

# Lab Lines

SEPTEMBER 2016

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**9TH ANNUAL  
'RUN FOR RESEARCH'**

**September 17th, 2016**

**Timed Race!**

Registration online  
[www.umces.edu/cbl/5k-run](http://www.umces.edu/cbl/5k-run)  
P: 410-326-7240

**CHESAPEAKE BIOLOGICAL LABORATORY**

The 9th Annual Run for Research timed race is September 17, 2016. Come on out and support the students at Chesapeake Biological Laboratory (see details under Development on page 2).

## RESEARCH & AWARDS

**W**alter Boynton, Chesapeake Bay Scientist at the Chesapeake Biological Laboratory, Solomons, Maryland has been chosen to receive the Mathias Medal to recognize his distinguished career of scholarship and public service. Read more about Walter at <http://www.umces.edu/cbl/project/legendary-chesapeake-bay-scientist-walt-boynton-receive-mathias-medal>.

Three of our faculty received separate awards from NSF for three years:

**Dr. Hongsheng Bi's** project (November 1, 2016-October 31, 2019). The title for this project is Demographic structure and recruitment patterns of the scyphozoan, *Chrysaora melanaster*, in the Bering Sea: the influence of climate on ecosystem function.

**Dr. Jackie Grebmeier's** project (July 1, 2016 – June 30, 2019). The title for this project is Formation and Persistence of Benthic Biological Hotspots in the Pacific Arctic.

Dr's. Fredrika Moser, **Lora Harris**, and Jamie Pierson Project (September 1, 2016-August 31, 2019). The title for this project is GP IMPACT: Pathways to RENEW: Tropical Oceanography Research Experiences for the Next-Generation Workforce.

Dr. Helen Bailey received an award from NOAA (09/01/2016-08/31/2017). The title for this project is El Nino Watch revisited an improved index for reducing loggerhead turtle bycatch in the California Current.

## RESEARCH & AWARDS CONT...

Dr. Slava Lyubchich, Dr. Dong Liang, Dr. Lora Harris, and Dr. Jeremy Testa received an award from the Chesapeake Bay Trust (July 1, 2016-May 31, 2017). The title for this project is Optimizing sampling frequency and monitoring design to assess the effects of stormwater best management practices (BMPs) on water restoration.

Dr. Lora Harris received an extension from the Dominion Cove Point (August 31, 2020). The title for this project is Ecosystem Restoration of Cove Point Freshwater Marsh.

Dr. Carys Mitchelmore and Al Place received an award from Environmental Research Services (August 1, 2016 – July 31, 2017). The title for this project is: Spatial and temporal analysis of phytoplankton in the Great Lakes over a one year period.

Dr. Genevieve Nesslage and Dr. Michael Wilberg received an award from the National Park Service (CESU) June 30, 2017). An evaluation of commercial fishing

operations within and adjacent to Assateague Island National Seashore.

Dr. Solange Filoso received an award from the Chesapeake Bay Trust. The title for this project is: Integrate existing and new stream restoration monitoring data to evaluate the effectiveness and sustainability of different restoration designs commonly implemented in Maryland.

Dr. Mario Tamburri received extensions from USDOT, Maritime Administration on two awards: Both dated September 1, 2016-December 31, 2018. The title for this project is Phase V Mod 3 Develop Method and Approaches for quantifying Effectiveness of Hull Husbandry. The second project is titled: X-Part II-Proof of Concept for Compliance Monitoring Ballast Water Discharge Regulations.

## NEW PERSONNEL & STUDENTS

Nicole Basenback (moved from hourly appointment to GRA I)  
Katherine Martin - Sea Grant (GRA I)  
Kathryn Doering - (GRA I)  
Katie Lankowicz (GRA I)  
Zachary Gotthardt - Sea Grant (GRA I)  
Zoraida Perez-Delgado (GRA I)

## DEVELOPMENT

On Saturday, September 17, 2016, graduate students at the Chesapeake Biological Laboratory (CBL) will host the 9th annual CBL 5K Run for Research. The course begins and ends at CBL and takes the participants on a morning run through beautiful Solomons, MD.

The students working at CBL conduct cutting edge research on the environment – including tracking the migrations of critically endangered leatherback sea turtle hatchlings, studying the impact of contaminants on the estuarine environment, and assessing the populations of important commercial Chesapeake fisheries, such as blue crabs, oysters, menhaden, and striped bass. Our students work hard to understand complex local and global environmental challenges and, under the guidance of their faculty advisors, they are seeking solutions for today and tomorrow.

An essential part of their education is attending scientific conferences around the country where they present the findings of their work. Attending these conferences is critical to leveraging the research they do in Southern Maryland by gaining insight and feedback from experts in their field. But the students at CBL couldn't travel to these conferences without the proceeds from the Run for Research which helps to subsidize travel expenses. Your support ensures that students from CBL can continue to further their educations, share their knowledge of the Chesapeake Bay System, and represent Solomons and Southern Maryland on the national stage.

Please consider participating in the Chesapeake Biological Laboratory 2016 Run for Research timed race. Funds raised by the Run for Research are used exclusively to provide travel grants to CBL students.

Register online at <http://www.umces.edu/cbl/5k-run>

## Student Careers and Awards

Gray Redding and Aimee Hoover both received Sea Grant Knauss Fellowships, which will start in 2017.

Brian Gallagher has received a position with Dr. Mary Fabrizio at VIMS beginning this September.

Brian Gallagher received the best oral student paper award at the Ecological and Evolution Ethology of Fishes Conference, Tallahassee, FL, in June.

Gray Redding received second place best oral student paper award at the Larval Fish Conference, Solomons, MD, June.

Gray Redding received an ICES travel award to attend the ICES Annual Science Conference in Riga, Latvia this September.

## SUSTAINABILITY

Thanks to all for participating in the commuter survey. Preliminary numbers below give you a sense of our fossil fuel consumption related to driving to work. Stay tuned for more information about greenhouse gas emissions for the entire campus.



- **433,817 – Total reported commuting miles for CBL employees in FY 2015 (70 responses from staff, faculty and students)**
- **6,200 – Average yearly commuting distance for CBL employees**
- **207 – Gallons of gas per person per year, assuming 30 mpg**
- **18 – Number of respondents who said they carpool, bike or walk to work at least once a month**



## OUTREACH

### Open House

As part of the University of Maryland Center for Environmental Science, CBL's faculty and graduate students are developing new approaches to solving the environmental management problems facing Calvert County, our nation, and our world. Celebrate Science on Solomons at the CBL Open House on September 10, 2016 from 1:00 - 5:00 p.m.

### Science for Citizens

The spring 2016 Science for Citizens seminar series will begin Tuesday, September 27 from 7:00 - 8:00 p.m. located in the Bernie Fowler Lab. There will be five seminars throughout September and October. See titles and dates under Upcoming Events on page 5.

### Visitor Center

Check out the exciting new "Making Waves with CBL Students" exhibit in the Visitor Center! This exhibit features a series of short videos about individual CBL students, highlighting the important research they are conducting. The CBL Visitor Center will be open:

- Memorial Day to Labor Day: Wednesday - Sunday from 9:30 am to 4:30 pm
- Free, docent-led Campus Tours are offered to the public on Fridays at 2 p.m. from June through the end of November. These tours last approximately 1 hour and depart from the Visitor Center.

Learn more about the CBL Visitor Center and Campus Tours here: <http://www.umces.edu/cbl/visitors-center-outreach>

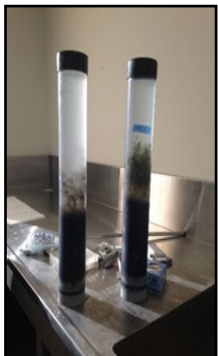
### Visitor Center Volunteers Needed

The Chesapeake Biological Laboratory (CBL) Visitor Center provides guests with the opportunity to learn about cutting-edge research being pioneered by CBL's team of faculty and student scientists. The CBL Visitor Center is entirely run by our dedicated Visitor Center docents, who serve a vital role in explaining our research to the general public and help guests understand the importance of the work we do. New volunteers are currently being recruited, and we would love to have you join the team! If you are interested in volunteering in the Visitor Center, or know someone you think would be interested in volunteering, please contact Sarah Brzezinski at [brzezins@umces.edu](mailto:brzezins@umces.edu).



## DID YOU KNOW?

Hadley McIntosh just got back from Inuvik, Northwest Territories, Canada. After spending 2 weeks at the Aurora Research Institute. While there she went into the Mackenzie River Delta to collect samples for her dissertation on time-series of methane (CH<sub>4</sub>) concentrations in Arctic lakes. It was a successful research trip retrieving and deploying OsmoSampler pumps in 8 lakes in the Delta! Last year a team of U.S. and Canadian collaborators put out the samplers that use only osmotic pressure differences in the pumps to continuously collect water. The fieldwork was done by an enthusiastic group despite occasionally poor weather conditions, including: Ph.D. student Hadley McIntosh, Dr. Beth Orcutt, Dr. Geoff Wheat, Dr. Lance Lesack, Trevor Fournier, Roger MacLeod, and Simon Fraser University Master's students Mitchell Bergstresser and Kim Geeves. This project is funded by an NSF grant to Dr's. Laura Lapham, Beth Orcutt, and Geoff Wheat.



Picture: Sediment cores with high abundance of macrophytes from lakes near Inuvik, NT, Canada.

## WHO'S ON TRAVEL?

Hongsheng Bi traveled in July to Hong Kong to attend a workshop symposium for ecological forecasting.

Michael Gonsior, Leanne Powers and Jenna Luek completed a research cruise in July with the RV Sharp and returned to Lewes, Delaware.

Michael Gonsior traveled to Philadelphia in August to attend the ACS meeting as a session organizer and present a talk.

Jackie Grebmeier and Lee Cooper traveled to Boston, MA in July to participate in the Ocean Carbon and Biogeochemistry meetings Woods Hole Oceanographic Institution (<http://web.who.edu/ocb-workshop/>). Jackie was an invited speaker. Lee participated in a workshop sponsored by NASA on the proposed Arctic Colors program.

David Secor, Michael O'Brien, Gray Redding, and Rebecca Wenker traveled in August to tend acoustic monitoring receivers targeting previously-tagged black sea bass offshore of Ocean City, MD.

Michael Wilbrg traveled in August to Kansas City, MO to attend and present at the American Fisheries Society Annual Meeting.

Dave Secor gave a plenary address at the Gordon Research Conference, Global Climate Change Biology in Waterville, NH in July. His talk was entitled, Fisheries Stewardship under Dynamic Seascapes.

Dave Secor also attended two assessment meetings in August: Atlantic Sates Marine Fisheries Commission Atlantic Sturgeon Stock Assessment Meeting, in Baltimore, MD., and International Commission for Conservation of Atlantic Tunas, Madrid, Spain.

Hali Kilbourne, Johan Schijf, and Khare Agraj will be traveling in September to Ft. Lauderdale, Florida to do field work in the Florida Keys.

Viacheslav Lyubchich will be traveling in September to participate in the Climate Informatics workshop.



## PUBLICATIONS

Williams, M.R., Barrett, M.W. (former REU student at CBL), and **Filoso, S.** 2016. *Sources of iron (Fe) and factors regulating the development of flocculate from Fe-oxidizing bacteria in regenerative streamwater conveyance structures.* Ecological Engineering 95 723-737.

**Wainger, L.**, Yu H, Gazenski, K., **Boynton W.** 2016. *The relative influence of local and regional environmental drivers of algal biomass (chlorophyll-a) varies by estuarine location.* Estuarine, Coastal and Shelf Science 178:65–76.

Abbott, B.W. and 99 co-authors including **Cooper, L.W.**, 2016. *Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire: an expert assessment.* Environmental Research Letters 11, 034014.

**Cooper, L.W.**, Frey, K.E., Christie, L., Biasatti, D.M., **Grebmeier, J.M.**, 2016. *Variations in the proportions of melted*

*sea ice and runoff in surface waters of the Chukchi Sea: A retrospective analysis, 1990–2012, and analysis of the implications of melted sea ice in an under-ice bloom.* Deep Sea Research Part II; Topical Studies in Oceanography 130, 6-13.

Logvinova, C.L., Frey, K.E., **Cooper, L.W.**, 2016. *The potential role of sea ice melt in the distribution of chromophoric dissolved organic matter in the Chukchi and Beaufort Seas.* Deep Sea Research Part II. Topical Studies in Oceanography 130, 28-42.

Strong, A.L., Lowry, K.E., Brown, Z.W., Mills, M.M., van Dijken, G.L., Pickart, R.S., **Cooper, L.W.**, Frey, K.E., Benner, R., Fichot, C.G., Mathis, J.T., Bates, N.R., Arrigo, K.R., 2016. *Mass balance estimates of carbon export in different water masses of the Chukchi Sea shelf* Deep Sea Research Part II. Topical Studies in Oceanography 130, 88-99.

Lovvorn, J.R., North, C.A., Kolts, J.M., **Grebmeier, J.M.**, **Cooper, L.W.**, Cui, X., 2016. *Projecting effects of climate-driven changes in organic matter supply on benthic food webs in the northern Bering Sea.* Marine Ecology Progress Series; 548, 11-30, doi: 10.3354/meps11651.

**Grebmeier, J.M.** and **Cooper, L.W.** 2016. *The Saint Lawrence Island Polynya: A 25-Year Evaluation of an Analogue for Climate Change in Polar Regions in: P. Glibert and T. Kana, eds. Aquatic Microbial Ecology and Biogeochemistry: A Dual Perspective; pp.171-183, DOI: 10.1007/978-3-319-30259-1\_14.*

Hidalgo, M., **Secor, D.H.**, and Browman, H.I. 2016. *Observing and managing seascapes: linking synoptic oceanography, ecological processes, and geospatial modeling.* ICES Journal of Marine Science; doi:10.1093/icesjms/fsw079.

## UPCOMING EVENTS

- **SEPTEMBER 1:** Dockside Chats with Calvet Marine Museum 6:30 P.M.
- **SEPTEMBER 10:** R.V. Truitt Dedication and Open House.
- **SEPTEMBER 17:** 5K Run for Research
- **SEPTEMBER 27:** Science for Citizens
- **NOVEMBER 14–17:** NSF Arctic Research Meeting @ CBL

## SCIENCE for CITIZENS

Meetings are Tuesdays from 7:00 - 8:00 p.m. located in the Bernie Fowler Building

**SEPTEMBER 27:** Managing Fisheries in the Chesapeake Bay Ecosystem by Dr. Tom Miller

**OCTOBER 4:** Mercury in Maryland: A Local or Global Problem? Presented by Dr. Andrew Heyes

**OCTOBER 11:** Coal Mining and the Death of Appalachian Streams Presented by Dr. Margaret Palmer

**OCTOBER 18:** Manure Happens: The Consequences of Feeding Seven Billion Carnivores Presented by Dr. Eric Davidson

**OCTOBER 25:** Fear For the Turtle? The Chesapeake's Diamondback Terrapin Presented by Dr. Chris Rowe

