNDANCE AND SPECIES RICHNESS IN UNPERTURBED - AND DEFORESTED-WATERSHED LAKES OF THE NORTHEASTERN CANADIAN BOREAL FOREST
- 9:00 a.m. Valett, H.; Crenshaw, C. L.; Wagner, P. F.: SURFACE - HYPORHEIC INTERACTIONS AND NUTRIENT RETENTION IN HEADWATER STREAMS: OLD GROWTH VS SECOND-GROWTH FORESTS
- 9:15 a.m. Hopkinson, C. S.; Claessens, L.; Rastetter, E.; Vallino, J. J.: NUTRIENT SOURCES, TRANSFORMATIONS AND BUDGETS AT THE WATERSHED SCALE - IPSWICH RIVER, MA.
- 9:30 a.m. Farris, C. N.: NUTRIENT TRANSPORT BETWEEN A TIDALLY RESTRICTED AND A NON-RESTRICTED SALT MARSH
- 9:45 a.m. Chapman, P. J.; Edwards, A. C.; Reynolds, B.: FACTORS INFLUENCING DISSOLVED ORGANIC NITROGEN AND NITRATE IN UPLAND STREAMS OF BRITAIN
- 10:00 a.m. Break**
- 10:30 a.m. Berndt, H. L.; Fisher, T. R.: THE EFFECTS OF WATERSHED NUTRIENT INPUTS ON ESTUARINE ALGAL COMMUNITIES IN THE CHOPTANK RIVER TRIBUTARY OF THE CHESAPEAKE BAY, USA
- 10:45 a.m. Whitall, D. R.; Peierls, B. L.; Showers, W. J.; Paerl, H. W.: QUANTIFICATION OF INORGANIC AND ORGANIC NITROGEN SPECIES IN ATMOSPHERIC DEPOSITION IN THE NEUSE RIVER WATERSHED, NORTH CAROLINA, USA: SOURCES, FLUXES AND SPATIOTEMPORAL VARIABILITY
- 11:00 a.m. Harrington, M. B.; Richardson, T. L.; Pinckney, J. L.; Paerl, H. W.: PHYTOPLANKTON COMMUNITY STRUCTURE AS A FUNCTION OF LIGHT AND NITROGEN FORM IN THE NEUSE RIVER ESTUARY, NORTH CAROLINA

- 11:15 a.m. Madden, C. J.: PATTERNS OF PHYSICO-CHEMICAL PROPERTIES IN NORTHEASTERN FLORIDA BAY WATERS AT REGIONAL AND LOCAL SCALES: EFFECTS ON PRIMARY PRODUCTIVITY
- 11:30 a.m. Carey, A. E.; Lyons, W. B.; Smith, S. H.: HYDROLOGY AND CLIMATE CHANGE IN THE MISSISSIPPI RIVER BASIN
- 11:45 a.m. Richards, C.; Johnson, L. B.; Host, G.: RELATIVE INFLUENCES OF LOCAL AND LARGE SCALE WATERSHED FEATURES ON STREAM ECOSYSTEMS
- 12:00 p.m. Dugdale, R. C.; Marchi, A.; Hogue, V.; Tustin, J.; Wilkerson, F. P.: NUTRIENT CONCENTRATIONS AND NUTRIENT UTILIZATION IN CENTRAL SAN FRANCISCO BAY

CS60: Microbial Web Dynamics: Bacteria to Zooplankton

- Chair: Suzanne Strom, *Shannon Point Marine Center*
- Location: Hilton, Mesa B
- 8:30 a.m. Reitner, B.; Herzig, A.; Herndl, G. J.: DYNAMICS IN BACTERIOPANKTON PRODUCTION IN A SHALLOW, TEMPERATE LAKE (LAKE NEUSIEDL, AUSTRIA): LEUCINE VERSUS THYMIDINE INCORPORATION AND THEIR RELATION TO TEMPERATURE
- 8:45 a.m. Schultz, Jr., G. E.; Ducklow, H.: CHANGES IN BACTERIOPANKTON METABOLIC CAPABILITIES ALONG A SALINITY GRADIENT IN THE YORK RIVER, VA, ESTUARY
- 9:00 a.m. Junge, K.; Staley, J.; Deming, J.: TESTING THE BACTERIAL ENUMERATION ANOMALY IN ARCTIC SEA ICE
- 9:15 a.m. Smith, T. B.: BACTERIVORY IN MIXOTROPHIC FLAGELLATES
- 9:30 a.m. Smalley, G. W.; Coats, D. W.: GRAZING OF THE MIXOTROPHIC DINOFLAGELLATE CERATIUM FURCA ON CILIATE POPULATIONS
- 9:45 a.m. Strom, S. L.; Wolfe, G. V.: ARE PROTOZOAN GRAZERS DETERRED BY PHYTOPLANKTON-PRODUCED CHEMICALS?
- 10:00 a.m. Break**
- 10:30 a.m. Brenner, R. J.; Dagg, M. J.; Ortner, P. B.: MICROPLANKTON GROWTH AND GRAZING DYNAMICS IN FLORIDA BAY, USA
- 10:45 a.m. Adrian, R.; Schneider, B.: THE ROLE OF COPEPODS AND CLADOCERANS IN STRUCTURING MICROBIAL FOOD WEBS
- 11:00 a.m. Sieracki, M. E.; Gifford, D.; Thier, E.: COPEPOD FOOD ON GEORGES BANK: NANO- AND MICROPLANKTON BIOMASS DISTRIBUTIONS
- 11:15 a.m. Tiselius, P.: SELECTIVE PREDATION OF THE COPEPODS ACARTIA BIFILOSA AND TEMORA LONGICORNIS ON THREE OLIGOTRICH CILIATES - ESCAPE RESPONSES ELICITED BY A STRONG FEEDING CURRENT
- 11:30 a.m. Work, K. A.; Havens, K. E.; East, T.; Sharfstein, B.: CARBON FLUX THROUGH THE PLANKTONIC FOOD WEB OF LAKE OKEECHOBEE, FL, USA.
- 11:45 a.m. Yeager, P. E.; Sinsabaugh, R. L.; Foreman, C. M.: DIFFERENTIAL MICROBIAL COMMUNITY STRUCTURE AND FUNCTION ON CHIRONOMID SUBSTRATE, FRASS, AND TUBES IN RESPONSE TO FEEDING PRESSURE

Wednesday Morning Oral Sessions

CS65:

Ultraviolet Radiation: Impacts on Aquatic Systems

Chair: Ralph Smith, *University of Waterloo, Canada*

Location: Sweeney, #2

- 8:30 a.m. Armstrong, R. A.; Detres, Y.: ATTENUATION COEFFICIENTS OF DOWNWELLING ULTRAVIOLET AND VISIBLE IRRADIANCE IN NEAR SHORE TROPICAL WATERS
- 8:45 a.m. Leavitt, P. R.; Graham, M. D.; Cumming, B. F.; Smol, J. P.; Reasoner, M.; Hodgson, D.: THE EVOLUTION OF BOREAL LAKE SENSITIVITY TO UV RADIATION AND DOM
- 9:00 a.m. Laurion, I.; Sommaruga, R.; Psenner, R.: FACTORS CONTROLLING THE ATTENUATION OF ULTRAVIOLET RADIATION IN ALPINE LAKES WITH PARTICULAR ATTENTION TO PHYTOPLANKTON ABSORBING COMPOUNDS
- 9:15 a.m. Xenopoulos, M. A.; Schindler, D. W.: IMPORTANCE OF NEAR-SURFACE THERMOCLINES IN COMBINATION WITH UV RADIATION IN BOREAL LAKES
- 9:30 a.m. Kellogg, C. A.; Paul, J. H.: DEGREE OF UV-DAMAGE AND REPAIR CAPABILITIES ARE RELATED TO G+C CONTENT IN MARINE PHAGES
- 9:45 a.m. Smith, R. E. H.; Allen, C. D.; Wilhelm, S. W.: SOLAR ULTRAVIOLET RADIATION AND BACTERIAL COMMUNITIES IN LAKE ERIE

10:00 a.m. Break

- 10:30 a.m. Banaszak, A. T.; Neale, P. J.; Miller, H. L.; Dunton, K. H.: RESPONSE OF TWO SPECIES OF ARCTIC KELP TO ULTRAVIOLET RADIATION (UVR): PHOTOINHIBITION AND RECOVERY

- 10:45 a.m. Neale, P. J.: THE DYNAMICS OF PHOTOSYNTHETIC RESPONSE TO UV EXPOSURE: INHIBITION, RECOVERY AND ACCLIMATION
- 11:00 a.m. Hiriart, V. P.; Smith, R. E. H.; Greenberg, B.; Charlton, M.: LAKE ERIE AND THE POTENTIAL CONSEQUENCES OF ENHANCED LEVELS OF ULTRAVIOLET RADIATION FOR PHYTOPLANKTON PRODUCTION
- 11:15 a.m. Fritz, J. J.; Neale, P. J.; Davis, R. F.: SPECTRAL AND TEMPORAL DEPENDENCE OF ULTRAVIOLET (UV)-INDUCED INHIBITION OF PHOTOSYNTHESIS IN COASTAL ANTARCTIC PHYTOPLANKTON
- 11:30 a.m. Litchman, E.; Neale, P. J.: SENSITIVITY OF NITROGEN-LIMITED PHYTOPLANKTON TO UV: RESULTS FROM MONOCULTURE AND NATURAL ASSEMBLAGE EXPERIMENTS
- 11:45 a.m. Williamson, C. E.; Olson, O. G.; Lott, S. E.; Walker, N. D.; Engstrom, D. R.: UV RADIATION AND ZOOPLANKTON COMMUNITY STRUCTURE ALONG A DEGLACIATION CHRONOSEQUENCE OF LAKES IN GLACIER BAY ALASKA.
- 12:00 p.m. Leech, D. M.; Williamson, C. E.: UV RADIATION AND SEASONAL PATTERNS OF ZOOPLANKTON VERTICAL DISTRIBUTION: TESTING THE SOLAR BOTTLENECK HYPOTHESIS
- 12:15 p.m. Bingham, B. L.; Reitzel, A. M.; Reyns, N. B.: LIGHT, DISTRIBUTION, AND LIFE HISTORY ADAPTATIONS OF THE ASCIDIAN, CORELLA INFLATA

Wednesday Afternoon Oral Sessions

Special Thematic Session TS02:

50 Years of Aquatic Sciences: Historical Perspectives

Chair: Nancy G. Slack, *Russell Sage College*

Location: Eldorado, Anasazi South

- 2:00 p.m. Magnuson, J.: WISCONSIN'S BIRGE & JUDAY, AND HASLER, LIVING WITH HISTORY
- 2:30 p.m. Slack, N. G.: THE G. EVELYN HUTCHINSON RESEARCH SCHOOL: CONTRIBUTIONS TO LIMNOLOGY AND OCEANOGRAPHY
- 3:00 p.m. Break
- 3:30 p.m. Benson, K. R.: THE MARINE BIOLOGY ORIGINS OF AMERICAN OCEANOGRAPHY
- 4:00 p.m. Rainger, R.: CHANGING EMPHASES IN AMERICAN OCEANOGRAPHY: ROGER REVELLE, THE SCRIPPS INSTITUTION, AND MARINE BIOLOGY, 1945-1955
- 4:30 p.m. Wooster, W.: POSTWAR DEVELOPMENT OF INTERNATIONAL OCEANOGRAPHY

SS09:

Marine Protected Areas: Current and Future Oceanographic Research

Chairs: M. E. Clarke, *University of Miami*
J. Bohnsack, *NOAA*
S. L. Smith, *University of Miami*

Location: Sweeney, #3

- 2:00 p.m. Bohnsack, J. A.; Ballantine, W. J.: DESIGNING MARINE RESERVES: IS OCEANOGRAPHIC INFORMATION REALLY NECESSARY?
- 2:15 p.m. Hixon, M. A.: WHY BIOLOGISTS AND PHYSICAL OCEANOGRAPHERS MUST COOPERATE TO PRODUCE EFFECTIVE MARINE PROTECTED AREAS
- 2:30 p.m. Kobayashi, D. R.; Polovina, J. J.: APPLICATION OF TOPEX/POSEIDON SATELLITE ALTIMETRY TO DESCRIBE LARVAL TRANSPORT IN THE HAWAIIAN ARCHIPELAGO WITH APPLICATION TO MARINE RESERVES AND FISHERIES MANAGEMENT
- 2:45 p.m. Lewis, C. V.; Lynch, D. R.; Fogarty, M. J.; Mountain, D.: EFFECT OF AREA CLOSURES ON GEORGES BANK BIVALVES: LARVAL TRANSPORT AND POPULATION DYNAMICS
- 3:00 p.m. Break
- 3:30 p.m. Cowen, R. K.; Lwiza, K. M. M.; Sponaugle, S.: CONNECTIVITY AND REPLENISHMENT OF REEF FISH POPULATIONS
- 3:45 p.m. Kitchell, J.; Harvey, C.; Johnson, T.; Mason, D.; Aydin, K.; Ebener, M.; Hansen, M.: SUSTAINABILITY OF THE LAKE SUPERIOR FISH COMMUNITY: AN ECOSIM MODELING ANALYSIS OF OPPORTUNITIES AND CONSTRAINTS
- 4:00 p.m. Arnold, W.; Hitchcock, G.: PATCH DYNAMICS OF AN INTENTIONAL RELEASE OF LARVAL MERCENARIA MERCENARIA IN THE INDIAN RIVER LAGOON, FL

Wednesday Afternoon Oral Sessions

- 4:15 p.m. Szmant, A. M.; Cohen, K.; Yeung, C.: FLORIDA KEYS NATIONAL MARINE SANCTUARY (FKNMS): RESEARCH ON SEDIMENTATION AND EUTROPHICATION AS POTENTIAL STRESSORS TO CORAL REEF HABITATS
- 4:30 p.m. Sabater, J.; Garcia, J. R.: PRELIMINARY OBSERVATIONS ON THE VERTICAL DISTRIBUTION AND DIURNAL MIGRATION OF PHYLLOSOMA LARVAE IN THE CARIBBEAN SEA
- 4:45 p.m. Clarke, M.: EXPERIMENTAL STUDIES ON SUBTROPICAL ICHTHYOPLANKTON: USEFUL INPUTS TO MANAGEMENT OF MARINE PROTECTED AREAS?

SS18: Non-Indigenous Species and Their Impacts on Aquatic Communities

- Chairs: Henry A. Vanderploeg, NOAA
Thomas F. Nalepa, NOAA
- Location: Eldorado, Zia A/B/C
- 2:00 p.m. Lozano, S. J.; Nalepa, T. F.: CHANGES IN THE FRESH-WATER BENTHIC COMMUNITY OF LAKE ONTARIO SINCE THE INVASION OF DREISSENA: 1972-1997
- 2:15 p.m. Nalepa, T.; Hartson, D.; Fanslow, D.; Lozano, S.: TEMPORAL TRENDS IN ABUNDANCES AND PHYSIOLOGICAL CONDITION OF THE AMPHIPOD DIPOREIA IN LAKE MICHIGAN
- 2:30 p.m. Liebig, J. R.; Vanderploeg, H. A.; Carmichael, W. W.; Johengen, T. H.; Agy, M. A.: FROM INDIVIDUAL BEHAVIOR TO ECOSYSTEM RESPONSE: ZEBRA MUSSEL FILTERING AND MICROCYSTIS BLOOMS
- 2:45 p.m. Vanderploeg, H. A.; Johengen, T. H.; Liebig, J. R.; Nalepa, T. F.; Fahnenstiel, G. L.: FROM INDIVIDUAL BEHAVIOR TO ECOSYSTEM RESPONSE: INTERACTIONS AMONG ZEBRA MUSSELS, THE ALGAL COMMUNITY, AND NUTRIENT CYCLING
- 3:00 p.m. Break**
- 3:30 p.m. Strayer, D. L.; Caraco, N. F.; Cole, J. J.; Findlay, S.; Pace, M. L.: EFFECTS OF ECOSYSTEM STRUCTURE ON IMPACTS AND ECOLOGY OF THE ZEBRA MUSSEL IN THE HUDSON RIVER ESTUARY
- 3:45 p.m. Anthony, J. L.; Downing, J. A.: EXTREME LONGEVITY IN FRESHWATER MUSSELS (FAMILY UNIONIDAE) INFERRED FROM MARK-RECAPTURE GROWTH DATA
- 4:00 p.m. Haltuch, M. A.; Berkman, P. A.: MODELING EXPANSION OF EXOTIC MUSSELS ON LAKE ERIE SEDIMENTS USING GEOGRAPHIC INFORMATION SYSTEMS
- 4:15 p.m. Jarnagin, S.; Swan, B. K.; Kerfoot, W.: TESTING THE EGG RATIO: PELAGIC VS SEDIMENTARY RECORDS OF SECONDARY PRODUCTION OF BYTHOTREPHES CEDERSTROEMI IN AN INLAND LAKE
- 4:30 p.m. Crooks, J. A.; Talley, T. S.; Levin, L. A.: ECOSYSTEM ALTERATIONS BY NON-INDIGENOUS HABITAT MODIFIERS IN CALIFORNIA COASTAL WETLANDS
- 4:45 p.m. Purcell, J. E.; Bamstedt, U.; Bamstedt, A.: PREY, FEEDING RATES, AND ASEXUAL REPRODUCTION RATES OF THE INTRODUCED OLIGOHALINE HYDROZOAN MOERISIA LYONSI

SS20: Bioenergetics of Pelagic Animals

- Chairs: William (Monty) Graham, *University of South Alabama*
James H. Cowan, Jr., *University of South Alabama*
- Location: Hilton, Mesa B
- 2:00 p.m. Ciannelli, L.; Brodeur, R. D.: BIOENERGETICS OF AGE-0 WALLEYE POLLOCK IN A FRONTAL STRUCTURE OF THE BERING SEA
- 2:15 p.m. Groenkjaer, P.; Schytte, M.: NON-RANDOM MORTALITY OF BALTIC COD LARVAE INFERRED FROM OTOLITH HATCH-CHECK SIZES
- 2:30 p.m. Reisenbichler, K. R.: THE ECOPHYSIOLOGY OF THE ANTARCTIC SILVERFISH, PLEURAGRAMMA ANTARCTICUM, (PISCES, NOTOTHENIIDAE)
- 2:45 p.m. Daly, K. L.; Hofmann, E. E.; Fraser, W. R.; Ribic, C. A.; Ainley, D. G.; Hopkins, T. L.; Torres, J. J.: DIRECT AND INDIRECT EFFECTS OF PREDATOR-PREY INTERACTIONS: COUPLING FIELD OBSERVATIONS AND A SPATIALLY-DEPENDENT MODEL
- 3:00 p.m. Break**
- 3:30 p.m. Batchelder, H. P.; Edwards, C. A.; Powell, T. M.: EXPLORING COPEPOD POPULATION DYNAMICS IN COASTAL UPWELLING SYSTEMS: INDIVIDUAL-BASED PHYSIOLOGICAL MODELS COUPLED TO IDEALIZED 2-D PHYSICAL CIRCULATION/NPZ MODELS
- 3:45 p.m. Mueller-Solger, A. B.; Brett, M. T.; Goldman, C. R.: ZOOPLANKTON EFFECTS ON LOWER TROPHIC LEVELS: A META-ANALYSIS OF ENCLOSURE STUDIES.
- 4:00 p.m. Choe, N.; Deibel, D.: THE SEASONAL BIOCHEMICAL CONTENT OF PARASAGITTA ELEGANS FROM THE BENTHIC BOUNDARY LAYER IN CONCEPTION BAY, NEWFOUNDLAND
- 4:15 p.m. Gibson, D. M.; Paffenhofer, G. A.: THE EFFECTS OF 4 DIFFERENT FOOD CONCENTRATIONS ON THE INGESTION RATES OF DOLIOLETTA GEGENBAURI (TUNICATA, THALIAACEA)
- 4:30 p.m. Graham, W. M.: EVIDENCE FOR PHYLOGENETIC CONSTRAINTS OF THE CNIDARIAN BODY PLAN ON JELLYFISH GROWTH RATES: A NEW PERSPECTIVE ON FOOD-LIMITATION
- 4:45 p.m. Collumb, C. J.; Buskey, E. J.: VISUAL PREDATION ON COPEPODS: EFFECTS OF SIZE, CONTRAST AND BEHAVIOR

SS21: Nutritional Ecology of Planktonic and Benthic Invertebrates

- Chairs: Gary S. Kleppel, *University of South Carolina*
Brian T. Hentschel, *Rutgers University*
- Location: Hilton, Mesa C
- 2:00 p.m. Huggins, P. D.; Lopez, G. R.: STARVATION SURVIVAL STRATEGY OF THE OPPORTUNISTIC POLYCHAETE CAPITELLA SP. I
- 2:15 p.m. Ahrens, M. J.; Lopez, G. R.: BODY LENGTH AND ITS IMPLICATIONS FOR DIGESTIVE AND ABSORPTIVE EFFICIENCY IN THE DEPOSIT FEEDING POLYCHAETE NEREIS SUCCINEA
- 2:30 p.m. Lopez, G. R.: FACTORS CONTROLLING DIGESTION AND ABSORPTION IN THE SPIONID POLYCHAETE STREBLOSPIO BENEDICTI.

Wednesday Afternoon Oral Sessions

2:45 p.m. Hentschel, B. T.: GROWTH RATES OF INTERFACE-FEEDING BENTHOS: EFFECTS OF FLOW AND THE FLUX OF NUTRITIOUS COMPONENTS OF NATURAL SEDIMENT

3:00 p.m. Break

3:30 p.m. Hansen, A. S.; Herman, P. M. J.: ARE MUSSELS OPTIMAL FORAGERS? A MODEL EXPLORATION

3:45 p.m. Richoux, N. B.; Thompson, R. J.: REGULATION OF PARTICLE TRANSPORT WITHIN THE VENTRAL GROOVE OF THE MUSSEL GILL (MYTILUS EDULIS) IN RESPONSE TO VARIATIONS IN TEMPERATURE AND AMBIENT PARTICLE CONCENTRATION

4:00 p.m. Quigley, M. A.; Berquist, S. J.; Nalepa, T. F.; Lang, G. A.; Eadie, B. J.: WHY THE DISPARITY BETWEEN HIGH PRODUCTION OF LAKE MICHIGAN BENTHIC AMPHIPODS AND LIMITED SOURCES OF AVAILABLE CARBON?

4:15 p.m. Lewis, B.; Crowl, T. A.: GOOD TRASH AND BAD TRASH: IS EXOTIC TAMARIX DETRITUS A POORER FOOD AND HABITAT SOURCE FOR AQUATIC INVERTEBRATES THAN IS NATIVE VEGETATION?

4:30 p.m. Hairston, Jr., N. G.; Lampert, W.; Caceres, C. E.; Weider, L. J.: IS THERE EVOLUTION OF GRAZER TOLERANCE TO DIETARY CYANOBACTERIA DURING LAKE EUTROPHICATION?

SS28:

Trace Elements from the Rivers to the Sea: Processes That Influence Chemical Speciation, Biogeochemical Cycling, and Biological Effects

Chairs: Greg L. Boyer, *State University of New York*
William G. Wallace, *U.S. Geological Survey*
Steven W. Wilhelm, *University of Tennessee*

Location: Sweeney, #1

2:00 p.m. Mason, R.; Lawson, N.; Benoit, J.; Gilmour, C.: THE DISTRIBUTION, SPECIATION AND CYCLING OF MERCURY AND METHYLMERCURY FROM RIVERS TO THE OCEAN

2:30 p.m. Green, A. C.; Bonzongo, J.; Buciak, M. A.; Lyons, W.: ASSESSMENT OF MERCURY CONCENTRATIONS IN THE SURFACE WATERS OF THE PEARL RIVER, MISSISSIPPI

2:45 p.m. Buciak, M. A.; Bonzongo, J.; Green, A. C.; Lyons, W.: EFFECTS OF COAL MINING ON MERCURY SPECIATION IN BLACK WARRIOR RIVER BASIN, ALABAMA

3:00 p.m. Break

3:30 p.m. Kneebone, P. E.; Hering, J. G.: REDOX CYCLING OF ARSENIC IN LAKE CROWLEY, CA: IMPLICATIONS FOR WATER QUALITY IN THE LOS ANGELES AQUEDUCT

3:45 p.m. Stephens, T. L.; Shiller, A. M.: TEMPERATURE-DEPENDENT MICROBIAL CONTROL OF DISSOLVED MANGANESE IN THE LOWER MISSISSIPPI RIVER

4:00 p.m. Ashby, S. L.; Faulkner, S. P.; Gambrell, R. P.; Smith, B. A.: ASSESSING IRON OXIDATION KINETICS IN RESERVOIR RELEASES

4:15 p.m. Nelson, Y. M.; Lion, L. W.; Costello, E. K.; Koster van Groos, P. G.; Shuler, M. L.: INFLUENCE OF MINERAL FORMATION MECHANISMS ON THE TRACE METAL ADSORPTION PROPERTIES OF IRON AND MANGANESE OXIDES

4:30 p.m. Riedel, G. F.; Gilmour, C. C.; Riedel, G. S.: REGIONAL AND TEMPORAL VARIATIONS OF THE SOURCES OF TRACE ELEMENTS TO THE PATUXENT RIVER ESTUARY

4:45 p.m. Moffett, J. W.; Saito, M. A.: ORGANIC COMPLEXATION OF COBALT IN THE SARGASSO SEA

SS31:

Biogeochemical Dynamics of the Southern Ocean

Chairs: Walker Smith, *College of William and Mary*
Robert Anderson, *Lamont Doherty Earth Observatory*
Hugh Ducklow, *College of William and Mary*
Mike Landry, *University of Hawaii*

Location: Sweeney, #2

2:00 p.m. Richman, J. G.; Barth, J. A.; Cowles, T. J.; Pierce, S. D.: LOCATION AND PHYSICAL/BIOLOGICAL STRUCTURE OF THE FRONTS ALONG 170W

2:15 p.m. MacCreedy, P.; Quay, P. D.; Westby, T.: THE EFFECTS OF CIRCULATION AND PRODUCTIVITY ON NUTRIENTS AND THE 13C/12C OF DIC IN SURFACE WATERS OF THE SOUTHERN OCEAN

2:30 p.m. Barth, J. A.; Cowles, T. J.; Richman, J. G.; Pierce, S. D.; Wingard, C.: MESOSCALE PHYSICAL AND BIO-OPTICAL STRUCTURE OF THE ANTARCTIC POLAR FRONT NEAR 170W

2:45 p.m. Abbott, M. R.; Richman, J. G.; Bartlett, J. S.: DRIFTER AND MOORING OBSERVATIONS OF MESOSCALE BIOLOGICAL/PHYSICAL PROCESSES IN THE ANTARCTIC POLAR FRONTAL ZONE

3:00 p.m. Break

3:30 p.m. Moore, J.; Abbott, M. R.; Richman, J. G.; Cowles, T. J.; Smith, W. O.; Gardner, W. D.; Barber, R. T.: SEAWIFS SATELLITE OCEAN COLOR DATA AT THE US SOUTHERN OCEAN JGOFS LINE ALONG 170W

3:45 p.m. Machu, E. J.; Garcon, V. V.: SEASONALITY OF THE AGULHAS RETURN CURRENT FROM REMOTELY SENSED DATA AND STATISTICAL ANALYSIS

4:00 p.m. Goyet, C.; Peltzer, E. T.; Eiseheid, G.; Kirchlechner, T.: TEMPORAL AND SPATIAL DISTRIBUTION OF TOC NEAR 170W BETWEEN 50S AND 62S IN NOVEMBER AND JANUARY 1998

4:15 p.m. Hales, B.; Takahashi, T.; Mathot, S.; Sweeney, C.: THREE BIOGEOCHEMICAL REGIMES CHARACTERIZE BLOOM INITIATION IN THE ROSS SEA POLYNYA

4:30 p.m. Sweeney, C.; Codispoti, L. A.; Gordon, L. I.; Millero, F. D.; Smith, W. O.: UTILIZATION OF NUTRIENTS AND CARBON IN THE PELAGIC WATERS OF THE ROSS SEA

4:45 p.m. Smith, W. O.; Barber, R. T.; Hiscock, M.; Marra, J.; Mathot, S.: THE SEASONAL CYCLE OF BIOMASS AND PRODUCTIVITY IN THE ROSS SEA, ANTARCTICA.

SS49-II:

Ecological Stoichiometry in Aquatic Ecosystems: New Directions for Navigating the Food Web in the Next Century

Chairs: James J. Elser, *Arizona State University*
David M. Karl, *University of Hawaii*

Location: Sweeney, #4

2:00 p.m. Frost, P. C.; Elser, J. J.; Turner, M. A.: EFFECTS OF LIGHT, CARBON, AND PHOSPHORUS ON THE STOICHIOMETRY OF BENTHIC ALGAE GROWTH

2:15 p.m. Teubner, K.; Teubner, T.; Dokulil, M. T.: COMPARISON OF THE SEASONAL DYNAMIC OF TN:TP:SRSI RATIOS IN LAKES OF DIFFERENT TROPHY IN RELATION TO PHYTOPLANKTON ASSEMBLAGES

2:30 p.m. Soto, D.; Fee, E.: THE ROLE OF LIGHT-NUTRIENT LIMITATION IN SOUTHERN CHILEAN TEMPERATE LAKES: ARE FOOD WEBS THAT RELEVANT HERE??

Wednesday Afternoon Oral Sessions

2:45 p.m. Dobberfuhl, D. R.; Elser, J. J.: COMMUNITY-LEVEL PATTERNS OF ECOLOGICAL STOICHIOMETRY IN THE LOWER FOOD WEB ACROSS A BROAD LATITUDINAL GRADIENT

3:00 p.m. Break

3:30 p.m. Grover, J. P.; Codeco, C. T.: RESOURCE COMPETITION AND RESOURCE RATIOS: HOW INTER- AND INTRASPECIFIC VARIATION OF MICROBIAL STOICHIOMETRY ILLUMINATES AN ECOLOGICAL PROCESS

3:45 p.m. Kilham, S. S.: RELATING ECOLOGICAL STOICHIOMETRY TO CLIMATE FACTORS

4:00 p.m. Michaels, A. F.: ECOLOGICAL STOICHIOMETRY IN THE OCEANS: A NECESSARY LINK BETWEEN OCEAN BIOLOGY AND GLOBAL MODELS

4:15 p.m. Caraco, N.; Lampman, G.: CO₂ INDUCED CHANGES IN C:N:P RATIOS OF MARINE DIATOMS: A LINK TO OCEANIC C STORAGE?

4:30 p.m. Sterner, R. W.: THE STOICHIOMETRY OF GLOBAL CHANGE IN AQUATIC ECOSYSTEMS

CS64: Ecology and Biogeochemistry of Streams

Chair: Susan P. Hendricks, *Murray State University*

Location: Eldorado, Anasazi North

2:00 p.m. Crenshaw, C. L.; Valett, H. M.; Tank, J. L.: FUNGAL COLONIZATION AND EFFECTS OF BURIED WOOD IN HYPORHEIC AND PARAFUVIAL ENVIRONMENTS

2:15 p.m. Sheibley, R. W.; Jackman, A. P.; Duff, J. H.; Triska, F. J.: INORGANIC N FLUX IN SEDIMENT PERFUSION CORES FROM THE HYPORHEIC ZONE OF THE SHINGOBEE RIVER, MINNESOTA.

2:30 p.m. Tank, J. L.; Mulholland, P. J.; Bowden, W. B.; McDowell, W.; Merriam, J.; Peterson, B. J.; Meyer, J. L.; Webster, J. R.; Sanzone, : ASSESSING STORM EFFECTS ON NITROGEN CYCLING IN STREAMS USING ¹⁵N AS A TRACER

2:45 p.m. Fellows, C. S.; Dahm, C. N.; Valett, H. M.: CONTRIBUTION OF THE HYPORHEIC ZONE TO ECOSYSTEM METABOLISM IN TWOMONTANE STREAMS, NEW MEXICO, USA

3:00 p.m. Break

3:30 p.m. Hill, A. R.; Devito, K. J.; Sanmugadas, K.: DENITRIFICATION IN STREAM RIPARIAN ZONES: INFLUENCE OF INTERACTIONS BETWEEN HYDROLOGICAL FLOW PATHS AND SUPPLIES OF NITRATE AND CARBON.

3:45 p.m. Duff, J. H.; Aiken, G.; Jackman, A. P.; Sheibley, R. W.; Triska, F. J.: THE INFLUENCE OF FLUVIAL SYSTEM AND GROUNDWATER DISCHARGE ON DOC CONCENTRATION AND COMPOSITION IN THE SHINGOBEE RIVER, MINNESOTA.

4:00 p.m. Hendricks, S. P.; White, D. S.; Hart, D. R.: PHYSICOCHEMICAL AND HYDROLOGICAL CONDITIONS AND MICROBIAL ACTIVITY WITHIN THE HYPORHEIC STORAGE ZONES OF TWO STREAMS DRAINING CONTRASTING WATERSHEDS IN WESTERN KY AND TN (USA).

4:15 p.m. Koepfler, E. T.; Allen, D.; Bushek, D.; Lewitus, A.; Dame, R.; Corbett, C.; Kjerfve, B.: GEOMORPHOLOGY, HYDROLOGY AND LANDSCAPE SETTING INFLUENCE ON PLANKTON, NEKTON AND BENTHOS OF EIGHT SALTMARSH TIDAL CREEKS OF NORTH INLET, SC

4:30 p.m. Lennon, J. T.; Peterson, B. J.; Wollheim, W.: STORAGE AND TRANSPORT OF FINE PARTICULATE ORGANIC MATTER IN AN EXPERIMENTALLY ENRICHED RIVER

CS66: Zooplankton: Population Dynamics and Trophic Interactions

Chair: Mark Ohman, *Scripps Institution of Oceanography*

Location: Hilton, Mesa A

2:00 p.m. Mitchell, S. E.; Lampert, W.: TEMPERATURE REACTION NORMS FOR GROWTH RATES IN DAPHNIA MAGNA

2:15 p.m. Makulla, A.: FOOD-MEDIATED INFLUENCE OF THE TEMPERATURE ON THE GROWTH OF DAPHNIA GALEATA

2:30 p.m. Stelzer, C. C.-P.: SOMATIC GROWTH, EGG PRODUCTION, AND OVARY-SIZE DYNAMICS IN A PLANKTONIC ROTIFER

2:45 p.m. Baier, C. T.; Napp, J. M.: DISTRIBUTION, REPRODUCTION, AND DEVELOPMENT OF CALANUS MARSHALLAE IN THE SOUTHEASTERN BERING SEA DURING THREE YEARS OF CONTRASTING OCEANOGRAPHIC CONDITIONS

3:00 p.m. Break

3:30 p.m. Ohman, M. D.; Runge, J. A.; Durbin, T.: COMPARATIVE MORTALITY ESTIMATES FOR CO-OCCURRING COPEPODS

3:45 p.m. Engstrom, J.; Koski, M.; Reinikainen, M.; Repka, S.; Viitasalo, M.: COPEPODS GRAZING ON NODULARIA SP. AND SYANOBACTERIAL IMPACT ON GRAZING HIGH QUALITY FOOD

4:00 p.m. Kann, J.: PROMOTION OF N₂ FIXING CYANOBACTERIAL BLOOMS BY LARGE-BODIED DAPHNIA: ALTERNATIVE PATHWAY OF THE TROPHIC CASCADE

4:15 p.m. Sierszen, M. E.; McDonald, M. M.; Jensen, D. A.: BENTHIC PRODUCTION AS THE BASE FOR FOOD WEBS IN ALASKAN ARCTIC LAKES

4:30 p.m. Gettel, G. M.; Hershey, A. E.; Pastor, J.: THE EFFECTS OF LAKE GEOMORPHOLOGY, FISH ASSEMBLAGE, AND SPECIES RICHNESS ON FOOD WEB STRUCTURE IN ARCTIC ALASKAN LAKES.

4:45 p.m. Rusak, J. A.; McQueen, D. M.; Somers, K. M.; Yan, N. D.; Ramcharan, C. W.: CHANGES IN THE PELAGIC ZOOPLANKTON COMMUNITY FOLLOWING WHOLE-LAKE MANIPULATIONS AND THE BIGGER PICTURE FROM REFERENCE LAKES

Wednesday Poster Sessions

Authors will be at their posters from 5:00 to 7:00 p.m. in the Sweeney Center Ballroom. Poster teardown begins at 7:30 p.m.

SS03:

Hydrodynamics and Material Transport Across Boundary Layers: The Interface Between Biology and Physics

114. Dauer, D. M.: HYDRODYNAMICS, FUNCTIONAL MORPHOLOGY AND FEEDING BEHAVIOR IN THE BENTHIC BOUNDARY LAYER
115. Eckman, J. E.; Duggins, D. O.; Siddon, C. C.: INFLUENCE OF FLUID FORCES ON MORTALITY OF SUB-SURFACE CANOPY (UNDERSTORY) KELPS
116. Rusch, A. C.; Huettel, M. H.; Jørgensen, B. B.: FIELD STUDIES ON MATERIAL TRANSPORT INTO INTERTIDAL SANDY SEDIMENTS CAUSED BY INTERFACIAL WATER FLOWS
117. Cambuzat, A.; Stolzenbach, K. D.: MATERIAL TRANSPORT IN THE WATER-SURFACE MICROLAYER

SS09:

Marine Protected Areas: Current and Future Oceanographic Research

118. Blakesley, B. A.; Hall, M. O.; White, M. W.: SPATIAL PATTERNS OF THALASSIA DECLINE AND INCIDENCE OF LABYRINTHULA INFECTION IN FLORIDA BAY, USA

SS18:

Non-Indigenous Species and Their Impacts on Aquatic Communities

119. Johns, C. E.; Phelps, D.: ZEBRA MUSSELS AS BIOSENTINELS IN THE ST. LAWRENCE RIVER: INTERANNUAL VARIABILITY OF TRACE METALS
120. Dzialowski, A. R.; O'Brien, W.: RANGE EXPANSION AND DISPERSAL OF THE EXOTIC CLADOCERAN DAPHNIA LUMHOLTZI
121. Mowry, L. A.; Brenneman, K. J.: WATER QUALITY EVALUATION OF TWO HIGH-USE, FISH STOCKED ALPINE LAKES IN THE KLAMATH NATIONAL FOREST

SS21:

Nutritional Ecology of Planktonic and Benthic Invertebrates

122. Tönnesson, K. M.: EFFECTS OF UV-B EXPOSURE ON THE DIATOM THALASSIOSIRA WEISSFLOGII: CHANGES IN FOOD QUALITY FOR THE COPEPOD ACARTIA TONSA
123. Park, S.; Brett, M. T.; Mueller-Navarra, D. C.; Goldman, C. R.: HIGHLY UNSATURATED FATTY ACID (HUFA) CONTENT AND P:C RATIO AS SESTON FOOD QUALITY INDICES FOR DAPHNIA PULEX
124. Thompson, R. J.; Parrish, C. C.; Deibel, D.; Choe, N.: EFFECT OF A SINKING SPRING BLOOM ON LIPIDS IN SUPRABENTHIC AND BENTHIC INVERTEBRATES IN A COLD OCEAN COASTAL ENVIRONMENT
125. Danielsdottir, M. G.; Brett, M. T.: A MATHEMATICAL ANALYSIS OF FOOD QUALITY IMPACTS ON TROPHIC COUPLING
126. Hassett, R.: ANALYZING THE BIOCHEMICAL COMPOSITION OF INDIVIDUAL COPEPODS

127. Brindza, N. R.; Luecke, C.; Wurtsbaugh, W.: THE EFFECTS OF DIEL MIGRATION CHANGES ON ZOOPLANKTON GRAZING RATES
128. Starr, M.; Runge, J. A.; St-Amand, L.: ARE DIATOMS TOXIC OR JUST NUTRITIONALLY INSUFFICIENT FOR SUCCESSFUL COPEPOD REPRODUCTION?
129. Kolesar, S. E.; Breitbart, D. L.; Rose, K. A.; Cowan Jr., J. H.: THE INFLUENCE OF HYPOXIA ON THE CTENOPHORE MNEMIOPSIS LEIDYI: BEHAVIOR AND PREDATION ON GOBISOMA BOSCAI LARVAE

SS28:

Trace Elements from the Rivers to the Sea: Processes That Influence Chemical Speciation, Biogeochemical Cycling, and Biological Effects

130. Chang, S.; Reinfelder, J. R.: SPECIATION AND MICROALGAL BIOAVAILABILITY OF INORGANIC SILVER
131. Haygood, M. G.; Edwards, D. B.: SIDEROPHORE PRODUCTION BY MARINE HETEROTROPHIC BACTERIA
132. Benoit, J. M.; Mason, R. P.; Gilmour, C. C.: ESTIMATION OF MERCURY-SULFIDE SPECIATION AND BIOAVAILABILITY IN SEDIMENT PORE WATERS USING OCTANOL-WATER PARTITIONING
133. Bell, J. T.; Gilmour, C. C.; Heyes, A.; Benoit, J. M.; Riedel, G. S.: THE INFLUENCE OF SULFUR INPUTS ON METHYLMERCURY PRODUCTION IN THE FLORIDA EVERGLADES
134. Martinez, J. S.; Zhang, G.; Holt, P. D.; Haygood, M. G.; Butler, A.: NEW SIDEROPHORES FROM MARINE HETEROTROPHIC BACTERIA
135. Dahl Rasmussen, A. D.; Andersen, O. A.: MODELLING STUDIES OF FACTORS AFFECTING SEDIMENT-WATER CD TRANSFER IN ESTUARIES
136. Connelly, D. P.; Sarkis, S. C.: COMPARISON OF TRACE METAL AND PCB ACCUMULATION IN THE TURKEY-WING MUSSEL, ARCA ZEBRA, IN THREE OF BERMUDA'S INSHORE WATER SITES.
137. Cotter, A. M.; Morrice, J.; Kelly, J. R.: NATURAL TRACERS AS BIOGEOCHEMICAL INDICATORS IN GREAT LAKES COASTAL WETLANDS
138. Byers, D. G.; Donat, J. R.; Burdige, D. J.: TOTAL DISSOLVED ZN(TDZN), ZN LIGANDS (L-ZN), AND K'(COND.) FOR ZN COMPLEXES IN THE SEDIMENT PORE WATERS AND BOTTOM WATERS IN CHESAPEAKE BAY AND ELIZABETH RIVER, VA.
139. Riedel, G. S.; Benoit, J. M.; Mason, R. P.; Gilmour, C. C.: BUDGETS FOR TOTAL AND METHYL MERCURY IN A SUBESTUARY OF CHESAPEAKE BAY
140. Roditi, H. A.; Sanudo-Wilhelmy, S. S.; Fisher, N. S.: INTERACTIONS OF ZEBRA MUSSELS (DREISSENA POLYMORPHA) WITH HIGH MOLECULAR WEIGHT COLLOIDAL TRACE ELEMENTS AND CARBON
141. Aguilar, C.; Cuhel, R. L.; Lovalvo, D.: PORE WATER, VENT WATER AND GROUND WATER INPUTS TO GEOTHERMALLY-ACTIVE YELLOWSTONE LAKE, WYOMING

Wednesday Poster Sessions

SS31: Biogeochemical Dynamics of the Southern Ocean

142. Wakeham, S. G.; Owens, K. N.: BIOMARKERS IN SUSPENDED PARTICULATE MATTER OF THE SOUTHERN OCEAN
143. Park, M. O.; Bidigare, R. R.; Hales, B.: DISTRIBUTION OF ALGAL PIGMENTS IN THE ROSS SEA DURING THE 1997 SPRING BLOOM
144. Peterson, J. O.; Urban-Rich, J. L.; Dagg, M. J.: CONTRIBUTION OF COPEPOD GRAZING TO BIOGENIC SILICA FLUX IN THE SOUTHERN OCEAN POLAR FRONTAL REGION.
145. Richardson, M.; Gardner, W. D.; Smith, W. O.: SEASONAL AND SPATIAL VARIABILITY IN POC DISTRIBUTIONS IN THE ROSS SEA
146. Sigmon, D. E.; Nelson, D. M.; Brzezinski, M. A.: THE SURFACE-LAYER SILICA CYCLE IN THE SOUTHERN OCEAN NEAR 170° W DURING AUSTRAL SPRING AND SUMMER, 1997-98
147. Cochlan, W.; Bronk, D.: PLANKTONIC AMMONIUM UPTAKE IN THE ROSS SEA, ANTARCTICA: KINETICS OF UPTAKE AND POTENTIAL INHIBITORY EFFECTS ON NITRATE UTILIZATION
148. Takahashi, T.; Hales, B.; Sweeney, C.: MESOSCALE PHYSICAL AND BIOGEOCHEMICAL VARIABILITY IN THE ROSS SEA
149. Carlson, C. A.; Hansell, D. A.; Peltzer, E. T.: TOC AND DOC DISTRIBUTION ALONG THE 76° 30'S TRANSECT LINE DURING SPRING PHYTOPLANKTON BLOOMS IN THE ROSS SEA, ANTARCTICA
150. Gordon, L. I.; Jennings, Jr., J. C.; Ross, A. A.; Wilson, J.: NUTRIENT DEPLETION RATIOS DURING THE AESOPS SOUTHERN OCEANS JGOFS STUDY
151. Church, M. J.; Ducklow, H. W.; Hutchins, D. A.: INVESTIGATION INTO BOTTOM-UP LIMITATION OF BACTERIAL GROWTH IN THE SOUTHERN OCEAN
152. Urban-Rich, J. L.; Landry, M.; Peterson, J. O.; Dagg, M. J.: COPEPOD GRAZING ON PROTOZOANS AND PHYTOPLANKTON DURING THE SUMMER IN THE SOUTHERN OCEAN POLAR FRONT REGION: IMPLICATIONS FOR VERTICAL FLUX
153. Brzezinski, M. A.; Nelson, D. M.; Franck, V. M.; Sigmon, D. E.: RATES OF BIOGENIC SILICA PRODUCTION WITHIN AN INTENSE DIATOM BLOOM AT THE ANTARCTIC POLAR FRONT AT 170W

SS32: Stable Isotope Natural Abundance: Applications in Marine and Freshwater Research

154. Manganelli, M.; Bidle, K.; Azam, F.: TEMPERATURE DEPENDENCE OF POC MINERALIZATION BY MARINE BACTERIAL ASSEMBLAGES.
155. Menden-Deuer, S.; Lessard, E. J.: CARBON CONTENT AND CARBON:VOLUME RATIOS OF HETEROTROPHIC AND AUTOTROPHIC DINOFLAGELLATES
156. Scranton, M. I.; Taylor, G. T.; Bohrer, R.; Astor, Y.; Ho, T.: BIOGEOCHEMICAL EFFECTS OF RECENT INTRUSIONS INTO THE ANOXIC ZONE OF THE CARIACO BASIN
157. Utsumi, M.; Nojiri, Y.: DISSOLVED METHANE OXIDATION IN A EUTROPHIC, SHALLOW LAKE (LAKE KASUMIGAURA), JAPAN

SS50: Atmospheric Deposition: Effects on Marine, Estuarine, and Freshwater Systems

158. Stoddard, J. J.; Jeffries, D. S.; Lukeville, A.; Skjelkvaale, B. L.: RECOVERY OF LAKES AND STREAMS FROM ACIDIFICATION: REGIONAL TRENDS IN NORTH AMERICA AND EUROPE IN THE 1980s AND 1990s
159. Church, M. R.; Van Sickle, J.: REGIONAL-SCALE MODELING OF POTENTIAL FUTURE EFFECTS OF ACIDIC DEPOSITION ON SURFACE WATER CHEMISTRY
160. Anderson, J. C.; Kopáček, J.; Tobias, C. R.; Vrba, J.; Macko, S. A.: RECOVERY OF ACIDIFIED GLACIAL LAKES AND THEIR WATERSHEDS FROM NITROGEN SATURATION
161. Chernyak, S. M.; McConnell, L. L.; Rice, C. P.: MODELING THE BEHAVIOR OF CHLORPYRIFOS AND TRIFLURALIN IN THE CHUKCHI SEA.
162. Eklund, N.; Embrechts, M. J.; Shaw, W.; Momen, B.; Zehr, J. P.: APPLICATION OF AN ARTIFICIAL NEURAL NETWORK FOR INVESTIGATION OF EFFECTS OF ACIDIC DEPOSITION ON ADIRONDACK LAKE COMMUNITIES.
163. Chang, C. C.; Riggs, M.; Campbell, D.; Silva, S.; Kendall, C.: NITRATE COLLECTION FOR N-15 AND O-18 ANALYSIS IN DILUTE WATERS

SS54: Multidisciplinary Research Experiences of Undergraduates in Ocean Sciences

164. Pacheco-Bernier, L. M.; Ullman, W. J.: OPTIMUM CONDITIONS FOR CALCIUM CARBONATE PRODUCTION BY THE COCCOLITHOPHORIDS PLEUROCHRYSIDAE CARTERAEE AND EMILIANIA HUXLEYI.
165. Boxwell, J. A.; Canuel, E. A.: APPLICATIONS OF MICROWAVE-ASSISTED SOLVENT EXTRACTION (MASE) FOR ISOLATING LIPID BIOMARKER COMPOUNDS ASSOCIATED WITH ESTUARINE PARTICULATE MATTER
166. Hixon, S. J.; Graham, W. M.: RESPIRATORY RESPONSE OF THE MOON JELLYFISH AURELIA AURITA TO PULSED FOOD
167. Stodghill, N.: THE EFFECT OF AMMONIA ON THE CULTURING OF PENAEUS VANNAMEI
168. Kish, S.: WEST AFRICAN COASTAL SEDIMENT SOURCES INFERRED FROM STRONTIUM ISOTOPE RECORDS
169. Carroll, A. L.: ANALYSIS OF BACTERIAL CARBON PARTITIONING AND THE IMPLICATIONS ON THE OCEANIC CARBON CYCLE
170. Kircher, E. A.: DETERMINATION OF THE EFFECTS OF POST DEATH CONDITION, PRESERVATION, AND AGE ON THE SHRINKAGE OF LARVAL YELLOW PERCH (PERCA FLAVESCENS)
171. Cleveland, K. K.; Li, J. L.; Gerth, W. J.: TEMPORAL DIFFERENCES IN THE ORDERS EPHEMEROPTERA, PLECOPTERA AND TRICHOPTERA (EPT) IN OAK CREEK (BENTON COUNTY, OREGON) FOLLOWING A FLOOD DISTURBANCE
172. Castellan, A. C.: PHYSICAL SEDIMENT DISTURBANCE EFFECTS ON JUVENILE RECRUITMENT PROCESSES AND MACROBENTHIC COMMUNITY STRUCTURE OF MUDDY ESTUARIES
173. Berukoff, S. J.: TIME-SERIES ANALYSIS OF MORPHOLOGICAL CHANGE ON LOIHI SEAMOUNT, HAWAII

Wednesday Poster Sessions

174. Lundquist, J.: SURFACE DRAG AND MOMENTUM EXCHANGE IN HURRICANE CONDITIONS
175. Oppert, C. J.: THE EFFECTS OF INCREASED NUTRIENTS, TRACE METALS, AND DIATOM FOOD ON EGG PRODUCTION RATES OF THE ESTUARINE COPEPOD, ACARTIA TONSA
176. Adams, B.: OXYGEN ISOTOPES AND THE LEAMINGTON CAVE ENVIRONMENT: THE KEY TO AN ANCIENT HURRICANE PROXY
177. Pustizzi, F.: THE EFFECTS OF LIGHT AND ORGANIC CARBON ON THE GROWTH OF THE BROWN TIDE ORGANISM AUREOCOCCUS ANAPHAGEFFERENS
178. Leffler, M.; Mackiernan, G.; Murray, L.; Kramer, J.: A DECADE OF STUDENTS IN THE MARYLAND SEA GRANT COLLEGE RESEARCH EXPERIENCE FOR UNDERGRADUATES PROGRAM
179. Banks, J.: SETTLEMENT BEHAVIOR OF DUNGENESS CRAB (CANCER MAGISTER) MAGALOPAE WHEN EXPOSED TO CHEMICAL AND VISUAL CUES FROM THE SHORE CRAB, HEMIGRAPSUS
180. Breckel, E. J.: COMPARISON OF PORE WATER IN HYDROTHERMALLY ACTIVE AND NON-HYDROTHERMALLY ACTIVE AREAS IN YELLOWSTONE LAKE
181. Edwards, K. A.: THE ROLE OF THE EGG JELLY COAT IN RESISTANCE TO SHEAR STRESS IN THE SEA URCHIN LYTECHINUS VARIEGATUS
182. Lowe, W.: THE EFFECTS OF STRONG EL NINOS AND LA NINAS ON RIVERFLOW IN THE DELAWARE RIVER BASIN
190. Sakka, A.; Legendre, L.; Gosselin, M.: TROPHIC INTERACTIONS IN THE MICROBIAL FOOD WEB IN THE LAGOON OF TAKAPOTO ATOLL (TUAMOTU ARCHIPELAGO, FRENCH POLYNESIA)
191. Choi, K. H.; Drake, L. L.; Locarnini, R. R.; Valle-Levinson, A. A.; Dobbs, F. F.: HYDROGRAPHIC INFLUENCE ON BACTERIOPLANKTON DYNAMICS AT THE ENTRANCE OF CHESAPEAKE BAY
192. Menezes, S.; Hargraves, P. E.: COMMUNITY TRENDS AMONG NANOPLANKTON IN THE PETTAQUAMSCUTT RIVER ESTUARY, RHODE ISLAND, U.S.A.
193. Holen, D. A.: THE ABUNDANCE, BIOVOLUME AND VERTICAL DISTRIBUTION OF PLASTIDIC AND HETEROTROPHIC CILIATES IN AN OLIGOTROPHIC LAKE.

CS59:

Human Impacts on Aquatic Ecosystems

183. Savarese, M.; Brewster, S.; Brand, L. E.: INFLUENCE OF WATER MANAGEMENT PRACTICES ON OYSTER REEF DISTRIBUTION AND PRODUCTIVITY WITHIN ESTUARIES OF SOUTHWEST FLORIDA
184. Bendis, B. J.: WATER QUALITY TRENDS IN TAMPA BAY, FLORIDA
185. Rodriguez, A. E.; Garcia, J. R.: TAXONOMIC COMPOSITION AND SEASONAL ABUNDANCE OF ZOOPLANKTON ENTRAINED BY A THERMOELECTRIC POWER PLANT IN SAN JUAN BAY, PUERTO RICO
186. Ramstack, J. M.; Fritz, S. C.: NONPOINT POLLUTION TRENDS IN MINNESOTA LAKES: THE USE OF FOSSIL DIATOMS AS PALEOINDICATORS OF HUMAN IMPACT
187. Sutula, M.; Day, J.; Childers, D.; Rudnick, D.: HYDROLOGICAL RESTORATION OF THE SOUTHERN EVERGLADES AND ITS EFFECTS ON FRESHWATER MARSH AND ESTUARINE NUTRIENT BUDGETS

CS60:

Microbial Web Dynamics: Bacteria to Zooplankton

188. Yih, W.; Coats, D. W.: PARASITISM OF GYMNODINIUM SANGUINEUM BY AMOEBOPHYRYA SP.: INFLUENCE OF NUTRIENT ENVIRONMENT ON PARASITE SUCCESS AND HOST SURVIVAL
189. Mohr, S.; Adrian, R.: SIZE-SELECTIVE GRAZING OF TWO ROTIFER SPECIES ON A MANIPULATED FRESHWATER CILIATE COMMUNITY

CS65:

Ultraviolet Radiation: Impacts on Aquatic Systems

194. Moeller, R. E.: INHIBITION OF FRESHWATER PHYTOPLANKTON PRODUCTIVITY BY ULTRAVIOLET RADIATION: SEASONAL PATTERNS AND EXPERIMENTAL EVIDENCE FOR ACCLIMATION TO UV-A
195. Osburn, C. L.; Morris, D. P.; Hargreaves, B. R.: MODELLING THE SPECTRAL DEPENDENCE OF PHOTOOXIDATION OF DISSOLVED ORGANIC MATTER USING ABSORBANCE AND FLUORESCENCE
196. Whitehead, R. F.; de Mora, S. J.; Demers, S.; Lean, D.; Gosselin, M.; Mostajir, B.; Mostajir, B.: INFLUENCE OF UV-B ENHANCED SOLAR RADIATION ON CARBON CYCLING IN A MESOCOSM EXPERIMENT
197. Booth, M. G.; Miller, R. V.: DEVELOPMENT AND FURTHER CHARACTERIZATION OF A MOLECULAR TOOL TO MONITOR DNA REPAIR IN UVR-STRESSED BACTERIOPLANKTON COMMUNITIES: RECA EXPRESSION IN VITRO AND IN SITU
198. Kerfoot, J.; Gorga, J.; Prezelin, B. B.: DINOFLAGELLATE GROWTH RESPONSES TO OUTDOOR CULTURING IN THE PRESENCE AND ABSENCE OF SOLAR UV RADIATION
199. McGovern, T.; Prezelin, B. B.; Kerfoot, J.; Gorga, J.; Robiart, J. C.: IN SITU SPECTRAL RESPONSES OF COASTAL CALIFORNIA PHYTOPLANKTON TO REGIONAL AND SEASONAL VARIABILITY IN SOLAR UV RADIATION
200. Gorga, J.; Kerfoot, J.; Prezelin, B. B.: DINOFLAGELLATE CELL COMPOSITION RESPONSES TO OUTDOOR CULTURING IN THE PRESENCE AND ABSENCE OF SOLAR UV RADIATION
201. Dunton, K. H.; Neale, P. J.; Miller, H. L.; Banaszak, A. T.; Major, K. M.: THE EFFECT OF UV RADIATION ON IN SITU PHOTOSYNTHETIC CARBON FIXATION IN HIGH ARCTIC KELPS USING 13C
202. Detres, Y.; Armstrong, R. A.: AGING STUDY OF FILTERS USED IN UV-B SUPPLEMENTATION AND EXCLUSION EXPERIMENTS

CS68:

Air-Water Interactions

203. Matrai, P. A.; Yocis, B. H.; Groszko, W.; Wright, H. A.: OCEANIC BIOLOGICAL PRODUCTION OF METHYL BROMIDE
204. Hargreaves, B. R.; Farkas, K. L.: LAKE EVAPORATION: SHORT-TERM MASS TRANSFER AND ENERGY BUDGET MODELS TESTED WITH LAKE AND PAN DATA

Wednesday Poster Sessions

CS69:

New Technologies

205. Leger, D. C.: RESEARCH VESSEL DISTRIBUTED DATA SYSTEMS
206. Holmes, R. M.; Aminot, A.; K erouel, R.; Hooker, B. A.; Peterson, B. J.: MANUAL FLUOROMETRIC MEASUREMENT OF AMMONIUM IN MARINE AND FRESH WATERS
207. Zhang, X. X.; Roman, M. M.; Lascara, ; Burgett, ; Sanford, ; Kennedy, : COMPARISON OF ZOOPLANKTON BIOMASS ESTIMATES WITH OPTICAL PLANKTON COUNTERS AND ZOOPLANKTON NETS IN CHESAPEAKE BAY
208. Sieracki, C. K.; Sieracki, M. E.: RESULTS OF CONTINUOUS AND DISCRETE FLOWCAM MEASUREMENTS OF PLANKTON COMMUNITY STRUCTURE, BOOTHBAY HARBOR, MAINE, USA
209. Potter, N. D.; Cowles, T. J.: USING WIRELESS NETWORKING AS A COLLABORATIVE TOOL DURING THE THIN LAYERS EXPERIMENT IN EAST SOUND, WA
210. Gardner, G. B.; Chen, R. F.; Rudnick, S. M.; Peter, E.; Goodkind, T.: DEVELOPMENT OF AN UNDULATING, TOWED VEHICLE FOR THE STUDY OF COASTAL BIOGEOCHEMISTRY
211. Barry, J. P.; Smith, J.; Whaling, P.: PATTERNS OF BENTHIC MEGAFANAL ABUNDANCE IN THE ROSS SEA, ANTARCTICA ESTIMATED USING A TOWED VIDEO SYSTEM

CS58: Wednesday Evening Historical Gala:

Attendance of the Historical Gala is by ticket only and has been sold out.

Chair: Val Smith, *University of Kansas, Lawrence*

Location: Eldorado

1. Allredge, A. L.: PERSPECTIVES FROM MIDCAREER: OCEANOGRAPHY AS PATH AND PASSION

Our careers are an integral part of our life path, imbued with lessons, opportunities, and above all, change. Are they what we expected when we started out? Using my own career of the last 3 decades as an example, I examine the ups and downs, shifts in perspective, and changes in the nature of motivation and satisfaction typical of many scientists as their careers mature and place these against the backdrop of larger historical trends occurring in oceanography and science, in general, over that time period. The account will be peppered with anecdote, philosophical musing, and personal insights into the nature of science as a path of discovery.

2. Banse, K.: VIEWS THROUGH A PORTHOLE

You will be regaled with three subjects that are loosely connected with my life: (a) Reminiscences about the central-European university in the first half of the half of the century when biological oceanography and limnology developed; I entered toward the end of that period. (b) The developing and maturing of experimental aquatic field ecology (manipulation); I witnessed it as an admiring by-stander in Seattle during much of the second half of the century. (c) The role of publishing at the right time in the right journal; I do not think that I will fully master this art even in the next century.

3. Edmondson, W. T.: HOW AND WHY I BECAME A LIMNOLOGIST

I intend to use a concise autobiographical sketch as a skeleton to be fleshed out with an account of the aspects of limnology that have interested me and some of the people I have met along the way. My random walk starts in 1916 in Milwaukee on the shore of Lake Michigan, moves to southern Indiana where there were no lakes, only ponds with mysterious tiny things moving around in them, to New Haven, Connecticut for High School, College (became a charter member of the Limnological Society of America) and Graduate School where I met many limnologists and protolimnologists. I had a side trip to Madison to take Juday's course. I spent most of the war years as a civilian doing research for the Navy at Woods Hole Oceanographic Institute and met many oceanographers. My first teaching job was in the Harvard Department of Biology, my second at the University of Washington where I still am.

Thursday Morning Oral Sessions

Presenting authors are underlined. Complete abstract and author information can be found at www.aslo.org/santafe99.

SS04:

Enhanced Biological Production at Physical Discontinuities

Chair: Mike Roman, *University of Maryland*

Location: Hilton, Mesa C

8:30 a.m. Embleton, K. V.; Cook, K. B.; Heaney, S. I.; Mills, D. K.; Rawlinson, M. B.: FINE SCALE PHYSICAL, CHEMICAL AND BIOLOGICAL STRUCTURE OF THE IRISH SEA USING A NEW UNDULATING CONTINUOUS PLANKTON RECORDER.

8:45 a.m. Roman, M. R.; Lascara, C.; Boicourt, W.; Valle-Levinson, A.; Burgett, R.; Zhang, X.: PLANKTON AGGREGATIONS ASSOCIATED WITH FRONTAL CONVERGENCES AT THE ENTRANCE OF CHESAPEAKE BAY

9:00 a.m. Harding, Jr., L. W.; Hood, R. R.; Scardi, M.: ENHANCED PHYTOPLANKTON BIOMASS AND PRODUCTIVITY ASSOCIATED WITH PERSISTENT MESOSCALE EDDIES IN THE LOWER CHESAPEAKE BAY

9:15 a.m. Barry, K. L.; Demers, E.; Brandt, S. B.: INFLUENCE OF SMALL-SCALE PHYSICAL FEATURES ON FISH PRODUCTION: ACOUSTIC MEASUREMENTS OF FISH ABUNDANCE NEAR FRONTS IN CHESAPEAKE BAY

9:30 a.m. Boicourt, W. C.; Valle-Levinson, A.; Lascara, C.; Roman, M.; Burgett, R.: HYDRAULIC CONTROLS AND TROPHIC TRANSFER IN THE CHESAPEAKE BAY ESTUARY

9:45 a.m. Brink, L. A.; Kiladis, M. E.; Purcell, J. E.: EFFECT OF THE HYDRAULIC CONTROL POINT ON EGG PRODUCTION AND FEEDING BY THE CTENOPHORE, MNEMIOPSIS LEIDYI, IN CHESAPEAKE BAY

10:00 a.m. Break

10:30 a.m. Kemp, W. M.; Brooks, M. T.; Hood, R. R.: PRODUCTIVITY, VARIABILITY AND TROPHIC TRANSFER EFFICIENCY IN PELAGIC FOOD WEBS

10:45 a.m. Edwards, C. A.; Batchelder, H. P.; Powell, T. M.: MODELS OF NP-(MICRO)ZOOPLANKTON DYNAMICS WITHIN A COASTAL UPWELLING SYSTEM

11:00 a.m. Hess, N. A.; Ribic, C. A.; Biggs, D. C.: DISTRIBUTION AND RELATIVE ABUNDANCE OF SEABIRDS IN RELATION TO HYDROGRAPHY AND PRODUCTIVITY IN THE NORTHERN GULF OF MEXICO

11:15 a.m. DeLong, T. C.; Mullin, K. D.; Redalje, D. G.: DISTRIBUTION AND ABUNDANCE OF CETACEANS IN THE NORTHEASTERN GULF OF MEXICO, RELATIVE TO SHIPBOARD SURFACE STRUCTURE DATA AND AVHRR IMAGERY

11:30 a.m. Remsen, A. W.; Hopkins, T. L.; Sutton, T. T.: CHARACTERIZATION OF A LOW SALINITY FEATURE AT AN OCEANIC SITE IN THE GULF OF MEXICO

11:45 a.m. Kononen, K.; Huttunen, M.; Kanoshina, I.; Laanemets, J.; Moisander, P.: HORIZONTAL, VERTICAL, AND TEMPORAL VARIABILITY OF A DINOFLAGELLATE-CYANOBACTERIUM COMMUNITY IN A CHANGING HYDRODYNAMICAL REGIME AT THE ENTRANCE TO THE GULF OF FINLAND

12:00 p.m. Estrada, M.: RELATIONSHIPS BETWEEN HYDROGRAPHICAL CHARACTERISTICS OF THE WATER COLUMN AND PHYTOPLANKTON ABUNDANCE IN AN OLIGOTROPHIC SEA

12:15 p.m. Rumsey, S.: VARIABILITY IN LARVAL DEVELOPMENT AND LARVAL STAGE-STRUCTURE OF EUPHAUSIA PACIFICA IN THE SOUTHERN CALIFORNIA BIGHT

SS10:

New Developments in Marine and Freshwater Epidemiology

Chairs: Mercedes Pascual, *University of Maryland*
Laurie L. Richardson, *Florida International University*
G. Chris Holdren, *Bureau of Reclamation*
James LaBounty, *Bureau of Reclamation*

Location: Sweeney, #3

8:30 a.m. Barber, R. T.: WHY IS AQUATIC EPIDEMIOLOGY CHANGING NOW? HAS A CHANGING CLIMATE PLAYED A KEY ROLE?

9:00 a.m. Powell, E. N.; Ford, S. E.; Hofmann, E. E.; Klinck, J. M.: MODELING THE EFFECT OF CLIMATE CHANGE ON OYSTER DISEASE

9:15 a.m. Rodo, X.; Pascual, M.: CHOLERA DYNAMICS AND RAINFALL VARIABILITY: AN ON-OFF RELATIONSHIP DRIVEN BY ENSO?

9:30 a.m. Schmidt, N.; Lipp, E. K.: CLIMATIC FACTORS AFFECTING WATER QUALITY IN CHARLOTTE HARBOR, FLORIDA

9:45 a.m. Precht, W. F.; Aronson, R. B.: DISEASE, HUMAN ACTIVITY AND THE CHANGING FACE OF CARIBBEAN CORAL REEFS

10:00 a.m. Break

10:30 a.m. Porter, J. W.; Dustan, P.; Jaap, W. C.; Wheaton, J.; Porter, K. G.; Patterson, K. L.; Peters, E. C.; Mueller, E.: PATTERNS OF DISTRIBUTION AND SPREAD OF CORAL DISEASE IN THE FLORIDA KEYS

10:45 a.m. Burkholder, J. M.; Glasgow, H. B.; Deamer-Melia, N. J.; Hannon, E. K.: THE 1998 FISH KILL SEASON: TRACKING A TOXIC PFIESTERIA OUTBREAK IN THE NEUSE ESTUARY, NORTH CAROLINA, U.S.A.

11:00 a.m. Smith, G. W.; Ritchie, K. B.: INVESTIGATING DISEASES OF MARINE INVERTEBRATES

11:15 a.m. Richardson, L. L.; Kuta, K. G.; Carlton, R. G.; Schnell, S.: INTEGRATING MICROBIOLOGICAL, MICROSENSOR, MOLECULAR, AND PHYSIOLOGICAL TECHNIQUES FOR THE STUDY OF CORAL DISEASE ETIOLOGY

11:30 a.m. Lipp, E. K.; Rose, J. B.: IMPORTANCE OF SEDIMENT IN THE DISTRIBUTION OF VIBRIO VULNIFICUS

11:45 a.m. Mallin, M. A.: INFLUENCE OF LAND USE PATTERNS ON ENTERIC BACTERIAL POLLUTION IN ESTUARINE WATERS

12:00 p.m. Noble, R. T.; Fuhrman, J. A.; Michaels, A.: DETECTION OF INDICATOR VIRUSES IN EFFLUENT-IMPACTED COASTAL WATERS OF THE SOUTHERN CALIFORNIA BIGHT

12:15 p.m. Maki, R. P.; Aas, P.; Hicks, R. E.: EFFECT OF DIFFERENT SUSPENDED PARTICLES ON THE SURVIVAL AND VIABILITY OF SALMONELLA TYPHIMURIUM IN FRESHWATER MICROBIAL COMMUNITIES

SS16:

Behavioral Ecology and Sensory Biology of Marine and Freshwater Organisms

Chairs: Michael Latz, *University of California San Diego*
Joop Ringelberg, *Netherlands Institute for Ecology*
Erik van Gool, *Netherlands Institute for Ecology*
Richard Zimmer-Faust, *University of California*

Location: Hilton, Mesa A

8:30 a.m. Janssen, J.: SWIMMING BEHAVIORS OF FISHES WITH WIDE, MEMBRANOUS LATERAL LINE CANALS

Thursday Morning Oral Sessions

- 8:45 a.m. Crimaldi, J. P.; Wiley, M. B.; Koseff, J. R.: DESIGN AND QUANTIFICATION OF A LABORATORY ODOR PLUME FOR USE IN BIOLOGICAL STUDIES OF CHEMICAL SENSING AND TRACKING ALGORITHMS
- 9:00 a.m. Mead, K. S.; Koehl, M. A. R.: OLFACTORY FLICKING IN STOMATOPODS: CHANGES IN THE BOUNDARY LAYER SURROUNDING THE CHEMOSENSORY SENSILLAE AS A FUNCTION OF ANIMAL SIZE AND ANTENNULE SPEED
- 9:15 a.m. Moore, P. A.: THE INFLUENCE OF HYDRODYNAMICS ON SENSORY INFORMATION AND ORIENTATION BEHAVIOR IN THE CRAYFISH, *ORCONECTUS RUSTICUS*
- 9:30 a.m. Tamburri, M. N.: IN SITU STUDIES OF CHEMICALLY MEDIATED FEEDING BY DEEP-SEA FISHES AND A MIDWATER HYDROMEDUSA
- 9:45 a.m. Lenz, P. H.; Hartline, D. K.: KINEMATICS OF CALANOID ESCAPE BEHAVIOR: COMPARISON BETWEEN TWO SPECIES, *UNDINULA VULGARIS* AND *PLEUROMAMMA XIPHIAS*
- 10:00 a.m. Break**
- 10:30 a.m. Fields, D. M.; Yen, J.; Miller, M. W.; Weissburg, M. J.: BEHAVIORAL THRESHOLDS FOR *EUCHAETA RIMANA* IN RESPONSE TO FLUID MECHANICAL SIGNALS.
- 10:45 a.m. Doall, M. H.; Strickler, J.; Yen, J.: THE SPATIAL-TEMPORAL SCALES OF INTERACTION BETWEEN COPEPODS: IMPLICATIONS FOR SENSORY SYSTEMS AND ENCOUNTER RATES
- 11:00 a.m. Ting, J. H.; Kelly, L. S.; Snell, T. W.: PURIFICATION OF MONOCLONAL ANTIBODIES TO MATE RECOGNITION PHEROMONES IN THE MARINE COPEPOD *TIGRIOPUS JAPONICUS*
- 11:15 a.m. Zimmer, R. K.; Decho, A. W.; Browne, K. A.: CHEMICAL CUES: WHY BASIC PEPTIDES ARE SIGNAL MOLECULES IN MARINE ENVIRONMENTS
- 11:30 a.m. Kurmayer, R. R.; Jüttner, F. F.: STRATEGIES FOR THE COEXISTENCE OF ZOOPLANKTON AND THE TOXIC CYANOBACTERIUM *PLANKTOTHRIX RUBESCENS* IN LAKE ZÜRICH, SWITZERLAND
- 11:45 a.m. Spaak, P.; Boersma, M.: PREDATOR INDUCED DIFFERENTIATION IN LIFE HISTORY AND BEHAVIOUR OF *DAPHNIA*: THE MAINTENANCE OF CLONAL DIVERSITY IN A HYBRID SPECIES COMPLEX
- 12:00 p.m. van Gool, E.; Ringelberg, J.: ESTIMATES ON EFFECTIVE KAIROMONE CONCENTRATION IN THE FIELD MAY PREDICT DIEL VERTICAL MIGRATION
- 12:15 p.m. Ringelberg, J.; Van Gool, E.: INTRA- AND INTERSPECIFIC EFFECTS OF INFOCHEMICAL PERCEPTION IN LAKES.

SS22: Zooplanktivory in Oceans and Lakes

- Chairs: Amatzia Genin, *Steinitz Marine Biology Laboratory*
Ken Sebens, *University of Maryland*
- Location: Hilton, Mesa B
- 8:30 a.m. Jaffe, J. S.; De Robertis, A.; Ohman, M. D.: EVIDENCE FOR THE PREDATOR AVOIDANCE HYPOTHESIS IN THE FINE STRUCTURE OF DIEL VERTICAL MIGRATION OF *EUPHAUSIA PACIFICA*.
- 8:45 a.m. Liu, Z.; Herzig, A.: PERSISTENCE STRATEGIES OF *LEPTODORA KINDTI*
- 9:00 a.m. Greene, H.: KRILL SOUND-SCATTERING LAYERS AND THEIR RELATIONSHIP TO BLUE WHALE FORAGING PATTERNS IN THE MONTEREY BAY SUBMARINE CANYON

- 9:15 a.m. Scheuerell, M. D.; Schindler, D. E.: THE EXTENT OF SPATIAL AGGREGATION OF PREDATORS AND PREY IN LAKES
- 9:30 a.m. Haldorson, L. J.; Boldt, J. L.: PLANKTIVORY BY FISHES IN PRINCE WILLIAM SOUND, ALASKA: A BIOENERGETICS ANALYSIS
- 9:45 a.m. Genin, A.; Jaffe, J. S.; Ayalon, I.; Ohevia, M.; Lindell, D.: ZOOPLANKTIVORY BY CORAL-REEF FISH INVESTIGATED WITH TRADITIONAL NETS AND A NEW DUAL-HEAD SONAR: FLUX-DEPENDENCY, SIZE SELECTIVITY AND COMMUNITY EFFECTS
- 10:00 a.m. Break**
- 10:30 a.m. Logerwell, E. A.; Ohman, M. D.: EGG-BROODING, BODY SIZE AND PREDATION RISK IN PLANKTONIC MARINE COPEPODS
- 10:45 a.m. Heidelberg, K. B.; Sebens, K. P.; Purcell, J. E.: A MODEL OF CORAL HETEROTROPHY BASED ON PREY BEHAVIOR, CORAL MORPHOLOGY AND WATER FLOW
- 11:00 a.m. Schabetsberger, R.; Brodeur, R.; Napp, J.: DIEL VERTICAL MIGRATION, FEEDING SELECTIVITY, AND PREY DISTRIBUTION OF JUVENILE WALLEYE POLLOCK AT A PRODUCTIVE FRONTAL REGION IN THE EASTERN BERING SEA
- 11:15 a.m. De Stasio, B. T.; Emery, A. L.; Murrin, C. R.; Magnuson, J. J.: SEASONAL DYNAMICS OF PLANKTIVORE-PREY INTERACTIONS: CHANGES IN VERTICAL DISTRIBUTIONS AND BIOENERGETICS
- 11:30 a.m. Lazzaro, X.; Starling, F.: THE ROLE OF FISH-ZOOPLANKTON INTERACTIONS IN TEMPERATE VS. TROPICAL LAKE AND RESERVOIR TROPHIC FOOD WEBS: CONSEQUENCES FOR BIOMANIPULATION
- 11:45 a.m. Schindler, D. E.; Scheuerell, M. D.: EFFECTS OF HUMAN ACTIVITIES ON THE RELATIVE IMPORTANCE OF BENTHIC AND PELAGIC CARBON IN LAKE FOOD WEBS

SS26: Planktonic Larvae: Meat and Potatoes or Nouvelle Cuisine? Paradigms for the Next Century

- Chair: John R. McConaugha, *Old Dominion University*
- Location: Eldorado, Anasazi North
- 8:30 a.m. Manahan, D. T.: PHYSIOLOGICAL STATE OF LARVAE: SURVIVING STARVATION AND METABOLIC REGULATION
- 9:00 a.m. McEdward, L. R.: SIMULATION MODELS OF LARVAL PLANKTIVORY IN MARINE INVERTEBRATES
- 9:15 a.m. Eckert, G. L.: TESTING OLD PARADIGMS: DO MARINE INVERTEBRATE SPECIES WITH FEEDING LARVAE REALLY HAVE SMALLER EGGS, LARGER GEOGRAPHIC RANGES, AND MORE POPULATION VARIABILITY?
- 9:30 a.m. Strathmann, R. R.; Staver, J. M.: EVOLUTION OF CELL CYCLE DURATIONS AND TIME TO FIRST SWIMMING OF PLANKTONIC EMBRYOS
- 9:45 a.m. Metaxas, A.: AGGREGATION OF ECHINOID LARVAE AROUND EXPERIMENTALLY-CONSTRUCTED FOOD PATCHES
- 10:00 a.m. Break**
- 10:30 a.m. Garrison, L. P.: PHOSPHOLIPID METABOLISM AND RESISTANCE TO STARVATION IN THE ZOEAE OF TWO ESTUARINE CRABS.
- 10:45 a.m. McConaugha, J. R.; McConaugha, C. S.: OMNIVORY IN DECAPOD LARVAE: IMPLICATIONS FOR GROWTH AND RECRUITMENT.

Thursday Morning Oral Sessions

- 11:00 a.m. Natunewicz, C. C.; Epifanio, C. E.: TWO-DIMENSIONAL SCALE OF LARVAL PATCHES IN A BUOYANCY-DRIVEN COASTAL CURRENT
- 11:15 a.m. Hare, J. A.; Churchill, J. H.; Cowen, R. K.; Berger, T. J.; Glenn, S. M.; Govoni, J. J.; Lee, T. N.: MECHANISMS OF LARVAL TRANSPORT FROM SOUTH TO NORTH OF CAPE HATTERAS: A LAGRANGIAN PERSPECTIVE
- 11:30 a.m. Butman, C.; Starczak, V. R.; Grassle, J. P.; Snelgrove, P. V.: SEDIMENT SELECTION AND LARVAL AVAILABILITY IN A COASTAL EMBAYMENT

SS30: Geochemistry and the Benthos: Determinants of Ecological Processes?

- Chairs: Roberta L. Marinelli, *National Science Foundation*
Sarah A. Woodin, *University of South Carolina*
- Location: Hilton, Ortiz I&II
- 8:30 a.m. Banta, G. T.; Timmerman, K.; Rasmussen, A. D.; Andersen, O.: POLLUTANT EFFECTS ON BIOTURBATION - AN ADDED WRINKLE IN INTERACTIONS BETWEEN GEOCHEMISTRY AND THE BENTHOS
- 8:45 a.m. Warner, K. A.; Capone, D. G.: HYDROGEN DISTRIBUTIONS IN CHESAPEAKE BAY SEDIMENTS IN RELATION TO REDUCTIVE DECHLORINATION ACTIVITY AND BIOGEOCHEMICAL PARAMETERS
- 9:00 a.m. Witte, U.: DETERMINANTS OF ABYSSAL BENTHIC COMMUNITY ORGANISATION: THE DEEP ARABIAN SEA
- 9:15 a.m. Levin, L.: UNTANGLING THE ROLES OF OXYGEN AND ORGANIC MATTER IN STRUCTURING COMMUNITIES: INSIGHTS FROM BATHYAL MACROFAUNA
- 9:30 a.m. Miller, D. C.: SUBMARINE GROUNDWATER DISCHARGE, WORM PATCHES AND PORE WATER CHEMISTRY
- 9:45 a.m. Jumars, P. A.; Mayer, L. W.; Vetter, Y.; Schmidt, J.: CONTRASTING CHARACTERISTICS AND CONSEQUENCES OF DIGESTION BY DEPOSIT FEEDERS AND SEDIMENTARY BACTERIA
- 10:00 a.m. Break**
- 10:30 a.m. Currin, C. A.; Pinckney, J. L.: BENTHIC MICROALGAL MEDIATION OF SURFICIAL SEDIMENT GEOCHEMISTRY
- 10:45 a.m. Marinelli, R. L.; Wethey, D. S.; Lindsay, S. M.; Woodin, S. A.: EFFECTS OF GEOCHEMISTRY ON BENTHIC RECRUITMENT AND COMMUNITIES: THE SIGNIFICANCE OF TRANSIENT PROCESSES
- 11:00 a.m. Whitlatch, R. B.; Osman, R. W.: FIELD MEASUREMENTS OF INITIAL BENTHIC INVERTEBRATE LARVAL SETTLEMENT: PHYSICAL CONTROLS AND GEOCHEMICAL IMPLICATIONS
- 11:15 a.m. Matisoff, G.; Soster, F. M.; McCall, P. L.; Robbins, J. A.: A MODEL OF PORE WATER GEOCHEMICAL SUCCESSION FOLLOWING SEDIMENT DISTURBANCE IN THE GREAT LAKES
- 11:30 a.m. Smith, C. R.; DeMaster, D. J.; Fornes, W.: ARE MEGAFAUNAL DEPOSIT FEEDERS "KEystone MODIFIERS" OF POC FLUX ON THE CONTINENTAL SLOPE?
- 11:45 a.m. Dahl Rasmussen, A. R.; Banta, G. B.; Andersen, O. A.: LUGWORM BIOTURBATION AFFECTS CADMIUM WATER/SEDIMENT TRANSFER AND DISTRIBUTION
- 12:00 p.m. Coley, T. L.; Cornwell, J. C.: THE EFFECT OF HYDROLOGICAL FLOW ON THE FLUX OF NUTRIENTS AND GASES ACROSS THE SEDIMENT-WATER INTERFACE

- 12:15 p.m. D'Andrea, A. F.; Aller, R. C.; Lopez, G. R.: RAPID FLUX AND TURNOVER OF REACTIVE POREWATER CONSTITUENTS ON AN INTERTIDAL SANDFLAT: THE INTERACTION OF PHYSICAL ADVECTION AND MACROBIOLOGICAL PROCESSES

SS33: Microbial Utilization of DOM in Freshwater and Marine Ecosystems

- Chairs: Louis A. Kaplan, *Stroud Water Research Center*
David Kirchman, *University of Delaware*
- Location: Sweeney, #4
- 8:30 a.m. Amon, R. M.W.: INTERACTION OF BACTERIAL GROWTH AND COMPOSITION OF FRESH DISSOLVED ORGANIC MATTER FROM AN ARCTIC ICE FLOE
- 8:45 a.m. Meon, B.; Kirchman, D. L.: DYNAMICS OF FREE AND COMBINED AMINO ACIDS AND CARBOHYDRATES DURING AN EXPERIMENTAL PHYTOPLANKTON BLOOM
- 9:00 a.m. Jorgensen, N. O. G.: L/D RATIOS OF DISSOLVED COMBINED AMINO ACIDS AS INDICATORS OF DOM QUALITY TO BACTERIA
- 9:15 a.m. Carlson, C. A.; Giovannoni, S. J.; Hansell, D. A.; Wheeler, B. R.: DETERMINING THE RESPONSE OF SURFACE AND DEEP BACTERIOPLANKTON COMMUNITIES TO DOM WHICH ACCUMULATES AT THE BERMUDA ATLANTIC TIME-SERIES STUDY STATION (BATS)
- 9:30 a.m. Skoog, A. C.; Whitehead, K.: AMBIENT CONCENTRATIONS OF GLUCOSE AND COMBINED NEUTRAL ALDOSES AND THE EFFECT OF INORGANIC NUTRIENT CONCENTRATIONS ON MICROBIAL ASSIMILATION OF GLUCOSE IN THE NORTH PACIFIC.
- 9:45 a.m. Kaplan, L. A.: DISSOLVED ORGANIC MATTER METABOLISM AS A LINK TO HETEROGENEITY IN COMMUNITIES OF HETEROTROPHIC BACTERIA
- 10:00 a.m. Break**
- 10:30 a.m. Harvey, H.; Mannino, A.; Ju, S.: POLAR LIPIDS IN DISSOLVED ORGANIC MATTER: STRUCTURE, SOURCES AND LINKS TO ORGANIC MATTER CYCLING
- 10:45 a.m. Sondergaard, M.: BIODEGRADABILITY OF DOC IN LAKE ESRUM
- 11:00 a.m. Tranvik, L. J.; Hansson, L. A.: FOOD WEB CONFIGURATION AFFECTS THE QUANTITY AND BACTERIAL DEGRADABILITY OF DOC
- 11:15 a.m. Kling, G. W.; Hobbie, J. E.; Rublee, P. A.; Kipphut, G. W.; Bahr, M.: BACTERIAL PROCESSING OF DOC - WHAT CONTROLS ARE REALLY IMPORTANT AT AN ECOSYSTEM SCALE?
- 11:30 a.m. Ward, A. K.; Johnson, M. D.: FACTORS AFFECTING RETENTION AND TRANSFORMATION OF DISSOLVED ORGANIC CARBON BY ATTACHED MICROBIAL COMMUNITIES IN WETLANDS
- 11:45 a.m. Hume, N.; Fleming, M.; Horne, A.: MICROBIAL AVAILABILITY OF PLANT DERIVED DOC IN DENITRIFICATION WETLANDS
- 12:00 p.m. Baker, M. A.; Dahm, C. N.; Valett, H.: MICROBIAL METABOLISM OF ACETATE IN THE GROUNDWATER-SURFACE WATER INTERFACE OF STREAMS
- 12:15 p.m. Coffin, R. B.; Grabowski, K. S.; MacDonald, I. R.; Cifuentes, L. A.; Pohlman, J. W.: ANALYSIS OF OCEAN METHANE HYDRATE FORMATION AND FATE

Thursday Morning Oral Sessions

SS39:

Nutrient Fluxes in Pelagic Food Webs

Chairs: Colin S. Reynolds, *Institute of Freshwater Ecology*
Louis Legendre, *Laval University*

Location: Sweeney, #2

- 8:30 a.m. Paerl, H. W.; Peierls, B. L.; Pinckney, J. L.; Whittall, D. R.: ANTHROPOGENICALLY-DERIVED ATMOSPHERIC NITROGEN: ITS POTENTIAL ROLES IN COASTAL EUTROPHICATION
- 8:45 a.m. Wilkerson, F. P.; Dugdale, R. C.; Schaefer, M.; Marchi, A.; Hogue, V.: SIZE FRACTIONATED NITROGEN UPTAKE AND ASSIMILATION IN MONTEREY BAY, CA.
- 9:00 a.m. Markager, S.: DOC AS REGULATING FACTOR FOR AREA PRIMARY PRODUCTION IN COASTAL AREAS
- 9:15 a.m. Le Bouteiller, A. A.; Radenac, M.; Blanchot, J.; Neveux, J.: VARIABILITY OF BIOMASS AND PRIMARY PRODUCTIVITY IN THE CENTRAL AND WESTERN EQUATORIAL PACIFIC UPWELLING
- 9:30 a.m. Dunne, J. P.; Murray, J. W.; Rodier, M.: THE ROLE OF MESOSCALE WAVES ON NEW AND EXPORT PRODUCTION IN THE EQUATORIAL PACIFIC UPWELLING ZONE
- 9:45 a.m. Cuhel, R. L.; Aguilar, C.: CAUSES AND CONSEQUENCES OF PLANKTON PHOSPHORUS DEFICIENCY DURING THE 1998 EL NINO IN LAKE MICHIGAN
- 10:00 a.m. Break**
- 10:30 a.m. Reynolds, C. S.: THE INFLUENCE OF NUTRIENTS ON THE SPECIES COMPOSITION OF PHYTOPLANKTON ASSEMBLAGES
- 10:45 a.m. Azam, F.: BIOGEOCHEMICAL SIGNIFICANCE OF BACTERIA-ORGANIC-MATTER INTERACTIONS IN THE OCEAN
- 11:00 a.m. Quental-Mendes, R.; Richards, K. J.; Fasham, M. J.: A MODEL OF VIRAL DYNAMICS IN BACTERIA AND PHYTOPLANKTON POPULATIONS OF THE OPEN OCEAN
- 11:15 a.m. Pace, M. L.; Cole, J. J.: BACTERIAL RESPONSES TO NUTRIENT LOADING DEPEND ON FOOD WEB STRUCTURE: RESULTS FROM WHOLE LAKE EXPERIMENTS
- 11:30 a.m. Gardner, W. S.; Lavrentyev, P. J.: THE HETEROTROPHIC NANOFLAGELLATE TO BACTERIA BIOMASS RATIO AS AN INDICATOR OF NITROGEN RECYCLING RATES IN LAKE MARACAIBO, VENEZUELA, AND IN TEXAS COASTAL WATERS
- 11:45 a.m. Schampel, J. H.; Schulz, K. L.; Sterner, R. W.: THE ROLE OF SMALL CONSUMERS IN THE PELAGIC FOOD WEB OF LAKE SUPERIOR'S WESTERN ARM
- 12:00 p.m. Wurtsbaugh, W. A.; Miracle, M. R.; Camacho, A.; Armengol, J.: NITROGEN FLUX BETWEEN STRATA AND THROUGH THE FOOD WEB MEASURED WITH A WHOLE-LAKE N-15 EXPERIMENT
- 12:15 p.m. Rassoulzadegan, F.; Thingstad, T.; Wassmann, P.: CAN DOMINANT STRUCTURE OF THE FOOD WEB EXPLAIN THE VARIABILITY OF THE VERTICAL FLUX?

SS51:

Mesocosms and Plankton Dynamics: What Have We Learned From Experimental Studies in Mesocosms?

Chairs: Paul Wassmann, *University of Tromsø*
Ray W. Drenner, *Texas Christian University*
Asit Mazumder, *Université de Montréal*

Location: Hilton, Mesa C

- 8:30 a.m. Harrison, P.: MARINE MESOCOSMS: GIANT TEST TUBES IN THE OCEAN
- 8:45 a.m. Riemann, B.: MODEL ECOSYSTEMS IN MARINE SCIENCE: A SURVIVING TRACE OR A PERSISTENT INSTRUMENT?
- 9:00 a.m. Neill, W. E.: LESSONS FROM 20 YEARS OF MESOCOSM STUDIES OF PLANKTON DYNAMICS IN OLIGOTROPHIC LAKES
- 9:15 a.m. Lignell, R.; Tamminen, T.; Heiskanen, A.; Seppaelae, J.; Kuuppo, P.; Tuomi, P.; Olli, K.: PLANKTON ECOLOGICAL STUDIES IN LARGE-SCALE MESOCOSMS: NUTRIENT VS. PREDATION CONTROL AND RETENTION VS. EXPORT OF NUTRIENT LOAD
- 9:30 a.m. Egge, J.: SEAWATER ENCLOSURE STUDIES ON THE NORWEGIAN COAST DURING THE LAST DECADE: I. INFLUENCE OF PHYSICAL, CHEMICAL AND BIOLOGICAL FACTORS ON PHYTOPLANKTON DYNAMIC
- 9:45 a.m. Nejstgaard, J. C.; Egge, J. K.; Bamstedt, U.: SEAWATER ENCLOSURE STUDIES ON THE NORWEGIAN WEST COAST DURING THE LAST DECADE: II. ZOOPLANKTON FOOD SELECTION AND PRODUCTION IN NATURAL PLANKTON DOMINATED BY FLAGELLATES OR DIATOMS.
- 10:00 a.m. Break**
- 10:30 a.m. Hansen, B. W.; Hygum, B. H.; Brozek, M.; Jensen, F.; Rey, C.: FOOD WEB INTERACTIONS IN A CALANUS FINMARCHICUS DOMINATED SYSTEM - A MESOCOSM STUDY
- 10:45 a.m. Rey, C. C.; Carlotti, F. F.; Tande, K. K.; Hygum, B. H.: EGG AND FAECAL PELLET PRODUCTION OF CALANUS FINMARCHICUS FEMALES FROM CONTROLLED MESOCOSMS AND IN SITU POPULATIONS: INFLUENCE OF AGE AND FEEDING HISTORY
- 11:00 a.m. Lampert, W.: TRADING FOOD FOR TEMPERATURE: COMPROMISES IN THE VERTICAL DISTRIBUTION OF DAPHNIA
- 11:15 a.m. Svensen, C. C.; Wassmann, P. P.: ENCLOSING NATURE: SOME EXPERIENCES FROM VERTICAL FLUX STUDIES IN MESOCOSMS
- 11:30 a.m. Luecke, C.; Budy, P.: UNDERSTANDING PATTERNS OF TROPHIC TRANSFER EFFICIENCY USING MESOCOSMS IN LAKES OF VARYING TROPHIC STATUS
- 11:45 a.m. Granéli, E.; Carlsson, P.; Legrand, C.; Johnsen, G.; Luckas, B.; Reichelt, M.: STRUCTURATION OF MARINE PHYTOPLANKTON COMMUNITIES SUBJECTED TO DIFFERENT LEVELS OF N, P AND SI LIMITATION IN A MESOCOSM EXPERIMENT
- 12:00 p.m. Holz, J. C.; Hoagland, K. D.; Joern, A.: EXPERIMENTAL MESOCOSM STUDY OF PHYTOPLANKTON SPECIES COMPOSITION, ALTERNATE LAKE STATES, AND COMMUNITY BREAKPOINTS ALONG A PHOSPHORUS GRADIENT

Thursday Morning Oral Sessions

SS52:

The Impact of Episodic Events on Lake and Coastal Ecosystems

- Chairs: Brain J. Eadie, *Nat'l. Oceanic and Atmospheric Admin.*
Raj Murthy, *Canada Centre for Inland Waters*
- Location: Eldorado, Zia A/B/C
- 8:30 a.m. Huttula, T.; Podsetchine, V.; Peltonen, A.; Schernewski, G.; Nöges, T.: THE EFFECT OF EPISODIC EVENTS ON LAKE ECOLOGY, NORTH EUROPEAN EXPERIENCES
- 9:00 a.m. Podsetchine, V.; Huttula, T.; Niinioja, R.; Filatov, N.; Lozovik, P.: AN EXAMPLE OF EPISODIC MIXING EVENT CAUSED BY STORM IN THE NORTHERN PART OF LAKE LADOGA
- 9:15 a.m. Wells Budd, J.; Chye, J. D.: RETROSPECTIVE STUDIES OF GREAT LAKES WATER QUALITY USING SATELLITE REMOTELY SENSED IMAGERY
- 9:30 a.m. Meadows, L. A.; Vesecky, J. F.; Teague, C.; Hansen, P. E.; Paduan, J.; Fernandez, D.; Daida, J.; Miller, G. S.: THE FRESHWATER APPLICATION OF A MULTI-FREQUENCY HF RADAR SYSTEM - PART OF THE EPISODIC EVENT: GREAT LAKES EXPERIMENT (EEGLE)
- 9:45 a.m. Flynn, K. M.; MacIntyre, S.: MIXING POTENTIAL OF STORM-DRIVEN INTERNAL WAVES IN MONO LAKE, CALIFORNIA
- 10:00 a.m. Break**
- 10:30 a.m. Chen, C.; Zhu, J.; Ralph, E.; Green, S.: A 3-D PROGNOSTIC MODELING STUDY OF THE KEWEENAW CURRENT IN LAKE SUPERIOR
- 10:45 a.m. Marko, M. D.; Ralph, E. A.; Megard, R. O.: EVIDENCE OF A LATE SUMMER UPWELLING IN WESTERN LAKE SUPERIOR
- 11:00 a.m. Urban, N. R.; Bastone, A.; Gatzke, T.; Jeong, J.; Koca, D. S.: THE EPISODIC NATURE OF CROSS-MARGIN TRANSPORT OF PARTICLES ACROSS THE KEWEENAW CURRENT IN L. SUPERIOR
- 11:15 a.m. Churchill, J. H.; Williams, A. J.; Ralph, E. A.: NEAR-BOTTOM SEDIMENT AND FLUID DYNAMICS IN THE COASTAL ZONE EAST OF LAKE SUPERIOR'S KEWEENAW PENINSULA.
- 11:30 a.m. Bedford, K.; Zhang, S.; Sadayappan, P.; Welsh, D.: A MESOSCALE WAVE/CURRENT/SEDIMENT-TRANSPORT PARALLEL MODELING SYSTEM APPLIED TO EPISODIC TRANSPORT IN LAKE MICHIGAN
- 11:45 a.m. Eadie, B. J.: MASSIVE EPISODIC SEDIMENT RESUSPENSION IN LAKE MICHIGAN
- 12:00 p.m. Hornbuckle, K. C.; Bogdan, J.: A STUDY OF ORGANIC CONTAMINANTS IN AIR AND WATER IN CONJUNCTION WITH EPISODIC EVENTS - GREAT LAKES EXPERIMENT(EEGLE)
- 12:15 p.m. Chang, M.; Sanford, L. P.: MODELING THE INFLUENCES OF RESUSPENSION AND DEPOSITION ON EARLY DIAGENESIS OF PHOSPHORUS

CS62:

Phytoplankton and Primary Production

- Chair: Brian Williams, *University of Newcastle, Australia*
- Location: Sweeney, #1
- 8:30 a.m. Armbrust, E. V.: IDENTIFICATION OF GENES EXPRESSED DURING THE ONSET OF SEXUAL REPRODUCTION IN A CENTRIC DIATOM
- 8:45 a.m. Interlandi, S. J.; Kilham, S. S.: LIMITING RESOURCES AND THE REGULATION OF DIVERSITY IN PHYTOPLANKTON COMMUNITIES
- 9:00 a.m. Lomas, M. W.; Rumbley, C. J.; Glibert, P. M.: NITROGEN RELEASE BY MARINE PHYTOPLANKTON UNDER LIGHT STRESS: COMPARISON OF SPECIES
- 9:15 a.m. Saros, J. E.; Fritz, S. C.: CHANGES IN THE OUTCOME OF NUTRIENT COMPETITION BETWEEN SALINE-LAKE DIATOMS IN RESPONSE TO VARIATION IN N:P RATIOS, SALINITY, AND BRINE TYPE
- 9:30 a.m. Klug, J. L.: POSITIVE AND NEGATIVE EFFECTS OF DISSOLVED ORGANIC MATTER ON PHYTOPLANKTON GROWTH
- 9:45 a.m. Horner Rosser, S.: DINOFLAGELLATE BLOOM DYNAMICS AND CHANGING PATTERNS OF DIURNAL VERTICAL MIGRATION
- 10:00 a.m. Break**
- 10:30 a.m. Bradshaw, E. G.; Olrik, K.; Anderson, N.: FACTORS CONTROLLING THE SEASONAL ABUNDANCE OF CYCLOSTEPHANOS DUBIUS (FRICKE) ROUND IN EUTROPHIC, DANISH LAKES
- 10:45 a.m. Julius, M. L.; Stoermer, E. F.: ONE DIATOM, TWO LAKES: STEPHANODISCUS NIAGARAE POPULATION DYNAMICS RECORDED IN LAKE ONTARIO AND LAKE ERIE SEDIMENTS
- 11:00 a.m. Williams, B. J.; Cole, B.: PRELIMINARY INVESTIGATIONS ASSOCIATED WITH MODELLING OF CYANOBACTERIAL BLOOMS IN A SHALLOW RESERVOIR
- 11:15 a.m. Dokulil, M. T.: SELECTION OF PHYTOPLANKTON ASSEMBLAGES ACROSS THE TROPHIC SPECTRUM
- 11:30 a.m. Sin, Y.; Wetzel, R. L.; Anderson, I. C.: THE USE OF A PLANKTON ECOSYSTEM MODEL FOR THE STUDY OF SIZE-STRUCTURED PHYTOPLANKTON DYNAMICS IN THE YORK RIVER ESTUARY, VIRGINIA
- 11:45 a.m. Parkhill, J.; Cullen, J. J.; Maillet, G. L.: INVESTIGATING KINETICS OF VARIABLE FLUORESCENCE AND NON-PHOTOCHEMICAL QUENCHING AS A FUNCTION OF IRRADIANCE USING A NEW MEASUREMENT SYSTEM
- 12:00 p.m. Reinfelder, J. R.; Morel, F. M.: PHOSPHOENOLPYRUVATE CARBOXYLASE AND A C4 CARBON PUMP IN MARINE DIATOMS
- 12:15 p.m. Sawatzky, C. L.; Wurtsbaugh, W.; Luecke, C.: ALKALINE PHOSPHATASE ACTIVITY AS A MEASURE OF SPATIAL-TEMPORAL PHOSPHORUS LIMITATION IN A HIGH MOUNTAIN LAKE WITH A DEEP CHLOROPHYLL LAYER

Thursday Afternoon Oral Sessions

Special Thematic Session TS03:

New Tools and Paradigms for Beginning the New Millennium

Chair: Steve Brandt, NOAA

Location: Eldorado, Anasazi South

2:00 p.m. Azam, F.: INTEGRATING MICROBIAL PROCESSES INTO OCEANOGRAPHY: DO WE NEED A NEW CONCEPTUAL FRAMEWORK?

2:30 p.m. Tenore, K.: VALUES IN THE PRACTICE OF SCIENCE: THEIR PAST AND FUTURE ROLES

3:00 p.m. Break

3:30 p.m. Pace, M. L.: THE FUTURE OF LIMNOLOGY AND OCEANOGRAPHY: INTELLECTUAL INTEGRATION AS A PATH TO SCIENTIFIC PROGRESS

4:00 p.m. Costanza, R.: PRINCIPLES FOR SUSTAINABLE GOVERNANCE OF THE OCEANS

4:30 p.m. Oviatt, C.: MARINE ECOLOGY NEEDS TO ENHANCE THE EXPERIMENTAL ECOSYSTEM APPROACH

SS16-II:

Behavioral Ecology and Sensory Biology of Marine and Freshwater Organisms

Chairs: Michael Latz, *University of California San Diego*
 Joop Ringelberg, *Netherlands Institute for Ecology*
 Erik van Gool, *Netherlands Institute for Ecology*
 Richard Zimmer-Faust, *University of California*

Location: Hilton, Mesa A

2:00 p.m. Speekmann, C. L.; Bollens, S. M.; Avent, S. R.: THE EFFECTS OF ULTRAVIOLET RADIATION ON MORTALITY AND VERTICAL MIGRATION OF ZOOPLANKTON FROM SAN FRANCISCO BAY.

2:15 p.m. Dainer, J. S.: HORIZONTAL GRADIENT IN ABUNDANCE OF PLANKTON IN LACUSTRINE SYSTEMS

2:30 p.m. Sell, A.: PREDATOR AVOIDANCE AND PHYSIOLOGICAL CHANGE? TANK EXPERIMENTS ON VERTICAL MIGRATION BEHAVIOR IN THE COPEPOD ACARTIA TONSA

2:45 p.m. Wiltshire, K. H.; Lampert, W.: THE INDUCTION OF COLONY FORMATION IN SCENEDESMUS ACUTUS BY DAPHNIA: NEW INSIGHTS.

SS24:

Diapause and Other Life History Strategies in Aquatic Ecosystems

Chairs: Victor R. Alekseev, *Zoological Institute of the Russian Academy of Sciences*

Location: Hilton, Mesa B

2:00 p.m. Alekseev, V. R.: BIOCHEMICAL AND PHYSIOLOGICAL TRANSFORMATIONS IN DIAPAUSING CRUSTACEANS

2:15 p.m. Avery, D. E.: PROXIMAL CUES TO AND INDIVIDUAL VARIATION IN RESTING EGG PRODUCTION BY THE COPEPOD ACARTIA HUDSONICA IN NARRAGANSETT BAY, RI, USA

2:30 p.m. Kremp, A.: GERMINATION OF DINOFLAGELLATE RESTING CYSTS IN THE COASTAL NORTHERN BALTIC SEA

2:45 p.m. Starkweather, P. L.: DROUGHT AND DELUGE: DESERT EPHEMERAL POND CRUSTACEANS SHOW VARIABILITY IN LIFE HISTORY, PHYSIOLOGY AND POPULATION DYNAMICS

3:00 p.m. Break

3:30 p.m. Stross, R. G.: DIAPAUSE OFFERS LIFE TO ECOLOGY'S ORGANISMS

4:00 p.m. Tessier, A. J.; Cáceres, C. E.: OVER-WINTERING DAPHNIA, EGG BANKS AND IMPACT ON THE SPRING ALGAL BLOOM

4:15 p.m. Wynngaard, G. A.; Rouse, N. M.; Colliver, E.; Domangue, R. J.; Rasch, E. M.: GENOME SIZE, DEVELOPMENTAL RATE, AND BODY SIZE IN FRESHWATER CYCLOPOID COPEPODS

4:30 p.m. Hunt, H. L.; Mullineaux, L. S.: SPATIAL VARIATION IN RECRUITMENT OF SOFT-SHELL CLAMS: THE ROLES OF POSTLARVAL TRANSPORT AND PREDATION

4:45 p.m. Goser, B.: CLONAL DIFFERENCES IN LIFE HISTORY CHANGES OF DAPHNIA INDUCED BY INTRASPECIFIC INFOCHEMICALS

SS28-II:

Trace Elements from the Rivers to the Sea: Processes That Influence Chemical Speciation, Biogeochemical Cycling, and Biological Effects

Chairs: Greg L. Boyer, *State University of New York*
 William G. Wallace, *U.S. Geological Survey*
 Steven W. Wilhelm, *University of Tennessee*

Location: Sweeney, #1

2:00 p.m. McKay, R. M.; Urban, N. R.; Green, S. A.: IN SITU IMMUNOLOGICAL ASSESSMENT OF PHYTOPLANKTON FE DEFICIENCY IN WATERS OFF THE KEWEENAW PENINSULA, LAKE SUPERIOR

2:15 p.m. Twiss, M. R.; Auclair, J.; Charlton, M. N.: IRON-STIMULATED PHYTOPLANKTON PRODUCTIVITY IN THE SURFACE WATER OF EASTERN AND CENTRAL LAKE ERIE DURING THERMAL STRATIFICATION: AN INVESTIGATION USING TRACE METAL CLEAN TECHNIQUES

2:30 p.m. Hutchins, D. A.; Bruland, K. W.: A FOUR-LEVEL CLASSIFICATION SYSTEM FOR IRON LIMITATION IN COASTAL UPWELLING SYSTEMS

2:45 p.m. Milligan, A. J.; Harrison, P. J.: THE INFLUENCE OF IRON AVAILABILITY ON NITROGEN ASSIMILATION IN A MARINE DIATOM

3:00 p.m. Break

3:30 p.m. Kustka, A. B.; Sañudo-Wilhelmy, S. A.; Carpenter, E. J.: IRON QUOTAS OF SOUTH PACIFIC POPULATIONS OF THE PLANKTONIC NITROGEN FIXING CYANOBACTERIA, TRICHODESMIUM SPP.

3:45 p.m. Mann, E. L.; Chisolm, S. W.: THE GROWTH RATE OF PROCHLOROCOCCUS IN THE EASTERN EQUATORIAL PACIFIC IS LIMITED BY IRON

4:00 p.m. Huie, J. L.; Morel, F. M. M.: COBALT USE BY MARINE SYNECHOCOCCUS

4:15 p.m. Saito, M. A.; Moffett, J. W.; Chisholm, S. W.: ARE COBALT LIGANDS PRODUCED BY PROCHLOROCOCCUS?

4:30 p.m. Sunda, W. G.; Huntsman, S. A.: INTERACTIVE EFFECTS OF METAL ION CONCENTRATION AND LIGHT ON THE ACCUMULATION AND UTILIZATION OF IRON, MANGANESE AND ZINC IN A COASTAL DIATOM

4:45 p.m. Lane, T. W.; Morel, F. M. M.: THE ROLE OF CADMIUM IN CARBON ACQUISITION IN THE MARINE DIATOM THALASSIOSIRA WEISSFLOGII

Thursday Afternoon Oral Sessions

SS31-II: Biogeochemical Dynamics of the Southern Ocean

- Chairs: Walker Smith, *College of William and Mary*
Robert Anderson, *Lamont Doherty Earth Observatory*
Hugh Ducklow, *College of William and Mary*
Mike Landry, *University of Hawaii*
- Location: Sweeney, #2
- 2:00 p.m. Coale, K. H.; Fitzwater, S. E.; Gordon, R. M.; Tanner, S. A.; Johnson, K. S.: IRON LIMITATION OF PHYTOPLANKTON GROWTH AFFECTS NUTRIENT DRAWDOWN RATIOS IN THE SOUTHERN OCEAN
- 2:15 p.m. Sosik, H. M.; Olson, R. J.; Chekalyuk, A. M.: IRON LIMITATION IN THE SOUTHERN OCEAN: ACTIVE FLUORESCENCE MEASUREMENTS OF PHYTOPLANKTON POPULATIONS AND INDIVIDUAL CELLS
- 2:30 p.m. Franck, V. M.; Brzezinski, M. A.; Coale, K. H.; Nelson, D. M.: THE EFFECT OF IRON, ZINC AND SILICON AVAILABILITY ON SILICON UPTAKE ACROSS THE POLAR FRONTAL ZONE (PFZ), ANTARCTICA
- 2:45 p.m. Mathot, S. J.; Smith, W. O.: TEMPORAL CHANGES OF PHAEOCYSTIS SP. IN THE ROSS SEA: VARIATIONS IN COLONY SIZE, ABUNDANCE AND CARBON CONTENT

3:00 p.m. Break

- 3:30 p.m. Gardner, W. D.; Richardson, M.; Walsh, I. D.; Smith, W. O.: POC DISTRIBUTIONS AND PHYSICAL FORCING IN THE ANTARCTIC POLAR FRONT ZONE
- 3:45 p.m. Sweeney, C.; Hansell, D. A.; Millero, F.; Carlson, C. A.; Codispoti, L. A.; Smith, W. O.; Takahashi, T.: THE BIOGEOCHEMICAL REGIMES IN THE ROSS SEA INDICATED BY NET UTILIZATION OF CARBON AND NUTRIENT AND NET PRODUCTION OF ORGANIC CARBON
- 4:00 p.m. Kirchman, D. L.; Meon, B.; Steward, G. F.; Azam, F.; Ducklow, H. W.: COMPOSITION AND TURNOVER OF SELECTED DOM COMPONENTS IN THE SOUTHERN OCEAN
- 4:15 p.m. Rubin, S. I.; Takahashi, T.; Millero, F. J.: CARBON DIOXIDE AND NUTRIENT UTILIZATION IN THE UPPER WATER COLUMN ACROSS THE POLAR FRONTAL ZONE
- 4:30 p.m. Nelson, D. M.; Brzezinski, M. A.; Sigmon, D. E.; Franck, V. M.: SILICON LIMITATION IN THE POLAR FRONTAL ZONE OF THE SOUTHERN OCEAN DURING AUSTRAL SPRING AND SUMMER, 1997-1998
- 4:45 p.m. Sambrotto, R. N.: NEW (NITRATE) AND REGENERATED NITROGEN PRODUCTION IN THE ANTARCTIC POLAR FRONT REGION ALONG 170 DEGREES EAST

SS33-II: Microbial Utilization of DOM in Freshwater and Marine Ecosystems

- Chairs: Louis A. Kaplan, *Stroud Water Research Center*
David Kirchman, *University of Delaware*
- Location: Sweeney, #4
- 2:00 p.m. Cottrell, M. T.; Kirchman, D. L.: CHITINASE ACTIVITY AND CHITIN DEGRADATION DURING AN EXPERIMENTAL PHYTOPLANKTON BLOOM
- 2:15 p.m. Keith, S. C.; Arnosti, C.: BACTERIAL EXTRACELLULAR ENZYMATIC ACTIVITY IN A RIVERINE- COASTAL WATER TRANSECT: VARIATIONS OF POLYSACCHARIDE HYDROLYSIS RATES WITH SUBSTRATE AND SIZE CLASS
- 2:30 p.m. Herndl, G. J.; Stoderegger, K.: PRODUCTION OF SEMILABILE DOM AND TRANSPARENT EXOPOLYMER PARTICLES BY MARINE BACTERIOPHYTES
- 2:45 p.m. Fischer, H.; Sachse, A.; Pusch, M.: HIGH BACTERIAL PRODUCTION AND DOC RETENTION IN SANDY RIVER SEDIMENTS

3:00 p.m. Break

- 3:30 p.m. Battin, T.: LINKING CATCHMENT PROCESSES, DOC BIOGEOCHEMISTRY AND STREAMBED BIOFILMS IN ALPINE GLACIER STREAMS
- 3:45 p.m. Estensen, J. L.; Braddock, J. F.; Oswood, M. W.; Bryant, J. P.; Irons III, J. G.: WINTER VERTEBRATE BROWSING OF BIRCH: EFFECTS ON THE USE OF LEAF LEACHATES BY STREAM MICROBES
- 4:00 p.m. Wiegner, T. N.; Seitzinger, S. P.: PHOTOCHEMICAL AND MICROBIAL DEGRADATION OF EXTERNAL DOM INPUTS TO RIVERS
- 4:15 p.m. Ruttenberg, K. C.; Monaghan, E. J.; Keon, N. E.: SEASONAL IMPORTANCE OF DISSOLVED ORGANIC PHOSPHORUS AS A NUTRIENT-P SOURCE IN A COASTAL MARINE SYSTEM: THE EEL RIVER SHELF
- 4:30 p.m. Findlay, S.; Quinn, J.; Hickey, C.; Burrell, G.; Byrnes, C.: "ALL CAUGHT UP IN SUNLIGHT," PHOTOLYSIS RELATIVE TO OTHER SOURCES AND SINKS OF STREAMWATER DOM
- 4:45 p.m. Granéli, W.; Barbosa Anesio, A.; Theil-Nielsen, J.: BACTERIAL UTILIZATION OF DOM FROM DIVERSE PRIMARY PRODUCERS: EFFECTS OF UV RADIATION ON SUBSTRATE QUALITY

SS36: Biomarkers in Aquatic Environments

- Chairs: Michael St. John, *Danish Inst. for Fisheries Research*
Bo Riemann, *Danish Environmental Research Institute*
- Location: Sweeney, #3
- 2:00 p.m. Kattner, G.; Hagen, W.: THE POTENTIAL OF FATTY ACIDS AS BIOMARKERS IN MARINE ZOOPLANKTON
- 2:15 p.m. St. John, M. A.; Jonasdottir, S.: LIPID BIOMARKERS: RESOLVING THE IMPORTANCE OF DIATOM PRODUCTION FOR REPRODUCTIVE POTENTIAL OF CALANUS FINMARCHICUS
- 2:30 p.m. Veefkind, R. J.; Whitticar, M.; Perry, R.; Whyte, J.: THE STABLE CARBON ISOTOPE RATIO OF INDIVIDUAL FATTY ACIDS: A NOVEL TRACER IN MARINE FOOD WEB STUDIES?
- 2:45 p.m. Napolitano, G. E.; Hayakawa, K.; Kumagai, M.: FATTY ACIDS AS TROPHIC MARKERS IN LAKE BIWA

3:00 p.m. Break

- 3:30 p.m. Canuel, E. A.: SOURCES OF SUSPENDED AND SEDIMENTARY PARTICULATE ORGANIC MATTER IN THE CHESAPEAKE BAY
- 3:45 p.m. Shin, K. H.; Noriki, S. S.; Tsunogai, S. S.; Hama, T. T.: BIOGEOCHEMISTRY OF FATTY ACID BIOMARKER IN THE SUBARCTIC OCEAN: IN PRODUCTION AND TRANSFORMATION AND EXPORT PROCESSES
- 4:00 p.m. Henriksen, P.; Riemann, B.; Sørensen, H. M.: QUANTIFYING PHYTOPLANKTON FROM PIGMENT ALGORITHMS - EVIDENCE FROM CULTURES AND NATURAL POPULATIONS
- 4:15 p.m. Millan-Nunez, R.; Trees, C. C.; Barlow, R.; Gibb, S.; Aiken, J.: PIGMENT SPECIFIC DISTRIBUTION AND COMMUNITY STRUCTURE OF PHYTOPLANKTON DURING NORTH AND SOUTH ATLANTIC TRANSECTS
- 4:30 p.m. Bustillos-Guzman, J.; Lopez-Cortes, D.; Hernandez, F.; Murillo, I.: PIGMENT SIGNATURES ASSOCIATED WITH AN ANOXIC COASTAL ZONE: BAHIA CONCEPCION, GULF OF CALIFORNIA.
- 4:45 p.m. Giner, J. L.; Boyer, G. L.: STEROLS AS BIOMARKERS FOR BROWN TIDE ALGAE

Thursday Afternoon Oral Sessions

SS51-II:

Mesocosms and Plankton Dynamics: What Have We Learned From Experimental Studies in Mesocosms?

- Chairs: Paul Wassmann, *University of Tromsø*
Ray W. Drenner, *Texas Christian University*
Asit Mazumder, *Université de Montréal*
- Location: Eldorado, Anasazi South
- 2:00 p.m. van de Bund, W. J.; van Donk, E.: A MESOCOSM EXPERIMENT STUDYING FOOD WEB STABILITY IN A SHALLOW, MACROPHYTE-DOMINATED LAKE
- 2:15 p.m. Andersen, T.: PELAGIC FOODWEB RESPONSES TO NUTRIENT ENRICHMENT: INVERSE MODEL ANALYSIS OF MASS FLOWS IN MESOCOSM GRADIENT EXPERIMENTS
- 2:30 p.m. Quimet, C.: MESOCOSMS AND THRESHOLDS IN ECOLOGICAL SYSTEMS: A WINDOW OF OPPORTUNITY IN RESEARCH.
- 2:45 p.m. Petersen, J. E.; Kemp, M.: EFFECTS OF PHYSICAL SCALE ON MEAN PROPERTIES AND ON VARIANCE IN EXPERIMENTAL PLANKTONIC ECOSYSTEMS

3:00 p.m. Break

- 3:30 p.m. Mowitt, W. P.; Houde, E. D.; Heath, M. R.; Sanford, A.: CONTAINMENT AND SPATIAL SCALE: EFFECTS ON FORAGING ABILITY OF PLANKTIVOROUS FISH
- 3:45 p.m. Breitburg, D. L.; Sanders, J. G.: FOOD WEB COMPLEXITY AND THE RESPONSE OF AQUATIC SYSTEMS TO STRESS
- 4:00 p.m. Osman, R. W.; Sanders, J. G.; Breitburg, D. L.; Bundy, M. H.; Riedel, G. F.; Seitzinger, S. P.; Gilmour, C. C.: EFFECTS OF MULTIPLE STRESSES ON ESTUARINE ECOSYSTEM DYNAMICS IN LARGE-SCALE FIELD ENCLOSURES: A COMPARISON TO MESOCOSMS
- 4:15 p.m. Hurlbert, S. H.; Gonzalez, M. R.; Hart, C. M.; Simpson, P.: SALINITY, TILAPIA, AND THE SALTON SEA: INSIGHTS FROM A MICROCOSM EXPERIMENT
- 4:30 p.m. Fauchot, J.; Gosselin, M.; Levasseur, M.; Mostajir, B.; Belzile, C.; Demers, S.; Zulema Villegas, P.: INFLUENCE OF UV-B RADIATION ON NITROGEN UTILIZATION BY A NATURAL ASSEMBLAGE OF PHYTOPLANKTON
- 4:45 p.m. Bergmann, T. I.; Schofield, O.; Kirkpatrick, G.; Millie, D.; Paerl, H.: IMPACT OF LIGHT AND NUTRIENTS ON THE MAXIMUM QUANTUM YIELD OF PHOTOSYSTEM II FOR NATURAL PHYTOPLANKTON POPULATIONS FROM THE NEUSE RIVER, NC

SS52-II:

The Impact of Episodic Events on Lake and Coastal Ecosystems

- Chairs: Brain J. Eadie, *NOAA*
Raj Murthy, *Canada Centre for Inland Waters*
- Location: Eldorado, Zia A/B/C
- 2:00 p.m. Heil, C. A.; O'Donohue, M. J.; Dennison, W. C.; Moss, A.: THE IMPACT OF A FLOOD EVENT ON AN AUSTRALIAN COASTAL ECOSYSTEM
- 2:15 p.m. Durako, M. J.; Paxson, J. C.; Hall, M. O.; Merello, M.: SYSTEMS-LEVEL CHANGES IN FLORIDA BAY SEAGRASS COMMUNITY STRUCTURE
- 2:30 p.m. Lohrenz, S. E.; Schofield, O. E.; Fahnenstiel, G. L.; Millie, D. F.: OPTICAL GRADIENTS IN A RECURRENT COASTAL TURBIDITY PLUME IN SOUTHEASTERN LAKE MICHIGAN
- 2:45 p.m. Green, S. A.; Vodacek, A.: KITES: GRADIENTS IN LIGHT ABSORBING AND SCATTERING MATERIALS ASSOCIATED WITH THE THERMAL BAR AND KEWEENAW CURRENT IN LAKE SUPERIOR

3:00 p.m. Break

- 3:30 p.m. Auer, M. T.; Snopek, M. L.; Elenbaas, K. D.: GRADIENTS IN BACTERIOPANKTON STANDING CROP, COMMUNITY STRUCTURE AND PRODUCTION IN LAKE SUPERIOR IN RELATION TO THE THERMAL BAR
- 3:45 p.m. Cotner, J. B.; Johengen, T. H.; Biddanda, B. A.: RAPID BACTERIAL PRODUCTION IN EXTREMELY COLD WATERS IS STIMULATED BY BENTHIC-PELAGIC EXCHANGES
- 4:00 p.m. Kerfoot, W. C.: EPISODIC EVENTS, SEDIMENT RESUSPENSION, AND THE DEVELOPMENT OF A RESTING EGG 'SEED BANK' MODEL
- 4:15 p.m. Schwab, D. J.; Beletsky, D.; Lou, J.: MODELING AND VISUALIZATION OF CIRCULATION PATTERNS AND SEDIMENT TRANSPORT IN LAKE MICHIGAN DURING EPISODIC EVENTS
- 4:30 p.m. Adams, D. D.; Vila, I.; Cortés, E.; Valero-Garcés, B. L.; Pizarro, J.; Salazar, C.: IMPACT OF AN EL NIÑO FLOOD ON CHILEAN RESERVOIRS CHANGES IN METHANE DIFFUSION AT THE SEDIMENT WATER INTERFACE AND CHEMICAL/GEOLOGICAL IDENTIFICATION OF LAYERS FROM PREVIOUS ENSO EVENTS

CS61:

Optical Properties and Satellite Observations of Marine Waters

- Chair: Norm Scully, *Dalhousie University, Canada*
- Location: Eldorado, Anasazi North
- 2:00 p.m. Stramski, D.; Stramska, M.; Tegowski, J.; Szczucka, J.; Klusek, Z.: CONCURRENT MEASUREMENTS OF TIME FLUCTUATIONS IN THE INHERENT OPTICAL PROPERTIES AND GAS BUBBLE CONCENTRATION IN THE NEAR-SURFACE OCEANIC LAYER
- 2:15 p.m. Nieke, B.; Cullen, J. J.: VERTICAL DIFFUSE ATTENUATION COEFFICIENT $K_d(UV)$ FROM WATER-LEAVING RADIANCES (400-700 NM) IN OCEANIC AND COASTAL WATERS
- 2:30 p.m. Brown, C. W.; Esaias, W. E.: INTERANNUAL VARIABILITY OF THE OPEN OCEAN TRANSITION ZONE
- 2:45 p.m. Ciotti, A. M.; Cullen, J. J.; Huot, Y.; Lewis, M. R.: DOMINANT CELL SIZE IN NATURAL PHYTOPLANKTON COMMUNITIES, THE SPECTRAL SHAPE OF THE ABSORPTION COEFFICIENT, AND POSSIBLE APPLICATIONS FOR REMOTE SENSING

3:00 p.m. Break

- 3:30 p.m. Balch, W. M.; Drapeau, D. T.; Bowler, B. C.; Ashe, A. L.; Vaillancourt, R. D.: BACKSCATTERING PROBABILITY AND CALCITE-DEPENDENT BACKSCATTERING IN THE GULF OF MAINE
- 3:45 p.m. Scully, N. M.; Miller, W. L.; Pinette, A.: SPATIAL AND TEMPORAL PROPERTIES OF COLOURED DISSOLVED ORGANIC MATTER IN THE NORTH WATER POLYNYA.
- 4:00 p.m. Phinney, D. A.; Yentsch, C. S.: PARTITIONED ABSORPTION IN CASE 2 WATERS OF THE GULF OF MAINE - EFFECT OF TOTAL SUSPENDED SOLIDS AND GELBSTOFF ON REMOTE SENSING REFLECTANCE
- 4:15 p.m. Redalje, D. G.; Shiller, A. M.; Ivey, J. E.; Bivens, J. R.; Grembowicz, K. P.: ABSORPTION SPECTRA OF CDOM ALONG A SALINITY GRADIENT IN ST. LOUIS BAY, MISSISSIPPI, A SHALLOW, TURBID ESTUARY
- 4:30 p.m. Schofield, O.; Moline, M. A.; Steward, R.; Kirkpatrick, G.: FLUORESCENCE-BASED DECONVOLUTION OF THE BULK INHERENT OPTICAL PROPERTIES DURING A GYMNODINIUM BREVE BLOOM IN THE GULF OF MEXICO

Thursday Poster Sessions

Authors will be at their posters from 5:00 to 7:00 p.m. in the Sweeney Center Ballroom. Poster teardown begins at 7:30 p.m.

SS04:

Enhanced Biological Production at Physical Discontinuities

212. Brooks, B. W.; Threlkeld, S. T.: EFFECTS OF NUTRIENTS, PISCIVORES, AND A MIXTURE OF BENTHIVORES, OMNIVORES AND ZOOPLANKTIVORES ON THERMAL PROFILES OF EXPERIMENTAL PONDS
213. Cinkovich, A. M.; Graham, W. M.: OBSERVATIONS OF JELLYFISH AROUND DENSITY DISCONTINUITIES USING AN IN SITU VIDEO PROFILER
214. Kelly, J. R.; Morrice, J.; Cotter, A.; Michael, K.; Trebitz, A.; Anderson, R.: A NEW TYPE OF "LAKE EFFECT"? SEICHE-DRIVEN NUTRIENT INPUT TO A GREAT LAKE COASTAL ECOSYSTEM
215. Nilsen, F.; Østerhus, S.; Mork, M.: ZOOPLANKTON MIGRATION MEASURED WITH A MOORED ADCP
216. Lougee, L. A.; Bollens, S. M.; Avent, S. R.: BEHAVIORAL RESPONSE AND TOLERANCE OF THREE ESTUARINE COPEPOD SPECIES TO HALOCLINES
217. Kuznetsova, M.; Lee, C.: HIGH PEPTIDE HYDROLYSIS RATES AT THE AIR-SEA INTERFACE
218. Prezelin, B. B.; Hofmann, E. E.; Klinck, J. M.; Mengelt, C.: THE LINKAGE BETWEEN UPPER CIRCUMPOLAR DEEP WATER (UPDW) AND PHYTOPLANKTON ASSEMBLAGES ON THE WEST ANTARCTIC PENINSULA CONTINENTAL SHELF
219. Houde, E. D.; Jech, M.; Leach, S. D.; Madden, A. P.; Sanford, L. P.; Jung, S.: LARVAL RETENTION AND YOUNG-OF-THE-YEAR FISH PRODUCTION IN ESTUARINE RETENTION-ENTRAPMENT FEATURES OF CHESAPEAKE BAY

SS12:

Partnerships in Ocean Science

220. Bissett, W.; Schofield, O.; Davis, C. O.: COMPARISON OF MEASURED AND PREDICTED OPTICAL PROPERTIES AT LEO-15 DURING THE COASTAL PREDICTIVE SKILL EXPERIMENTS

SS16:

Behavioral Ecology and Sensory Biology of Marine and Freshwater Organisms

221. Lindsay, S. M.; Latz, M. I.: EXPERIMENTAL EVIDENCE FOR LUMINESCENT COUNTERSHADING BY SOME EUPHAUSIID CRUSTACEANS

SS22:

Zooplanktivory in Oceans and Lakes

222. Sutor, M. M.; Ramcharan, C.: DENSITY-DEPENDENT PREDATION EFFECTS OF FOURTH-INSTAR CHAOBORUS TRIVITTATUS ON A FRESHWATER ZOOPLANKTON COMMUNITY

SS26:

Planktonic Larvae: Meat and Potatoes or Nouvelle Cuisine? Paradigms for the Next Century

223. Sherlock, R. E.; Robison, B. H.: EFFECTS OF TEMPERATURE ON THE DEVELOPMENT AND SURVIVAL OF NANOMIA BIJUGA (HYDROZOA, SIPHONOPHORA)

SS30:

Geochemistry and the Benthos: Determinants of Ecological Processes?

224. Ferdelman, T. G.; Strotmann, B.; Schubert, C. J.; Zabel, M.; Schulz, H. D.: ORGANIC CARBON INPUTS AND THE SPATIAL DISTRIBUTION OF SULFATE REDUCTION IN WEST AFRICAN CONTINENTAL SLOPE SEDIMENTS
225. Carlson, P. R.; Yarbrow, L. A.: RELEASE OF PHOSPHORUS FROM CARBONATE SEDIMENTS OF FLORIDA BAY, USA: THE POTENTIAL ROLE OF SEDIMENT SULFIDE.
226. Cornwell, J. C.; Owens, M. S.: BIOGEOCHEMICAL CONTROLS ON SEDIMENT-WATER PHOSPHORUS EXCHANGE IN LAKE CHAMPLAIN
227. Craig, N. I.: DO SUBSURFACE DETRITIVORES REALLY EXIST?

SS33:

Microbial Utilization of DOM in Freshwater and Marine Ecosystems

228. Kresge, K. G.; Morris, D. P.: BACTERIA, UVR, AND DOC: A COMPLEX INTERACTION IN FRESHWATER LAKES
229. Yu, Y.; Scranton, M. I.; Taylor, G. T.: BACTERIAL TURNOVER OF SELECTED LOW MOLECULAR WEIGHT ORGANIC MOLECULES IN THE HUDSON RIVER ESTUARY
230. Way, J. L.; Scranton, M. I.; Taylor, G. T.; Yu, Y.: PATTERNS OF BACTERIOPLANKTONIC EXOENZYME ACTIVITY IN LOWER HUDSON RIVER AND WESTERN LONG ISLAND SOUND ESTUARIES
231. Engelhaupt, E.; Bianchi, T.; Wetzel, R.; Tarr, M.: EFFECTS OF UV RADIATION ON THE COMPOSITION AND MICROBIAL UTILIZATION OF DISSOLVED ORGANIC CARBON (DOC) IN BAYOU TREPAGNIER, LA, USA
232. Fukuda, R.; Nagata, T.; Kirchman, D.; Koike, I.: SELECTIVE PRESERVATION OF BACTERIAL PROTEINS IN SEAWATER
233. Karlsson, J. J.; Andersson, A. A.: CLIMATE IMPACTS ON LAKE ECOSYSTEM STRUCTURE AND PRODUCTIVITY IN SUBARCTIC ENVIRONMENTS
234. McArthur, M. D.; Richardson, J. S.; Kiffney, P. M.: MICROBIAL UTILIZATION OF DISSOLVED ORGANIC CARBON LEACHED FROM RIPARIAN TREE SPECIES OF DIFFERENT SERAL STAGES

SS36:

Biomarkers in Aquatic Environments

235. Fluegge, A.; Maassen, J.; Schulz-Bull, D. E.; Suess, E.: REFINED TEMPERATURE CALIBRATION OF THE ALKENONE UNSATURATION RATIO FOR THE NORTHERN NORTH ATLANTIC
236. Gagné, J.: ON THE IMPORTANCE OF DIFFERENT EXTRACTION PARAMETERS TO RECOVER SEDIMENTARY CHLOROPHYLL A BIOMARKER
237. Schubert, C. J.: BIOMARKER INVESTIGATIONS ON SEDIMENTS FROM THE CHILEAN SHELF OFF CONCEPCION

Thursday Poster Sessions

SS37:

Organic Sulfur in Aquatic Systems

238. Bruton, J. A.; Kiene, R. P.; Linn, L.: THE FATE OF METHANETHIOL IN SEAWATER: UPTAKE BY BACTERIOPLANKTON AND REACTION WITH DISSOLVED ORGANIC MATTER.
239. Linn, L. J.; Kiene, R.: THE FATE OF DMSP SULFUR IN SEAWATER FROM THE GULF OF MEXICO: TRACER STUDIES WITH 35S-LABELED DMSP AND DMS.
240. Keller, M. D.; Matrai, P. M.; Kiene, R. P.: DYNAMICS OF DMSP AND GLYCINE BETAINE (GBT) IN COASTAL PHYTOPLANKTON POPULATIONS IN RESPONSE TO NITROGEN ADDITIONS
241. Sharma, S.; Barrie, L.; Hastie, D.; Stainton, M.; Kelly, C.: CONTRIBUTION OF SULPHUR (DIMETHYL SULPHIDE) FROM THE FRESHWATER LAKES OF THE CANADIAN BOREAL REGION.
242. Stoecker, D. K.; Keller, M. D.: PRODUCTION AND DYNAMICS OF DMSP AND DMS IN UPPER SEA ICE PROTISTS
243. Pos, W. H.; Riemer, D. D.; Zika, R. G.: FURTHER EVIDENCE OF FREE RADICAL PARTICIPATION ON HYDROGEN SULFIDE SPECIES OXIDATION IN NATURAL WATERS
244. Bouillon, R. C.; Lee, P. A.; de Mora, S. J.; Levasseur, M.: CONCENTRATIONS AND SPATIAL DISTRIBUTIONS OF DMSO, DMSP AND DMS IN THE NORTHWATER POLYNIA, BAFFIN BAY
245. Lee, P. A.; de Mora, S. J.; Gosselin, M.; Levasseur, M.; Nozais, C.; Bouillon, R. C.: DIMETHYLSULFOXIDE AND DIMETHYLSULFONIOPROPIONATE CONTENT OF ICE ALGAE IN THE NORTHWATER POLYNIA, BAFFIN BAY

SS39:

Nutrient Fluxes in Pelagic Food Webs

246. Heiskanen, A.: SEASONAL FLUXES OF NITROGEN AND PHOSPHORUS IN THE PELAGIC ECOSYSTEM OF THE NORTHERN BALTIC SEA
247. McRoy, C. P.; Simpson, P.; Ward, A.; Tamburello, K.: INTERANNUAL VARIANCE IN THE SEASONAL CYCLE OF PRIMARY PRODUCTION AND NUTRIENTS IN PRINCE WILLIAM SOUND, ALASKA

SS42:

Nuisance Blooms and Toxin Production: Controlling Mechanisms in Freshwater and Marine Environments

248. Ashton-Urrego, M. A.; Tosteson, C.; Tosteson, T. R.: TOXIN PRODUCTION IN RELATION TO ELEVATED TEMPERATURE EXPOSURE IN LABORATORY CULTURED OSTREOPSIS LENTICULARIS
249. Boissonneault-Cellineri, K.; Mehta, M.; Lonsdale, D. J.; Caron, D. A.: MICROBIAL FOOD WEB INTERACTIONS IN A LONG ISLAND BAY SYSTEM THAT HAS EXPERIENCED RECURRENT NOXIOUS ALGAL BLOOMS
250. Storms, W. E.; Garrison, D. L.; Franks, P. J. S.: PRODUCTION OF DOMOIC ACID IN TWO SPECIES OF THE DIATOM GENUS; PSEUDO-NITZSCHIA
251. Hiltz, M.; Bates, S. S.; Kaczmarek, I.: EFFECT OF PHOTOPERIOD ON THE SEXUAL REPRODUCTION OF THE PENNATE DIATOM PSEUDO-NITZSCHIA MULTISERIES
252. McManus, G. B.; Fagin, S. J.: FEEDING OF OLIGOTRICH CILIATES ON THE HARMFUL ALGAL BLOOM SPECIES PROOCENTRUM MINIMUM AND HETEROSIGMA CARTERA

253. Glasgow, H. B.; Burkholder, J. M.; Lewitus, A. J.: STIMULATION OF PFIESTERIA PISCICIDA AND A SECOND TOXIC PFIESTERIA-LIKE SPECIES BY N AND P ENRICHMENTS
254. Scholin, C.; Marin, R.; Miller, P.; Doucette, G.; Powell, C.: A BLOOM OF PSEUDO-NITZSCHIA AUSTRALIS IN MONTEREY BAY, CALIFORNIA ASSOCIATED WITH DOMOIC ACID PRODUCTION AND SEA LION MORTALITY
255. Citarella, G. B.: HARMFUL PLANKTONIC ALGAE LIVING IN THE NORTHUMBERLAND STRAIT (CANADIAN EAST COAST)

SS46:

Benthic Microalgae in Coastal and Freshwater Ecosystems

256. Pinowska, A.; Lowe, R. L.: EFFECT OF EXTRACT FROM MYRIOPHYLLUM SIBIRICUM ON ALGAL PERIPHYTON
257. Blanchard, G. F.; Guarini, J. M.; Gros, P.: A THEORETICAL SCHEME OF MICROALGAL PRIMARY PRODUCTIVITY: THE CASE OF MARINE INTERTIDAL MUDFLATS
258. Sauriau, P.; Kang, C. K.; Richard, P.; Blanchard, G. F.: ISOTOPIC EVIDENCE OF A BENTHIC MICROALGAE-BASED SECONDARY PRODUCTION IN CERASTODERMA EDULE (L.), A COMMON FILTER-FEEDER BIVALVE IN MARENNES-OLERON BAY, FRANCE.

SS48:

Large Lakes and Enclosed Seas

259. Panayotou, D. Y.; Goldman, C. R.: SPATIAL DISTRIBUTION OF NUTRIENTS IN BARGUZIN BAY, LAKE BAIKAL, RUSSIA
260. Hueftle, S. J.: PARTITIONED WINTER UNDERFLOWS EFFECTS ON THE MONIMOLIMNION OF LAKE POWELL RESERVOIR, SOUTHWESTERN U.S.

SS51:

Mesocosms and Plankton Dynamics: What Have We Learned From Experimental Studies in Mesocosms?

261. Caceres, C. E.; Soluk, D. A.: DUCK'S FEET REVISITED: CONSIDERING MECHANISMS FOR ZOOPLANKTON DISPERSAL AND COLONIZATION
262. Nishioka, J.; Takeda, S.; Wong, C. S.: CHANGE IN THE CONCENTRATIONS OF IRON IN DIFFERENT SIZE FRACTIONS DURING A PHYTOPLANKTON BLOOM IN CONTROL ECOSYSTEM ENCLOSURES
263. Cooper, M. R.; Barlow, G. W.; Black, A. R.: USING ENCLOSURES TO ESTIMATE PLANKTONIC SECONDARY PRODUCTIVITY IN LAKE ROOSEVELT OF THE COLUMBIA RIVER

SS52:

The Impact of Episodic Events on Lake and Coastal Ecosystems

264. Niebauer, H. J.: EPISODIC EVENTS IN COASTAL TRANSPORT AND FLUX IN THE KEWEENAW CURRENT IN LAKE SUPERIOR
265. Laurentyev, P. J.; Gardner, W. S.; Cavaletto, J. F.: SPATIAL PATTERNS OF MICROBIAL PLANKTON COMPOSITION AND NITROGEN CYCLING RATES DURING A MAJOR EPISODIC EVENT IN SOUTHERN LAKE MICHIGAN.
266. Millie, D.; Fahnenstiel, G.; Schofield, O.; Lohrenz, S.: IMPACT OF A RECURRENT SEDIMENT PLUME ON LAKE MICHIGAN PHYTOPLANKTON

Thursday Poster Sessions

267. Bujan, S.; Grenz, C.; Fichez, R.; Douillet, P.: CONTRIBUTION OF OCCASIONAL FRESHWATER INPUTS ON A COASTAL SUBTROPICAL ECOSYSTEM. IMPACT ON NUTRIENTS AND PHYTOPLANKTON BIOMASS DESCRIBED THROUGH A BIOGEOCHEMICAL SIMULATION MODEL
268. Klump, J. Val.; Waples, J. T.; Edgington, D. N.; Mackenzie, R. A.; Szmania, D. C.; Lovalvo, D.; Eadie, B. J.; Orlandini, K.; Robbins, R. A.: VISUAL RECONNAISSANCE OF THE BOTTOM AND AN ASSESSMENT OF THE RESUSPENSIBLE POOL OF SEDIMENTS WITHIN THE NEARSHORE ZONE OF SOUTHERN LAKE MICHIGAN.
269. McCormick, M. J.; Murthy, C. R.; Miller, G. S.; Saylor, J. H.: MEASURING OFFSHORE AND LONGSHORE TRANSPORT WITH CURRENT METER ARRAYS DURING STORM EVENTS IN LAKE MICHIGAN
270. Pegau, W.; Boss, E.; Barnard, A. H.; Zaneveld, J. V.: THE REDISTRIBUTION OF OPTICAL PROPERTIES DURING STORMS IN THE MID-ATLANTIC BIGHT
271. Andrade V., J. E.; Mazumder, A.: DISTRIBUTION AND ALLOMETRY OF OLIGOCHAETES ON THE CARRIBEAN COASTS OF VENEZUELA.
272. Waples, J. T.; Klump, V.; Edgington, D. N.; MacKenzie, R.; Szmania, D.; Robbins, J. A.; Eadie, B. J.: TH-234 INVENTORIES IN NEARSHORE ENVIRONMENTS OF LAKE MICHIGAN

SS53:

Ocean and Freshwater Research in the Service of Education

273. Kruse, A. E.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: BUILDING A LEARNING COMMUNITY
274. Green, R. E.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: INTERPRETATION OF THE SPECTRAL SHAPES OF PARTICLE BACKSCATTERING, SAN JUAN ISLANDS, WA
275. McLeroy-Etheridge, S. L.; Bontempi, P. S.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: INVESTIGATION OF CLOSURE BETWEEN MEASURED SCATTERING EFFICIENCIES AND THOSE DERIVED FROM THEORY
276. Ivey, J. E.; Carder, K. L.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: MODEL CLOSURE BETWEEN REMOTE SENSING REFLECTANCE (RRS) AND INHERENT OPTICAL PROPERTY (IOP) MEASUREMENTS IN PUGET SOUND
277. Smith, E. A.; Alfultis, M. A.; Kibler, S.: STUDYING EARTH'S ENVIRONMENT FROM SPACE: APPLICATION OF SATELLITE IMAGERY FOR OCEAN AND EARTH SCIENCE INSTRUCTION
278. Mack, L. K.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: CDOM ABSORPTION AND ITS EFFECT ON REMOTELY-SENSED REFLECTANCE MODELED WITH HYDROLIGHT 4.0
279. Ayoub, L. M.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: PHOTOINHIBITION OF CHLOROPHYLL A FLUORESCENCE
280. Perry, M. J.; Roesler, C. S.; Carder, K. L.: AN INTENSIVE OPTICAL OCEANOGRAPHY TEACHING/LEARNING EXPERIENCE
281. Weiss, A. M.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: COMPARISON OF MEASURED AND MODELED ABSORPTION, SCATTERING, AND BEAM ATTENUATION FOR PARTICLES IN EAST SOUND

282. Coleman, J. E.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: THE RELATIONSHIP BETWEEN BACKSCATTER AND CDOM ABSORPTION
283. Nunez, J. M.; Royals, F.; Clark, W. H.: BUILDING SALT MARSH CANOE TRAILS, A MOTIVATIONAL TOOL FOR AT-RISK HIGH SCHOOL STUDENTS
284. Ostroumov, S. A.: USING AQUATIC ORGANISMS RESEARCH TO EDUCATE UNDERGRADUATES IN MOSCOW STATE UNIVERSITY, RUSSIA
285. Filippi, A. M.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: THE BIDIRECTIONAL REFLECTANCE DISTRIBUTION FUNCTION (BRDF) EFFECT ON INVERSION ALGORITHMS FOR IOP ESTIMATION
286. Bontempi, P. S.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: THE INFLUENCE OF CHLOROPHYLL A ON THE BACKSCATTERING COEFFICIENT BY PARTICLES
287. Bernard, S.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: MULTISPECTRAL APPLICATION OF THE ROELSER-PERRY INVERSE REFLECTANCE MODEL
288. Bivens, J. R.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: MEASURING AND MODELING KD: HOW DO YOU GET FROM IOPS TO AOPS?
289. Jacobs, K. R.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: VARIABILITY IN THE Q-FACTOR
290. Mobley, C. D.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: HYDROLIGHT IN THE CLASSROOM
291. Clayton, T. D.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: A PRELIMINARY INVESTIGATION INTO FLUORESCENCE-ASSOCIATED IRRADIANCE, SAN JUAN ISLANDS, WA
292. Hildebrand, E. N.: INTENSIVELY LEARNING OPTICAL OCEANOGRAPHY: A PERFORMANCE EVALUATION OF THE LISST-100

CS55:

Carbon and Nitrogen Cycling in Aquatic Environments

293. Villareal, T. A.; Pilska, C.; Brzezinski, M.; Lipschultz, F.; Gardner, G. B.: NEW ESTIMATES OF UPWARD OCEANIC NITRATE FLUXES BY MIGRATING DIATOM MATS (RHIZOSOLENIA MATS)
294. Fischer, G.; Wefer, G.: SEASONAL CHANGES IN CARBON ISOTOPE COMPOSITION OF SINKING MATTER IN THE ATLANTIC AND SOUTHERN OCEAN: RELATIONSHIPS TO ORGANIC CARBON FLUXES AND TO ENVIRONMENTAL AND BIOLOGICAL FACTORS
295. Cabrini, M.; Cok, S.; Salvi, C.: PHYTOPLANKTON CONTRIBUTION TO PARTICULATE ORGANIC MATTER IN THE SOUTH ADRIATIC
296. Balch, W. M.; Drapeau, D. T.; Fritz, J. J.; Ashe, A. L.; Dunford, S. J.: MONSOONAL FORCING OF COCCOLITHOPHORE CALCIFICATION IN THE ARABIAN SEA
297. Martino, D. P.; Ward, B. B.: DIVERSITY OF DENITRIFYING BACTERIA FROM TOMALES BAY, CA, BASED ON RIBOSOMAL AND NITRITE REDUCTASE GENE SEQUENCES
298. Carr, L. M.; Ouverney, C. C.; Fuhrman, J. A.: COMPARISON OF BACTERIAL AND ARCHAEOAL CONCENTRATIONS BETWEEN NEAR-SHORE AND OPEN-OCEAN DEPTH PROFILES OFF SOUTHERN CALIFORNIA

Thursday Poster Sessions

299. DeGrandpre, M. D.; Olbu, G. R.; Wirick, C. D.: NET COMMUNITY PRODUCTION IN COASTAL WATERS: ESTIMATES FROM MOORING-BASED MEASUREMENTS OF PCO₂ AND O₂
300. Wommack, K.; Chen, F.; Hodson, R. E.: NITROGENASE REDUCTASE FROM MARINE VIBRIOS
301. Neumann, M. J.; Toole, D. A.; Cohn, N. L.; Washburn, L.; Siegel, D. A.: WATER MASS VARIABILITY, NUTRIENTS, SEDIMENTS, AND PHYTOPLANKTON PIGMENT CONCENTRATIONS IN THE SANTA BARBARA CHANNEL
302. Lam, P. J.; Tortell, P. D.; Morel, F. M. M.: THE ROLE OF PCO₂ IN INORGANIC CARBON USE IN THE COCCOLITHOPHORE EMILIANIA HUXLEYI
303. Scala, D.; Kerkhof, L.: TRFLP FINGERPRINTING OF DENITRIFIERS IN SALT MARSH SEDIMENTS
304. Williams, E. Z.; Campbell, L.; DiTullio, G.: THE NITROGEN SPECIFIC UPTAKE OF THREE STRAINS OF PROCHLOROCOCCUS
305. Horne, A. J.: NITROGEN AND PHOSPHORUS LIMITATION IN LAKES: A BEE KEEPERS APPROACH
- CS57:
Estuaries and Continental Shelves**
306. Dobbs, F. F.; Choi, K. H.: LONG-TERM VARIATION IN SOLE-CARBON SOURCE UTILIZATION BY BACTERIOPANKTON IN LOWER CHESAPEAKE BAY
307. Burden, C. A.; Gardner, W. D.; Richardson, M.; Asper, V. L.: CURRENTS AND SEDIMENT TRANSPORT IN THE MISSISSIPPI CANYON
308. Vargo, G. A.; Hitchcock, G. L.; Neely, M.; Jurado, J.; Melahn, L.; Mir, D.: ESTIMATES OF PHYTOPLANKTON GROWTH, PRODUCTION, AND NUTRIENT REQUIREMENTS BASED ON A DRIFTER TRACKED WATER PARCEL IN WESTERN FLORIDA BAY, USA
309. Greene, M. C.; LaVigne, H. R.; Landers, D. H.: COMPARISON OF SURVIVAL AND GROWTH BETWEEN LARGESCALE SUCKER (CATOSTOMUS MACROCHEILUS) WITH AND WITHOUT SURGICALLY IMPLANTED DUMMY RADIO TRANSMITTERS AS DEMONSTRATED WITH FIELD ENCLOSURES
310. Revilla, M.; Iriarte, A.; Madariaga, I.; Orive, E.: SHIFT FROM AUTOTROPHY TO HETEROTROPHY IN A TEMPERATE ESTUARY
- CS61:
Optical Properties and Satellite Observations of Marine Waters**
311. Mazel, C. H.; Fux, E.; Mobley, C. D.: THE COLOR OF CORALS: CONTRIBUTION OF FLUORESCENCE AND ITS VARIABILITY WITH INCIDENT IRRADIANCE
312. Cota, G. F.: ARCTIC PRIMARY PRODUCTION FROM SPACE
313. Zaneveld, J. V.; Barnard, A. H.; Washburn, J. L.; Moore, C.: SMALL SCALE SPATIAL VARIATIONS IN BENTHIC INHERENT OPTICAL PROPERTIES: PRELIMINARY RESULTS FROM A DIVER OPERATED AC-9.
314. Jacobs, K. R.; Campbell, J. W.: OPTICAL PROPERTIES OF THE GREAT BAY ESTUARY, NH
315. Swift, T. J.; Reuter, J. E.; Goldman, C. R.: FIELD AND LABORATORY APPROACHES TO QUANTIFYING CAUSES OF VARIATION IN LAKE WATER CLARITY
316. Hildebrand, E. N.; Hill, P. S.; Grant, J.; Milligan, T. G.: SPECTRAL BACKSCATTERING COEFFICIENT AND SUSPENDED PARTICLE SIZE DISTRIBUTION
- CS62:
Phytoplankton and Primary Production**
317. Takeda, S.; Nishioka, J.; Wong, C.; Johnson, W. K.; Whitney, F. A.: THE LIMITATION OF IRON, LIGHT AND TEMPERATURE TO PHYTOPLANKTON GROWTH IN THE NORTHEAST SUBARCTIC PACIFIC IN WINTER
318. Westberry, T. K.; Siegel, D. A.; Nelson, N. B.; O'Brien, M. C.: REGIONAL MODELING OF PRIMARY PRODUCTION IN THE SARGASSO SEA
319. Shankle, A. M.; Franks, P. J.; Azam, F.: INTRA-POPULATION GENETIC VARIATION IN THE DINOFLAGELLATES LINGULODINIUM POLYEDRUM AND PROROCENTRUM MICANS EVALUATED USING DENATURING GRADIENT GEL ELECTROPHORESIS (DGGE)
320. Clayton, T. D.; Hofmann, E. E.: A SIMPLE NUTRIENT-BASED OPEN-OCEAN ECOSYSTEM MODEL INCLUDING TRICHODESMIUM SPP.
321. Yocis, B. H.; Matrai, P. A.; Groszko, W.: METHYL BROMIDE PRODUCTION DURING SPRING BLOOM IN THE GULF OF MAINE, USA
322. Chen, Y.; Dominic, B.; Zehr, J. P.: CIRCADIAN CONTROL OF THE PHOTOSYNTHETIC APPARATUS IN THE NITROGEN FIXING CYANOBACTERIUM TRICHODESMIUM
323. Casotti, R.; Ribera d'Alcala', M.; Brunet, C.: PHYTOPLANKTON DISTRIBUTION AND PHYSIOLOGY AS FUNCTION OF MESOSCALE VARIABILITY IN THE CHANNEL OF SICILY (MEDITERRANEAN SEA)
324. Trocchi-Ghinaglia, L. E.; Herrera-Silveira, J. A.: DISTRIBUTION AND ABUNDANCE OF PHYTOPLANKTON OF PENINSULA DE YUCATAN IN THE NORTES SEASON (NOVEMBER 1997)
325. Sintes, E. E.; Martinez-Taberner, A. A.; Mas, M. A.; Moya, G. G.; Puigserver, M. M.: PHYTOPLANKTONIC PRIMARY PRODUCTION IN TWO DIFFERENT BAY SYSTEMS FROM THE BALEARIC ISLANDS (MEDITERRANEAN SEA)
326. Pelletier, D. M.; Chan, F.; Marino, R. M.: CONCENTRATING NATURAL ASSEMBLAGES OF PLANKTON CELLS: A TEST OF TANGENTIAL FLOW FILTRATION
327. Carpenter, E. J.; Montoya, J. P.; Burns, J.; Mulholland, M.; Subramaniam, A.: EXTENSIVE BLOOM OF A N₂ FIXING SYMBIOTIC ASSOCIATION IN THE TROPICAL ATLANTIC OCEAN
328. Harris, S. L.; Varela, D. E.; Harrison, P. J.: SIZE-FRACTIONATED PRIMARY PRODUCTIVITY IN AN UPWELLING REGIME OFF THE WEST COAST OF VANCOUVER ISLAND (CANADA)
329. Guerra, O. J.; Hewes, C.; Wieland, J. D.; Cheng, S. C.; Reid, F.; Mitchell, B. G.: MICROSPECTROPHOTOMETRIC ESTIMATE OF CELLULAR CHLOROPHYLL IN NATURAL POPULATIONS OF THE DINOFLAGELLATE LINGULODINIUM POLYEDRA

Thursday Poster Sessions

CS63:

Sedimentary Biogeochemistry

330. de Angelis, M. A.; Davis, B.; Downey, G.; Fowler, M.; Grimes, S.; Logan, M.; Puleo, J.; Schneider, M.: DISTRIBUTION AND POTENTIAL ECOLOGICAL SIGNIFICANCE OF EPIBENTHIC WOODY DEBRIS ON A NORTHERN CALIFORNIA CONTINENTAL SHELF
331. Johnson-Pyrtle, A.: TRANSPORT OF CS-137 INTO THE ARCTIC'S LAPTEV SEA AND THE LENA RIVER ESTUARY AS EVIDENCED BY MARINE, ESTUARINE AND LACUSTRINE SEDIMENTS
332. Burd, A. B.; Eldridge, P.: A MODEL OF THE LIGHT AND SEDIMENT INTERACTIONS OF SEAGRASSES.
333. Wallace, C. D.; Neely, R. K.: DIATOMS AS POTENTIAL BIOINDICATORS FOR WETLAND HABITAT DELINEATION
334. Gunnars, A.: FORMATION OF IRON PHOSPHATE SPECIES AT REDOX BOUNDARIES IN FRESHWATER AND MARINE SYSTEMS
335. McGlathery, K. J.; Berg, P.: POREWATER PROFILES OF DISSOLVED ORGANIC AND INORGANIC N AND P IN VEGETATED MARINE CARBONATE SEDIMENTS
336. Hoehler, T. M.; Borowski, W. S.; Alperin, M. J.; Rodriguez, N.; Paull, C. K.: ANAEROBIC METHANE OXIDATION IN SEDIMENTS OVERLYING GAS HYDRATES ON THE BLAKE RIDGE
337. Beutel, M. W.; Horne, A. J.: BENCH SCALE TESTING OF THE EFFECTS OF OXYGENATION ON RESERVOIR SEDIMENT NUTRIENT RELEASE RATES
338. Ryves, D. B.; Battarbee, R. W.; Flower, R. J.; Jewson, D.; Kuzmina, A. E.; Mackay, A. W.; Lees, J. A.; Sturm, M.: THE TAPHONOMIC TRANSFORMATION OF LIVING PLANKTONIC COMMUNITIES TO SURFACE SEDIMENT ASSEMBLAGES IN LAKE BAIKAL, SIBERIA
339. Burns, J. A.; Mellon, M.; Zehr, J. P.; Paerl, H. W.; Capone, D. G.: NITROGEN FIXING PHYLOTYPES OF CHESAPEAKE BAY AND NEUSE RIVER ESTUARY SEDIMENTS: TRENDS IN PHYLOTYPIC COMPOSITION CORRELATE WITH SEDIMENT CHARACTERISTICS
340. Albert, D. B.; Martens, C. S.: DETERMINATION OF ACETATE TURNOVER RATES IN SEDIMENTS: METHODOLOGICAL ARTIFACTS
341. Menounou, N.; Presley, B. J.: EARLY DIAGENESIS OF MERCURY AND OTHER TRACE METALS IN SEDIMENT CORES FROM CENTRAL TEXAS LAKES
342. Branfireun, M. L.; Moore, T. R.: DECOMPOSITION AND METHYLMERCURY AVAILABILITY IN A BOREAL WETLAND
343. Ingalls, A. E.; Lee, C.; Aller, R. C.: ORGANIC CARBON PRESERVATION IN CORAL AND CARBONATE SEDIMENTS

Friday Morning Oral Sessions

Presenting authors are underlined. Complete abstract and author information can be found at www.aslo.org/santafe99.

SS11: Risk Assessment for Aquatic Ecosystems: Into the Next Century?

Chairs: Valery E. Forbes, *Roskilde University*
Peter Calow, *University of Sheffield*

Location: Hilton, Mesa C

8:30 a.m. Calow, P.; Forbes, V. E.: REVIEW OF AQUATIC ECOLOGICAL RISK ASSESSMENT: PAST, PRESENT AND FUTURE.

8:45 a.m. Forbes, V. E.; Calow, P.: RISK ASSESSMENT AND UNCERTAINTY ANALYSIS FOR PROTECTION OF AQUATIC ECOSYSTEMS: CURRENT PRACTICE AND THOUGHTS ABOUT FUTURE DIRECTIONS.

9:00 a.m. Cook, R. B.; Suter, G. W.; Sample, B. E.; Jones, D. S.; Efrogmson, R. A.: WEIGHING MULTIPLE LINES OF EVIDENCE TO ASSESS RISKS IN A RIVER-RESERVOIR ECOSYSTEM

9:15 a.m. Lam, P. K. S.; Richardson, B. J.; Martin, M.: ECOLOGICAL RISK ASSESSMENT: PACIFIC RIM BIPOLARITY?

9:30 a.m. Paulsen, S. G.: COMPARATIVE ASSESSMENTS - A MISSING PERSPECTIVE IN RISK ASSESSMENT

9:45 a.m. Adams, S.; Power, M.; McCarty, L. M.: TOWARDS A MORE ECOLOGICALLY RELEVANT APPROACH IN THE ECOLOGICAL RISK ASSESSMENT PROCESS

10:00 a.m. Break

10:30 a.m. Klerks, P. L.: RISK ASSESSMENT AND GENETIC ADAPTATION TO STRESSORS

10:45 a.m. Snell, T. W.; Serra, M.: LONG-TERM EFFECTS OF REDUCTIONS IN POPULATION GROWTH RATE ON THE PROBABILITY OF EXTINCTION OF ROTIFER POPULATIONS

11:00 a.m. Montagna, P. A.: USING BENTHIC INFAUNA DATA TO ASSESS RISK

11:15 a.m. Stevenson, R.; Sweets, P.; Pan, Y.: MULTI-LEVEL COMPARISON OF THE SENSITIVITY AND PRECISION OF ALGAL INDICES OF ECOLOGICAL CONDITIONS

11:30 a.m. Wangberg, S.: SHORT-TERM OR LONG-TERM EXPERIMENTS FOR ECOLOGICAL RISK ASSESSMENTS IN AQUATIC ENVIRONMENTS

11:45 a.m. Olson, O. G.; Leavitt, P. R.; Chen, G.; Chen, M.; You, J.; Laird, K.: DROUGHT PREDICTION USING CONDITIONAL PROBABILITY ANALYSIS OF PALEOCLIMATE RECORDS

12:00 p.m. Nygaard, K. K.; Vedal, J. J.; Bjerkeng, B. B.; Johnsen, T. T.; Lømsland, E. E.: LIFE AND DEATH IN A WATER JET - ECOSYSTEM CONSIDERATIONS.

SS12: Partnerships in Ocean Science

Chair: Richard W. Spinrad, *Consortium for Oceanographic Research and Education (CORE)*

Location: Hilton, Mesa A

8:30 a.m. Glenn, S. M.; Grassle, J.; von Alt, C. J.; De Luca, M.: AN OVERVIEW OF NOPP-SPONSORED RESEARCH AND EDUCATIONAL ACTIVITIES AT THE LONG-TERM ECOSYSTEM OBSERVATORY

8:45 a.m. Crowley, M. F.; Fracassi, J. F.; Glenn, S. M.: USING REAL-TIME REMOTE SENSING AND IN SITU OCEAN DATA FOR ADAPTIVE SAMPLING AND DATA ASSIMILATIVE MODELING

9:00 a.m. Kohut, J.; Barrick, D. E.; Chant, R.; Glenn, S. M.: USE OF A SEASONDE HF RADAR FOR ADAPTIVE SAMPLING AT THE LONG-TERM ECOSYSTEM OBSERVATORY

9:15 a.m. Chant, R. J.; Crowley, M. F.; Kohut, J.; Glenn, S. M.: STRUCTURE OF NEAR-INERTIAL AND SUBINERTIAL MOTION ACROSS AND UPWELLING FRONTAL SYSTEM.

9:30 a.m. Levine, E. R.; Lueck, R. G.; Licis, P.; Shell, R. R.: OCEAN TURBULENCE ESTIMATES IN THE COASTAL OCEAN MODELING AND OBSERVATION PROGRAM (COMOP) STUDIES AT LEO-15.

9:45 a.m. Arango, H. G.; Glenn, S. M.; Haidvogel, D. B.: COASTAL OCEAN PREDICTIVE EXPERIMENTS AT LEO-15

10:00 a.m. Break

10:30 a.m. Durski, S. M.; Haidvogel, D. B.; Chant, R.: COASTAL UPWELLING ON A SHALLOW SHELF WITH TOPOGRAPHIC BUMPS

10:45 a.m. Moline, M.; Bergmann, T.; Glenn, S.; Grzymiski, J.; Schofield, O.: CHARACTERIZING THE VARIABILITY IN THE INHERENT AND APPARENT OPTICAL PROPERTIES DURING THE LEO-15 1998 COASTAL PREDICTIVE SKILL EXPERIMENTS

11:00 a.m. Grzymiski, J.; Bergmann, T.; Mark, M. M.; Schofield, O.: DECONVOLVING THE INHERENT OPTICAL PROPERTIES FOR NEARSHORE COASTAL WATERS DURING UPWELLING AT LEO-15

11:15 a.m. Cullen, J. T.; Grzymiski, J.; Sherrell, R. M.; Schofield, O.; Glenn, S.: ESTIMATING SUSPENDED PARTICULATE MASS AND PARTICULATE ORGANIC CARBON FROM IN SITU OPTICAL DATA IN A COASTAL UPWELLING SYSTEM ON THE NEW JERSEY SHELF

11:30 a.m. De Luca, M. P.; McDonnell, J. D.; Podchaski, T.; McBride, C.: EDUCATIONAL APPLICATIONS AT A LONG-TERM ECOSYSTEM OBSERVATORY (LEO-15)

11:45 a.m. Ma, H.; Grassle, J.; Butman, C.: MESOSCALE SPATIAL DISTRIBUTION OF SURFCLAM LARVAE AT LEO-15 ON THE NEW JERSEY CONTINENTAL SHELF*

12:00 p.m. Spruill, V.: PUBLIC EDUCATION OF OCEAN ISSUES: AN INVITATION FOR PARTICIPATION FROM THE MARINE SCIENCE COMMUNITY.

SS37: Organic Sulfur in Aquatic Systems

Chairs: Ron Kiene, *University of South Alabama*
Maurice Levasseur, *Fisheries and Oceans Canada*

Location: Sweeney, #4

8:30 a.m. Malin, G.: TURNOVER OF DMS AND RELATED COMPOUNDS IN PHAEOCYSTIS DOMINATED WATERS.

8:45 a.m. Simó, R.; Pedrós-Alió, C.; Massana, R.; Díez, B.: SHORT-TERM VARIABILITY IN THE BIOLOGICAL CYCLING OF DMS IN THE OPEN OCEAN

9:00 a.m. Levasseur, M.; Gosselin, M.; Sharma, S.; Simard, N.; Brickell, P.; Horner, R.; Bates, T. S.: BIOGENIC SOURCES OF SULFUR IN THE ARCTIC

9:15 a.m. Steinke, M.; Malin, G.; Archer, S. D.; Burkill, P. H.; Liss, P. S.: ENZYMATIC PRODUCTION OF DIMETHYLSULFIDE DURING A COCCOLITHOPHORID BLOOM IN THE NORTH ATLANTIC

9:30 a.m. Cutter, G. A.; Dryden, C. L.: DISSOLVED ORGANIC SULFUR IN THE CHESAPEAKE BAY AND WESTERN NORTH ATLANTIC OCEAN

9:45 a.m. Ahner, B. A.; Oleson, J. R.; Sliniski, K. M.: GLUTATHIONE CONCENTRATIONS IN FRESHWATER AND MARINE PHYTOPLANKTON

Friday Morning Oral Sessions

10:00 a.m. Break

- 10:30 a.m. Lomans, B. P.; Pol, A.; Op den Camp, H. J. M.; van der Drift, C.: METHANOGENESIS FROM DIMETHYL SULFIDE AND METHANETHIOL IN ANOXIC FRESHWATER SEDIMENTS
- 10:45 a.m. Hines, M. E.; Kiene, R. P.: CONTROLS ON EMISSIONS OF DIMETHYLSULFIDE FROM FRESHWATER WETLANDS
- 11:00 a.m. Tang, K. W.; Dam, H. G.; Visscher, P. T.; Fenn, T. D.: DMSP IN MARINE COPEPODS AND ITS RELATION WITH DIETS AND SALINITY
- 11:15 a.m. Archer, S. D.; Stelfox, C. E.; Burkill, P. H.: QUANTIFICATION OF THE DIMETHYLSULFIDE (DMS) PRODUCTION DUE TO MICROZOOPLANKTON HERBIVORY IN NATURAL WATERS.
- 11:30 a.m. Wolfe, G. V.; Levasseur, M.; Cantin, G.; Michaud, S.: MEASURING THE IMPACT OF ZOOPLANKTON GRAZING ON THE CYCLING OF ORGANIC SULFUR COMPOUNDS IN THE LABRADOR SEA
- 11:45 a.m. Gonzalez, J. M.; Kiene, R. P.; Moran, M.: POSSIBLE ROLE IN THE DMSP/DMS CYCLE OF A NUMERICALLY IMPORTANT GROUP OF BACTERIA IN THE ALPHA-SUBCLASS OF THE PROTEOBACTERIA
- 12:00 p.m. Scarratt, M. G.; Levasseur, M.; Schultes, S.; Michaud, S.; Cantin, G.: BACTERIAL PRODUCTION AND CONSUMPTION OF DIMETHYLSULFIDE IN NORTH ATLANTIC WATERS
- 12:15 p.m. Kiene, R. P.; Linn, L.: ASSIMILATION OF DMSP-SULFUR INTO THE PROTEIN FRACTION OF MARINE BACTERIOPLANKTON.

SS42:

Nuisance Blooms and Toxin Production: Controlling Mechanisms in Freshwater and Marine Environments

- Chairs: Michio Kumagi, *Lake Biwa Research Institute*
 Stephen Monismith, *Stanford University*
 Richard D. Robarts, *National Water Research Institute*
- Location: Eldorado, Anasazi South
- 8:30 a.m. Sellner, K. G.: CONTROLLING MECHANISMS IN TOXIC BLOOMS AND TOXIN PRODUCTION: WHAT'S UP DOC'S?
- 9:00 a.m. Lucas, L. V.; Cloern, J. E.; Koseff, J. R.; Monismith, S. G.: PHYSICAL INFLUENCES ON BLOOM DEVELOPMENT IN SHALLOW TIDAL SYSTEMS: WHAT TIMESCALES ARE IMPORTANT?
- 9:15 a.m. Doblin, M. A.; Parker, N.; Blackburn, S. I.; Hallegraef, G. M.: IMPORTANCE OF PHYSICAL, CHEMICAL AND BIOLOGICAL PROCESSES IN THE DEVELOPMENT OF TOXIC GYMNODINIUM CATENATUM BLOOMS IN SOUTH-EAST TASMANIA, AUSTRALIA
- 9:30 a.m. Gobler, C. J.; Sanudo-Wilhelmy, S. A.: THE INFLUENCE OF GROUND WATER INPUTS ON BROWN TIDES
- 9:45 a.m. Buskey, E. J.; Liu, H.; Villareal, T. A.; Wysor, B.; Collumb, C.: EL NINO AND THE LAGUNA MADRE: DON'T YOU MAKE MY BROWN TIDES BLUE?

10:00 a.m. Break

- 10:30 a.m. Belgrano, A.: NORTH ATLANTIC OSCILLATION (NAO) AND TOXIC PHYTOPLANKTON IN THE SKAGERRAK
- 10:45 a.m. Park, H. D.; Watanabe, M. F.; Nakajima, T.: TOXIC CYANOBACTERIA BLOOMS AND MICROCYSTIN CONCENTRATION IN DRINKING WATER LAKE, LAKE BIWA, JAPAN

- 11:00 a.m. Tsujimura, S. S.; Kumagai, M. M.; Nakahara, H. H.: APPLICATION OF THE FDC TECHNIQUE TO ESTIMATE THE IN SITU GROWTH RATE OF MICROCYSTIS
- 11:15 a.m. Chan, F.; Pace, M. L.; Howarth, R. W.; Marino, R. M.; Pelletier, D. M.: PLANKTONIC NITROGEN-FIXING CYANOBACTERIA IN ESTUARIES: AN EXPERIMENTAL TEST OF BLOOM REGULATION BY TOP-DOWN CONTROLS
- 11:30 a.m. Bianchi, T. S.; Westman, P.; Rolff, C.; Engelhaupt, E.; Andren, T.: CYANOBACTERIAL BLOOMS IN THE BALTIC SEA: NATURAL OR HUMAN-INDUCED?
- 11:45 a.m. Ford, P. W.; Bormans, M.: NUTRIENT AND CYANOBACTERIAL DYNAMICS IN A STRATIFIED TROPICAL BARRAGE
- 12:00 p.m. Twiner, M. J.; Trick, C. G.: NUTRITIONAL CONTROL OF GROWTH AND TOXICITY OF THE COASTAL RAPIDOPHYTE, HETEROSIGMA SP.
- 12:15 p.m. Legrand, C.; Johnsen, G.; Hummert, C.; Granéli, E.: VARIATION IN TOXIN PRODUCTION IN TWO STRAINS OF ALEXANDRIUM TAMARENSE: EFFECTS OF NITROGEN AND PHOSPHORUS REPLETE VS. LIMITED GROWTH CONDITIONS

SS46:

Benthic Microalgae in Coastal and Freshwater Ecosystems

- Chairs: Kevin R. Carman, *Louisiana State University*;
 Carolyn A. Currin, *NOAA*
- Location: Eldorado, Anasazi North
- 8:30 a.m. Sundback, K.; Brotas, V.; Dalsgaard, T.; Nielsen, L. P.; Underwood, G.; Viaroli, P.: MARINE MICROPHYTOBENTHOS ON A EUROPEAN SCALE
- 8:45 a.m. Miles, A.; Sundback, K. E.; Goransson, E.: ESTIMATING NITROGEN ASSIMILATION BY MARINE MICROPHYTOBENTHOS
- 9:00 a.m. Dodds, W. K.; Tank, J.; Lohman, K.; Smith, V.: RELATIVE IMPORTANCE OF N AND P LIMITATION OF STREAM PERIPHYTON
- 9:15 a.m. Gaiser, E. E.; DeCelles, S. J.; Richards, J. H.: SEASONALITY AND SUCCESSION OF PERIPHYTON COMMUNITIES IN EVERGLADES NATIONAL PARK, FLORIDA.
- 9:30 a.m. Buzzelli, C. P.; Childers, D. L.; Dailey, S.: INVESTIGATION OF PERIPHYTON PHOSPHORUS RELATIONSHIPS IN EVERGLADES NATIONAL PARK: MECHANISTIC EXPERIMENTS ON A DESKTOP
- 9:45 a.m. Guarini, J. M.; Blanchard, G. G.; Cloern, J. J.; Gros, P. P.: SHORT-TERM DYNAMICS OF INTERTIDAL MICROPHYTOBENTHIC BIOMASS: MATHEMATICAL MODELLING
- 10:00 a.m. Break
- 10:30 a.m. Nelson, J. R.; Robertson, C. Y.: BIO-OPTICAL VARIABILITY AND THE POTENTIAL FOR BENTHIC PRIMARY PRODUCTION ON THE CONTINENTAL SHELF OF THE SOUTH ATLANTIC BIGHT
- 10:45 a.m. Nilsson, C. C.; Sundback, K. E.; Wulff, A. A.; Odmark, S. S.; Wangberg, S. A.; Underwood, G. G.: SYNERGISTIC EFFECTS OF UVB-RADIATION AND NUTRIENT LIMITATION ON A MARINE MICROBENTHIC COMMUNITY
- 11:00 a.m. Barranguet, C. C.; Kromkamp, J. J.; Herman, P. P.; Peene, J. J.: PRODUCTIVITY AND PHOTOSYNTHETIC CHARACTERISTICS OF MICROPHYTOBENTHOS IN A TEMPERATE TIDAL FLAT.

Friday Morning Oral Sessions

- 11:15 a.m. Huang, S.; Newell, R. I. E.; Kreeger, D. A.: RELATIVE IMPORTANCE OF BENTHIC DIATOMS AS A FOOD SOURCE FOR RIBBED MUSSELS IN SALT MARSHES
- 11:30 a.m. Welch, E. B.; Jacoby, J. M.; Anderson, E. L.; Biggs, B. F.; Quinn, J. M.: INVERTEBRATE REMOVAL OF FILAMENTOUS ALGAE IN STREAMS
- 11:45 a.m. Goldfinch, A. C.; Carman, K. R.: CHIRONOMID GRAZING ON BENTHIC ALGAE IN A LOUISIANA SALT MARSH
- 12:00 p.m. Buffan-Dubau, E.; Carman, K. R.: DIEL PATTERNS OF MEIOFAUNA FEEDING ON MICROALGAE IN A LOUISIANA SALT MARSH.
- 12:15 p.m. Pinckney, J. L.; Steppe, T. F.; Paerl, H. W.; Reid, P.: MICROALGAL MEDIATION OF LITHIFICATION IN BAHAMIAN STROMATOLITES

CS55: Carbon and Nitrogen Cycling in Aquatic Environments

Chair: Mary Voytek, *United States Geological Survey*

Location: Sweeney, #2

- 8:30 a.m. Triska, F. J.; Jackman, A. P.; Duff, J. H.; Avanzino, R. J.: IMPACT OF BEAVER DAMS ON TRANSPORT AND TRANSFORMATION OF DISSOLVED INORGANIC NITROGEN (DIN) IN SURFACE AND PORE WATER: SHINGO BEE RIVER, MINNESOTA, USA
- 8:45 a.m. Mulholland, P. J.; Tank, J. L.; Sanzone, D. M.; Wollheim, W. M.; Peterson, B. J.; Meyer, J. L.: NITROGEN CYCLING IN A STREAM ECOSYSTEM DETERMINED BY A TRACER-LEVEL NITROGEN-15 ADDITION EXPERIMENT
- 9:00 a.m. Voytek, M.; Witzel, K.; Ward, B.: SEASONAL PELAGIC NITRIFICATION RATES AND THE COMMUNITY STRUCTURE OF NITRIFYING BACTERIA IN THREE KETTLE LAKES IN NORTHERN GERMANY
- 9:15 a.m. Fleming, M. S.; Hume, N. P.; Horne, A. J.: THE EFFECT OF DOC ON NITROGEN REMOVAL KINETICS IN CONSTRUCTED WETLANDS: DENITRIFICATION AS A SECOND ORDER PROCESS
- 9:30 a.m. Parrish, C. C.; Thompson, R. J.; Deibel, D.: LIPID BIOGEOCHEMISTRY OF PLANKTON AND SETTLING MATTER DURING THE SPRING BLOOM IN A COLD OCEAN COASTAL ENVIRONMENT
- 9:45 a.m. Simpson, E.; McRoy, C.: MODEL EVIDENCE OF A BERING SEA IRON CURTAIN
- 10:00 a.m. Break**
- 10:30 a.m. Twomey, L.; Thompson, P.: NUTRIENT LIMITATION AND NITROGEN UPTAKE BY PHYTOPLANKTON IN WILSON INLET, WESTERN AUSTRALIA
- 10:45 a.m. Wu, L.; Zhou, J. Z.; Palumbo, A. V.; Devol, A.; Tiedje, J. M.: MOLECULAR CHARACTERIZATION OF DENITRIFIERS FROM MARINE ENVIRONMENTS
- 11:00 a.m. Neuer, S.; Davenport, R.; Freudenthal, T.; Meggers, H.; Sprengel, C.; Llinas, O.; Nave, S.: PARTICLE FLUX MEASUREMENTS ALONG A PRODUCTIVITY GRADIENT IN THE NORTHERN CANARY ISLANDS BASIN
- 11:15 a.m. Cavender-Bares, K. K.; Chisholm, S. W.: RESPONSE OF PHYTOPLANKTON GROUPS TO ENRICHMENT WITH DIFFERENT FORMS OF NITROGEN IN THE WESTERN SARGASSO SEA
- 11:30 a.m. Lipschultz, F.; Montoya, J. P.: THE OXYGEN MINIMUM ZONE OF THE EASTERN TROPICAL NORTH PACIFIC: HYDROGRAPHY AND NUTRIENTS UNDER THE INFLUENCE OF EL NINO

- 11:45 a.m. Al-Mutairi, H.; Landry, M.: EXPORT OF RESPIRATORY CARBON AND DISSOLVED INORGANIC NITROGEN BY DIEL-MIGRANT MESOZOOPANKTON AT THE HAWAIIAN OCEAN TIME SERIES STATION ALOHA
- 12:00 p.m. Burkill, P.; Edwards, E.: WHAT CONTROLS ENHANCED PRODUCTION DURING UPWELLING IN THE ARABIAN SEA?
- 12:15 p.m. Williams, P.; Bowers, D.: CARBON BALANCE IN THE OPEN OCEANS: CAN IT BE DETERMINED FROM REGRESSION ANALYSIS OF FIELD OBSERVATIONS

CS57: Estuaries and Continental Shelves

Chair: Thomas R. Fisher, *University of Maryland Center for Environmental Science/Horn Point Laboratory*

Location: Eldorado, Zia A/B/C

- 8:30 a.m. DiBacco, C.; Levin, L. A.: BAY-OCEAN EXCHANGE PROCESSES: DEVELOPMENT AND APPLICATION OF A MEROPLANKTON TRACER TECHNIQUE
- 8:45 a.m. Lehrter, J. C.; Pennock, J. R.; Cowan, J. L.: CARBON, NITROGEN AND PHOSPHORUS DYNAMICS IN A PULSED RIVER-DOMINATED ESTUARY: MOBILE BAY, ALABAMA (USA)
- 9:00 a.m. Gustafson, A. B.; Fisher, T. R.; Haas, L. W.; Walstad, L.: THE SURFACE MIXED LAYER OF CHESAPEAKE BAY, USA
- 9:15 a.m. Falkenhayn, C.; Newton, J.; Clishe, C.; Moore, C.: PHYSICAL AND BIOLOGICAL PROCESSES IN A SHALLOW ESTUARY: CHARACTERIZING WILLAPA BAY, WA, BY HIGH-RESOLUTION SAMPLING
- 9:30 a.m. Layman, C. A.; Herod, J. D.; Smith, D. E.: THE RELATIVE IMPORTANCE OF ABIOTIC AND BIOTIC FACTORS IN STRUCTURING MARSH POND COMMUNITIES: A SEASONAL CYCLE DETERMINING OBSERVED FISH ASSEMBLAGES
- 9:45 a.m. Smalls, L. D.: INDICATIONS OF YEAR-CLASS STRENGTH BASED ON TRAWL AND TRAMMEL NET DATA
- 10:00 a.m. Break**
- 10:30 a.m. Schaefer, T. L.; Power, J. H.: SPATIAL PATTERNS OF LARVAL TRANSPORT AND DISPERSION IN A LOUISIANA COASTAL BAY, USA
- 10:45 a.m. Brown, C. A.; Jackson, G. A.; Brooks, D. A.: ROLE OF TIDAL FORCING ON LARVAL TRANSPORT THROUGH A MICROTIDAL INLET ON THE TEXAS COAST
- 11:00 a.m. Schwartz, M. C.; Sharp, J.; Church, T.; Hussain, N.: IDENTIFICATION AND BIOGEOCHEMICAL ASSESSMENT OF A GROUNDWATER DISCHARGE ZONE IN THE DELAWARE ESTUARY
- 11:15 a.m. Bogden, P. S.; O'Donnell, J.: ESTIMATING THE CIRCULATION IN EASTERN LONG ISLAND SOUND WITH AN INVERSE MODEL AND A SHIPBOARD ADCP: DOES IT WORK?
- 11:30 a.m. Chang, G. C.; Dickey, T. D.: SALINITY INTRUSIONS ALONG A SHELF / SLOPE FRONT
- 11:45 a.m. Pringle, J. M.; Franks, P. J. S.: CROSS-BANK FLOWS OF PARTICLES AND NUTRIENTS— EXAMPLES MOTIVATED BY GEORGES BANK
- 12:00 p.m. Kincaid, C. R.; Huzzey, L.; Pockalny, R. A.; DeLeo, W.: CIRCULATION PATTERNS AT THE MOUTH OF NARRAGANSETT BAY FROM SHIPBOARD ADCP DATA
- 12:15 p.m. Merickel, J. A.; Wiebe, W. J.: EFFECTS OF HURRICANE ANDREW ON MANGROVE SEDIMENT NUTRIENT CONCENTRATIONS IN SOUTHWEST FLORIDA, USA

Friday Morning Oral Sessions

CS63:

Sedimentary Biogeochemistry

- Chairs: Jaye Cable, *Louisiana State University*
Bo Barker Joergensen, *Max Planck Institute for Marine Microbiology*
- Location: *Sweeney, #1*
- 8:30 a.m. Goericke, R.; Strom, S. L.: NEW CHL A-DERIVED BIOMARKERS IN THE MARINE ENVIRONMENT: POTENTIAL APPLICATIONS AND IMPLICATIONS FOR MEASUREMENTS OF GRAZING
- 8:45 a.m. Sun, M.; Aller, R. C.; Lee, C.; Wakeham, S. G.: EFFECTS OF OXYGEN CONTENT AND REDOX OSCILLATION ON DEGRADATION OF CELL-ASSOCIATED LIPIDS AT A SIMULATED SEDIMENT-WATER INTERFACE
- 9:00 a.m. Rutzen, C.; Dittrich, M.; Gabriel, O.; Koschel, R. H.: PHOSPHORUS RELEASE DURING ARTIFICIALLY INDUCED CALCITE PRECIPITATION IN A STRATIFIED HARDWATER LAKE
- 9:15 a.m. Denis, L.; Grenz, C.: OXYGEN AND NUTRIENT FLUXES FROM SHELF SEDIMENTS IN THE GULF OF LIONS (NW MEDITERRANEAN SEA)
- 9:30 a.m. Bishop, J.; Levine, A.: AMMONIUM AFFINITY OF SEDIMENTS AT LIZARD ISLAND, GREAT BARRIER REEF, AUSTRALIA
- 9:45 a.m. Joye, S. B.: SPATIO-TEMPORAL PATTERNS IN RATES OF BENTHIC NITRIFICATION AND METHANE OXIDATION IN GALVESTON BAY, TEXAS.

10:00 a.m. Break

- 10:30 a.m. Roden, E. E.: MODELING IRON CYCLING AND THE INFLUENCE OF MICROBIAL IRON OXIDE REDUCTION ON METHANE PRODUCTION IN FRESHWATER WETLAND SEDIMENTS
- 10:45 a.m. Jørgensen, B. B.; Boettcher, M.; Neretin, L.; Weber, A.: GEOCHEMISTRY OF SULFATE-METHANE AND SULFIDE-IRON DIFFUSION FRONTS IN BLACK SEA SEDIMENTS
- 11:00 a.m. Boehme, S. E.; Riess, W.; Wenzhofer, F.: BIOGEOCHEMICAL STUDIES OF BLACK SEA SEDIMENTS
- 11:15 a.m. Alperin, M. J.; Suayah, I. B.; Benninger, L. K.; DeVito, C. M.; Cutshall, N. H.: A COMPARISON OF FALLOUT PLUTONIUM AND CESIUM IN SEDIMENTS FROM THE NORTH CAROLINA CONTINENTAL SLOPE
- 11:30 a.m. Cable, J. E.; Smoak, J. M.; Brenner, M.; Schelske, C. L.: BERYLLIUM-7 AS AN INDICATOR OF LAKE SEDIMENT MIXING
- 11:45 a.m. Yahel, R.; Genin, A.: DIEL PATTERNS OF SUSPENDED SEDIMENTS IN CORAL REEFS: THE ROLE OF BIOGENIC MECHANISMS
- 12:00 p.m. Schmidt, J. L.; Jumars, P. A.: SPATIAL DISTRIBUTION OF INDIVIDUAL BACTERIA IN SURFICIAL MARINE SEDIMENTS
- 12:15 p.m. Griscom, S. B.; Fisher, N. S.; Aller, R. C.: GUT REDOX CONDITIONS AND THE ASSIMILATION OF SEDIMENT-BOUND METALS IN TWO MARINE BIVALVES

Friday Afternoon Oral Sessions

SS12-II:

Partnerships in Ocean Science

- Chair: Richard W. Spinrad, *Consortium for Oceanographic Research and Education (CORE)*
- Location: Eldorado, Anasazi North
- 2:00 p.m. Robinson, A. R.: A LITTORAL OCEAN OBSERVING AND PREDICTING SYSTEM (LOOPS) FOR A NATIONAL LITTORAL LABORATORY
- 2:15 p.m. Allen, J. S.; Barth, J. A.; Kosro, P. M.: THE PREDICTION OF WIND-DRIVEN COASTAL CIRCULATION
- 2:30 p.m. Paduan, J. D.; Vesecky, J. F.; Fernandez, D. M.; Shulman, I.; Chavez, F. P.; Maffione, R. A.; Kindle, J. C.: AN INNOVATIVE COASTAL-OCEAN OBSERVING NETWORK (ICON)
- 2:45 p.m. Gross, T. F.; Walstad, L. J.; Aikman III, F.; Klein, C. C.: COASTAL MARINE DEMONSTRATION: DISSEMINATING REAL-TIME OBSERVATIONS AND MODEL-BASED NOWCAST AND FORECAST MARINE INFORMATION.
- 3:00 p.m. Break**
- 3:30 p.m. Delaney, J. R.; Chave, A. D.; Howe, B. M.: NEPTUNE: A SUBMARINE INTERACTIVE PLATE-SCALE OBSERVATORY
- 3:45 p.m. Dickey, T. D.; Feely, R. A.; Wanninkhof, R. H.; Chavez, F. P.; Bates, N. R.; Moore, C.; Dickey, T. D.: A NEW PARTNERSHIP PROGRAM: OCEANOGRAPHIC -SYSTEMS FOR CHEMICAL, OPTICAL, AND PHYSICAL EXPERIMENTS (O-SCOPE)
- 4:00 p.m. Bucklin, A.; Wiebe, P. H.; Goudey, C. A.; Novello, J. B.; Williams, G.: OCEANOGRAPHIC AND FISHERIES DATA COLLECTION AND TELEMETRY FROM COMMERCIAL FISHING VESSELS
- 4:15 p.m. Seim, H. E.: SOUTH ATLANTIC BIGHT SYNOPTIC OFFSHORE OBSERVATIONAL NETWORK

- 4:30 p.m. Betzer, P. R.; Normile, M. J.; Barnes, A.: PARTNERSHIPS AND SCIENTIFIC RESEARCH - ENHANCING THE PRESENT/INSURING THE FUTURE

SS13:

Si Fluxes in Aquatic Environments and Their Importance as a Component of Global Change

- Chairs: Daniel J. Conley, *National Environmental Research Inst.*
Claire L. Scheske, *University of Florida*
- Location: *Sweeney, #4*
- 2:00 p.m. Turner, R. E.; Qureshi, N.; Rabalais, N. N.; Dortch, Q.; Justic, D.; Cope, J.: FLUCTUATING SILICATE:NITRATE RATIOS AND COASTAL PLANKTON FOOD WEBS
- 2:15 p.m. Ragueneau, O.; Lancelot, C.; Egorov, V.; Vervlommen, J.; Cociasu, A.; Cauwet, G.; Moncheva, S.: Si:N DISTROPHY AND ITS CONSEQUENCES FOR COASTAL PHYTOPLANKTON: MODULATION BY P AVAILABILITY
- 2:30 p.m. Correll, D. L.; Weller, D. E.; Jordan, T. E.: FLUXES OF DISSOLVED SI FROM THE CHESAPEAKE BAY WATERSHED: MORE LIMITING OVER TIME?
- 2:45 p.m. Chauvaud, L.; Jean, F.; Ragueneau, O.; Thouzeau, G.: DO BENTHIC SUSPENSION FEEDERS MODIFY SI CYCLE?
- 3:00 p.m. Break**
- 3:30 p.m. Del Amo, Y.; Brzezinski, M. A.: DETERMINATION OF THE CHEMICAL FORM OF DISSOLVED Si TAKEN UP BY DIATOMS
- 3:45 p.m. Stoermer, E. F.: DIATOM SPECIES REACTIONS TO SILICA DEPLETION IN THE GREAT LAKES
- 4:00 p.m. Danielsson, Å.: SPATIAL ANALYSIS OF SILICA IN THE BALTIC SEA SEDIMENTS

Friday Afternoon Oral Sessions

- 4:15 p.m. Sigleo, A. C.: TEMPORAL AND SPATIAL DISTRIBUTIONS OF SILICA IN NORTHWESTERN USA WATERSHEDS
- 4:30 p.m. Shipe, R. E.; Brzezinski, M. A.; Franck, V. M.; Varela, D. E.; Harrison, P. J.: BIOGENIC SILICA PRODUCTION ALONG THE EASTERN MARGIN OF THE NORTH PACIFIC GYRE
- 4:45 p.m. Varela, D. E.; Harrison, P. J.; Shipe, R. F.; Brzezinski, M. A.; Harris, S. L.: NEW AND REGENERATED NITROGEN PRODUCTION BY PHYTOPLANKTON ASSEMBLAGES FROM A COASTAL UPWELLING REGIME IN THE NORTHEASTERN PACIFIC: COMPARISON TO BIOGENIC SILICA PRODUCTION

SS28-III:

Trace Elements from the Rivers to the Sea: Processes That Influence Chemical Speciation, Biogeochemical Cycling, and Biological Effects

- Chairs: Greg L. Boyer, *State University of New York*
William G. Wallace, *U.S. Geological Survey*
Steven W. Wilhelm, *University of Tennessee*
- Location: Sweeney, #3
- 2:00 p.m. Barbeau, K. A.; Moffett, J. W.: REMINERALIZATION AND RECYCLING OF TRACE METALS BY PROTOZOAN GRAZERS
- 2:15 p.m. Baines, S. B.; Fisher, N. S.; Cutter, G.; Doblin, M. A.: UPTAKE OF DISSOLVED SELENIUM BY PHYTOPLANKTON: IS ORGANIC SELENIUM READILY INCORPORATED AND DO UPTAKE RATES DIFFER AMONG TAXA?
- 2:30 p.m. Chen, Z.; Mayer, L. M.; Sampson, S.; Quetel, C.; Donard, O.; Jumars, P. A.: ENHANCED SOLUBILIZATION OF TRACE METALS IN DEPOSIT FEEDERS' GUTS
- 2:45 p.m. Warren, L. A.: BACTERIALLY PROMOTED CALCITE PRECIPITATION AND ASSOCIATED CAPTURE OF METAL AND RADIONUCLIDE CONTAMINANTS
- 3:00 p.m. Break**
- 3:30 p.m. Wallace, W. G.; Brown, C. L.; Luoma, S. N.: THE INFLUENCE OF ANIMAL SIZE AND EXPOSURE HISTORY ON THE SUBCELLULAR PARTITIONING OF Cd AND Zn IN THE BIBALVE POTAMOCORBULA AMURENSIS AND THE IMPLICATIONS FOR METAL TROPHIC TRANSFER
- 3:45 p.m. Fisher, N. S.; Wang, W.; Stupakoff, I.; Sanudo-Wilhelmy, S.; Teyssie, J.; Fowler, S. W.; Crusius, J.: MODELING AND MEASURING METAL ACCUMULATION IN MARINE COPEPODS
- 4:00 p.m. Luoma, S.; Hornberger, M.; Cain, D.; Parchaso, F.; Thompson, J.: METAL INFLUENCES ON A CLAM POPULATION: LONG-TERM STUDIES IN SAN FRANCISCO BAY.
- 4:15 p.m. Gilmour, C. C.; Ward, P.; Bennett, L.; McManus, G.: INTERACTING EFFECTS OF NUTRIENTS AND TRACE METALS ON MICROBIAL FOOD WEBS IN ESTUARINE ENCLOSURES
- 4:30 p.m. Sanders, J. G.; Weinstein, M. J.; Breitburg, D. L.: THE EFFECTS OF MULTIPLE STRESSORS ON ESTUARINE ECOSYSTEMS: SEASONAL VARIABILITY IN RESPONSE OF PHYTOPLANKTON COMMUNITIES TO TRACE ELEMENTS
- 4:45 p.m. Connell, D. B.; Sanders, J. G.; Riedel, G. F.: THE EFFECTS OF MULTIPLE STRESSORS ON ESTUARINE ECOSYSTEMS: THE RELATIONSHIP BETWEEN NUTRIENT LEVELS AND TRACE METAL UPTAKE IN BIVALVES AND FISH

SS31-III:

Biogeochemical Dynamics of the Southern Ocean

- Chairs: Walker Smith, *College of William and Mary*
Robert Anderson, *Lamont Doherty Earth Observatory*
Hugh Ducklow, *College of William and Mary*
Mike Landry, *University of Hawaii*
- Location: Sweeney, #2
- 2:00 p.m. Ducklow, H. W.; Smith, W. O.; Fandino, L.; Azam, F.; Kirchman, D. L.; Smith, D. C.; Dickson, M. L.; Carlson, C. A.; Caron, D. A.; Dennett, M.: ALTERNATIVE SCENARIOS FOR BACTERIAL PRODUCTION IN THE ROSS SEA: CONVERSIONS AND CONSTRAINTS.
- 2:15 p.m. Brown, S. L.; Landry, M. R.; Nunnery, S.; Casciotti, K.: THE MICROBIAL COMMUNITY AND THE ANTARCTIC POLAR FRONT
- 2:30 p.m. Walsh, I. D.; Gardner, W. D.; Searson, S.; Gundersen, J. S.; Richardson, M. J.: MARINE AGGREGATES IN THE SOUTHERN OCEAN - ANTARCTIC POLAR FRONT ZONE
- 2:45 p.m. Landry, M. R.; Brown, S. B.; Selph, K. E.; Allen, C. B.; Calbet, A.; Nolla, H. A.; Nunnery, S.: PHYTOPLANKTON GROWTH AND MICROZOOPLANKTON GRAZING IN THE ANTARCTIC POLAR FRONT ZONE DURING AUSTRAL SUMMER 1997-98
- 3:00 p.m. Break**
- 3:30 p.m. Dagg, M. J.; Urban-Rich, J. L.; Peterson, J. O.: CONTRIBUTIONS FROM THE COPEPOD COMMUNITY TO PHYTOPLANKTON MORTALITY AND VERTICAL FLUX OF CARBON AND SILICA NEAR THE ANTARCTIC POLAR FRONT.
- 3:45 p.m. Collier, R. W.; Dymond, J.; Honjo, S.; Manganini, S.; Francois, R.: THE VERTICAL FLUX OF BIOGENIC AND LITHOGENIC PARTICLES IN THE ROSS SEA DURING THE AESOPS EXPERIMENT
- 4:00 p.m. Honjo, S.; Manganini, S.; Francois, R.; Collier, R.; Dymond, J.: EXPORT OF BIOGENIC AND LITHOGENIC PARTICLES TO THE INTERIOR OF OPEN SOUTHERN OCEAN ALONG 170 W.
- 4:15 p.m. Sayles, F. L.; Martin, W. R.; Honjo, S.; Goudreau, J. E.: BENTHIC REMINERALIZATION OF CALCIUM CARBONATE, BIOGENIC OPAL AND ORGANIC CARBON ALONG THE USJGOF SOUTHERN OCEAN STUDY TRANSECT
- 4:30 p.m. Chase, Z.; Fleisher, M. Q.; Anderson, R. F.: PRESERVATION AND BURIAL OF OPAL IN THE SW PACIFIC SECTOR OF THE SOUTHERN OCEAN
- 4:45 p.m. Altabet, M. A.; Francois, R.: NITROGEN AND CARBON ISOTOPIC STUDIES DURING AESOPS: IMPLICATIONS FOR THE PALEOCEANOGRAPHIC RECORD AND MODERN BIOGEOCHEMISTRY IN THE SOUTHERN OCEAN

SS42-II:

Nuisance Blooms and Toxin Production: Controlling Mechanisms in Freshwater and Marine Environments

- Chairs: Michio Kumagū, *Lake Biwa Research Institute*
Stephen Monismith, *Stanford University*
Richard D. Robarts, *National Water Research Institute*
- Location: Eldorado, Anasazi South
- 2:00 p.m. Roesler, C. S.: RESPONSE OF OCEAN COLOR TO THE FORMATION OF HARMFUL ALGAL BLOOMS
- 2:15 p.m. Cembella, A. D.; Bauder, A. G.; Lewis, N. I.; Quilliam, M. A.; Lawrence, J. E.; MacIntyre, G. J.; Lewis, M. R.: MONITORING HARMFUL ALGAL BLOOMS AT SHELLFISH AQUACULTURE SITES USING IN SITU OPTICAL SENSORS: A CASE STUDY IN COASTAL NOVA SCOTIA

Friday Afternoon Oral Sessions

2:30 p.m. Liu, H.; Buskey, E. J.: THE EFFECT OF HYPERSALINITY TO THE EXTRACELLULAR POLYMERIC SUBSTANCE (EPS) EXUDATION OF TEXAS BROWN TIDE ALGA, AUREOUMBRA LAGUNENSIS

2:45 p.m. Bersano, J. J.G.; Buskey, E. E.; Lavrentyev, P. P.: FIELD OBSERVATIONS ON THE FEEDING OF *Acartia tonsa* (CRUSTACEA: COPEPODA) IN TEXAS BROWN TIDE WATERS

3:00 p.m. Break

3:30 p.m. Boyer, G. L.; Szymr, D. B.; Alexander, J. A.; La Roche, J.: METABOLIC MARKERS FOR THE STUDY OF IRON LIMITATION IN THE BROWN TIDE ALGA AUREOCOCCUS ANOPHAGEFFERENS

3:45 p.m. Fan, C.; Lomas, M. W.; Haramoto, E.; Glibert, P. M.: NITROGEN AND CARBON UPTAKE KINETICS OF A PROROCENTRUM MINIMUM BLOOM IN CHESAPEAKE BAY, USA

4:00 p.m. Adolf, J. E.; MacIntyre, H. L.: PHOTOSYNTHETIC AND BIO-OPTICAL PROPERTIES OF A PROROCENTRUM MINIMUM BLOOM: RELATIONSHIPS TO ENVIRONMENTAL VARIABILITY

4:15 p.m. Glibert, P. M.; Terlizzi, D. E.; Lomas, M. W.; Fan, C.: CO-OCCURRENCE OF DINOFLAGELLATE BLOOMS AND ELEVATED LEVELS OF UREA UNDER HIGHLY EUTROPHIC CONDITIONS

4:30 p.m. Smith, G.; Miller, P. E.: EVALUATION OF THE RELATIONSHIP BETWEEN DOMOIC ACID AND PROLINE METABOLISM IN PSEUDO-NITZSCHIA SPP. FROM MONTEREY BAY, CA.

4:45 p.m. Rublee, P. A.; Kempton, J.; Schaefer, E.; Oldach, D.; Burkholder, J. M.: GENE PROBES TO PFIESTERIA PISCICIDA: RESULTS FROM THE 1998 ACTIVE SEASON.

SS48:

Large Lakes and Enclosed Seas

Chairs: Stephen B. Brandt, *NOAA*
Elisabeth Lipiatou, *European Commission*

Location: Eldorado, Zia A/B/C

2:00 p.m. Corredor, J. E.; Morell, J. M.: SEASONAL VARIATION OF PHYSICAL AND BIOGEOCHEMICAL FEATURES OF EASTERN CARIBBEAN SURFACE WATER AT THE CARIBBEAN TIME-SERIES STATION (CaTS)

2:15 p.m. Green, M. L.; DePinto, J. V.; Sweet, C.; Hites, R. A.; Schwab, D.; Hornbuckle, K. C.: REGIONAL SPATIAL AND TEMPORAL INTERPOLATION OF PCBS: INTERPRETATION OF LAKE MICHIGAN MASS BALANCE ATMOSPHERIC DATA

2:30 p.m. Melville, G. E.: LAKE TROUT, CLIMATE CHANGE AND YIELDS IN THE MACKENZIE GREAT LAKES

2:45 p.m. Rahm, L.: NITROGEN FIXATION IN THE BALTIC PROPER: AN EMPIRICAL STUDY

3:00 p.m. Break

3:30 p.m. Sellinger, C. E.: LARGE LAKES GROUNDWATER BUDGET—LAKE MICHIGAN, A CASE STUDY

3:45 p.m. Sherman, K.: EMERGING PATTERNS OF FORCES DRIVING CHANGES IN LARGE MARINE ECOSYSTEMS : A GLOBAL PERSPECTIVE

4:00 p.m. Tiffany, M. A.; Watts, J. M.; Hurlbert, S. H.: PLANKTON DYNAMICS OF CALIFORNIA'S LARGEST LAKE, THE SALTON SEA

4:15 p.m. Watts, J. M.; Tiffany, M.; Verfaillie, J. R.; Hurlbert, S. H.: NUTRIENT LOADINGS TO THE SALTON SEA: PAST, PRESENT, AND THE FUTURE

4:30 p.m. Wassmann, P.; Tamminen, T.: RIVER RUN-OFF, PELAGIC EUTROPHICATION AND SEDIMENTATION IN THE GULF OF RIGA, BALTIC SEA

CS63-II:

Sedimentary Biogeochemistry

Chairs: Jaye Cable, *Louisiana State University*
Bo Barker Jørgensen, *Max Planck Institute for Marine Microbiology*

Location: Sweeney, #1

2:00 p.m. Hudson, R. J.M.; Watras, C. J.: METHYLMERCURY UPTAKE BY FRESHWATER MICROORGANISMS: MODELING SESTON-WATER PARTITIONING DATA FROM WISCONSIN LAKES

2:15 p.m. Martinez, E. A.; Moore, B. C.; Schaumlöffel, J.: EVALUATION OF MOUTHPART DEFORMITIES AND HEAVY METALS IN CHIRONOMIDS FROM THE HEAVY METAL CONTAMINATED COEUR D'ALENE RIVER

2:30 p.m. Myrbo, A. E.; Dean Jr., W. E.; Kelts, K. R.: INORGANIC-ORGANIC CARBON TRANSITIONS IN LACUSTRINE SEDIMENTARY RECORDS: A COMPARISON OF NATURAL AND ANTHROPOGENIC SHIFTS

2:45 p.m. Sanpawanitchakit, C.; Honeyman, B. D.: A STUDY OF THE ROLE OF NOM IN TRACE METAL FLUX FROM SEDIMENTS USING A BENCH-SCALE BENTHIC CHAMBER.

3:00 p.m. Break

3:30 p.m. Engstrom, D. R.; Swain, E. B.; Balogh, S. J.: ELEVATED MERCURY INPUTS TO URBAN LAKES FROM LOCAL EMISSION SOURCES AND WATERSHED RUNOFF: EVIDENCE FROM DATED SEDIMENT CORES FROM 50 MINNESOTA LAKES

3:45 p.m. Heyvaert, A. C.; Reuter, J. E.; Slotton, D. G.; Goldman, C. R.: HISTORICAL ATMOSPHERIC DEPOSITION OF LEAD AND MERCURY RECONSTRUCTED FROM SEDIMENT CORES OF LAKE TAHOE, CALIFORNIA AND NEVADA.

4:00 p.m. Ek, A.; Renberg, I.: ONE THOUSAND YEARS OF COPPER MINING IN FALUN, CENTRAL SWEDEN, AND ITS EFFECTS ON LAKE ACIDITY

4:15 p.m. Gottgens, J. F.; Kaplan, S. M.; Simmers, B. S.: TESTING THE USEFULNESS OF SEDIMENTARY INDICATORS TO REFLECT PAST ENVIRONMENTAL CONDITIONS

ASLO 1999 Registration Form

If you are unable to register electronically on the web at <http://www.aslo.org/santafe99>, please mail completed registration form and payment to: **ASLO, 5400 Bosque Boulevard, Suite 680, Waco, Texas 76710-4446, USA**

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

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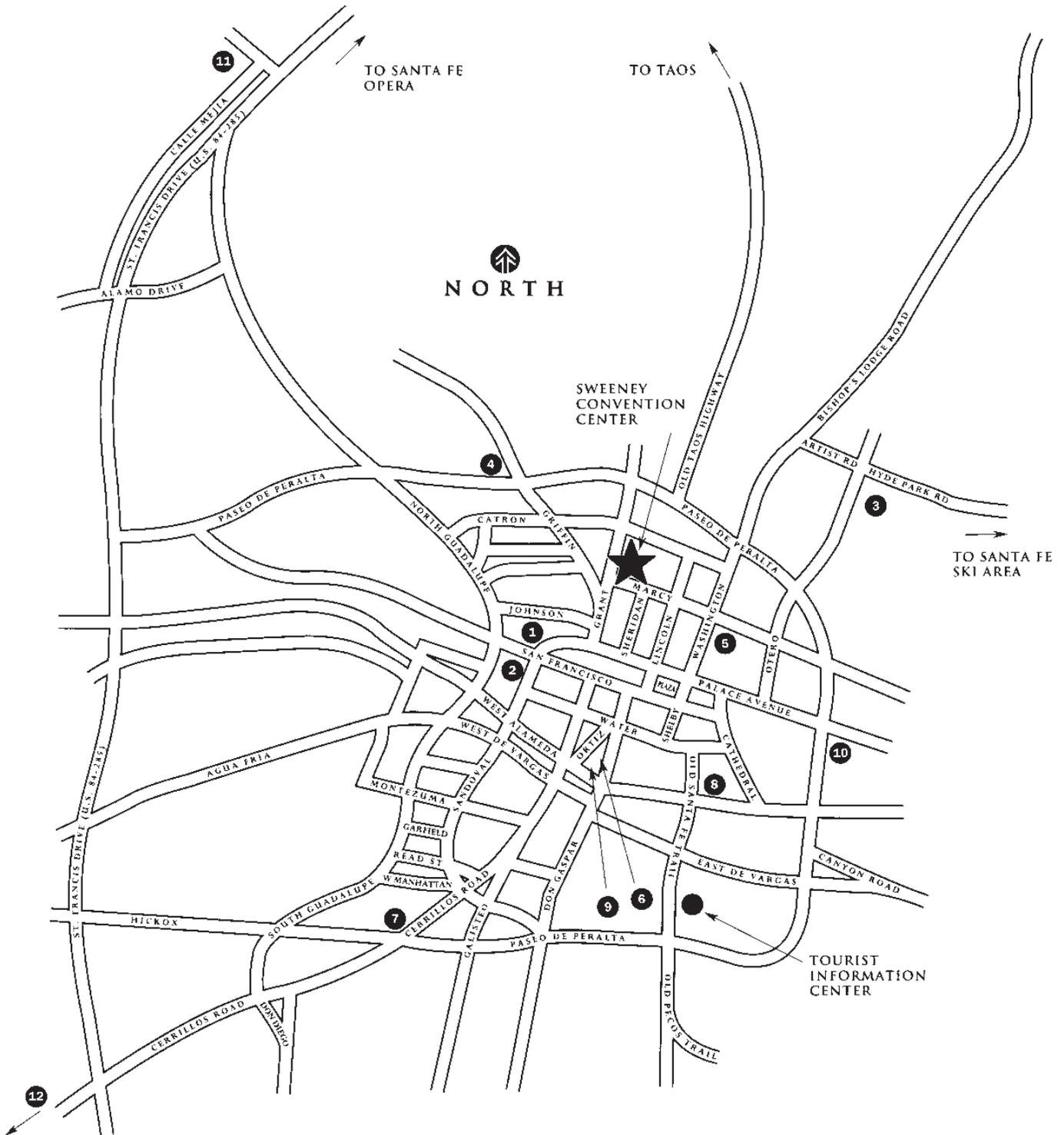
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Sante Fe, NM - Downtown and Nearby Hotels



- | | |
|---|---|
| 1 Eldorado Hotel | 7 Hotel Santa Fe |
| 2 Hilton of Santa Fe | 8 Hotel Loretto (formerly Inn at Loretto) |
| 3 Fort Marcy Hotel Suites Compound | 9 Inn of the Governors |
| 4 Villas de Santa Fe (formerly Homewood Suites) | 11 Radisson Hotel |
| 5 Radisson Hotel & Suites on the Plaza | 12 Fairfield Inn |
| 6 Saint Francis Hotel | |

ASLO 1999 Hotel Reservation Form

ASLO 99 AQUATIC SCIENCES MEETING • FEBRUARY 1-5, 1999 • Santa Fe, New Mexico

To reserve hotel accommodations in Santa Fe for ASLO 1999, complete and FAX to 505-984-6679 or mail to:

Housing Coordinator
 Santa Fe Convention & Visitors Bureau—ASLO 1999
 P.O. Box 909
 Santa Fe, NM 87504-0909

All room reservations must be made through the Housing Coordinator at the **Convention & Visitors Bureau** through January 4, 1999. (FAX or MAIL this form to the **Convention & Visitors Bureau**; telephone reservations will not be accepted by the **Convention & Visitors Bureau**.) After January 4, reservations must be made directly with the hotels. Please specify you are with the "ASLO" meeting. Once this form has been processed, you will receive an acknowledgement from the **Convention & Visitors Bureau**. Shortly thereafter, you will receive a confirmation from your hotel. All changes and cancellations must be made directly with the Housing Coordinator at the **Convention & Visitors Bureau** through January 4. After that date, you must contact the hotel directly. In order to guarantee your reservation, you must either include credit card information or send a deposit directly to your assigned hotel upon receipt of acknowledgment. In the event of a sell-out, other hotels of comparable quality may be substituted. Reservations will be confirmed by First Class Mail.

Please print or use block letters:

LAST NAME			FIRST NAME			MIDDLE INITIAL		
INSTITUTE OR ORGANIZATION								
DEPARTMENT OR FIRST ADDRESS LINE								
LAST ADDRESS LINE								
CITY			STATE/PROVINCE		ZIP		COUNTRY	
E-MAIL			DAYTIME PHONE (INCLUDE COUNTRY CODE)				FAX	
ARRIVAL DATE			ESTIMATED TIME OF ARRIVAL AT HOTEL			DEPARTURE DATE		

Please indicate your 1st, 2nd & 3rd choice of hotel:

1. _____ 2. _____ 3. _____

Accommodation Required: Single Double Rate: _____ (See reverse side of this form)

Name of Second Person, if applicable: _____

Please check one: Smoking Non-Smoking

Special Requests:

To guarantee reservations, hotel reservation form must include credit card number, expiration date & signature.

Please check the appropriate method of payment: VISA Mastercard American Express Discover

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Hotel Reservation Form (Hotel List)

Participating Hotels

Note: Rates shown do not include taxes. The current tax is 10.25 %

Headquarter Hotels:

*Eldorado Hotel (Co-headquarters hotel)

\$119 single or double occupancy
Add \$20 for additional adults over two sharing a room.
309 West San Francisco Street.

Santa Fe's original four-star, four-diamond hotel, the Eldorado is located one block from the historic Plaza, adjacent to the Hilton Hotel and a short walk to the Sweeney Center. This is a large modern hotel with indoor pool and many shops and restaurants. Parking is \$8.00 per 24-hour period to hotel guests and \$10.00 per day for non-guests. Check them out at www.eldoradohotel.com.

*Hilton of Santa Fe (Co-headquarters hotel)

\$116 single or double occupancy
Add \$10 for additional adults over two sharing a room.
100 Sandoval Street.

Two-story territorial-style building just steps from the historic Plaza, adjacent to the Eldorado and within a short walk to the Sweeney Center. There are several restaurants located at the Hilton. Visit their web site at www.hiltonofsantafe.com. Parking is \$5.00 per day.

Other Participating Hotels:

*Hotel Loretto (Formerly Inn at Loretto)

\$99 single or double occupancy
Add \$15 for additional adults over two sharing a room.
211 Old Santa Fe Trail.

The Hotel Loretto is a tiered-design Pueblo style hotel with restaurants and shops as part of the hotel itself. It is located one block from the Plaza and a short walk to the meeting facilities. Overnight parking for guests is \$5.00 per day.

Fort Marcy Hotel Suites Compound

\$89 single, \$99 double occupancy
Add \$20 for additional adults over two sharing a room.
320 Artist Road.

Four blocks off of the Plaza, this compound offers various size bedroom suites. Parking is complimentary and the hotel owns a van for complimentary shuttle service to the meeting sites.

Radisson Hotel

\$94 single or double occupancy
Add \$20 for additional adults over two sharing a room.
750 North St. Francis Drive.

The Radisson is located outside of the downtown area and offers complimentary parking. Whenever possible, it will provide complimentary shuttle service via its van to the meeting sites.

Fairfield Inn by Marriott

\$49 single or double occupancy
Add \$5 for additional adults over two sharing a room.
4150 Cerrillos Road.

The Fairfield Inn is located outside of the downtown area and offers complimentary parking.

Radisson Hotel & Suites on the Plaza (formerly the Hotel Plaza Real)

\$89 single or double occupancy
Add \$10 for additional adults over two sharing a room.
125 Washington Avenue.

Territorial-style architecture offering continental breakfast but no restaurant on the premises. Parking is \$10.00 per night.

*Inn of the Governors

\$109 single or double occupancy
Add \$15 for additional adults over two sharing a room.
234 Don Gaspar.

Southwestern ambiance and an ideal location-just a short walk from the Plaza. Parking is complimentary.

*Villas de Santa Fe

\$99 single or double occupancy
(formerly the Homewood Suites)
Add \$10 for additional adults over two sharing a room.
400 Griffin Street.

This all-suite hotel offers rooms with kitchens and has a small convenience store as part of the hotel. The Villas de Santa Fe is located five blocks from the Plaza. Parking is complimentary.

*Hotel Santa Fe

\$99 single or double occupancy
Add \$10 for additional adults over two sharing a room.
1501 Paseo De Peralta.

Santa Fe's only Native-American owned hotel, this facility offers complimentary parking and shuttle service to the meeting.

*St. Francis Hotel

\$95 single or double occupancy
Add \$15 for additional occupants over two sharing a room (applies to ages 13 and over).
210 Don Gaspar Avenue.

National historic landmark building that was renovated in the 1980's and located on the Plaza just a short walk to the meeting. Parking is complimentary.

Note: Hotels marked with an asterisk () are downtown properties and are within walking distance of the Sweeney Center, Eldorado and Hilton hotels. The remaining participating hotels are located within 5-15 minutes of the downtown area and some provide complimentary shuttle service. This may not be convenient for all events, however. We recommend renting a car if you plan to stay outside the downtown area. Parking at the Sweeney is \$.60 per half hour or \$6.00 per day.*

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HIGHEST DEGREE		YEAR DEGREE ATTAINED	
GENDER (M OR F)	BIRTH YEAR	FIELD (LIM = LIMNOLOGY; OCE = OCEANOGRAPHY; ENTER PRIMARY FIRST, IF LISTING BOTH)	

Discipline: _____

(B = Biological; C = Chemical; G = Geological; O = Optical; P = Physical; If listing more than one, list in order of priority.)

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(1 = Lakes/Reservoirs/Ponds; 2 = Rivers/Streams; 3 = Great Lakes; 4 = Wetlands; 5 = Estuaries; 6 = Coastal Ocean; 7 = Open Ocean; 8 = Most / All; Enter no more than four in order of priority.)

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 American Society of Limnology and Oceanography
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 Waco, Texas 76710-4446
 (800) 929-ASLO · (254) 399-9635
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Monday, February 1

* Please note that the authors listed for all sessions are the presenting authors.

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6:30am-7:40am				Student Breakfast -	
7am-8:15am				Speaker Ready Room -	
7am-5pm					
7am-5pm					
7am-10pm					
8:15am-12pm					
9:30-10:15am					
Plenary #1					
10:15-10:30am				BREAK	
10:30-11:15am				BREAK	
Plenary #2					
11:15-12:00pm					
Plenary #3					
12pm-2pm					
2pm-5pm	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B
Concurrent Sessions	SS44 Integrating Ecosystem Models and Observations	SS32 Stable Isotope Natural Abundance	SS34 Composition and Reactivity of DOC	SS14 Signs of Response to Climate Change	SS47 Large River Ecosystems
2:00pm	Niquil, Nathalie	Popp, Brian N.	Repeta, Daniel J.	Jochem, Frank	Gregory, Stanley V.
2:15pm	Jackson, George A.	Bidigare, Robert R.	Repeta, Daniel J.	Vinebrooke, Rolf D.	Gregory, Stanley V.
2:30pm	Vezina, Alain F.	Riebesell, Ulf	Boehme, Jennifer R.	Weller, Gunter E.	Squires, Margaret M.
2:45pm	Athias, Veronique	Wolf-Gladrow, Dieter A.	Twardowski, Michael S.	Tynan, Cynthia T.	Andrus, Charles (Chip) W.
3pm-3:30pm	BREAK			BREAK	
3:30pm	Cottingham, Kathryn L.	Burkhardt, Steffen	Piatina, Tatiana	Stockwell, Dean A.	Hein, Thomas
3:45pm	Armstrong, Robert A.	Thoms, Silke	Rao, Usha	Zeeman, Stephan I.	Hatch, Lorin K.
4:00pm	Spitz, Yvette H.	Savidge, William B.	Conmy, Robyn N.	Coyle, Kenneth O.	Fernald, Alexander G.
4:15pm	Vallino, Joseph J.	Rau, Greg H.	Cole, Jonathan J.	Pinchuk, Alexei I.	Bukaveckas, Paul A.
4:30pm	Friedrichs, Marjorie A.M.	Tortell, Philippe D.	Cole, Jonathan J.	Napp, Jeffrey M.	Hamilton, Stephen K.
4:45pm	Schartau, Markus	Hollander, David J.	McCallister, S. Leigh	Hunt, George L.	Landers, Dixon H.
5pm-9pm				ASLO Business Meeting -	
5:30pm-6:30pm					

Notes

Monday, February 1

HILTON		SWEENEY				
Mesa Ballroom						6:30am-7:40am
		Coffee Service - Sweeney Ballroom				7am-8:15am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Aspen						7am-10pm
		Welcome / Awards / Opening Plenary Session - Sweeney Ballroom				8:15am-12pm
		Richard T. Barber, Duke University <i>How Will Oceanic Ecosystems Respond to the Climate of the 21st Century?</i>				9:30-10:15am Plenary #1
BREAK		BREAK				10:15-10:30am
		Sallie W. Chisholm, Massachusetts Institute of Technology <i>Dealing with Diversity: Structure and Function in Ocean Ecosystems</i>				10:30-11:15am Plenary #2
		Gene E. Likens, Institute of Ecosystem Studies <i>Limnology and Freshwater Ecosystems in the 21st Century</i>				11:15-12:00pm Plenary #3
		LUNCH - ON YOUR OWN				12pm-2pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm Concurrent Sessions
SS06 Ecosystems as Hi-Tech Water Purifiers		SS01 Physics and Biology of Plankton Feeding Ecology	SS17 Biofilms and Mucilage	SS41 Probing Individual Cell Physiology	SS45 Competition of Plankton and Attached Algae	
Richardson, Curtis J.		Gargett, Ann E.	Orellana, Monica V.	Fuhrman, Jed A.	MacIntyre, Hugh L.	2:00pm
Smith, Lesley K.		Edwards, Christopher A.	Fonda, Serena	Frischer, Marc E.	Thomas, Serge	2:15pm
Bonner, James S.		Beisner, Beatrix E.	Quéric, Nadia V.	Hagström, Åke F.K.	Graham, Mark D.	2:30pm
Steinberg, Christian E.W.		Leising, Andrew W.	Baty, Ace M.	del Giorgio, Paul A.	Vadeboncoeur, Yvonne	2:45pm
BREAK		BREAK				3pm-3:30pm
Tebo, Bradley M.		Brewer, Matthew C.	Passow, Uta D.	Smith, Erik M.	Havens, Karl E.	3:30pm
Angel, Dror		Jiang, Houshuo	Alber, Merryl	Gasol, Josep M.	Havens, Karl E.	3:45pm
Admiraal, Wim W.		Ginn, Jennifer A.	Decho, Alan W.	Veldhuis, Marcel J.W. M.	Tyler, Anna C.	4:00pm
Fischer, Helmut		Visser, Andre W.	Arnosti, Carol	Giovannoni, Stephen J.	Hauxwell, Jennifer A.	4:15pm
Newell, Roger I.		Rapoza, Rebecca C.	Wetzel, Robert G.	Perthaler, Jakob	Colman, John A.	4:30pm
Ostroumov, Sergei A.		Miller, Thomas J.	Espeland, Eric M.	DeLong, Edward F.		4:45pm
		Exhibit Set-up - Sweeney Ballroom				5pm-9pm
Mesa Ballroom						5:30pm-6:30pm

Tuesday, February 2

* Please note that the authors listed for all sessions are the presenting authors.

ELDORADO				HILTON		
7am-8am						
7am-8:30am	Coffee Service - Cash Service at all Locations				Coffee Service -	
7am-5pm						
7am-5pm						
7am-10pm					Speaker Ready Room -	
8am-12pm					CURMLO -	
8am-7pm						
8:30-12:30pm Concurrent Sessions	Anasazi North CS56 <u>DOM: Sources and Cycling</u>	Anasazi South SS32 - II <u>Stable Isotope Natural Abundance</u>	Zia A/B/C SS34 - II <u>Composition and Reactivity of DOC</u>	Mesa A SS05 <u>Thin Layers</u>	Mesa B SS02 <u>At and Below the Kolmogorov Scale</u>	
8:30am	Sharp, Jonathan H.	Werne, Josef P.	Aluwihare, Lihini I.	Osborn, Thomas R.	Yamazaki, Hidekatsu	
8:45am	Willey, Joan D.	Needoba, Joseph A.	Hill, Jon K.	Dekshenieks, Margaret M.	Krause, Dale C.	
9:00am	Pabich, Wendy J.	Montoya, Joseph P.	Hee, Carol A.	Donaghay, Percy	Kiorboe, T.	
9:15am	Kolar, Ingrid E.	Childress, James J.	Kastler, Jessica A.	Cowles, Timothy J.	Alcaraz, Miquel	
9:30am	Kaldy, James E.	McClelland, James W.	Moran, Mary Ann	Maffione, Robert A.	Marrase, Celia	
9:45am	Heilman, Mark A.	Clesceri, Erika J.	Zepp, Richard G.	Bivens, Jennifer R.	Costello, John H.	
10am-10:30am	BREAK			BREAK		
10:30am	Vlahos, Penny	Macrellis, Amy N.	Waiser, Marley J.	Holliday, Dale V.	Strickler, J. Rudi	
10:45am	Otero, Ernesto	McCusker, Eileen M.	Mayer, Lawrence M.	Herren, Christy M.	Miranda, Ricardo C.	
11:00am	Callahan, Julie	Smith, Michael A.	Bourbonniere, Richard A.	MacIntyre, Sally	Ploug, Helle H.	
11:15am	Sayama, M.	Martens, Christopher S.	Mannino, Antonio	Smith, David C.	Karp-Boss, Lee	
11:30am	Teece, Mark A.	Molina, Marirosa	Chen, Robert F.	Johnson, Gabrielle L.	Juhl, Andrew R.	
11:45am	Kelley, Cheryl A.	Pease, Tamara K.	Chasar, Lynda S.	Gifford, Dian J.	Latz, Michael I.	
12:00pm	Nagata, T.	Boschker, Henricus T.S.	Burdige, David J.		Peters, Francesc	
12:15pm	Sinsabaugh, Robert L.	Middelburg, Jack J.	Clark, Lauren L.		Waters, Raechel L.	
12:30-2:00pm	LUNCH - ON YOUR OWN			LUNCH - ON YOUR OWN		
12:45-1:45pm	L&O Workshop - Zia					
2pm-5pm Concurrent Sessions	Anasazi North SS15 <u>Evidence of Global Change at High Latitude</u>	Anasazi South TS01 <u>Global Perspectives (Thematic Session)</u>	Zia A/B/C SS34 - III <u>Composition and Reactivity of DOC</u>	Mesa A CS67 <u>Zooplankton: Temporal and Spatial Dynamics</u>	Mesa B SS23 <u>Global Significance of Small Copepods</u>	
2:00pm	Aagaard, Knut	Ducklow, Hugh	Opsahl, Stephen	Crawford, Tiffany N.	Calbet, Albert	
2:15pm	Aagaard, Knut	Ducklow, Hugh	Mitra, Siddhartha	McLaughlin, Erin N.	Satapoomin, Suree	
2:30pm	McPhee, Miles G.	Malone, Thomas C.	Quayle, Wendy C.	Raskoff, Kevin A.	Nielsen, Torkel Gissel	
2:45pm	Hobbie, John E.	Malone, Thomas C.	Loh, Ai Ning	Robison, Bruce H.	Mazzocchi, Maria Grazia	
3pm-3:30pm	BREAK			BREAK		
3:30pm	Anderson, John	Grassle, J. Frederick	Bronk, Deborah A.	Hameed, Sultan	Roff, John C.	
3:45pm	Clough, Lisa M.	Grassle, J. Frederick	Skold, Magnus	Piontkovski, Sergey	Paffenhofer, Gustav-Adolf	
4:00pm	Hershey, Anne E.	Hamilton, Stephen K.	McCarthy, Matthew D.	Wishner, Karen F.	Rose, Kimberly N.	
4:15pm		Hamilton, Stephen K.	Raymond, Peter A.	Carlotti, Francois	Hopcroft, Russell R.	
4:30pm		Wetzel, Robert G.	Edmonds, Jennifer W.	Rocha, Andrea M.	Lopes, Rubens M.	
4:45pm		Wetzel, Robert G.	Verdugo, Pedro	Fussmann, Gregor	Schnack-Schiel, Sigrid B.	
5pm-7pm						
7pm-9pm						
7:30-9:30pm						

SS01 Poster <u>Physics and Biology of Plankton Feeding Ecology</u> 1. Stiansen, Jan Erik 2. Bochdanský, Alexander	SS02 Poster <u>At and Below the Kolmogorov Scale</u> 3. Irigoien, Xabier 4. Malits, Andrea 5. Yen, Jeannette	SS05 Poster SS05 <u>Thin Layers</u> 6. Boss, Emmanuel 7. Sullivan, James M. 8. Rines, Jan E. 9. Wingard, Chris E. 10. Eisner, Lisa B.	SS06 Poster <u>Ecosystems as Hi-Tech Water Purifiers</u> 11. Dittrich, Maria 12. Steingruber, Sandra 13. Owens, Michael S. 14. Obratsova, Anna Y. 15. Ostroumov, Sergei A.	SS07 Poster <u>Biogeochemical Patterns Altered by Humans</u> 16. Huh, C.-A. 17. Newton, Jan A. 18. Fugate, David C. 19. Mayer, Marilyn S. 20. Albertson, Storrs L.
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SS34 Poster <u>Composition and Reactivity of DOC</u> 49. Sanderson, Marta P. 50. Lobbes, Joerg M. 51. Deflandre, Bruno 52. Zanardi, E. 53. Engbrodt, Ralph 54. Morell, Julio M. 55. Bauer, James E.	SS40 Poster <u>Microbial Diversity and Population Dynamics</u> 56. Palenik, Brian P. 57. Worm, Jakob J. 58. Wilhelm, Steven W. 59. Zani, Sabino 60. Lu, Jing-rang 61. Shapiro, Lynda 62. Chen, Feng 63. Methe', Barbara A. 64. Keough, Brendan P. 65. Rohwer, Forest 66. Middelboe, Mathias 67. Suzuki, Marcelino T.	SS41 Poster <u>Probing Individual Cell Physiology</u> 68. Howard-Jones, Michelle 69. Binder, Brian J. 70. Karner, Markus B. 71. Olson, R. J. 72. Dijkman, Nicole A. 73. Schaefer, Maria C. 74. Sullivan, James B. 75. Alfreider, Albin 76. Berman-Frank, Ilana R. 77. Lesser, Michael P. 78. Paul, John H.	SS43 Poster <u>Applications of Satellite and Aircraft Sensors</u> 79. Siegel, David A. 80. Yoder, James A. 81. Schollaert, Stephanie E. 82. Stegmann, Petra M. 83. Mobley, Curtis D. 84. Strutton, Peter G. 85. Barnard, Andrew H. 86. Kudela, Raphael M. 87. Warrington, Daniel S. 88. Rhea, William J. 89. Filippi, Anthony M. 90. Stumpf, Richard P.
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Tuesday, February 2

HILTON		SWEENEY				
		Exhibit / Poster Set-up - Sweeney Ballroom				7am-8am
Cash Service at all Locations		Coffee Service - Cash Service at all Locations				7am-8:30am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Aspen						7am-10pm
Ortiz I&II						8am-12pm
		Exhibits / Posters - Sweeney Ballroom				8am-7pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	8:30-12:30pm Concurrent Sessions
SS40 <u>Microbial Diversity and Population Dynamics</u>		SS43 <u>Applications of Satellite and Aircraft Sensors</u>	SS27 <u>Aquatic Ecosystems in Extreme Environments</u>	SS19 <u>The Legacy of Reservoirs</u>	SS07 <u>Biogeochemical Patterns altered by Humans</u>	
Giovannoni, Stephen J.		Yentsch, Charles S.	Steppe, Timothy F.	Van Metre, Peter C.	Galloway, James N.	8:30am
Giovannoni, Stephen J.		Bontempi, Paula S.	Yanos, A. A.	Lewis, Gregory P.	Galloway, James N.	8:45am
Stürmeyer, Heike H.		Hood, Raleigh R.	Brandes, Jay A.	Dean, Walter E.	Seitzinger, Sybil	9:00am
Sobecky, Patricia A.		Monger, Bruce C.	Delaney, John R.	Almendinger, James E.	Richey, Jeffrey E.	9:15am
Cary, Craig S.		Fisher, Karen E.	Escorcía, Susie P.	Kipphut, George W.	Lammers, Richard B.	9:30am
Rocap, Gabrielle		Johannessen, Sophia C.	MacDonald, Ian R.	Andrews, Edmund D.	Howarth, Robert W.	9:45am
BREAK		BREAK				10am-10:30am
Toledo, Gerardo G.		Dadou, Isabelle I.C.	Nelson, Douglas C.	Bowser, Carl J.	O'Reilly, Catherine M.	10:30am
MacGregor, Barbara J.		Polovina, Jeffrey J.	Bernhard, Joan M.	Tietjen, Todd E.	Jordan, Thomas E.	10:45am
Höfle, Manfred G.		Carr, Mary-Elena	Atkins, Michael S.	Giani, Alessandra A.	Kopaska, Jeffery A.	11:00am
Weinbauer, Markus G.		Kahru, Mati	Hand, Steven C.	Waldron, Marcus C.	Arbuckle, Kelly	11:15am
Juergens, Klaus		García-Goriz, Elisa	Girguis, Peter R.	Green, William R.	Valiela, Ivan	11:30am
Riemann, Lasse		Peterson, Alan R.	Fisher, Charles R.	Pinto-Coelho, Ricardo R.	Carrubba, Lisamarie	11:45am
Muyzer, Gerard		Mertes, Leal A.	Ellis-Evans, Cynan	Schmidt, John C.	Blomqvist, Sven	12:00pm
Palumbo, Anthony V.		Trees, Charles C.		Threlkeld, Stephen T.	Branfireun, Brian A.	12:15pm
LUNCH - ON YOUR OWN		LUNCH - ON YOUR OWN				12:30-2:00pm
						12:45-1:45pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm Concurrent Sessions
SS01 - II <u>Physics and Biology of Plankton Feeding Ecology</u>		SS43 - II <u>Applications of Satellite and Aircraft Sensors</u>	SS27 - II <u>Aquatic Ecosystems in Extreme Environments</u>	SS41 - II <u>Probing Individual Cell Physiology</u>	SS49 <u>Ecological Stoichiometry in Aquatic Ecosystems</u>	
Davis, Michael W.		Carder, Kendall L.	McKnight, Diane M.	Hodson, Robert E.	Karl, David M.	2:00pm
Quinlan, John A.		English, David C.	Priscu, John C.	Poulton, Nicole J.	Karl, David M.	2:15pm
Pithakpol, Santiwat		Davis, Curtiss O.	Takacs, Cristina D.	Rynearson, Tatiana A.	Downing, John A.	2:30pm
Jakobsen, Hans Henrik		Hu, Chuanmin	Sattler, Birgit	Ouverney, Cleber C.	Marino, Roxanne	2:45pm
BREAK		BREAK				3pm-3:30pm
Ince, Lewis S.		Dekker, Arnold A.	Shick, J. M.	Jochem, Frank J.	Vanni, Michael J.	3:30pm
Currie, Warren J.S.		DiGiacomo, Paul M.	Roesler, Collin S.	Bird, David F.	Elser, James J.	3:45pm
Sullivan, Barbara K.		Toole, Dierdre A.	Jellison, Robert S.	Dyhrman, Sonya T.	McTavish, Kathleen A.	4:00pm
Dower, John F.		Ringold, Paul L.	Larson, Gary L.	Gisselson, Lars-Åke	Bentzen, Ellen	4:15pm
Koehl, Mimi A.R.		Melack, John M.	Peeken, Ilka I.		Tibbets, Teresa M.	4:30pm
					Stelzer, Robert S.	4:45pm
		Exhibits / Posters / Reception - Sweeney Ballroom				5pm-7pm
		GEO / NSF Town Meeting - Sweeney #1				7pm-9pm
		Poster Teardown - Sweeney Ballroom				7:30-9:30pm

SS14 Poster <u>Signs of Response to Climate Change</u> 21. Connelly, Xana M.	SS15 Poster <u>Evidence of Global Change at High Latitudes</u> 22. Panzenböck, M. 23. Beer, Laura L.	SS17 Poster <u>Biofilms and Mucilage</u> 24. Kovac, Solveg 25. Drake, Lisa A. 26. Tornblom, Erik 27. Francoeur, Steven N. 28. Ivosevic, Nadica 29. Karlsson, Ann-Louise	SS23 Poster <u>Global Significance of Small Copepods</u> 30. Herman, Alex W. 31. Albers, Carola	SS27 Poster <u>Aquatic Ecosystems in Extreme Environments</u> 32. Pichahchy, Alice E. 33. Belzile, Claude 34. Campbell, Barbara J. 35. Priscu, John C. 36. Haecky, P.B. 37. Buck, Kurt 38. Evans, Marlene S.	SS32 Poster <u>Stable Isotope Natural Abundance</u> 39. Rust, Terri M. 40. Schell, Donald M. 41. Adams, Thomas S. 42. Voss, Maren 43. Freudenthal, Tim 44. Benthien, Albert 45. Roberts, Brian J. 46. Kline, Thomas C. 47. Fry, Brian 48. Knoff, Amanda J.
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SS44 Poster <u>Integrating Ecosystem Models and Observations</u> 91. Yamashiki, Yosuke Y. 92. Batchelder, Harold P. 93. Garçon, Veronique V. 94. Michels, Erik 95. Cottenie, Karl 96. Meixner, Thomas	SS47 Poster <u>Large River Ecosystems</u> 97. Erway, Marilyn M. 98. LaVigne, Henry R. 99. Santoro, E. 100. Schrutka, Susanne 101. Riedler, Patricia	SS49 Poster <u>Ecological Stoichiometry in Aquatic Ecosystems</u> 102. Schwalbach, Michael S. 103. Lampman, Gregory 104. Sundareshwar, P. V. 105. Urabe, Jotaro	CS56 Poster <u>DOM: Sources and Cycling</u> 106. Grembowicz, Kenneth 107. Sebetich, Michael J.	CS67 Poster <u>Zooplankton: Temporal and Spatial Dynamics</u> 108. Chandra, Sudeep 109. Scheurer, David L. 110. Ramirez, Jennie T. 111. Earle, Jannell D. 112. Gonzalez Sagrario, M. 113. Rapien, Mary K.
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Wednesday, February 3

* Please note that the authors listed for all sessions are the presenting authors.

	ELDORADO			HILTON			
7am-8am							
7am-8:30am	Coffee Service - Cash Service at all Locations			Coffee Service -			
7am-5pm							
7am-5pm							
7am-10pm						Speaker Ready Room -	
8am-12pm						CURMLO -	
8am-7pm							
8:30-12:30pm Concurrent Sessions	Anasazi North SS03 <u>Boundary Layers</u>	Anasazi South SS32 Continued <u>Stable Isotope Natural Abundance</u>	Zia A/B/C SS53 <u>Ocean and Freshwater Research in Education</u>	Mesa A SS38 <u>Microbial Control of Carbon Biogeochemistry</u>	Mesa B CS60 <u>Microbial Web Dynamics: Bacteria to Zooplankton</u>		
8:30am	Frick, Walter E.	Tobias, Craig R.	Cohen, Andrew S.	Biddanda, Bopaiah A.	Reitner, Bettina		
8:45am	Sanford, Lawrence P.	Sickman, James O.	Canuel, Elizabeth A.	Anderson, M. Robin	Schultz, Jr., Gary E.		
9:00am	Porter, Elka T.	Finlay, Jacques C.	Ambler, Julie W.	Ho, Tung-Yuan T.	Junge, Karen		
9:15am	Schaffner, Linda C.	Cabana, Gilbert	Moore, Marianne V.	Covert, Joseph S.	Smith, Treda B.		
9:30am	Ackerman, Josef D.	Cifuentes, Luis A.	Brakke, David F.	Steward, G.	Smalley, Gabriela W.		
9:45am	Edwards, William J.	Chanton, Jeffrey P.	Greely, Teresa M.	Pelegrí, Silvia P.	Strom, Suzanne		
10am-10:30am	BREAK			BREAK			
10:30am	Finelli, Christopher M.	Larsen, Birger	Cuhel, Russell L.	Brussaard, Corina P.D.	Brenner, Robert J.		
10:45am	Kozerski, Hans-Peter H P	MacAvoy, Stephen E.	Cole, Marci L.	Mulholland, Margaret R.	Adrian, Rita R.		
11:00am	Ockenfeld, Klaus	Thorrold, Simon R.	Mayer, Marilyn S.	Legendre, Louis	Sieracki, Michael E.		
11:15am	Thomas, Steven A.	Masterson, Colleen F.	Axler, Richard P.	Thingstad, Tron Frede F.	Tiselius, Peter		
11:30am	Brugger, Albert V.	Harvey, Christopher J.	Johnson, Lucinda B.	Havskum, Harry	Work, Kirsten A.		
11:45am	Huettel, Markus H.	Ryals, Kimberly G.	Bornhold, Elizabeth A.	Taylor, Gordon T.	Yeager, Phillip E.		
12:00pm	Sansone, Francis J.	Bindler, Richard		Friedrich, Jana			
12:15pm	Falter, James L.	Jahren, Anne Hope		Huot, Yannick			
12:30-2:00pm	LUNCH - ON YOUR OWN			LUNCH - ON YOUR OWN			
12:45-1:45pm	Cross-Boundary Transfers of Aquatic Species: Planning for an International Workshop - Zia						
2pm-5pm Concurrent Sessions	Anasazi North CS64 <u>Ecology and Bio- geochemistry of Streams</u>	Anasazi South TS02 <u>Historical Perspectives (Thematic Session)</u>	Zia A/B/C SS18 <u>Non-Indigenous Species and Their Impacts</u>	Mesa A CS66 <u>Zooplankton Dynamics and Trophic Interactions</u>	Mesa B SS20 <u>Bioenergetics of Pelagic Animals</u>		
2:00pm	Crenshaw, Chelsea L.	Magnuson, John	Lozano, Stephen	Mitchell, Suzanne E.	Ciannelli, Lorenzo		
2:15pm	Sheibley III, Richard W.	Magnuson, John	Nalepa, Thomas	Makulla, Alexandra	Groenkjaer, Peter		
2:30pm	Tank, Jennifer L.	Slack, Nancy G.	Liebig, James R.	Stelzer, Claus-Peter C.-P.	Reisenbichler, Kim R.		
2:45pm	Fellows, Christine S.	Slack, Nancy G.	Vanderploeg, Henry A.	Baier, Christine T.	Daly, Kendra L.		
3pm-3:30pm	BREAK			BREAK			
3:30pm	Hill, Alan R.	Benson, Keith R.	Strayer, David L.	Ohman, Mark D.	Batchelder, Harold P.		
3:45pm	Duff, John H.	Benson, Keith R.	Anthony, James L.	Engstrom, Jonna M.	Mueller-Solger, Anke B.		
4:00pm	Hendricks, Susan P.	Rainger, Ron	Haltuch, Melissa A.	Kann, Jacob	Choe, Nami		
4:15pm	Koepfler, Eric T.	Rainger, Ron	Jarnagin, S. Taylor	Sierszen, Michael E.	Gibson, Deidre M.		
4:30pm	Lennon, Jay T.	Wooster, Warren	Crooks, Jeff J.	Gettel, Gretchen M.	Graham, William M.		
4:45pm		Wooster, Warren	Purcell, Jennifer E.	Rusak, James A.	Collumb, Christopher J.		
5pm-7pm							
8pm-10pm	HISTORICAL GALA						
7:30-9:30pm							

SS03 Poster Boundary Layers	SS09 Poster Marine Protected Areas	SS18 Poster Non-indigenous Species and Their Impacts	SS21 Poster Nutrition of Plankton and Benthos	SS28 Poster Trace Elements from the Rivers to the Sea
114. Dauer, Daniel M. 115. Eckman, James E. 116. Rusch, Antje C. 117. Stolzenbach, Keith D.	118. Blakesley, Barbara A.	119. Johns, Carolyn E. 120. Dzialowski, Andrew R. 121. Mowry, Linda A.	122. Tönnesson, Kajsa M. 123. Park, SangKyu 124. Thompson, Raymond J. 125. Danielsdottir, Marta G. 126. Hassett, R. Patrick 127. Brindza, Nathan R. 128. Starr, Michel 129. Kolesar, Sarah E.	133. Chang, Sung Il 131. Haygood, Margo G. 132. Benoit, Janina M. 133. Bell, James T. 134. Martinez, Jennifer S. 135. Andersen, Ole 136. Sarkis, Samia C. 137. Cotter, Anne M. 138. Byers, Duncan G. 139. Riedel, Georgia S. 140. Roditi, Hudson A. 141. Aguilar, Carmen

CS65 Poster Ultraviolet Radiation	CS68 Poster Air-Water Interactions	CS69 Poster New Technologies
194. Moeller, Robert E. 195. Osburn, Christopher L. 196. Whitehead, Robert F. 197. Booth, Melissa G. 198. Kerfoot, John M. 199. McGovern, Timothy M. 200. Gorga, Joseph J. 201. Dunton, Kenneth H. 202. Detres, Yasmin	203. Matrai, Patricia A. 204. Hargreaves, Bruce R.	205. Leger, David C. 206. Holmes, Robert M. 207. Zhang, Xinsheng X. 208. Sieracki, Christian K. 209. Potter, Nathan D. 210. Gardner, George B. 211. Barry, James P.

Wednesday, February 3

HILTON		SWEENEY				
		Exhibit / Poster Set-up - Sweeney Ballroom				7am-8am
Cash Service at all Locations		Coffee Service - Cash Service at all Locations				7am-8:30am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Aspen						7am-10pm
Ortiz I&II						8am-12pm
		Exhibits / Posters - Sweeney Ballroom				8am-7pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	8:30-12:30pm Concurrent Sessions
SS21 <u>Nutrition of Plankton and Benthos</u>		SS50 <u>Atmospheric Deposition</u>	CS65 <u>Ultraviolet Radiation</u>	SS08 <u>Coordinated Management of Estuaries and Coasts</u>	CS59 <u>Human Impacts on Aquatic Ecosystems</u>	
Jumars, Peter A. Anderson, Thomas R. Jonasdottir, Sigrun H Schulz, Kimberly L. Brett, Michael T. Bock, Michael J.		Galloway, James N. Galloway, James N. Siefert, Ronald L. Herut, Barak Peierls, Benjamin L. Bowen, Jennifer L.	Armstrong, Roy A. Leavitt, Peter R. Laurion, Isabelle Xenopoulos, Marguerite A. Kellogg, Christina A. Smith, Ralph E.	Magnien, Robert E. Stram, Diana L. Nemazie, David A. Collier, Carol R. Leonard, Dorothy L. Whittemore, Ray C.	O'Brien, John Patoine, Alain Valett, Herbert M. Hopkinson, Charles S. Farris, Charles N. Chapman, Pippa J.	8:30am 8:45am 9:00am 9:15am 9:30am 9:45am
BREAK		BREAK				10am-10:30am
Bundy, Marie H. Boersma, Maarten Koski, Marsa K. Dam, Hans G. Irigoiien, Xabier X. Kleppel, Gary S. Yahel, Gitai Selph, Karen E.		Baker, Joel E. Chaky, Damon A. Arnott, Shelley E. Shaw, William H. Baron, Jill S. Campbell, Donald H. Reddy, Michael M. Heyes, Andrew	Banaszak, Anastazia T. Neale, Patrick J. Hiriart, Veronique P. Fritz, Jennifer J. Litchman, Elena G. Williamson, Craig E. Leech, Dina M. Bingham, Brian L.	Jones, Kim K. Wen, Marc E Roelke, Daniel L. Lebo, Martin E. Berman, Mark S. Muggli, Deborah L. Field, Katharine G. Rudnick, Steven	Berndt, Heather L. Whitall, David R. Harrington, Monica B. Madden, Christopher J. Carey, Anne E. Richards, Carl Dugdale, Richard C.	10:30am 10:45am 11:00am 11:15am 11:30am 11:45am 12:00pm 12:15pm
LUNCH - ON YOUR OWN		LUNCH - ON YOUR OWN				12:30-2:00pm
						12:45-1:45pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm Concurrent Sessions
SS21 Continued <u>Nutrition of Plankton and Benthos</u>		SS28 <u>Trace Elements from the Rivers to the Sea</u>	SS31 <u>Biogeochemical Dynamics of the Southern Ocean</u>	SS09 <u>Marine Protected Areas</u>	SS49 Continued <u>Ecological Stoichiometry in Aquatic Ecosystems</u>	
Huggins, Pamela D. Ahrens, Michael J. Lopez, Glenn R. Hentschel, Brian T.		Mason, Robert P. Mason, Robert P. Green, Adrian C. Buciak, Melissa A.	Richman, James G. MacCreedy, Parker Barth, Jack A. Abbott, Mark R.	Bohnsack, James A. Hixon, Mark A. Kobayashi, Donald R. Lewis, Craig V.	Frost, Paul C. Teubner, Katrin Soto, Doris Dobberfuhl, Dean R.	2:00pm 2:15pm 2:30pm 2:45pm
BREAK		BREAK				3pm-3:30pm
Hansen, Anja S. Richoux, Nicole B. Quigley, Michael A. Lewis, Bert Hairston, Jr., Nelson G.		Kneebone, Penelope E. Shiller, Alan M. Ashby, Steven L. Nelson, Yarrow M. Riedel, Gerhard F. Moffett, James W.	Moore, J. Keith Machu, Eric E. J. Goyet, Catherine Hales, Burke Sweeney, Colm Smith, Walker O.	Cowen, Robert K. Kitchell, James Hitchcock, G. Szmant, Alina M. Sabater, Jorge Clarke, Marjory E.	Grover, James P. Kilham, Susan S. Michaels, Anthony F. Caraco, Nina Sternner, Robert W. Sternner, Robert W.	3:30pm 3:45pm 4:00pm 4:15pm 4:30pm 4:45pm
		Exhibits / Posters / Reception - Sweeney Ballroom				5pm-7pm
						8pm-10pm
		Poster Teardown - Sweeney Ballroom				7:30-9:30pm

SS31 Poster <u>Biogeochemical Dynamics of the Southern Ocean</u> 142. Wakeham, Stuart G. 143. Park, Mi-Ok 144. Peterson, Jay O. 145. Richardson, Mary Jo 146. Sigmon, Daniel E. 147. Cochlan, William P. 148. Hales, Burke 149. Hansell, Dennis A. 150. Gordon, Louis I. 151. Church, Matthew J. 152. Urban-Rich, Juanita L. 153. Brzezinski, Mark A.	SS32 Poster <u>Stable Isotope Natural Abundance</u> 154. Manganelli, M. 155. Menden-Deuer, S. 156. Scranton, Mary I. 157. Utsumi, Motoo	SS50 Poster <u>Atmospheric Deposition</u> 158. Stoddard, John L. 159. Church, Marchall R. 160. Anderson, Iris C. 161. Chernyak, Sergei M. 162. Zehr, Jonathan P. 163. Chang, Cecily	SS54 Poster <u>Multidisciplinary Undergraduate Ocean Research</u> 164. Pacheco-Bernier, Liza 165. Boxwell, J.A. 166. Hixon, Suzan J. 167. Stodghill, Nikita 168. Kish, Stacy 169. Carroll, Allyson L. 170. Kircher, Emily A. 171. Cleveland, Kimberly K. 172. OCastellan, Allison C. 173. Berukoff, Steven J. 174. Lundquist, J. 175. Oppert, Christopher J. 176. Adams, Brad 177. Pustizzi, Frances 178. Leffler, Merrill 179. Banks, Janel 180. Breckel, Erin 181. Edwards, Kristen A. 182. Lowe, Will	CS59 Poster <u>Human Impacts on Aquatic Ecosystems</u> 183. Savarese, Michael 184. Bendis, Brian J. 185. Rodriguez, Aurea E. 186. Ramstack, Joy M. 187. Sutula, Martha	CS60 Poster <u>Microbial Web Dynamics: Bacteria to Zooplankton</u> 188. Yih, Wonho 189. Mohr, Silvia 190. Sakka, Asma 191. Choi, K.-H. 192. Menezes, Sunshine 193. Holen, Dale A.
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Thursday, February 4

* Please note that the authors listed for all sessions are the presenting authors.

	ELDORADO			HILTON	
7am-8am					
7am-8:30am	Coffee Service - Cash Service at all Locations			Coffee Service -	
7am-5pm					
7am-5pm					
7am-10pm				Speaker Ready Room -	
8am-7pm					
8:30-12:30pm Concurrent Sessions	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B
	SS26 <u>Planktonic Larvae: Nouvelle Cuisine?</u>	SS51 <u>Mesocosms and Plankton Dynamics</u>	SS52 <u>Impacts of Episodic Events</u>	SS16 <u>Behavioral Ecology and Sensory Biology</u>	SS22 <u>Zooplanktivory in Oceans and Lakes</u>
8:30am	Manahan, Donal T.	Harrison, Paul J.	Huttula, Timo H.	Janssen, J.	Jaffe, Jules S.
8:45am	Manahan, Donal T.	Riemann, Bo	Huttula, Timo H.	Crimaldi, John P.	Liu, Zhengwen
9:00am	McEdward, Larry R.	Neill, William E.	Podsetchine, Victor P.	Mead, Kristina S.	Greene, Charles H.
9:15am	Eckert, Ginny L.	Lignell, Risto	Wells Budd, Judith	Moore, Paul A.	Scheuerell, Mark D.
9:30am	Strathmann, Richard	EGge, J. K.	Meadows, Lorelle A.	Tamburri, Mario N.	Haldorson, Lewis J.
9:45am	Metaxas, Anna	Nejstgaard, J. C.	Flynn, Kevin M.	Lenz, Petra H.	GENIN, Amatzia
10am-10:30am	BREAK			BREAK	
10:30am	Garrison, Lance P.	Hansen, Benni W.	Chen, Changsheng C.	Fields, David M.	Logerwell, Elizabeth A.
10:45am	McConaughy, John R.	Rey, Catherine C.	Marko, Michelle D.	Doall, Michael H.	Heidelberg, Karla B.
11:00am	Natunewicz, Cecily C.	Lampert, Winfried	Urban, Noel R.	Ting, Joy H.	Schabetsberger, Robert
11:15am	Hare, Jonathan A.	Svensen, Camilla C.	Churchill, James H.	Zimmer, Richard K.	De Stasio, Bart T.
11:30am	Butman, Cheryl Ann	Luecke, Chris	Bedford, Keith	Kurmayer, Rainer R.	Lazzaro, Xavier T.
11:45am		Granéli, Edna	Eadie, Brian J.	Spaak, Piet	Schindler, Daniel E.
12:00pm		Holz, John C.	Hornbuckle, Keri C.	van Gool, Erik	
12:15pm			Chang, M.-L.	Ringelberg, Joop	
12:30pm-2pm	LUNCH - ON YOUR OWN			LUNCH - ON YOUR OWN	
2pm-5pm Concurrent Sessions	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B
	CS61 <u>Optical Properties and Satellite Observations</u>	TS03 <u>New Tools and Paradigms (Thematic Session)</u>	SS52 Continued <u>Impacts of Episodic Events</u>	SS16 Continued <u>Behavioral Ecology and Sensory Biology</u>	SS24 <u>Diapause and Other Life History Strategies</u>
2:00pm	Stramski, Dariusz	Azam, Farooq	Heil, Cynthia A.	Speekmann, Christa L.	Alekseev, Victor R.
2:15pm	Nieke, Barbara	Azam, Farooq	Durako, Michael J.	Dainer, Joan S.	Avery, David E.
2:30pm	Brown, Christopher W.	Tenore, Kenneth	Lohrenz, Steven E.	Sell, A.	Kremp, Anke
2:45pm	Ciotti, Aurea M.	Tenore, Kenneth	Green, Sarah A.	Wiltshire, Karen, H.	Starkweather, Peter L.
3pm-3:30pm	BREAK			BREAK	
3:30pm	Drapeau, David T.	Pace, Michael L.	Auer, Martin T.		Stross, Ray G.
3:45pm	Scully, Norman M.	Pace, Michael L.	Cotner, James B.		Stross, Ray G.
4:00pm	Phinney, David A.	Costanza, Robert	Kerfoot, Wilson C.		Tessier, Alan J.
4:15pm	Redalje, Donald G.	Costanza, Robert	Schwab, David J.		Wyngaard, Grace A.
4:30pm	Schofield, Oscar M.	Oviatt, Candace	Adams, Donald D.		Hunt, Heather L.
4:45pm		Oviatt, Candace			Goser, Brigitte
5pm-7pm					
7pm-9pm					
7pm-9pm					
7:30-9:30pm					
TBD				Late-Breaking Science	
9pm-12am	Dance - Anasazi Ballroom & Concourse				

SS04 Poster <u>Enhanced Production at Physical Discontinuities</u> 212. Brooks, Bryan W. 213. Cinkovich, Anna M. 214. Kelly, John R. 215. Nilsen, Frank 216. Lougee, Laurence A. 217. Kuznetsova, Marina 218. Prezelin, Barbara B. 219. Houde, Edward D.	SS12 Poster <u>Partnerships in Ocean Science</u> 220. Bissett, Paul	SS16 Poster <u>Behavioral Ecology and Sensory Biology</u> 221. Lindsay, Sara M.	SS22 Poster <u>Zooplanktivory in Oceans and Lakes</u> 222. Sutor, Malinda M.	SS26 Poster <u>Planktonic Larvae: Nouvelle Cuisine?</u> 223. Sherlock, Robert E.
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SS46 Poster <u>Benthic Microalgae</u> 256. Pinowska, Aga 257. Blanchard, Gerard F. 258. Sauriau, Pierre - Guy	SS48 Poster <u>Large Lakes and Enclosed Seas</u> 259. Panayotou, Dorothea Y. 260. Hueftle, Susan J.	SS51 Poster <u>Mesocosms and Plankton Dynamics</u> 261. Caceres, Carla E. 262. Nishioka, J. 263. Cooper, Matt R.	SS52 Poster <u>Impacts of Episodic Events</u> 264. Niebauer, Henry J. 265. Lavrentyev, Peter J. 266. Millie, David F. 267. Bujan, Stephane 268. Klump, J. Val 269. McCormick, Michael J. 270. Pegau, W. Scott 271. Andrade V., Jose E. 272. Waples, James T.	SS53 Poster <u>Ocean and Freshwater Research in Education</u> 273. Kruse, Ann E. 274. Green, Rebecca E. 275. McLeroy-Etheridge, S. 276. Ivey, James E. 277. Smith, Elizabeth A. 278. Mack, Lisa K. 279. Ayoub, Lore M. 280. Perry, Mary Jane 281. Weiss, Andrea M. 282. Coleman, James E. 283. Nunez, Jose M. 284. Ostroumov, Sergei A. 285. Filippi, Anthony M. 286. Bontempi, Paula S.
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Thursday, February 4

HILTON		SWEENEY				
		Exhibit / Poster Set-up - Sweeney Ballroom				7am-8am
Cash Service at all Locations		Coffee Service - Cash Service at all Locations				7am-8:30am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Aspen						7am-10pm
		Exhibits / Posters - Sweeney Ballroom				8am-7pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	8:30-12:30pm Concurrent Sessions
SS04 <u>Enhanced Production at Physical Discontinuities</u> Embleton, Karl Roman, M. Harding, Jr., Lawrence W. Barry, Karen L. Boicourt, William C. Brink, Laura A.	SS30 <u>Geochemistry and the Benthos</u> Banta, Gary T. Warner, Kimberly A. Witte, Ursula Levin, Lisa A. Miller, Douglas C. Jumars, Peter A.	CS62 <u>Phytoplankton and Primary Production</u> Armbrust, E. Virginia Interlandi, Sebastian J. Lomas, Michael W. Saros, Jasmine E. Klug, Jen Horner Rosser, S.M.Jane	SS39 <u>Nutrient Fluxes in Pelagic Food Webs</u> Paerl, Hans W. Wilkerson, Frances Markager, Stiig Le Bouteiller, Aubert A. Dunne, John P. Cuhel, Russell L.	SS10 <u>Marine and Freshwater Epidemiology</u> Barber, Richard T. Barber, Richard T. Powell, Eric N. Pascual, Mercedes Schmidt, Nancy Precht, William F.	SS33 <u>Microbial Utilization of DOM</u> Amon, Rainer M.W. Meon, Benedikt Jorgensen, Niels O.G. Carlson, Craig A. Skoog, Annelie C. Kaplan, Louis A.	8:30am 8:45am 9:00am 9:15am 9:30am 9:45am
BREAK		BREAK				10am-10:30am
Kemp, William M. Powell, Thomas M. Hess, Nancy A. DeLong, Theia C. Remsen, Andrew W. Kononen, Kaisa Estrada, Marta Rumsey, Scott M.	Currin, Carolyn A. Marinelli, Roberta L. Whitlatch, Robert B. Matisoff, Gerald Smith, Craig R. Dahl Rasmussen, Allan Coley, Teresa L. D'Andrea, Anthony F.	Bradshaw, Emily G. Julius, M. Williams, Brian J. Dokulil, Martin T. Sin, Yongsik Parkhill, Jean-Paul Reinfeldler, John R. Sawatzky, Cornelia L.	Reynolds, Colin S. Azam, Farooq Quental-Mendes, Rui Pace, Michael L. Gardner, Wayne S. Schampel, John H. Wurtsbaugh, Wayne A Rassoulzadegan, Fereidoun	Porter, James W. Burkholder, JoAnn M. Smith, Garriet W. Richardson, Laurie L. Lipp, Erin K. Mallin, Michael A. Noble, Rachel T. Maki, Ryan P.	Harvey, Rodger Sondergaard, Morten Tranvik, Lars J. Kling, George W. Ward, Amelia K. Hume, Noah P. Baker, Michelle A. Coffin, Richard	10:30am 10:45am 11:00am 11:15am 11:30am 11:45am 12:00pm 12:15pm
LUNCH - ON YOUR OWN		LUNCH - ON YOUR OWN				12:30pm-2pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm Concurrent Sessions
SS51 Continued <u>Mesocosms and Plankton Dynamics</u> van de Bund, Wouter J. Andersen, Tom Ouimet, Chantal Petersen, John E.		SS28 Continued <u>Trace Elements from the Rivers to the Sea</u> McKay, Robert M. Twiss, Michael R. Hutchins, D. A. Milligan, Allen J.	SS31 Continued <u>Biogeochemical Dynamics of the Southern Ocean</u> Coale, K. H. Olson, Robert J. Franck, Valerie M. Mathot, Sylvie I.	SS36 <u>Biomarkers in Aquatic Environments</u> Kattner, Gerhard St. John, Michael A. Veeffkind, Ruben J. Napolitano, Guillermo E.	SS33 Continued <u>Microbial Utilization of DOM</u> Cottrell, Matthew T. Keith, Steven C. Herndl, Gerhard J. Fischer, Helmut	2:00pm 2:15pm 2:30pm 2:45pm
BREAK		BREAK				3pm-3:30pm
Mowitz, William P. Breitburg, Denise L. Osman, Richard W. Hurlbert, Stuart H. Fauchot, Juliette Bergmann, Trisha I.		Kustka, A. Mann, Elizabeth L. Huie, Janet L. Saito, Mak A. Sunda, William G. Lane, Todd W.	Gardner, Wilford D. Sweeney, Colm Kirchman, David L. Rubin, Stephany I. Nelson, David M. Sambrotto, Raymond N.	Canuel, Elizabeth A. Shin, Kyung Hoon K. H. Henriksen, P. Millan-Nunez, Roberto Bustillos, Jose Giner, Jose L.	Battin, Tom J. Estensen, Jeffrey L. Wiegner, Tracy N. Ruttenberg, Kathleen C. Findlay, Stuart Granéif, Wilhelm	3:30pm 3:45pm 4:00pm 4:15pm 4:30pm 4:45pm
		Exhibits / Posters / Reception - Sweeney Ballroom				5pm-7pm
		Popular Science Communication Workshop - Sweeney #1				7pm-9pm
		Coastal Ocean Sciences Workshop - Sweeney #2				7pm-9pm
		Poster Teardown - Sweeney Ballroom				7:30-9:30pm
Workshop - Ortiz I&II						TBD
						9pm-12am

SS30 Poster <u>Geochemistry and the Benthos</u>	SS33 Poster <u>Microbial Utilization of DOM</u>	SS36 Poster <u>Biomarkers in Aquatic Environments</u>	SS37 Poster <u>Organic Sulfur in Aquatic Systems</u>	SS39 Poster <u>Nutrient Fluxes in Pelagic Food Webs</u>	SS42 Poster <u>Nuisance Blooms and Toxin Production</u>
224. Ferdelman, Timothy G. 225. Carlson, Paul R. 226. Cornwell, Jeffrey C. 227. Craig, Nancy I.	228. Kresge, Kathleen G. 229. Yu, Ying 230. Way, Juliette L. 231. Engelhaupt, Erika D. 232. Fukuda, Rumi 233. Karlsson, Jan J. 234. McArthur, Michael D.	235. Fluegge, Arnim 236. Gagné, Jean-Pierre 237. Schubert, Carsten J.	238. Bruton, Jody A. 239. Linn, Laura J. 240. Keller, Maureen D. 241. Sharma, S. 242. Keller, Maureen D. 243. Pos, Willer H. 244. Bouillon, Rene C. 245. Lee, Peter A.	246. Heiskanen, Anna-Stiina 247. McRoy, C. P.	248. Ashton-Urrego, Mayra 249. Boissonneault-Cellineri 250. Storms, Wendy E. 251. Kaczmarek, Irena 252. McManus, George B. 253. Glasgow, Howard B. 254. Scholin, Chris 255. Citarella, Georges B.

SS53 Poster Continued <u>Ocean and Freshwater Research in Education</u>	CS55 Poster <u>Carbon and Nitrogen Cycling</u>	CS57 Poster <u>Estuaries and Continental Shelves</u>	CS61 Poster <u>Optical Properties and Satellite Observations</u>	CS62 Poster <u>Phytoplankton and Primary Production</u>	CS63 Poster <u>Sedimentary Biogeochemistry</u>
287. Bernard, Stewart 288. Bivens, Jennifer R. 289. Jacobs, Kenneth R. 290. Mobley, Curtis D. 291. Clayton, Tonya D. 292. Hildebrand, Erin N.	293. Villareal, Tracy A. 294. Fischer, Gerhard 295. Cabrini, M. 296. Balch, W.M. 297. Martino, Darryl P. 298. Carr, Liam M. 299. DeGrandpre, Michael 300. Wommack, K. Eric 301. Neumann, Michael J. 302. Lam, Phoebe J. 303. Scala, D. 304. Williams, Eli Z. 305. Horne, Alex J.	306. Dobbs, Fred C. 307. Burden, Cheryl A. 308. Vargo, Gabriel A. 309. Greene, Michael C. 310. Orive, Emma E.	311. Mazel, Charles H. 312. Cota, Glenn F. 313. Zaneveld, J. Ronald V. 314. Jacobs, Kenneth R. 315. Swift, Theodore J. 316. Hildebrand, Erin N.	317. Takeda, Shigenobu 318. Westberry, Toby K. 319. Shankle, Amy M. 320. Clayton, Tonya D. 321. Matrai, Patricia A. 322. Zehr, Jonathan P 323. Casotti, R. 324. Troccoli-Ghinaglia, Luis 325. Sintes, Eva E. 326. Pelletier, Derek M. 327. Carpenter, Edward J. 328. Harris, Shannon L. 329. Guerra, Omar J.	330. de Angelis, Marie A. 331. Johnson-Pyrtle, Ashanti 332. Burd, Adrian B. 333. Neely, Robert K. 334. Gunnars, Anneli A. 335. McGlathery, Karen J. 336. Hoehler, Tori M. 337. Beutel, Marc W. 338. Ryves, David B. 339. Burns, James A. 340. Albert, Daniel B. 341. Menounou, Nektaria N. 342. Branfireun, Marnie L. 343. Ingalls, Anitra E.

Friday, February 5

* Please note that the authors listed for all sessions are the presenting authors.

	ELDORADO			HILTON	
7am-8:30am	Coffee Service - Cash Service at all Locations			Coffee Service -	
7am-5pm					
7am-5pm					
8:30-12:30pm Concurrent Sessions	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B
	SS46 Benthic Microalgae	SS42 Nuisance Blooms and Toxin Production	CS57 Estuaries and Continental Shelves	SS12 Partnerships in Ocean Science	
8:30am	Sundback, Kristina	Sellner, K.G.	DiBacco, Claudio	Glenn, Scott M.	
8:45am	Miles, Alison C.	Sellner, K.G.	Lehrter, John C.	Crowley, Michael F.	
9:00am	Dodds, Walter K.	Lucas, Lisa V.	Fisher, Thomas R.	Kohut, Joshua	
9:15am	Gaiser, Evelyn E.	Doblin, Martina A.	Falkenhayn, Carol	Chant, Robert J.	
9:30am	Buzzelli, Christopher P.	Gobler, Christopher J.	Layman, Craig A.	Levine, Edward R.	
9:45am	Guarini, Jean-Marc	Buskey, Edward J.	Smalls, Latoya D.	Arango, Hernan G.	
10am-10:30am	BREAK			BREAK	
10:30am	Nelson, James R.	Belgrano, Andrea	Schaefer, Terry L.	Durski, Scott M.	
10:45am	Nilsson, Claes	Park, Ho-Dong	Brown, Cheryl A.	Moline, Mark M.	
11:00am	Barranguet, Christiane C.	Tsujimura, Shigeo S.	Schwartz, Matthew C.	Grzymyski, Joe	
11:15am	Huang, Shou-Chung	Chan, Francis	Bogden, Philip S.	Cullen, Jay T.	
11:30am	Welch, Eugene B.	Bianchi, Thomas S.	Chang, Grace C.	De Luca, Michael P.	
11:45am	Goldfinch, April C.	Ford, Phillip W.	Franks, Peter J.S.	Ma, Hongguang	
12:00pm	Carman, Kevin R.	Twiner, Michael J.	Kincaid, Chris R.	Debenham, Patty	
12:15pm	Pinckney, James L.	Legrand, Catherine	Merickel, Jim		
12:30-2pm	LUNCH - ON YOUR OWN			LUNCH - ON YOUR OWN	
2pm-5pm Concurrent Sessions	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B
	SS12 Continued Partnerships in Ocean Science	SS42 Continued Nuisance Blooms and Toxin Production	SS48 Large Lakes and Enclosed Seas		
2:00pm	Robinson, Allan R.	Roesler, Collin S.	Corredor-Garcia, Jorge E.		
2:15pm	Barth, Jack	Cembella, Allan D.	Green, Mark L.		
2:30pm	Paduan, Jeffrey D.	Liu, Hongbin	Melville, Guy E.		
2:45pm	Gross, Thomas F.	Bersano, Jose Guilherme	Rahm, Lars		
3pm-3:30pm	BREAK			BREAK	
3:30pm	Delaney, John R.	Boyer, Gregory L.	Sellinger, Cynthia E.		
3:45pm	Dickey, Tommy D.	Fan, Chunlei	Sherman, Kenneth		
4:00pm	Bucklin, Ann C.	Adolf, Jason E.	Tiffany, Mary A.		
4:15pm	Seim, Harvey E.	Glibert, Patricia M.	Watts, James M.		
4:30pm	Betzer, Peter R.	Smith, G. Jason	Wassmann, Paul		
4:45pm		Rublec, Parke A.			

Notes

Friday, February 5

HILTON		SWEENEY				
Cash Service at all Locations		Coffee Service - Cash Service at all Locations				7am-8:30am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	8:30-12:30pm Concurrent Sessions
SS11 Risk Assessment for <u>Aquatic Ecosystems</u> Calow, Peter Forbes, Valery E. Cook, Robert B. Richardson, Bruce J. Paulsen, Steven G. Adams, S. Marshall		CS63 Sedimentary <u>Biogeochemistry</u> Goericke, Ralf Sun, Ming-Yi Dittrich, Maria Denis, Lionel Bishop, John W. Joye, Samantha B.	CS55 Carbon and Nitrogen <u>Cycling</u> Triska, Frank J. Mulholland, Patrick J. Voytek, Mary A. Fleming, Maia S. Parrish, Christopher C. Simpson, E. Paul		SS37 Organic Sulfur in <u>Aquatic Systems</u> Malin, Gil Simó, Rafel Levasseur, Maurice Steinke, Michael Cutter, Gregory A. Ahner, Beth A.	8:30am 8:45am 9:00am 9:15am 9:30am 9:45am
BREAK		BREAK				10am-10:30am
Klerks, Paul L. Snell, Terry W. Montagna, Paul A. Stevenson, Robert Jan Wangberg, Sten A. Olson, Olaf G. Nygaard, Kari K.		Roden, Eric E. Jorgensen, Bo B. Boehme, Susan E. Alperin, Marc J. Cable, Jaye E. Yahel, Ruthy Schmidt, Jill L. Griscom, Sarah B.	Twomey, Luke J. Zhou, Jizhong Neuer, Susanne Cavender-Bares, Kent K. Lipschultz, Fred Al-Mutairi, Hussain A. Burkill, Peter Williams, Peter		Lomans, Bart P. Hines, Mark E. Tang, Kam W. Archer, Stephen D. Wolfe, Gordon V. Gonzalez, Jose M. Scarratt, Michael G. Kiene, Ronald P.	10:30am 10:45am 11:00am 11:15am 11:30am 11:45am 12:00pm 12:15pm
LUNCH - ON YOUR OWN		LUNCH - ON YOUR OWN				12:30-2pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm Concurrent Sessions
		CS63 Continued Sedimentary <u>Biogeochemistry</u> Hudson, Robert J.M. Martinez, Edward A. Myrbo, Amy E. Sanpawanitchakit, Charoen	SS31 Continued Biogeochemical Dynamics <u>of the Southern Ocean</u> Ducklow, Hugh Brown, Susan L. Walsh, Ian D. Landry, Michael R.	SS28 Continued Trace Elements from the <u>Rivers to the Sea</u> Barbeau, Katherine A. Baines, Stephen B. Chen, Zhen Warren, Lesley A.	SS13 Si Fluxes and <u>Global Change</u> Turner, Robert E. Ragueneau, Olivier Correll, David L. Thouzeau, Gérard G.	2:00pm 2:15pm 2:30pm 2:45pm
BREAK		BREAK				3pm-3:30pm
		Engstrom, Daniel R. Heyvaert, Alan C. Ek, Anna S. Gottgens, Johan F.	Dagg, Michael J. Collier, Robert W. Honjo, Susumu Sayles, Fred L. Chase, Zanna Altabet, Mark A.	Wallace, William G. Fisher, Nicholas S. Luoma, Samuel N. Gilmour, Cynthia C. Sanders, James G. Connell, Deborah B.	Del Amo, Yolanda Stoermer, Eugene F. Danielsson, Åsa Sigleo, Anne C. Shipe, Rebecca F. Varela, Diana E.	3:30pm 3:45pm 4:00pm 4:15pm 4:30pm 4:45pm

Saturday at a Glance

4pm-9:30pm	Minorities Program -
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Sunday at a Glance

8am-4pm	Minorities Program - 8am-2pm - 2pm-4pm -	
	ELDORADO	HILTON
9am-11:30am	Using Local Resources and Science Fairs to Enhance Aquatic Science Education Workshop Anasazi South	
1pm-4pm	Innovative Course Designs for Non-Major Introductory Aquatic Science Courses Workshop Anasazi South	
1pm-4pm	BI-OMP Session Workshop - Anasazi North	
1pm-9pm	Registration - Eldorado Zia	
3pm-10pm		
5:30pm-9pm	Reception - Anasazi Ballroom	

Monday at a Glance

	ELDORADO			HILTON	
6:30am-7:40am				Student Breakfast -	
7am-8:15am					
7am-5pm					
7am-5pm				Speaker Ready Room -	
7am-10pm					
8:15am-12pm					
9:30-10:15am Plenary #1					
10:15-10:30am					
10:30-11:15am Plenary #2					
11:15-12:00pm Plenary #3					
12pm-2pm					
2pm-5pm Concurrent Sessions	Anasazi North SS44 Integrating Ecosystem Models and Observations	Anasazi South SS32 Stable Isotope Natural Abundance	Zia A/B/C SS34 Composition and Reactivity of DOC		
3pm-3:30pm	BREAK			BREAK	
5pm-9pm					
5:30pm-6:30pm					

Saturday at a Glance

HOTEL LORETTO	4pm-9:30pm
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Sunday at a Glance

HOTEL LORETTO Field Trips General Session		8am-4pm
HILTON	SWEENEY	
		9am-11:30am
		1pm-4pm
		1pm-4pm
		1pm-9pm
Aspen		3pm-10pm
		5:30pm-9pm

Monday at a Glance

HILTON		SWEENEY				
Mesa Ballroom						6:30am-7:40am
		Coffee Service - Sweeney Ballroom				7am-8:15am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Aspen						7am-10pm
		Welcome / Awards / Opening Plenary Session - Sweeney Ballroom				8:15am-12pm
		Richard T. Barber, Duke University <i>How Will Oceanic Ecosystems Respond to the Climate of the 21st Century?</i>				9:30-10:15am Plenary #1
BREAK		BREAK				10:15-10:30am
		Sallie W. Chisholm, Massachusetts Institute of Technology <i>Dealing with Diversity: Structure and Function in Ocean Ecosystems</i>				10:30-11:15am Plenary #2
		Gene E. Likens, Institute of Ecosystem Studies <i>Limnology and Freshwater Ecosystems in the 21st Century</i>				11:15-12:00pm Plenary #3
		LUNCH - ON YOUR OWN				12pm-2pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm
SS06 Ecosystems as Hi-Tech Water Purifiers		SS01 Physics and Biology of Plankton Feeding Ecology	SS17 Biofilms and Mucilage	SS41 Probing Individual Cell Physiology	SS45 Competition of Plankton and Attached Algae	Concurrent Sessions
BREAK		BREAK				3pm-3:30pm
		Exhibit Set-up - Sweeney Ballroom				5pm-9pm
Mesa Ballroom						5:30pm-6:30pm

Tuesday at a Glance

	ELDORADO			HILTON			
7am-8am							
7am-8:30am	Coffee Service - Cash Service at all Locations			Coffee Service -			
7am-5pm							
7am-5pm							
7am-10pm						Speaker Ready Room -	
8am-12pm						CURMLO -	
8am-7pm							
8:30-12:30pm	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B		
Concurrent Sessions	CS56 DOM: Sources and Cycling	SS32 Continued Stable Isotope Natural Abundance	SS34 Continued Composition and Reactivity of DOC	SS05 Thin Layers	SS02 At and Below the Kolmogorov Scale		
10am-10:30am	BREAK			BREAK			
12:30-2:00pm	LUNCH - ON YOUR OWN			LUNCH - ON YOUR OWN			
12:45-1:45pm	L&O Workshop - Zia						
2pm-5pm	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B		
Concurrent Sessions	SS15 Evidence of Global Change at High Latitude	TS01 Global Perspectives (Thematic Session)	SS34 Continued Composition and Reactivity of DOC	CS67 Zooplankton: Temporal and Spatial Dynamics	SS23 Global Significance of Small Copepods		
3pm-3:30pm	BREAK			BREAK			
5pm-7pm							
7pm-9pm							
7:30-9:30pm							

Wednesday at a Glance

	ELDORADO			HILTON				
7am-8am								
7am-8:30am	Coffee Service - Cash Service at all Locations			Coffee Service -				
7am-5pm								
7am-5pm								
7am-10pm						Speaker Ready Room -		
8am-12pm						CURMLO -		
8am-7pm								
8:30-12:30pm	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B			
Concurrent Sessions	SS03 Boundary Layers	SS32 Continued Stable Isotope Natural Abundance	SS53 Ocean and Freshwater Research in Education	SS38 Microbial Control of Carbon Biogeochemistry	CS60 Microbial Web Dynamics: Bacteria to Zooplankton			
10am-10:30am	BREAK			BREAK				
12:30-2:00pm	LUNCH - ON YOUR OWN			LUNCH - ON YOUR OWN				
12:45-1:45pm	Cross-Boundary Transfers of Aquatic Species: Planning for an International Workshop - Zia							
2pm-5pm	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B			
Concurrent Sessions	CS64 Ecology and Bio- geochemistry of Streams	TS02 Historical Perspectives (Thematic Session)	SS18 Non-Indigenous Species and Their Impacts	CS66 Zooplankton Dynamics and Trophic Interactions	SS20 Bioenergetics of Pelagic Animals			
3pm-3:30pm	BREAK			BREAK				
5pm-7pm								
8pm-10pm						HISTORICAL GALA		
7:30-9:30pm								

Tuesday at a Glance

HILTON		SWEENEY				
		Exhibit / Poster Set-up - Sweeney Ballroom				7am-8am
Cash Service at all Locations		Coffee Service - Cash Service at all Locations				7am-8:30am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Aspen						7am-10pm
Ortiz I&II						8am-12pm
		Exhibits / Posters - Sweeney Ballroom				8am-7pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	8:30-12:30pm
SS40 Microbial Diversity and Population Dynamics		SS43 Applications of Satellite and Aircraft Sensors	SS27 Aquatic Ecosystems in Extreme Environments	SS19 The Legacy of Reservoirs	SS07 Biogeochemical Patterns altered by Humans	Concurrent Sessions
BREAK		BREAK				10am-10:30am
LUNCH - ON YOUR OWN		LUNCH - ON YOUR OWN				12:30-2:00pm
						12:45-1:45pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm
SS01 Continued Physics and Biology of Plankton Feeding Ecology		SS43 Continued Applications of Satellite and Aircraft Sensors	SS27 Continued Aquatic Ecosystems in Extreme Environments	SS41 Continued Probing Individual Cell Physiology	SS49 Ecological Stoichiometry in Aquatic Ecosystems	Concurrent Sessions
BREAK		BREAK				3pm-3:30pm
		Exhibits / Posters / Reception - Sweeney Ballroom				5pm-7pm
		GEO / NSF Town Meeting - Sweeney #1				7pm-9pm
		Poster Teardown - Sweeney Ballroom				7:30-9:30pm

Wednesday at a Glance

HILTON		SWEENEY				
		Exhibit / Poster Set-up - Sweeney Ballroom				7am-8am
Cash Service at all Locations		Coffee Service - Cash Service at all Locations				7am-8:30am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Aspen						7am-10pm
Ortiz I&II						8am-12pm
		Exhibits / Posters - Sweeney Ballroom				8am-7pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	8:30-12:30pm
SS21 Nutrition of Plankton and Benthos		SS50 Atmospheric Deposition	CS65 Ultraviolet Radiation	SS08 Coordinated Management of Estuaries and Coasts	CS59 Human Impacts on Aquatic Ecosystems	Concurrent Sessions
BREAK		BREAK				10am-10:30am
LUNCH - ON YOUR OWN		LUNCH - ON YOUR OWN				12:30-2:00pm
						12:45-1:45pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm
SS21 Continued Nutrition of Plankton and Benthos		SS28 Trace Elements from the Rivers to the Sea	SS31 Biogeochemical Dynamics of the Southern Ocean	SS09 Marine Protected Areas	SS49 Continued Ecological Stoichiometry in Aquatic Ecosystems	Concurrent Sessions
BREAK		BREAK				3pm-3:30pm
		Exhibits / Posters / Reception - Sweeney Ballroom				5pm-7pm
						8pm-10pm
		Poster Teardown - Sweeney Ballroom				7:30-9:30pm

Thursday at a Glance

	ELDORADO			HILTON			
7am-8am							
7am-8:30am	Coffee Service - Cash Service at all Locations			Coffee Service -			
7am-5pm							
7am-5pm							
7am-10pm						Speaker Ready Room -	
8am-7pm							
8:30-12:30pm	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B		
Concurrent Sessions	SS26 Planktonic Larvae: Nouvelle Cuisine?	SS51 Mesocosms and Plankton Dynamics	SS52 Impacts of Episodic Events	SS16 Behavioral Ecology and Sensory Biology	SS22 Zooplanktivory in Oceans and Lakes		
10am-10:30am	BREAK			BREAK			
12:30pm-2pm	LUNCH - ON YOUR OWN			LUNCH - ON YOUR OWN			
2pm-5pm	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B		
Concurrent Sessions	CS61 Optical Properties and Satellite Observations	TS03 New Tools and Paradigms (Thematic Session)	SS52 Continued Impacts of Episodic Events	SS16 Continued Behavioral Ecology and Sensory Biology	SS24 Diapause and Other Life History Strategies		
3pm-3:30pm	BREAK			BREAK			
5pm-7pm							
7pm-9pm							
7pm-9pm							
7:30-9:30pm							
TBD				Late-Breaking Science			
9pm-12am	Dance - Anasazi Ballroom & Concourse						

Friday at a Glance

	ELDORADO			HILTON	
7am-8:30am	Coffee Service - Cash Service at all Locations			Coffee Service -	
7am-5pm					
7am-5pm					
8:30-12:30pm	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B
Concurrent Sessions	SS46 Benthic Microalgae	SS42 Nuisance Blooms and Toxin Production	CS57 Estuaries and Continental Shelves	SS12 Partnerships in Ocean Science	
10:00-10:30am	BREAK			BREAK	
12:30-2:00pm	LUNCH - ON YOUR OWN			LUNCH - ON YOUR OWN	
2pm-5pm	Anasazi North	Anasazi South	Zia A/B/C	Mesa A	Mesa B
Concurrent Sessions	SS12 Continued Partnerships in Ocean Science	SS42 Continued Nuisance Blooms and Toxin Production	SS48 Large Lakes and Enclosed Seas		
3:00-3:30pm	BREAK			BREAK	

Thursday at a Glance

HILTON		SWEENEY				
		Exhibit / Poster Set-up - Sweeney Ballroom				7am-8am
Cash Service at all Locations		Coffee Service - Cash Service at all Locations				7am-8:30am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Aspen						7am-10pm
		Exhibits / Posters - Sweeney Ballroom				8am-7pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	8:30-12:30pm
SS04 Enhanced Production at Physical Discontinuities	SS30 Geochemistry and the Benthos	CS62 Phytoplankton and Primary Production	SS39 Nutrient Fluxes in Pelagic Food Webs	SS10 Marine and Freshwater Epidemiology	SS33 Microbial Utilization of DOM	Concurrent Sessions
BREAK		BREAK				10am-10:30am
LUNCH - ON YOUR OWN		LUNCH - ON YOUR OWN				12:30pm-2pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm
SS51 Continued Mesocosms and Plankton Dynamics		SS28 Continued Trace Elements from the Rivers to the Sea	SS31 Continued Biogeochemical Dynamics of the Southern Ocean	SS36 Biomarkers in Aquatic Environments	SS33 Continued Microbial Utilization of DOM	Concurrent Sessions
BREAK		BREAK				3pm-3:30pm
		Exhibits / Posters / Reception - Sweeney Ballroom				5pm-7pm
		Popular Science Communication Workshop - Sweeney #1				7pm-9pm
		Coastal Ocean Sciences Workshop - Sweeney #2				7pm-9pm
		Poster Teardown - Sweeney Ballroom				7:30-9:30pm
Workshop - Ortiz I&II						TBD
						9pm-12am

Friday at a Glance

HILTON		SWEENEY				
Cash Service at all Locations		Coffee Service - Cash Service at all Locations				7am-8:30am
		Registration - Sweeney Lobby				7am-5pm
		Email Room - Sweeney #5				7am-5pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	8:30-12:30pm
SS11 Risk Assessment for Aquatic Ecosystems		CS63 Sedimentary Biogeochemistry	CS55 Carbon and Nitrogen Cycling		SS37 Organic Sulfur in Aquatic Systems	Concurrent Sessions
BREAK		BREAK				10:00-10:30am
LUNCH - ON YOUR OWN		LUNCH - ON YOUR OWN				12:30-2:00pm
Mesa C	Ortiz I&II	#1	#2	#3	#4	2pm-5pm
		CS63 Continued Sedimentary Biogeochemistry	SS31 Continued Biogeochemical Dynamics of the Southern Ocean	SS28 Continued Trace Elements from the Rivers to the Seas	SS13 Si Fluxes and Global Change	Concurrent Sessions
BREAK		BREAK				3:00-3:30pm



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