



Cover Picture: Solange Filoso with the Vice-Mayor of Niteroi City and President of the Maryland-Rio Partners of the Americas program, Rio de Janeiro Chapter.

Lab Lines

March 2016

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Research and Awards

Drs. Michael Gonsior, Lora Harris and Andrew Heyes were awarded a new grant from MDSG (NOAA). This award will track septic system performance by using innovative mass spectrometric approaches and traditional nutrient measurements.

Dr. Lora Harris also was awarded two new grants from MDSG. One of the grants requires quantifying changes to nutrient cycling and nitrogen removal in an estuary as a consequence of aeration. The other award requires quantifying changes to a nutrient cycling and nitrogen removal in an estuary as a consequence of aeration.

Dr. Mario Tamburri received modifications to his ongoing work

evaluating the effectiveness of ballast water treatment system with NSF International – a public health and safety organization.

Dr. Mario Tamburri's work with the US maritime Authority and the Port of Baltimore was expanded. A new award – The Year – 2 Maritime Environmental Resource Center (MERC) was approved. This project was extended for five years and funds were amended.

A new award for Drs. Woodland and Bi was approved. The sponsor, MD Sea Grant, requires Woodland and Bi to evaluate methods to effectively sample mysid shrimp in the Chesapeake Bay: Funds will support gear testing and preliminary data

collection to support future studies.

MD Sea Grant (through NOAA) awarded Dr. Genevieve Nesslage a new grant developing a Bayesian approach for estimating ecosystem based reference points for Atlantic menhaden.

Dr. David Secor was awarded additional funds on a current award from the Atlantic States Marine Fisheries Commission. This award seeks to quantify size-specific and seasonal patterns of emigration between the Chesapeake Bay and coastal habitats by Potomac River Striped Bass.

Dr. Walter Boynton was awarded an EPA/CBO (thru CA UMCES) contract. This award supports "World Flux: A review, synthesis, and community data base for

Research and Awards Continued

estuarine and coastal sediment flux data.”

Dr. Helen Bailey was awarded a grant from the Leatherback Trust. This project focuses on the development of a dynamic management tool using sea surface temperature to aid in the bycatch reductions of the critically endangered Eastern Pacific Leatherback Turtle.

A new award was granted to Drs. Lora Harris, Jeremy Testa, and Mr. Jerry Frank from St. Mary’s County to support storm water sampling in St. Mary’s County.

Dominion Cove Point renewed an award to Dr. Lora Harris to continue studies of the “Ecosystem Restoration of Cove Point Freshwater Marsh.”

The Chesapeake Bay Trust awarded Dr’s. Ryan Woodland and Edward Houde funds to assess

Maintenance

Very soon you will be noticing a few changes in the schedule of office trash pick-up. A revised schedule and building “drop off” locations will be distributed soon!

New sustainable landscaping areas will be “popping up” as the spring season rolls around. Some mulched areas will be replaced with river rock and native plants and no-mow grasses will be joining the CBL landscape.

“Environmental, spatial and temporal patterns in the Chesapeake Bay forage population distributions and predator consumption.”

A new award was received for NASL from MDE titled *Analytical Support 2016-2018 Back River Ion Matrix Project*.

A new grant was awarded for Solange Filoso with The National Socio-Environmental Synthesis Center. The specific objective of this project is to define reference conditions and restoration endpoints for water yield and water quality in streams and rivers of the Atlantic Forest region.

New Personnel/Students

Please welcome Erin Crandall, a full time Graduate Research Assistant, to CBL.

CBL has a new MS student, Erin Crandall, who started in early March in Chris Rowe’s lab. She received her B.S. from U.C. San Diego and worked in the Everglades before coming to CBL. If you see Erin, please stop and introduce yourself.

Development

The Chesapeake Biological Laboratory (CBL) Open House is on May 21, 2016 from 1:00 to 5:00. The new R.V. Truitt Laboratory is a state-of-the-art campus of the University of Maryland Center for Environmental Sciences Chesapeake Biological Laboratory campus in Solomons, MD. This building is named after our founding director, Dr. Reginald Van Trump Truitt. The new laboratory will provide over 11,000 sq. ft. of research space that will allow UMCES scientists to continue their work on understanding the ecology and restoration of the Chesapeake Bay. The new building provides 2 controlled environmental seawater laboratories that will permit research on a wide range of environmental questions from the Arctic to the Gulf of Mexico, four additional uncontrolled seawater laboratories, five state-of-the-art research laboratories as well as academic offices and meeting spaces. To celebrate the commissioning of the new R.V. Truitt Laboratory the University of Maryland Center for Environmental Science Chesapeake Biological Laboratory is going to have an Open House on May 21, 2016 from 1:00 to 5:00 in the afternoon. The Open House event will provide people a chance to participate in hands-on science experiments and activities. From seining to discovering new worlds through the lens of a microscope, visitors will gain access to our most important resource-our faculty and staff – and our campus.

Development Continued

CBL will also host the Ninth Annual 5K Run for Research on Saturday, September 17, 2016. Participants will run through beautiful Solomons, MD. Donations and Sponsorships ensure that students from CBL can continue to further their educations, share their knowledge of the Chesapeake System, and represent Solomons and Southern Maryland on the national stage.

There are a variety of sponsorship levels: Presenting Sponsor (\$2,500.00). Platinum Sponsor (\$1,000.00), and Gold Sponsor (\$500.00). This year the 5K Team includes: Reed Brodnik, Matt Damiano, Kevin Kahover, Agraj Khare, Hadley McIntosh, and Jacob Oster. The team has just started securing sponsorships from Southern Maryland Electric Cooperative, and Holiday Inn, Solomon's.

GEC Fellowship

The GEC is pleased to announce that six student GEC Travel Awards have been approved for the current March through June, 2016 request period. Students will be presenting posters or talks at five national meetings and also at one International meeting.

Safety

The newly formed safety committee (Michael Gonsior, Stacy Maffei, Laura Lapham, Melissa Day, Lee Cooper and Jerry Frank) suggested a few changes to make CBL an even safer place to work. The laboratory phones can now be used without the need to dial an account number first, which enables a very quick way to call supervisors in critical situations. The safety committee started designing a best management practice guide and will continue to evaluate safety concerns on campus. We are also still looking for a student member to serve on the safety committee.

Sustainability

The annual state required greenhouse gas reporting is underway – again this year Gray Redding will be assisting CBL in compiling the data required to calculate our footprint. Stay tuned and be sure to respond to his requests.

Outreach

The Chesapeake Biological Laboratory Visitor Center will be open to the public from 9:30 A.M. to 4:30 P.M. every day from Saturday, March 19 through Saturday, March 26h for Calvert and St. Mary's Counties Spring Breaks.

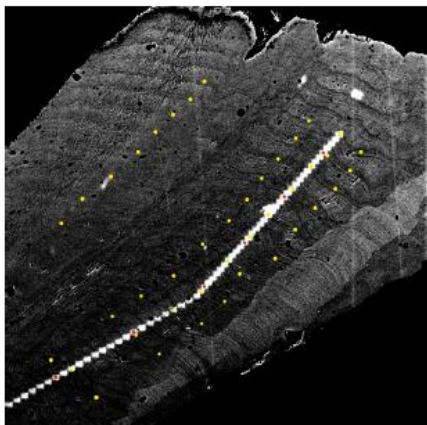
Join us at the oldest state-supported marine lab on the East Coast to learn about innovative research being pioneered by Chesapeake Biological Laboratory (CBL) scientists. As a part of the University of Maryland Center for Environmental Science (UMCES), CBL faculty and graduate students are developing new approaches to solving the environmental management problems facing Calvert County, our nation, and the world. Each Science for Citizens seminar will be presented by an UMCES scientist and will inform the public about a featured research effort. This spring, join us from 7:00-8:00pm to learn about:

- *Atlantic Menhaden: Stories from Early Life* - presented by Dr. Tom Miller on March 29th
- *Oyster Restoration in Maryland* - presented by Dr. Kennedy Paynter on April 05th
- *Why Does Blue Crab Abundance Change Year to Year?* - presented by Dr. Eric Schott on April 12th
- *Beautiful Swimmers Revisited* Film Screening - presented by film interviewee Dr. Tom Miller on April 19th
- *The Gathering Storm: Flooding the Chesapeake Bay* - presented by Dr. William Boicourt on April 26th.

For a complete Science for Citizens seminar schedule and receive email notifications about upcoming seminars, visit: <http://www.umces.edu/cbl/outreach-seminars>

Publications

This is the first paper published by the UMCES Environmental Statistics Collaborative Team (related picture shown below of Bluefin Otolith with annual rings).



Siskey, M.R., V. Lyubchich, D. Liang, P.M. Piccoli, and D.H. Secor, 2016. Periodicity of Strontium: Calcium Across Annuli further Validates Otolith-Ageing for Atlantic Bluefin Tuna (*Thunnus Thynnus*). Fisheries Research 177:13-17.

K.J. Dunton, A. Jordaan, D.H. Secor, C. Martinez, T. Kehler, K.A. Hattala, J. Van Eenennaam, M. Fisher, K.A. McKown, D.O. Conover, and M.G. Frisk, 2016. Age and Growth of Atlantic Sturgeon, *Acipenser Oxyrinchus Oxyrinchus*, in the New York Bight. North America Journal of Fisheries Management. 36: 62-73.

Who's On Travel?

There was a successful Leap Year Cruise (26-29 Feb) on R/V Sharp with Chief Scientist Mike O'Brien and scientific crew **Jess Wingfield** and **Gray Redding** offshore Ocean City in Maryland's Wind Energy Area listening for cetaceans, striped bass and sturgeons. Next one aboard RV Carson in mid-May.

Hongsheng Bi: March 9 – 18: Hong Kong. Working with collaborators to modify in-flow-ZOOVIS and the related software.

Mario Tamburri: March 14 – 18: Quebec, Canada. Speaker at 6th GEF – UNDP – IMO GloBallast R & D Forum and Exhibition on Ballast Water Management in Montreal, Canada.

Lora Harris: March 10 – 12: Attend AERS meeting to participate in board meeting and present poster in Virginia Beach, VA.

Johan Schijf: Tokyo, Japan: June 22 – July 2. Attend the 2016 Goldschmidt Conference in Yokohama, Japan and give keynote address for the Masuda Symposium at the invitation of Prof. Yoshio Takahashi.



Presentations/Seminars

Schijf, J. and Burns, S.M., *Determination of the Side-Reaction Coefficient of the Trihydroxamate Side-Reaction* ASLO Ocean Sciences Meeting, New Orleans, LA. *Siderophore Desferrioxamine B in Metal Free Seawater* at the

Zhang, M., Kedra, M. Biasatti, D.M., Cooper, L.W., and Grebmeier, J.M., *Compound specific isotopic analyses of amino acids in bivalves of the Chulchi Sea: New insights on food web dynamics* at the ASLO Ocean Sciences Meeting, New Orleans, LA.

Carvellas, E., Grebmeier, J.M., Cooper, L.W., *Scientists and Classroom Teachers Working Together: A Win Win Scenario Demonstrated Over a Ten Year Period of Collaboration Through Arctic Research* at the Ocean Sciences Meeting, New Orleans, LA.

Cooper, L.W. and Grebmeier, J.M., *Sediment Deposition Patterns on the Chukchi Shelf Using Radionuclide Inventories* at the Ocean Sciences Meeting, New Orleans, LA.

Grebmeier, J.M., Cooper, L.W., and Moore, S.E., *The Bering Strait Region: A Window Changing Ethnicpopulations in Response to Varying Sub-Arctic – Arctic Oonnectivity and Ecosystem Dynamics* at the Ocean Sciences Meeting, New Orleans, LA.

Iken, K., Danielson, S.L., Grebmeier, J.M., Cooper, L.W., Hopcroft, R.R., Kuletz,

K., Stafford, K., Mueter, F.J., Collins, E., Bluhm, B., Moore, S.E., and Bochenek, R.J., *AMBON: The Arctic Marine Biodiversity Observing Network* at the Ocean Sciences Meeting, New Orleans, LA.

Goethel, C., Grebmeier, J.M., Cooper, L.W. *A Time-Series for Recruitment and Size Distributions of the Bivalve *Macoma spin**

the Southern Chikchi Sea and Experimental Responses of Arctic Bivalves to pH and Food Manipulations at the Ocean Sciences Meeting, New Orleans, LA.

Nobre, C., Pickart, R., Moore, K., Ashjian, C., Arrigo, K., Grebmeier, J.M., Vagle, S., Itoh, M., Berchok, C., Stabeno, P., Kikuchi, T., Cooper, L.W., Hartwell, I., He, J. *Seasonal to Mesoscale Variability of Water Masses in Barrow Canyon Chukchi Sea* at the Ocean Sciences Meeting, New Orleans, LA.

Harris, L., Woodland, R., Lapham, L., Gonsior, M., Cooper, L., Testa, J., Pierson, J. *Rapid Response Storm Sampling for the Octover 2015 Nor'Easter and Hurricane Joaquin* at the Atlantic Estuarine

Research Society Meeting, Virginia Beach, VA.

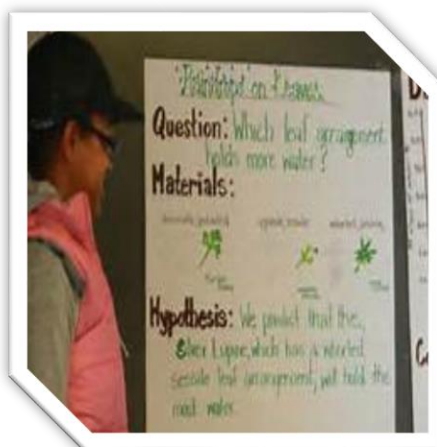
Orcutt, B. N., Aeppli, C., Sharrar, A.M., Spaulding-Astudillo, F., and Lapham, L. L., *Crude Oil Biodegradation by Estuarine Sediment Microbial Communities from Diverse Coastal Environments* at the Oil Spill and Ecosystem Science Conference, St. Petersburg, FL.

Lapham, L.L., Wilson, R. and Chanton, J.P., *Understandingthe*

Role of Oil and Surfactants Play in Controlling Gas Hydrate Stability at the Oil Spill and Ecosystem Science Conference, St. Petersburg, FL.

Bailey, H., *Movement Ecology of Mobile Marine Species*, at the Appalachian Laboratory, Frostburg, MD.

Glandon, H.L., Paynter, K., Miller, T. J., *The Interactive Effects of Acidification and Warming on the Growth of Juvenile Blue Crab, *Callinectes Sapidus*, from the Patuxent River and Chesapeake Bay* at the National Shellfisheries Association Triennial Meeting, Las Vegas, NV.



Presentations/Seminars Continued

Solange Filoso participated as a special guest speaker in a week long workshop about river restoration at the Brazilian Fluminense Federal University (UFF) in Niterói, Rio de Janeiro, where she was invited to talk about her research with stream restoration in the Chesapeake Bay region. The objective of the workshop was to discuss the science and practice of stream restoration as the city of Niterói prepares to launch the first river restoration project in the Guanabara Bay region and one of the first in Brazil. Another objective was to discuss plans to create a River Restoration Center at UFF, and the potential for collaboration with UMCES and other research institutions in the US and Europe.



Pictured: Solange Filoso talking about her research at UFF

Upcoming Events

Science for Citizens (March – April)

Solomons Civic Assoc., April 11, 7 PM

UMCES faculty convocation, May 9-10

UMCES Graduate Commencement, May 10

IAMSLIC Library Conference May 10-14

Board of Visitors Meeting, May 20

Open House, May 21

Larval Fish, Conference – June 19-23

Ninth Annual Run for Research 5K Run, September 17

NSF Arctic Research Meeting (November 14 – 17).

What's Your Green IQ?

The CBL Sustainability Committee wants to know! To Kick-off 2016 a quarterly series of contests will be featured, so join in and be a part of the Resilience **Green Team**



Today-March - Submit your sustainable "bright Idea"

(hint, we already use bio-degradable trash bags) Submit your idea to harris@umces.edu A winner will be announced April 1. Winning ideas must be new to campus.



April-June - What's your print?

How big of a mark are you leaving on the planet? Complete the personal calculator and find out, and submit your results for a chance to win.



July-September - Focus on the Chesapeake.

Participate in an activity designed to improve water quality in your watershed and the Chesapeake Bay. Submit your results for a chance to win.



October-December - Team Challenge

We'll issue the challenge and you build your team. GO! - Best team effort wins. Winners will be announced at the Holiday Party



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