

Ocean Carbon and Biogeochemistry (OCB) Summer Workshop
Woods Hole Oceanographic Institution
July 23-26, 2007

Monday July 23, 2007

08:00 *Continental Breakfast*
(Post posters immediately)

Introduction

08:30 Overview and progress on OCB: Scott Doney, Chair

08:45 Agency perspectives on OCB: NSF, NASA, NOAA

Theme I. The interplay between biotic structure and biogeochemical cycles

(Chairs: Tammi Richardson / Debbie Bronk)

[Each speaker has 30 min. to speak, plus 10 min. to engage the audience in "discussion topics" of their and the audience's choosing.]

09:30 *Joe Vallino, Marine Biological Laboratory:*
Can Dynamic Trophic Structures Be Captured in Structurally Fixed Models?

10:10 *Mak Saito, Woods Hole Oceanographic Institution:*
Trace Metal Biogeochemistry and Ocean Carbon: GEOTRACES, Colimitation, Marine Bioinorganic Chemistry, and the Continuing Pursuit of the Elusive Meaning of Bioavailability

10:50 30 min. BREAK

11:20 *Deborah A. Bronk, Virginia Institute of Marine Science:*
The Marine Nitrogen Cycle - Who is Doing What?

12:10 *Tatiana Ryneearson, University of Rhode Island:*
Plankton Biogeography - Using Population Genetics Tools to Examine the Interplay of Biotic Structure and Biogeochemical Cycles

12:40 LUNCH

14:00 **Breakouts (two foci *tbd*, Biotic Structure and Biogeochemical Cycles 1 and 2. See page 5 for specific questions to be addressed. The breakout session topics are preliminary and additional special topic sessions will be added during the workshop.)**

15:00 BREAK

16:00 Posters

18:00 RECEPTION

Tuesday July 24, 2007

08:00 *Continental Breakfast*
(Post posters immediately)

Reports back to plenary, theme I (10 minute report, 10 minute discussion)

08:30 Biotic Structure & Biogeochemical Cycles: breakout I

08:50 Biotic Structure & Biogeochemical Cycles: breakout II

Theme II. Changing Ocean Biogeochemistry: The Prediction Challenge

(Chairs: Joan Kleypas / Galen McKinley)

[Each speaker has 30 min. to speak, plus 10 min. to engage the audience in “discussion topics” of their and the audience’s choosing.]

09:10 *Steve Murawski, NOAA Fisheries:*

Biogeochemistry Matters!: Implications of Ocean Acidification for Marine Ecosystems

09:50 *Jeremy Blackford, Plymouth Marine Laboratory:*

Acidification and the Marine Ecosystem: Synthesising Experiments and Models

10:30 30 min BREAK

11:00 *John Dunne, NOAA Geophysical Fluid Dynamics Laboratory:*

Carbon System Prediction: Approaches, Challenges and Opportunities for Earth System Modeling

11:40 *Dave Siegel, University of California – Santa Barbara:*

What Can We Learn About Ocean Biogeochemistry from Satellite Data?

12:20 LUNCH

14:00 Breakouts (See page 5 for specific questions to be addressed.)

Breakout I: Understanding ocean acidification

Breakout II: Predicting future ocean carbon storage

15:00 BREAK

16:00 Posters

18:00 END DAY TWO

Dinner on your own

Wednesday July 25, 2007

08:00 *Continental Breakfast*
(Post posters immediately)

Reports back to plenary, theme II (10 minute report, 10 minute discussion)

08:30 Changing Ocean Biogeochemistry: Understanding ocean acidification

08:50 Changing Ocean Biogeochemistry: Predicting future carbon storage

Theme III. Terrestrial / coastal ocean cross-boundary fluxes

(Chairs: Chris Sabine / Wade McGillis)

[Each speaker has 30 min. to speak, plus 10 min. to engage the audience in “discussion topics” of their and the audience’s choosing]

9:10 *Arthur Chen, National Sun Yat-sen University, Taiwan:*
Cross-Boundary Transports of Carbon across the Land-Continental Shelf, Continental Shelf-Open Ocean and Ocean-Atmosphere Boundaries

9:50 *Walter C. Oechel, San Diego State University:*
Carbon Dioxide and Methane Eddy Covariance Flux Towers for Comparative Coastal Ocean and Terrestrial Fluxes

10:30 30 min BREAK

11:00 *Sybil Seitzinger, Rutgers University:*
Linking Watersheds to Coastal Systems - a Global Perspective on River Transport of N, P and C - Past, Present and Future

11:40 *Ajit Subramaniam, Lamont-Doherty Earth Observatory:*
Tropical Rivers Enhance Carbon and Nitrogen Cycles

12:20 LUNCH

14:00 Breakouts (See page 5 for specific questions to be addressed.)

Breakout I: River-dominated systems

Breakout II: Carbon and ecology in coastal regions

15:00 BREAK

16:00 Posters

18:00 END DAY THREE

18:30 Group Supper on Fenno Patio

Thursday July 26, 2007

08:00 *Continental Breakfast*

Reports back to plenary, theme III (10 minute report, 10 minute discussion)

08:30 Cross-Boundary Fluxes 1: River-dominated systems

08:50 Cross-Boundary Fluxes 2: Carbon and ecology in coastal regions

Updates: resources and connections

09:10 *Hugh Ducklow, Marine Biological Laboratory:*
LTER Sites

09:20 *Frank Muller-Karger, University of South Florida:*
The Role of the Ocean Studies Board (National Research Council)

09:30 *Joachim Segschneider, Max-Planck-Institute of Meteorology:*
CARBOOCEAN

09:40 *Chris Sabine, NOAA/Pacific Marine Environmental Laboratory:*
Time-Series Stations

09:50 *Wade McGillis, Columbia University:*
Ocean Observatories Initiative

10:00 BREAK

10:30 **Plenary discussion: Setting OCB Priorities**

12:00 LUNCH

END WORKSHOP

Breakout Discussion Questions

1. What are the key unknowns in this area?
2. What observations and/or modelling studies are needed to improve our understanding?
3. How reliable are current predictions? What are the major barriers to prediction?
4. What information does the scientific community need to provide for policy discussions?
What questions do we need to be prepared for?
5. How can OCB best contribute to progress in this area?