



SCOR Newsletter No. 13

March 2009

Products from High-CO₂ Symposium

Several different products are planned from the second symposium on The Ocean in a High-CO₂ World, to reach different audiences. The Research Priorities Report has been completed and posted on the Web; it summarizes the science presented at the symposium, as well as the discussions that took place in the breakout sessions. A shorter version is being prepared for publication in *Oceanography* magazine. A Summary for Policymakers is being developed and the special issue of the journal *Biogeosciences* is underway; 12 papers have been submitted and some already have been accepted for publication. All of the documents and materials from the meeting are available at <http://www.ocean-acidification.net/>. Planning should begin late in 2010 for the third symposium in 2012.

SCOR Panel on New Technologies for Observing Marine Life

The SCOR Panel on New Technologies for Observing Marine Life continues work on its synthesis of the technologies used by the Census of Marine Life. A series of papers will be published in the open-access journal *PLoS One*. The Panel also is planning its Workshop on Ocean Biology Observatories, to be held in Mestre, Italy on 16-18 September 2009 (see http://www.scor-int.org/OBO_Workshop.htm). The goal of the workshop is to bring together biologists, the observing community, and the technology community to develop ocean biology observatories that could address the challenges of observing ocean life and its response to global change. Discussions will include observation systems designed to detect changes in ocean biology that result from ocean acidification and oxygen depletion, as well as changes in community structure, from microbes to zooplankton; distribution and movement of marine organisms and changes in ocean properties; vertical movements of predators and prey in

relation to physical/chemical structures; trophic structures; and benthic dynamics.



The new Web site for the Panel is available at <http://www.coml.org/scortechpanel/>. The site provides links to documents created by the Panel, as well as photos, videos, and animations of technology used by the Census of Marine Life.

SCOR Capacity-Building Activities

SCOR recently announced the first call for participants for the SCOR Visiting Scholars program (see http://www.scor-int.org/Capacity_Building/SCOR_Visiting_Scholars.pdf). We are looking for scientists from all countries to serve as teachers and mentors for short periods in a developing country and we are seeking institutions to host Visiting Scholars. SCOR Visiting Scholars can be from developed or developing countries. SCOR will provide some travel support and will help make arrangements for insurance, if required. Host institutions are expected to provide local support.

Data Publication

SCOR and the International Oceanographic Data and Information Exchange (IODE) of the Intergovernmental Oceanographic Commission continue work on our joint project on data publication. A group of ocean science journal editors met over lunch at the AGU meeting in December 2008; the editors responded enthusiastically to the ideas presented in the report from the first SCOR/IODE workshop (see <http://www.scor-int.org/Publications/wr207.pdf>). IODE hosted a meeting in mid-March this year to develop pilot projects to test the ideas presented in this report, specifically (1) one project to create data publications from existing and future holdings of national data centers and (2) another to provide the “digital backbone” for traditional journal publications. These pilot projects have been designed to test the processes for data publication in the two cases mentioned above, so that the approaches described in the SCOR/IODE report can be refined and implemented more broadly.

Working Groups


SCOR is accepting proposals for new working groups until **31 May 2009**. Proposals on all ocean science topics are accepted, but the 2009 call for proposals encouraged those that deal with climate change, ecosystem impact, and human impact, in preparation for the next IPCC assessment. Specific topics of interest include sea level changes and impacts, ocean dynamics and heat transfers, ocean dynamics and the carbon cycle, and human health and disaster impacts. In addition, integrated modeling of ecosystems-ocean dynamics and biogeochemistry were mentioned. Each proposal will be evaluated by national SCOR committees in terms of scientific merit and quality, timeliness, relevance to SCOR, and achievability of the proposed terms of reference. Decisions about new working groups will be made at the 2009 SCOR Executive Committee Meeting in Beijing, China in October.

WG 125 on Global Comparisons of Zooplankton Time Series—This working group had its final meeting in conjunction with a workshop at the 2008 symposium on “Effects of Climate Change on the World’s Oceans”. The group has now assembled more than 100 multi-year zooplankton time series from more than 25 countries. The group found weak spatial correlations in zooplankton biomass within a region, but no synchronies on a global scale. This differs from the results for sardines and anchovies found by SCOR WG 98 on Worldwide Large-scale Fluctuations of Sardine and Anchovy Populations, which found apparent teleconnections among populations of small pelagic fish in different parts of the world. However, group members are still in the process of examining zooplankton data on the species level; aggregation of data for all species in the initial analysis may be concealing some trends in

global synchrony. The work of the group is nicely summarized in a *PICES Press* article (see http://www.pices.int/publications/pices_press/volume16/v16_n2/pp_13-15_zooplankton_f.pdf).

WG 126 on The Role of Viruses in Marine Ecosystems—The group will hold its final meeting in conjunction with a symposium on aquatic viral ecology, in Newark, Delaware (USA); see http://www.scor-int.org/Working_Groups/WG126Symposium-2.pdf for the first announcement of the meeting.

FIRST ANNOUNCEMENT



AQUATIC VIRAL ECOLOGY

TWO DECADES OF DISCOVERY, WHAT'S NEXT?

3RD ANNUAL MEETING OF THE SCOR WORKING GROUP ON THE ROLE OF VIRUSES IN MARINE ECOSYSTEMS

UNIVERSITY OF DELAWARE, NEWARK, DELAWARE MAY 14-16, 2009

PLEASE JOIN US

This year marks the 20th anniversary of the first reports of high viral abundance within marine ecosystems and the beginning of a renaissance in our appreciation of the importance of viruses to the ecology, population biology, and evolution of their microbial hosts. Today, mounting evidence from field ecology to bacterial comparative genomics and metagenomics of viral assemblages support the idea viral infection is probably a universal phenomena for all microbial life. The broader implications of this fact are that viruses influence global-scale biogeochemical cycles and carry a diverse repository of genes which are capable of altering the physiological features of host cells. This meeting will provide an overview of the current research avenues within viral ecology and implications for our understanding of the ecology of microorganisms in the sea. Despite our focus on marine ecosystems, the SCOR working group welcomes all scientists interested in the influence of viral activities on ecosystem processes and microbial communities.

PRELIMINARY SCHEDULE

Thursday May 14th Keynote presentation and Evening Mixer
Friday May 15th Presentations and evening poster session
Saturday May 16th Sightseeing and Science: Talks and a tour through the Brandywine Valley

REGISTRATION INFORMATION

Principal Investigators: \$160; Post-docs: \$130; Students: \$110
On-line registration and housing will be available in late January. Inquiries concerning meeting details should be directed to Eric Wommack, ewommack@del.edu.

VENUE INFORMATION

The University of Delaware in Newark, Delaware is conveniently located between Baltimore and Philadelphia along the I-95 corridor. Newark is ~2h drive from Washington, DC; 1.5h drive from Baltimore, and 1h drive from Philadelphia. The nearby Brandywine Valley offers numerous world class sightseeing opportunities. Transit service from either the Philadelphia International or the Baltimore-Washington International airports is readily available. Regular passenger train service is also available in nearby Wilmington, Delaware.

The Scientific Committee on Ocean Research
Working Group

Co-Chairs
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Corina Brussaard (Netherlands)
Dolores Mehmet (Brazil)
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International Council for Science
Scientific Committee on Oceanic Research

WG 130 on Automatic Plankton Visual Identification—The group is planning a large demonstration experiment that will involve labs in Brazil, France, Spain, the United Kingdom, and the United States. The objective will be to assess and compare data produced from the same preserved plankton samples when processed with Zooscan and flatbed scanner systems combined with plankton identification software.

SCOR/IAPSO OceanScope WG 133—This group will be meeting for the first time in conjunction with the IAMAS-IAPSO-IACS Joint Assembly in Montreal, Canada in July 2009. One of the co-chairs, Tom Rossby, presented on OceanScope at a workshop hosted by The Institute of Marine Engineering, Science & Technology in London on 24 March 2009 (see

<http://www.imarest.org/Events/EventsListing/1DayWorksop/tabid/773/language/en-US/Default.aspx>).

New IOCCP Director

SCOR and IOC are pleased to announce the new director of the International Ocean Carbon Coordination Project (IOCCP), which is a joint IOC/SCOR project and based from the IOC headquarters in Paris. Kathy Tedesco will be taking over the reins from Maria Hood, who has been ably staffing IOCCP since it was formed. Maria will continue on as a part-time consultant to the project. Kathy previously served in the U.S. National Oceanic and Atmospheric Administration and the U.S. Geological Survey. She earned her Ph.D. in Geological Oceanography from the University of South Carolina in 2002.

Large-Scale Ocean Research Projects

GEOHAB—Planning for the GEOHAB Modeling Workshop is completed. There will be approximately 75 participants, of which 15 will be students or post-doctoral fellows. The purpose of the workshop is to advance GEOHAB modeling activities and to provide opportunities for modelers and field scientists to work together. GEOHAB projects produced two major publications since SCOR Newsletter #12. The GEOHAB Core Research Project on HABs and Eutrophication produced a special issue of the journal *Harmful Algae* and the Core Research Project on HABs in Stratified Systems published their Research Plan (see Publications section below).

IMBER—SCOR and IGBP approved the following new members for the Scientific Steering Committee (SSC) of the Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) project: Kenneth Drinkwater (Norway), Eugene Murphy (UK), Hiroshi Ogawa (Japan), Katja Philippart (Netherlands), Alberto Piola (Argentina), and Sinjae Yoo (Korea).

SOLAS—SCOR and the other co-sponsors of the Surface Ocean – Lower Atmosphere Study (SOLAS) approved the following new members of the SOLAS SSC: Minhan Dai (China-Beijing), Cecile Guieu (France), Patricia Quinn (USA), and Rafel Simo (Spain). SOLAS Science 2009 is planned for Barcelona, Spain on 16-19 November 2009. The 4th SOLAS Summer School will be held on 3-15 August 2009, and SOLAS is in the process of informing successful applicants.

Partner Organizations



International Geosphere – Biosphere Programme (IGBP)—IGBP has appointed a new Executive Director, Sybil Seitzinger, who is a member of SCOR/LOICZ Working Group 128 on Natural and Human-Induced Hypoxia and Consequences for Coastal Areas. Seitzinger comes to IGBP from Rutgers University (USA) and is co-chair of the Global Nutrient Export from Watersheds project. SCOR will be represented at the 2009 IGBP Scientific Committee meeting by Wolfgang Fennel.



Intergovernmental Oceanographic Commission (IOC)—SCOR and IOC cooperate on a range of activities. IOC will be celebrating its 50th Anniversary in 2011 and is preparing a special volume on IOC history and a major symposium to celebrate the occasion. Elizabeth Gross will be authoring a chapter of the special volume on IOC interactions with partner organizations. Luis Valdés has recently come from the Instituto Español de Oceanografía to head the IOC Ocean Science Section. The chair of IOC, Javier Valladares, was recently appointed as a member of the SCOR/IAPSO OceanScope Working Group 133.

Other Activities

Ocean Mixing Group—SCOR approved the Ocean Mixing Group as an affiliated group at the 2008 SCOR General Meeting. This group is a follow-on to IAPSO/SCOR WG 121 on Ocean Mixing. It will meet in Montreal in July 2009 in conjunction with the IAMAS-IAPSO-IACS Assembly and has begun discussing a symposium for 2010.

Publications

Feistel, R. 2008. A Gibbs function for seawater thermodynamics for -6 to 80 °C and salinity up to 120 g kg⁻¹. *Deep-Sea Research I* 55:1639-1671. – From work of SCOR/IAPSO WG 127.

Feistel, R., D.G. Wright, K. Miyagawa, A.H. Harvey, J. Hruby, D.R. Jackett, T.J. McDougall, and W. Wagner. 2008. Mutually consistent thermodynamics potentials for fluid water, ice and seawater; a new standard for oceanography. *Ocean Science* 4:275-291. – From work of SCOR/IAPSO WG 127

GEOHAB. 2008. *Global Ecology and Oceanography of Harmful Algal Blooms, GEOHAB Core Research Project:*

HABs in Stratified Systems. P. Gentien, B. Reguera, H. Yamazaki, L. Fernand, E. Berdalet, and R. Raine (eds.) IOC and SCOR, Paris, France, and Newark, Delaware, USA, 59 pp.

Glibert, P.M., J.M. Burkholder, E. Graneli, and D.M. Anderson. 2008. HABs and Eutrophication. *Harmful Algae* 8(1):1-88. – From work of the GEOHAB Core Research Project on HABs and Eutrophication

Urban, E., S. Sathyendranath, and J. de Leeuw. 2009. Improved Tracking of Research Cruises. *EOS: Transactions of the American Geophysical Union* 90(8):62.

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Photos:
Page 1: Great Wall at Badaling, China, by Ed Urban

SCOR Annual Meetings

2009—The 2009 SCOR Executive Committee Meeting will be held in Beijing, China, on 20-22 October, in conjunction with an open science meeting of the GEOHAB Core Research Project on HABs in Eutrophied Systems and a meeting of the SCOR/LOICZ WG 132 on Land-based Nutrient Pollution and the Relationship to Harmful Algal Blooms in Coastal Marine Systems. The annual SCOR meeting will mark the 25th anniversary of China-Beijing's entry to SCOR.

2010—SCOR has accepted an offer from the French SCOR Committee to hold the 2010 SCOR General Meeting in Toulouse, France.

2011—The Finnish SCOR Committee has invited SCOR to hold its 2011 Executive Committee meeting in Finland.

For additional information about SCOR activities, please see the SCOR Web site: <http://www.scor-int.org>.

Acronyms:

GEOTRACES	an international study of the global marine biogeochemical cycles of trace elements and their isotopes (SCOR)
IACS	International Association of Cryospheric Sciences
IAMAS	International Association for Meteorology and Atmospheric Sciences
IAPSO	International Association for the Physical Sciences of the Ocean
IGBP	International Geosphere-Biosphere Programme
IMBER	Integrated Marine Biogeochemistry and Ecosystem Research project
IOC	Intergovernmental Oceanographic Commission
SCOR	Scientific Committee on Oceanic Research