



# ASLO 2005 Program Schedule Aquatic Sciences Meeting

February 20-25, 2005, Salt Lake City, Utah, USA

The ASLO 2005 Aquatic Sciences Meeting is supported by The Nature Conservancy, the Geological Society of America, and the North American Benthological Society. Members of each of these societies and organizations are encouraged to submit abstracts or simply come to the meeting to discuss research with aquatic scientists with whom you may not normally interact. Each member of a supporting society will be able to register for the conference at the ASLO member rate.

**Special Note: *Limnology and Oceanography*, ASLO's premier aquatic journal, celebrates 50 years of publication in 2005!**

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American Society of Limnology and Oceanography

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## **Contents**

Monday, February 21, 2005 .....	3
Tuesday, February 22, 2005 .....	8
Wednesday, February 23, 2005 .....	17
Thursday, February 24, 2005 .....	26
Friday, February 25, 2005 .....	36
Author Index .....	41

**Monday, February 21, 2005****GS02: Primary Production**

Chair(s): Nicole L. Goebel, nicole.goebel@uconn.edu

Location: 256 B/C

- 3:30 PM Goebel, N. L.; Kremer, J. N.: DETAILED CALCULATIONS OF INTEGRATED PRIMARY PRODUCTION IN CENTRAL AND WESTERN LONG ISLAND SOUND
- 3:45 PM Gorbunov, M. Y.; Falkowski, P. G.: MONITORING PHOTOSYNTHETIC PROCESSES AND PRIMARY PRODUCTION IN THE OCEAN USING THE NOVEL FLUORESCENCE INDUCTION AND RELAXATION (FIRE) TECHNIQUE
- 4:00 PM Johnson, K. S.; Coletti, L.; Chavez, F.: DIEL NITRATE CYCLES IN THE COASTAL OCEAN PREDICT ANNUAL PRIMARY PRODUCTION AND BIOMASS ACCUMULATION
- 4:15 PM Kostadinov, T. S.; Siegel, D. A.; Maritorena, S.; Guillocheau, N.: LOCAL TUNING OF A SEMI-ANALYTICAL BIO-OPTICAL ALGORITHM FOR CASE II WATERS USING GENETIC ALGORITHMS

**GS17: Estuarine and Coastal Ecosystems**Chair(s): John J. Cullen, John.Cullen@Dal.CA  
A. Keith Miles, keith\_miles@usgs.gov  
R. Eugene Turner, euturne@lsu.edu

Location: 254 B

- 10:30 AM Branco, A. B.; Kremer, J. N.: MODELING LIGHT ATTENUATION IN SHALLOW COASTAL WATERS
- 10:45 AM Collis, H. A.; Cable, J. E.; Sutula, M. A.: EVALUATING SEDIMENT DEPOSITIONAL PATTERNS USING BE-7 AND EXCESS TH-234 IN NEWPORT ESTUARY, CALIFORNIA (USA)
- 11:00 AM Cullen, J. J.; Dowd, M.; Guarracino, M.; Hannah, C.; Laurent, A.; Sheng, J.; Vezina, A. F.; Wang, L.: EVOLUTION OF A REAL-TIME, PHYSICAL-BIOLOGICAL COASTAL OBSERVATION AND PREDICTION SYSTEM
- 11:15 AM Doyle, R. A.; Arend, K. A.; King, A. T.; Rueda-Vivalda, F.; Hairston, N. G.; Cowen, E. A.; Driscoll, C. T.; Johnson, R. L.; Chen, X.: ASSESSING THE EFFECT OF HURRICANE-INDUCED LAKE ONTARIO UPWELLING ON PLANKTON DYNAMICS IN TWO COASTAL EMBAYMENTS
- 11:30 AM Hall, C. J.; Mueller-Solger, A. B.: FOOD RESOURCES FOR CALANOID COPEPODS IN THE SACRAMENTO-SAN JOAQUIN RIVER DELTA, CA.
- 11:45 AM Ma, H.; Grassle, J. P.; Tidd, R. A.; Petrecca, R. F.; Dobarro, J.: CROSS-SHELF CIRCULATION AND MEROPLANKTON CONCENTRATIONS USING AN AUV-MOUNTED ZOOPLANKTON PUMP
- 1:30 PM McGillis, W. R.; Raymond, P. A.: GAS EXCHANGE IN A LARGE RIVER: THE RELATIONSHIP BETWEEN WIND, TIDES, SURFACE TURBULENCE AND THE GAS TRANSFER VELOCITY IN THE HUDSON RIVER

- 1:45 PM Miles, A. K.; Takekawa, J. Y.; Schoellhamer, D. H.; Athearn, N. D.; Saiki, M. K.; Duffy, W. D.; Kleinschmidt, S.; Shellenbarger, G. G.; Jannusch, C. A.; Spring, S. E.: ECOLOGICAL STRUCTURE OF SALT PONDS, SAN FRANCISCO BAY, CALIFORNIA; BALANCING TIDAL WETLAND RESTORATION WITH EXISTING BENEFICIAL HABITAT
- 2:00 PM Nañez-James, S. E.; Stunz, G. W.; Holt, S.: IDENTIFICATION AND CHARACTERIZATION OF NURSERY HABITAT FOR JUVENILE SOUTHERN FLOUNDER, *PARALICHTHYS LETHOSTIGMA*, IN ARANSAS BAY, TEXAS.
- 2:15 PM Williams, H. N.; Stine, O. C.; Noble, R.; Pineiro, S. A.: DISTINCT POPULATIONS OF THE BDELLOVIBRIONACEAE IN ESTUARIES
- 2:30 PM Speekmann, C. L.; Buskey, E. J.: EFFECTS OF NATURAL AND ANTHROPOGENIC TOXINS ON RNA:DNA RATIO OF COPEPODS
- 2:45 PM Sutor, M.; Cowles, T. J.: CHARACTERISTICS OF ZOOPLANKTON VERTICAL DISTRIBUTIONS ASSOCIATED WITH FINESCALE PHYSICAL PARAMETERS AS OBSERVED OVER A RANGE OF LARGE-SCALE PHYSICAL CONDITIONS
- 3:30 PM Turner, R. E.; Rabalais, N. N.: NITROGEN, PHOSPHORUS AND SILICATE GROWTH LIMITATION OF PHYTOPLANKTON ON THE MISSISSIPPI RIVER CONTINENTAL SHELF
- 3:45 PM Urban-Rich, J.: DETECTION OF GRAZING ZOOPLANKTON IN THE GULF OF MEXICO
- 4:00 PM Vance, P. M.; Peterson, W. T.: DIEL VERTICAL MIGRATIONS OF EUPHAUSIIDS IN THE CALIFORNIA CURRENT SYSTEM. CROSS-SHELF AND SEASONAL VARIATIONS IN MIGRATION PATTERNS
- 4:15 PM Zimmer, C. A.; Fingerut, J. T.; Zimmer, R. K.: CLOSING THE LARVAL LOOP: BEHAVIOR PREVAILS OVER PASSIVE PROCESSES

**TS01: From Gene Expression to Ecological Processes**Chair(s): Frank J. Jochem, frank@jochemnet.de  
Gry Mine Berg, gberg@awi-bremerhaven.de

Location: 250 A/B

- 1:30 PM Paul, J. H.; Wawrik, B.; Gray, M.; John, D.; Corredor, J.: FROM GENE EXPRESSION TO ECOLOGICAL PROCESSES-THE RBCL STORY \*
- 1:45 PM Zehr, J. P.; Short, S. M.; Short, C. M.; Church, M. J.: REAL TIME PCR APPLICATIONS FOR QUANTIFYING NITROGENASE GENES AND GENE EXPRESSION \*
- 2:00 PM Wilkerson, F. P.; Takabayashi, M.; Barada, L.; Lorenzi, A.: FROM GENE EXPRESSION TO ECOLOGICAL PROCESSES: NITROGEN ASSIMILATION BY PHYTOPLANKTON
- 2:15 PM Suzuki, M. T.; Shi, Y.; Preston, C. M.; Sabehi, G.; Béjà, O.; DeLong, E. F.: MEASURING GENE EXPRESSION BY UNCULTURED MARINE BACTERIOPLANKTON USING REAL-TIME PCR

(\*) represents Invited presentations

- 2:30 PM Hristova, K. R.; Feris, K. P.; Scow, K. M.: APPLICATION OF REAL-TIME PCR FOR ENUMERATION OF GROUNDWATER MICROORGANISMS DURING BIOREMEDIATION
- 2:45 PM Carney, S. L.; Fisher, C. R.; Schaeffer, S. W.: MORPH- AND HABITAT-SPECIFIC DIFFERENCES IN THE EXPRESSION OF HEMOGLOBIN SUBUNITS IN TWO EXTREME PHENOTYPES OF THE JUAN DE FUCA RIDGE TUBEWORM, *RIDGEIA PISCESAE*
- 3:30 PM Berg, G. M.; LaRoche, J.: GENES RELATED TO THE AUTOPHAGIC PATHWAY ARE PRESENT IN THE UNICELLULAR MARINE EUKARYOTIC PHYTOPLANKTON *AUREOCOCCUS ANOPHAGEFFERENS*.
- 3:45 PM Countway, P. D.; Caron, D. A.; Savai, P.; Vigil, P. D.: PROTISTAN DIVERSITY AT THE USC MICROBIAL OBSERVATORY BY 18S rDNA SEQUENCE ANALYSIS
- 4:00 PM Zhang, H.; Lin, S.: DEVELOPMENT OF DUAL-GENE (MTDNA-18S rDNA) REAL-TIME PCR ASSAYS AND A GEOGRAPHIC SURVEY FOR *PFIESTERIA PISCICIDA* AND *P. SHUMWAYAE*
- 4:15 PM Rodriguez-Lopez, M. A.; Bonde, R. K.; Clark, A. M.; Zayas, B.; McGuire, P.: MANATEE GENETICS IN PUERTO RICO: WHERE ARE WE NOW?

**TS02: Thresholds in Aquatic Systems: Where, When, and How Do They Occur?**

Chair(s): Todd Wellnitz, wellnitz@lamar.colostate.edu

Location: 255 B/C

- 10:30 AM Bingham, B. L.: LIGHT AS A FACTOR INFLUENCING DISTRIBUTION AND ABUNDANCE OF SOLITARY ASCIDIANS
- 10:45 AM Brussock, P. P.: THE CASE FOR CONSISTENT DESIGNATIONS OF EPHEMERAL, INTERMITTENT AND PERENNIAL HEADWATER STREAM SEGMENTS
- 11:00 AM Conroy, J. D.; Culver, D. A.: CROSSING A THRESHOLD IN A LARGE LAKE ECOSYSTEM – THE LAKE ERIE “FLIP-FLOP”
- 11:15 AM Gaichas, S. K.; Aydin, K. Y.; Field, J. C.: COMPARATIVE STRUCTURE AND POTENTIAL THRESHOLDS IN NORTH PACIFIC MARINE ECOSYSTEMS
- 11:30 AM Hagerthey, S. E.; Newman, S.: EVERGLADES ECOSYSTEM STATE CHANGES IN RELATION TO PHOSPHORUS: DEFINING THE THRESHOLD FOR P
- 11:45 AM Irwin, A. J.; Finkel, Z. V.; Falkowski, P. G.: MINING A SEA OF DATA: FINDING ORDER IN THE OCEAN BY LOOKING FOR ECOSYSTEM TRANSITIONS
- 1:30 PM O'Donnell, M. J.: INTERACTING PROCESSES IN THE ROCKY INTERTIDAL: WHAT WAVE EXPOSURE CAN TELL US ABOUT TEMPERATURE STRESS
- 1:45 PM Riedinger-Whitmore, M. A.; Whitmore, T. J.; Brenner, M.; Schelske, C. L.; Smoak, J. M.; Curtis, J.: THRESHOLD RESPONSES OF CYANOBACTERIA TO EUTROPHICATION: PALEOLIMNOLOGICAL EVIDENCE OF ALTERNATIVE STABLE STATES IN FLORIDA LAKES

- 2:00 PM Roelke, D. L.; Zohary, T.; Hambright, K. D.: SYSTEM HYSTERESIS AND SELECTION OF ALTERNATE STABLE COMMUNITY STATES: A CASE STUDY USING THE 34-YEAR PLANKTON RECORD FROM THE SEA OF GALILEE, ISRAEL
- 2:15 PM Scheuerell, M. D.; Levin, P. S.; Zabel, R. W.; Williams, J. G.; Achord, S.: ANTHROPOGENIC CAUSES OF A STATE SHIFT IN A LARGE RIVER ECOSYSTEM: CHINOOK SALMON AND THE SNAKE RIVER BASIN
- 2:30 PM Sullivan, S. M.; Watzin, M. C.: CONNECTING PHYSICAL AND BIOTIC THRESHOLDS IN STREAMS
- 2:45 PM Teubner, K.; Jagsch, A.; Lenhart, B.; Morscheid, H.; Dokulil, M.: DECADAL TRENDS AND THRESHOLD VALUES OF PHYSICAL PARAMETERS AND THEIR EFFECT ON THE TIMING OF PHYTOPLANKTON IN RESPONSE TO CLIMATIC SIGNALS

**TS03: Novel Phototrophic Microbes in Aquatic Systems**

Chair(s): Zbigniew Kolber, zkolber@mbari.org  
Matthew Cottrell, mattcott@udel.edu

Location: 251 D/E

- 10:30 AM Cottrell, M. T.; Kirchman, D. L.; Mannino, A.: NOVEL PHOTOTROPHIC MICROBES IN AQUATIC SYSTEMS
- 10:45 AM Devol, A. H.; Van Mooy, B. A.; Keil, R. G.: RELATIONSHIP BETWEEN BACTERIAL COMMUNITY STRUCTURE, LIGHT, AND CARBON CYCLING IN THE EASTERN SUBARCTIC NORTH PACIFIC.\*
- 11:00 AM Church, M. J.: PHOTOENHANCEMENT OF HETEROTROPHIC PICOPLANKTON PRODUCTION IN THE OLIGOTROPHIC NORTH PACIFIC OCEAN \*
- 11:15 AM Schwalbach, M. S.; Fuhrman, J. A.: FACTORS CONTROLLING BACTERIAL PHOTOTROPHS IN SEAWATER
- 11:30 AM Kolber, Z. S.; Haffa, A.; Klimov, D.: MEASURING EXCITATION ENERGY TRANSFER IN AEROBIC PHOTOHETEROTROPHIC BACTERIA
- 11:45 AM Koblizek, M.; Masin, M.: AEROBIC ANOXYGENIC PHOTOHETEROTROPHS ARE PRESENT IN BOTH MARINE AND FRESHWATER ENVIRONMENTS

**TS14: Denitrification in Nitrogen Cycling and Transport Among Diverse Aquatic Ecosystems**

Chair(s): Robert Hall, bhall@uwyo.edu  
Jennifer Tank, tank.1@nd.edu

Location: 250 C/F

- 10:30 AM Seitzinger, S. P.: DENITRIFICATION ACROSS THE TERRESTRIAL-FRESHWATER-MARINE CONTINUUM ~
- 11:00 AM Laursen, A. E.: MEASURING DENITRIFICATION IN RIVERS ACROSS SCALES, FROM HEADWATER STREAMS TO LARGE RIVERS.
- 11:15 AM Harvey, J. W.; Bohlke, J. K.; Voytek, M. A.: ISOTOPE INJECTION IN A NITRATE-RICH STREAM TO QUANTIFY DENITRIFICATION RATES IN THE STREAMBED HYPORHEIC ZONE

↪ represents Tutorial presentations

- 11:30 AM Gardner, W. S.; McCarthy, M. J.: NET N<sub>2</sub> FLUXES AND POTENTIAL DENITRIFICATION, N-FIXATION, AND DISSIMILATORY NITRATE REDUCTION TO AMMONIUM (DNRA) IN DIVERSE SHALLOW AQUATIC ENVIRONMENTS
- 11:45 AM Joye, S. B.; Lee, R. Y.; Porubsky, W. P.; Weston, N. B.: ENVIRONMENTAL CONTROLS ON DENITRIFICATION IN TEMPERATE AND TROPICAL SHALLOW SEDIMENTS.
- 1:30 PM Bernot, M. J.; Docherty, K.; Tank, J. L.: RELATIONSHIP BETWEEN MICROBIAL COMMUNITY COMPOSITION AND SEDIMENT DENITRIFICATION RATES IN STREAMS INFLUENCED BY DIFFERENT LANDUSE
- 1:45 PM Tank, J. L.; Bernot, M. J.; Hamilton, S. K.; Hall, R. O.: USING 15N TRACER ADDITIONS TO DETERMINE HOW LAND USE CONTROLS STREAM DENITRIFICATION AND ASSIMILATORY UPTAKE IN TWO DISTINCT BIOMES.
- 2:00 PM Burgin, A. J.; Hamilton, S. K.: NITROGEN-SULFUR COUPLING IN FRESHWATER SEDIMENTS: IMPLICATIONS FOR NITRATE REMOVAL BY WETLANDS, LAKES AND STREAMS
- 2:15 PM Burton, J. L.; Cornwell, J. C.: DOES MICROPHYTOBENTHOS OXYGEN PRODUCTION AFFECT NITROGEN FLUXES AT THE SEDIMENT-WATER INTERFACE IN A SUBTROPICAL MARINE SYSTEM?
- 2:30 PM Owens, M. S.; Cornwell, J. C.; Kiss, E.: DENITRIFICATION ACROSS AN ESTUARINE SALINITY GRADIENT: RATES AND CONTROLS
- 2:45 PM Slaby, E. F.; McCorkle, D. C.; Hemond, H. F.: EFFECTS OF TIDAL PUMPING ON NITRATE INPUT TO THE COASTAL OCEAN: A STUDY OF TIME VARYING TRANSPORT AND DENITRIFICATION
- 3:30 PM Rao, A. E.; Jahnke, R. A.: NITROGEN CYCLING IN PERMEABLE CONTINENTAL SHELF SEDIMENTS ON THE SOUTH ATLANTIC BIGHT
- 3:45 PM Lemke, M. J.; Jenkins, D. G.; Bartletti, J. L.: THE IMPORTANCE OF FLOOD-PULSE FOR DENITRIFICATION IN RIVERINE HABITATS: THE LAGRANGE REACH OF THE ILLINOIS RIVER, USA.
- 4:00 PM Wollheim, W. M.; Vorosmarty, C. J.; Green, P. A.; Peterson, B. J.; Seitzinger, S. P.; Harrison, J. A.; Bjerklie, D. M.: THE RELATIVE IMPORTANCE OF TERRESTRIAL AND AQUATIC N SINKS IN THE GLOBAL N CYCLE: AN INVERSE APPROACH.
- 4:15 PM Webster, J. R.; Valett, H. M.; Meyer, J. L.; Niederlehner, B. R.; Poole, G.: SYNOPTIC WATER CHEMISTRY IN THE UPPER LITTLE TENNESSEE RIVER WATERSHED
- TS19: Air-sea Flux of Carbon Dioxide in Coastal Margins**  
Chair(s): Wei-Jun Cai, wcai@uga.edu  
Steven Lohrenz, Steven.Lohrenz@usm.edu  
Location: 250 D/E
- 3:15 PM Cai, W.: SURFACE WATER CARBON DIOXIDE SYSTEM IN THE LARGE RIVER PLUMES AND A GLOBAL SYNTHESIS OF AIR-SEA CO<sub>2</sub> FLUX IN CONTINENTAL SHELVES ~
- 3:45 PM Rochelle-Newall, E. J.; Barron, C.; Borges, A. V.; Duarte, C. M.; Frankignoulle, M.; Gazeau, F.; Middelburg, J. J.; Pizay, M. D.; Thioulouse, J.; Gattuso, J. P.: COMMUNITY METABOLISM IN THREE CONTRASTING COASTAL ECOSYSTEMS \*
- 4:00 PM Salisbury, J. E.; Vandemark, D.; Chris, C.; McGillis, W. R.: OBSERVATIONS OF, AND RELATIONSHIPS BETWEEN SURFACE OPTICAL PROPERTIES, PCO<sub>2</sub> AND OXYGEN SATURATION: POTENTIAL FOR REMOTE DETERMINATION OF METABOLIC VARIABLES.
- 4:15 PM Lohrenz, S. E.; Cai, W. J.; Wright, V.: SATELLITE-AIDED ESTIMATION OF AIR-SEA FLUXES OF CO<sub>2</sub> IN A RIVER-DOMINATED COASTAL MARGIN
- TS23: Siliceous Biogenic Records in Lacustrine and Marine Sediments**  
Chair(s): Sheri Fritz, sfritz2@unl.edu  
Thomas C. Johnson, tcj@d.umn.edu  
Location: 251 A/B
- 1:30 PM Conley, D. J.: THE UPS AND DOWNS OF BIOGENIC SILICA RECORDS IN LACUSTRINE AND MARINE SEDIMENTS ~
- 2:00 PM Clarke, A. L.; Andr n, E.; Weckstr m, K.; Telford, R. J.; Juggins, S.: DIATOMS AS INDICATORS OF COASTAL EUTROPHICATION IN NORTHERN EUROPE
- 2:15 PM Filstrup, C. T.; White, J. D.; Lind, O. T.: SEASONAL AND SPATIAL BIOGENIC SILICA RESUSPENSION DYNAMICS WITHIN A SHALLOW, WIND-STRESSED IMPOUNDMENT
- 2:30 PM Schelske, C. L.; Stoermer, E. F.: SEDIMENTARY BIOGENIC SILICA (BSI) ACCUMULATION AND BSI:P STOICHIOMETRY ARE SENSITIVE PROXIES FOR LOW-LEVEL PHOSPHORUS ENRICHMENT IN THE GREAT LAKES
- 2:45 PM Coleman, S. M.; Moser, K. A.; Kimball, J. P.: DIATOMS AND BIOGENIC SILICA IN BEAR LAKE: SENSITIVE MONITORS OF ENVIRONMENTAL CHANGE
- 3:30 PM Wolin, J. A.; Shkarpa, V.: DIATOM RECORD OF HOLOCENE CLIMATE CHANGE IN SILVER LAKE, OHIO
- 3:45 PM Johnson, T. C.; Alin, S.; Russell, J. M.: BIOGENIC SILICA AND ORGANIC CARBON BURIAL RATES IN THE LARGE LAKES OF THE WORLD
- 4:00 PM Shemesh, A.: STABLE ISOTOPES IN MARINE AND LACUSTRINE DIATOMS \*
- 4:15 PM Finkel, Z. V.; Katz, M. E.; Wright, J. D.; Schofield, O.; Falkowski, P. G.: CENOZOIC CLIMATE AND MACRO-EVOLUTIONARY PATTERNS IN FRUSTULE SIZE OF MARINE DIATOMS

(\*) represents Invited presentations

**TS25: Benthic-pelagic Links: Nutrient and Energy Flux Across Physically and Biotically Complex Boundaries**

Chair(s): Greta Burkart, greta@cc.usu.edu  
Yvonne Vadeboncoeur, yvonne.vadeboncoeur@wright.edu  
Gilbert T. Rowe, roweg@tamug.tamu.edu  
Koren Nydick, koren@cc.usu.edu  
Samantha Joye, mjoye@arches.uga.edu  
Edward J. Carpenter, ecarpent@sfsu.edu

Location: 251 D/E

- 1:30 PM Vadeboncoeur, Y.; Vander Zanden, M. J.; Peterson, G.; Kalf, J.: SETTING THE STAGE FOR BIOTIC INTERACTIONS: MORPHOMETRY AS A DETERMINANT OF LITTORAL-PELAGIC LINKS IN LAKES ~
- 2:00 PM MacIntyre, S.; Sickman, J. O.; Goldthwait, S. A.; Kling, G. W.; Caceres, C. E.; Hall, S. R.; Duffy, M. A.; Tessier, A. J.: CONSEQUENCES OF TURBULENCE AT INTERFACES. ~
- 2:30 PM Bailey, E. M.; Boynton, W. R.; Cornwell, J. C.; Owens, M. S.: SEDIMENT PHOSPHORUS FLUX PH INTERACTIONS IN THE TIDAL FRESHWATER POTOMAC RIVER ESTUARY
- 2:45 PM Sansone, F. J.; Spalding, H. L.; Smith, C. M.: SEDIMENT POREWATER GEOCHEMISTRY ASSOCIATED WITH DEEPWATER MACROALGAL MEADOWS
- 3:15 PM Nydick, K. R.; Wurtsbaugh, W. A.: EPIPELON AS A SINK FOR WATER-COLUMN NITRATE? N15 STUDIES IN A MOUNTAIN LAKE
- 3:30 PM Southwell, M. W.; Weisz, J. B.; Martens, C. S.; Popp, B. N.; Lindquist, N.: NITROGEN CYCLING BY SPONGES IN TROPICAL COASTAL WATERS
- 3:45 PM Waldbusser, G. G.; Marinelli, R. L.: THE IMPORTANCE OF SPECIES IDENTITY IN THE CONTROL OF POREWATER ADVECTION WITHIN AN INTERTIDAL SEDIMENT HABITAT: AN EXAMPLE FROM FALSE BAY, WASHINGTON.
- 4:00 PM Marinelli, R. L.; Woodin, S. A.; Wetthey, D. S.; Waldbusser, G. G.: SEDIMENT-SEAWATER FLUXES AND DENSITY DEPENDENT PROCESSES IN MARINE SEDIMENTARY ENVIRONMENTS: EFFECTS OF BEHAVIOR AND RESOURCES
- 4:15 PM MacIntyre, P. B.: BENTHIC VERSUS PLANKTONIC SOURCES OF NUTRIENTS EXCRETED BY LITTORAL FISHES IN LAKE TANGANYIKA

**TS26: Phytoplankton Nutrient Physiology: Plasticity, Interspecific Differences, and Biogeochemical Consequences**

Chair(s): Robert Armstrong, rarmstrong@notes.cc.sunysb.edu  
John Raven, j.a.raven@dundee.ac.uk  
Adam Kustka, kustka@princeton.edu

Location: 256 B/C

- 10:30 AM Raven, J. A.; Andrews, M.; Quigg, A.: THE EVOLUTIONARY SIGNIFICANCE OF NUTRIENT DEPRIVATION BEFORE, AND WITHIN, PHYTOPLANKTON ~
- 11:00 AM Kustka, A. B.; Shaked, Y.; Milligan, A.; King, D. W.; Morel, F. M.: A NEW KINETIC MODEL FOR FE ACQUISITION BY EUKARYOTIC PHYTOPLANKTON- THE ROLES OF CELL SURFACE REDUCTION AND EXTRACELLULAR RELEASE OF SUPEROXIDE
- 11:15 AM Rivers, A. R.; Trowbridge, N. Y.; Webb, E. A.: THE LOCATION OF IDIA IN MARINE SYNECHOCOCCUS AND DEVELOPMENT OF A WHOLE CELL LABELING AND FLOW CYTOMETRY ASSAY FOR DETECTION OF IRON STRESS
- 11:30 AM Chappell, P. D.; Moffett, J. W.; Webb, E. A.: EVALUATION OF IDIA AND FEOB GENE EXPRESSION AS MARKERS OF IRON STRESS IN TRICHODESMIUM
- 11:45 AM Armstrong, R. A.: AN OPTIMIZATION-BASED RECONSTRUCTION OF THE GEIDER ET AL. (1998) MODEL OF PHOTOSYNTHESIS AND PHOTOACCLIMATION
- 1:30 PM Ward, B. B.: COMMUNITY COMPOSITION AND FUNCTIONAL DIVERSITY IN PHYTOPLANKTON COMMUNITIES EVALUATED USING FUNCTIONAL GENE MICROARRAYS \*
- 1:45 PM Wurch, L. L.; Haley, S. T.; Dyhrman, S. T.: USING MOLECULAR DIAGNOSTICS TO DETECT NUTRITIONAL PHYSIOLOGY IN EMILIANIA HUXLEYI
- 2:00 PM Barnett, A. B.; Normandeau, C.; Ryan, C. M.; Cullen, J. J.: THE INFLUENCE OF NUTRITION AND LIGHT HISTORY ON NONPHOTOCHEMICAL QUENCHING OF FLUORESCENCE IN A MARINE DIATOM
- 2:15 PM Harada, H.; Kiene, R. P.: DIMETHYLSULPHONIOPROPIONATE LYASE ACTIVITY IN OCEAN PLANKTON AND MONOSPECIFIC PHYTOPLANKTON CULTURES
- 2:30 PM Rynearson, T. A.; Armburst, E. V.; Sarason, C. P.; Kawase, M.: GENETICS OR ENVIRONMENT? REGULATION OF DIATOM BLOOMS IN PUGET SOUND, WA.
- 2:45 PM Button, D. K.; Gustofson, E.; Zhao, X.: TEMPERATURE EFFECTS ON MICROBIAL KINETICS

**TS40: Lacustrine Biogeochemical Studies and Continental Paleoclimate: Paleorecords from Molecular Methods**

Chair(s): Lindsay Powers, powe0285@umn.edu  
Josef P. Werne, jwerne@d.umn.edu

Location: 251 A/B

- 10:30 AM Van Mooy, B.; Devol, A. H.; Sturt, H. F.; Evans, C. T.: NUCLEIC ACIDS AND INTACT POLAR LIPIDS AS FUNCTIONAL BIOMARKERS OF MICROBIAL PROCESSES IN THE SURFACE OCEAN: IMPLICATIONS FOR SEDIMENTARY RECORDS. ~
- 11:00 AM Leavitt, P. R.; Hampton, S. E.; Schindler, D. E.; Sanford, P. R.; Cumming, B. F.: PERSISTENT INCREASES IN ECOSYSTEM VARIABILITY FOLLOWING LAKE EUTROPHICATION AND RECOVERY: THE CASE OF LAKE WASHINGTON, USA.

~ represents Tutorial presentations

- 11:15 AM Powers, L. A.; Johnson, T. C.; Werne, J. P.; Hopmans, E. C.; Sinnighe Damste, J. S.; Schouten, S.: WORLD-WIDE CALIBRATION OF THE MOLECULAR PALEOTEMPERATURE PROXY TEX86 IN LACUSTRINE SYSTEMS AND APPLICATION TO A TROPICAL AFRICAN SEDIMENT RECORD THROUGH THE LGM
- 11:30 AM Hollander, D. J.; Cross, E.; Van Vleet, E. S.: MOLECULAR HYDROGEN ISOTOPIC-PROXIES FOR THE QUANTITATIVE RECONSTRUCTION OF RELATIVE HUMIDITY AND SOURCE WATER COMPOSITION IN CONTINENTAL SETTINGS
- 11:45 AM Castaneda, I. S.; Werne, J. P.; Johnson, T. C.: A 22,000 YEAR BIOMARKER RECORD FROM LAKE MALAWI, EAST AFRICA: THE RESPONSE OF TERRESTRIAL VEGETATION AND ALGAL COMMUNITY STRUCTURE TO CLIMATIC VARIABILITY

**TS45: Enhancing K-12 Science Education and Graduate Student Professional Development**

Chair(s): Amy Townsend-Small, amy@utmsi.utexas.edu  
Kenneth H. Dunton, dunton@utmsi.utexas.edu  
Gerardo Chin-Leo, chinleog@evergreen.edu

Location: 250 D/E

- 10:30 AM Brawley, S. H.; Muhlin, J. F.; Cole, B.; Hunter, S.; Norton, S.; Yehle, R.: IMPROVING GRADUATE EDUCATION IN THE SCIENCES: THE UNIVERSITY OF MAINE'S NSF GK-12 GRADUATE TEACHING FELLOWS PROGRAM ~
- 11:00 AM Ziegler, T. A.; Waters, B. S.: SCIENTISTS IN SCHOOLS: A PARTNERSHIP BETWEEN DUKE UNIVERSITY MARINE LABORATORY AND CARTERET COUNTY PUBLIC SCHOOLS
- 11:15 AM Judkins, H. L.; Hill, H. W.; Greely, T.; Pyrtle, A.; Ivey, S.; Lodge, A.: BRINGING THE OCEANS TO TEACHERS: PROFESSIONAL DEVELOPMENT OPPORTUNITIES
- 11:30 AM Irizarry-Ocasio, N.; Menchaca, S.; Greely, T.; Pyrtle, A. J.; López-Garriga, J.: INTEGRATING ENVIRONMENTAL SCIENCE TOOLS INTO AN OCEAN SCIENCE GK12 EXPERIENCE
- 11:45 AM Taylor, K.; Variano, E. A.; Trautmann, N.: HIGH SCHOOL RESEARCH IN LIMNOLOGY - LEARNING CONCEPTS, FACTS, THE RESEARCH PROCESS, AND THE NATURE OF SCIENCE \*
- 1:30 PM Rodgers, J. C.; Cano, J.; Ellins, K. K.: DROUGHT AND MAYAN CIVILIZATION COLLAPSE: ODP CORE 1002D AND A GK-12 CLIMATOLOGY ACTIVITY
- 1:45 PM Fluhrer, P. E.; Townsend-Small, A.; Dunton, K.: STUDENT-TEACHER ROLE REVERSAL: MUTUAL BENEFITS OF THE NSF GK-12 RESEARCH EXPERIENCE FOR TEACHERS PROGRAM FOR GRADUATE STUDENTS AND K-12 SCIENCE TEACHERS
- 2:00 PM Aumack, C. E.; Cie, P.; Dunton, K. H.: ENHANCING CAREER AND CLASSROOM: COLLABORATIVE WORK BETWEEN A GRADUATE STUDENT AND K-12 TEACHER TO STUDY HIGH ARCTIC SHELF/BASIN INTERACTIONS

- 2:15 PM Fellows, K. A.; Dunton, K. H.: USING THE 5E MODEL TO INTEGRATE GRADUATE RESEARCH INTO THE ELEMENTARY CLASSROOM FOR NSF'S GK-12 PROGRAM
- 2:30 PM Halversen, C. E.; Penry, D. L.; Strang, C. C.: COMMUNICATING OCEAN SCIENCE: USING INQUIRY-BASED SCIENCE AND OCEAN SCIENCE EXEMPLARS IN EDUCATIONAL OUTREACH

**TS51: Algal Dynamics and Metabolite Release and Toxins**

Chair(s): Paul Westerhoff, p.westerhoff@asu.edu  
Jonathan Sharp, jsharp@udel.edu

Location: 250 A/B

- 10:30 AM Gobler, C. J.; Davis, T. W.; Boyer, G. L.: IMPACT OF NUTRIENT LOADING AND ZOOPLANKTON GRAZING ON THE ABUNDANCE, GROWTH AND TOXIN PRODUCTION OF BLOOM-FORMING CYANOBACTERIA
- 10:45 AM Walker, D. B.; Boyer, G. L.; Zimba, P. V.; Matter, W. J.: CYANO-TOXIN PRODUCTION AND FISH KILLS IN RESERVOIRS ALONG THE SALT RIVER, ARIZONA, USA.
- 11:00 AM Rinta-Kanto, J. M.; Boyer, G. L.; Satchwell, M.; Smith, M. T.; Li, R.; Wilhelm, S. W.: ANALYSIS OF TOXIC MICROCYSTIS BLOOMS ON LAKE ERIE USING QUANTITATIVE REAL-TIME PCR
- 11:15 AM Kreider, M. A.; Watzin, M. C.; Brines, E. K.; Clason, T. A.: EVALUATING APPROACHES TO MONITORING FOR TOXIC CYANOBACTERIA: LESSONS LEARNED FROM LAKE CHAMPLAIN
- 11:30 AM Martins, C. A.; Juhl, A. R.: DO DINOFLAGELLATE PSP TOXINS AFFECT GRAZING BY GASTROPOD LARVAE?
- 11:45 AM Busse, L. B.; Venrick, E. L.; Antrobus, R.; Miller, P. E.; Vigilant, V.; Silver, M. W.; Keltner, K.; McKagan, S.; Mengelt, C.; Mydlarz, L.; Wallner, E.; Prezelin, B. B.: TOXIC PSEUDO-NITZSCHIA BLOOMS IN CALIFORNIA - FREQUENCY AND MAGNITUDE OF BLOOMS IN THE LAST CENTURY

**TS54: Advances in Microbial Ecology: New Culturing Techniques and Culture-independent Approaches**

Chair(s): Michael Rappe, rappe@hawaii.edu  
Bethany Jenkins, bjenkins@cats.ucsc.edu

Location: 255 B/C

- 3:30 PM Rappe, M. S.: EXPANDING THE TRADITIONAL CULTIVATION-BASED REPERTOIRE TO ISOLATE BACTERIOPLANKTON FOR NEW MODEL BIOSYSTEMS IN MICROBIAL OCEANOGRAPHY ~
- 4:00 PM Christian, B. W.; Lind, O. T.: PHYSIOLOGICAL PROFILING USING BIOLOG: APPLICATIONS AND LIMITATIONS TO UNDERSTANDING BACTERIAL COMMUNITY DYNAMICS
- 4:15 PM Hill, J. E.; Elimelech, M.: SULFUR AND ORGANIC PHOSPHORUS CYCLING BY THIOBACILLUS

(\*) represents Invited presentations

**Tuesday, February 22, 2005****GS10: Metal Cycling**

Chair(s): Mak A. Saito, mak@whoi.edu  
Peter Sedwick, psedwick@bbsr.edu

Location: 250 C/F

- 10:30 AM Sedwick, P. N.; Church, T. M.; Bowie, A. R.; Marsay, C. M.; Achilles, K. M.; Ussher, S. J.; Lethaby, P. J.; Johnson, R. J.; McGillicuddy, D. J.: IRON IN THE SARGASSO SEA DURING SUMMER: AEOLIAN IMPRINT, SPATIOTEMPORAL VARIABILITY, AND ECOLOGICAL IMPLICATIONS
- 10:45 AM Higgins, J. L.; Kudo, I.; Tsuda, A.; Wilhelm, S. W.: TRACKING THE RESPONSE OF THE VIRUS COMMUNITY TO A MESOSCALE IRON FERTILIZATION IN THE SUB-ARCTIC PACIFIC OCEAN
- 11:00 AM Poorvin, L.; Mioni, C. E.; Sander, S.; Wilhelm, S. W.: CHARACTERIZATION AND BIOAVAILABILITY OF IRON RELEASED BY VIRAL LYSIS OF MARINE PLANKTON
- 11:15 AM Mioni, C. E.; Poorvin, L.; Wilhelm, S. W.: BIOLUMINESCENT BACTERIAL REPORTERS: A TOOL OF BIOLOGICAL AND CHEMICAL RELEVANCE TO ESTIMATE IRON BIOAVAILABILITY IN AQUATIC SYSTEMS.
- 11:30 AM Saito, M. A.: COBALT, IRON, AND MANGANESE BIOGEOCHEMISTRY IN THE EQUATORIAL PACIFIC: COBALT SCAVENGING IN OXYGEN MINIMUM ZONES
- 11:45 AM Kalnejais, L.; Martin, W. R.: BENTHIC TRACE METAL CYCLING IN THE COASTAL ZONE

**TS06: Microbial Nitrogen Fixation Across Environments: Ski to Sea**

Chair(s): Jayne Belnap, jayne\_belnap@usgs.gov  
Doug Capone, capone@usc.edu  
Margie Mulholland, mmulholl@odu.edu

Location: 255 B/C

- 10:30 AM Paerl, H. W.; Dyble, J.; Moisander, P. H.; Piehler, M. F.: CONTROLS ON PLANKTONIC NITROGEN FIXATION ALONG THE FRESHWATER-MARINE CONTINUUM AND IMPLICATIONS FOR NUTRIENT LIMITATION ~
- 11:00 AM Crews, T. E.: CONSTRAINTS ON N FIXATION AND N LIMITATION IN TERRESTRIAL ECOSYSTEMS \*
- 11:15 AM Belnap, J.: Nitrogen Contributions to Terrestrial Ecosystems by Free-Living Soil Cyanobacteria and Cyanolichens
- 11:30 AM Marcarelli, A. M.; Wurtsbaugh, W. A.; Koch, B. J.; Baker, M. A.: THE IMPORTANCE OF AQUATIC NITROGEN FIXATION IN HIGH ALTITUDE SUBALPINE WATERSHEDS OF CENTRAL IDAHO
- 11:45 AM Moseman, S. M.: ANTHROPOGENIC ALTERATION OF SEAGRASS-MICROBE ASSOCIATIONS AND NITROGEN FIXATION IN TWO WETLANDS OF SOUTHERN CALIFORNIA

- 1:30 PM Smith, C. S.; Haese, R. R.; Skyring, G. W.; Maher, W.: NUTRIENT CYCLING, DENITRIFICATION AND NITROGEN FIXATION IN A TROPICAL MACRO-TIDAL AUSTRALIAN ESTUARY
- 1:45 PM Moisander, P. H.; Shiue, L.; Steward, G. F.; Jenkins, B. D.; Bebout, B. M.; Zehr, J. P.: DETECTION OF DIVERSITY AND EXPRESSION OF NIFH IN LYNGBYA-DOMINATED MICROBIAL MATS USING AN OLIGONUCLEOTIDE MICROARRAY
- 2:00 PM Rabouille, S.; Staal, M.; Soetaert, K.: EXPLORING THE PROCESS OF NITROGEN FIXATION IN SOME MARINE CYANOBACTERIA WITH A ONE-DIMENSIONAL, PHYSIOLOGICAL MODEL
- 2:15 PM Westberry, T. K.; Siegel, D. A.; Subramaniam, A.: PATTERNS OF TRICHODESMIUM BLOOMS IN THE WORLDS OCEANS
- 2:30 PM Montoya, J. P.; Joye, S. B.: NITROGEN FIXATION IN DEEP WATERS OF THE GULF OF MEXICO
- 2:45 PM Holl, C. M.; Villareal, T. A.; Payne, C. D.; Clayton, T.; Montoya, J. P.: CHARACTERIZATION OF A BLOOM OF THE DIAZOTROPHIC MARINE CYANOBACTERIUM, TRICHODESMIUM: IMPLICATIONS FOR N AND C CYCLING IN THE GULF OF MEXICO

**TS07: Pattern and Mechanism in Aquatic Biodiversity**

Chair(s): Val H. Smith, vsmith@ku.edu

Location: 256 B/C

- 10:30 AM Dodson, S. I.; Hoffmann, M. D.; Will-Wolf, S.; Lillie, R. A.: AQUATIC BIODIVERSITY: A SPECIAL SESSION OVERVIEW. ~
- 11:00 AM Gillooly, J. E.; Allen, A. P.: THE ROLE OF METABOLISM IN REGULATING BIODIVERSITY
- 11:15 AM Marston, M. F.; Hughes, J. B.: SPATIAL AND TEMPORAL VARIATION IN THE GENETIC DIVERSITY AND RELATIVE ABUNDANCE OF CYANOPHAGES INFECTING SYNECHOCOCCUS SPP. IN NARRAGANSETT BAY, RHODE ISLAND
- 11:30 AM Fuhrman, J. A.; Hewson, I.; Schwalbach, M.; Steele, J.; Brown, M.; Patel, A.: BIOGEOGRAPHIC PATTERNS IN MARINE BACTERIOPLANKTON
- 11:45 AM Crump, B. C.; Hobbie, J. E.; Adams, H. E.; Kling, G. W.: SHIFTS IN BACTERIOPLANKTON COMMUNITY COMPOSITION ACROSS A LANDSCAPE: INFLUENCE OF BACTERIAL PRODUCTION AND LAKE RESIDENCE TIME
- 1:30 PM Horner-Devine, M. C.; Lage, M.; Bohannan, B.; Hughes, J. B.: A TAXA-AREA RELATIONSHIP FOR BACTERIA?
- 1:45 PM von Dassow, P.; Petersen, T. W.; Armbrust, E. V.: EVIDENCE FOR A HISTORY OF POLYPLOIDY IN THE DIVERSIFICATION OF CENTRIC DIATOMS OF THE GENUS THALASSIOSIRA INTO DIFFERENT AQUATIC HABITATS
- 2:00 PM Stomp, M.; Huisman, J.; Ibelings, B. W.; Stal, L. J.: ADAPTIVE DIVERGENCE IN PIGMENT COMPOSITION PROMOTES PHYTOPLANKTON BIODIVERSITY

↪ represents Tutorial presentations



- 2:15 PM Huisman, J.; Sharples, J.; Stroom, J. M.; Visser, P. M.; Sommeijer, B. P.: CHANGES IN TURBULENT MIXING SHIFT THE COMPETITIVE BALANCE BETWEEN PHYTOPLANKTON SPECIES
- 2:30 PM Smith, V. H.; Foster, B. L.; Grover, J. P.; Holt, R. D.; Leibold, M. A.; deNoyelles, F.: EFFECTS OF SPATIAL SCALE AND PRODUCTIVITY ON PHYTOPLANKTON SPECIES RICHNESS
- 2:45 PM Rasmussen, M.; Bucklin, A.; Frost, B. W.: GENETIC STRUCTURE OF THE PLANKTONIC COPEPOD CALANUS PACIFICUS IN THE EASTERN NORTH PACIFIC
- 3:30 PM Schaffner, L. C.: BIODIVERSITY OF ESTUARINE MACROBENTHOS: RELATIONSHIPS WITH ENVIRONMENTAL FACTORS
- 3:45 PM Virtanen, R.; Paavola, R.; Jackson, D. A.; Soininen, J.; Kwandrans, J.; Heino, J.; Muotka, T.: CONCORDANCE IN THE COMMUNITY STRUCTURE AND SPECIES RICHNESS OF MULTIPLE LOTIC TAXA \*
- 4:00 PM Kiffney, P. M.; Greene, C.; Good, T.: REACH-SCALE PATTERNS OF RIVERINE BIODIVERSITY AND PRODUCTIVITY: ROLE OF TRIBUTARY JUNCTIONS
- 4:15 PM Xenopoulos, M. A.; Lodge, D. M.; Alcamo, J.; Marker, M.; Schulze, K.; Van vuuren, D.: FORECASTING GLOBAL FRESHWATER BIODIVERSITY LOSS: USING BROAD-SCALE RELATIONSHIPS BETWEEN RICHNESS AND HABITAT FEATURES.

**TS14: Denitrification in Nitrogen Cycling and Transport Among Diverse Aquatic Ecosystems**

Chair(s): Robert Hall, bhall@uwyo.edu  
Jennifer Tank, tank.1@nd.edu

Location: 250 C/F

- 3:30 PM Alexander, R. B.; Smith, R. A.; Schwarz, G. E.; Boyer, E. W.: ESTIMATING NITROGEN REMOVAL IN RIVERS USING SPATIALLY REFERENCED MODELING TECHNIQUES
- 3:45 PM Baker, M. A.; Hall, R. O.: DENITRIFICATION IN STREAMS: SILVER BULLET OR MOVING TARGET?
- 4:00 PM David, M. B.; Royer, T. V.; Tank, J. L.; Wall, L. G.; Bernot, M. J.: IMPORTANCE OF DENITRIFICATION IN AQUATIC SEDIMENTS TO THE NITROGEN MASS BALANCE OF A MIDWESTERN AGRICULTURAL REGION
- 4:15 PM Greene, S. E.; Boynton, W. R.: NITROGEN REMOVAL BY TIDAL FRESH AND OLIGOHALINE MARSHES IN A CHESAPEAKE BAY TRIBUTARY

**TS19: Air-sea Flux of Carbon Dioxide in Coastal Margins**

Chair(s): Wei-Jun Cai, wcai@uga.edu  
Steven Lohrenz, Steven.Lohrenz@usm.edu

Location: 250 D/E

- 3:30 PM Fagan, K. E.; Paquay, F.; Lockett, D. E.; Mackenzie, F. T.: PROCESSES CONTROLLING AIR-SEA EXCHANGE OF CO<sub>2</sub> IN SUBTROPICAL PACIFIC ESTUARIES

- 3:45 PM Tseng, C. M.; Lee, B. S.; Chou, W. C.; Sheu, D. D.; Wong, G.T.F., ; Liu, K. K.: TEMPORAL VARIABILITY OF MIXED-LAYER OCEANIC CO<sub>2</sub> SPECIES AT THE SEATS
- 4:00 PM Bade, D. L.; Cole, J. J.: CHEMICALLY ENHANCED DIFFUSION INFLUENCES DISSOLVED INORGANIC CARBON STABLE ISOTOPE CYCLING IN A HIGHLY PRODUCTIVE AQUATIC ECOSYSTEM
- 4:15 PM Ducklow, H. W.; McCallister, S. L.: CONTINENTAL SHELVES AS A MAJOR SINK FOR ATMOSPHERIC CO<sub>2</sub>.

**TS25: Benthic-pelagic Links: Nutrient and Energy Flux Across Physically and Biotically Complex Boundaries**

Chair(s): Greta Burkart, greta@cc.usu.edu  
Yvonne Vadeboncoeur, yvonne.vadeboncoeur@wright.edu  
Gilbert T. Rowe, roweg@tamug.tamu.edu  
Koren Nydick, koren@cc.usu.edu  
Samantha Joye, mjoye@arches.uga.edu  
Edward J. Carpenter, ecarpent@sfsu.edu

Location: 251 D/E

- 1:30 PM Stief, P.; Hölker, F.: PREDATOR FISH ODOR INDUCES BIOGEOCHEMICAL EFFECTS OF BENTHIC MIDGE LARVAE
- 1:45 PM Porter, E. T.; Mason, R. P.; Reardon, M.; Sanford, L. P.; Bergeron, C.; Kim, E. H.; Soulen, H. L.: EFFECT OF HARD CLAMS, MERCENARIA MERCENARIA, AND BOTTOM SHEAR VELOCITY/STRESS ON WATER QUALITY: FOUR EXPERIMENTS WITH TIDAL RESUSPENSION
- 2:00 PM Pontius, R. A.; Conroy, J. D.; Edwards, W. J.; Culver, D. A.: EXCRETION BY INVASIVE DREISSENID MUSSELS: EVIDENCE FOR CHANGES IN LAKE ERIE
- 2:15 PM Higgins, S. N.; Hecky, R. E.; Guildford, S. J.; Howell, T. E.: IMPLICATIONS OF DREISSENA TO BENTHIC PRODUCTION IN EASTERN LAKE ERIE
- 2:30 PM Francis, T. B.; Schindler, D. E.: ALTERATION OF BENTHIC HABITATS IN THE PACIFIC NORTHWEST: EFFECTS OF LAKESHORE DEVELOPMENT AND CONSEQUENCES FOR INVERTEBRATE PRODUCTION
- 2:45 PM Luecke, C.: USE OF STABLE ISOTOPES TO ASSESS CONTRIBUTIONS OF BENTHIC AND PELAGIC PRIMARY PRODUCTION TO HIGHER TROPHIC LEVELS
- 3:15 PM Burkart, G. A.; Luecke, C.: The Importance of Pelagic Subsidies to Zoobenthos in Arctic Lake Food Webs
- 3:30 PM Chandra, S.: THE EFFECTS OF CULTURAL EUTROPHICATION ON THE COUPLING BETWEEN PELAGIC PRIMARY PRODUCERS AND BENTHIC CONSUMERS
- 3:45 PM Marcus, N. H.: PLANKTON COMMUNITIES IN ESTUARINE AND COASTAL WATERS: THE IMPORTANCE OF BENTHIC RESTING STAGES
- 4:00 PM Teasdale, M. J.; Thistle, D.; Vopel, K. C.: THE TIMING OF BENTHIC COPEPOD EMERGENCE—A LABORATORY FLUME STUDY

(\*) represents Invited presentations

4:15 PM Ackerman, J. D.: VARIATION AND VORTICITY IN THE EXHALANT BEHAVIOUR OF AN EPIBENTHIC BIVALVE: IMPLICATIONS FOR LOCAL MIXING AND EXCHANGE

**TS29: Aquatic Classification - From the Headwaters to the Sea**

Chair(s): Naomi Detenbeck, detenbeck.naomi@epa.gov

Location: 250 D/E

10:30 AM Jensen, M. E.: ECOLOGICAL APPROACHES TO THE CLASSIFICATION OF RIVERINE SYSTEMS ~

11:00 AM Herlihy, A. T.; Hughes, R. M.; Sifneos, J. C.: NATIONAL CLUSTERS OF LOTIC FISH AND MACROINVERTEBRATE ASSEMBLAGES IN THE UNITED STATES AND THEIR RELATIONSHIP TO EXISTING SPATIAL CLASSIFICATION SCHEMES

11:15 AM Higgins, J. V.; Bryer, M. T.; Khoury, M. L.: HIERARCHICAL FRESHWATER CLASSIFICATION FOR CONSERVATION PLANNING

11:30 AM Lorang, M. S.; Hauer, F. R.; Whited, D. C.; Stanford, J. A.: HYDRAULIC CONDITIONS OF COMMON AQUATIC STREAM HABITATS

11:45 AM Watzin, M. C.; Sullivan, S. M.; McCutcheon, K.: CONSIDERING SCALE IN THE DESIGN OF STREAM AND WATERSHED CLASSIFICATION SYSTEMS

1:30 PM Kiesling, R. L.: ASSESSING ALGAL GROWTH AND PRODUCTION AS A FUNCTION OF INSTREAM NUTRIENT CHEMISTRY: DEVELOPING MECHANISTIC BIOCRITERIA FOR NUTRIENT-ENRICHED STREAMS

1:45 PM Holz, A. A.; Holz, J. C.; Hoagland, K. D.; Merchant, J. M.; Bulley, H. N.: LAKE AND RESERVOIR CLASSIFICATION IN AGRICULTURALLY DOMINATED ECOSYSTEMS

2:00 PM Kurtz, J. C.; Detenbeck, N. E.; Engle, V. D.; Ho, K. T.; Smith, L. M.; Jordan, S. J.; Campbell, D.: CLASSIFYING COASTAL WATERS: HISTORICAL PERSPECTIVE AND CURRENT FOCUS ON AQUATIC STRESSORS \*

2:15 PM Johnson, L. B.; Ciborowski, J. J.; Host, G. E.; Brady, V.; Schuldt, J.; Richards, C.: GREAT LAKES COASTAL WETLAND CLASSIFICATION AND IDENTIFICATION OF REFERENCE AREAS

2:30 PM Dettmann, E. H.: FACTORS AFFECTING SENSITIVITY OF CHEMICAL AND ECOLOGICAL RESPONSES OF MARINE EMBAYMENTS TO NITROGEN LOADING

2:45 PM Detenbeck, N. E.; Moffett, M. F.; Greenlee, S. K.; Cincotta, D.; Brazner, J.: EXTENDING AQUATIC CLASSIFICATION TO THE LANDSCAPE SCALE: HYDROLOGY-BASED STRATEGIES

**TS32: The Role of Zooplankton Predator-prey Interactions in Structuring Plankton Communities**

Chair(s): Marie H. Bundy, mbundy@nsf.gov  
 Maria Grazia Mazzocchi, grazia@szn.it  
 Don R. Deibel, ddeibel@mun.ca

Location: 250 A/B

10:30 AM Strickler, J. R.; Jiang, H. S.: PAFFENHÖFER, QUO VADIS? ~

11:00 AM Harris, R. P.: FROM INSEL SYLT TO SKIDAWAY ISLAND: A CAREER IN ZOOPLANKTON ECOLOGY

11:15 AM Jiang, H.; Paffenhöfer, G. A.: DIRECTIONAL INFORMATION ON HYDRODYNAMIC SIGNAL PERCEPTION BY PREY IN NAUPLIUS-PREDATOR ENCOUNTERS

11:30 AM Levinton, J. S.; Yen, J.; Woodson, B.; Weissburg, M. J.; Frank, D.: ESCAPE MECHANISMS AND CAPTURE OF MESOZOOPLANKTON BY INHALANT STRUCTURES OF BIVALVE MOLLUSCS

11:45 AM Kerfoot, W. C.: PERSPECTIVES ON INVERTEBRATE PREDATION: EXPANDING TO METAPOPOPULATIONS

1:30 PM Lenz, P. H.; Burdick, D.; Litz, M.; Hartline, D. K.: DIFFERENT RESPONSE PATTERNS TO THREAT STIMULI IN CO-OCCURRING COPEPODS \*

1:45 PM O'Brien, W. J.: THE IMPORTANCE OF PREDATION AND COMPETITION IN STRUCTURING ARCTIC POND ZOOPLANKTON COMMUNITIES

2:00 PM Cohen, J. H.; Forward, Jr., R. B.: DIEL VERTICAL MIGRATION IN THE MARINE COPEPOD CALANOPIA AMERICANA: REDUNDANT PROXIMATE MECHANISMS AND PREDATOR-INDUCED PHENOTYPIC PLASTICITY

2:15 PM Sørnes, T.; Aksnes, D. L.: LIGHT LIMITED PREDATION AND ZOOPLANKTON STRUCTURE

2:30 PM Holzman, R.; Genin, A.: "DRAW" OR "CHOOSE"? PREY SELECTIVITY IN NOCTURNAL FISH.

2:45 PM Ribera d'Alcala', M.; Botte, V.; Mariani, P.; Mazzocchi, M. G.: MODELING OPTIMAL FEEDING VS. PREDATION RISK AT DIFFERENT MIXING RATES

3:30 PM Leising, A. W.; Pierson, J. J.; Frost, B. W.: COPEPOD FORAGING FORAYS: DO THEY HAPPEN, AND HOW COULD WE TELL?

3:45 PM Lee, R. E.: HOW LIPIDS CAN BE USED IN PREDATOR-PREY STUDIES \*

4:00 PM Calliari, D.; Tiselius, P.: FEEDING AND REPRODUCTION IN A SMALL CALANOID COPEPOD: ACARTIA CLAUSI CAN COMPENSATE QUALITY WITH QUANTITY

4:15 PM DeMott, W. R.; McKinney, E. R.; Newcum, R.; Tessier, A. J.: ONTOGENY OF DIGESTION AND GUT PROCESSING IN DAPHNIA: EVIDENCE FOR A JUVENILE BOTTLENECK

**TS33: Climate Change Effects on Inland Aquatic Ecosystems**

Chair(s): Mark Scheuerell, mark.scheuerell@noaa.gov

Location: 251 A/B

10:30 AM Schindler, D. E.: FRESHWATER ECOSYSTEM RESPONSES TO CLIMATE CHANGE: BIG EFFECTS AND SUBTLE CAUSES ~

11:00 AM Buck, D. G.; Brenner, M.; Hodell, D. A.; Curtis, J. H.: A LATE HOLOCENE RECORD OF CLIMATE VARIABILITY FROM HYPERSALINE LAGO ENRIQUILLO, DOMINICAN REPUBLIC

11:15 AM Dietrich, S. V.; McGowan, S.; Leavitt, P. R.: QUANTITATIVE EVALUATION OF LAKE RELATIVE SENSITIVITY TO CLIMATE VARIATION AND LAND-USE PRACTICES \*

(~) represents Tutorial presentations

- 11:30 AM Guntenspergen, G. R.; Johnson, W. C.; Voldseth, R. A.; Millet, B. V.: RESPONSE OF PRAIRIE WETLANDS TO CLIMATE CHANGE
- 11:45 AM Flanagan, K. M.; McCauley, E. F.; Wrona, F.: PROCESSES DRIVING THE AIR-WATER CARBON FLUX OF LAKES AND POTENTIAL IMPLICATIONS OF CLIMATE CHANGE
- 1:30 PM O'Reilly, C. M.; Plisnier, P. D.; Cohen, A. S.: THE AFFECT OF CLIMATE CHANGE ON NUTRIENT DYNAMICS AND PRODUCTIVITY OF THE EAST AFRICAN RIFT VALLEY LAKES \*
- 1:45 PM Hobbie, J. E.: ARCTIC FRESHWATERS AND CLIMATE CHANGE: CONCLUSIONS OF THE ARCTIC CLIMATE IMPACT ASSESSMENT REPORT
- 2:00 PM Kessler, K.; Williamson, C. E.; Saros, J. E.: MECHANISMS OF UV DEFENSE IN ALPINE PHYTOPLANKTON AND ZOOPLANKTON
- 2:15 PM Williamson, C. E.: ECOLOGICAL IMPLICATIONS OF VARIATION IN UV RADIATION TOLERANCE AND PHOTOREPAIR ACROSS TAXA FROM BACTERIA TO FISH.
- 2:30 PM Hampton, S. E.: INCREASED NICHE DIFFERENTIATION BETWEEN CONGENERIC ZOOPLANKTON OVER 33 YEARS OF CLIMATE CHANGE AND FOOD WEB ALTERATION \*
- 2:45 PM Winder, M.; Essington, T. E.; Schindler, D. E.; Litt, A. H.; Edmondson, W. T.: CLIMATIC EFFECTS ON COPEPOD POPULATION DYNAMICS \*
- 3:30 PM Battin, J.; Bartz, K. L.; Ruckelshaus, M. H.; Imaki, H.; Wiley, M. W.; Korb, E.; Palmer, R. N.: MODELING THE IMPACT OF CLIMATE CHANGE ON CHINOOK SALMON HABITAT RESTORATION ACTIONS IN THE PUGET SOUND REGION \*
- 3:45 PM Zabel, R. W.; Crozier, L.: IMPACTS OF CLIMATE CHANGE ON THE POPULATION VIABILITY OF CHINOOK SALMON AND CONSEQUENCES FOR THE PRODUCTIVITY OF STREAMS IN THE SALMON RIVER BASIN, IDAHO \*
- 4:00 PM Crumrine, P. A.; McCauley, E.; Benoy, G.: EFFECTS OF WINTER CONDITIONS ON FRESH-LITTER DECOMPOSITION IN A BOREAL FEN
- TS36: Biogeochemistry in Flowing Waters: What's New? What's Next? What are the Limitations?**
- Chair(s): Craig Tobias, crtobias@usgs.gov
- Location: 250 C/F
- 1:30 PM Townsend-Small, A.; McClain, M. E.; Brandes, J. A.: IN-STREAM NITROGEN TRANSFORMATIONS IN THE PERUVIAN ANDES: EVIDENCE FROM A SERIES OF NITROGEN-15 TRACER ADDITION EXPERIMENTS
- 1:45 PM Cornwell, J. C.; Owens, M. S.; Kana, T. M.: DENITRIFICATION MEASUREMENTS IN FLOWING WATERS AND RESERVOIRS: APPLICATIONS OF MEMBRANE INLET MASS SPECTROMETRY
- 2:00 PM Andersson, M.; Brion, N.; Middelburg, J. J.: NITRIFICATION AND NITRIFIER GROWTH ARE NOT NECESSARILY COUPLED
- 2:15 PM Caraco, N. F.; Cole, J. J.; Raymond, P. A.; Bauer, J. E.: ORGANIC MATTER INPUTS AND METABOLISM IN A LARGE RIVER ESTUARY (THE HUDSON): INSIGHTS FROM NATURAL ABUNDANCE ISOTOPES AND WHOLE SYSTEM METABOLISM
- 2:30 PM Belzile, C.; Guo, L.: SCAVENGING OF OPTICALLY ACTIVE DISSOLVED ORGANIC MATTER (DOM) BY GLACIAL FLOUR IN THE YUKON RIVER
- 2:45 PM Hannides, A. K.; Gaidos, E. J.; Sansone, F. J.: A MICROCOSM AT WORK: PRELIMINARY EXPERIMENTS FROM THE MICROBE PROJECT
- TS49: Physical Discontinuities in Aquatic Systems**
- Chair(s): Sally MacIntyre, sally@icess.ucsb.edu  
Piet Verburg, pverburg@sciborg.uwaterloo.ca
- Location: 251 D/E
- 10:30 AM Steissberg, T. E.; Schladow, S. G.; Hook, S. J.: BASIN-SCALE JETS AND OTHER UPWELLING FRONTS IN LAKES – QUANTIFYING THE VIEW FROM SPACE
- 10:45 AM Inthorn, M.; Zabel, M.: SIGNIFICANCE OF LATERAL PARTICLE TRANSPORT PROCESSES ALONG THE CONTINENTAL MARGIN IN THE BENGUELA UPWELLING AREA
- 11:00 AM Hofmann, H.; Bäuerle, E.; Fischer, P.; Peeters, F.: OBSERVATION OF RESUSPENSION-INDUCED DENSITY PLUMES IN THE LITTORAL ZONE OF UPPER LAKE CONSTANCE
- 11:15 AM Cardenas, B. R.; Wilson, J. L.: WATER FLOW ABOVE AND BELOW A SEDIMENT-WATER INTERFACE UNDER AMBIENT GROUNDWATER DISCHARGE
- 11:30 AM Variano, E. A.; Cowen, E. A.: QUANTITATIVE VISUALIZATION OF CO<sub>2</sub> TRANSFER AT A TURBULENT FREE SURFACE
- 11:45 AM Anis, A.; Singhal, G. : INERTIAL OSCILLATIONS IN THE HYPOXIC ZONE OFF LOUISIANA
- TS50: Disease in Aquatic Systems**
- Chair(s): Kathy Cottingham, cottingham@dartmouth.edu  
Steve Kohler, steve.kohler@wmich.edu
- Location: 254 B
- 10:30 AM Richardson, L. L.; Mills, D. K.; Foley, J.; Kaczmarek, L.; Remily, E.; Voss, J. D.: ETIOLOGY OF THE CARIBBEAN CORAL DISEASE WHITE PLAGUE
- 10:45 AM Voss, J. D.; Richardson, L. L.: NUTRIENT ENRICHMENT IMPACTS SEVERITY AND RATE OF PROGRESSION IN BLACK BAND DISEASE OF CORALS
- 11:00 AM Ward, J. R.; Rypien, K. L.; Bruno, J.; Harvell, C. D.; Jordan-Dahlgren, E.; Mullen, K.; Rodriguez, R.; Sanchez, J.; Smith, G.: CORAL DIVERSITY AND DISEASE IN THE CARIBBEAN
- 11:15 AM Byers, J. E.; Blakeslee, A. M.; Linder, E.; Cooper, A. B.; Maguire, T.: ENVIRONMENTAL DETERMINANTS OF PARASITIC TREMATODE INFECTION IN AN INTERTIDAL SNAIL OVER A LARGE SPATIAL SCALE.

(\*) represents Invited presentations

- 11:30 AM Bernot, R. J.: INDIRECT EFFECTS OF A TREMATODE PARASITE ON A BENTHIC COMMUNITY
- 11:45 AM Kohler, S. L.; Wiley, M. J.: LONG-TERM DYNAMICS OF AN INVERTEBRATE HOST-PATHOGEN INTERACTION IN COLDWATER STREAMS
- 1:30 PM Spaak, P.; Keller, B.; Wolinska, J.: PARASITES CAN ALTER TAXA AND CLONAL COMPOSITION IN NATURAL DAPHNIA POPULATIONS
- 1:45 PM Caceres, C. E.; Hall, S. R.; Duffy, M. A.; MacIntyre, S.; Tessier, A. J.: SPATIAL AND TEMPORAL VARIATION IN METCHNIKOWIA EPIDEMICS IN 18 POPULATIONS OF DAPHNIA DENTIFERA
- 2:00 PM Johnson, P. T.; Longcore, J. E.; Stanton, D. E.; Preu, E. R.; Carnegie, R. B.; Carpenter, S. R.: UNDERSTANDING THE CAUSES AND CONSEQUENCES OF DISEASE IN AQUATIC ECOSYSTEMS: INSIGHTS FROM CHYTRID INFECTION IN DAPHNIA POPULATIONS
- 2:15 PM Paris, M. J.: FUNGAL PATHOGEN CAUSES COMPETITIVE AND DEVELOPMENTAL STRESS IN LARVAL AMPHIBIAN COMMUNITIES
- 2:30 PM Gilbert, P. M.; Evans, J. J.; Klesius, P. H.; Shoemaker, C. A.; Alexander, J. A.: COMPARISON OF TWO FISH KILL EVENTS INVOLVING HUMAN BACTERIAL PATHOGENS: INFLUENCE OF ENVIRONMENTAL STRESSORS AND HARMFUL ALGAE
- 2:45 PM Rejmánková, E.; Grieco, J.; Achee, N.; Masuoka, P.; Pope, K.; Roberts, D.: NUTRIENT ENRICHMENT AND MALARIA PERSISTENCE IN TROPICAL WETLANDS
- 3:30 PM Cottingham, K. L.; Donahue, M. J.; Butzler, J. M.: THE POTENTIAL EFFECTS OF FOOD WEB STRUCTURE ON CHOLERA POPULATION DYNAMICS AND TRANSMISSION TO HUMANS: MODELING AND LABORATORY EXPERIMENTS
- 3:45 PM Lyons, M. M.; Uhlinger, K. R.; Gast, R. J.; Ward, J. E.; Smolowitz, R.: QUAHOG PARASITE UNKNOWN (QPX) AND ITS ASSOCIATION WITH MARINE AGGREGATES
- 4:00 PM Staroscik, A. M.; Denkin, S. M.; Nelson, D. R.: PRODUCTION OF AI-2 AND REGULATION OF THE LUXS GENE IN THE FISH PATHOGEN VIBRIO ANGUILLARUM

**TS54: Advances in Microbial Ecology: New Culturing Techniques and Culture-independent Approaches**

Chair(s): Michael Rappe, rappe@hawaii.edu  
Bethany Jenkins, bjenkins@cats.ucsc.edu

Location: 255 B/C

- 3:30 PM Malmstrom, R. R.; Kiene, R. P.; Vila, M.; Simo, R.; Gasol, J. M.; Kirchman, D. L.: UPTAKE OF DIMETHYLSULFONIOPROPIONATE (DMSP) BY SYNECHOCOCCUS IN THE NORTHWEST ATLANTIC OCEAN.
- 3:45 PM Worden, A. Z.: MICROBIAL EXPRESSION: A KEY TO ENVIRONMENTAL DYNAMICS OF PICOEUKARYOTES
- 4:00 PM Caron, D. A.; Gast, R. J.; Countway, P. D.; Savai, P.; Schnetzer, A.; Moorthi, S.: PROTISTAN DNA SEQUENCE INFORMATION AND THE SPECIES CONCEPT: DEFINING TAXA FOR ECOLOGICAL STUDIES

- 4:15 PM MacGregor, B. J.; Juchelka, D.: DETERMINING STABLE CARBON ISOTOPIC COMPOSITION OF RNA BY HPLC-IRMS: A NEW METHOD TO DISCOVER WHO IS EATING WHAT IN MICROBIAL COMMUNITIES

**GS01: Paleoclimate: Terrestrial to Deep Ocean**

Location: Exhibit Hall

192. Meyer, K. M.; Freeman, K. H.; Kump, L. R.: RELATIONSHIP BETWEEN HOPANOID BIOMARKER AND PLANKTONIC MICROBIAL DIVERSITY IN SEDIMENTS OF MEROMICTIC FAYETTEVILLE GREEN LAKE, NY
193. Dolney, A.; Julius, M.: PALEOLIMNOLOGICAL COMPARISON OF A LAKE LOCATED ON A MILITARY TRAINING BASE AND A SIMILAR SYSTEM IN THE SURROUNDING AREA
194. Spruance, C. L.; Brunelle, A.: A PRELIMINARY ANALYSIS OF THE PALEOENVIRONMENTAL RECORD FROM A SMALL, ALPINE LAKE BASIN IN NEW MEXICO, USA.
195. Kidder, D. L.; Gierlowski-Kordesch, E. H.: IMPACT OF GRASSLAND RADIATION ON THE NONMARINE SILICA CYCLE AND MIOCENE DIATOMITE
196. Brown, D. C.; Christensen, B. A.: PLIOCENE SEA-LEVEL VARIATIONS ON THE SOUTHWEST AFRICAN MARGIN (ODP SITE 1085) FROM BENTHIC FORAMINIFERA FAUNAL ASSEMBLAGES
197. Kang, H. S.; Shin, K. H.; Yoon, H.I.; Kim, Y.D.: INTERPRETATION OF LATE QUATERNARY PALEOENVIRONMENT OF THE SAINT ANNA TROUGH, KARA SEA IN THE ARCTIC
198. Ballantyne, A. P.; Baker, P.; Fritz, S.; Seltzer, G.: 500,000 YEARS OF CLIMATE MEDIATED CARBON AND NITROGEN DYNAMICS IN A TROPICAL LAKE
199. Eltgroth, M. L.; Wolfe, G. V.: CELLULAR LOCALIZATION OF POLYUNSATURATED LONG-CHAIN NEUTRAL LIPIDS IN EMILIANIA HUXLEYI AND ISOCHRYSIS GALBANA (HAPTOPHYTA)
200. Placencia, J.; Pantoja, S.; Lange, C. B.; Prah, F.; Hebbeln, D.; Garcés-Vargas, J.: ALKENONES FROM THE EASTERN SOUTH PACIFIC OCEAN: IS THE TEMPERATURE RECORD IN SEDIMENTS SURFACE MIXED LAYER OR THERMOCLINE DERIVED?

**GS03: Invasive Species: Ecology and Impacts Across Aquatic Ecosystems**

Chair(s): Donn K. Branstrator, dbranstr@d.umn.edu  
Christine Mayer, christine.mayer@utoledo.edu

Location: Exhibit Hall

214. Qin, P.; Mayer, C. M.; Schulz, K. L.; Ji, X.; Ritchie, M.: PHOSPHORUS ABATEMENT AND DREISSENA FILTRATION: EFFECTS ON PERIPHYTON PRODUCTION AND STOICHIOMETRY IN LAKES?
215. Petrusek, A.; Šedivý, J.: VERTICAL MIGRATIONS OF THE FRESHWATER JELLYFISH CRASPEDACUSTA SOWERBYI IN STRATIFIED WATER BODIES

↳ represents Tutorial presentations

216. HOTALING, C. W.; SCHULZ, K. L.: SPATIAL AND TEMPORAL COMPARISONS OF NATIVE AND EXOTIC PREDATORY INVERTEBRATES IN THE LAURENTIAN GREAT LAKES

**GS07: Biosensors, New Technologies, and Cyberinfrastructure**

Location: Exhibit Hall

217. Preston, C. M.; Marin III, R.; Jones, W.; Ryan, J.; Jensen, S.; Feldman, J.; Massion, E.; Roman, B.; Cline, D.; Delong, E.; Scholin, C.: AUTONOMOUS, NEAR REAL-TIME DETECTION OF MARINE BACTERIOPANKTON IN MONTEREY BAY USING THE ENVIRONMENTAL SAMPLE PROCESSOR (ESP)

218. Egli, P. J.; Hanson, A. K.; Moore, C.; Dickey, T. D.; Chang, G. C.: IN SITU PHOSPHATE MEASUREMENTS ABOARD THE SANTA BARBARA CHANNEL CHARM MOORING

219. Smith, M. C.; Farmer, A. S.; Neumann, O.; Casper, E. T.; Patterson, S.; Gonzalez, G.; Paul, J. H.; Fries, D. P.: THE AUTONOMOUS MICROBIAL GENOSENSOR (AMG) - AN OPEN PLATFORM AUTONOMOUS GENETIC SENSOR FOR REAL-TIME DETECTION OF MARINE MICROORGANISMS.

220. Sweetman, R. J.; Egli, P. J.; Hanson, A. K.: IN SITU MEASUREMENTS OF THE SPATIAL AND TEMPORAL VARIABILITY OF NUTRIENTS IN COASTAL WATERS OFF CALIFORNIA

221. Broadbent, H. A.; Ivanov, S.; Steimle, G. T.; Fries, D. P.: DEVELOPMENT OF A MINIATURE OCEANOGRAPHIC CTD SYSTEM

222. Sieracki, M. E.; Balch, W.; Benfield, M.; Hanson, A.; Pilskaln, C.; Schultz, H.; Utgoff, P. E.; Riseman, E. M.; Schultz, H.; Utgoff, P. E.: AUTOMATED CLASSIFICATION OF PLANKTON FROM DIGITAL IMAGES

223. Raymond, E. L.; Widder, E. A.: EYE-IN-THE-SEA: A PLATFORM FOR UNOBSTRUSIVE IN-SITU OBSERVATIONS OF DEEP-SEA NEKTON

**GS16: Fish and Other Higher Trophic Levels**

Chair(s): Mary T. Bremigan, [bremigan@msu.edu](mailto:bremigan@msu.edu)  
Mitchell A. Roffer, [roffers@bellsouth.net](mailto:roffers@bellsouth.net)

Location: Exhibit Hall

210. Robinson, J. C.; Luecke, C.: INFLUENCE OF PLANKTIVOROUS FISH AND LAKE WATER LEVELS ON ABUNDANCE PATTERNS OF DAPHNIA IN BEAR LAKE

211. Wiegand, M. D.; Johnston, T. A.; Ballevena, A. J.; Watchorn, K. E.; Leggett, W. C.: EGG FATTY ACID COMPLEMENT IS DEPENDENT ON MATERNAL SIZE IN LAKE ONTARIO WALLEYE

212. Pasma, J. E.; McKeel, S.; Jones, C. M.; Sorensen, P. W.: USING OTOLITH CHEMISTRY TO IDENTIFY NURSERY HABITAT IN THE HAWAIIAN GOBY, AWAOUS GUAMENSIS

**TS02: Thresholds in Aquatic Systems: Where, When, and How Do They Occur?**

Chair(s): Todd Wellnitz, [wellnitz@lamar.colostate.edu](mailto:wellnitz@lamar.colostate.edu)

Location: Exhibit Hall

201. De Luna, E. D.; Matthews, R. A.: MICROBIAL PATTERNS IN THE METALIMNION OF LAKE WHATCOM, WASHINGTON (USA)

**TS11: Advances in Otolith Chemistry and Applications in Freshwater Systems**

Chair(s): Robyn Hannigan, [hannigan@astate.edu](mailto:hannigan@astate.edu)  
Nate Bickford, [nbickfor@astate.edu](mailto:nbickfor@astate.edu)

Location: Exhibit Hall

213. Sako, A.; O'Reilly, C. M.; Hannigan, R.; Bickford, N.; Johnson, R. L.: VARIATION IN OTOLITH ELEMENTAL COMPOSITIONS PROVIDE INFORMATION ABOUT FISH POPULATIONS AND FISH MOVEMENT IN LAKE TANGANYIKA, EAST AFRICA

**TS16: Scientific Inquiry in the K-16 Classroom**

Chair(s): Lesley K. Smith, [smithlk@cires.colorado.edu](mailto:smithlk@cires.colorado.edu)

Location: Exhibit Hall

1. Fox, J.; Clay, T.; Grunbaum, D.; Jumars, P.: USING PHYSICS AS A MEANS FOR UNDERSTANDING MARINE ORGANISMS IN THE HIGH SCHOOL CLASSROOM
2. Rodriguez-Lopez, M. A.; Woolums, R.; Lourenco, M.: OCEANS
3. Hoggarth, M. A.; Cook-Hoggarth, K. L.: TEACHING WATER RESOURCE INTEGRITY AT THE HIGH SCHOOL AND UNDERGRADUATE LEVELS EMPLOYING STRESSED STREAM ANALYSIS AND INDICES OF BIOTIC INTEGRITY
4. Tyner, E. C.; McCabe, P.; Greely, T.; Pyrtle, A. J.: IT TAKES A VELIGER TO TEACH A CHILD

**TS20: Integrating Research and Education: The Broader Impacts of Aquatic Science Research**

Chair(s): Peggy Hamner, [phamner@ucla.edu](mailto:phamner@ucla.edu)  
Linda E. Duguay, [duguay@usc.edu](mailto:duguay@usc.edu)

Location: Exhibit Hall

5. Goodman, K. J.; Wang, Q.; Mou, P. P.; Hershey, A. E.: MONITORING WATER QUALITY IN CHINA: THE USE OF BIOMONITORING TOOLS IN A DEVELOPING COUNTRY
6. Tang, K. W.; Gibson, D. M.; Peters, C.: DREAMS – A MULTIDIMENSIONAL RESEARCH AND EDUCATION PROGRAM FOR UNDERREPRESENTED STUDENTS

(\*) represents Invited presentations

7. Cowart, D. A.; Dellapenna, T.; McInnes, A.: INTERGRATION OF UNDERGRADUATE RESEARCH WITH A WEB-BASED DATA NETWORK: THE TEXAS COASTAL EROSION DATA NETWORK
8. Burns, J. A.; Moon, M.: ENVIRONMENTAL RESEARCH AND TREATY TRIBES: TRIBAL SCIENTISTS SHOULD BE ENCOURAGED TO PARTICIPATE.
9. Saleem, S.; Naar, D.; Donahue, B.; Carder, K.: SUBMARINE SPRINGS OFF THE COAST OF FORT MYERS, FLORIDA: CAN REMOTE SENSING THEMATICALLY "SENSE" THESE PHENOMENA?
10. Meaux, M. F.; Olsen, L. M.: SIMPLIFYING THE SEARCH FOR OCEAN DATA SETS THROUGH NASA'S GLOBAL CHANGE MASTER DIRECTORY
- TS28: Beyond the Mean: Effects of Instantaneous Turbulent Events on Organismal Processes**
- Chair(s): Marc Weissburg, marc.weissburg@biology.gatech.edu  
Don Webster, dw139@ce.gatech.edu
- Location: Exhibit Hall
202. Dombroski, D. E.; Crimaldi, J. P.: A 3D PLIF SYSTEM TO EXPLORE CRAYFISH NAVIGATION IN RESPONSE TO INSTANTANEOUS TURBULENT PLUME STRUCTURE
203. Larsen, L. G.; Crimaldi, J. P.: THE ROLE OF INSTANTANEOUS TURBULENT PROCESSES IN BROADCAST SPAWNING: AN EXPERIMENTAL APPROACH
- TS31: Water Quality Research in the 21st Century: Global Climate to Genomics**
- Chair(s): Erin Lipp, elipp@uga.edu  
Rachel T. Noble, rtnoble@email.unc.edu
- Location: Exhibit Hall
224. Pednekar, A. M.; Grant, S. B.; Jeong, Y.; Sanders, B. F.; Goulden, M.; Copil Oancea, C. M.: THE INFLUENCE OF CLIMATE, LAND USE AND TIDAL MIXING ON WATER QUALITY IN NEWPORT BAY, SOUTHERN CALIFORNIA
225. Pardi, R. R.; Hung, J.: AQUATIC GEOCHEMISTRY OF URBAN STREAMS, PASSAIC RIVER BASIN, USA
226. Ksoll, W. B.; Ishii, S.; Hicks, R. E.; Sadowsky, M. J.: DYNAMICS OF FECAL COLIFORMS AND SOURCES OF ESCHERICHIA COLI IN AN EPILITHIC PERIPHYTON COMMUNITY
227. Libby, P. S.; Borkman, D. G.; Turner, J. T.: VARIABILITY IN THE FREQUENCY, MAGNITUDE, AND DURATION OF PHAEOCYSTIS POUCHETII BLOOMS IN MASSACHUSETTS BAY – EUTROPHICATION VERSUS ECOLOGICAL COMPLEXITY
228. Handler, N. B.; Santoro, A. E.; Higgins, C. P.; Luthy, R. G.; Boehm, A. B.; Paytan, A.: SPATIOTEMPORAL COVARIATION OF BIOLOGICAL AND CHEMICAL POLLUTANT CONCENTRATIONS AND FLUXES AT WATERSHED OUTLETS IN CENTRAL CALIFORNIA, USA
229. Bunting, L.; Leavitt, P. R.; Hall, V.; Gibson, C. E.; Gallagher, D.: NITROGEN DEGRADATION OF WATER QUALITY IN A PHOSPHORUS-SATURATED CATCHMENT: THE CASE OF LOUGH NEAGH, NORTHERN IRELAND, 1930-2001.
230. Rowe, E. A.; Redalje, D. G.; Lohrenz, S. E.; Ellender, R. D.; Tuel, M.; Sawant, P.; Natter, M. J.; Pluhar, R.; Kirk, E.; Schilling, R.: THE SPATIAL AND TEMPORAL VARIABILITY OF BACTERIOPLANKTON RELATIVE TO WATER QUALITY IN THE BAY OF ST. LOUIS, MISSISSIPPI, USA
- TS33: Climate Change Effects on Inland Aquatic Ecosystems**
- Chair(s): Mark Scheuerell, mark.scheuerell@noaa.gov
- Location: Exhibit Hall
204. Doyle, S. A.; Saros, J. E.; Williamson, C. E.: INTERACTIVE EFFECTS OF ULTRAVIOLET RADIATION, TEMPERATURE, AND NUTRIENTS ON ALPINE PHYTOPLANKTON COMMUNITIES
205. Flores, E.; Bingham, B. L.: SUNLIGHT DAMAGE TO THE SOLITARY ASCIDIAN CHELYOSOMA PRODUCTUM
206. Loadman, N. L.; Huebner, J. D.; Thuen, D. J.; Lentz, V.; Young, D. L.; Wiegand, M. D.: SURVIVAL, REPRODUCTION AND PHOTOREPAIR IN DAPHNIA MAGNA EXPOSED TO ARTIFICIAL UVB AT DIFFERENT AGES
207. Young, D. L.; Wiegand, M. D.; Loadman, N. L.; Huebner, J. D.; Ballewona, A. J.: ARTIFICIAL ULTRAVIOLET-B RADIATION AFFECTS CHLOROPHYLL AND FATTY ACID CONTENT OF DUCKWEED (LEMNA MINOR)
- TS45: Enhancing K-12 Science Education and Graduate Student Professional Development**
- Chair(s): Amy Townsend-Small, amy@utmsi.utexas.edu  
Kenneth H. Dunton, dunton@utmsi.utexas.edu  
Gerardo Chin-Leo, chinleog@evergreen.edu
- Location: Exhibit Hall
11. Hill, R. J.; Kirby, B. E.; Mahowski, J. B.; Greely, T. M.; Pyrtle, A. J.; Lodge, A. P.: INCORPORATING MARINE SCIENCE INTO AN ELEMENTARY SCHOOL CURRICULUM: ADAPTING INSTRUCTION FOR ALL GRADE LEVELS
12. Saleem, S. M.; Madeiros, A.; Ringelspaugh, A.; Greely, T.; Pyrtle, A.; Lodge, A.; Ivey, S.: HOW TEACHING MARINE SCIENCE BECAME MY CREATIVE OUTLET
13. Chin-Leo, G.: TEACHING MARINE SCIENCES AT A LIBERAL ARTS COLLEGE USING AN INTERDISCIPLINARY APPROACH
14. Sharon Maurer, S. N.: WATERSHEDS-NATURAL 'BRIDGES' FOR INTEGRATING DISCIPLINES IN MIDDLE SCHOOL LEARNING

↪ represents Tutorial presentations

15. Breslin, V. T.; Tait, J. F.: SCIENCE ALONG THE CONNECTICUT COAST: AN INTERDISCIPLINARY APPROACH TO TEACHING SCIENCE TO UNDERGRADUATES
17. Petersen, E. U.; Chapman, D. S.; Godsey, H. S.; Madden, L.; Millward, L.: PROJECT WEST: PARTNERING TO ENHANCE INQUIRY BASED SCIENCE TEACHING IN THE SALT LAKE CITY SCHOOL DISTRICT
16. Brumsted, M. A.: OPERATION OYSTER: PUTTING HABITAT RESTORATION IN THE HANDS OF STUDENTS
- TS49: Physical Discontinuities in Aquatic Systems**
- Chair(s): Sally MacIntyre, sally@icess.ucsb.edu  
Piet Verburg, pverburg@sciborg.uwaterloo.ca
- Location: Exhibit Hall
208. Hodder, K. R.; Gilbert, R.: Particle size distribution across the thermocline of a large montane glacial lake.
209. Lacy, J. R.; Harney, J. N.; Gelfenbaum, G.: TEMPORAL VARIABILITY IN THE INFLUENCE OF EELGRASS ON CURRENTS IN THE BOTTOM BOUNDARY LAYER
- TS50: Disease in Aquatic Systems**
- Chair(s): Kathy Cottingham, cottingham@dartmouth.edu  
Steve Kohler, steve.kohler@wmich.edu
- Location: Exhibit Hall
231. Ragoonath, D. N.; Richardson, L. L.: PHYSIOLOGICAL ECOLOGY OF A HETEROTROPHIC CYANOBACTERIUM IN THE BLACK BAND DISEASE MICROBIAL CONSORTIUM OF CORALS
232. Holland, V. B.; O'Brien, W. J.: EFFECTS OF SCHISTOCEPHALUS SOLIDUS (CESTODA: LIGULIDAE) ON THE FORAGING ACTIVITY OF SLIMY SCULPIN (COTTUS COGNATUS) IN ARCTIC ALASKAN LAKES
233. Venton, J. C.; Griffin, D. W.; Lipp, E. K.: EVALUATION OF HUMAN FECAL PATHOGENS IN OFFSHORE REEFS OF THE FLORIDA KEYS
234. Keymer, D. P.; Miller, M. C.; Handler, N.; Schoolnik, G. K.; Boehm, A. B.: VARIABILITY IN PREVALENCE AND GENOTYPE OF VIBRIO CHOLERAEE ISOLATED FROM NORTHERN CALIFORNIA COASTAL WATERS
- TS56: Research Experiences of Undergraduates in Aquatic Sciences**
- Chair(s): Russell Cuhel, rcuhel@uwm.edu  
Carmen Aguilar, aguilar@uwm.edu
- Location: Exhibit Hall
18. Colbert, E. P.; Gallagher, J. L.; Seliskar, D. M.: COMPARISON OF NATIVE AND EXOTIC PHRAGMITES AUSTRALIS HAPLOTYPES: EFFECT OF SHOOT REMOVAL ON BUD BANK ACTIVITY AND LEAF PIGMENT CONTENT
19. Hill, A. E.; Burks, R. L.: WHAT DOESN'T KILL YOU...MAY GIVE CUES TO SURVIVAL: LOW CONCENTRATION ATRAZINE STIMULATES REPRODUCTION IN DAPHNIA MAGNA
20. Laukannen, K. H.: EFFECT OF GHOST SHRIMP (NEOTRYPAEA CALIFORNIENSIS) POPULATION DENSITY ON OXYGEN FLUX ACROSS THE SEDIMENT WATER INTERFACE
21. McInnes, A. J.; Joiner, N. L.; Wren, P. A.; Dellapenna, T. M.: MORPHOLOGICAL MONITORING OF A STORM-DOMINATED MICROTIDAL BARRIER ISLAND, GALVESTON ISLAND'S WESTEND, TEXAS, USA
22. Kelly, S. M.; Ginis, I.; Thomas, B.; Moon, I. J.: EFFECT OF AIR-SEA SURFACE FLUXES IN THE GEOPHYSICAL FLUID DYNAMICS LABORATORY HURRICANE PREDICTION SYSTEM
23. Linares, A. C.; Gordon, A. S.; Butler, M. J.: THE EVALUATION AND SIGNIFICANCE OF THE SPONGE COMMUNITY WITH RESPECT TO THE SURROUNDING WATER COLUMN WITHIN THE FLORIDA KEYS.
24. Arnold, B. R.; Christner, B. C.; Priscu, J. C.: ISOLATION AND CHARACTERIZATION OF MICROORGANISMS IN GLACIAL AND ACCRETED ICE FROM THE VOSTOK ICE CORE: IS THERE LIFE IN LAKE VOSTOK?
25. Walker, B. D.; Peucker-Ehrenbrink, B.: EVIDENCE FOR NON-CONSERVATIVE BEHAVIOR OF RHENIUM IN AQUATIC SYSTEMS
26. Anderson, J. A.; Targett, N. M.: SURFACE-ASSOCIATED PREDATOR CHEMOATTRACTANT IN HORSESHOE CRAB EGGS
27. Peranteau, C. L.; Crump, B. C.: ESTUARINE BACTERIOPANKTON METABOLISM AND DIVERSITY ACROSS A SEASONAL OXYGEN GRADIENT
28. McNeil, R. S.; Shirey, J. S.; Siwik, P. J.; Hoch, M. P.: ENZYMATIC ASSESSMENT OF NITROGEN AND PHOSPHORUS AVAILABILITY IN PIEDMONT STREAM PERIPHYTON COMMUNITIES: IS FLOW A FACTOR?
29. Seders, L. A.; Smith, A. J.; Palmer, D. F.; Namjesnik-Dejanovic, K.; Ortiz, J. D.: WATER QUALITY AND OSTRACODES: TRACKING CHANGES IN ROAD SALT AND NITRATE IN A NORTHEAST OHIO WATERSHED, USA
30. Bickel, S. L.; Jiang, H.; Strickler, J. R.: TIME SERIES OF FREE-SWIMMING ZOOPLANKTERS, TRANSITION MATICES OF BEHAVIOR, AND AUTO-CORRELATION OF MOTION PATTERNS
31. Lockwood, R. S.; Williamson, C. E.; Saros, J. E.; Kessler, K. I.: ZOOPLANKTON DISTRIBUTION AND ABUNDANCE ACROSS DOC GRADIENTS IN ALPINE LAKES OF THE BEARTOOTH MOUNTAINS: IS THERE EVIDENCE FOR AVOIDANCE OF UV RADIATION?
32. Brueggen, M. K.; Gannon, D. P.: EFFECTS OF BOTTLENOSE DOLPHIN SOUNDS ON THE ACOUSTIC BEHAVIOR OF SPOTTED SEA TROUT
33. Kupchik, M. J.; Grguric, G.: INTERSTITIAL WATER NUTRIENTS AT SEVERAL SITES IN GREAT BAY, NEW JERSEY
34. Wood, C. L.; Pratt, L. J.: ARCHIPELAGOS AS A POROUS MEDIUM FOR OCEAN CURRENTS

(\*) represents Invited presentations

35. Holsinger, S.; Kolbe, S.; Goodbred, S.; Flood, R.; Aller, J.: LATE HOLOCENE HISTORY OF THE GREAT SOUTH BAY BACKBARRIER LAGOON, LONG ISLAND, NEW YORK: EVIDENCE FOR A CATASTROPHIC BEGINNING
36. Lowe, A. T.; Whitehead, K.: A PRELIMINARY ASSESSMENT OF MYCOSPORINE-LIKE AMINO ACID (MAA) DISTRIBUTION IN THE NORTH PACIFIC OCEAN.
37. Myers, T. L.; Siefert, R. L.: AMMONIA FLUX CALCULATIONS ACROSS THE AIR-WATER INTERFACE USING HOURLY AIR AND WATER AMMONIA OBSERVATIONS AT AN OVER-WATER SITE ON THE CHESAPEAKE BAY
38. Soule, C.; Reimers, C.: PLANKTON BIO-FUEL CELLS: THE ROLES OF SULFIDE PRODUCTION IN THE ANODE CHAMBERS AND OF A BIO-FILM IN THE CATHODE CHAMBERS
39. Harrison, E. L.; Veron, F.: THE IMPACT OF RAINFALL ON THE OCEAN SURFACE AT LOW WIND SPEED
40. Prince, E.; Hicks, M. K.; Kubanek, J.: FLORIDA RED TIDE USES CHEMICALLY-MEDIATED INTERFERENCE TO SUPPRESS COMPETING PHYTOPLANKTON
41. Armour, R.: CHEMOTAXIS & PREDATORY CHOICE BY THE NUDIBRANCH HERMISSENDA CRASSICORNIS
42. Martin, C. S.; Saros, J. E.: PATTERNS OF SEASONAL PHYTOPLANKTON SUCCESSION IN PRAIRIE SALINE LAKES
43. Tait, E. D.; Carman, M.; Sievert, S. M.: A MOLECULAR APPROACH TO EXPLORING BACTERIAL ASSOCIATIONS WITH ASCIDIAN SPECIES OF WOODS HOLE, MASSACHUSETTS
44. Praetorius, S.; McManus, J.: A SEDIMENT RECORD OF BOTTOM CURRENTS IN THE NORTH ATLANTIC SINCE THE LAST ICE AGE
45. Thornton, B.; Adams, A.: EVALUATION OF PIT (PASSIVE INTEGRATED TRANSPONDER) TAGGING AS A METHOD FOR TRACKING THE MOVEMENTS OF JUVENILE COMMON SNOOK, CENTROPOMUS UNDECIMALIS
46. Lasley, R.; Yen, J.; Weissburg, M. J.; Doall, M. H.: EVIDENCE FOR CHEMICAL TRAIL PREFERENCE IN THE MATING BEHAVIOR OF A CALANOID COPEPOD, TEMORA LONGICORNIS
47. Rasher, D. B.; Calvert, E. L.; Stekoll, M. S.: KELP BEDS AS HABITAT AND NUTRIENTS FOR INVERTEBRATES IN SOUTHEAST ALASKA
48. Carlson IV, W. F.: TAXONOMIC VARIABILITY IN NUTRIENT CELL QUOTAS IN MARINE PHYTOPLANKTON
49. Montgomery, T.: SEDIMENT ORGANIC MATTER COMPOSITION IN EELGRASS BEDS: GOODWIN'S ISLAND, VA
50. Foster, S. Q.; Sohm, J.; Capone, D. G.: NITROGEN FIXATION ASSOCIATED WITH THE GIANT KELP, MACROCYSTIS PYRIFERA IN SOUTHERN CALIFORNIA WATERS
51. Young, D.; Prince, E.; Kubanek, J.: DO SOME GULF OF MEXICO PHYTOPLANKTERS RELEASE COMPOUNDS TO SUPPRESS FLORIDA RED TIDE?
52. Williams, B. D.; Ashford, J. A.: CAN ELEMENTAL MARKERS DISTINGUISH BETWEEN ANTARCTIC KRILL POPULATIONS IN THE WEDDELL SEA AND SOUTH SHETLAND ISLANDS?
53. Eastwood, M. M.; Donahue, M. J.; Fowler, A. E.: COMMUNITY IMPACTS OF INVASIVE SPECIES: THE EFFECTS OF TWO HISTORIC INVASIONS ON THE DISTRIBUTION AND TROPHIC INTERACTIONS OF LITTORINA SAXATILIS
54. Swanson, M. K.; Pawlak, G.: CORRELATIONS BETWEEN TURBIDITY AND SOURCES OF PHYSICAL FORCING ON THE SOUTH SHORE OF OAHU
55. Seebald, K. E.: ULTRASONIC TELEMETRY ASSESSMENT OF DIEL CHANGES IN HABITAT USE BY JUVENILE AND ADULT SUMMER FLOUNDER, P. DENTATUS, IN THE GREAT BAY-LITTLE EGG HARBOR ESTUARY.



**Wednesday, February 23, 2005****GS04: Eutrophication**

Chair(s): James W. Ammerman, ammerman@imcs.rutgers.edu

Location: 254 B

- 10:30 AM Gaas, B. M.; Sylvan, J. B.; Ammerman, J. W.: DEVELOPMENT OF A CONTINUOUS AUTOMATED ASSAY FOR REAL-TIME MEASUREMENT OF MICROBIAL ENZYME ACTIVITY
- 10:45 AM Bradley, P. B.; Bronk, D. A.: USE OF FLOW CYTOMETRIC SORTING IN THE MEASUREMENT OF AUTOTROPHIC NITROGEN UTILIZATION
- 11:00 AM Peeler, K.; Chanton, J. P.; Opsahl, S.; Murray, M.: CAFFEINE AS AN ANTHROPOGENIC SOURCE INDICATOR IN FRESHWATER AND MARINE SYSTEMS
- 11:15 AM DiMarco, S. E.; Hetland, R.; Chapman, P.; Rowe, G.: PHYSICAL PROCESSES AFFECTING SPATIAL SCALES AND EVOLUTION OF HYPOXIA ON THE TEXAS-LOUISIANA SHELF DURING SUMMER 2004
- 11:30 AM Foy, R. H.: CLIMATIC FACTORS IMPACTING ON NITRATE AND PHOSPHATE LOSSES TO LOUGH NEAGH: IMPLICATIONS FOR THE EFFECTIVENESS OF N CONTROLS TO AN APPARENTLY N LIMITED LAKE
- 11:45 AM Jaeger, S. A.; Sylvan, J. B.; Ammerman, J. W.: DISTRIBUTION OF MICROBIAL ECTOENZYME ACTIVITY IN THE NORTHERN GULF OF MEXICO
- 1:30 PM Smallwood, B. J.; Jones, W. B.; DiMarco, S. F.: SOURCES OF ORGANIC CARBON ON THE LOUISIANA CONTINENTAL SHELF DURING THE SPRING AND SUMMER OF 2004
- 1:45 PM Kopecky, A. L.; Dunton, K. H.: DRIFT MACROALGAL ABUNDANCE AND DISTRIBUTION IN RELATIONSHIP TO BIOLOGICAL INDICATORS IN TWO SEAGRASS DOMINATED TEXAS ESTUARINE SYSTEMS
- 2:00 PM Nunnally, C. C.; Rowe, G. T.: SEDIMENT COMMUNITY FLUX IN RESPONSE TO SEASONAL HYPOXIA IN THE GULF OF MEXICO
- 2:15 PM Sebetich, M. J.; Spellman, J.: SUCCESSFUL RESTORATION OF A SMALL LAKE IN NEW JERSEY, USA. A CASE STUDY.
- 2:30 PM Quigg, A. S.; Traywick, T. L.; Sylvan, J.; DiMarco, S. F.; Ammerman, J. W.: SEASONAL CHANGES IN PRIMARY PRODUCTIVITY IN THE GULF OF MEXICO
- 2:45 PM Yoshiyama, K.: PHYTOPLANKTON RESPONSE TO NUTRIENT ENRICHMENT IN AN URBANIZED ESTUARY: APPARENT INHIBITION OF PRIMARY PRODUCTION BY OVER-EUTROPHICATION.

**GS08: Stream and Lake Ecosystems**

Chair(s): Jonathan W. Moore, jwmoore@u.washington.edu

Location: 251 D/E

- 10:30 AM Cooke, S. L.; Williamson, C. E.; Saros, J. E.: UV RADIATION EFFECTS ON CALANOID REPRODUCTION ARE ALTERED BY TEMPERATURE, DISSOLVED ORGANIC CARBON, AND NUTRIENTS IN ALPINE LAKES

- 10:45 AM Scheuerell, J. M.; Hampton, S. E.; Schindler, D. E.: THE INFLUENCE OF LONG-TERM TEMPORAL DYNAMICS ON COEXISTENCE OF *DAPHNIA* SPECIES AND IMPLICATIONS FOR TROPHIC CONNECTIONS
- 11:00 AM Roberts, B. J.; Hill, W. R.; Mulholland, P. J.: ECOSYSTEM METABOLISM IN A FORESTED STREAM: AN ANNUAL ANALYSIS OF PATTERNS IN THE WEST FORK OF WALKER BRANCH
- 11:30 AM Weibell, B. J.; Shiozawa, D. K.: SEMI-QUANTITATIVE ASSESSMENT OF MACROINVERTEBRATE RESTORATION TO CHANNEL RECONSTRUCTION USING POINT SAMPLING
- 11:45 AM Moore, J. W.; Schindler, D. E.: MODIFICATION OF STREAM HABITATS BY SPAWNING SOCKEYE SALMON

**TS17: Formation, Budgeting, Modeling, and Microbial Interactions in Seawater Gels**

Chair(s): Pedro Verdugo, verdugo@u.washington.edu

Location: 256 B/C

- 3:30 PM Santschi, P. H.: THE OCEANIC GEL PHASE AS PART OF THE CONTINUUM BETWEEN DISSOLVED, COLLOIDAL AND PARTICULATE ORGANIC CARBON
- 3:45 PM Rodriguez, A.; Ding, Y.; Chin, W.; Gamble, L.; Castner, D.; Verdugo, P.: IRON ION ACCELERATES THE KINETICS OF SPONTANEOUS ASSEMBLY OF DOM POLYMERS FOR THE FORMATION OF MARINE MICROGELS
- 4:00 PM Metcalfe, A. M.; Burd, A.: POLYMERS, COLLOIDS AND STICKINESS: AGGREGATION AND MARINE SNOW CHARACTERISTICS
- 4:15 PM Stramski, D.; Wozniak, S. B.: LIGHT SCATTERING BY MARINE COLLOIDS

**TS20: Integrating Research and Education: The Broader Impacts of Aquatic Science Research**Chair(s): Peggy Hamner, phamner@ucla.edu  
Linda E. Duguay, duguay@usc.edu

Location: 250 D/E

- 10:30 AM Muller-Parker, G. T.: INTEGRATING RESEARCH AND EDUCATION: LESSONS FROM AN INTER-DISCIPLINARY UNDERGRADUATE TEAM-BASED RESEARCH PROJECT
- 11:00 AM Weiler, C. S.: DIALOG: A PROGRAM TO FOSTER INTERDISCIPLINARY UNDERSTANDING AND PEER NETWORKING AMONG RECENT PH.D. GRADUATES
- 11:15 AM Doyle, R. D.; Conry, T.; Scott, J. T.: BAYLOR UNIVERSITY CENTER FOR RESERVOIR AND AQUATIC SYSTEMS RESEARCH (CRASR): PROMOTING INTERDISCIPLINARY AQUATIC RESEARCH AND EDUCATION
- 11:30 AM Franks, S. E.; Peach, C. L.; Moll, R. A.: PREEMPTIVE ASSISTANCE: AN EXPERIMENTAL APPROACH FOR ENGAGING MARINE SCIENTISTS IN EDUCATION AND OUTREACH

(\*) represents Invited presentations

- 11:45 AM Schubel, J. R.; Lau, A. V.: AN UNDERUTILIZED WEAPON IN ENHANCING THE BROADER IMPACTS OF OCEAN RESEARCH
- 1:30 PM Matsumoto, G. I.: INTEGRATING RESEARCH AND EDUCATION AT A NONPROFIT RESEARCH ORGANIZATION \*
- 1:45 PM Aguilar, C.; Cuhel, R. L.; Ryder, R.; Hensgen, J.: INTEGRATION OF RESEARCH AND RESEARCH EDUCATION: EXUCSE OR OPPORTUNITY?
- 2:00 PM Cetrulo, B.; Herren, C.; Lemus, J.; Joyce, P.: BUILDING A COMMUNITY OF LEARNERS: A MODEL FOR A HIGHLY ACCELERATED MARINE SCIENCE PROGRAM FOR HIGH SCHOOL STUDENTS
- 2:15 PM Cuker, B. E.; Cutter, G. A.: MULTICULTURAL STUDENTS AT SEA TOGETER: PROMOTING DIVERISTY THROUGH THE NEXUS OF RESEARCH AND EDUCATION
- 2:30 PM Gelsleichter, J.; Kirkpatrick, B.: BEST PRACTICES IN EXPERIENTIAL EDUCATION IN THE AQUATIC SCIENCES: THE STUDENT PERSPECTIVE
- 2:45 PM Powell, J. M.; Pyrtle, A. J.; Williamson, V. W.; Griess, C. A.: MINORITIES STRIVING AND PURSUING HIGHER DEGREES OF SUCCESS IN EARTH SYSTEM SCIENCE (MS PHD'S) INITIATIVE'S PROFESSIONAL DEVELOPMENT PROGRAM
- TS24: Microzooplankton: The Link Between Top-down and Bottom-up Control**
- Chair(s): Diane Stoecker, stoecker@hpl.umces.edu
- Location: 250 C/F
- 10:30 AM Wickham, S. A.; Gaedke, U.: CILIATE RESPONSE TO DECREASING NUTRIENT LOADING IN LAKE CONSTANCE: A 12 YEAR STUDY \*
- 10:45 AM Claessens-Kenning, M.; Wickham, S.; Post, A.: TOP-DOWN OR BOTTOM-UP CONTROL, WHAT'S MORE IMPORTANT FOR CILIATES IN THE OLIGOTROPHIC OCEAN?
- 11:00 AM Fonda Umani, S.; Tirelli, V.; Beran, A.: MICROZOOPLANKTON: A COMPETITOR OR A FOOD SOURCE FOR COPEPODS?
- 11:15 AM Schnetzer, A.; Caron, D. A.; Countway, P. D.; Savai, P. P.: COPEPOD GRAZING IMPACT ON PROTISTAN ASSEMBLAGES FROM THE SAN PEDRO CHANNEL, CALIFORNIA: THE USE OF GENE SEQUENCE INFORMATION IN PREDATION EXPERIMENTS
- 11:30 AM Dolan, J. R.: DILUTION: USE RESULTS WITH CAUTION
- 11:45 AM Graneli, E.: WITH THE HELP OF ITS TOXIN AN ALGAE THAT IS BOTH A PREDATOR AND A MICROGRAZER
- TS30: Deep-sea Benthic Biogeochemical Processes and Interactions with Biota**
- Chair(s): Lisa Levin, llevin@ucsd.edu  
Greg Cowie, glcowie@glg.ed.ac.uk
- Location: 255 B/C
- 10:30 AM Witte, U.: THE FATE OF ORGANIC CARBON SETTLING AT THE DEEP-SEA FLOOR: AN EXPERIMENTAL APPROACH ~
- 11:00 AM Cowie, G. L.: BENTHIC BIOGEOCHEMICAL PROCESSES IN THE ARABIAN SEA: STUDIES ACROSS THE OXYGEN MINIMUM ZONE AND UNDER MONSOON AND INTERMONSOON CONDITIONS
- 11:15 AM Andersson, J. H.; Schwartz, M. C.; Woulds, C.; Cowie, G. L.; Soetaert, K.; Middelburg, J. J.: RESPIRATION AND BACTERIAL UPTAKE OF PHYTODETRITUS ACROSS THE ARABIAN SEA OXYGEN MINIMUM ZONE
- 11:30 AM Woulds, C.; Levin, L. A.; Jeffreys, R. M.; Larkin, K.; Andersson, J. H.; Cowie, G. L.; Schwartz, M. C.: THE ROLE OF BENTHIC FAUNA IN SEDIMENT ORGANIC MATTER CYCLING; RESULTS OF PULSE-CHASE CARBON TRACER STUDIES ACROSS THE ARABIAN SEA OXYGEN MINIMUM ZONE (OMZ)
- 11:45 AM Jeffreys, R. M.; Levin, L. A.; Whitcraft, C.; Wolff, G. A.: SEASONAL AND SPATIAL CHANGES IN TROPHIC PATTERNS OF BENTHOS ACROSS THE PAKISTAN MARGIN OXYGEN MINIMUM ZONE
- 1:30 PM Purinton, B. L.; DeMaster, D. J.; Smith, C. R.; Thomas, C. J.: C-14 AS A TRACER OF LABILE ORGANIC MATTER IN AN ANTARCTIC BENTHIC FOOD WEB
- 1:45 PM Levin, L. A.; Ziebis, W.; Michener, R.; Lee, R.; Harris, D.: MACROFAUNA-MICROBE-ENVIRONMENT INTERACTIONS: NEW QUESTIONS AND ANSWERS FROM ANIMAL ISOTOPIC SIGNATURES
- 2:00 PM Kemp, K. M.; Bagley, P. M.; Jamieson, A. J.; Collins, M. A.; Priede, I. G.: FAUNAL INTERACTIONS AT A LARGE BATHYAL FOOD FALL: A SIX MONTH STUDY IN THE NORTH-EAST ATLANTIC
- 2:15 PM Jahnke, R. A.: DYNAMICS OF SEAFLOOR BIOGEOCHEMISTRY AND BIOLOGY: THE NEED FOR SUSTAINED, HIGH-FREQUENCY OBSERVATIONS \*
- 2:30 PM Breuer, E. R.; Peppe, O.; Harvey, S. M.; Shimmield, G. B.; Mckinlay, S.: CONSUMPTION AND MICRODISTRIBUTION OF OXYGEN IN SEDIMENTS UNDERLYING THE PAKISTAN MARGIN OXYGEN MINIMUM ZONE.
- 2:45 PM Shimmield, T. M.; Shimmield, G. B.; Breuer, E. R.: NATURAL RADIONUCLIDE TRACERS OF BENTHIC FLUX DYNAMICS IN THE NORTHERN ARABIAN SEA
- 3:30 PM Law, G.; Shimmield, T. M.; Shimmield, G. B.; Cowie, G. L.; Ganeshram, R.: URANIUM CYCLING IN ORGANIC RICH SEDIMENTS
- 3:45 PM Schwartz, M. C.; Naik, H.; Naqvi, W. S.; Cowie, G.: SEDIMENTARY DENITRIFICATION ACROSS THE ARABIAN SEA OMZ: RATES AND TECHNIQUES
- 4:00 PM Linke, P.; Wallmann, K.; Suess, E.; Hensen, C.; Rehder, G.: IN-SITU BENTHIC FLUXES FROM AN INTERMITTENTLY ACTIVE MUD VOLCANO AT THE COSTA RICA CONVERGENT MARGIN
- 4:15 PM Sommer, S.; Pfannkuche, O.; Linke, P.; Luff, R.; Greinert, J.; Drews, M.; Gubsch, S.: THE EFFICIENCY OF THE BENTHIC FILTER – BIOLOGICAL CONTROL OF THE EMISSION OF DISSOLVED METHANE FROM SEDIMENTS HOSTING SHALLOW GAS HYDRATES

~ represents Tutorial presentations

**TS31: Water Quality Research in the 21st Century: Global Climate to Genomics**

Chair(s): Erin Lipp, elipp@uga.edu  
Rachel T. Noble, rtnoble@email.unc.edu

Location: 251 D/E

- 1:30 PM Goldman, C. R.: THE ROLE OF LIMNOLOGICAL RESEARCH IN THE GLOBAL WATER CRISIS
- 2:00 PM Chen, R. F.; Gardner, G. B.; Wang, X. C.; Rudnick, S. M.; Wang, Z.; Litz, L.; Cobb, D.; Saffert, H.; Wright, D.; Sherrell, R.; Peri, F.; Reinfelder, J.: THE SCHMUTZ OF NEW YORK
- 2:15 PM Redalje, D. G.; Sawant, P. A.; Schilling, R. L.; Rowe, E. A.; Pluhar, R. J.; Natter, M. J.; Kirk, E. A.: EVALUATING ENVIRONMENTAL QUALITY FOR AN ESTUARY ALONG THE NORTH-CENTRAL GULF OF MEXICO COASTLINE
- 2:30 PM Noble, R. T.; Bera, A.; Blackwood, A. D.; Fuhman, J. A.; Hernandez, X.; Griffith, J. F.; Liang, X.; Schiff, K.: AN HOLISTIC APPROACH FOR THE ASSESSMENT OF MICROBIAL CONTAMINATION IN BALLONA CREEK, LOS ANGELES, CALIFORNIA
- 2:45 PM Griffith, J. F.; Haugland, R. A.; Lovelace, G.; Schiff, K. C.; Sobsey, M. D.: MULTI-METHOD ANALYSIS OF MARINE ENVIRONMENTAL WATER SAMPLES FOR INDICATORS OF FECAL CONTAMINATION
- 3:30 PM Baums, I. B.; Kiesling, T.; Goodwin, K. D.; Fell, J. W.: DETECTION OF FECAL INDICATORS IN RECREATIONAL WATERS USING THE LUMINEX 100 SYSTEM
- 3:45 PM Field, K. G.; Dick, L.; Walters, S.; Petersen, C.: NEW DEVELOPMENTS IN FECAL SOURCE IDENTIFICATION WITH BACTEROIDETES MOLECULAR MARKERS
- 4:00 PM Cole, D. J.; Wang, X.; Lance, S.; Schmidt, N.; Lipp, E.: EFFECT OF CLIMATE ON REPORTED SALMONELLA CASE RATES IN SOUTHEAST GEORGIA
- 4:15 PM Fries, J. S.; Characklis, G. W.; Noble, R. T.: DYNAMICS OF PATHOGEN-PARTICLE INTERACTIONS AND IMPLICATIONS ON THE TRANSPORT AND ECOLOGY OF HUMAN PATHOGENS IN THE NEUSE RIVER ESTUARY, NC, USA

**TS32: The Role of Zooplankton Predator-prey Interactions in Structuring Plankton Communities**

Chair(s): Marie H. Bundy, mbundy@nsf.gov  
Maria Grazia Mazzocchi, grazia@szn.it  
Don R. Deibel, ddeibel@mun.ca

Location: 250 A/B

- 10:30 AM Tang, K. W.: COPEPODS AS MICROBIAL HOTSPOTS: EFFECTS OF HOST FEEDING ACTIVITIES ON ATTACHED BACTERIA
- 10:45 AM Ohman, M. D.; Sullivan, B. K.; Durbin, E. G.; Runge, J. A.: RELATIONSHIP OF PREDATION POTENTIAL TO MORTALITY FOR CALANUS FINMARCHICUS ON GEORGES BANK, N.W. ATLANTIC
- 11:00 AM BONNET, D.: LONG TERM CHANGES IN PREDATION ON COPEPODS IN THE ENGLISH CHANNEL

- 11:15 AM Costello, J. H.; Colin, S. P.; Higgins, J.; D'Ambra, I.: SCYPHOMEDUSAN FORM, FUNCTION AND FEEDING
- 11:30 AM Kolesar, S. E.; Breitbart, D. L.: SMALL-SCALE INTERACTIONS BETWEEN MNEMIOPSIS LEIDYI CTENOPHORES AND FISH LARVAE: EFFECT OF LOW DISSOLVED OXYGEN ON SWIMMING SPEEDS, ENCOUNTER RATE AND PREDATION
- 11:45 AM Gibson, D. M.: DOLIOLIDS REVISITED
- 1:30 PM Buskey, E. J.; Hyatt, C. J.: THE ROLE OF ZOOPLANKTON GRAZERS IN KARENIA BREVIS RED TIDE BLOOM DYNAMICS
- 1:45 PM Wiggert, J. D.; Haskell, A. E.; Paffenhöfer, G. A.; Hofmann, E. E.; Klinck, J. M.: SUSTAINING COPEPOD POPULATIONS UNDER OLIGOTROPHY: THE ROLE OF FEEDING BEHAVIOR
- 2:00 PM Menden-Deuer, S.; Grünbaum, D.: ZOOPLANKTON ON THE MOVE: UNDERSTANDING THE CONSEQUENCES OF INDIVIDUAL-LEVEL DIFFERENCES FOR POPULATION DISTRIBUTIONS
- 2:15 PM Kleppel, G. S.: LAND USE AND THE TROPHIC STRUCTURE OF ESTUARINE PLANKTON COMMUNITIES
- 2:30 PM Ambler, J. W.: COMPARISON OF SUMMER ZOOPLANKTON COMMUNITIES OFF CHINCOTEAGUE, VA, WITH OTHER COMMUNITIES IN U.S. ATLANTIC COASTAL WATERS
- 2:45 PM McKenna, K.; Moorhead, D.; Christian, R.; Laybourn-Parry, J.: NETWORK ANALYSIS OF CARBON FLOW IN THE PELAGIC FOOD WEB OF LAKE FRYXELL, ANTARCTICA: IMPACTS OF ALTERNATIVE TROPHIC STRUCTURE
- 3:00 PM von Harbou, L.; Deibel, D.; Passow, U.; Bathmann, U.: REMOVAL OF TRANSPARENT EXOPOLYMER PARTICLES (TEP) BY TUNICATES – A NEW ASPECT OF BENTHIC-PELAGIC LINKS IN FOOD WEBS
- 3:30 PM Spitael, M. S.; Hembre, L. K.; McAlpine, R. J.; Megard, R. O.; Hondzo, M.: DIEL PATTERNS OF PATCHINESS IN LAKE ZOOPLANKTON
- 3:45 PM Herren, C.; Haddock, S.; Brewster, J.; Case, J.; Orrico, C.: SLOW GLOWS AND FAST FLASHES: BIOLUMINESCENT SIGNALS AS INDICATORS OF PLANKTON COMMUNITY STRUCTURE
- 4:00 PM Rudstam, L. G.; Boscarino, B.; Gal, G.; Johannsson, O. E.; O'Gorman, R.; Mills, E. L.; Loew, E.; Mata, S.; Arts, M.; Eillenberger, J. J.: FINE SCALE DISTRIBUTION OF MYSIDS AND ZOOPLANKTON IN LAKE ONTARIO: EFFECT OF LIGHT AND TEMPERATURE.
- 4:15 PM Paffenhofer, G. A.; Sherr, B. F.; Sherr, E. B.: FROM SMALL SCALES TO THE BIG PICTURE: A MECHANISM CONTRIBUTING TO THE PERSISTENCE OF THE MICROBIAL LOOP

**TS37: Riverine-floodplain Interactions: Groundwater-surface Water Interactions**

Chair(s): Durelle Scott, dtscott@usgs.gov  
Emily Stanley, ehstanley@wisc.edu

Location: 250 C/F

(\*) represents Invited presentations

- 1:30 PM Tockner, K.; Uehlinger, U.; Doering, M.; Malard, F.: SHIFTING MOSAIC OF GROUNDWATER-SURFACE WATER INTERACTIONS: IMPLICATION FOR FLOODPLAIN BIODIVERSITY ~
- 2:00 PM Anderson, M. L.; Stanford, J. A.; Hauer, F. R.; Lorang, M. S.: FLOODPLAIN SPRING BROOKS: PATCHES OF HABITAT STABILITY IN A DISTURBED MOSAIC
- 2:15 PM Reid, B. R.; Hauer, F. R.; Stanford, J. A.: OXYGEN DYNAMICS AND COMMUNITY RESPIRATION IN A MONTANE FLOODPLAIN AQUIFER
- 2:30 PM Harner, M. J.: CONTRIBUTIONS BY MYCORRHIZAL FUNGI AND FINE ROOTS TO FLOODPLAIN NUTRIENT CYCLING
- 2:45 PM Baldwin, D. S.; Rees, G. N.; Mitchell, A. M.; Watson, G.: IMPACT OF SALINE GROUNDWATER INTRUSIONS ON ANAEROBIC BIOGEOCHEMICAL PROCESSES IN SEDIMENTS OF FRESHWATER FLOODPLAIN WETLANDS
- 3:30 PM Showers, W. J.; Fountain, M.; Usry, B.; DeMaster, D. J.: EVENT DRIVEN GROUNDWATER SURFACE WATER NITROGEN FLUX LINKAGES ON A WATERSHED SCALE
- 3:45 PM Noe, G. B.; Harvey, J. W.; Scott, D. T.; Hupp, C. R.: CONTROLS ON NUTRIENT PROCESSING IN RIVER-FLOODPLAIN ECOSYSTEMS \*
- 4:00 PM Duval, T. P.; Hill, A. R.: STREAM - FLOODPLAIN INTERACTIONS IN TWO LOWLAND HEADWATER STREAMS: RESULTS OF A BROMIDE TRACER EXPERIMENT
- 4:15 PM Scott, D. T.; Harvey, J. W.; Noe, G. B.; Böhlke, J. K.: NITROGEN TRANSPORT AND REMOVAL WITHIN A FLOODPLAIN ENVIRONMENT OF A SOUTHEASTERN US WATERSHED
- TS38: Feedbacks Among Physical and Biogeochemical Processes in Flowing Waters**
- Chair(s): Michael N. Gooseff, gooseff@cnr.usu.edu  
Judson Harvey, jwharvey@usgs.gov  
Steven M. Wondzell, swondzell@fs.fed.us
- Location: 251 A/B
- 10:30 AM Dahm, C. N.: FEEDBACKS AND LINKAGES BETWEEN PHYSICAL AND BIOGEOCHEMICAL PROCESSES IN STREAMS ~
- 11:00 AM Gonser, T.; Lorang, M.; Hoehn, E.: LINKING SURFACE/ GROUNDWATER EXCHANGE PATTERNS WITH FLUVIAL GEOMORPHIC FEATURES USING RN-222
- 11:15 AM Malard, E.; Uehlinger, U.; Zah, R.; Tockner, K.: FLOOD-PULSE, RIVERSCAPE DYNAMICS, AND HYPORHEIC BIODIVERSITY PATTERNS IN A GLACIAL-RIVER FLOODPLAIN SYSTEM
- 11:30 AM Rosi-Marshall, E. J.; Tank, J. L.; Hoellein, T. J.; Entekin, S. A.; Lamberti, G. A.: LOG-INDUCED BENTHIC SORTING INFLUENCES NUTRIENT AND PARTICLE RETENTION IN HEADWATER STREAMS
- 11:45 AM CHASAR, L. C.; CABLE, J. E.; SNEDDEN, G. A.; KRABBEHOFT, D. P.: EVALUATING MERCURY DISTRIBUTION IN A DELTAIC ESTUARY, BRETON SOUND, LOUISIANA (USA)
- 1:30 PM Lightbody, A. E.; Nepf, H. M.: FIELD AND LABORATORY OBSERVATIONS OF SMALL-SCALE DISPERSION IN WETLANDS ~
- 2:00 PM Hodges, B. R.; Fu, S.: FLOW IMPACT OF LARGE WOODY DEBRIS IN STREAMS AND RIVERS
- 2:15 PM Tanino, Y.; Nepf, H. M.: UNSTEADY GRAVITY CURRENTS IN AQUATIC CANOPIES
- 2:30 PM Colman, J. A.; Bratton, J. F.; Charette, M. A.; Crusius, J.; Masterson, J. P.: FLOW-MODEL, SALT-BALANCE, SEEPAGE-METER, RADON, AND GEOPHYSICAL ESTIMATES OF GROUND-WATER DISCHARGE TO A MARINE EMBAYMENT
- 3:30 PM Hall, R. O.; Baker, M. A.; Tank, J. L.; Arp, C. D.; Koch, B. J.: EXPORT OF PARTICULATE NITROGEN DURING STORMS INTERPRETED FROM 15N TRACER STUDIES IN STREAMS ~
- 4:00 PM Morris, M. R.; Stanford, J. A.: PACIFIC-SALMON DERIVED NUTRIENTS AND THEIR CONTRIBUTION TO PLANT NUTRITION ACROSS A FLOODPLAIN SUCCESSIONAL CHRONOSEQUENCE IN THE KOL RIVER, KAMCHATKA, RUSSIA
- 4:15 PM Crenshaw, C. L.; Dahm, C. N.; Sheibley, R. W.; Grimm, N. B.; Pershall, A. D.: NITROGEN DYNAMICS IN HYPORHEIC ZONE SEDIMENTS USING 15N-NO3 TRACERS
- TS42: Microbial Observatories: Integrative Studies of Microbial Habitats from Genomics to Biogeochemistry**
- Chair(s): Samantha Joye, mjoye@uga.edu  
Antje Boetius, aboetius@mpi-bremen.de  
Matthew Kane, mkane@nsf.gov
- Location: 256 B/C
- 10:30 AM Reysenbach, A. L.: MICROBIAL OBSERVATORIES: PROVIDING CLUES TO FORCES THAT DRIVE GLOBAL PATTERNS OF MICROBIAL DIVERSITY ~
- 11:00 AM Treude, T.; Boetius, A.; Smith, C. R.; and the shipboard scientific party, .: BIOGEOCHEMICAL GRADIENTS AT A DEEP-SEA WHALE-FALL \*
- 11:15 AM Schulz, H. N.; Schulz, H. D.: RAPID APATITE PRECIPITATION DRIVEN BY THE PHOSPHATE RELEASE OF THE LARGE SULFUR BACTERIUM THIAMARGARITA NAMIBIENSIS
- 11:30 AM Girguis, P. R.; Cozen, A. E.; DeLong, E.: GROWTH AND POPULATION DYNAMICS OF METHANOTROPHIC ARCHAEA AND SULFATE REDUCING BACTERIA IN A CONTINUOUS FLOW BIOREACTOR
- 11:45 AM Orcutt, B. N.; Joye, S. B.; Boetius, A.; Samarkin, V.: MOLECULAR BIOGEOCHEMISTRY OF SULFATE REDUCTION, METHANOGENESIS AND THE ANAEROBIC OXIDATION OF METHANE AT GULF OF MEXICO METHANE SEEPS
- 1:30 PM Boetius, A.; Niemann, H.; Loesekann, T.; Omeregic, E.; DeBeer, D.; Sauter, E.; Schlueter, M.; Foucher, J. P.: MUD VOLCANOES AS MICROBIAL HABITATS: PATTERNS OF SUCCESSION, ASSOCIATION AND EXCLUSION

↪ represents Tutorial presentations

- 1:45 PM Sievert, S. M.; Jonkers, H.; Hinrichs, K. U.; Sturt, H.; Krey, W. B.; Buehring, S.; Molyneux, S. J.: PHOTO-SYNTHETIC MICROBIAL MATS AT A SURFICIAL SULFIDIC SPRING: AN ANALOG FOR ARCHAIC ECOSYSTEMS?
- 2:00 PM Mikucki, J. A.; Welch, K. A.; Lyons, W. B.; Lee, P. A.; Prisco, J. C.: MICROBIOLOGICAL AND GEOCHEMICAL ANALYSIS OF OUTFLOW FROM A SUBGLACIAL LAKE
- 2:15 PM Yannarell, A. C.; Steppe, T. F.; Paerl, H. W.: EXTREME EVENTS IN EXTREME ENVIRONMENTS: RESPONSE OF A HYPERSALINE MICROBIAL MAT COMMUNITY TO HURRICANE FRANCES
- 2:30 PM Newton, R. J.; Kent, A. D.; Yannarell, A. C.; McMahon, K. D.: BACTERIAL COMMUNITY DYNAMICS IN A HUMIC LAKE: SHIFTING COMPOSITION AND DRAMATIC DROPS IN DIVERSITY OVER THREE YEARS
- 2:45 PM Giovannoni, S. J.; Carlson, C. A.; Vergin, K. L.; Morris, R. M.: TIME-SERIES MEASUREMENTS REVEAL SPATIAL AND TEMPORAL VARIABILITY AMONG BACTERIOPLANKTON LINEAGES AT BATS

**GS02: Primary Production**

Chair(s): Nicole L. Goebel, nicole.goebel@uconn.edu

Location: Exhibit Hall

138. Lipschultz, F.; Lomas, M. W.; Nelson, D. M.; Bates, N. R.; Walker, C. F.; Krause, J.: WINTER MIXING AND THE SPRING BLOOM: REVISING NEW PRODUCTION IN THE SARGASSO SEA
139. McGee, D. K.; Laws, R. A.; Cahoon, L. B.: A DEEP WATER BENTHIC DIATOM ASSEMBLAGE FROM OUTER SHELF-UPPER SLOPE SEDIMENTS, ONSLOW BAY, N.C.
140. Reifel, K. M.; Swan, B. K.; Tiffany, M. A.; Trees, C. C.; Hurlbert, S. H.: PHYTOPLANKTON COMPOSITION AND ABUNDANCE IN THE SALTON SEA, CALIFORNIA DETERMINED BY MICROSCOPY AND PIGMENTS
141. prezelin, B. B.: ABSOLUTE DEPENDENCE OF MARINE PRIMARY PRODUCTION ON ATMOSPHERIC OZONE CONCENTRATIONS: BWFS & UV RADIATION AMPLIFICATION FACTORS FOR CALIFORNIA COASTAL WATERS
142. Li/Qian, Q. P.; Hansell/Dennis, D. A.; McGillicuddy/Dennis, D. J.: STUDY OF NUTRIENTS IN A CYCLONIC EDDY IN THE SARGASSO SEA
143. Wigdahl, C. R.; Saros, J. E.; Osburn, C. L.; Fritz, S. C.: PATTERNS OF PRIMARY PRODUCTION IN SALINE LAKES OF THE GREAT PLAINS
144. Estévez-Blanco, P.; Fernández, E.; Cermeño, P.; Espiñeira, M.; Bode, A.; Castiñeira, F.; Lorenzo, J.; Varela, M.: SIGNIFICANT RELATIONSHIP BETWEEN C-14 BASED AND FRRF-DERIVED PRIMARY PRODUCTION ESTIMATES IN COASTAL WATERS OFF NW SPAIN

**GS04: Eutrophication**

Chair(s): James W. Ammerman, ammerman@imcs.rutgers.edu

Location: Exhibit Hall

56. Potapova, M.; Charles, D. F.: DIATOM METRICS FOR MONITORING EUTROPHICATION IN US RIVERS
57. Smallwood, B. J.; Mullenbach, B.; Jones, B.; DiMarco, S. F.: TOTAL SUSPENDED SOLIDS ON THE LOUISIANA CONTINENTAL SHELF DURING SPRING AND SUMMER 2004
58. Fisher, T. R.; Gustafson, A. B.; Tozzi, S.; Quigg, A.; Ammerman, J. W.: NUTRIENT ADDITION BIOASSAYS IN THE MISSISSIPPI RIVER PLUME
59. Zhang, L.; Fan, C.; Qin, B.; McCarthy, M. J.; Gardner, W. S.: COMPARISON OF PHOSPHATE AND AMMONIA FLUXES BETWEEN MACROPHYTE AND ALGAE DOMINATED ZONES IN A SHALLOW EUTROPHIC LAKE (LAKE TAIHU, CHINA)
60. Van Bergeijk, S. A.; Corzo, A.; Yufera, M.; Garcia de Lomas, J.: ECOLOGICAL RESPONSES OF INTERTIDAL MICROBENTHOS TO DEPOSITION OF DRIFTING GREEN MACROALGAE
61. Hayes, K. C.; Lewitus, A. J.: BIOASSAY NUTRIENT RESPONSES OF HARMFUL ALGAE IN A SOUTH CAROLINA BRACKISH LAGOONAL SYSTEM

**GS09: Symbiosis in Aquatic Systems**

Location: Exhibit Hall

62. Ossolinski, J. E.; Curless, S. E.; Sharp, J. H.: A CARBON BUDGET STUDY OF SYMBIOSIS BETWEEN ZOOXANTHELLAE AND CORAL ANIMAL
63. Bailey, K. L.; Weisz, J. B.; Lindquist, N.: CHARACTERIZATION OF SPONGE-ASSOCIATED MICROBIAL COMMUNITIES
64. Robison, J. D.; Warner, M. E.: DISSECTING THE PATHWAYS OF THERMAL AND LIGHT STRESS IN DIFFERENT SYMBIOTIC DINOFLAGELLATES

**GS11: Deep-sea Vents, Hot Springs, and Other Extreme Environments**

Chair(s): Jaye E. Cable, jcable@isu.edu

Location: Exhibit Hall

288. Swan, B. K.; Valentine, D. L.: INCIDENCE OF LYSOGENY IN PERMANENTLY-COLD, ANOXIC MARINE SEDIMENTS: SANTA BARBARA BASIN, CALIFORNIA
289. Teske, A.; Lauer, A.; Soerensen, K.: PHYLOGENETIC PROFILES OF PROKARYOTES IN DEEP MARINE SUBSURFACE SEDIMENTS (ODP LEG 201)
290. Walker, B.; Fisher, A. T.; Guilderson, T. P.; McCarthy, M. D.: DIC C-14 AGES OF FLUID FROM RIDGE FLANK HYDROTHERMAL SYSTEMS, JUAN DE FUCA RIDGE

(\*) represents Invited presentations

**TS01: From Gene Expression to Ecological Processes**

Chair(s): Frank J. Jochem, frank@jochemnet.de  
Gry Mine Berg, gberg@awi-bremerhaven.de

Location: Exhibit Hall

156. Shi, Y.; Preston, C. M.; Suzuki, M. T.: DIEL AND SPATIAL GENE EXPRESSION DYNAMICS OF NOVEL PROTEORHODOPSINS FROM THE HAWAII OCEAN TIME SERIES (HOTS)
157. Muhlin, J. E.; Brawley, S. H.: THE INFLUENCE OF COASTAL TOPOGRAPHY ON POPULATION GENETIC STRUCTURE OF FUCUS VESICULOSUS L. IN THE GULF OF MAINE
158. León-Cardona, A.; Teh, S. J.: FROM GENE EXPRESSION TO POPULATION-LEVEL EFFECTS: INTEGRATING BIOMARKERS TO REVEAL ANTIANDROGEN-SPECIFIC PROFILES IN MEDAKA FISH (ORYZIAS LATIPES)
159. Wecker, P.; Bauer, M.; Glöckner, F. O.: DEVELOPMENT OF A GENETIC SYSTEM FOR RHODOPIRELLULA BALTICA SH 1T
160. park, H.; Saito, M.; Song, B.; Morel, F. M.: IDENTIFICATION AND REGULATION OF CADMIUM CARBONIC ANHYDRASES IN MARINE DIATOMS
161. Lorenzi, A. H.; Takabayashi, M.; Wilkerson, F. P.: ASSESSING PRIMARY PRODUCTION IN DIATOMS USING GENETIC (REAL TIME PCR) AND BIO-GEOCHEMICAL (14C FIXATION) TECHNIQUES
162. Hoover, C. A.; Slattery, M.; Marsh, A. G.: PROFILING TRANSCRIPTOME COMPLEXITY DURING SECONDARY METABOLITE SYNTHESIS INDUCED BY WOUND STRESS IN A BENTHIC SOFT CORAL, SINULARIA POLYDACTYLA
163. Barada, L.; Takabayashi, M.; Wilkerson, F.: SELECTING AN APPROPRIATE INTERNAL CONTROL GENE FOR RELATIVE REAL-TIME REVERSE TRANSCRIPTION PCR
164. O'Connor, B. L.; Dobraca, D.; LaPara, T. M.; Hondzo, M.; Finlay, J. C.; Power, M. E.: QUANTITY-ACTIVITY COMPARISON OF DENITRIFYING BACTERIA AND NITRATE VARIABILITY IN STREAMS

**TS07: Pattern and Mechanism in Aquatic Biodiversity**

Chair(s): Val H. Smith, vsmith@ku.edu

Location: Exhibit Hall

165. Chiba, S.; Tadokoro, K.; Sugisaki, H.; Saino, T.: DECADEAL SCALE ECOSYSTEM CHANGE STUDY IN THE WESTERN NORTH PACIFIC BASED ON THE HISTORICAL ZOOPLANKTON COLLECTION – THE ODATE PROJECT –
166. Collins, B. M.; Colburn, E.; Sobczak, W. V.: SUBSURFACE FLOWPATHS DRIVE SPATIAL VARIATION IN THE MACROINVERTEBRATE COMMUNITY OF AN INTERMITTENT HEADWATER STREAM IN CENTRAL NEW ENGLAND

167. Stoddard, L. I.; Hughes, J. B.; Marston, M. F.: EVOLUTION OF CYANOPHAGE-RESISTANCE IN MARINE SYNECHOCOCCUS SPP.
168. Dale, R. K.; Miller, D. C.: 3-D THERMAL MAPPING SHOWS THE POTENTIAL OF INTERTIDAL GROUND-WATER SEEPS AS A MECHANISM FOR STRUCTURING SANDFLAT BIODIVERSITY
169. Harbeson, S. A.; Macko, S. A.; Orth, R.; VanMontfrans, J.; Combs, D.; Canuel, E.; Gross, M.: TRACING THE INCORPORATION OF ZOSTERA MARINA IN THE FOOD WEB OF RESTORED SEAGRASS BEDS: A STABLE ISOTOPE APPROACH
170. Steele, J. A.; Schwalbach, M. S.; Patel, A.; Hewson, I.; Fuhrman, J. A.: STABILITY IN MARINE BACTERIAL COMMUNITIES ON HOUR-DAY TIME SCALES AND KILOMETER SPATIAL SCALES IN THE SAN PEDRO BASIN, CALIFORNIA
171. Eberl, R.; Carpenter, E. J.: NEW INSIGHTS INTO MACROSETELLA GRACILIS (COPEPODA, MIRACIIDAE) AND TRICHODESMIUM SPP. ASSOCIATION FOR THE TROPICAL PACIFIC.
172. Leung, R.; Camargo, A.: RIPARIAN VEGETATION AND CHANNEL MORPHOLOGY INFLUENCING AQUATIC MACROPHYTE DISTRIBUTION IN COASTAL STREAMS IN SOUTHEAST BRAZIL
173. Soliman, Y. S.; Rowe, G. T.: REMARKABLE DEEP-SEA AMPHIPOD POPULATIONS ALONG A TRANSECT DOWN THE MISSISSIPPI CANYON (GULF OF MEXICO).

**TS10: Organic Matter Cycling in Saline Lakes**

Chair(s): Jasmine E. Saros, saros.jasm@uwlax.edu  
Christopher Osburn, cosburn@ccs.nrl.navy.mil

Location: Exhibit Hall

291. Kelley, C. A.; Bebout, B. M.; Bebout, L. E.: CHANGES IN CARBON CYCLING UNDER LOWERED SULFATE CONDITIONS IN HYPERSALINE MICROBIAL MATS
292. Nyholm, B. P.; Osburn, C. L.; Paerl, R. W.; Boyd, T. J.: VARIATION IN UDOM PHOTO- AND BIOLOGICAL-REACTIVITY IN FRESHWATER TO OCEAN TRANSECTS
293. Kenney, T. A.; Naftz, D. L.; Wankel, S. D.; Silva, S. R.; Mosley, R.; Van Leeuwen, J.: USE OF STABLE ISOTOPES TO DETERMINE ARTEMIA NUTRIENT SOURCES, GREAT SALT LAKE, UTAH
294. Fimmen, R. L.; Chin, Y. P.: CHANGES IN FULVIC ACID REDOX BEHAVIOR AND FATE OF ORGANIC AMINES IN PONY LAKE, ANTARCTICA DOM DURING ICE-MELT OVER THE AUSTRAL SUMMER

**TS13: Ecological Stoichiometry: The Periodic Table and Other Frontiers**

Chair(s): Ariel D. Anbar, anbar@earth.rochester.edu  
James Elser, j.elser@asu.edu  
Robert Sterner, stern007@umn.edu

Location: Exhibit Hall

↪ represents Tutorial presentations

174. Hassett, R. P.; Crockett, E. L.: A CHOLESTEROL-ENRICHED DIET ENHANCES EGG PRODUCTION AND EGG VIABILITY WITHOUT ALTERING CHOLESTEROL CONTENT OF BIOLOGICAL MEMBRANES IN A MARINE COPEPOD

175. Watts, J. M.; Elser, J. J.: RESPONSE OF A BENTHIC INVERTEBRATE TO ENVIRONMENTAL VARIANCE: A STOICHIOMETRIC PROSPECTIVE

**TS15: The Great Salt Lake System (Biology, Ecology, Hydrology, Geology, Geologic History)**

Chair(s): Robert L. Baskin, rbaskin@usgs.gov  
Charles Oviatt, joviatt@ksu.edu

Location: Exhibit Hall

295. Naftz, D. L.; Waddell, B.; Krabbenhoft, D.: MERCURY IN WATER AND BIOTA FROM GREAT SALT LAKE, UTAH

296. Acord, M. R.; Allred, A. D.; Jang, J.; Baxter, B. K.: ARCHAEA, BACTERIA, AND VIRUSES IN GREAT SALT LAKE: COMPLEXITY IN A SIMPLE ECOSYSTEM

297. Litchfield, C. D.; Baxter, B.; Sikaroodi, M.; Gillevet, P. M.: TEMPORAL DIVERSITY OF THE MICROBIAL COMMUNITY IN GREAT SALT LAKE

298. Parker, J. N.; Robinson, J. C.; Wurtsbaugh, W. A.; Marcarelli, A. M.: NUTRIENT LIMITATION AND NITROGEN FIXATION OF PHYTOPLANKTON AND STROMATOLITES IN THE GREAT SALT LAKE (UTAH, USA) UNDER VARYING SALINITIES

299. Baskin, R. L.; Allen, D. V.: BATHYMETRIC MAP OF GILBERT BAY AREA, GREAT SALT LAKE, UTAH

300. Allred, A. D.; Acord, M. R.; Jang, J.; Baxter, B. K.: THE PINK WATERS OF GREAT SALT LAKE: THE ROLE OF ARCHAEAL CAROTENOID PIGMENTS IN PHOTOPROTECTION

301. Helfrich, L. C.; Balch, D. P.; Cohen, A. S.: STABLE ISOTOPE ANALYSIS OF OSTRACODE VALVES: A RECORD OF CLIMATE CHANGE IN THE BONNEVILLE BASIN, GREAT SALT LAKE, UTAH.

**TS21: Coupling Dissolved Organic Matter (DOM) Chemistry and Microbial Activity in Aquatic Ecosystems**

Chair(s): Sandra Clinton, sclinton@uclink.berkeley.edu  
Jennifer Edmonds, edmonds@uga.edu

Location: Exhibit Hall

65. Voparil, I. M.; McCarthy, M. D.: RADIOCARBON AGE OF CONSTITUENTS OF DISSOLVED ORGANIC MATERIAL IN THE PACIFIC OCEAN

66. Orellana, M. V.; Donahue, S. M.; Repeta, D. J.: CARBON SEQUESTRATION: SHOTGUN PROTEOMICS ANALYSIS OF MARINE DISSOLVED ORGANIC MATTER

67. Jones, V.; Collins, M. J.; Penkman, K. E.; Gogou, A.; Migon, C.; Repeta, D. J.: MICROBIAL INPUTS TO THE DISSOLVED ORGANIC MATTER POOL AS REVEALED FROM AMINO ACID ENANTIOMER ANALYSIS

68. Schartau, M.: MODELING THE FORMATION OF EXTRACELLULAR PARTICULATE ORGANIC CARBON (POC).

69. Yoshimura, T.; Ogawa, H.; Nishioka, J.; Kuma, K.; Saito, H.; Tsuda, A.: DISSOLVED ORGANIC PHOSPHORUS DYNAMICS DURING IRON-INDUCED AND NATURAL DIATOM BLOOM IN THE WESTERN SUBARCTIC PACIFIC

70. Carlson, C. A.; Goldberg, S. J.; Meyers, M. K.; Nelson, N. B.; Siegel, D. A.: STOCKS, DISTRIBUTION AND BIOREACTIVITY OF DOM ALONG MERIDIONAL TRANSECTS IN THE NORTH ATLANTIC BASIN

71. Kujawinski, E. B.; Louisa Morrison, L.: ELUCIDATION OF METABOLIC PATHWAYS WITHIN MICROBIAL COMMUNITIES

72. Ogawa, H.; Fukuda, H.; Imai, K.; Saotome, N.; Kubo, A.; Suzumura, M.; Koike, I.: LATITUDINAL VARIATION OF DISSOLVED ORGANIC MATTER IN SURFACE WATERS OF THE WESTERN NORTH PACIFIC

73. Simmons, C. C.; Cherrier, J.; Hamill, B. J.: RESPONSE OF THE MARINE COASTAL DIATOM THALASSIOSIRA PSEUDONANA TO RAPID INCREASES IN LIGHT INTENSITIES

74. Macaluso, A. L.; Porter, J. A.; Sanders, R. W.: SHORT-TERM STIMULATION OF MICROBIAL POPULATIONS BY CDOM IN THE PRESENCE AND ABSENCE OF UV RADIATION

**TS22: Linking Molecular Ecology and Biogeochemistry in Extreme Aquatic Environments**

Chair(s): Christine M. Foreman, cforeman@montana.edu  
John C. Priscu, jpriscu@montana.edu

Location: Exhibit Hall

302. Steiner, C. C.; Breitbart, M. I.; Angly, F.; Wegley, L.; Edwards, R.; Rohwer, F. L.: UNCULTURED VIRAL DIVERSITY IN THERMOPHILIC ENVIRONMENTS.

303. Roehrborn, L. R.; Quigg, A. S.: WATER QUALITY CHANGES IN OFFATTS BAYOU (TX) AND ITS EFFECTS ON PHYTOPLANKTON

304. Coyne, K. J.; Wait, B.; Hawes, I.; Cowan, D. A.; Cary, S. C.: DIVERSITY AND EXPRESSION OF SUPEROXIDE DISMUTASE (MNSOD) BY BACTERIAL COMMUNITIES IN MELTWATER PONDS OF THE MCMURDO ICE SHELF, ANTARCTICA

305. Glazer, B. T.; Luther III, G. W.; Coyne, K. J.; Cary, S. C.: IN-SITU VOLTAMMETRY AS A TOOL TO AID MICROBIAL COMMUNITY COMPOSITION AND METABOLIC ANALYSES OF A MICROBIAL MAT

306. Foreman, C. M.; Christner, B. C.; Mikucki, J. A.; Priscu, J. C.: CRYOCONITES: ACTIVE ASSEMBLAGES ENTOMBED IN GLACIAL ICE

307. Samarkin, V.; Carini, S. A.; Joye, S. B.: SULFATE REDUCTION, METHANOGENESIS AND METHANE OXIDATION IN HOT CREEK SEDIMENTS, LONG VALLEY CALDERA, SE CALIFORNIA, USA

(\*) represents Invited presentations

308. Kelly, S. M.; Banta, A. B.; Von Damm, K. L.; Reysenbach, A. L.: PATTERNS OF MICROBIAL DIVERSITY ALONG A MID OCEAN RIDGE, 9 NORTH - 21 NORTH, EAST PACIFIC RISE
309. Mitchell, K. R.; Reysenbach, A. L.; Banta, A. B.; Rodman, A. W.; Nordstrom, D. K.; McCleskey, R. B.; Shanks III, W. C.; Gemery, P. A.; Morgan, L. A.; Vesbach, C. D.: DISTRIBUTION OF THERMOPHILIC MICROBIAL COMMUNITIES IN YELLOWSTONE NATIONAL PARK: ECOLOGICAL CONVERGENCE OR ISOLATION?
- TS24: Microzooplankton: The Link Between Top-down and Bottom-up Control**
- Chair(s): Diane Stoecker, stoecker@hpl.umces.edu
- Location: Exhibit Hall
75. Moats, K. M.; Lavrentyev, P. J.; Jochem, F. J.; Klarer, D. M.: ON THE APPLICABILITY OF SERIAL DILUTION TO MEASURING MICROZOOPLANKTON HERBIVORY IN PRODUCTIVE COASTAL WATERS
76. Lee, S. M.; Choi, J. K.: SPATIAL DISTRIBUTION AND STRUCTURE OF MICROBIAL COMMUNITY IN THE NORTHERN EAST CHINA SEA AND SOUTH SEA OF KOREA
77. Strom, S. L.; Bright, K. B.; Wolfe, G. V.: AMINO ACIDS AS SIGNAL MOLECULES AFFECTING FEEDING BY MICROZOOPLANKTON
78. Rollwagen Bollens, G.; Gifford, S. M.; Slaughter, A. M.; Bollens, S. M.: MICROZOOPLANKTON IN THE NORTHERN SAN FRANCISCO ESTUARY: IMPORTANT FOOD RESOURCES BUT MINIMAL PHYTOPLANKTON GRAZERS
79. Wolfe, G. V.; Bright, K. B.; Strom, S. L.: PROTIST BEHAVIORAL RESPONSES TO MICROMOLAR LEVELS OF DISSOLVED AMINO ACIDS
80. Wohlford, T. D.; Strom, S. L.: EFFECTS OF NUTRIENT LIMITATION ON PHYTOPLANKTON AND IMPACTS ON MICROZOOPLANKTON GRAZING
- TS26: Phytoplankton Nutrient Physiology: Plasticity, Interspecific Differences, and Biogeochemical Consequences**
- Chair(s): Robert Armstrong, rarmstrong@notes.cc.sunysb.edu  
John Raven, j.a.raven@dundee.ac.uk  
Adam Kustka, kustka@princeton.edu
- Location: Exhibit Hall
145. Erickson, J. M.; Saros, J. E.; Martin, C.: COMMUNITY- AND SPECIES-LEVEL PATTERNS IN ALKALINE PHOSPHATASE ACTIVITY IN PRAIRIE SALINE LAKES
146. Wilhelm, S. W.; Bullerjahn, G. S.; Eldridge, M. L.: EVIDENCE FOR ABUNDANT SYNECHOCOCCUS AND PROCHLOROCOCCUS ASSOCIATED WITH THE LAKE ERIE "DEAD ZONE"
147. Hynes, A. M.; Webb, E. A.; Dyhrman, S. T.; Doney, S. C.: PHOSPHORUS AND IRON PHYSIOLOGY IN NORTH PACIFIC TRICHODESMIUM
148. Wetz, M. S.; Wheeler, P. A.: RELEASE OF DISSOLVED ORGANIC MATTER BY COASTAL DIATOMS
149. Henke, M. E.; Saros, J. E.: IRON LIMITATION PATTERNS IN PRAIRIE SALINE LAKES OF THE NORTHERN GREAT PLAINS
150. Achilles, K. M.; Hutchins, D. A.; Church, T. M.: BIOAVAILABILITY OF IRON TO CYANOBACTERIAL CULTURES
151. Castruita, M.; Elmegreen, L.; Stiefel, E. I.; Morel, F. M.: DPS PROTEINS IN THE MARINE ENVIRONMENT
- TS27: Photochemical Contrasts from Lakes to the Sea**
- Chair(s): Gregory Cutter, gcutter@odu.edu
- Location: Exhibit Hall
310. Rivera-Sanchez, M.; Cutter, G. A.: ARSENIC AND ANTIMONY (III) PHOTOCHEMICAL OXIDATION IN COASTAL SEAWATER
311. Pothen, J. J.; Minor, E. C.; Mopper, K.: EFFECTS OF SALINITY CHANGES ON THE PHOTODEGRADATION OF DISSOLVED ORGANIC MATTER FROM GREAT DISMAL SWAMP, VA
- TS29: Aquatic Classification - From the Headwaters to the Sea**
- Chair(s): Naomi Detenbeck, detenbeck.naomi@epa.gov
- Location: Exhibit Hall
176. DeGoosh, K. E.; Schilling, E. G.; Loftin, C. S.; Webster, K. E.: MESSAGE IN THE MUD: WHAT THE PRESENCE OF CHAEBORUS AMERICANUS CAN TELL US ABOUT FISH DISTRIBUTIONS THROUGHOUT THE MAINE LANDSCAPE
177. Wan, H.; Perry, J. A.; Ferrin, R. S.; Stadsvold, B. K.; Grave, B. N.: AQUATIC HABITATS CLASSIFICATION ON THE ST CROIX RIVER BY ARTIFICIAL NEURAL NETWORK (ANN)
178. Brown, C. W.; Behrenfeld, M. J.: INTERMITTENCY OF PRIMARY PRODUCTION IN THE OCEAN
179. MOFFETT, M. E.; SIMON, T. P.; DETENBECK, N. E.: INVENTORY AND CLASSIFICATION OF GREAT LAKES COASTAL WETLANDS FOR MONITORING AND ASSESSMENT AT LARGE SPATIAL SCALES
- TS32: The Role of Zooplankton Predator-prey Interactions in Structuring Plankton Communities**
- Chair(s): Marie H. Bundy, mbundy@nsf.gov  
Maria Grazia Mazzocchi, grazia@szn.it  
Don R. Deibel, ddeibel@mun.ca
- Location: Exhibit Hall

↪ represents Tutorial presentations



81. Burks, R. L.; Michels, H.; Gonzalez Sagrario, M. A.; Jeppesen, E.: SPINELESS BUT NOT WIMPY: INVERTEBRATE PREDATOR (CHAOBORUS) PROMPTS DIEL HORIZONTAL MIGRATION OF LARGE-BODIED DAPHNIA
82. Norrbin, M. F.: CHANGES IN VERTICAL DISTRIBUTION OF COPEPODS EXPOSED TO CHEMICAL SIGNALS FROM MARINE FISH
83. Thal, J.; Durbin, E.: ABUNDANCE AND DISTRIBUTION OF NORTHERN KRILL, MEGANYCTIPHANES NORVEGICA, AND THEIR PREDATION IMPACT ON COPEPOD POPULATIONS IN THE GULF OF MAINE REGION
- TS34: Comparative Ecology of High-altitude and High-latitude Aquatic Ecosystems**
- Chair(s): Christian H. Fritsen, chris.fritsen@dri.edu
- Location: Exhibit Hall
312. Nielson, M. R.; Gradinger, R. R.; Bluhm, B. A.: STABLE ISOTOPE TURNOVER RATES FOR THE ARCTIC ICE-RELATED AMPHIPOD SPECIES ONISIMUS LITORALIS
- TS44: Biocomplexity in Marine Ecosystems**
- Chair(s): Anthony Michaels, tony@usc.edu  
Doug Capone, capone@usc.edu
- Location: Exhibit Hall
180. Cooley, S. R.; Yager, P. L.: INTRA- AND INTERANNUAL VARIATION IN THE WESTERN TROPICAL ATLANTIC INORGANIC CARBON SYSTEM
181. Parker, D.; Shirley, T. C.; Warrenchuk, J.: RANGE EXTENSION FOR THE MESOPELAGIC SCYPHOMEDUSA TIBURONIA GRANROJO
182. Blackmore, D.; Champanerkar, J.; Levandowsky, M.: COMPLEXITY MEASURES: A SALT MARSH EXAMPLE
183. Carpenter, E. J.; Subramaniam, A.; Burns, J.; Cooley, S.; Finzi, J.; Gunderson, T.; Shipe, R.; Yager, P.; Capone, D.; Mahaffey, C.: CARBON AND NITROGEN FIXATION IN THE WESTERN TROPICAL NORTH ATLANTIC (WTNA) OCEAN
184. Long, A. K.; de la Rosa, M.; Paul, J. H.: LYSOGENY IN MARINE BACTERIA: STUDIES WITH PHISIC AND NATURAL POPULATIONS
185. Kirshtein, J. D.; Peglar, M. T.; Voytek, M. A.: TEMPORAL AND SPATIAL VARIATION IN AMMONIA OXIDIZER DIVERSITY AND ABUNDANCE: RELATIONSHIP TO ENVIRONMENTAL VARIABLES
186. Sañudo-Wilhelmy, S. A.; Tovar-Sanchez, A.; Fu, F. X.; Capone, D. G.; Carpenter, E. J.; Hutchins, D. A.: THE IMPACT OF SURFACE-ADSORBED PHOSPHORUS ON REDFIELD STOICHIOMETRY IN TRICHODESMIUM
187. Collier, J. L.; Baker, K. M.; Solomon, C. M.: RESPONSES OF UREA-DEGRADING ORGANISMS IN CHESAPEAKE BAY TO ENRICHMENT WITH NITRATE, AMMONIUM, OR UREA
188. Foster, R. A.; Church, M. J.; Carpenter, E. J.; Capone, D. G.; Zehr, J. P.: A QUANTITATIVE PCR STUDY OF RICHELIA-DIATOM SYMBIOSES AND FREE-LIVING CYANOBACTERIAL POPULATIONS DOWNSTREAM OF THE AMAZON RIVER DISCHARGE
189. Sohm, J. A.; Capone, D. G.: PHOSPHORUS DYNAMICS OF THE NORTH ATLANTIC: TRICHODESMIUM VS. BULK PLANKTON
- TS47: Biological-physical Interaction at Individual Plankter Scale**
- Chair(s): Jeannette Yen, jeannette.yen@biology.gatech.edu  
Houshuo Jiang, hsjiang@whoi.edu
- Location: Exhibit Hall
84. Maldonado, E. M.; Latz, M. I.: SHEAR STRESS DEPENDENCE OF DINOFLAGELLATE GROWTH AND BIOLUMINESCENCE
- TS51: Algal Dynamics and Metabolite Release and Toxins**
- Chair(s): Paul Westerhoff, p.westerhoff@asu.edu  
Jonathan Sharp, jsharp@udel.edu
- Location: Exhibit Hall
152. Damon, R. L.; Satchwell, M. F.; Hotto, A. M.; Boyer, G. L.: DISTRIBUTION AND MOLECULAR ANALYSIS OF MICROCYSTIN CYANOBACTERIAL TOXINS IN LAKE CHAMPLAIN, NY.
153. Marin, R.; Doucette, G.; Powell, C.; Ryan, J.; Kudela, R.; Scholin, C.: A BLOOM OF PSEUDO-NITZSCHIA AUSTRALIS IN MONTEREY BAY, CA, IS ASSOCIATED WITH EXTREME VARIATIONS IN LEVELS OF PARTICULATE AND DISSOLVED DOMOIC ACID
154. Satchwell, M. F.; Hotto, A. M.; Yang, X.; Boyer, G. L.: SEASONAL PRODUCTION AND MOLECULAR CHARACTERIZATION OF MICROCYSTIN IN ONEIDA LAKE, NEW YORK
155. Hubbard, K. A.; Armbrust, E. V.; Orellana, M. V.; Petersen, T. W.; Bill, B. D.: MOLECULAR AND PHYSIOLOGICAL DIFFERENTIATION OF PSEUDO-NITZSCHIA PUNGENS FROM COASTAL AND INLAND WATERS OF WASHINGTON STATE
- TS55: Genome-enabled Insights into Aquatic Ecosystems**
- Chair(s): Brian Palenik, bpalenik@ucsd.edu
- Location: Exhibit Hall
190. Richter, M.; Lombardot, T.; Strittmatter, A.; Bauer, M.; Glöckner, F. O.: GENE NEIGHBOURHOOD ANALYSIS OF ORFANS IN ENVIRONMENTALLY RELEVANT SULFATE REDUCING BACTERIA
191. John, D. E.; Wawrik, B.; Paul, J. H.: Uncovering Diversity in the rbcL Genomic Environment of Marine Synechococcus

(\*) represents Invited presentations

**Thursday, February 24, 2005****GS03: Invasive Species: Ecology and Impacts Across Aquatic Ecosystems**

Chair(s): Donn K. Branstrator, dbranstr@d.umn.edu  
Christine Mayer, christine.mayer@utoledo.edu

Location: 250 C/F

- 1:30 PM Ayala, J. R.; Rader, R. B.; Belk, M. C.; Schaalje, G. B.: OVERLAP IN THE SEASONAL AND DIEL HABITAT USE OF NATIVE LEAST CHUB (IOTICHTHYS PLEGETHONTIS) AND INVASIVE WESTERN MOSQUITOFISH (GAMBUSIA AFFINIS)
- 1:45 PM Mills, M. D.; Rader, R. B.; Belk, M. C.: COMPLEX INTERACTIONS BETWEEN NATIVE AND INVASIVE FISH: THE SIMULTANEOUS EFFECTS OF MULTIPLE NEGATIVE INTERACTIONS
- 2:00 PM Storch, A. J.; Schulz, K. L.; Caceres, C. E.; Dettmers, J. M.; Smyntek, P.; Teece, M. A.: THE ROLE OF INVASIVE ZOOPLANKTON IN THE DIETS OF GREAT LAKES PLANKTIVORES
- 2:15 PM Branstrator, D. K.; Shannon, L. J.; Brown, M. E.: EFFECTS OF PHYSICAL AND CHEMICAL STRESSORS ON SURVIVAL OF THE DIAPAUSING EGG OF BYTHOTREPHES LONGIMANUS
- 2:30 PM Follstad Shah, J. J.; Dahm, C. N.: SOIL NITROGEN CYCLING IN RIPARIAN FORESTS: DRIVER OF NON-NATIVE PLANT INVASION?
- 2:45 PM Whitcraft, C. R.; Crooks, J. A.; Levin, L. A.; Talley, D. M.: EFFECT OF INVASIVE TAMARISK ON THE PHYSICAL ENVIRONMENT AND SEDIMENT FOOD WEB IN A SALT MARSH ECOSYSTEM
- 3:30 PM Cuhel, R. L.; Aguilar, C.; Hinkfuss, S.; Freer, E.; Pankowski, M.; Janssen, J.: QUAGGA MUSSEL (DREISSENA BUGENSIS) INVASION OF WESTERN LAKE MICHIGAN 2002-2004: THE LEADING EDGE
- 3:45 PM Brown, J. R.; Miller, D. C.: DIFFERENTIAL USAGE OF BIOGENIC STRUCTURES BY NATIVE AND INVASIVE SPECIES
- 4:00 PM Mayer, C.; Johnson, R.; Lohner, R.; Rudstam, L.; Mills, E.; Bridgeman, T.; Heckathorn, S.: BIOLOGICAL AND PHYSICAL FACTORS AFFECTING BENTHIFICATION IN LAKES
- 4:15 PM Errera, R. M.; Roelke, D. L.; Pinckney, J. L.: INVASION SUCCESS OF PRYMNESIUM PARVUM IN A DEEP, SEMI-TROPICAL RESERVOIR: THE ROLE OF INORGANIC NUTRIENTS

**GS11: Deep-sea Vents, Hot Springs, and Other Extreme Environments**

Chair(s): Jaye E. Cable, jcable@isu.edu

Location: 251 D/E

- 1:30 PM Blankenship, L. E.; Yayanos, A. A.; Levin, L. A.: ECOLOGY OF THE HADAL ZONE: INFERENCES FROM SCAVENGING AMPHIPODS

- 1:45 PM Cable, J. E.; Carney, R. S.; Dulaiova, H.; Burnett, W. C.: ESTIMATING THE WATER FLUX FROM A DEEP-SEA BRINE POOL IN THE GULF OF MEXICO
- 2:00 PM Kalanetra, K. M.; Joye, S. B.; Huston, S. L.; Nelson, D. C.: EVOLUTIONARY RELATIONSHIPS OF TWO TYPES OF NOVEL, VACUOLATE, SULFUR BACTERIA FROM COLD SEEPS AND HYDROTHERMAL VENTS
- 2:15 PM McCarthy, M. D.; Walker, B.; Guilderson, T.: ELEMENTAL AND ISOTOPIC COMPOSITION OF PARTICULATE ORGANIC MATTER FROM HYDROTHERMAL FLUIDS IN OLD VS YOUNG OCEAN CRUST
- 2:30 PM Moore, T. S.; Waite, T. J.; Kraiya, C.; Tsang, J.; Janzen, C. P.; Luther, G. W.; Nuzio, D. M.; Glazer, B. T.; Shank, T. M.: DEVELOPMENT OF AN IN-SITU ELECTRO-CHEMICAL ANALYZER (ISEA) FOR DEEP-SEA HYDROTHERMAL VENT WORK.
- 2:45 PM Richards, M. D.; Tamone, S. L.; Shirley, T. C.: DETERMINING GROWTH POTENTIAL UTILIZING HORMONE LEVELS IN THE DEEP SEA CRAB, MACROREGONIA MACROCHIRA

**GS14: Chemical Signaling in the Aquatic Environment**

Chair(s): Richard Zimmer, z@lifesci.ucla.edu  
Jeffrey Riffell, jeffr@neurobiology.arizona.edu

Location: 251 A/B

- 3:30 PM Riffell, J. A.; Zimmer, R. K.: SPERM CHEMOTAXIS AND EFFECTS OF STEADY SHEAR FLOW ON GAMETE INTERACTIONS
- 3:45 PM Zimmer, R. K.; Riffell, J. A.; Spehr, M.; Hatt, H.: CHEMICAL COMMUNICATION AND THE LANGUAGE OF SPERM AND EGG
- 4:00 PM Davis, J. M.; Moser, K. A.; Chan, M. A.: PHYSICAL AND CHEMICAL CHARACTERISTICS OF ROCK POOLS ON THE COLORADO PLATEAU, UTAH, U.S.A.
- 4:15 PM Green, C. E.; O'Brien, W. J.: EFFECTS OF KAIROMONE PRESENCE FROM AN INVERTEBRATE AND VERTEBRATE PREDATOR SPECIES ON DAPHNIA MIDDENDORFFIANA IN ARCTIC WATERS

**GS16: Fish and Other Higher Trophic Levels**

Chair(s): Mary T. Bremigan, bremigan@msu.edu  
Mitchell A. Roffer, roffers@bellsouth.net

Location: 250 C/F

- 10:30 AM Bremigan, M. T.; Jubar, A. K.; Wagner, T.: CAN HABITAT ALTERATION AND SPRING FISHING EXPLAIN BLACK BASS NEST DISTRIBUTION AND SUCCESS ?
- 10:45 AM Brind'Amour, A.; Boisclair, D.; Legendre, P.; Borcard, D.: MULTISCALE SPATIAL DISTRIBUTION OF LITTORAL FISH ASSEMBLAGES IN RELATION TO ENVIRONMENTAL FACTORS
- 11:00 AM Gayeski, N. J.; Stanford, J. A.: AN EMPIRICAL BAYES APPROACH TO LINEAR REGRESSION PROBLEMS INVOLVING ECOLOGICAL DATA

↪ represents Tutorial presentations

- 11:15 AM Law, C. G.; Quinlan, J. A.; Hart, D. R.: SOURCE-SINK DYNAMICS OF LARVAL TRANSPORT IN SEA-SCALLOPS UNDER A ROTATIONAL-HARVEST MANAGEMENT PLAN
- 11:30 AM Roffer, M. A.; Muller-Karger, F.; Hammond, D.; Wall, C.: STUDY OF OCEAN ENVIRONMENTAL PARAMETERS TO FORECAST THE EFFECTS OF CLIMATE VARIABILITY ON DOLPHIN FISH AND KING MACKEREL
- 11:45 AM Wiley, S. A.; Yakubu, A. A.; Fogarty, M.: INTRAGUILD PREDATION AND HARVESTING IN A GEORGES BANK FOOD CHAIN

**TS08: Limnology of Tropical and Subtropical Lakes**

Chair(s): Karl E. Havens, khavens@ufl.edu

Location: 254 B

- 10:30 AM Lewis, W. M.: OVERVIEW OF LATITUDINAL GRADIENTS IN LAKES: FIFTY DEGREES TO ZERO DEGREES ~
- 11:00 AM Lind, O. T.; Davalos-Lind, L. O.: LIMNOLOGICAL CONSEQUENCES OF EXPLOITIVE WATER DECLINE IMPOSED ON NORMAL WET-DRY CYCLES OF A LARGE TROPICAL LAKE
- 11:15 AM Havens, K. E.: SYNCHRONIZED ZOOPLANKTON MAXIMA IN SIX SUBTROPICAL LAKES
- 11:30 AM Singhal, G.; Anis, A.: OBSERVATIONS AND MODELING OF MIXING PROCESSES IN A FRESH WATER RESERVOIR - VALLE DE BRAVO (MEXICO)
- 11:45 AM McCarthy, M. J.; Zhang, L.; Yang, L. Y.; Qin, B. Q.; Gardner, W. S.: SEASONAL DENITRIFICATION IN ROOTED MACROPHYTE VERSUS ALGAE DOMINATED AREAS OF A LARGE, SUBTROPICAL, SHALLOW, EUTROPHIC LAKE (TAIHU LAKE, CHINA)

**TS15: The Great Salt Lake System (Biology, Ecology, Hydrology, Geology, Geologic History)**Chair(s): Robert L. Baskin, rbaskin@usgs.gov  
Charles Oviatt, joviatt@ksu.edu

Location: 251 D/E

- 10:30 AM Oviatt, C. G.; Miller, D. M.: OVERVIEW OF RESEARCH ON THE HOLOCENE HISTORY OF GREAT SALT LAKE
- 10:45 AM Atwood, G.: BOULDER BEACHES OF GREAT SALT LAKE, UTAH, USA: EVIDENCE OF LAKE ELEVATION AND SHOREZONE PROCESSES.
- 11:00 AM Crosman, E. T.; Horel, J. D.: CLIMATOLOGY AND VARIABILITY OF SATELLITE-DERIVED TEMPERATURE OF THE GREAT SALT LAKE
- 11:15 AM Jones, B. F.; Naftz, D. L.; Kimball, B. A.: NORMATIVE SALT INDICATIONS OF EVAPORATION AND REACTIVE CLAYS, GREAT SALT LAKE, UTAH
- 11:30 AM Baxter, B. K.; DasSarma, S.; Litchfield, C.; Griffith, J. G.: MICROBIAL DIVERSITY OF THE NORTH ARM OF GREAT SALT LAKE

- 11:45 AM Belovsky, G. E.; Stephens, D.; Perschon, C.; Birdsey, P.; Sorenson, K.; Larson, C.; Mellison, C.; Mosley, R.; Van Leeuwen, J.: BRINE SHRIMP AND PHYTOPLANKTON DYNAMICS IN GREAT SALT LAKE (UTAH, USA): WEATHER, GRAZING, PREDATION AND COMPETITION \*

**TS16: Scientific Inquiry in the K-16 Classroom**

Chair(s): Lesley K. Smith, smithlk@cires.colorado.edu

Location: 254 B

- 1:30 PM Brabander, D. J.; Beattie, R. B.; Chen, R. F.; Ford, D. J.: FROM INQUIRY IN THE SCHOOLYARD TO THE POWERPOINT LARGE LECTURE HALL: STRATEGIES FOR RE-KINDLING CURIOSITY ABOUT EARTH PROCESSES ~
- 2:00 PM Greely, T.; Pyrtle, A.; Lodge, A.; Ivey, S.: OCEAN SCIENCES AS A BRIDGE TO ENGAGE SCIENTIFIC INQUIRY IN THE K-20 CLASSROOM THROUGH THE PROFESSIONAL DEVELOPMENT OF SCIENTISTS AND TEACHERS
- 2:15 PM Quan, S. W.: SAILING WITH THE ARMADA
- 2:30 PM Clay, T.; Grunbaum, D.; Fox, J.; Jumars, P.: BRINGING CURRENT RESEARCH TOPICS INTO THE HIGH SCHOOL CLASSROOM AS A MEANS FOR ILLUSTRATING THE INTERCONNECTEDNESS OF BIOLOGY, MATHEMATICS, AND PHYSICS
- 2:45 PM Donovan, D. A.: AN INQUIRY-BASED COURSE FOR PRESERVICE ELEMENTARY TEACHERS.
- 3:15 PM Hoch, M. P.; Pepper, C. A.; Siwik, P. J.; McNeil, R. S.: A "WATERSHED ACADEMY" FOR MIDDLE SCHOOLS: HIGHLIGHTING THE STREAM CHANNEL RESTORATION CHALLENGE
- 3:30 PM Bebout, B. M.; Bucaria, R.: EARTH'S EARLIEST ECOSYSTEMS IN THE CLASSROOM: THE USE OF MICROBIAL MATS TO DEMONSTRATE GENERAL PRINCIPLES OF SCIENTIFIC INQUIRY AND MICROBIAL ECOLOGY
- 3:45 PM Salinas, J. T.; Salinas, K. A.; Misaras, L. R.; McCabe, M.: CRATER LAKE, OREGON: ECOLOGY AND RESEARCH HAVE BEEN DEVELOPED INTO A K-12 INQUIRY CURRICULUM USING THE WORLD WIDE WEB
- 4:00 PM Hagley, C. A.; Axler, R. P.; Host, G. E.; Munson, B.; Richards, C.; Ruzycski, E.: WATER ON THE WEB: LAKE AND STREAM DATA-RICH TEACHING RESOURCES
- 4:15 PM Keener-Chavis, P.: BRINGING SCIENTIFIC INQUIRY INTO THE CLASSROOM THROUGH NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) OCEAN EXPLORATION

(\*) represents Invited presentations

**TS21: Coupling Dissolved Organic Matter (DOM) Chemistry and Microbial Activity in Aquatic Ecosystems**

Chair(s): Sandra Clinton, sclinton@uclink.berkeley.edu  
Jennifer Edmonds, edmonds@uga.edu

Location: 250 D/E

10:30 AM Bronk, D. A.; Sanderson, M. P.; Filippino, K. C.; Carlson, C. A.: PRELIMINARY RESULTS OF A NEW METHOD TO QUANTIFY CONCENTRATIONS OF DISSOLVED ORGANIC NITROGEN

10:45 AM Panagiotopoulos, C.; Repeta, D. J.; Johnson, C. G.: MOLECULAR CHARACTERIZATION OF OLIGOSACCHARIDES ISOLATED FROM HIGH MOLECULAR WEIGHT DISSOLVED ORGANIC MATTER (HMWDOM)

11:00 AM Quan, T. M.; Repeta, D. J.: RADIOCARBON ANALYSIS OF INDIVIDUAL AMINO ACIDS ISOLATED FROM MARINE HIGH MOLECULAR WEIGHT DISSOLVED ORGANIC MATTER

11:15 AM Repeta, D. J.; Panagiotopoulos, C.: BACTERIAL PRODUCTION AND A RADIOCARBON BASED MEASUREMENT OF DOC CYCLING IN SURFACE SEAWATER

11:30 AM Jander, J.; Nixdorf, B.: THE IMPACT OF EMPIRICAL CONVERSION FACTORS ON BACTERIAL PRODUCTION WITH [METHYL-3H]THYMIDINE IN ACIDIC MINING LAKES

11:45 AM Köster, M.; Meyer-Reil, L. A.: MICROSCALE MEASUREMENTS OF AVAILABLE DISSOLVED ORGANIC CARBON BY A MICROBIAL BIOSENSOR

1:30 PM Floge, S. A.; Wells, M. L.: CHANGES IN COLLOIDAL CHROMOPHORIC ORGANIC MATTER IN RELATION TO PHYTOPLANKTON ABUNDANCE IN THE DAMARISCOTTA RIVER ESTUARY, MAINE

1:45 PM Porter, J. A.; Morris, D. P.: THE EFFECTS OF PHOTOBLEACHING CHROMOPHORIC DISSOLVED ORGANIC MATTER ON AQUATIC MICROBIAL COMMUNITIES: A MESOCOSM STUDY

2:00 PM Hamill, B. J.; Cherrier, J.: THE ROLE OF NUTRIENT LIMITATION IN DIATOM RESPONSE TO LIGHT STRESS

2:15 PM Pullin, M. J.; Bertilsson, S.; Goldstone, J. V.; Voelker, B. M.: EFFECTS OF SUNLIGHT ON DOM: BACTERIAL GROWTH EFFICIENCY AND CARBOXYLIC ACID UTILIZATION

2:30 PM Leech, D. M.; Wetzel, R. G.; Lauer, A.; Teske, A.: INDIRECT EFFECTS OF ELEVATED CO<sub>2</sub> AND UV ON COMMUNITY STRUCTURE AND FUNCTION IN THE MICROBIAL LOOP

2:45 PM Pantos, O.; Rohwer, F. L.: DISSOLVED ORGANIC CARBON (DOC) ON CARIBBEAN CORAL REEFS

3:30 PM Young, K. C.; Maurice, P. A.; Docherty, K. M.; Bridgman, S. D.; Kulpa, C. F.: A MOLECULAR-BASED STUDY OF BACTERIAL DEGRADATION OF DISSOLVED ORGANIC MATTER FROM NORTHERN MICHIGAN SURFACE WATERS

3:45 PM Madey, G. R.; Cabaniss, S. E.; Maurice, P. A.; Xiang, X.; Arthurs, L.; Kennedy, R.; Huang, Y.: Online Collaboratory for NOM Research: Agent-based Simulations, Data-Mining, and Knowledge-Discovery

4:00 PM Cabaniss, S. E.; Madey, G. R.; Leff, L. G.; Maurice, P. A.; Wetzel, R. G.: AGENT-BASED SIMULATION OF NOM: PREDICTING ION BINDING, LIGHT ABSORPTION AND MICROBIAL UTILIZATION

**TS22: Linking Molecular Ecology and Biogeochemistry in Extreme Aquatic Environments**

Chair(s): Christine M. Foreman, cforeman@montana.edu  
John C. Priscu, jpriscu@montana.edu

Location: 256 B/C

10:30 AM Fritsen, C. H.; Mosier, A. C.; Murray, A. E.: MOLECULAR INFORMATION FROM DYNAMIC ICE COVERS: IS THE INFORMATION CONSISTENT WITH THE DYNAMICS? ~

11:00 AM Francis, C. A.; Glatz, R. E.; Ward, B. B.: DENITRIFIER DIVERSITY AND ACTIVITY IN THE WATER COLUMN OF PERMANENTLY ICE-COVERED LAKE BONNEY, ANTARCTICA

11:15 AM Christner, B. C.; Priscu, J. C.; Dore, J. E.; Popp, B. N.; Lyons, W. B.; Casciotti, K. L.: SOURCES OF EXTREME NITROUS OXIDE LEVELS IN AN ANTARCTIC LAKE: EVIDENCE FROM GEOCHEMICAL AND MOLECULAR DATA

11:30 AM Gast, R. J.; Moran, D. M.; Beaudoin, D. J.; Blythe, J. N.; Dennett, M. R.; Caron, D. A.: IDENTIFICATION, DISTRIBUTION AND ABUNDANCE OF A NOVEL BLOOM-FORMING DINOFLAGELLATE IN THE ROSS SEA, ANTARCTICA

11:45 AM Thomas Mock, T.; Andreas Krell, ; Gernot Glöckner, ; Gerhard Dieckmann, ; Klaus Valentin, : EST ANALYSIS OF THE ANTARCTIC DIATOM FRAGILARIOPSIS CYLINDRUS: DETECTION AND EXPRESSION OF NUMEROUS COLD ACCLIMATION RELATED GENES

**TS27: Photochemical Contrasts from Lakes to the Sea**

Chair(s): Gregory Cutter, gcutter@odu.edu

Location: 255 B/C

1:30 PM Graneli, W.; Daniel, C. B.; Gutseit, K. C.; Anesio, A. M.: ZOOPLANKTON GROWTH IN DARK AND UV-TREATED HUMIC LAKE WATER

1:45 PM Kelton, N.; Molot, L. A.: PHOTOCHEMICAL FORMATION OF PARTICULATE ORGANIC CARBON IN BOREAL WATERS: INFLUENCE AND FATE OF IRON

2:00 PM Wetzel, R. G.: NATURAL PHOTOLYTIC DEGRADATION OF STEROIDAL HORMONES IN FRESH WATERS

2:15 PM Voelker, B. M.; Southworth, B. A.; Pullin, M. J.; Goldstone, J. V.; Bertilsson, S.: HYDROXYL RADICAL PRODUCED BY FENTON'S REACTION: PREDICTING ITS IMPORTANCE AS A SINK OF RECALCITRANT ORGANIC COMPOUNDS IN FRESHWATER

2:30 PM Skalski, M. N.; Miller, W. L.; Kepkay, P.: SEASONAL ESTIMATES OF PHOTOCHEMICAL PRODUCTION OF DISSOLVED INORGANIC CARBON FROM TERRESTRIAL ORGANIC MATTER IN AN ATLANTIC CANADA COASTAL ZONE (ACCZ) ESTUARY

☞ represents Tutorial presentations

2:45 PM Miller, W. L.; Fichot, C. G.; Ziolkowski, L. A.; Johannessen, S. C.: CALCULATING THE TOTAL IMPACT OF PHOTOCHEMISTRY ON DISSOLVED ORGANIC CARBON CYCLING IN THE GEORGIA BIGHT USING OCEAN COLOR

3:30 PM Johannessen, S. C.; Pena, M. A.; Quenneville, M. L.: PHOTOCHEMICAL PRODUCTION OF DISSOLVED INORGANIC CARBON DURING A COASTAL PHYTOPLANKTON BLOOM

3:45 PM Cutter, G. A.; Cutter, L. S.; Filippino, K. C.: THE PHOTOCHEMICAL OXIDATION OF ARSENIC AND ANTIMONY(III) IN THE OPEN OCEAN

**TS30: Deep-sea Benthic Biogeochemical Processes and Interactions with Biota**

Chair(s): Lisa Levin, llevin@ucsd.edu  
Greg Cowie, glcowie@glg.ed.ac.uk

Location: 255 B/C

10:30 AM Gilhooly, W. P.; Macko, S. A.; Carney, R. S.: RELATIONSHIPS BETWEEN SULFUR OXIDIZING BACTERIAL MATS AND THEIR CARBON SOURCES

10:45 AM Ziebis, W.; Jacobson, M.; Capone, D. G.; Fuhrman, J. A.; Hewson, I.; Rathburn, A. E.: COMPARISON OF MICROBIAL ACTIVITY AND DIVERSITY IN DEEP-SEA SEDIMENTS AT THE UNIMAK MARGIN, ALASKA

11:00 AM Carney, R. S.; Trefry, J. H.: IMAGE-DERIVED COLORIMETRIC AND TEXTURAL SURFICIAL EVIDENCE OF SEDIMENT MIXED LAYER CHEMICAL GRADIENTS ON THE CONTINENTAL SLOPE

11:15 AM Smallwood, B. J.; Wolff, G. A.: MACROFAUNA INFLUENCE CARBON TURNOVER IN LOW OXYGEN SEDIMENTS

11:30 AM Vandewiele, S. L.; Cowie, G. L.; Middelburg, J. J.; Soetaert, K.: PRESERVATION AND QUALITY OF ORGANIC MATTER ACROSS THE ARABIAN SEA OXYGEN MINIMUM ZONE (OMZ)

11:45 AM Ahke, A.; Ferdelman, T. G.; Schubert, C. J.; Aspetsberger, F.; Inthorn, M.; Nickel, M.; Witte, U.; Zabel, M.: APPLICATION OF MOLECULAR DEGRADATION INDICES TO CHARACTERIZE ORGANIC MATTER REACTIVITY IN BENGUELA UPWELLING AND ARCTIC SEDIMENT

**TS31: Water Quality Research in the 21st Century: Global Climate to Genomics**

Chair(s): Erin Lipp, elipp@uga.edu  
Rachel T. Noble, rtnoble@email.unc.edu

Location: 251 D/E

3:30 PM Lavik, G.; Andersen, M. S.; Meysman, F.; Postma, D.: PROCESSING OF GROUNDWATER DERIVED NITRATE IN A COASTAL MARINE ENVIRONMENT

3:45 PM Sharp, J. O.; Alvarez-Cohen, L.: BIODEGRADATION OF THE WATER CONTAMINANT N-NITROSODIMETHYLAMINE (NDMA) BY AXENIC SOIL BACTERIA

4:00 PM Caccia, V. G.; Boyer, J. N.: EFFECT OF LAND USE AND WATER MANAGEMENT ON WATER QUALITY OF BISCAYNE BAY, USA

4:15 PM Hieb, W. S.; Hicks, R. E.; Sadowsky, M. J.; James, K. L.; Johnson, L. B.: RELATIONSHIP BETWEEN LAND USE AND SOURCES OF E. COLI IN STREAMS AT DIFFERENT WATERSHED SCALES

**TS39: Landscape Limnology: Linking Streams, Lakes, and Wetlands at Large Spatial Scales**

Chair(s): Christopher T. Robinson,  
Christopher.Robinson@eawag.ch  
Wayne A. Wurtsbaugh, wurts@cc.usu.edu

Location: 250 A/B

10:30 AM Richards, C.: LANDSCAPES AND LIMNOLOGY: A TUTORIAL OF PROCESSES AND PROBLEMS ~

11:00 AM Martin, S. L.; Soranno, P. A.: LAKE LANDSCAPE POSITION: RELATIONSHIPS TO HYDROLOGIC CONNECTIVITY AND LANDSCAPE FEATURES.

11:15 AM Arp, C. D.; Schmidt, J. C.; Baker, M. A.: THE EFFECT OF LAKES ON STREAM GEOMORPHOLOGY IN A MOUNTAIN LAKE DISTRICT

11:30 AM Cheruvellil, K. S.; Wagner, T.; Soranno, P. A.; Bremigan, M. T.; Breck, J. E.: PREDICTING LAKE PHYSICO-CHEMICAL VARIABLES FROM LANDSCAPE FEATURES AT MULTIPLE SPATIAL SCALES

11:45 AM Garrett, J. D.; Marcarelli, A. M.; Wurtsbaugh, W. A.: PERVASIVE TEMPERATURE EFFECTS THROUGH SUB-ALPINE STREAM-LAKE-STREAM SYSTEMS

1:30 PM Winter, T. C.: THE AQUATIC SYSTEMS CONTINUUM

1:45 PM Robinson, C. T.: LAKE STREAM LINKAGES IN A HIGH ALPINE CATCHMENT IN SWITZERLAND

2:00 PM Stanford, J. A.; Hauer, F. R.; Lorang, M. S.; Kimball, J. S.; Ellis, B. K.: LAKES AND FLOOD PLAINS: DETERMINANTS OF RIVER CATCHMENT BIOGEOCHEMISTRY

2:15 PM Melack, J. M.; Leydecker, A.; Beighley, R. E.: REGIONALIZATION OF NUTRIENT EXPORT BY STREAMS IN COASTAL CALIFORNIA

2:30 PM Wurtsbaugh, W. A.; Nydick, K. R.; Baker, M. A.; Arp, C.; Hall, R. O.; Haefner, J. W.: LACUSTRINE CONTROL OF NUTRIENT FLUX THROUGH ROCKY MOUNTAIN WATERSHEDS: PHYSICAL AND BIOLOGICAL MECHANISMS

2:45 PM Morrice, J. A.; Kelly, J. R.; Yurista, P. M.; Thompson, J. A.; Sierszen, M. E.; Danz, N. P.; Hollenhorst, T. P.: CONNECTING WATERSHED CHARACTERISTICS TO NUTRIENT REGIME, FROM HEADWATERS TO RECEIVING WATERS IN THE LAURENTIAN GREAT LAKES.

3:30 PM Soranno, P. A.; Cheruvellil, K. S.; Bremigan, M. T.: RELATIONSHIPS BETWEEN LAND USE AND LAKE NUTRIENTS IN UPPER MIDWEST LAKES AND THE EFFECT OF LANDSCAPE CONTEXT

3:45 PM Brown, P. D.; Wurtsbaugh, W. A.; Nydick, K. R.: THE EFFECT OF LAKES AND LANDCOVER CHARACTERISTICS ON STREAMWATER NUTRIENT LEVELS IN SMALL MOUNTAIN WATERSHEDS

(\*) represents Invited presentations

4:00 PM Webster, K. E.; Grygo, A. M.; Knight, S. E.; Emmons, E. E.: INTERPRETING RELATIONSHIPS BETWEEN CATCHMENT LAND USE AND LAKE NUTRIENT STATUS: INSIGHTS FROM A LANDSCAPE PERSPECTIVE

4:15 PM Frost, P. C.; Larson, J. H.; Cherrier, C. T.; Zheng, Z.; Johnston, C. A.; Bridgman, S. D.; Lamberti, G. A.; Lodge, D. M.: C:N:P RATIOS OF ORGANIC PARTICLES IN NORTHERN MICHIGAN STREAMS: EFFECTS OF LAKES, WETLANDS, AND WATERSHED SIZE

#### TS44: Biocomplexity in Marine Ecosystems

Chair(s): Anthony Michaels, tony@usc.edu  
Doug Capone, capone@usc.edu

Location: 256 B/C

1:30 PM Michaels, A. F.; Berelson, W. M.; Capone, D. G.; Caron, D. A.; Levin, S.; Neelson, K. H.; Siegel, D.: COMPLEX SYSTEMS, COMPLEX SCHOLARSHIP AND AQUATIC SCIENCE

1:45 PM Siegel, D. A.; Costello, C.; Gaines, S. D.; Hilborn, R. W.; Kendall, .; Polasky, S.; Warner, R. R.; Winters, K. B.: FLOW, FISH AND FISHING: A BIOCOMPLEXITY PROJECT \*

2:00 PM Hsieh, C.; Ohman, M. D.: BIOLOGICAL RESPONSES TO ENVIRONMENTAL SIGNALS: LINEAR TRACKING OR NONLINEAR DYNAMICS?

2:15 PM Friedrichs, M. A.; Hood, R. R.; Wiggert, J. D.; Laws, E. A.: ASSESSING THE COSTS AND BENEFITS OF INCREASING ECOSYSTEM MODEL COMPLEXITY USING DATA ASSIMILATION

2:30 PM Hood, R. R.; Coles, V. J.; Capone, D. G.: MODELING THE INFLUENCE OF NITROGEN FIXATION ON MARINE BIOGEOCHEMICAL CYCLES IN THE ATLANTIC

2:45 PM O'Mullan, G. D.; Ward, B. B.; Alexander, J.; Baker, K.; Collier, J. L.; Cornwell, J.; Glibert, P. A.; Jackson, G. A.; Jenkins, B.; Kana, T.; Kirshtein, J.; Short, S.; Solomon, C.; Voytek, M. A.; Zehr, J. P.: BIOCOMPLEXITY IN THE AQUATIC NITROGEN CYCLE: RELATING MICROBIAL DIVERSITY TO ECOSYSTEM FUNCTION \*

3:30 PM Jabro, N. B.; Marinelli, R. L.; Eckman, J. E.; Andres, M. S.: BETWEEN-SITE PHYSICAL VARIABILITY AND ITS CONTRIBUTION TOWARD A STAGE-BASED MATRIX MODEL OF BAHAMIAN STROMATOLITES

3:45 PM Pineda, J.; Starczak, V.; DiBacco, C.: BENTHIC POPULATION DYNAMICS: PROCESSES, TIMING, AND COUPLING OF SCALES

4:00 PM Needoba, J. A.; Johnson, K. S.; Monismith, S. G.; Paytan, A.; Los Huertos, M.; Wasson, K.; Coletti, L.; Fitzwater, S.; Jannasch, H. W.; Plant, J.; Sakamoto, C. M.: THE LAND/OCEAN BIOGEOCHEMICAL OBSERVATORY (LOBO): A SENSOR NETWORK FOR COUPLED NUTRIENT CYCLES IN A COMPLEX ENVIRONMENT

#### TS47: Biological-physical Interaction at Individual Plankter Scale

Chair(s): Jeannette Yen, jeannette.yen@biology.gatech.edu  
Houshuo Jiang, hsjiang@whoi.edu

Location: 251 A/B

10:30 AM Yen, J.; Brown, J.; Tian, X.; Weissburg, M. J.; Webster, D. R.: DYNAMIC SIMILARITY OR SIZE PROPORTIONALITY? ADAPTATIONS OF A POLAR COPEPOD.

10:45 AM Grunbaum, D.; Riley, J. J.; Mitarai, S.: PRINCIPLES OF DESIGN OF PLANKTONIC MORPHOLOGY AND BEHAVIOR FOR EFFECTIVE MOVEMENT IN TURBULENCE

11:00 AM Woodson, C. B.; Webster, D. R.; Weissburg, M. J.; Yen, J.: DEFINING STRUCTURE IN PELAGIC HABITATS: ARE PHYSICAL GRADIENTS IMPORTANT TO COPEPOD FORAGING AND AGGREGATION?

11:15 AM Malkiel, E.; Garber, D.; Sheng, j.; Katz, J.: APPLICATION OF HIGH SPEED DIGITAL HOLOGRAPHY TO INVESTIGATE ZOOPLANKTON BEHAVIOR

11:30 AM Sheng, J.; Malkiel, E.; Nguyen, C. V.; Katz, J.: DIGITAL HOLOGRAPHIC MICROSCOPE FOR SMALL-SCALE DYNAMICS OF MICRO-ORGANISMS

11:45 AM Donaghay, P. L.; Holliday, D. V.: TEMPORAL AND SPATIAL VARIATION IN THE SHEAR AMBIT OF A PLANKTER IN THE OCEAN

1:30 PM Karp-Boss, L.; Jumars, P. A.; Grant, P.; Wereley, S.; Klingler, E. H.: MOTION OF DIATOMS IN STEADY AND UNSTEADY SHEAR FLOWS

1:45 PM Colin, S. P.; Costello, J. H.; Graham, W. M.; Ford, M. D.: UPSTREAM FORAGING BY MEDUSAE

2:00 PM Dabiri, J. O.; Colin, S. P.; Costello, J. H.; Gharib, M.: FLOW PATTERNS GENERATED BY OBLATE MEDUSAN SWIMMERS: IN SITU OBSERVATION AND ANALYSIS

2:15 PM Houser, L. T.; Epifanio, C. E.: THE IMPORTANCE OF SWIMMING BEHAVIOR IN MAINTAINING PATCHES OF LARVAL CRABS: DO BIOCHEMICAL CUES HAVE AN EFFECT?

2:30 PM Krembs, C.; Keiners, K.: ANNUAL EVOLUTION OF MICROBIALLY PRODUCED EXOPOLYMERIC SUBSTANCES (EPS) AND THEIR CONSEQUENCES FOR LAND-FAST SEA ICE OF THE CHUKCHI SEA

#### GS08: Stream and Lake Ecosystems

Chair(s): Jonathan W. Moore, jwmoore@u.washington.edu

Location: Exhibit Hall

235. Royer, T. V.; David, M. B.: LONG-TERM PATTERNS IN STREAM EXPORT OF DISSOLVED ORGANIC CARBON FROM AGRICULTURAL WATERSHEDS

236. Ellis, B. K.; Stanford, J. A.; Craft, J. A.: A 25-YEAR RECORD OF NUTRIENT LOADING TO A LARGE, OLIGOTROPHIC LAKE

237. Hernandez, M. M.; Pagulayan, R. C.: FRESHWATER MACROINVERTEBRATES OF SUBIC FOREST RESERVE, PHILIPPINES

↪ represents Tutorial presentations

238. Gray, L. J.: SUBSTRATE COMPACTION AS AN INDICATOR OF SEDIMENT IMPACTS IN UTAH STREAMS
239. Hunte-Brown, M. E.; Kilham, S. S.: THE ROLE OF TADPOLES IN FOOD WEB STRUCTURE AND FUNCTION IN UPLAND STREAMS OF PANAMA: THE CONSEQUENCES OF EXTINCTION
240. Arend, K.; Chen, X.; Doyle, R.; Hotaling, N.; King, A.: THE PHYSICAL, CHEMICAL, AND BIOLOGICAL IMPACT OF LAKE ONTARIO UPWELLING ON TWO COASTAL EMBAYMENTS
241. Taub, F. B.; Barbee, D.: DO LAKES SLEEP AT NIGHT?
242. Fortino, K.; Hershey, A. E.; Whalen, S. C.: POSSIBLE LANDSCAPE-SCALE EXPLANATIONS FOR SEDIMENTATION RATE VARIABILITY IN ALASKAN ARCTIC LAKES
243. Hartman, J. S.; Reynolds, R. L.; Rosenbaum, J. G.; Walsh, M. K.; Moser, K. A.: POST-SETTLEMENT ATMOSPHERIC INPUTS REVEALED IN SEDIMENTOLOGIC CHANGES IN UINTA MOUNTAIN LAKES
244. Shostell, J. M.; Williams, B. S.: A NEW BENTHIC SAMPLING DEVICE FOR SHALLOW SOFT SEDIMENTS
- GS12: Hypoxia Across Diverse Environments**  
Location: Exhibit Hall
260. Markfort, C. D.; Hondzo, M.: EFFECT OF WATER TEMPERATURE AND PRESSURE ON DISSOLVED OXYGEN MEASUREMENTS IN AQUATIC ENVIRONMENTS
261. Belabbassi, L.; Nowlin, W.; DiMarco, S. F.; Jochens, A. E.; Chapman, P.: IMPACT OF RIVER-DERIVED LOW SALINITY WATER AND CIRCULATION ON BOTTOM HYPOXIA OVER THE NORTHERN CONTINENTAL SHELVES OF THE GULF OF MEXICO.
- GS17: Estuarine and Coastal Ecosystems**  
Chair(s): John J. Cullen, John.Cullen@Dal.CA  
A. Keith Miles, keith\_miles@usgs.gov  
R. Eugene Turner, euturne@su.edu  
Location: Exhibit Hall
110. Ithier, W.; Pyrtle, A. J.; Smoak, J.; Mayo, M.: RADIOGEOCHEMISTRY STUDY OF THE BONUS PROTOTYPE NUCLEAR POWER PLANT LOCAL ENVIRONMENT NEAR RINCON PUERTO RICO- PRELIMINARY RESULTS
111. Daniels, C. A.; Muller, P. H.; Lidz, B. H.: DEVELOPMENT & APPLICATION OF THE SEDCON INDEX FOR RESOURCE AND RISK
112. Green, R. E.; Bianchi, T. S.; Dagg, M. J.; Walker, N. D.: AN ORGANIC CARBON BUDGET FOR THE MISSISSIPPI RIVER PLUME: COMBINING PHYSICAL MEASUREMENTS AND A FOOD WEB MODEL
113. Shipe, R. E.; Curtaz, J.; Carpenter, E. J.; Capone, D. G.: DIATOM ASSEMBLAGES IN THE WESTERN TROPICAL ATLANTIC OCEAN IN SPRING 2003
114. Weissberger, E. J.; Jumars, P. A.; Mayer, L. M.: RAPID FEEDING-RATE ACCLIMATION OF AN INTERTIDAL POLYCHAETE, STREBLOSPIO BENEDICTI
115. Mayo, M.; Pyrtle, A. J.; Ithier, W.: AQUATIC RESOURCE MANAGEMENT AND ANTHROPOGENIC IMPACT IN TWO CONTROLLED ENVIRONMENTS IN PUERTO RICO
116. Quinlan, J. A.; Manderson, J. P.; Shaheen, P.; Law, C. G.; Bosch, J.; Kohut, J.; Creed, E.: UNDERSTANDING THE LANDSCAPE: FISHERIES SURVEYS WITHIN AN INTEGRATED OCEAN OBSERVATION SYSTEM IN THE NEW YORK BIGHT
117. White, A. J.; Harwell, M.; Marcovich, D.: METAL CONCENTRATIONS IN LOGGERHEAD SEA TURTLE EGGS FROM THE FLOIRDA GULF AND ATLANTIC COASTS
118. Costantini, M.; Ameri, E.; Borme, D.; Russo, A.; Tirelli, V.; Fonda Umani, S.; Brandt, S. B.: EFFECT OF THE PO RIVER OUTFLOW ON THE DISTRIBUTION OF JUVENILE EUROPEAN ANCHOVY (ENGRAULIS ENCRASICOLUS L) IN THE NORTHERN ADRIATIC SEA (CENTRAL MEDITERRANEAN)
119. Colón-Carrión, D.; Montero, L.: THE GROWTH INHIBITION EFFECT OF THE MUCOUS SECRETED BY THE HAWKSBILL SEA TURTLE (ERETMOCHELYS IMBRICATA)
120. BROWN, H. A.; MORTON, S.; CHERRIER, J.: THE EFFECTS OF SALINITY CONCENTRATIONS ON KARENIA BREVIS GROWTH AND TOXIN PRODUCTION
121. Koester, J. A.; Karp-Boss, L.; Brawley, S. H.: INDUCTION OF SEXUAL REPRODUCTION AND THE MATING SYSTEM OF THE PLANKTONIC DIATOM DITYLUM BRIGHTWELLII
122. Williams, C. J.; Boyer, J. N.; Jochem, F. J.: ECTOENZYME KINETICS ACROSS TWO ISOLATED PHYTOPLANKTON BLOOMS WITHIN FLORIDA BAY
123. Youn, S. H.; Choi, J. K.: ANNUAL CHANGES IN BIOMASS, GROWTH RATE AND PRODUCTION OF COPEPOD ACARTIA HONGI IN KYEONGGI BAY, KOREA
124. Bochdansky, A. B.; Bollens, S. M.: HETEROGENEITY OF VERTICAL CHLOROPHYLL DISTRIBUTION DURING RUNAWAY STRATIFICATION IN THE TIDALLY DYNAMIC SAN FRANCISCO ESTUARY
125. Surratt, D. D.; Cherrier, J.; Robinson, L. L.; Cable, J. E.: CHRONOLOGY OF NUTRIENT GEOCHEMISTRY IN APALACHICOLA BAY, FLORIDA (USA)
126. Wiltshire, K. H.; Aberle-Mahizahn, N.; Moldaneke, C.; Beutler, M.: DEVICE FOR THE DETECTION OF ALGAE ON BENTHIC SURFACES : AUTOMATIC ANALYSIS OF TOTAL CHLOROPHYLL AND DIFFERENTIATION OF MAJOR ALGAL GROUPS IN-SITU
127. Rogers, M. T.; Boyer, J. N.; Jochem, F. J.; Dailey, S. K.: BACTERIAL ABUNDANCE, GROWTH RATES, AND GRAZING LOSSES IN FLORIDA BAY
128. Corbett, D. R.; Elkins, J. B.; Dail, M. B.: ESTUARINE SEDIMENT DYNAMICS DRIVEN BY STORMS IN THE ALBEMARLE-PAMILICO ESTUARINE SYSTEM, NORTH CAROLINA

(\*) represents Invited presentations

129. Slaughter, A. M.; Bollens, S. M.; Papastephanou, K. M.; Dorman, J. G.; Rollwagen Bollens, G.: ZOOPLANKTON DISTRIBUTION, ABUNDANCE AND COMPOSITION DURING WINTER (NON-UPWELLING SEASON) OFF THE COAST OF NORTHERN CALIFORNIA: RESULTS FROM COOP-WEST
130. Carmichael, Jr., W. V.; Forthman, C.; Mahon, G.; Marella, R.: A BATHYMETRIC STUDY OF AGRICULTURAL SURFACE IMPOUNDMENTS ALONG THE ABRAMS CREEK WATERSHED WITHIN THE FLINT RIVER BASIN
131. Nestler, J. R.; Cromwell, K. J.; Wheeling, R. J.; Dennison, R. L.; Wolfling, A. B.: DIEL CYCLES OF ACTIVITY, METABOLISM, AND NUTRIENT PRODUCTION IN TROPICAL SEA CUCUMBERS
132. Pfeiffer-Hoyt, A. S.; McManus, M. A.; Chao, Y.: MODELING THE GROWTH, BEHAVIOR AND DISPERSAL OF *BALANUS GLANDULA* LARVAE WITHIN THE HYDROGRAPHY OF THE CENTRAL CALIFORNIA COAST
- TS04: Ecology of Rocky Shore Fauna**  
Chair(s): Clement A. Edokpayi, klemmedokpayi@hotmail.com  
Location: Exhibit Hall
133. EDOKPAYI, C. A.; ADENLE, A. T.; LAWAL, M. O.: SOME ASPECTS OF THE ECOLOGY OF BENTHIC INVERTEBRATE OF AN ARTIFICIAL ROCKY SHORE AT TARKWA BAY, LAGOS, SOUTHERN NIGERIA.
- TS06: Microbial Nitrogen Fixation Across Environments: Ski to Sea**  
Chair(s): Jayne Belnap, jayne\_belnap@usgs.gov  
Doug Capone, capone@usc.edu  
Margie Mulholland, mmulholl@odu.edu  
Location: Exhibit Hall
85. Achilles, K. M.; Lipschultz, F.; Sedwick, P. N.; Luther, G. W.; Church, T. M.: IMPORTANCE OF IRON TO TRICHODESMIUM COLONIES IN THE WESTERN NORTH ATLANTIC
86. Finzi, J. A.; Subramaniam, A.; Kustka, A. B.; Capone, D. G.: PHOTOPHYSIOLOGICAL PARAMETERS OF TRICHODESMIUM ISOLATE IMS-101 UNDER P AND FE LIMITATION
87. Capone, D. G.; Burns, J. A.; Carpenter, E. J.; Gunderson, T.; Holl, C. M.; Michaels, A. F.; Montoya, J. P.; Sohm, J. A.; Subramaniam, A.: PARTITIONING MARINE PLANKTONIC NITROGEN FIXATION
88. YANG, Y.; JOCHEM, F. J.: OPTIMIZATION OF REAL-TIME PCR DETECTION OF CYANOBACTERIAL NIFH GENES
- TS08: Limnology of Tropical and Subtropical Lakes**  
Chair(s): Karl E. Havens, khavens@ufl.edu  
Location: Exhibit Hall
245. Reverol, Y. M.; Sánchez, L. ...: ZOOPLANKTON COMMUNITY STRUCTURE FROM MAIN CHANNEL OF THE LOWER BASIN OF CAURA RIVER AND ITS FLOODPLAIN LAKES, VENEZUELA.
246. Montoya, J. V.; Castillo, M. M.: BACTERIOPLANKTON DYNAMICS IN A LARGE TROPICAL RIVER: COMPARISONS BETWEEN THE MAIN CHANNEL AND FLOODPLAIN LAKES.
247. Lopez, C. L.; Lind, O. T.: SUMMER SUCCESSION IN A POST-INVASION DAPHNIA ASSEMBLAGE: DEMOGRAPHY AND LIFE HISTORY TRAITS
248. Escobar, J. H.; Brenner, M.; Kenney, W.; Whitmore, T.: TESTATE RHIZOPODS AS INDICATORS OF WATER QUALITY IN FLORIDA LAKES
249. Delgado, J. G.; Sanchez, L.: DIATOMS FROM FLOODPLAIN LAKES OF THE CAURA RIVER, VENEZUELA.
250. Sánchez, L. ...; Delgado, J. G.; Mntoya, J. V.: TEMPORAL VARIATION OF PHYTOPLANKTON COMPOSITION, ABUNDANCE AND BIOMASS IN FLOODPLAIN LAKES OF THE LOWER CAURA RIVER (VENEZUELA).
251. Uchikawa, J.; Popp, B. N.; Schoonmaker, J.; Xu, L.: APPLICATION OF ACCELERATOR MASS SPECTROMETRY (AMS) RADIOCARBON DATING OF SEDIMENTS USING PLANT WAXES IN A TROPICAL POND IN HAWAII.
- TS14: Denitrification in Nitrogen Cycling and Transport Among Diverse Aquatic Ecosystems**  
Chair(s): Robert Hall, bhall@uwyo.edu  
Jennifer Tank, tank.1@nd.edu  
Location: Exhibit Hall
89. King, J. D.; Vance-Harris, C.; Ingall, E. D.; Taillefert, M.: EVIDENCE FOR COUPLING OF MANGANESE, NITROGEN, AND CARBON CYCLING IN SALTMARSH SEDIMENTS
90. Westley, M. B.; Popp, B. N.: USING ISOTOPOMER DISTRIBUTIONS TO IDENTIFY OCEANIC SOURCES AND SINKS OF NITROUS OXIDE
91. Abell, J.; Laverman, A.; Pallud, C.; Meile, C.; van Cappellen, P.: DETERMINING DENITRIFICATION KINETIC PARAMETERS FOR NITRATE AND DISSOLVED ORGANIC CARBON USING PLUG FLOW-THROUGH REACTORS
- TS17: Formation, Budgeting, Modeling, and Microbial Interactions in Seawater Gels**  
Chair(s): Pedro Verdugo, verdugo@u.washington.edu  
Location: Exhibit Hall
92. Whitehead, K.; Orellana, M. V.; Panetta, R. J.; Verdugo, P.; Hedges, J. I.: VERTICAL DISTRIBUTION AND PHOTODEGRADATION OF MARINE POLYMER GELS: A FIRST GLIMPSE.
93. Steen, A. D.; Arnosti, C.: THE INFLUENCE OF MARINE POLYMER GELS ON THE ACTIVITY OF EXTRACELLULAR HYDROLASES

☞ represents Tutorial presentations



94. Hung, C. C.; Santschi, P. H.: COMPOSITION OF EXOPOLYMERIC SUBSTANCES PRODUCED BY MARINE MICROORGANISMS
95. DING, Y.; Rodriguez, A.; Chin, W. C.; Hung, C.; Santschi, P. H.; Verdugo, P.: DYNAMICS OF BACTERIAL EXOPOLYMER NETWORKS AND THEIR ROLE IN BIOFILM AND MARINE MICROGELS FORMATION.
- TS18: Effect of Watershed Parameters on the Fate of Mercury in Aquatic Systems**
- Chair(s): Kimberly A. Warner, KWARNER@biology.as.ua.edu  
Jean-Claude J. Bonzongo, bonzongo@ufl.edu
- Location: Exhibit Hall
262. Guentzel, J. L.: THE GEOCHEMICAL CYCLING AND TRANSPORT OF MERCURY IN SOUTH CAROLINA
263. Hughes, R. M.; Herlihy, A. T.; Peterson, S. A.: MERCURY CONCENTRATION IN LOTIC FISH TISSUE ACROSS THE WESTERN UNITED STATES
264. Warner, K. A.; Bonzongo, J. C.; Roden, E. E.; Lyons, W. B.; Ward, G. M.; Chaubey, I.: WATERSHED CONTROLS ON MERCURY DISTRIBUTIONS IN THE MOBILE ALABAMA RIVER BASIN
265. Mason, R. P.; Heyes, A.; Gilmour, C. G.: MERCURY METHYLATION AND DEMETHYLATION IN ESTUARINE SYSTEMS
266. Fleming, E. J.; Mack, E. E.; Nelson, D. C.: MERCURY-METHYLATION: IT'S NOT JUST FOR SULFATE-REDUCING BACTERIA
267. Bonzongo, J. C.; Warner, K. A.; Donkor, A. K.: LAND USE DRIVEN MOBILITY AND TRANSFORMATION OF MERCURY PRESENT IN SOILS/SEDIMENTS: AN OVERVIEW
- TS19: Air-sea Flux of Carbon Dioxide in Coastal Margins**
- Chair(s): Wei-Jun Cai, wcai@uga.edu  
Steven Lohrenz, Steven.Lohrenz@usm.edu
- Location: Exhibit Hall
268. Hunt, C. W.; Salisbury, J.; Vandemark, D.; McGillis, W. R.: CONTRASTING WATERSHED PROPERTIES AND THEIR POTENTIAL IMPACTS ON COASTAL ZONE AIR-SEA EXCHANGE
- TS25: Benthic-pelagic Links: Nutrient and Energy Flux Across Physically and Biotically Complex Boundaries**
- Chair(s): Greta Burkart, greta@cc.usu.edu  
Yvonne Vadeboncoeur, yvonne.vadeboncoeur@wright.edu  
Gilbert T. Rowe, roweg@tamug.tamu.edu  
Koren Nydick, koren@cc.usu.edu  
Samantha Joye, mjoye@arches.uga.edu  
Edward J. Carpenter, ecarpent@sfsu.edu
- Location: Exhibit Hall
134. Wren, P. A.; Cahoon, L. B.: BOTTOM BOUNDARY LAYER DELIVERY OF CHLOROPHYL A TO A HARD BOTTOM REEF IN ONSLOW BAY, NC
135. Horrocks, J. D.; Luecke, C.: EFFECTS OF FISH ON SIZE STRUCTURE OF BENTHIC AND PLANKTONIC INVERTEBRATE ASSEMBLAGES IN ARCTIC LAKES
136. Roux, M. J.; Anderson, M. R.; Planas, D.; Wadleigh, M.: BI-DIMENSIONAL FOOD WEB STRUCTURE IN THE CONTEXT OF MERCURY BIOACCUMULATION: SYNOPSIS FOR PELAGIC AND LITTORAL/BENTHIC PRODUCTION INTEGRATION IN LABRADOR LAKES
137. Bucci, J. P.; Showers, W. J.: A COMPARISON OF BLUE CRAB AND BIVALVE DELTA 15N TISSUE ENRICHMENT IN TWO NORTH CAROLINA ESTUARIES
- TS30: Deep-sea Benthic Biogeochemical Processes and Interactions with Biota**
- Chair(s): Lisa Levin, llevin@ucsd.edu  
Greg Cowie, glcowie@glg.ed.ac.uk
- Location: Exhibit Hall
269. Okuda, C.; Buck, K. R.; Levesque, C.; Barry, J. P.: BENTHIC IN SITU OXYGEN CONSUMPTION MEASURED WITH AN OPTODE-BASED RESPIROMETER
270. Gage, J. D.; Lamont, P. A.; Feeley, K. S.; Packer, M.; Levin, L. A.; Mendoza, G.: BATHYAL BENTHIC MACROFAUNAL VARIABILITY ACROSS THE OXYGEN MINIMUM ZONE OFF PAKISTAN (NE ARABIAN SEA)
271. Buck, K. R.; Barry, J. P.; Levesque, C.; Lovera, C.; Kuhn, L.; Carman, K. R.: THE MICROBIAL FOOD-WEB OF THE DEEP-SEA BENTHOS
272. Larkin, K. E.; Gooday, A. J.; Pond, D. W.; Bett, B. J.: RAPID UPTAKE OF LABILE CARBON AND SELECTIVE FEEDING BY FORAMINIFERAN SPECIES FROM THE PAKISTAN MARGIN OXYGEN MINIMUM ZONE – EVIDENCE FROM FATTY ACID ANALYSIS
273. Kitazato, H.: DYNAMIC SEDIMENTARY PROCESSES AT ACTIVE OCEAN MARGINS: RESULTS FROM LONG-TERM MONITORING IN SAGAMI BAY, JAPAN
274. Nomaki, H.; Heinz, P.; Nakatsuka, T.; Ohkouchi, N.; Suga, H.; Matsumoto, K.; Shimanaga, M.; Kitazato, H.: THE FATE AND DEGRADATION PROCESS OF PHYTODETRITUS ON THE SEAFLOOR: IN SITU TRACER EXPERIMENT WITH COMPOUNDS LEVEL ANALYSIS
- TS35: High-latitude River Hydrology, Ecology, and Biogeochemistry**
- Chair(s): Robert (Rob) Striegl, rstriegl@usgs.gov  
Robert (Max) Holmes, RHolmes@mbl.edu
- Location: Exhibit Hall
252. Stewart, K. A.; Lamoureux, S. F.: A LACUSTRINE RECORD OF RECENT ECOLOGICAL AND HYDROLOGICAL CHANGE IN THE CANADIAN MIDDLE ARCTIC

(\*) represents Invited presentations

253. Gooseff, M. N.; Bowden, W. B.; McNamara, J. P.; Bradford, J. H.; Zarnetske, J.; Brosten, T.: WILL CLIMATE CHANGE AFFECT HYPORHEIC PROCESSES IN ARCTIC STREAMS? AN ASSESSMENT OF INTERACTIONS AMONG GEOMORPHOLOGY, HYDROLOGY, AND BIOGEOCHEMISTRY

**TS36: Biogeochemistry in Flowing Waters: What's New? What's Next? What are the Limitations?**

Chair(s): Craig Tobias, crtobias@usgs.gov

Location: Exhibit Hall

275. Prast, M. M.; Cleven, E. J.; Amann, R.; Berninger, U. G.: DO CILIATES HAVE AN IMPACT ON NITROGEN TRANSFORMATION IN A SANDY RIVERINE SEDIMENT?

276. Inoue, T.; Nakamura, Y.: RESPONSE OF PHOSPHATE RELEASE FROM THE SEDIMENT TO A STEP INCREASE IN FLOW VELOCITY

277. Reid, N. J.; Hamilton, S. K.: ALGAL GROWTH RESPONSE TO NUTRIENT IN A RIVER SYSTEM WITH VARIABLE DEGREES OF IMPOUNDMENT

278. Bristow, G. M.; Taillefert, M.; Neuhuber, S. M.: IRON AND SULFUR CYCLING IN INTERTIDAL SALTMARSH SEDIMENTS

279. Hays, R. L.; Ullman, W. J.: ATTENUATION OF NUTRIENT FLUXES DURING GROUNDWATER SEEPAGE ACROSS A BEACHFACE AT CAPE HENLOPEN, DELAWARE

**TS37: Riverine-floodplain Interactions: Groundwater-surface Water Interactions**

Chair(s): Durelle Scott, dtscott@usgs.gov  
Emily Stanley, ehstanley@wisc.edu

Location: Exhibit Hall

254. Salazar, E.; Sánchez, L.: SPATIAL AND SEASONAL VARIABILITY OF SOME METALS IN SEDIMENTS IN THE FLOODPLAIN OF THE LOWER CAURA RIVER (VENEZUELA).

**TS38: Feedbacks Among Physical and Biogeochemical Processes in Flowing Waters**

Chair(s): Michael N. Gooseff, gooseff@cnr.usu.edu  
Judson Harvey, jwharvey@usgs.gov  
Steven M. Wondzell, swondzell@fs.fed.us

Location: Exhibit Hall

255. Noguera, J. L.; Rios, J. A.; Hall, B.; McClain, M. E.: SUSPENDED SEDIMENT DYNAMICS IN RIVERS OF THE PERUVIAN ANDES AS A FUNCTION OF SEASON, STORM EVENTS, AND RIVER DISCHARGE

**TS39: Landscape Limnology: Linking Streams, Lakes, and Wetlands at Large Spatial Scales**

Chair(s): Christopher T. Robinson,  
Christopher.Robinson@eawag.ch  
Wayne A. Wurtsbaugh, wurts@cc.usu.edu

Location: Exhibit Hall

256. Nielson, A.; MacKinnon, P. D.; Luecke, C.: EFFECTS OF LAKES ON PHYSICAL CHARACTERISTICS OF ARCTIC STREAMS

257. Williams, M. W.; Seastedt, T.; Caine, N.; McKnight, M.: SPATIAL LIMNOLOGY FOR TOPOGRAPHICALLY RUGGED LANDSCAPES:

THE LANDSCAPE CONTINUUM MODEL

258. Jenkins, D. G.; Rosas-Anderson, C.; Weishampel, J.: THINK OF AQUATIC ECOSYSTEMS AS SMALL-WORLD NETWORKS

259. Kinsman, L. E.; Frost, P. C.; Larson, J. H.; Cherrier, C. T.; Lamberti, G. A.; Bridgham, S. D.: ATTENUATION OF UV RADIATION IN STREAMS AND LAKES OF NORTHERN MICHIGAN: EFFECTS OF SEASONAL CHANGES IN DISSOLVED ORGANIC CARBON CONCENTRATION AND CHEMISTRY

**TS42: Microbial Observatories: Integrative Studies of Microbial Habitats from Genomics to Biogeochemistry**

Chair(s): Samantha Joye, mjoye@uga.edu  
Antje Boetius, aboetius@mpi-bremen.de  
Matthew Kane, mkane@nsf.gov

Location: Exhibit Hall

96. Lavrentyev, P. J.; Duff, R. J.; Klarer, D. M.: PROTIST DIVERSITY, DISTRIBUTION, AND DYNAMICS IN A STROM-DRIVEN COASTAL WETLAND

97. GODFREY, A.; CAMBON-BONAVITA, M. A.; GESLIN, C.; LEROMANCER, M.; PRIEUR, D.; QUERELLOU, J.: MICROBIAL DIVERSITY IN MARINE EXTREME ENVIRONMENTS.

98. Herndl, G. J.; Reinthaler, T.; Teira, E.; Aken, H. v.; Veth, C.; Pernthaler, A.; Pernthaler, J.: CONTRIBUTION OF ARCHAEA TO TOTAL PROKARYOTIC PRODUCTION IN THE DEEP ATLANTIC OCEAN

99. Long, R. A.; Venable, K. E.; Sauer, L. A.; Pinckney, J. L.: ANTAGONISTIC INTERACTIONS BETWEEN AEROBIC HETEROTROPHIC BACTERIA FROM A HYPERSALINE MICROBIAL MAT

100. LEE, J. B.: DISTRIBUTION CHARACTERISTICS OF BIOMASS AND PRODUCTIVITY OF MICROBIAL COMMUNITY IN THE EAST CHINA SEA

101. Rodriguez Brito, B.; Breitbart, M.; Felts, B.; Mahaffy, J. M.; Nulton, J.; Salamon, P.; Rohwer, F.: MODELING ENVIRONMENTAL PHAGE-BACTERIA INTERACTIONS

102. Kamp, A.; Stief, P.; Schulz, H. N.: MICROSCALE GRADIENTS OF OXYGEN, SULFIDE, AND NITROGEN COMPOUNDS IN A LITHOTROPHIC BEGGIATOIA MAT GROWN IN ENRICHMENT CULTURE

↪ represents Tutorial presentations

103. Kent, A. D.; Watras, C. J.; Regnell, O.; Eckley, C.; McMahon, K. D.; Hintelmann, H.: MICROBIAL COMMUNITY STRUCTURE IS CORRELATED WITH MERCURY METHYLATION IN NORTHERN WISCONSIN LAKES
104. Bobb, M.; Zeglin, L. H.; Gooseff, M. N.; Barrett, J. E.; Dahm, C. N.; Vesbach, C. D.: SCALES OF MICROBIAL DIVERSITY ACROSS AQUATIC/TERRESTRIAL INTER-FACES IN A POLAR DESERT
105. Jones, S. E.; Beissenger, J. E.; McMahon, K. D.; Graham, L. K.: PREDATION AND CARBON SOURCE HOMOGENIZATION BY DINOBRYON SP. IN A HUMIC LAKE AND THEIR EFFECTS ON BACTERIAL COMMUNITY DIVERSITY
106. Jochem, F. J.; Lavrentyev, P. J.; Moats, K.; Klarer, D. M.: ABUNDANCE, GROWTH AND GRAZING LOSS RATES OF LOW- AND HIGH-DNA BACTERIA IN THE OLD WOMAN CREEK ESTUARY AND WESTERN LAKE ERIE

**TS48: Fate and Transport of Nutrients and Contaminants: Recent Advances**

Chair(s): Ben Hodges, hodges@mail.utexas.edu  
Sveinn Palmarsson, sopalmarsson@ucdavis.edu  
Jose Romero, romero@cwr.uwa.edu.au

Location: Exhibit Hall

280. Ahn, J.; Grant, S. B.; Surbeck, C. Q.; DiGiacomo, P. M.; Nezhin, N. P.; Jiang, S.: WATER QUALITY IMPACT OF STORM WATER RUNOFF TO COASTAL OCEAN IN SOUTHERN CALIFORNIA
281. Usry, B. P.; Showers, W. J.; DeMaster, D. J.: NITROGEN LOADING IN THE NEUSE RIVER BASIN, NORTH CAROLINA: THE RIVERNET MONITORING PROGRAM
282. Zamora, I. M.; Jochem, F. J.; Gardinali, P. R.: ASSESSING THE EFFECTS OF IRGAROL 1051 ON MARINE PHYTOPLANKTON POPULATIONS IN KEY LARGO HARBOR, FLORIDA
283. Li, L.; Wallace, G. T.; Jiang, M. S.; Pala, F.: MODELING THE TRANSPORT AND FATE OF TRACE METALS IN MASSACHUSETTS BAY WITH AN INTEGRATED HYDRODYNAMIC MODEL
284. Wolfe, III, J. E.; Lind, O. T.: EFFECT OF SMECTITE AND KAOLINITE CLAYS ON PHOSPHORUS CYCLING BY STREAM PERIPHYTON

**TS54: Advances in Microbial Ecology: New Culturing Techniques and Culture-independent Approaches**

Chair(s): Michael Rappe, rappe@hawaii.edu  
Bethany Jenkins, bjenkins@cats.ucsc.edu

Location: Exhibit Hall

107. Moorthi, S. D.; Countway, P. D.; Schnetzer, A.; Caron, D. A.: USE OF MOLECULAR APPROACHES TO INVESTIGATE THE DYNAMICS OF THE RED TIDE DINOFAGELLATE LINGULODINIUM POLYEDRUM
108. Johnson, E. C.; Long, R. A.: IDENTIFYING GROWING MARINE BACTERIA. IS BRDU A VIABLE OPTION?
109. Mann, E. L.; Roe, K. L.; Barbeau, K.; Haygood, M. G.: ISOLATING TRICHODESMIUM ASSOCIATED BACTERIA: USING SSU rRNA GENE SEQUENCES TO SCREEN FOR UNIQUE AND ENVIRONMENTALLY RELEVANT MICROBES

**TS57: Coupled Biogeochemical Interactions of Wetlands and Connected Aquatic Systems**

Chair(s): Sue Newman, snewman@sfwmd.gov  
Ramesh Reddy, krr@ufl.edu

Location: Exhibit Hall

285. Kerr, S. C.; Shafer, M. M.: THE ORIGIN AND FATE OF METAL-BINDING LIGANDS ALONG HYDROLOGIC FLOW PATHS
286. Shafer, M. M.; Kerr, S. C.; Overdier, J. O.; Armstrong, D. E.: CONTRASTS IN TRACE METAL CYCLING WITHIN OXIC AND ANOXIC FLOWPATHS OF A NORTHERN TEMPERATE STREAM CATCHMENT
287. Hill, B. H.; Elonen, C. M.; Jicha, T. M.; Danz, N. P.; Saraurer, R. S.: MICROBIAL ENZYME ACTIVITY FOR CHARACTERIZING NUTRIENT LOADING TO GREAT LAKES COASTAL WETLANDS

(\*) represents Invited presentations

**Friday, February 25, 2005****GS06: Impact of Environmental Estrogens and Pharmaceuticals**

Chair(s): Jonathan Sharp, jsharp@udel.edu

Location: 251 D/E

3:30 PM Gray, J. L.; Vajda, A.; Woodling, J.; Norris, D. O.; Barber, L. B.: CHEMICAL AND BIOLOGICAL INDICATORS OF ESTROGENIC ACTIVITY DOWNSTREAM OF WASTEWATER DISCHARGE IN BOULDER CREEK, BOULDER, CO4:00 PM Seyfried, E. E.; McMahon, K. D.: DOES GENOTYPIC DIVERSITY AMONG ANTIMICROBIAL RESISTANT BACTERIA VARY WITH LAKE TROPHIC STATUS?4:15 PM Stanley, J. K.; Ramirez, A. J.; Dzialowski, E.; Chambliss, C. K.; Brooks, B. W.: ENANTIO-SPECIFIC EFFECTS OF PROPRANOLOL, A COMMON HEART MEDICATION, TO DAPHNIA MAGNA**TS10: Organic Matter Cycling in Saline Lakes**Chair(s): Jasmine E. Saros, saros.jasm@uwlax.edu  
Christopher Osburn, cosburn@ccs.nrl.navy.mil

Location: 250 D/E

10:30 AM Waiser, M. J.: DEPARTURES FROM DOM PARADIGMS: THE UNIQUE CASE OF DOM IN SALINE LAKES AND WETLANDS ~11:00 AM Osburn, C. L.; Hamdan, L. J.; Fritz, S. C.; Saros, J. E.: VARIATION IN ORGANIC GEOCHEMISTRY AND AQUATIC OPTICS OF PRAIRIE SALINE LAKES11:15 AM Saros, J. E.; Erickson, J. M.; Wigdahl, C. R.; Fritz, S. C.; Osburn, C. L.: DOM-MEDIATED PHOSPHORUS LIMITATION OF PHYTOPLANKTON PRODUCTION IN PRAIRIE SALINE LAKES11:30 AM Moore, J. G.; Priscu, J. C.: THE EXTRACELLULAR RELEASE OF DISSOLVED ORGANIC CARBON IN FOUR ANTARCTIC LAKES11:45 AM Cory, B. M.; Foreman, C. M.; McKnight, D. M.; Mikucki, J. A.; Priscu, J. C.: CONTROLS ON DISSOLVED ORGANIC MATTER REDOX STATE IN ANTARCTIC LAKES**TS11: Advances in Otolith Chemistry and Applications in Freshwater Systems**Chair(s): Robyn Hannigan, hannigan@astate.edu  
Nate Bickford, nbickfor@astate.edu

Location: 250 A/B

1:30 PM Jones, C. M.: USING OTOLITH CHEMISTRY AS A NATURAL TAG ~2:00 PM Wells, B. K.: THE APPLICATION OF OTOLITH MICRO-CHEMICAL TECHNIQUES TO ADDRESS FISH ECOLOGY QUESTIONS IN FRESHWATERS. \*2:15 PM Howard, R.; Bickford, N. A.; Hannigan, R.: ENVIRONMENTAL LIFE HISTORY OF WALLEYE (SANDER VITREUM) IN GREER'S FERRY LAKE2:30 PM Kennedy, B. P.; Blum, J. D.; Nislow, K. H.; Coggins, L.: ADVANCES IN OTOLITH CHEMISTRY AND APPLICATIONS IN FRESHWATER SYSTEMS2:45 PM Hobbs, J. A.; Bennett, J. A.; Rosenfield, J. A.; Feyrer, F. E.: THE APPLICATION OF STRONTIUM ISOTOPES AND TRACE ELEMENT CHEMISTRY IN FISH OTOLITHS: IDENTIFYING NATAL HABITATS FOR NATIVE FISHES IN THE SAN FRANCISCO ESTUARY.3:00 PM Thébault, J.; Chauvaud, L.; Clavier, J.; Dunbar, R. B.; Fichez, R.; Mucciarone, D. A.: USE OF OXYGEN ISOTOPE THERMOMETRY FOR THE CALIBRATION OF THE SCALLOP COMPTOPALLIUM RADULA AS A HIGH-RESOLUTION TEMPERATURE RECORDER IN NEW CALEDONIA**TS13: Ecological Stoichiometry: The Periodic Table and Other Frontiers**Chair(s): Ariel D. Anbar, anbar@earth.rochester.edu  
James Elser, j.elser@asu.edu  
Robert Sterner, stern007@umn.edu

Location: 251 A/B

10:30 AM Sterner, R. W.: OVERVIEW OF SESSION: STOICHIOMETRY ACROSS THE PERIODIC TABLE10:45 AM Quigg, A. S.; Finkel, Z. V.; Irwin, A. J.; Van de Schootrugge, B.; Rosenthal, Y.; Falkowski, P. G.: ELEMENTAL SIGNATURES: LINKING EVOLUTIONARY FORCES AND ECOLOGICAL SUCCESS11:00 AM Sherrell, R. M.; Wei, L.; Ji, Y.: METALS IN PHYTOPLANKTON: DO LAB CULTURE RESULTS REALLY JIVE WITH BIOCHEMICAL MECHANISMS OR PREDICT CELLULAR METALS IN NATURAL SYSTEMS?11:15 AM Wei, L. P.; Sherrell, R. M.: EFFECT OF PH ON PHYTOPLANKTON METAL QUOTAS – METAL SPECIATION OR CELL PHYSIOLOGY?11:30 AM Ji, Y.; Sherrell, R. M.: HIGH ZN QUOTA IN PHYTOPLANKTON FROM LAKE SUPERIOR- A RESULT OF LOW PHOSPHORUS AVAILABILITY?11:45 AM Hutchins, D. A.; Fu, F. X.; Leblanc, K.; Zhang, Y.; Sanudo-Wilhelmy, S. A.: CORRECTING REDFIELD RATIOS AND P QUOTAS OF EUKARYOTIC AND PROKARYOTIC ALGAE FOR P SCAVENGING ONTO CELL SURFACES1:30 PM Karimi, R.; Chen, C. Y.; Folt, C. L.: HEAVY METAL AND NUTRIENT STOICHIOMETRY IN FRESHWATER INVERTEBRATE PREY AND THE IMPLICATIONS FOR TROPHIC TRANSFER1:45 PM Wolfe Simon, F.; Starovoytov, V.; Schofield, O.; Falkowski, P.: DIATOMS EXPRESS A NOVEL MNSOD IN THE CHLOROPLAST THAT RESPONDS TO LIGHT STRESS2:00 PM Ariel, A. D.: STOICHIOMETRIC LINKAGES BETWEEN MAJOR AND MINOR ELEMENTS IN EVOLUTION

☞ represents Tutorial presentations

- 2:15 PM Twining, B. S.; Baines, S. B.; Fisher, N. S.: STOICHIOMETRIC RESPONSES OF SOUTHERN OCEAN PLANKTON TO IRON FERTILIZATION: EXPANDING STOICHIOMETRY TO INCLUDE TRACE ELEMENTS
- 2:30 PM Allen, A. P.; Gillooly, J. F.: PREDICTING WHOLE-ORGANISM RNA AND PHOSPHORUS CONTENT
- 2:45 PM Acharya, K.; Jeffrey, J. D.: LIFE HISTORY TRAITS OF BOSMINA LONGIROSTRIS IN NATURAL RIVER SESTON VS. HOMOGENOUS SCENEDESMUS ACUTUS
- 3:30 PM Christian, J. B.: MODELING PLANKTONIC ECOSYSTEMS: BEYOND THE REDFIELD RATIO
- 3:45 PM Ji, X.; Schulz, K. L.; Qin, P.; Mayer, C. M.: SYNERGISTIC EFFECTS OF PHOSPHORUS ABATEMENT AND DREISSENA FILTRATION ON ECOSYSTEM PRIMARY PRODUCTION AND ALGAL STIOCHIOMETRY
- 4:00 PM Downing, J. A.; Cherrier, C. T.: ROLE OF AGRICULTURE AND IMPOUNDMENT IN ALTERING COASTAL Si:DIN STOICHIOMETRY
- 4:15 PM McCauley, E.; Elsler, J. J.; Hessen, D. O.; Sterner, R. W.; Andersen, T.; Faafeng, B.; Downing, J. A.: EFFECTS OF ANTHROPOGENIC N DEPOSITION ON NUTRIENT STOICHIOMETRY AND ZOOPLANKTON: DATA FROM SOUTHERN NORWAY
- TS21: Coupling Dissolved Organic Matter (DOM) Chemistry and Microbial Activity in Aquatic Ecosystems**
- Chair(s): Sandra Clinton, sclinton@uclink.berkeley.edu  
Jennifer Edmonds, edmonds@uga.edu
- Location: 250 D/E
- 1:30 PM Weston, N. B.; Joye, S. B.: SEASONAL VARIATION IN THE BREAKDOWN OF HMW-DOM IN ESTUARINE SEDIMENT: COUPLING BETWEEN THE HYDROLYTIC/FERMENTATIVE AND TERMINAL METABOLIC MICROBIAL COMMUNITIES
- 1:45 PM Arnosti, C.; Ghobrial, S.; Jeffrey, W. H.: SPATIAL PATTERNS IN THE ACTIVITIES OF MICROBIAL EXTRACELLULAR ENZYMES: A FACTOR IN THE PERSISTENCE OF 'SEMI-LABILE' DOC? \*
- 2:00 PM Findlay, S. E.; Sinsabaugh, R. L.: INCREASED CONCENTRATION AND REDUCED CONSUMPTION OF DISSOLVED ORGANIC CARBON IN THE HUDSON RIVER NY: UNEXPECTED CONSEQUENCE OF NITROGEN DEPOSITION?
- 2:15 PM Harrison, J. R.; Wells, S. A.; Rychert, R. C.; Naymik, J.: SEARCHING FOR A PRACTICAL APPROACH TO PARTITION BIOMASS AND DETRITUS FOR ECOLOGICAL MODELS APPLIED TO THE SNAKE RIVER AND ITS RESERVOIRS.
- 2:30 PM Lennon, J. T.: TERRESTRIAL DOM SUPPLY MODIFIES CARBON FLOW IN LAKES: EVIDENCE BASED ON STABLE ISOTOPES AND THE COMPOSITION OF MICROBIAL COMMUNITIES
- 3:30 PM Sinsabaugh, R. L.; Findlay, S.: AGRO-URBAN DEVELOPMENT OF WATERSHEDS ALTERS REGIONAL PATTERNS IN THE COMPOSITION AND FUNCTION OF HYPORHEIC BACTERIAL COMMUNITIES
- 3:45 PM Kaplan, L. A.; Hatcher, P. G.; Stahl, D. A.; Findlay, R. H.; Kim, S.; Hullar, M. A.; Frazier, S. W.: EMERGING PATTERNS OF BIODEGRADABLE DOC FROM STREAMS WITHIN EASTERN DECIDUOUS, SOUTH-EASTERN CONIFEROUS, AND TROPICAL EVERGREEN FORESTS \*
- 4:00 PM Edmonds, J. W.; Clinton, S. M.: CROSSING DISCIPLINARY BOUNDARIES TO INVESTIGATE THE COUPLING OF DOM CHEMISTRY AND MICROBIAL ACTMITY: PATTERNS ACROSS SPACE AND TIME \*
- TS28: Beyond the Mean: Effects of Instantaneous Turbulent Events on Organismal Processes**
- Chair(s): Marc Weissburg, marc.weissburg@biology.gatech.edu  
Don Webster, dw139@ce.gatech.edu
- Location: 255 B/C
- 1:30 PM Weissburg, M. J.; Webster, D. R.: MOVING BEYOND THE MEAN: HOW WE GOT HERE, AND WHY WE NEED TO KEEP GOING
- 2:00 PM Warnaars, T. A.; Hondzo, M.: INVESTIGATING FLUID MOTION EFFECTS ON FRESHWATER ALGAE IN A NOVEL APPARATUS GENERATING TURBULENCE
- 2:15 PM Latz, M. I.; Rohr, J.; Allen, J.: EFFECT OF THE DURATION OF UNSTEADY FLOW ON DINOFLAGELLATE POPULATION GROWTH
- 2:30 PM Crimaldi, J. P.; Larsen, L. G.; Hartford, J. R.: BROADCAST SPAWNING: THE ROLE OF INSTANTANEOUS PHYSICAL AND BIOLOGICAL PROCESSES GOVERNING FERTILIZATION EFFICIENCY
- 2:45 PM Hartford, J. R.; Crimaldi, J. P.: BROADCAST SPAWNING: NUMERICAL SIMULATIONS OF TURBULENT PROCESSES ASSOCIATED WITH FERTILIZATION EFFICIENCY
- 3:30 PM Mitarai, S.; Siegel, D. A.; Winters, K. B.: A NUMERICAL STUDY OF STOCHASTIC LARVAL SETTLEMENT IN NEARSHORE ENVIRONMENTS
- 3:45 PM Fricova, A.; Osborn, T. R.; Katz, J.: FLOW STRUCTURE AND PARTICLE DISTRIBUTION IN THE COASTAL BOTTOM BOUNDARY LAYER
- 4:00 PM Newby, S. G.: PREDATOR RELATED TURBULENCE AND THE RESPONSE OF JUVENILE ATLANTIC SURFCLAMS, SPISULA SOLIDISSIMA
- TS34: Comparative Ecology of High-altitude and High-latitude Aquatic Ecosystems**
- Chair(s): Christian H. Fritsen, chris.fritsen@dri.edu
- Location: 250 C/F
- 10:30 AM Priscu, J. C.; Christner, B.; Foreman, C. M.; Mikucki, J. A.; Welch, K. A.; Lyons, W. B.; Royston-Bishop, G.: PHYSICAL AND BIOLOGICAL CHARACTER OF SUBGLACIAL LAKE VOSTOK, ANTARCTICA \*
- 10:45 AM Gradinger, R. R.; Stockwell, D.: PHOTOSYNTHESIS PARAMETERS OF SEA ICE AND PHYTOPLANKTON COMMUNITIES IN ARCTIC WATERS

(\*) represents Invited presentations

- 11:00 AM Bluhm, B. A.; Gradinger, R. R.; Nielson, M. R.: THE ROLE OF SEA ICE SEDIMENTS FOR THE SEASONAL DEVELOPMENT OF NEAR-SHORE ARCTIC FAST ICE BIOTA OFF BARROW, ALASKA
- 11:15 AM Rose, J. M.; Caron, D. A.; Gast, R. J.; Moran, D. M.; Vora, N. M.; Sippel, V.: TEMPERATURE EFFECTS ON MICROGRAZER CONTROL OF ALGAL AND BACTERIAL ASSEMBLAGES IN THE ROSS SEA, ANTARCTICA
- 11:30 AM Squires, M. M.; Hecky, R. E.; Guildford, S. J.; Ramlal, P. S.: ORGANIC CARBON BUDGET OF ARCTIC DELTA VERSUS ARCTIC TUNDRA LAKES

**TS35: High-latitude River Hydrology, Ecology, and Biogeochemistry**

Chair(s): Robert (Rob) Striegl, rstriegl@usgs.gov  
Robert (Max) Holmes, RHolmes@mbl.edu

Location: 250 C/F

- 1:30 PM McClelland, J. W.; Holmes, R. M.; Peterson, B. J.; Amon, R.; Brabets, T.; Cooper, L.; Gibson, J.; Guay, C.; Milburn, D.; Raymond, P.; Zhulidov, A.; Zimov, S.: BIOGEOCHEMICAL TRACERS IN ARCTIC RIVERS: LINKING THE PAN-ARCTIC WATERSHED TO THE ARCTIC OCEAN \*
- 1:45 PM Gibson, J. J.; Helie, J. F.: STABLE ISOTOPE COMPOSITION OF THE MACKENZIE RIVER, ITS TRIBUTARIES, AND LAKES \*
- 2:00 PM Amon, R. M.; Benner, R.: THE BIOGEOCHEMISTRY OF DISSOLVED ORGANIC MATTER AND NUTRIENTS IN ARCTIC ESTUARIES AND IMPLICATIONS FOR OUR UNDERSTANDING OF THE ARCTIC OCEAN SYSTEM
- 2:15 PM Raymond, P. A.; Holmes, R.; Striegl, R.; McClelland, J.; Peterson, B.: A PRELIMINARY EVALUATION OF CARBON SOURCES AND AGES EXPORTED BY MAJOR ARCTIC RIVERS
- 2:30 PM Striegl, R. G.; Aiken, G. R.; Dornblaser, M. M.; Eberl, D. D.; Wickland, K. P.: CARBON BIOGEOCHEMISTRY AND TRANSPORT IN THE YUKON RIVER
- 2:45 PM Aiken, G.; Striegl, R.; Schuster, P.: DISSOLVED ORGANIC MATTER IN THE YUKON RIVER BASIN
- 3:30 PM Eberl, D. D.: QUANTITATIVE MINERALOGY OF THE YUKON RIVER SYSTEM: CHANGES WITH REACH AND SEASON, AND DETERMINING SEDIMENT PROVENANCE
- 3:45 PM Guo, L.; Guéguen, C.; Zhang, J. Z.: PHASE SPECIATION AND FLUXES OF NUTRIENTS FROM THE UPPER YUKON RIVER
- 4:00 PM Shiller, A. M.; Finlay, J.; Aiken, G. R.: SPATIAL AND TEMPORAL VARIABILITY OF DISSOLVED AND COLLOIDAL TRACE ELEMENTS IN RIVERS OF CENTRAL ALASKA
- 4:15 PM Febria, C. M.; Lesack, L. F.; Bothwell, M. L.: PATTERNS OF HYDROGEN PEROXIDE BUILD UP AMONG LAKES OF THE MACKENZIE DELTA AND POTENTIAL EFFECTS ON BACTERIAL PRODUCTION

**TS39: Landscape Limnology: Linking Streams, Lakes, and Wetlands at Large Spatial Scales**

Chair(s): Christopher T. Robinson,  
Christopher.Robinson@eawag.ch  
Wayne A. Wurtsbaugh, wurts@cc.usu.edu

Location: 250 A/B

- 10:30 AM Patoine, A.; Graham, M. D.; Hesslein, R.; Leavitt, P. R.: LANDSCAPE-SCALE PATTERNS OF NITROGEN FIXATION BY CYANOBACTERIA
- 10:45 AM Aufdenkampe, A. K.; Mayorga, E.; Hedges, J. I.; Llerena, C. A.; Quay, P. D.; Krusche, A. V.; Richey, J. E.: THE AMAZON FROM THE ANDES TO THE ATLANTIC: THE EVOLUTION OF ORGANIC MATTER IN A LARGE RIVER SYSTEM
- 11:00 AM Palen, W. J.; Carter, J. L.; Schindler, D. E.: DRIVERS OF UV TRANSPARENCY IN MONTANE LAKES; IMPLICATIONS FOR AMPHIBIAN RISK ANALYSIS
- 11:15 AM Pace, M. L.; Prairie, Y. T.: AN OVERVIEW AND GLOBAL ESTIMATE OF LAKE RESPIRATION
- 11:30 AM Hopkinson, C. S.; Smith, E. M.: ESTUARINE RESPIRATION: AN OVERVIEW OF BENTHIC, PELAGIC AND WHOLE SYSTEM RESPIRATION
- 11:45 AM Wagner, T.; Bremigan, M. T.; Spence Cheruvellil, K.; Soranno, P. A.; Nate, N. A.; Breck, J. E.: COMPARING MULTI-SCALE PREDICTORS OF FISH GROWTH: TOWARDS A REGIONAL FRAMEWORK FOR LAKE MANAGEMENT
- 12:00 PM Hershey, A. E.; Fortino, K.; Keyse, M.; Kelly, S.; O'Brien, W. J.; Beaty, S.; Luecke, C.; Whalen, S.: USE OF STABLE ISOTOPES IN MACROINVERTEBRATES TO STUDY BENTHIC-PELAGIC COUPLING AND LAKE-LANDSCAPE COUPLING IN ARCTIC ALASKAN LAKES

**TS43: Hydrodynamics of Coral Reef Systems**

Chair(s): Matthew A. Reidenbach, matt@berkeley.edu  
Jim Falter, falter@hawaii.edu

Location: 254 B

- 10:30 AM Sebens, K. P.: HYDRODYNAMICS OF CORAL REEFS: A CORAL'S EYE VIEW ~
- 11:00 AM Chang, S.; Elkins, C. J.; Iaccarino, G.; Monismith, S.: SMALL-SCALE FLOW VARIABILITY INSIDE BRANCHED CORAL COLONIES: COMPUTATIONS AND EXPERIMENTAL VALIDATION
- 11:15 AM Low, R. J.; Koseff, J. R.; Monismith, S. G.; Falter, J. L.: WAVE-DRIVEN FLOW AND MASS TRANSFER THROUGH CORAL REEF CANOPIES
- 11:30 AM Koseff, J. R.; Reidenbach, M. A.; Monismith, S. G.: THE EFFECT OF WAVE ACTION ON MIXING AND MASS TRANSFER IN CORAL COMMUNITIES
- 11:45 AM Stewart, H. L.: HYDRODYNAMIC CONSEQUENCES OF BUOYANCY AND STIFFNESS OF A REEF ALGA IN WAVES AND UNIDIRECTIONAL FLOW: A STUDY USING PHYSICAL MODELS

~ represents Tutorial presentations

- 1:30 PM Finelli, C. M.; Clarke, R. D.; Gaebe, C.; Buskey, E. J.: THE TURBULENT LIVES OF TUBE BLENNIES: FIELD MEASUREMENTS OF FLOW IN THE FEEDING VOLUMES OF CORAL REEF PLANKTIVORES
- 1:45 PM Genin, A.: FLOW EFFECTS IN THE CORAL REEF COMMUNITY: AN OVERVIEW \*
- 2:00 PM Reidenbach, M. A.; Koseff, J. R.; Monismith, S. G.; Genin, A.; Dunbar, R. B.; Zerbe, L.: INTERACTION BETWEEN CO<sub>2</sub>, CALCIFICATION, AND HYDRODYNAMICS ON CORAL REEFS
- 2:15 PM Falter, J. L.; Atkinson, M. J.; Merrifield, M. A.: MASS TRANSFER LIMITATION OF NUTRIENT UPTAKE BY A WAVE-DOMINATED REEF FLAT COMMUNITY
- 2:30 PM Symonds, G.: MODELLED AND OBSERVED WAVE DRIVEN FLOWS ON REEFS
- 2:45 PM Hench, J. L.; Lenihan, H. S.: CIRCULATION IN PAOPAO BAY, MOOREA, FRENCH POLYNESIA
- 3:30 PM Paris, C. B.; Cowen, R. K.; Srinivasan, A.; Chérubin, L.: CONNECTIVITY AMONG SNAPPER AND GROUPER POPULATIONS IN THE CARIBBEAN: A METAPOPOPULATION APPROACH FOR THE DESIGN OF MARINE RESERVE NETWORKS
- 3:45 PM Cowen, R. K.; Paris, C. B.; Srinivasan, A.: MODELING POPULATION CONNECTIVITY OF CORAL REEF FISHES WITHIN THE GREATER CARIBBEAN
- 4:00 PM Hernández-Cruz, L. R.; Purkis, S. J.; Riegl, B. M.: AIRBORNE HYPERSPECTRAL AND LIDAR SYNERGY AS AN ASSESSMENT TOOL FOR ACROPORID CORAL STATUS IN VIEQUES, PUERTO RICO

**TS44: Biocomplexity in Marine Ecosystems**

Chair(s): Anthony Michaels, tony@usc.edu  
Doug Capone, capone@usc.edu

Location: 250 A/B

- 3:30 PM Roache-Johnson, K. H.; Sieracki, M. E.; Poulton, N.; Moore, L. R.: A CELL-SPECIFIC DETECTION METHOD FOR QUANTIFYING ALKALINE PHOSPHATASE ACTIVITY (APA) IN MARINE PICOPLANKTON USING ELF-97 IN CONJUNCTION WITH FLOW CYTOMETRY
- 3:45 PM Chen, Y.; Tovar-Sanchez, A.; Siefert, R. L.; Sanudo-Wilhelmy, S. A.: THE UPTAKE OF AEROSOL IRON BY TRICHODESMIUM USING CONCURRENTLY COLLECTED AEROSOL, SEAWATER AND TRICHODESMIUM SAMPLES
- 4:00 PM Grace, J. B.: STUDYING NATURAL SYSTEMS USING STRUCTURAL EQUATION MODELING
- 4:15 PM Kaltenberg, A. M.; Thode, A. D.; Biggs, D. C.; DiMarco, S. F.: MEASUREMENT OF ADCP BACKSCATTER FROM DEEP SCATTERING LAYERS WHILE TRACKING THE DIVE DEPTH OF FORAGING SPERM WHALES

**TS48: Fate and Transport of Nutrients and Contaminants: Recent Advances**

Chair(s): Ben Hodges, hodges@mail.utexas.edu  
Sveinn Palmarsson, sopalmarsson@ucdavis.edu  
Jose Romero, romero@cwr.uwa.edu.au

Location: 256 B/C

- 10:30 AM Oldham, C. E.: Contaminant Fate and Transport An Interdisciplinary Systems Approach \*
- 11:00 AM Gardner, B.; Chen, R. F.; Wright, D.: TRANSPORT AND FATE OF CDOM AND HYDROCARBONS IN THE LOW SALINITY REGION OF THE HUDSON RIVER ESTUARY.
- 11:15 AM Luengen, A. C.; Flegal, A. R.: PRONOUNCED VARIATIONS IN NUTRIENTS AND TRACE METALS DURING A SPRING PHYTOPLANKTON BLOOM IN SAN FRANCISCO BAY
- 11:30 AM Carr, M. L.; Rehmann, C. R.: ESTIMATING THE DISPERSION COEFFICIENT WITH AN ACOUSTIC DOPPLER CURRENT PROFILER
- 11:45 AM Laval, B. E.; James, C. A.: ESTIMATING STABILITY IN DEEP TEMPERATURE LAKES
- 1:30 PM McKnight, D. M.; Miller, M. P.; Cory, R. M.; Williams, M. W.: HUMIC REDOX REACTIONS INFLUENCING NUTRIENT AND METAL TRANSPORT IN MOUNTAIN STREAMS \*
- 1:45 PM O'Brien, J. M.; Dodds, W. K.: PREDICTING AMBIENT UPTAKE AND MINERALIZATION OF AMMONIUM IN STREAMS USING WHOLE STREAM UPTAKE KINETICS
- 2:00 PM Fleener, W. E.; Rabidoux, A. A.; Schladow, S. G.: STREAM-LAKE INTERACTIONS AND THE IMPLICATIONS FOR PARTICLE AND NUTRIENT TRANSPORT AND DISTRIBUTION
- 2:15 PM Perez-Losada, J.; Schladow, S. G.; Fleener, W. E.; Jassby, D.; Rabidoux, A. A.: MODELING AND MEASURING THE IMPACT OF STREAMS ON THE WATER CLARITY OF LAKE TAHOE, USA
- 2:30 PM Pálmarsson, S. Ó.; Schladow, S. G.: OFFSHORE TRANSPORT OF PARTICLE-BOUND CONTAMINANTS IN A LARGE STRATIFIED LAKE
- 2:45 PM Loveless, A.; Oldham, C. E.: COASTAL GROUNDWATER DISCHARGE AND NUTRIENT SUPPLY IN A NATURALLY OLIGOTROPHIC, SEMI-ENCLOSED COASTAL BASIN
- 3:30 PM Pala, F.; Li, L.; Smith, J. P.; Wallace, G. T.: APPLICATION OF A DYNAMIC EQUILIBRIUM MODEL IN THE INTERPRETATION OF THE SEDIMENT/WATER DISTRIBUTION OF COPPER AND LEAD IN CHESAPEAKE BAY
- 3:45 PM Grant, S.; JEONG, Y.: FISHER INFORMATION AND ANALYSIS OF COMPLEX ENVIRONMENTAL SIGNALS IN COASTAL WATER QUALITY MONITORED AT NEWPORT BAY, CALIFORNIA
- 4:00 PM Sunda, W. G.; Donat, J. R.; Huntsman, S. A.; Carrasco, G. G.: CONTROL OF ZINC UPTAKE BY ESTUARINE PLANKTON BY FREE ZINC ION CONCENTRATION

(\*) represents Invited presentations

**TS55: Genome-enabled Insights into Aquatic Ecosystems**

Chair(s): Brian Palenik, bpalenik@ucsd.edu

Location: 251 D/E

- 10:30 AM Proctor, L. M.; Kingsbury, D. T.; McCann, K.: THE GORDON AND BETTY MOORE FOUNDATION MARINE MICROBIAL GENOME SEQUENCING PROJECT: PHASE ONE.
- 10:45 AM Moran, M. A.; Belas, R.; Whitman, W. B.; Buchan, A.; González, J. M.; Schell, M. A.; Ward, N.: COMPARATIVE ANALYSIS OF THREE MARINE ROSEOBACTER GENOMES \*
- 11:00 AM Bauer, M.; Kube, M.; Teeling, H.; Lombardot, T.; Richter, M.; Allers, E.; Kuhl, H.; Choudhuri, J.; Meyer, F.; Reinhardt, R.; Amann, R. I.; Glöckner, F. O.: WHOLE GENOME ANALYSIS OF THE MARINE CYTOSOLIC SP. STRAIN KT0803
- 11:15 AM Glöckner, F. O.; Bauer, M.; Teeling, H.; Lombardot, T.; Würdemann, C.; for the REGX-consortium, .: GENOME ANALYSIS OF ENVIRONMENTALLY RELEVANT MARINE BACTERIA – LESSONS FROM THE RHODOPIRELLULA BALTICA SH 1 T GENOME
- 11:30 AM Paulsen, I. T.; Palenik, B.: COMPARISON OF THE COMPLETE GENOME SEQUENCES OF COASTAL AND OPEN OCEAN SYNECHOCOCCUS ISOLATES
- 11:45 AM Grzyski, J.: COMPARATIVE GENOMIC ANALYSIS OF SIX ANTARCTIC MICROBIAL GENOME FRAGMENTS REVEALS PSYCROPHILIC SIGNATURES
- 1:30 PM Dupont, C. L.; Palenik, B.: DIVERSITY OF GENES CODING FOR NI-CONTAINING SUPEROXIDE DISMUTASES IN THE MARINE ENVIRONMENT
- 1:45 PM Johnson, Z. I.; Zinser, E. R.; McNulty, N. P.; Chisholm, S. W.: DIVERGENCE OF PROCHLOROCOCCUS SPP. PSBA GENES IN RELATION TO THEIR ECOLOGICAL DISTRIBUTIONS
- 2:00 PM Davis, A. K.; Hildebrand, M.; Palenik, B.: GENES INDUCED BY SHORT TERM COPPER EXPOSURE ARE FOUND IN MULTIPLE COPIES IN THE THALASSIOSIRA PSEUDONANA GENOME
- 2:15 PM Xu, Y.; Su, Z.; Dam, P.; Olman, V.; Chen, X.; Jiang, T.; Palenik, B.: COMPUTATIONAL PREDICTION OF FUNCTIONAL MODULES AND REGULATORY NETWORKS IN SYNECHOCOCCUS SP WH8102 ~
- 2:45 PM Palenik, B.; Yates, J.: THE PROTEOME OF A MARINE CYANOBACTERIUM—ANALYSIS THROUGH MULTI-DIMENSIONAL LIQUID CHROMATOGRAPHY AND TANDEM MASS SPECTROMETRY

**TS57: Coupled Biogeochemical Interactions of Wetlands and Connected Aquatic Systems**

Chair(s): Sue Newman, sneyman@sfwmd.gov

Ramesh Reddy, krr@ufl.edu

Location: 255 B/C

- 10:30 AM Santoro, A. E.; Boehm, A. B.; Francis, C. A.: DIVERSITY OF NITRITE REDUCTASE GENES ALONG A SALINITY AND NITRATE GRADIENT IN A COASTAL UNCONFINED AQUIFER
- 10:45 AM Piebler, M. E.; Thompson, S. P.; Poe, A. C.; McMillan, S. W.: LINKING NITROGEN REMOVAL AND RETENTION BY CONSTRUCTED WETLANDS TO ESTUARINE WATER QUALITY IN COASTAL NORTH CAROLINA, USA
- 11:00 AM Scott, J. T.; Doyle, R. D.: DIFFERENTIAL NUTRIENT LIMITATION WITHIN A FRESHWATER WETLAND: IMPLICATIONS FOR NITROGEN AND PHOSPHORUS DYNAMICS IN METAPHYTON
- 11:15 AM Blodau, C.; Mayer, B.; Moore, T. R.: COUPLING OF DOM AND SULPHUR CYCLING IN NORTHERN PEATLANDS
- 11:30 AM Louchouart, P.; Houel, H.; Peteet, D.; Sambrotto, R.: PALEOFIRE HISTORY AND BULK ISOTOPIC MARKERS: POTENTIAL BIASES IN SOURCE RECONSTRUCTION OF CARBON SOURCES TO WETLAND SEDIMENTS
- 11:45 AM Anthony, C.; Pullin, M. J.; Maurice, P. A.: COUPLING OF FE AND DOM IN WETLANDS: EFFECTS OF FE ON DOM MOLECULAR WEIGHT, FLUORESCENCE, AND ABSORBANCE PROPERTIES

~ represents Tutorial presentations



## Index

- A**
- Abell, J. 32  
 Aberle-Mahlzahn, N. 31  
 Acharya, K. 37  
 Achee, N. 12  
 Achilles, K. M. 8, 24, 32  
 Achord, S. 4  
 Ackerman, J. D. 10  
 Acord, M. R. 23  
 Adams, A. 16  
 Adams, H. E. 8  
 ADENLE, A. T. 32  
 Aguilar, C. 18, 26  
 Ahke, A. 29  
 Ahn, J. 35  
 Aiken, G. 38  
 Aiken, G. R. 38  
 Aken, H. v. 34  
 Aksnes, D. L. 10  
 Alcamo, J. 9  
 Alexander, J. 12, 30  
 Alexander, J. A. 12  
 Alexander, R. B. 9  
 Alin, S. 5  
 Allen, A. P. 8, 37  
 Allen, D. V. 23  
 Allen, J. 37  
 Aller, J. 16  
 Allers, E. 40  
 Allred, A. D. 23  
 Alvarez-Cohen, L. 29  
 Amann, R. 34, 40  
 Amann, R. I. 40  
 Ambler, J. W. 19  
 Ammerman, J. W. 17, 21  
 Amon, R. 38  
 Amon, R. M. 38  
 Andersen, M. S. 29  
 Andersen, T. 37  
 Anderson, J. A. 15  
 Anderson, M. L. 20  
 Anderson, M. R. 33  
 Andersson, J. H. 18  
 Andersson, M. 11  
 Andreas Krell, . 28  
 Andrén, E. 5  
 Andres, M. S. 30  
 Andrews, M. 6  
 Anesio, A. M. 28  
 Angly, F. 23  
 Anis, A. 11, 27  
 Anis, A. . 11  
 Anthony, C. 40  
 Antrobus, R. 7  
 Arend, K. 3, 31  
 Arend, K. A. 3  
 Ariel, A. D. 36  
 Armbrust, E. V. 6, 8, 25  
 Armour, R. 16  
 Armstrong, D. E. 35  
 Armstrong, R. A. 6  
 Ameri, E. 31  
 Arnold, B. R. 15  
 Amosti, C. 32, 37  
 Arp, C. 20, 29  
 Arp, C. D. 20, 29  
 Arthurs, L. 28  
 Arts, M. 19  
 Ashford, J. A. 16  
 Aspetsberger, F. 29  
 Athearn, N. D. 3  
 Atkinson, M. J. 39  
 Atwood, G. 27  
 Aufdenkampe, A. K. 38  
 Aumack, C. F. 7  
 Axler, R. P. 27  
 Ayala, J. R. 26  
 Aydin, K. Y. 4
- B**
- Bade, D. L. 9  
 Bagley, P. M. 18  
 Bailey, E. M. 6  
 Bailey, K. L. 21  
 Baines, S. B. 37  
 Baker, K. 25, 30  
 Baker, K. M. 25  
 Baker, M. A. 8, 9, 20, 29  
 Baker, P. 12  
 Balch, D. P. 23  
 Balch, W. 13  
 Baldwin, D. S. 20  
 Ballantyne, A. P. 12  
 Ballevona, A. J. 13, 14  
 Banta, A. B. 24  
 Barada, L. 3, 22  
 Barbeau, K. 35  
 Barbee, D. 31  
 Barber, L. B. 36  
 Barnett, A. B. 6  
 Barrett, J. E. 35  
 Barron, C. 5  
 Barry, J. P. 33  
 Bartlett, J. L. 5  
 Bartz, K. L. 11  
 Baskin, R. L. 23  
 Bates, N. R. 21  
 Bathmann, U. 19  
 Battin, J. 11  
 Bauer, J. E. 11  
 Bauer, M. 22, 25, 40  
 Bäuerle, E. 11  
 Baums, I. B. 19  
 Baxter, B. 23, 27  
 Baxter, B. K. 23, 27  
 Beattie, R. B. 27  
 Beaty, S. 38  
 Beaudoin, D. J. 28  
 Bebout, B. M. 8, 22, 27  
 Bebout, L. E. 22  
 Behrenfeld, M. J. 24  
 Beighley, R. E. 29  
 Beissenger, J. E. 35  
 Béjã, O. 3  
 Belabbassi, L. 31  
 Belas, R. 40  
 Belk, M. C. 26  
 Belnap, J. 8  
 Belovsky, G. E. 27  
 Belzile, C. 11  
 Benfield, M. 13  
 Benner, R. 38  
 Bennett, J. A. 36  
 Benoy, G. 11  
 Bera, A. 19  
 Beran, A. 18  
 Berelson, W. M. 30  
 Berg, G. M. 4  
 Bergeron, C. 9  
 Berninger, U. G. 34  
 Bernot, M. J. 5, 9  
 Bernot, R. J. 12  
 Bertilsson, S. 28  
 Bett, B. J. 33  
 Beutler, M. 31  
 Bianchi, T. S. 31  
 Bickel, S. L. 15  
 Bickford, N. 13, 36  
 Bickford, N. A. 36  
 Biggs, D. C. 39  
 Bill, B. D. 25  
 Bingham, B. L. 4, 14  
 Birdsey, P. 27  
 Bjerklie, D. M. 5  
 Blackmore, D. 25  
 Blackwood, A. D. 19  
 Blakeslee, A. M. 11  
 Blankenship, L. E. 26  
 Blodau, C. 40
- Bluhm, B. A. 25, 38  
 Blum, J. D. 36  
 Blythe, J. N. 28  
 Bobb, M. 35  
 Bochdansky, A. B. 31  
 Bode, A. 21  
 Boehm, A. B. 14, 15, 40  
 Boetius, A. 20  
 Bohannan, B. 8  
 Bohlke, J. K. 4  
 Böhlke, J. K. 20  
 Boisclair, D. 26  
 Bollens, S. M. 24, 31, 32  
 Bonde, R. K. 4  
 BONNET, D. 19  
 Bonzongo, J. C. 33  
 Borcard, D. 26  
 Borges, A. V. 5  
 Borkman, D. G. 14  
 Borme, D. 31  
 Boscarino, B. 19  
 Bosch, J. 31  
 Bothwell, M. L. 38  
 Botte, V. 10  
 Bowden, W. B. 34  
 Bowie, A. R. 8  
 Boyd, T. J. 22  
 Boyer, E. W. 9  
 Boyer, G. L. 7, 25  
 Boyer, J. N. 29, 31  
 Boynton, W. R. 6, 9  
 Brabander, D. J. 27  
 Brabets, T. 38  
 Bradford, J. H. 34  
 Bradley, P. B. 17  
 Brady, V. 10  
 Branco, A. B. 3  
 Brandes, J. A. 11  
 Brandt, S. B. 31  
 Branstrator, D. K. 26  
 Bratton, J. F. 20  
 Brawley, S. H. 7, 22, 31  
 Brazner, J. 10  
 Breck, J. E. 29, 38  
 Breitbart, M. 23, 34  
 Breitbart, M. I. 23  
 Breitburg, D. L. 19  
 Bremigan, M. T. 26, 29, 38  
 Brenner, M. 4, 10, 32  
 Breslin, V. T. 15  
 Breuer, E. R. 18  
 Brewster, J. 19  
 Bridgeman, T. 26  
 Bridgham, S. D. 28, 30, 34  
 Bright, K. B. 24  
 Brind'Amour, A. 26  
 Brines, E. K. 7  
 Brion, N. 11  
 Bristow, G. M. 34  
 Broadbent, H. A. 13  
 Bronk, D. A. 17, 28  
 Brooks, B. W. 36  
 Brosten, T. 34  
 Brown, C. W. 24  
 Brown, D. C. 12  
 BROWN, H. A. 31  
 Brown, J. 26, 30  
 Brown, J. R. 26  
 Brown, M. 8, 26  
 Brown, M. E. 26  
 Brown, P. D. 29  
 Brueggen, M. K. 15  
 Brumsted, M. A. 15  
 Brunelle, A. 12  
 Bruno, J. 11  
 Brussock, P. P. 4  
 Bryer, M. T. 10  
 Bucaria, R. 27  
 Bucci, J. P. 33  
 Buchan, A. 40  
 Buck, D. G. 10
- Buck, K. R. 33  
 Bucklin, A. 9  
 Buehring, S. 21  
 Bullerjahn, G. S. 24  
 Bulley, H. N. 10  
 Bunting, L. 14  
 Burd, A. 17  
 Burdick, D. 10  
 Burgin, A. J. 5  
 Burkart, G. A. 9  
 Burks, R. L. 15, 25  
 Burnett, W. C. 26  
 Burns, J. 14, 25, 32  
 Burns, J. A. 14, 32  
 Burton, J. L. 5  
 Buskey, E. J. 3, 19, 39  
 Busse, L. B. 7  
 Butler, M. J. 15  
 Button, D. K. 6  
 Butzler, J. M. 12  
 Byers, J. E. 11
- C**
- Cabaniss, S. E. 28  
 CABLE, J. E. 20  
 Cable, J. E. 3, 26, 31  
 Caccia, V. G. 29  
 Caceres, C. E. 6, 12, 26  
 Cahoon, L. B. 21, 33  
 Cai, W. 5  
 Cai, W. J. 5  
 Caine, N. 34  
 Calliari, D. 10  
 Calvert, E. L. 16  
 Camargo, A. 22  
 CAMBON-BONAVITA, M. A. 34  
 Campbell, D. 10  
 Cano, J. 7  
 Canuel, E. 22  
 Capone, D. 16, 25, 29, 30, 31, 32  
 Capone, D. G. 16, 25, 29, 30, 31, 32  
 Caraco, N. F. 11  
 Cardenas, B. R. 11  
 Carder, K. 14  
 Carini, S. A. 23  
 Carlson, C. A. 21, 23, 28  
 Carlson IV, W. F. 16  
 Carman, K. R. 33  
 Carman, M. 16  
 Carmichael, Jr., W. V. 32  
 Carnegie, R. B. 12  
 Carney, R. S. 26, 29  
 Carney, S. L. 4  
 Caron, D. A. 4, 12, 18, 28, 30, 35, 38  
 Carpenter, E. J. 22, 25, 31, 32  
 Carpenter, S. R. 12  
 Carr, M. L. 39  
 Carrasco, G. G. 39  
 Carter, J. L. 38  
 Cary, S. C. 23  
 Casciotti, K. L. 28  
 Case, J. 19  
 Casper, E. T. 13  
 Castaneda, I. S. 7  
 Castillo, M. M. 32  
 Castiñeira, F. 21  
 Castner, D. 17  
 Castruita, M. 24  
 Cermeño, P. 21  
 Cetrulo, B. 18  
 Chambliss, C. K. 36  
 Champanerkar, J. 25  
 Chan, M. A. 26  
 Chandra, S. 9  
 Chang, G. C. 13  
 Chang, S. 38  
 Bucci, J. P. 33  
 Chanton, J. P. 17  
 Chao, Y. 32

(\*) represents Invited presentations

- Chapman, D. S. 15  
 Chapman, P. 17, 31  
 Chappell, P. D. 6  
 Characklis, G. W. 19  
 Charette, M. A. 20  
 Charles, D. F. 21  
 CHASAR, L. C. 20  
 Chaubey, I. 33  
 Chauvaud, L. 36  
 Chavez, F. 3  
 Chen, C. Y. 36  
 Chen, R. F. 19, 27, 39  
 Chen, X. 3, 31, 40  
 Chen, Y. 39  
 Cherrier, C. T. 30, 34, 37  
 CHERRIER, J. 31  
 Cherrier, J. 23, 28, 31  
 Chérubin, L. 39  
 Cheruvellil, K. S. 29  
 Chiba, S. 22  
 Chin, W. 17, 33  
 Chin, W. C. 33  
 Chin, Y. P. 22  
 Chin-Leo, G. 14  
 Chisholm, S. W. 40  
 Choi, J. K. 24, 31  
 Chou, W. C. 9  
 Choudhuri, J. 40  
 Chris, C. 5  
 Christensen, B. A. 12  
 Christian, B. W. 7  
 Christian, J. R. 37  
 Christian, R. 19  
 Christner, B. 15, 23, 28, 37  
 Christner, B. C. 15, 23, 28  
 Church, M. J. 3, 4, 25  
 Church, T. M. 8, 24, 32  
 Ciborowski, J. J. 10  
 Cie, P. 7  
 Cincotta, D. 10  
 Claessens-Kenning, M. 18  
 Clark, A. M. 4  
 Clarke, A. L. 5  
 Clarke, R. D. 39  
 Clason, T. A. 7  
 Clavier, J. 36  
 Clay, T. 13, 27  
 Clayton, T. 8  
 Cleven, E. J. 34  
 Cline, D. 13  
 Clinton, S. M. 37  
 Cobb, D. 19  
 Coggins, L. 36  
 Cohen, A. S. 11, 23  
 Cohen, J. H. 10  
 Colbert, E. P. 15  
 Colburn, E. 22  
 Cole, B. 7  
 Cole, D. J. 19  
 Cole, J. J. 9, 11  
 Coleman, S. M. 5  
 Coles, V. J. 30  
 Coletti, L. 3, 30  
 Colin, S. P. 19, 30  
 Collier, J. L. 25, 30  
 Collins, B. M. 22  
 Collins, M. A. 18  
 Collins, M. J. 23  
 Collis, H. A. 3  
 Colman, J. A. 20  
 Colón-Carrión, D. 31  
 Combs, D. 22  
 Conley, D. J. 5  
 Conroy, J. D. 4, 9  
 Conry, T. 17  
 Cook-Hoggarth, K. L. 13  
 Cooke, S. L. 17  
 Cooley, S. 25  
 Cooley, S. R. 25  
 Cooper, A. B. 11  
 Cooper, L. 38  
 Copil Oancea, C. M. 14  
 Corbett, D. R. 31  
 Cornwell, J. 5, 6, 11, 30  
 Cornwell, J. C. 5, 6, 11  
 Corredor, J. 3  
 Cory, R. M. 36, 39  
 Corzo, A. 21  
 Costantini, M. 31  
 Costello, C. 30  
 Costello, J. H. 19, 30  
 Cottingham, K. L. 12  
 Cottrell, M. T. 4  
 Countway, P. D. 4, 12, 18, 35  
 Cowan, D. A. 23  
 Cowart, D. A. 14  
 Cowen, E. A. 3, 11  
 Cowen, R. K. 39  
 Cowie, G. 18, 29  
 Cowie, G. L. 18, 29  
 Cowles, T. J. 3  
 Coyne, K. J. 23  
 Cozen, A. E. 20  
 Craft, J. A. 30  
 Creed, E. 31  
 Crenshaw, C. L. 20  
 Crews, T. E. 8  
 Crimaldi, J. P. 14, 37  
 Crockett, E. L. 23  
 Cromwell, K. J. 32  
 Crooks, J. A. 26  
 Crosman, E. T. 27  
 Cross, E. 7  
 Crozier, L. 11  
 Crump, B. C. 8, 15  
 Crumrine, P. A. 11  
 Crusius, J. 20  
 Cuhel, R. L. 18, 26  
 Cuker, B. E. 18  
 Cullen, J. J. 3, 6  
 Culver, D. A. 4, 9  
 Cumming, B. F. 6  
 Curless, S. E. 21  
 Curtaz, J. 31  
 Curtis, J. 4, 10  
 Curtis, J. H. 10  
 Cutter, G. A. 18, 24, 29  
 Cutter, L. S. 29
- D**
- Dabiri, J. O. 30  
 Dagg, M. J. 31  
 Dahm, C. N. 20, 26, 35  
 Dail, M. B. 31  
 Dailey, S. K. 31  
 Dale, R. K. 22  
 Dam, P. 40  
 D'Ambra, I. 19  
 Damon, R. L. 25  
 Daniel, C. B. 28  
 Daniels, C. A. 31  
 Danz, N. P. 29, 35  
 DasSarma, S. 27  
 Davalos-Lind, L. O. 27  
 David, M. B. 9, 30  
 Davis, A. K. 40  
 Davis, J. M. 26  
 Davis, T. W. 7  
 de la Rosa, M. 25  
 De Luna, E. D. 13  
 DeBeer, D. 20  
 DeGoosh, K. E. 24  
 Deibel, D. 19  
 Delgado, J. G. 32  
 Dellapenna, T. 14, 15  
 Dellapenna, T. M. 15  
 DeLong, E. 3, 20  
 DeLong, E. 13  
 DeLong, E. F. 3  
 DeMaster, D. J. 18, 20, 35  
 DeMott, W. R. 10  
 Denkin, S. M. 12  
 Dennett, M. R. 28  
 Dennison, R. L. 32  
 deNoyelles, F. 9  
 DETENBECK, N. E. 24  
 Detenbeck, N. E. 10  
 Dettmann, E. H. 10  
 Dettmers, J. M. 26  
 Devol, A. H. 4, 6  
 DiBacco, C. 30  
 Dick, L. 19  
 Dickey, T. D. 13  
 Dietrich, S. V. 10  
 DiGiacomo, P. M. 35  
 DiMarco, S. F. 17, 21, 31, 39  
 DING, Y. 33  
 Ding, Y. 17  
 Doall, M. H. 16  
 Dobarro, J. 3  
 Dobraca, D. 22  
 Docherty, K. 5, 28  
 Docherty, K. M. 28  
 Dodds, W. K. 39  
 Dodson, S. I. 8  
 Doering, M. 20  
 Dokullil, M. 4  
 Dolan, J. R. 18  
 Dolney, A. 12  
 Dombroski, D. E. 14  
 Donaghay, P. L. 30  
 Donahue, B. 14  
 Donahue, M. J. 12, 16  
 Donahue, S. M. 23  
 Donat, J. R. 39  
 Doney, S. C. 24  
 Donkor, A. K. 33  
 Donovan, D. A. 27  
 Dore, J. E. 28  
 Dorman, J. G. 32  
 Dornblaser, M. M. 38  
 Doucette, G. 25  
 Dowd, M. 3  
 Downing, J. A. 37  
 Doyle, R. 3, 17, 31, 40  
 Doyle, R. A. 3  
 Doyle, R. D. 17, 40  
 Doyle, S. A. 14  
 Drews, M. 18  
 Driscoll, C. T. 3  
 Duarte, C. M. 5  
 Ducklow, H. W. 9  
 Duff, R. J. 34  
 Duffy, M. A. 6, 12  
 Duffy, W. D. 3  
 Dulaiova, H. 26  
 Dunbar, R. B. 36, 39  
 Dunton, K. 7, 17  
 Dunton, K. H. 7, 17  
 Dupont, C. L. 40  
 Durbin, E. 19, 25  
 Durbin, E. G. 19  
 Duval, T. P. 20  
 Dyble, J. 8  
 Dyhrman, S. T. 6, 24  
 Dzialowski, E. 36
- E**
- Eastwood, M. M. 16  
 Eberl, D. D. 38  
 Eberl, R. 22  
 Eckley, C. 35  
 Eckman, J. E. 30  
 Šedivý, J. 12  
 Edmonds, J. W. 37  
 Edmondson, W. T. 11  
 EDOKPAYI, C. A. 32  
 Edwards, R. 23  
 Edwards, W. J. 9  
 Egli, P. J. 13  
 Eillenberger, J. J. 19  
 Eldridge, M. L. 24  
 Elimelech, M. 7  
 Elkins, C. J. 38  
 Elkins, J. B. 31  
 Ellender, R. D. 14  
 Ellins, K. K. 7  
 Ellis, B. K. 29, 30  
 Elmegreen, L. 24  
 Elonen, C. M. 35  
 Elser, J. J. 23, 37  
 Eltgroth, M. L. 12  
 Emmons, E. E. 30  
 Engle, V. D. 10  
 Entrekin, S. A. 20  
 Epifanio, C. E. 30  
 Erickson, J. M. 24, 36  
 Errera, R. M. 26  
 Escobar, J. H. 32  
 Espíñeira, M. 21  
 Essington, T. E. 11  
 Estévez-Blanco, P. 21  
 Evans, C. T. 6  
 Evans, J. J. 12
- F**
- Faafeng, B. 37  
 Fagan, K. E. 9  
 Falkowski, P. 3, 4, 5, 36  
 Falkowski, P. G. 3, 4, 5, 36  
 Falter, J. L. 38, 39  
 Fan, C. 21  
 Farmer, A. S. 13  
 Febria, C. M. 38  
 Feeley, K. S. 33  
 Feldman, J. 13  
 Fell, J. W. 19  
 Fellows, K. A. 7  
 Felts, B. 34  
 Ferdelman, T. G. 29  
 Feris, K. P. 4  
 Fernández, E. 21  
 Ferrin, R. S. 24  
 Feyrer, F. E. 36  
 Fichez, R. 36  
 Fichot, C. G. 29  
 Field, J. C. 4  
 Field, K. G. 19  
 Filippino, K. C. 28, 29  
 Filstrup, C. T. 5  
 Fimmen, R. L. 22  
 Findlay, R. H. 37  
 Findlay, S. 37  
 Findlay, S. E. 37  
 Finelli, C. M. 39  
 Fingerut, J. T. 3  
 Finkel, Z. V. 4, 5, 36  
 Finlay, J. 22, 38  
 Finlay, J. C. 22  
 Finzi, J. 25, 32  
 Finzi, J. A. 32  
 Fischer, P. 11  
 Fisher, A. T. 21  
 Fisher, C. R. 4  
 Fisher, N. S. 37  
 Fisher, T. R. 21  
 Fitzwater, S. 30  
 Flanagan, K. M. 11  
 Fleenor, W. E. 39  
 Flegal, A. R. 39  
 Fleming, E. J. 33  
 Fløge, S. A. 28  
 Flood, R. 16  
 Flores, E. 14  
 Fluhrer, P. E. 7  
 Fogarty, M. 27  
 Foley, J. 11  
 Follstad Shah, J. J. 26  
 Folt, C. L. 36  
 Fonda Umani, S. 18, 31  
 Ford, D. J. 27

Ford, M. D. 30  
Foreman, C. M. 23, 36, 37  
Forthman, C. 32  
Fortino, K. 31, 38  
Forward, Jr., R. B. 10  
Foster, B. L. 9  
Foster, R. A. 25  
Foster, S. Q. 16  
Foucher, J. P. 20  
Fountain, M. 20  
Fowler, A. E. 16  
Fox, J. 13, 27  
Foy, R. H. 17  
Francis, C. A. 28, 40  
Francis, T. B. 9  
Frank, D. 10  
Frankignoulle, M. 5  
Franks, S. E. 17  
Frazier, S. W. 37  
Freeman, K. H. 12  
Freer, E. 26  
Fricova, A. 37  
Friedrichs, M. A. 30  
Fries, D. P. 13  
Fries, J. S. 19  
Fritsen, C. H. 28  
Fritz, S. 12, 21, 36  
Fritz, S. C. 21, 36  
Frost, P. C. 30  
Frost, B. W. 9, 10  
Frost, P. C. 34  
Fu, F. X. 25, 36  
Fu, S. 20  
Fuhrman, J. A. 4, 8, 19, 22, 29  
Fukuda, H. 23

**G**

Gaas, B. M. 17  
Gaebe, C. 39  
Gaedke, U. 18  
Gage, J. D. 33  
Gaichas, S. K. 4  
Gaidos, E. J. 11  
Gaines, S. D. 30  
Gal, G. 19  
Gallagher, D. 14  
Gallagher, J. L. 15  
Gamble, L. 17  
Ganeshram, R. 18  
Gannon, D. P. 15  
Garber, D. 30  
Garcés-Vargas, J. 12  
García de Lomas, J. 21  
Gardinali, P. R. 35  
Gardner, B. 39  
Gardner, G. B. 19  
Gardner, W. S. 5, 21, 27  
Garrett, J. D. 29  
Gasol, J. M. 12  
Gast, R. J. 12, 28, 38  
Gattuso, J. P. 5  
Gayeski, N. J. 26  
Gazeau, F. 5  
Gelfenbaum, G. 15  
Gelsleichter, J. 18  
Gemery, P. A. 24  
Genin, A. 10, 39  
Gerhard Dieckmann, . 28  
Gernot Glöckner, . 28  
GESLIN, C. 34  
Gharib, M. 30  
Ghobrial, S. 37  
Gibson, C. E. 14  
Gibson, D. M. 13, 19  
Gibson, J. 38  
Gibson, J. J. 38  
Gierlowski-Kordesch, E. H. 12  
Gifford, S. M. 24  
Gilbert, R. 15  
Gillooly, W. P. 29

Gillevet, P. M. 23  
Gillooly, J. F. 8, 37  
Gilmour, C. G. 33  
Ginis, I. 15  
Giovannoni, S. J. 21  
Girguis, P. R. 20  
Glatz, R. E. 28  
Glazer, B. T. 23, 26  
Glibert, P. A. 30  
Gilbert, P. M. 12  
Glöckner, F. O. 22, 25, 40  
Gobler, C. J. 7  
GODFROY, A. 34  
Godsey, H. S. 15  
Goebel, N. L. 3  
Gogou, A. 23  
Goldberg, S. J. 23  
Goldman, C. R. 19  
Goldstone, J. V. 28  
Goldthwait, S. A. 6  
Gonser, T. 20  
Gonzalez, G. 13  
González, J. M. 40  
Gonzalez Sagrario, M. A. 25  
Good, T. 9  
Gooday, A. J. 33  
Goodbred, S. 16  
Goodman, K. J. 13  
Goodwin, K. D. 19  
Gooseff, M. N. 34, 35  
Gorbunov, M. Y. 3  
Gordon, A. S. 15  
Goulden, M. 14  
Grace, J. B. 39  
Gradinger, R. R. 25, 37, 38  
Graham, L. K. 35  
Graham, M. D. 38  
Graham, W. M. 30  
Graneli, E. 18  
Graneli, W. 28  
Grant, P. 30  
Grant, S. 14, 35, 39  
Grant, S. B. 14, 35  
Grassle, J. P. 3  
Grave, B. N. 24  
Gray, J. L. 36  
Gray, L. J. 31  
Gray, M. 3  
Greely, T. 7, 13, 14, 27  
Greely, T. M. 14  
Green, C. E. 26  
Green, P. A. 5  
Green, R. E. 31  
Greene, C. 9  
Greene, S. E. 9  
Greenlee, S. K. 10  
Greinert, J. 18  
Grguric, G. 15  
Grieco, J. 12  
Griess, C. A. 18  
Griffin, D. W. 15  
Griffith, J. F. 19  
Griffith, J. G. 27  
Grimm, N. B. 20  
Gross, M. 22  
Grover, J. P. 9  
Grunbaum, D. 13, 27, 30  
Grünbaum, D. 19  
Grygo, A. M. 30  
Grzymalski, J. 40  
Guarracino, M. 3  
Guay, C. 38  
Gubsch, S. 18  
Guéguen, C. 38  
Quentzel, J. L. 33  
Guilderson, T. 21, 26  
Guilderson, T. P. 21  
Guildford, S. J. 9, 38  
Guillocheau, N. 3  
Gunderson, T. 25, 32  
Guntenspergen, G. R. 11

Guo, L. 11, 38  
Gustafson, A. B. 21  
Gustafson, E. 6  
Gutseit, K. C. 28

**H**

Haddock, S. 19  
Haefner, J. W. 29  
Haese, R. R. 8  
Haffa, A. 4  
Hagerthey, S. E. 4  
Hagley, C. A. 27  
Hairston, N. G. 3  
Haley, S. T. 6  
Hall, B. 34  
Hall, C. J. 3  
Hall, R. O. 5, 9, 20, 29  
Hall, S. R. 6, 12  
Hall, V. 14  
Halverson, C. E. 7  
Hambright, K. D. 4  
Hamdan, L. J. 36  
Hamill, B. J. 23, 28  
Hamilton, S. K. 5, 34  
Hammond, D. 27  
Hampton, S. E. 6, 11, 17  
Handler, N. 14, 15  
Handler, N. B. 14  
Hannah, C. 3  
Hannides, A. K. 11  
Hannigan, R. 13, 36  
Hansell/Dennis, D. A. 21  
Hanson, A. 13  
Hanson, A. K. 13  
Harada, H. 6  
Harbeson, S. A. 22  
Harner, M. J. 20  
Harney, J. N. 15  
Harris, D. 18  
Harris, R. P. 10  
Harrison, E. L. 16  
Harrison, J. A. 5  
Harrison, J. R. 37  
Hart, D. R. 27  
Hartford, J. R. 37  
Hartline, D. K. 10  
Hartman, J. S. 31  
Gray, M. 3  
Harvell, C. D. 11  
Harvey, J. W. 4, 20  
Harvey, S. M. 18  
Harwell, M. 31  
Haskell, A. E. 19  
Hassett, R. P. 23  
Hatcher, P. G. 37  
Hatt, H. 26  
Hauer, F. R. 10, 20, 29  
Haugland, R. A. 19  
Havens, K. E. 27  
Hawes, I. 23  
Hayes, K. C. 21  
Haygood, M. G. 35  
Hays, R. L. 34  
Hebbeln, D. 12  
Heckathorn, S. 26  
Hecky, R. E. 9, 38  
Hedges, J. I. 32, 38  
Heino, J. 9  
Heinz, P. 33  
Helfrich, L. C. 23  
Helie, J. F. 38  
Hembre, L. K. 19  
Hemond, H. F. 5  
Hench, J. L. 39  
Henke, M. E. 24  
Hensen, C. 18  
Hensgen, J. 18  
Herlihy, A. T. 10, 33  
Hernandez, M. M. 30  
Hernandez, X. 19  
Hernández-Cruz, L. R. 39

Herndl, G. J. 34  
Herren, C. 18, 19  
Hershey, A. E. 13, 31, 38  
Hessen, D. O. 37  
Hesselein, R. 38  
Hetland, R. 17  
Hewson, I. 8, 22, 29  
Heyes, A. 33  
Hicks, M. K. 16  
Hicks, R. E. 14, 29  
Hieb, W. S. 29  
Higgins, C. P. 14  
Higgins, J. 8, 10, 19  
Higgins, J. L. 8  
Higgins, J. V. 10  
Higgins, S. N. 9  
Hilborn, R. W. 30  
Hillebrand, M. 40  
Hill, A. E. 15  
Hill, A. R. 20  
Hill, B. H. 35  
Hill, H. W. 7  
Hill, J. E. 7  
Hill, R. J. 14  
Hill, W. R. 17  
Hinkfuss, S. 26  
Hinrichs, K. U. 21  
Hintelmann, H. 35  
Ho, K. T. 10  
Hoagland, K. D. 10  
Hobbie, J. E. 8, 11  
Hobbs, J. A. 36  
Hoch, M. P. 15, 27  
Hodder, K. R. 15  
Hodell, D. A. 10  
Hodges, B. R. 20  
Hoehn, E. 20  
Hoellein, T. J. 20  
Hoffmann, M. D. 8  
Hofmann, E. E. 19  
Hofmann, H. 11  
Hoggarth, M. A. 13  
Hölker, F. 9  
Holl, C. M. 8, 32  
Holland, V. B. 15  
Hollander, D. J. 7  
Hollenhorst, T. P. 29  
Holiday, D. V. 30  
Holmes, R. 38  
Holmes, R. M. 38  
Holsinger, S. 16  
Holt, R. D. 9  
Holt, S. 3  
Holz, A. A. 10  
Holz, J. C. 10  
Holzman, R. 10  
Hondzo, M. 19, 22, 31, 37  
Hood, R. R. 30  
Hook, S. J. 11  
Hoover, C. A. 22  
Hopkinson, C. S. 38  
Hopmans, E. C. 7  
Horel, J. D. 27  
Horner-Devine, M. C. 8  
Horrocks, J. D. 33  
Host, G. E. 10, 27  
HOTALING, C. W. 13  
Hotaling, N. 31  
Hotto, A. M. 25  
Houel, H. 40  
Houser, L. T. 30  
Howard, R. 36  
Howell, T. E. 9  
Hristova, K. R. 4  
Hsieh, C. 30  
Huang, Y. 28  
Hubbard, K. A. 25  
Huebner, J. D. 14  
Hughes, J. B. 8, 22  
Hughes, R. M. 10, 33  
Huisman, J. 8, 9

(\*) represents Invited presentations

Hullar, M. A. 37  
 Hung, C. 33  
 Hung, C. C. 33  
 Hung, J. 14  
 Hunt, C. W. 33  
 Hunte-Brown, M. E. 18  
 Hunter, S. 7  
 Huntsman, S. A. 39  
 Hupp, C. R. 20  
 Hurlbert, S. H. 21  
 Huston, S. L. 26  
 Hutchins, D. A. 24, 25, 36  
 Hyatt, C. J. 19  
 Hynes, A. M. 24

**I**  
 Iaccarino, G. 38  
 Ibelings, B. W. 8  
 Imai, K. 23  
 Imaki, H. 11  
 Ingall, E. D. 32  
 Inoue, T. 34  
 Inthorn, M. 11, 29  
 Irizarry-Ocasio, N. 7  
 Irwin, A. J. 4, 36  
 Ishii, S. 14  
 Ithier, W. 31  
 Ivanov, S. 13  
 Ivey, S. 7, 14, 27

**J**  
 Jabro, N. B. 30  
 Jackson, D. A. 9  
 Jackson, G. A. 30  
 Jacobson, M. 29  
 Jaeger, S. A. 17  
 Jagsch, A. 4  
 Jahnke, R. A. 5, 18  
 James, C. A. 39  
 James, K. L. 29  
 Jamieson, A. J. 18  
 Jander, J. 28  
 Jang, J. 23  
 Jannasch, H. W. 30  
 Jannusch, C. A. 3  
 Janssen, J. 26  
 Janzen, C. P. 26  
 Jassby, D. 39  
 Jeffrey, J. D. 37  
 Jeffrey, W. H. 37  
 Jeffreys, R. M. 18  
 Jenkins, B. 8, 30  
 Jenkins, B. D. 8  
 Jenkins, D. G. 5, 34  
 Jensen, M. E. 10  
 Jensen, S. 13  
 JEONG, Y. 39  
 Jeong, Y. 14  
 Jeppesen, E. 25  
 Ji, X. 12, 37  
 Ji, Y. 36  
 Jiang, H. 10, 15  
 Jiang, H. S. 10  
 Jiang, M. S. 35  
 Jiang, S. 35  
 Jiang, T. 40  
 Jicha, T. M. 35  
 JOCHEM, F. J. 32  
 Jochem, F. J. 24, 31, 35  
 Jochens, A. E. 31  
 Johannessen, S. C. 29  
 Johannsson, O. E. 19  
 John, D. 3, 25  
 John, D. E. 25  
 Johnson, C. G. 28  
 Johnson, E. C. 35  
 Johnson, K. S. 3, 30  
 Johnson, L. B. 10, 29  
 Johnson, P. T. 12  
 Johnson, R. 3, 8, 13, 26

Johnson, R. J. 8  
 Johnson, R. L. 3, 13  
 Johnson, T. C. 5, 7  
 Johnson, W. C. 11  
 Johnson, Z. I. 40  
 Johnston, C. A. 30  
 Johnston, T. A. 13  
 Joiner, N. L. 15  
 Jones, B. 21, 27  
 Jones, B. F. 27  
 Jones, C. M. 13, 36  
 Jones, S. E. 35  
 Jones, V. 23  
 Jones, W. 13, 17  
 Jones, W. B. 17  
 Jonkers, H. 21  
 Jordan, S. J. 10  
 Jordan-Dahlgren, E. 11  
 Joyce, P. 18  
 Joye, S. B. 5, 8, 20, 23, 26, 37  
 Jubar, A. K. 26  
 Juchelka, D. 12  
 Judkins, H. L. 7  
 Juggins, S. 5  
 Juhl, A. R. 7  
 Julius, M. 12  
 Jumars, P. 13, 27, 30, 31  
 Jumars, P. A. 30, 31

**K**  
 Kaczmarek, L. 11  
 Kalanetra, K. M. 26  
 Kalff, J. 6  
 Kalnejais, L. 8  
 Kaltenberg, A. M. 39  
 Kamp, A. 34  
 Kana, T. 11, 30  
 Kana, T. M. 11  
 Kaplan, L. A. 37  
 Karimi, R. 36  
 Karp-Boss, L. 30, 31  
 Katz, J. 30, 37  
 Katz, M. E. 5  
 Kawase, M. 6  
 Keener-Chavis, P. 27  
 Keil, R. G. 4  
 Keiners, K. 30  
 Keller, B. 12  
 Kelley, C. A. 22  
 Kelly, J. R. 29  
 Kelly, S. 15, 24, 38  
 Kelly, S. M. 15, 24  
 Keltner, K. 7  
 Kelton, N. 28  
 Kemp, K. M. 18  
 Kendall, . 30  
 Kennedy, B. P. 36  
 Kennedy, R. 28  
 Kenney, T. A. 22  
 Kenney, W. 32  
 Kent, A. D. 21, 35  
 Kepkay, P. 28  
 Kerfoot, W. C. 10  
 Kerr, S. C. 35  
 Kessler, K. 11, 15  
 Kessler, K. I. 15  
 Keymer, D. P. 15  
 Keyse, M. 38  
 Khoury, M. L. 10  
 Kidder, D. L. 12  
 Kiene, R. P. 6, 12  
 Kiesling, T. 19  
 Kiesling, R. L. 10  
 Kiffney, P. M. 9  
 Kilham, S. S. 31  
 Kim, E. H. 9  
 Kim, S. 37  
 Kim, Y.D. 12  
 Kimball, B. A. 27  
 Kimball, J. P. 5

Kimball, J. S. 29  
 King, A. 3, 31  
 King, A. T. 3  
 King, D. W. 6  
 King, J. D. 32  
 Kingsbury, D. T. 40  
 Kinsman, L. E. 34  
 Kirby, B. E. 14  
 Kirchman, D. L. 4, 12  
 Kirk, E. 14, 19  
 Kirk, E. A. 19  
 Kirkpatrick, B. 18  
 Kirshtein, J. 25, 30  
 Kirshtein, J. D. 25  
 Kiss, E. 5  
 KITAZATO, H. 33  
 Kitazato, H. 33  
 Klarer, D. M. 24, 34, 35  
 Klaus Valentin, . 28  
 Kleinschmidt, S. 3  
 Kleppel, G. S. 19  
 Klesius, P. H. 12  
 Klimov, D. 4  
 Klinck, J. M. 19  
 Kling, G. W. 6, 8  
 Klingler, E. H. 30  
 Knight, S. E. 30  
 Koblizek, M. 4  
 Koch, B. J. 8, 20  
 Koester, J. A. 31  
 Kohler, S. L. 12  
 Kohut, J. 31  
 Koike, I. 23  
 Kolbe, S. 16  
 Kolber, Z. S. 4  
 Kolesar, S. E. 19  
 Kopecky, A. L. 17  
 Korb, E. 11  
 Koseff, J. R. 38, 39  
 Kostadinov, T. S. 3  
 Köster, M. 28  
 KRABbenhofT, D. P. 20  
 Kraiya, C. 26  
 Krause, J. 21  
 Kreider, M. A. 7  
 Krembs, C. 30  
 Kremer, J. N. 3  
 Krey, W. B. 21  
 Krusche, A. V. 38  
 Ksoll, W. B. 14  
 Kubanek, J. 16  
 Kube, M. 40  
 Kubo, A. 23  
 Kudela, R. 25  
 Kudo, I. 8  
 Kuhl, H. 40  
 Kuhn, L. 33  
 Kujawinski, E. B. 23  
 Kulpa, C. F. 28  
 Kuma, K. 23  
 Kump, L. R. 12  
 Kupchik, M. J. 15  
 Kurtz, J. C. 10  
 Kustka, A. B. 6, 32  
 Kwandrans, J. 9

**L**  
 Lacy, J. R. 15  
 Lage, M. 8  
 Lamberti, G. A. 20, 30, 34  
 Lamont, P. A. 33  
 Lamoureux, S. F. 33  
 Lance, S. 19  
 Lange, C. B. 12  
 LaPara, T. M. 22  
 Larkin, K. 18, 33  
 Larkin, K. E. 33  
 LaRoche, J. 4  
 Larsen, L. G. 14, 37

Larson, C. 27  
 Larson, J. H. 30, 34  
 Lasley, R. 16  
 Latz, M. I. 25, 37  
 Lau, A. V. 18  
 Lauer, A. 21, 28  
 Laukannen, K. H. 15  
 Laurent, A. 3  
 Laursen, A. E. 4  
 Laval, B. E. 39  
 Laverman, A. 32  
 Lavik, G. 29  
 Lavrentyev, P. J. 24, 34, 35  
 Law, C. G. 27, 31  
 Law, G. 18  
 LAWAL, M. O. 32  
 Laws, E. A. 30  
 Laws, R. A. 21  
 Laybourn-Parry, J. 19  
 Leavitt, P. R. 6, 10, 14, 38  
 Leblanc, K. 36  
 Lee, B. S. 9  
 LEE, J. B. 34  
 Lee, P. A. 21  
 Lee, R. 5, 10, 18  
 Lee, R. F. 10  
 Lee, R. Y. 5  
 Lee, S. M. 24  
 Leech, D. M. 28  
 Leff, L. G. 28  
 Legendre, P. 26  
 Leggett, W. C. 13  
 Leibold, M. A. 9  
 Leising, A. W. 10  
 Lemke, M. J. 5  
 Lemus, J. 18  
 Lenhart, B. 4  
 Lenihan, H. S. 39  
 Lennon, J. T. 37  
 Lentz, V. 14  
 Lenz, P. H. 10  
 León-Cardona, A. 22  
 LEROMANCER, M. 34  
 Lesack, L. F. 38  
 Lethaby, P. J. 8  
 Leung, R. 22  
 Levandowsky, M. 25  
 Levesque, C. 33  
 Levin, L. A. 18, 26, 33  
 Levin, P. S. 4  
 Levin, S. 30  
 Levinton, J. S. 10  
 Lewis, W. M. 27  
 Lewitus, A. J. 21  
 Leydecker, A. 29  
 Li, L. 35, 39  
 Li, R. 7  
 Li/Qian, Q. P. 21  
 Liang, X. 19  
 Libby, P. S. 14  
 Lidz, B. H. 31  
 Lightbody, A. F. 20  
 Lillie, R. A. 8  
 Lin, S. 4  
 Linares, A. C. 15  
 Lind, O. T. 5, 7, 27, 32, 35  
 Linder, E. 11  
 Lindquist, N. 6, 21  
 Linke, P. 18  
 Lipp, E. 15, 19  
 Lipp, E. K. 15  
 Lipschultz, F. 21, 32  
 Litchfield, C. 23, 27  
 Litchfield, C. D. 23  
 Litt, A. H. 11  
 Litz, L. 19  
 Litz, M. 10  
 Liu, K. K. 9  
 Llerena, C. A. 38  
 Loadman, N. L. 14  
 Lockett, D. E. 9

Lockwood, R. S. 15  
 Lodge, A. 7, 14, 27  
 Lodge, A. P. 14  
 Lodge, D. M. 9, 30  
 Loesekann, T. 20  
 Loew, E. 19  
 Loftin, C. S. 24  
 Lohner, R. 26  
 Lohrenz, S. E. 5, 14  
 Lomas, M. W. 21  
 Lombardot, T. 25, 40  
 Long, A. K. 25  
 Long, R. A. 34, 35  
 Longcore, J. E. 12  
 Lopez, C. L. 32  
 López-Garriga, J. 7  
 Lorang, M. 10, 20, 29  
 Lorang, M. S. 10, 20, 29  
 Lorenzi, A. 3, 22  
 Lorenzi, A. H. 22  
 Lorenzo, J. 21  
 Los Huertos, M. 30  
 Louchouart, P. 40  
 Louisa Morrison, L. 23  
 Lourenco, M. 13  
 Lovelace, G. 19  
 Loveless, A. 39  
 Lovera, C. 33  
 Lowe, A. T. 16  
 Lowe, R. J. 38  
 Luecke, C. 9, 13, 33, 34, 38  
 Luengen, A. C. 39  
 Luff, R. 18  
 Luther, G. W. 26, 32  
 Luther III, G. W. 23  
 Luthy, R. G. 14  
 Lyons, M. M. 12  
 Lyons, W. B. 21, 28, 33, 37

**M**

Ma, H. 3  
 Macaluso, A. L. 23  
 MacGregor, B. J. 12  
 MacIntyre, S. 6, 12  
 Mack, E. E. 33  
 Mackenzie, F. T. 9  
 MacKinnon, P. D. 34  
 Macko, S. A. 22, 29  
 Madden, L. 15  
 Madeiros, A. 14  
 Madey, G. R. 28  
 Maguire, T. 11  
 Mahaffey, C. 25  
 Mahaffy, J. M. 34  
 Maher, W. 8  
 Mahon, G. 32  
 Mahowski, J. B. 14  
 Malard, F. 20  
 Maldonado, E. M. 25  
 Malkiel, E. 30  
 Malmstrom, R. R. 12  
 Manderson, J. P. 31  
 Mann, E. L. 35  
 Mannino, A. 4  
 Marcarelli, A. M. 8, 23, 29  
 Marcovich, D. 31  
 Marcus, N. H. 9  
 Marella, R. 32  
 Mariani, P. 10  
 Marin III, R. 13  
 Marin, R. 25  
 Marinelli, R. L. 6, 30  
 Maritorea, S. 3  
 Marker, M. 9  
 Markfort, C. D. 31  
 Marsay, C. M. 8  
 Marsh, A. G. 22  
 Marston, M. F. 8, 22  
 Martens, C. S. 6  
 Martin, C. 16, 24

Martin, C. S. 16  
 Martin, S. L. 29  
 Martin, W. R. 8  
 Martins, C. A. 7  
 Masin, M. 4  
 Mason, R. P. 9, 33  
 Massion, E. 13  
 Masterson, J. P. 20  
 Masuoka, P. 12  
 Mata, S. 19  
 Matsumoto, G. I. 18  
 Matsumoto, K. 33  
 Matter, W. J. 7  
 Matthews, R. A. 13  
 Maurice, P. A. 28, 40  
 Mayer, B. 40  
 Mayer, C. 12, 26, 37  
 Mayer, C. M. 12, 37  
 Mayer, L. M. 31  
 Mayo, M. 31  
 Mayorga, E. 38  
 Mazzocchi, M. G. 10  
 McAlpine, R. J. 19  
 McCabe, M. 27  
 McCabe, P. 13  
 McCallister, S. L. 9  
 McCann, K. 40  
 McCarthy, M. D. 21, 23, 26  
 McCarthy, M. J. 5, 21, 27  
 McCauley, E. 11, 37  
 McCauley, E. F. 11  
 McClain, M. E. 11, 34  
 McClelland, J. 38  
 McClelland, J. W. 38  
 McCleskey, R. B. 24  
 McCorkle, D. C. 5  
 McCutcheon, K. 10  
 McGee, D. K. 21  
 McGillicuddy, D. J. 8  
 McGillicuddy/Dennis, D. J. 21  
 McGillis, W. R. 3, 5, 33  
 McGowan, S. 10  
 McGuire, P. 4  
 McInnes, A. 14, 15  
 McInnes, A. J. 15  
 McIntyre, P. B. 6  
 McKagan, S. 7  
 McKeel, S. 13  
 McKenna, K. 19  
 Mckinlay, S. 18  
 McKinney, E. R. 10  
 McKnight, D. M. 36, 39  
 McKnight, M. 34  
 McMahan, K. D. 21, 35, 36  
 McManus, J. 16  
 McManus, M. A. 32  
 McMillan, S. W. 40  
 McNamara, J. P. 34  
 McNeil, R. S. 15, 27  
 McNulty, N. P. 40  
 Meaux, M. F. 14  
 Megard, R. O. 19  
 Meile, C. 32  
 Melack, J. M. 29  
 Mellison, C. 27  
 Menchaca, S. 7  
 Menden-Deuer, S. 19  
 Mendoza, G. 33  
 Mengelt, C. 7  
 Merchant, J. M. 10  
 Merrifield, M. A. 39  
 Metcalfe, A. M. 17  
 Meyer, F. 40  
 Meyer, J. L. 5  
 Meyer, K. M. 12  
 Meyer-Reil, L. A. 28  
 Meyers, M. K. 23  
 Meysman, F. 29  
 Michaels, A. F. 30, 32  
 Michels, H. 25  
 Michener, R. 18

Middelburg, J. J. 5, 11, 18, 29  
 Migon, C. 23  
 Milkucki, J. A. 21, 23, 36, 37  
 Milburn, D. 38  
 Miles, A. K. 3  
 Miller, D. C. 22, 26  
 Miller, D. M. 27  
 Miller, M. C. 15  
 Miller, M. P. 39  
 Miller, P. E. 7  
 Miller, W. L. 28  
 Miller, W. L. 29  
 Millet, B. V. 11  
 Milligan, A. 6  
 Mills, D. K. 11  
 Mills, E. 19, 26  
 Mills, E. L. 19  
 Mills, M. D. 26  
 Millward, L. 15  
 Minor, E. C. 24  
 Mioni, C. E. 8  
 Misaras, L. R. 27  
 Mitarai, S. 30, 37  
 Mitchell, A. M. 20  
 Mitchell, K. R. 24  
 Mntoya, J. V. 32  
 Moats, K. 24, 35  
 Moats, K. M. 24  
 Moffett, J. W. 6  
 MOFFETT, M. F. 24  
 Moffett, M. F. 10  
 Moisander, P. H. 8  
 Moldaneke, C. 31  
 Moll, R. A. 17  
 Molot, L. A. 28  
 Molyneaux, S. J. 21  
 Monismith, S. 30, 38, 39  
 Monismith, S. G. 30, 38, 39  
 Montero, L. 31  
 Montgomery, T. 16  
 Montoya, J. P. 8, 32  
 Montoya, J. V. 32  
 Moon, I. J. 15  
 Moon, M. 14  
 Moore, C. 13  
 Moore, J. G. 36  
 Moore, J. W. 17  
 Moore, L. R. 39  
 Moore, T. R. 40  
 Moore, T. S. 26  
 Moorhead, D. 19  
 Moorthi, S. 12, 35  
 Moorthi, S. D. 35  
 Mopper, K. 24  
 Moran, D. M. 28, 38  
 Moran, M. A. 40  
 Moran, F. M. 6, 22, 24  
 Morgan, L. A. 24  
 Morrice, J. A. 29  
 Morris, D. P. 28  
 Morris, M. R. 20  
 Morris, R. M. 21  
 Morscheid, H. 4  
 MORTON, S. 31  
 Moseman, S. M. 8  
 Moser, K. A. 5, 26, 31  
 Mosier, A. C. 28  
 Mosley, R. 22, 27  
 Mou, P. P. 13  
 Mucciarone, D. A. 36  
 Mueller-Solger, A. B. 3  
 Muhlin, J. F. 7, 22  
 Mulholland, P. J. 17  
 Mullen, K. 11  
 Mullenbach, B. 21  
 Muller, P. H. 31  
 Muller-Karger, F. 27  
 Muller-Parker, G. T. 17  
 Munson, B. 27  
 Muotka, T. 9  
 Murray, A. E. 28

Murray, M. 17  
 Mydlarz, L. 7  
 Myers, T. L. 16

**N**

Naar, D. 14  
 Naftz, D. L. 22, 23, 27  
 Naik, H. 18  
 Nakamura, Y. 34  
 Nakatsuka, T. 33  
 Namjesnik-Dejanovic, K. 15  
 Nañez-James, S. E. 3  
 Naqvi, W. S. 18  
 Nate, N. A. 38  
 Natter, M. J. 14, 19  
 Naymik, J. 37  
 Nealson, K. H. 30  
 Needoba, J. A. 30  
 Nelson, D. C. 26, 33  
 Nelson, D. M. 21  
 Nelson, D. R. 12  
 Nelson, N. B. 23  
 Nepf, H. M. 20  
 Nestler, J. R. 32  
 Neuhuber, S. M. 34  
 Neumann, O. 13  
 Newby, S. G. 37  
 Newcum, R. 10  
 Newman, S. 4  
 Newton, R. J. 21  
 Neziin, N. P. 35  
 Nguyen, C. V. 30  
 Nickel, M. 29  
 Niederlehner, B. R. 5  
 Nielson, A. 34  
 Nielson, M. R. 25, 38  
 Niemann, H. 20  
 Nishioka, J. 23  
 Nislow, K. H. 36  
 Nixdorf, B. 28  
 Noble, R. 3, 19  
 Noble, R. T. 19  
 Noe, G. B. 20  
 Noguera, J. L. 34  
 Nomaki, H. 33  
 Nordstrom, D. K. 24  
 Normandeau, C. 6  
 Norrbin, M. F. 25  
 Norris, D. O. 36  
 Norton, S. 7  
 Nowlin, W. 31  
 Nulton, J. 34  
 Nunnally, C. C. 17  
 Nuzio, D. M. 26  
 Nydick, K. R. 6, 29  
 Nyholm, B. P. 22

**O**

O'Brien, J. M. 39  
 O'Brien, W. J. 10, 15, 26, 38  
 O'Connor, B. L. 22  
 O'Donnell, M. J. 4  
 Ogawa, H. 23  
 O'Gorman, R. 19  
 Ohkouchi, N. 33  
 Ohman, M. D. 19, 30  
 Okuda, C. 33  
 Oldham, C. E. 39  
 Olman, V. 40  
 Olsen, L. M. 14  
 Omeregie, E. 20  
 O'Mullan, G. D. 30  
 Opsahl, S. 17  
 Orcutt, B. N. 20  
 O'Reilly, C. M. 11, 13  
 Orellana, M. V. 23, 25, 32  
 Orrio, C. 19  
 Orth, R. 22  
 Ortiz, J. D. 15  
 Osborn, T. R. 37

Osburn, C. L. 21, 22, 36  
 Ossolinski, J. E. 21  
 Overdier, J. O. 35  
 Oviatt, C. G. 27  
 Owens, M. S. 5, 6, 11

**P**

Paavola, R. 9  
 Pace, M. L. 38  
 Packer, M. 33  
 Paerl, H. W. 8, 21  
 Paerl, R. W. 22  
 Paffenhofer, G. A. 19  
 Paffenhöfer, G. A. 10, 19  
 Pagulayan, R. C. 30  
 Pala, F. 35, 39  
 Palen, W. J. 38  
 Palenik, B. 40  
 Pallud, C. 32  
 Pålmarsson, S. Ö. 39  
 Palmer, D. F. 15  
 Palmer, R. N. 11  
 Panagiotopoulos, C. 28  
 Panagiotopoulos, C. 28  
 Panetta, R. J. 32  
 Pankowski, M. 26  
 Pantoja, S. 12  
 Pantos, O. 28  
 Papastephanou, K. M. 32  
 Paquay, F. 9  
 Pardi, R. R. 14  
 Paris, C. B. 39  
 park, H. 22  
 Parker, D. 25  
 Parker, J. N. 23  
 Parris, M. J. 12  
 Pasma, J. E. 13  
 Passow, U. 19  
 Patel, A. 8, 22  
 Patoine, A. 38  
 Patterson, S. 13  
 Paul, J. H. 3, 13, 25  
 Paulsen, I. T. 40  
 Pawlak, G. 16  
 Payne, C. D. 8  
 Paytan, A. 14, 30  
 Peach, C. L. 17  
 Pednekar, A. M. 14  
 Peeler, K. 17  
 Peeters, F. 11  
 Peglar, M. T. 25  
 Pena, M. A. 29  
 Penkman, K. E. 23  
 Penny, D. L. 7  
 Peppe, O. 18  
 Pepper, C. A. 27  
 Peranteau, C. L. 15  
 Perez-Losada, J. 39  
 Peri, F. 19  
 Pernthaler, A. 34  
 Pernthaler, J. 34  
 Perry, J. A. 24  
 Perschon, C. 27  
 Pershall, A. D. 20  
 Peteet, D. 40  
 Peters, C. 13  
 Petersen, C. 19  
 Petersen, E. U. 15  
 Petersen, T. W. 8, 25  
 Peterson, B. 5, 38  
 Peterson, B. J. 5, 38  
 Peterson, G. 6  
 Peterson, S. A. 33  
 Peterson, W. T. 3  
 Petrecca, R. F. 3  
 Petrussek, A. 12  
 Peucker-Ehrenbrink, B. 15  
 Pfannkuche, O. 18  
 Pfeiffer-Hoyt, A. S. 32  
 Piehler, M. F. 8, 40

Pierson, J. J. 10  
 Pliskaln, C. 13  
 Pinckney, J. L. 26, 34  
 Pineda, J. 30  
 Pineiro, S. A. 3  
 Pizay, M. D. 5  
 Placencia, J. 12  
 Planas, D. 33  
 Plant, J. 30  
 Plisnier, P. D. 11  
 Pluhar, R. 14, 19  
 Pluhar, R. J. 19  
 Poe, A. C. 40  
 Polasky, S. 30  
 Pond, D. W. 33  
 Pontius, R. A. 9  
 Poole, G. 5  
 Poorvin, L. 8  
 Pope, K. 12  
 Popp, B. N. 6, 28, 32  
 Porter, E. T. 9  
 Porter, J. A. 23, 28  
 Porubsky, W. P. 5  
 Post, A. 18  
 Postma, D. 29  
 Potapova, M. 21  
 Pothén, J. J. 24  
 Poulton, N. 39  
 Powell, C. 25  
 Powell, J. M. 18  
 Power, M. E. 22  
 Powers, L. A. 7  
 Praetorius, S. 16  
 Prael, F. 12  
 Prairie, Y. T. 38  
 Prast, M. M. 34  
 Pratt, L. J. 15  
 Preston, C. M. 3, 13, 22  
 Preu, E. R. 12  
 Prezelin, B. B. 7  
 prezelin, B. B. 21  
 Priede, I. G. 18  
 PRIEUR, D. 34  
 Prince, E. 16  
 Priscu, J. C.  
 15, 21, 23, 28, 36, 37  
 Proctor, L. M. 40  
 Pullin, M. J. 28, 40  
 Purinton, B. L. 18  
 Purkis, S. J. 39  
 Pyrtle, A. 7, 13, 14, 18, 27, 31  
 Pyrtle, A. J. 7, 13, 14, 18, 31

**Q**

Qin, B. 21, 27  
 Qin, B. Q. 27  
 Qin, P. 12, 37  
 Quan, S. W. 27  
 Quan, T. M. 28  
 Quay, P. D. 38  
 Quenneville, M. L. 29  
 QUERELLOU, J. 34  
 Quigg, A. 6, 17, 21, 23, 36  
 Quigg, A. S. 17, 23, 36  
 Quinlan, J. A. 27, 31

**R**

Rabalais, N. N. 3  
 Rabidoux, A. A. 39  
 Rabouille, S. 8  
 Rader, R. B. 26  
 Ragoonth, D. N. 15  
 Ramirez, A. J. 36  
 Ramlal, P. S. 38  
 Rao, A. F. 5  
 Rappe, M. S. 7  
 Rasher, D. B. 16  
 Rasmussen, M. 9  
 Rathburn, A. E. 29  
 Raven, J. A. 6

Raymond, E. L. 13  
 Raymond, P. 3, 11, 38  
 Raymond, P. A. 3, 11, 38  
 Reardon, M. 9  
 Redalje, D. G. 14, 19  
 Rees, G. N. 20  
 Regnell, O. 35  
 Rehder, G. 18  
 Reimann, C. R. 39  
 Reid, B. R. 20  
 Reid, N. J. 34  
 Reidenbach, M. A. 38, 39  
 Reifel, K. M. 21  
 Reimers, C. 16  
 Reinfelder, J. 19  
 Reinhardt, R. 40  
 Reinthaler, T. 34  
 Rejmánková, E. 12  
 Remily, E. 11  
 Repeta, D. J. 23, 28  
 Reverol, Y. M. 32  
 Reynolds, R. L. 31  
 Reysenbach, A. L. 20, 24  
 Ribera d'Alcala', M. 10  
 Richards, C. 10, 27, 29  
 Richards, M. D. 26  
 Richardson, L. L. 11, 15  
 Richey, J. E. 38  
 Richter, M. 25, 40  
 Riedinger-Whitmore, M. A. 4  
 Riegl, B. M. 39  
 Riffell, J. A. 26  
 Riley, J. J. 30  
 Ringelspaugh, A. 14  
 Rinta-Kanto, J. M. 7  
 Rios, J. A. 34  
 Riseman, E. M. 13  
 Ritchie, M. 12  
 Rivera-Sanchez, M. 24  
 Rivers, A. R. 6  
 Roache-Johnson, K. H. 39  
 Roberts, B. J. 17  
 Roberts, D. 12  
 Robinson, C. T. 29  
 Robinson, J. C. 13, 23  
 Robinson, L. L. 31  
 Robison, J. D. 21  
 Rochelle-Newall, E. J. 5  
 Roden, E. E. 33  
 Rodgers, J. C. 7  
 Rodman, A. W. 24  
 Rodriguez, A. 17, 33  
 Rodriguez Brito, B. 34  
 Rodriguez, R. 11  
 Rodriguez-Lopez, M. A. 4, 13  
 Roe, K. L. 35  
 Roehrborn, L. R. 23  
 Roelke, D. L. 4, 26  
 Roffer, M. A. 27  
 Rogers, M. T. 31  
 Rohr, J. 37  
 Rohwer, F. 23, 28, 34  
 Rohwer, F. L. 23, 28  
 Rollwagen Bollens, G. 24, 32  
 Roman, B. 13  
 Rosas-Anderson, C. 34  
 Rose, J. M. 38  
 Rosenbaum, J. G. 31  
 Rosenfield, J. A. 36  
 Rosenthal, Y. 36  
 Rosi-Marshall, E. J. 20  
 Roux, M. J. 33  
 Rowe, E. A. 14, 19  
 Rowe, G. 17, 22  
 Rowe, G. T. 17, 22  
 Royer, T. V. 9, 30  
 Royston-Bishop, G. 37  
 Ruckelshaus, M. H. 11  
 Rudnick, S. M. 19  
 Rudstam, L. 19, 26  
 Rudstam, L. G. 19

Rueda-Vivalda, F. 3  
 Runge, J. A. 19  
 Russell, J. M. 5  
 Russo, A. 31  
 Ruzycski, E. 27  
 Ryan, C. M. 6  
 Ryan, J. 13, 25  
 Rychert, R. C. 37  
 Ryder, R. 18  
 Rynearson, T. A. 6  
 Rypien, K. L. 11

**S**

Sabehi, G. 3  
 Sadowsky, M. J. 14, 29  
 Saffert, H. 19  
 Saiki, M. K. 3  
 Saino, T. 22  
 Saito, H. 23  
 Saito, M. 8, 22  
 Saito, M. A. 8  
 Sakamoto, C. M. 30  
 Sako, A. 13  
 Salamon, P. 34  
 Salazar, E. 34  
 Saleem, S. 14  
 Saleem, S. M. 14  
 Salinas, J. T. 27  
 Salinas, K. A. 27  
 Salisbury, J. 5, 33  
 Salisbury, J. E. 5  
 Samarkin, V. 20, 23  
 Sambrotto, R. 40  
 Sanchez, J. 11  
 Sanchez, L. 32  
 Sánchez, L. 32, 34  
 Sánchez, L. ... 32  
 Sander, S. 8  
 Sanders, B. F. 14  
 Sanders, R. W. 23  
 Sanderson, M. P. 28  
 Sanford, L. P. 9  
 Sanford, P. R. 6  
 Sansone, F. J. 6, 11  
 Santoro, A. E. 14, 40  
 Santschi, P. H. 17, 33  
 Sanudo-Wilhelmy, S. A. 36, 39  
 Sañudo-Wilhelmy, S. A. 25  
 Saotome, N. 23  
 Sarason, C. P. 6  
 Saraure, R. S. 35  
 Saros, J. E.  
 11, 14, 15, 16, 17, 21, 24, 36  
 Satchwell, M. 7, 25  
 Satchwell, M. F. 25  
 Sauer, L. A. 34  
 Sauter, E. 20  
 Savai, P. 4, 12, 18  
 Savai, P. P. 18  
 Sawant, P. 14, 19  
 Sawant, P. A. 19  
 Schaajle, G. B. 26  
 Schaeffer, S. W. 4  
 Schaffner, L. C. 9  
 Schartau, M. 23  
 Schell, M. A. 40  
 Schelske, C. L. 4, 5  
 Scheuerell, J. M. 17  
 Scheuerell, M. D. 4  
 Schiff, K. 19  
 Schiff, K. C. 19  
 Schilling, E. G. 24  
 Schilling, R. 14, 19  
 Schilling, R. L. 19  
 Schindler, D. E.  
 6, 9, 10, 11, 17, 38  
 Schladow, S. G. 11, 39  
 Schlueter, M. 20  
 Schmidt, J. C. 29  
 Schmidt, N. 19

↳ represents Tutorial presentations

- Schnetzler, A. 12, 18, 35  
 Schoellhamer, D. H. 3  
 Schofield, O. 5, 36  
 Scholin, C. 13, 25  
 Schoolnik, G. K. 15  
 Schoonmaker, J. 32  
 Schouten, S. 7  
 Schubel, J. R. 18  
 Schubert, C. J. 29  
 Schuldt, J. 10  
 Schultz, H. 13  
 Schulz, H. D. 20  
 Schulz, H. N. 20, 34  
 SCHULZ, K. L. 13  
 Schulz, K. L. 12, 26, 37  
 Schulze, K. 9  
 Schuster, P. 38  
 Schwalbach, M. 4, 8, 22  
 Schwalbach, M. S. 4, 22  
 Schwartz, M. C. 18  
 Schwarz, G. E. 9  
 Scott, D. T. 20  
 Scott, J. T. 17, 40  
 Scow, K. M. 4  
 Seastedt, T. 34  
 Sebens, K. P. 38  
 Sebetich, M. J. 17  
 Seders, L. A. 15  
 Sedwick, P. N. 8, 32  
 Seebald, K. E. 16  
 Seitzinger, S. P. 4, 5  
 Seliskar, D. M. 15  
 Seltzer, G. 12  
 Seyfried, E. E. 36  
 Shafer, M. M. 35  
 Shaheen, P. 31  
 Shaked, Y. 6  
 Shank, T. M. 26  
 Shanks III, W. C. 24  
 Shannon, L. J. 26  
 Sharon Maurer, S. N. 14  
 Sharp, J. H. 21  
 Sharp, J. O. 29  
 Sharples, J. 9  
 Sheibley, R. W. 20  
 Shellenbarger, G. G. 3  
 Shemesh, A. 5  
 Sheng, J. 3, 30  
 Sheng, J. 30  
 Sherr, B. F. 19  
 Sherr, E. B. 19  
 Sherrell, R. 19, 36  
 Sherrell, R. M. 36  
 Sheu, D. D. 9  
 Shi, Y. 3, 22  
 Shiller, A. M. 38  
 Shimanaga, M. 33  
 Shimmiel, G. B. 18  
 Shimmiel, T. M. 18  
 Shin, K. H. 12  
 Shiozawa, D. K. 17  
 Shipe, R. 25, 31  
 Shipe, R. F. 31  
 Shirey, J. S. 15  
 Shirley, T. C. 25, 26  
 Shiue, L. 8  
 Shkarpa, V. 5  
 Shoemaker, C. A. 12  
 Short, C. M. 3  
 Short, S. 3, 30  
 Short, S. M. 3  
 Shostell, J. M. 31  
 Showers, W. J. 20, 33, 35  
 Sickman, J. O. 6  
 Siefert, R. L. 16, 39  
 Siegel, D. 3, 8, 23, 30, 37  
 Siegel, D. A. 3, 8, 23, 30, 37  
 Sieracki, M. E. 13, 39  
 Sierszen, M. E. 29  
 Sievert, S. M. 16, 21  
 Sifneos, J. C. 10  
 Sikaroodi, M. 23  
 Silva, S. R. 22  
 Silver, M. W. 7  
 Simmons, C. C. 23  
 Simo, R. 12  
 SIMON, T. P. 24  
 Singhal, G. 11, 27  
 Singhal, G. . 11  
 Sinninghe Damste, J. S. 7  
 Sinsabaugh, R. L. 37  
 Sippel, V. 38  
 Siwik, P. J. 15, 27  
 Skalski, M. N. 28  
 Skyring, G. W. 8  
 Slaby, E. F. 5  
 Slattery, M. 22  
 Slaughter, A. M. 24, 32  
 Smallwood, B. J. 17, 21, 29  
 Smith, A. J. 15  
 Smith, C. M. 6  
 Smith, C. R. 18, 20  
 Smith, C. S. 8  
 Smith, E. M. 38  
 Smith, G. 11  
 Smith, J. P. 39  
 Smith, L. M. 10  
 Smith, M. C. 13  
 Smith, M. T. 7  
 Smith, R. A. 9  
 Smith, V. H. 9  
 Smoak, J. 4, 31  
 Smoak, J. M. 4  
 Smolowitz, R. 12  
 Smyntek, P. 26  
 SNEDDEN, G. A. 20  
 Sobczak, W. V. 22  
 Sobsey, M. D. 19  
 Soerensen, K. 21  
 Soetaert, K. 8, 18, 29  
 Sohm, J. 16, 25, 32  
 Sohm, J. A. 25, 32  
 Soininen, J. 9  
 Soliman, Y. S. 22  
 Solomon, C. 25, 30  
 Solomon, C. M. 25  
 Sommeijer, B. P. 9  
 Sommer, S. 18  
 Song, B. 22  
 Soranno, P. A. 29, 38  
 Sorensen, P. W. 13  
 Sorensen, K. 27  
 Sørnes, T. 10  
 Soule, C. 16  
 Soulen, H. L. 9  
 Southwell, M. W. 6  
 Southworth, B. A. 28  
 Spaak, P. 12  
 Spalding, H. L. 6  
 Speckmann, C. L. 3  
 Spehr, M. 26  
 Spellman, J. 17  
 Spence Cheruvelli, K. 38  
 Spitael, M. S. 19  
 Spring, S. E. 3  
 Spruance, C. L. 12  
 Squires, M. M. 38  
 Srinivasan, A. 39  
 Staal, M. 8  
 Stadsvold, B. K. 24  
 Stahl, D. A. 37  
 Stal, L. J. 8  
 Stanford, J. A. 10, 20, 26, 29, 30  
 Stanley, J. K. 36  
 Stanton, D. E. 12  
 Starczak, V. 30  
 Staroscik, A. M. 12  
 Starovoytov, V. 36  
 Steele, J. 8, 22  
 Steele, J. A. 22  
 Steen, A. D. 32  
 Steimle, G. T. 13  
 Steiner, C. C. 23  
 Steissberg, T. E. 11  
 Stekoll, M. S. 16  
 Stephens, D. 27  
 Steppe, T. F. 21  
 Sterner, R. W. 36, 37  
 Stewart, G. F. 8  
 Stewart, H. L. 38  
 Stewart, K. A. 33  
 Stief, P. 9, 34  
 Stiefel, E. I. 24  
 Stine, O. C. 3  
 Stockwell, D. 37  
 Stoddard, L. I. 22  
 Stoermer, E. F. 5  
 Stomp, M. 8  
 Storch, A. J. 26  
 Stramski, D. 17  
 Strang, C. C. 7  
 Strickler, J. R. 10, 15  
 Striegl, R. 38  
 Striegl, R. G. 38  
 Strittmatter, A. 25  
 Strom, S. L. 24  
 Stroom, J. M. 9  
 Stunz, G. W. 3  
 Sturt, H. 6, 21  
 Sturt, H. F. 6  
 Su, Z. 40  
 Subramaniam, A. 8, 25, 32  
 Suess, E. 18  
 Suga, H. 33  
 Sugisaki, H. 22  
 Sullivan, B. K. 19  
 Sullivan, S. M. 4, 10  
 Sunda, W. G. 39  
 Surbeck, C. Q. 35  
 Surratt, D. D. 31  
 Sutor, M. 3  
 Sutula, M. A. 3  
 Suzuki, M. T. 3, 22  
 Suzumura, M. 23  
 Swan, B. K. 21  
 Swanson, M. K. 16  
 Sweetman, R. J. 13  
 Sylvan, J. 17  
 Sylvan, J. B. 17  
 Symonds, G. 39  
**T**  
 Tadokoro, K. 22  
 Taillefert, M. 32, 34  
 Tait, E. D. 16  
 Tait, J. F. 15  
 Takabayashi, M. 3, 22  
 Takekawa, J. Y. 3  
 Talley, D. M. 26  
 Tamone, S. L. 26  
 Tang, K. W. 13, 19  
 Tanino, Y. 20  
 Tank, J. L. 5, 9, 20  
 Targett, N. M. 15  
 Taub, F. B. 31  
 Taylor, K. 7  
 Teasdale, M. J. 9  
 Teece, M. A. 26  
 Teeling, H. 40  
 Teh, S. J. 22  
 Teira, E. 34  
 Telford, R. J. 5  
 Teske, A. 21, 28  
 Tessier, A. J. 6, 10, 12  
 Teubner, K. 4  
 Thal, J. 25  
 Thébault, J. 36  
 Thioulouse, J. 5  
 Thistle, D. 9  
 Thode, A. D. 39  
 Thomas, B. 15  
 Thomas, C. J. 18  
 Thomas Mock, T. 28  
 Thompson, J. A. 29  
 Thompson, S. P. 40  
 Thornton, B. 16  
 Thuen, D. J. 14  
 Tian, X. 30  
 Tidd, R. A. 3  
 Tiffany, M. A. 21  
 Tirelli, V. 18, 31  
 Tiselius, P. 10  
 Tockner, K. 20  
 Tovar-Sanchez, A. 25, 39  
 Townsend-Small, A. 7, 11  
 Tozzi, S. 21  
 Trautmann, N. 7  
 Traywick, T. L. 17  
 Trees, C. C. 21  
 Trefry, J. H. 29  
 Treude, T. 20  
 Trowbridge, N. Y. 6  
 Tsang, J. 26  
 Tseng, C. M. 9  
 Tsuda, A. 8, 23  
 Tuel, M. 14  
 Turner, J. T. 14  
 Turner, R. E. 3  
 Twining, B. S. 37  
 Tyner, E. C. 13  
**U**  
 Uchikawa, J. 32  
 Uehlinger, U. 20  
 Uhlinger, K. R. 12  
 Ullman, W. J. 34  
 Urban-Rich, J. 3  
 Usry, B. 20, 35  
 Usry, B. P. 35  
 Ussher, S. J. 8  
 Utgoff, P. E. 13  
**V**  
 Vadeboncoeur, Y. 6  
 Vajda, A. 36  
 Valentine, D. L. 21  
 Valett, H. M. 5  
 Van Bergeijk, S. A. 21  
 van Cappellen, P. 32  
 Van de Schootrugge, B. 36  
 Van Leeuwen, J. 22, 27  
 Van Mooy, B. 4, 6  
 Van Mooy, B. A. 4  
 Van Vleet, E. S. 7  
 Van vuuren, D. 9  
 Vance, P. M. 3  
 Vance-Harris, C. 32  
 Vandemark, D. 5, 33  
 Vander Zanden, M. J. 6  
 Vandewiele, S. L. 29  
 VanMontfrans, J. 22  
 Varela, M. 21  
 Variano, E. A. 7, 11  
 Venable, K. E. 34  
 Venrick, E. L. 7  
 Venton, J. C. 15  
 Verdugo, P. 17, 32, 33  
 Vergin, K. L. 21  
 Veron, F. 16  
 Vesbach, C. D. 24, 35  
 Veth, C. 34  
 Vezina, A. F. 3  
 Vigil, P. D. 4  
 Vigilant, V. 7  
 Vila, M. 12  
 Villareal, T. A. 8  
 Virtanen, R. 9  
 Visser, P. M. 9  
 Voelker, B. M. 28  
 Voldseth, R. A. 11  
 Von Damm, K. L. 24  
 von Dassow, P. 8

(\*) represents Invited presentations

- von Harbou, L. 19  
 Vopari, I. M. 23  
 Vopel, K. C. 9  
 Vora, N. M. 38  
 Vorosmarty, C. J. 5  
 Voss, J. D. 11  
 Voytek, M. A. 4, 25, 30
- W**
- Waddell, B. 23  
 Wadleigh, M. 33  
 Wagner, T. 26, 29, 38  
 Waiser, M. J. 36  
 Wait, B. 23  
 Waite, T. J. 26  
 Waldbusser, G. G. 6  
 Walker, B. 15, 21, 26  
 Walker, B. D. 15  
 Walker, C. F. 21  
 Walker, D. B. 7  
 Walker, N. D. 31  
 Wall, C. 27  
 Wall, L. G. 9  
 Wallace, G. T. 35, 39  
 Wallmann, K. 18  
 Wallner, E. 7  
 Walsh, M. K. 31  
 Walters, S. 19  
 Wan, H. 24  
 Wang, L. 3  
 Wang, Q. 13  
 Wang, X. 19  
 Wang, X. C. 19  
 Wang, Z. 19  
 Wankel, S. D. 22  
 Ward, B. B. 6, 28, 30  
 Ward, G. M. 33  
 Ward, J. E. 12  
 Ward, J. R. 11  
 Ward, N. 40  
 Warnaars, T. A. 37  
 Warner, K. A. 33  
 Warner, M. E. 21  
 Warner, R. R. 30  
 Warrenchuk, J. 25  
 Wasson, K. 30  
 Watchorn, K. E. 13  
 Waters, B. S. 7  
 Watras, C. J. 35  
 Watson, G. 20  
 Watts, J. M. 23
- Watzin, M. C. 4, 7, 10  
 Wawrik, B. 3, 25  
 Webb, E. A. 6, 24  
 Webster, D. R. 30, 37  
 Webster, J. R. 5  
 Webster, K. E. 24, 30  
 Wecker, P. 22  
 Weckström, K. 5  
 Wegley, L. 23  
 Wei, L. 36  
 Wei, L. P. 36  
 Weibell, B. J. 17  
 Weiler, C. S. 17  
 Weishampel, J. 34  
 Weissberger, E. J. 31  
 Weissburg, M. J. 10, 16, 30, 37  
 Weisz, J. B. 6, 21  
 Welch, K. A. 21, 37  
 Wells, B. K. 36  
 Wells, M. L. 28  
 Wells, S. A. 37  
 Wereley, S. 30  
 Werne, J. P. 7  
 Westberry, T. K. 8  
 Westley, M. B. 32  
 Weston, N. B. 5, 37  
 Wethey, D. S. 6  
 Wetz, M. S. 24  
 Wetzel, R. G. 28  
 Whalen, S. 31, 38  
 Whalen, S. C. 31  
 Wheeler, P. A. 24  
 Wheeling, R. J. 32  
 Whitcraft, C. 18, 26  
 Whitcraft, C. R. 26  
 White, A. J. 31  
 White, J. D. 5  
 White, D. C. 10  
 Whitehead, K. 16, 32  
 Whitman, W. B. 40  
 Whitmore, T. 4, 32  
 Whitmore, T. J. 4  
 Wickham, S. 18  
 Wickham, S. A. 18  
 Wickland, K. P. 38  
 Widder, E. A. 13  
 Wiegand, M. D. 13, 14  
 Wigdahl, C. R. 21, 36  
 Wiggert, J. D. 19, 30  
 Wiley, M. J. 12  
 Wiley, M. W. 11
- Wiley, S. A. 27  
 Wilhelm, S. W. 7, 8, 24  
 Wilkerson, F. 3, 22  
 Wilkerson, F. P. 3, 22  
 Will-Wolf, S. 8  
 Williams, B. D. 16  
 Williams, B. S. 31  
 Williams, C. J. 31  
 Williams, H. N. 3  
 Williams, J. G. 4  
 Williams, M. W. 34, 39  
 Williamson, C. E. 11, 14, 15, 17  
 Williamson, V. W. 18  
 Wilson, J. L. 11  
 Wiltshire, K. H. 31  
 Winder, M. 11  
 Winter, T. C. 29  
 Winters, K. B. 30, 37  
 Witte, U. 18, 29  
 Wohlford, T. D. 24  
 Wolfe, G. V. 12, 24  
 Wolfe, III, J. E. 35  
 Wolfe Simon, F. 36  
 Wolff, G. A. 18, 29  
 Wolffing, A. B. 32  
 Wolin, J. A. 5  
 Wolinska, J. 12  
 Wollheim, W. M. 5  
 Wong, G.T.F., . 9  
 Wood, C. L. 15  
 Woodin, S. A. 6  
 Woodling, J. 36  
 Woodson, B. 10  
 Woodson, C. B. 30  
 Woolums, R. 13  
 Worden, A. Z. 12  
 Woulds, C. 18  
 Wozniak, S. B. 17  
 Wren, P. A. 15, 33  
 Wright, D. 19, 39  
 Wright, J. D. 5  
 Wright, V. 5  
 Wrona, F. 11  
 Wurch, L. L. 6  
 Würdemann, C. 40  
 Wurtsbaugh, W. A. 6, 8, 23, 29
- X**
- Xenopoulos, M. A. 9  
 Xiang, X. 28
- Xu, L. 32  
 Xu, Y. 40
- Y**
- Yager, P. 25  
 Yager, P. L. 25  
 Yakubu, A. A. 27  
 Yang, L. Y. 27  
 Yang, X. 25  
 YANG, Y. 32  
 Yannarell, A. C. 21  
 Yates, J. 40  
 Yayanos, A. A. 26  
 Yehle, R. 7  
 Yen, J. 10, 16, 30  
 Yoon, H.I. 12  
 Yoshimura, T. 23  
 Yoshiyama, K. 17  
 Youn, S. H. 31  
 Young, D. 14, 16  
 Young, D. L. 14  
 Young, K. C. 28  
 Yufera, M. 21  
 Yurista, P. M. 29
- Z**
- Zabel, M. 11, 29  
 Zabel, R. W. 4, 11  
 Zah, R. 20  
 Zamora, I. M. 35  
 Zarnetske, J. 34  
 Zayas, B. 4  
 Zeglin, L. H. 35  
 Zehr, J. P. 3, 8, 25, 30  
 Zerbe, L. 39  
 Zhang, H. 4  
 Zhang, J. Z. 38  
 Zhang, L. 21, 27  
 Zhang, Y. 36  
 Zhao, X. 6  
 Zheng, Z. 30  
 Zhulidov, A. 38  
 Ziebis, W. 18, 29  
 Ziegler, T. A. 7  
 Zimba, P. V. 7  
 Zimmer, C. A. 3  
 Zimmer, R. K. 3, 26  
 Zimov, S. 38  
 Zinser, E. R. 40  
 Ziolkowski, L. A. 29





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