CHESAPEAKE BIOLOGICAL LABORATORY | SOLOMONS, MD

ISSUE 54

Lab Lines

FEBRUARY 2021

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DIRECTOR'S VIEW

My optimism from January continues. Almost 40% of our CBL community has managed to receive at least their first jab of vaccine and I expect that figure to increase in the coming weeks as vaccines become more available. Although this may not directly lead to reducing the public health measures we have put in place, it does mean that members of the CBL are less likely to become really sick. I encourage everyone to be vaccinated at the earliest opportunity.

I also want to recognize the great news of the awarding of Fulbright Fellowships to Dr. Lora Harris and Christina Goethel. Lora will use her fellowship to travel to Finland to work on the comparative ecology of the Chesapeake Bay and Baltic Sea - both large estuaries. Christina will be traveling to Iceland for a post-doctoral fellowship to work on Arctic-wide issues. Christina will also get the chance to gain teaching experience. In addition to these intrepid travellers, Dr. Michael Gonsior will be starting a sabbatical at the University of Montana in August of this year to study the organic geochemistry of Yellowstone Lake. Oh, and the fishing is pretty good.

Spring is annual review time. In compiling information for faculty reviews, it became clear that the CBL research community published more than 130 peer-review papers in 2020. It is important to understand this is not an unexpected benefit of COVID - but reflects the accumulated benefit of hardwork by many faculty, staff and students over the last few years. This is an increase in output of almost 30% over prior years. I have also read annual reviews for FRAs which indicate the amazing contributions these researchers make to our community.

Safety Corner: Cheryl Clark

GLOVES

It is important to know that one glove will not meet all your laboratory needs. Nitrile gloves are what we most frequently use in our laboratories, but they are not appropriate for all chemical and physical hazards. In order to know what type of glove is needed, you need to know the chemical you are working with by reading the Safety Data Sheets, particularly Section 8 which covers personal protection. There is also an excellent glove selection guide provided by Ansell that will let you know which type of glove is compatible with a particular chemical. Ansell uses three criteria to evaluate the glove:

1) Degradation- change in the physical properties after contact with the chemical

2) Permeation rate – how quickly a chemical will pass through the material at a molecular level.

3) Breakthrough time – how much time it takes the chemical to get to the other side of the glove (soaks through).

Sometimes there are physical hazards in the lab that require hand protection. Will the item be hot or cold? Is there a puncture hazard? How much dexterity do you need?

Here are some other items to help you:

1) Make sure your gloves fit properly.

2) Do not touch door knobs, computer keyboards, or telephones while wearing gloves. There is a risk for contamination of these surfaces.

3) DO NOT reuse disposable gloves. Be sure to discard them after use.

4) Make sure you use the safe method for glove removal, by turning the first glove partially inside out. Use your gloved finger tips to remove the second glove completely by pulling it down towards the fingers from the wrist. Use your unprotected fingers to grab the inside of the first glove and remove it the remainder of the way. Throw both gloves away. This is demonstrated on pg. 12 in the Right to Know document in the Safety folder on the p drive. The location is p:\Safety\Plans & Policies\RTK Training Docs.

5) Remember to wash reusable gloves (such as Viton or neoprene), with soap and water after using and hang out to dry.

In Case You Missed It!

Jamie Testa co-presented with Jenna Linhart on the Wave of Plastic project (UMCES team: Helen Bailey, Carys Mitchelmore, Sarah Brzezinski, Michael Gonsior, and Cat Stylinski) to the Maryland Association of Outdoor & Environmental Education virtual conference on 6th February 2021. Approximately 45 educators and practitioners attended the 1-hour workshop.

Dr. Carys Mitchelmore was an invited participant and panelist at the stakeholder forum organized by Green Cross France et Territoires entitled "Sunscreens, Human & Environmental Health" (Feb 9, 17, 25th 2021). On February 9th she will be gave a talk on the state of the science regarding UV filters and coral reefs.

Lora Harris received the "Seeking Global Solutions" Fulbright Award to spend time at the Tvärminne Zoological Station during academic year 2021-2022, a laboratory associated with the University of Helsinki. She will participate in large scale mesocosm experiments and pursue a comparative synthesis of the Baltic and Chesapeake Bay Restoration trajectories. This award is supported by the Fulbright Finland Foundation.

Nicole Barbour, PhD student in Dr. Bailey's group, will be orally presenting at the virtual "Ecology in R" conference on March 2-6, 2021, about her recent work for her second dissertation chapter on integrating dynamic time warp clustering techniques with data on dive behavior of leatherback turtles in the Eastern Pacific.

Outreach

Visitor Center

Out of an abundance of concern related to the COVID-19 pandemic, the Chesapeake Biological Laboratory Visitor Center will remain closed.

Science for Citizens Seminar Series

Join UMCES Chesapeake Biological Laboratory as we explore the health of the Chesapeake Bay in our upcoming public webinar series! Please save these dates:

•Tuesday, March 30th at 7:00pm – Dr. Tom Miller

•Tuesday, April 6h at 7:00pm – Dr. Victor Kennedy

•Tuesday, April 13th at 7:00pm – Dr. Michael Gonsior

•Tuesday, April 20th at 7:00pm – Dr. Solange Filoso

•Tuesday, April 27th at 7:00pm – Dr. Lisa Wainger

A registration website is in development, and will be used to provide Zoom log-in details for these webinars.

Virtual Science Semester

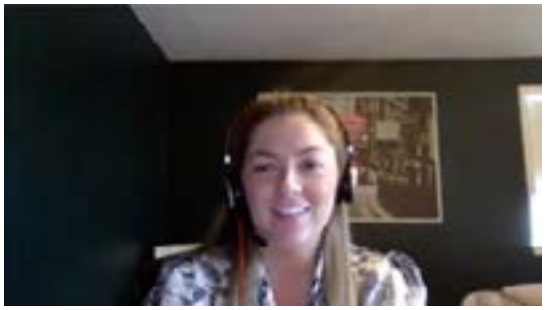
The Chesapeake Biological Laboratory's "Virtual Science Semester" wrapped up last month with a final round of video interviews! You can learn about the career paths and influence a CBL education had on young alumni, and explore the thesis research and aspirations of our next generation of student scientists:

Next Generation Interview: Christina Goethel

Meet Christina Goethel! After finishing her master's research at CBL, Christina decided to stay on for her PhD. Christina is now examining changes to Arctic clam populations over the last 25-years. Clams are an important food source in the Arctic food web, sustaining species like walrus and diving sea ducks.

Next Generation Interview: Maddy Lahm

Meet Maddy Lahm, a master's student at UMCES CBL. Maddy is using advanced chemistry techniques to study the marine carbon cycle, including the molecular structure and fates of carbon that is fixed by picocyanobacteria at the sea surface and then transported to the deep ocean.



Young Alumni Interview: Jessica Cohn

Meet Jessica Cohn! At UMCES CBL, Jess earned her master's degree while using a virtual model to predict the growth, survival, and regional appearances of eel grass. After completing a Knauss fellowship and her degree, Jess entered the International Consulting industry as an Ecologist & Resilience Specialist.

Development Activity: Jeane Wharton

Under the circumstances created by the pandemic, we are in an evolving situation with varied impacts. In a recent survey by Fidelity Charitable, 54 percent of donors plan to maintain their giving levels. Younger donors surveyed said they'd give more, and 43 percent of all donors surveyed said they'd continue to donate to the organizations to which they'd donated previously. Donations to CBL seemed to echo the Fidelity survey findings, as many donors maintained or increased their giving levels. In 2020, 20 individuals, a family foundation and two corporations gave $1,000 or more to support students and research at CBL.

Since March, Wharton and other UMCES development staff meet frequently by phone and Zoom with UMCES Vice President for Strategic Initiatives Stuart Clarke. Development staff has had extensive online training with the Ellucian Advance database, the large database hosted by the University System of Maryland Foundation.

She continues to stay in contact with CBL donors and prospective donors through emails, texts and phone calls. On the phone or in email, donors have said they're pleased Science for Citizens presentations are online. The average attendance has been higher than the in-person event, with attendees from all over the US. A few donations were made each Tuesday following the presentations. Science for Citizens presentations begin again March 30 and continue on Tuesday nights in April.

Publications

A critical review paper detailing the state of the science on the environmental risk of UV filters to coral reefs was just published in Environmental Toxicology and Chemistry by Carys Mitchelmore, Andrew Heyes and Annaleise Conway from UMCES, CBL in collaboration with colleagues at the Personal Care Products Council. This paper is open access and can be viewed and downloaded at https://setac.onlinelibrary.wiley.com/doi/full/10.1002/etc.4948

Kennedy, V.S., L. Bolognini, J. Dulčić, R.J. Woodland, M.J. Wilberg and L.A. Harris. 2021. Status of fish and shellfish stocks. Pages 203-227 in T.C. Malone, A. Malej, and J. Faganeli (editors). Coastal Ecosystems in Transition: A Comparative Analysis of the Northern Adriatic and Chesapeake Bay. Geophysical Monograph 256. American Geophysical Union. Wiley, New York. DOI:10.1002/9781119543626

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University of Maryland
Center for Environmental Science
Chesapeake Biological Laboratory

www.umces.edu/cbl | 410-326-4281
P.O. Box 38 | 146 Williams Street | Solomons, MD 20688-0038