

**Ocean Carbon and Biogeochemistry (OCB) Summer Workshop
Woods Hole Oceanographic Institution
June 26-29, 2017**

WORKSHOP AGENDA

Logistical notes

- **Plenary sessions (in blue throughout agenda)** will take place in Redfield Auditorium (45 Water Street, Woods Hole Village)
- Poster sessions (Monday/Tuesday) will take place at MBL Swope (5 North Street, Woods Hole Village)
- All workshop meals will take place under the tent behind Redfield Auditorium
- There is no parking in Woods Hole Village, so please use the meeting shuttles
- **Meeting shuttle schedule (in red throughout agenda):** There will be *White Tie Limousine* shuttle buses to transport participants between the hotels (Holiday Inn, Inn on the Square) and the WHOI Village and Quissett campuses
 - **Morning shuttles:** Shuttles to Redfield (one from Holiday Inn at 7, 8) and one from Inn on the Square (7, 8), stopping at Clark parking lot (7:15-7:30ish, 8:15-8:30ish) and then proceeding to Redfield
 - After the ~8:30 drop-off at Redfield, the shuttles will do one final circuit to hotels and Clark parking lot for sleepyheads
 - These times are approximate (this is summer on Cape Cod after all!). If you get stuck and need a cab, call Falmouth Taxi (508-548-3100)

Monday, June 26	
7:00-8:30	Morning shuttles to Redfield (see morning schedule in logistical notes above)
7:30-8:30	Breakfast (Redfield tent)
8:30	Welcome (Bethany Jenkins, URI, OCB SSC Vice-Chair)
8:40	Introduction and opening remarks (Heather Benway, OCB Project Office)
8:55	Getting to know the Biological and Chemical Oceanography Data Management Office (BCO-DMO) at OCB 2017 (Danie Kinkade, BCO-DMO)
Plenary Session 1. Carbon fluxes in coastal wetlands: What is state-of-the-art? - Chairs: Chris Osburn (NCSU), Z. Aleck Wang (WHOI), Maria Tzortziou (CUNY), Kevin Kroeger (USGS)	
9:00	Session introduction and overview (Chris Osburn, NCSU)
9:15	Carbon budget of eastern North American tidal wetlands and estuaries (Ray Najjar, PSU)

9:45	Coastal wetland carbon accounting: Using U.S. syntheses to build up the baseline (Lisamarie Windham-Myers, USGS)
10:15	Open group discussion on plenary talks
10:30	Break
Topic 1: Lateral fluxes and exchanges – DIC, DOC, and POC and their effects on coastal carbon chemistry and budgets (Moderator: Chris Osburn, NCSU)	
11:00	Lightning talks part 1
11:30	Panel discussion on lateral fluxes and exchanges part 1
11:45	Lightning talks part 2
12:15	Panel discussion on lateral fluxes and exchanges part 2
12:30-1:45	Networking Lunch (Redfield tent) - <i>Assigned seating, find your table number on the back of your nametag</i>
Topic 2: Internal cycling - Carbon burial, primary and secondary production, soil/sediment processes, groundwater (Moderator: Kevin Kroeger, USGS)	
1:45	Lightning talks
1:55	Panel discussion on internal cycling
Topic 3: Vertical fluxes and exchanges – CO₂, CH₄ (Moderator: Z. Aleck Wang, WHOI)	
2:05	Lightning talks
2:15	Panel discussion on vertical fluxes and exchanges
Topic 4: Modeling - Connections between biogeochemical and physical models aimed at regional scales (Moderator: Maria Tzortziou, CUNY)	
2:25	Lightning talks
2:50	Panel discussion on modeling
3:15	Transition to MBL Swope (5 North Street, Woods Hole) for poster session (It's a short 0.3 mi. walk or you can take shuttle from Redfield to Swope)
3:30-5:00	Poster session with beverages and light snacks (MBL Swope, Meigs Room upstairs) - Please remove and take your posters with you at the end of this session!
5:00	Shuttle from MBL Swope to Redfield

5:15-6:45	Agency updates – NASA, NOAA, NSF (Redfield Auditorium)
6:45-8:15	Welcome reception with beverages and hors d'oeuvres (Redfield tent)
8:30-10:00	Film screening of <i>Before the Flood</i> (Redfield Auditorium)
7:30-10:30	Shuttles running from Redfield to Clark parking lot and hotels

Tuesday, June 27	
7:00-8:30	Morning shuttles to Redfield (see morning schedule in logistical notes above)
7:30-8:30	Breakfast (Redfield tent)
Plenary Session 2. Ecological and biogeochemical impacts of natural climate perturbation - Chair: Andrew Barton (Scripps Inst. Oceanography)	
8:30	Large-scale natural variability and anthropogenic trends in multiple ocean ecosystem stressors (Thomas Frölicher, ETH Zurich)
9:00	Natural cycles in unnatural times or the limitations of linear thinking in an increasingly non-linear world (Andy Pershing, GMRI)
9:30	Mechanisms of North Pacific climate and zooplankton variability (Julie Keister, UW)
10:00	Break
10:30	Between the footprints of natural climate variability modes (Phoebe Woodworth-Jefcoats, NOAA)
11:00	Open group discussion
11:30	Student lightning talks (Chairs: Mara Freilich, MIT/WHOI and Julia Moriarty, VIMS)
12:30-2:00	Lunch (Redfield tent) 1. Early career participants have lunch with SSC members at reserved tables 2. BCO-DMO Tutorial (Smith conference room) at 1 pm (cut lunch line!)
Plenary Session 3. Mesoscale and submesoscale physical-biological-biogeochemical interactions - Chairs: Andrea Fassbender (MBARI), Dennis McGillicuddy (WHOI)	
2:00	Mechanisms of mesoscale physical/biological interaction (Peter Gaube, APL/UW)

2:30	Carbon export processes at meso- and submesoscales (Melissa Omand, URI)
3:00	Submesoscale biological patchiness: Horizontal stirring, or response to vertical velocities? (Peter Franks, SIO)
3:30	Break
3:45	Nitrogen loss in oxygen-deficient zone mesoscale eddies (Annie Bourbonnais, WHOI)
4:15	(Sub)mesoscale modulation of phytoplankton diversity and community structure (Sophie Clayton, UW)
4:45	Open group discussion
5:15	Transition to MBL Swope (5 North Street, Woods Hole) for poster session (It's a short 0.3 mi. walk or you can take shuttle from Redfield to Swope)
5:30-7:00	Poster session with beverages and light snacks (MBL Swope, Meigs Room upstairs) – Please remove and take your posters with you at the end of this session!
7:00	Shuttles start running from MBL Swope back to Clark parking lot and hotels
Dinner on your own (see <i>Local Notes</i> in meeting folder for restaurant suggestions)	

Wednesday, June 28	
7:00-8:30	Morning shuttles to Redfield (see morning schedule in logistical notes above)
7:30-8:30	Breakfast (Redfield tent)
Plenary Session 4. Stoichiometry and higher trophic levels - Chairs: Debbie Steinberg (VIMS) and Michael Roman (UMCES)	
8:30	Stoichiometry of consumer-driven nutrient cycling: Background and theory (Bob Sterner, Large Lakes Observatory, Univ. Minnesota, Duluth)
9:15	Stoichiometry of mesopelagic zooplankton and carbon sequestration in the ocean (Tom Anderson, NOC)
9:45	Exploring the role of bottom-up provisioning by consumers across ecosystems (Carla Atkinson, Univ. Alabama)
10:15	Questions and discussion
10:30	Break

11:00	The role of vertically migrating zooplankton in biogeochemical flux (Sigrún Jonasdóttir, DTU)
11:30	Disproportionate nutrient loads and resulting stoichiometry impacts food webs, from toxic algae to higher trophic levels (Patricia Glibert, UMCES)
12:00	Open group discussion
12:30-2:00	Lunch (Redfield tent) 12:45-1:45 pm: OCB Ocean Time-series Committee members meet over lunch (sit at reserved tables), OTC members cut the line
2:00-6:00	Free afternoon! See <i>Local Notes</i> in meeting folder for inspiration.
1:50	National Deep Submergence Facility Tour 1 (meet Heather at Redfield front desk at 1:50 to walk to the Blake building for the tour at 2:00)
2:00	Shuttle from Redfield to Clark parking lot and hotels
2:20	National Deep Submergence Facility Tour 2 (meet Heather at Redfield front desk at 2:20 to walk to the Blake building for the tour at 2:30)
3:45	Shuttle from Redfield to Clark for Program Manager reception with students/postdocs
4:00-6:00	Program Manager reception with students/postdocs (light snacks/drinks) (Quissett Campus - Clark 507)
5:30	Shuttle to Redfield from hotels and Clark parking lot (same circuit as in the morning)
6:00	Shuttle from Clark (Program Manager reception with students/postdocs) to Redfield for dinner
6:00-9:00	Workshop dinner (Redfield tent)
8:00	Shuttles start running from Redfield back to Clark parking lot and hotels

Thursday, June 29	
7:00-8:30	Morning shuttles to Redfield (see morning schedule in logistical notes above)
7:30-8:30	Breakfast (Redfield tent)
Plenary Session 5. Our autonomous future - Chairs: David Siegel (UCSB), Jessica Cross (NOAA/PMEL)	
8:30	Dawn in the age of robotic oceanography (Oscar Schofield, Rutgers)

9:00	Spanning the scales: Multi-platform approaches for integrated studies of biogeochemistry and physics (Craig Lee, APL/UW)
9:20	Stretching the scales of surface ocean observing systems: Biogeochemical observations from the Saildrone USV (Jessica Cross, NOAA/PMEL)
9:40	Robotic systems for survey and sampling of the mesopelagic (Dana Yoerger, WHOI)
10:00	Break
10:30	Measuring fluid and particle motion using DeepPIV (Kakani Katija, MBARI)
10:50	Digital in-line holographic microscopy (DIHM): Design, advantages, challenges and future integration into autonomous platforms (Alexander Bochdansky, ODU)
11:10	Controlled, Agile and Novel Observations Networks (CANON) (Francisco Chavez, MBARI)
11:30	Open group discussion
12:00	Planning U.S. contributions to the 2nd International Indian Ocean Expedition (IIOE-2) (Raleigh Hood, UMCES)
12:20	Closing remarks and adjourn meeting
12:30-2:00	Lunch (Redfield tent) – <i>agency and SSC participants to front of line</i>
1:20	Shuttles start running from Redfield to Clark parking lot and hotels (SSC members and agency representatives depart on 1:20 shuttle for SSC meeting in Clark on Quissett Campus)
1:30-5:00	OCB Scientific Steering Committee Meeting (Clark 271, SSC members and agency representatives)