

# Lab Lines

## DIRECTOR'S VIEW

APRIL 2021

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Osprey are back! Frogs are peeping! And crab pots are on the backs of trucks and boats all around the harbor. All signs point to Spring and rebirth. The number of research protocols that have been submitted indicate that CBL researchers are feeling the urge to get back in the field and the lab as well. I review all of these protocols solely through the lens of safety - can the research be conducted while keeping within the UMCES COVID policies - so can social distancing be maintained, can we keep the risk of viral transmission low. I am extremely thankful that all CBL researchers have taken these questions so seriously and responded so positively to help ensure the safety of the entire community.

But as we think hopefully about more normal times ahead, I must remind you that despite the availability of vaccines continues to increase, the percentage of tests that are positive has increased in recent weeks. For example, for Calvert County, case positivities rates reached a nadir in late February of about 2.5%. It has increased consistently since then to a peak of 5%. It is a similar story statewide. These numbers force us to remember that risks of COVID infection remain substantial for those who are not vaccinated. We also heard this week that Pfizer believes those who received their vaccine will likely need a booster shot this autumn. So, I have to ask all of us to continue to maintain vigilance against infection risks, to maintain social distancing and other practices known to control the risk of infection. We are working on Phase III of our Return to Campus plan that will try to balance the benefits of vaccination programs against ongoing concerns from CBLers who want to continue to exercise caution while uncertainties over disease dynamics remain.

## In Case You Missed It!

Dr. Helen Bailey attended the Bureau of Ocean Management (BOEM) virtual scoping meeting for Ocean Wind, LLC's proposed wind energy facility offshore New Jersey on 13th April 2021.

Drew Hobbs was recently awarded a summer fellowship and grant: Recipient of 2021 Maryland Sea Grant Graduate Research Support Grant and 2021 University of Maryland Graduate School Summer Research Fellowship.

Isabel Sanchez Viruet is serving as an invited panelist for the 2021 Islands of Sustainability Conference. The title of her panel is: Symposium on the UN Decade of Ocean Science for Sustainable Development: NSF INCLUDES SEAS Island Alliance. Because this symposium is a virtual offering hosted by the University of Guam, it is possible to say that she will be a panelist on both April 7th and April 8th!

Isabel is also giving an oral presentation at the 2nd International Aquatic Mesocosm Research Symposium – From local processes to cross-domain interactions. She will be presenting her mesocosm research investigating nitrogen processing by floating wetlands in estuarine environments.

## Facilities

Spring has sprung at CBL! Everything is popping with color and looking magnificent on campus. Many thanks to the Facilities Team for allowing CBL to shine! If you are on campus, hopefully you are enjoying the spring beauty and awakening of the landscape. If you aren't on campus, take a moment to enjoy the photos.



## Development Activity: Jeane Wharton

Most fundraising blogs and articles predict that virtual events are here to stay. CBL's popular Science for Citizens series has been successful online. Thanks to Outreach Coordinator Sarah Brzezinski, Dr. Tom Miller, and terrific speakers, we've been successful taking this event to Zoom. The presentations were well-attended (hundreds from the region, the state, the US and a few from across the globe!) Many donors, too, responded positively to our message: Despite the difficult year, students, staff and faculty at CBL continue to find innovative answers to environmental questions.

We're beginning to develop more accurate lists of CBL alumni, and one way we are connecting with them is on Linked In. <https://www.linkedin.com/in/cbl-development-6416b9200/>. Thank you, Renee Arnold, for help in beginning our alumni list!

In the first quarter of 2021, I was able to connect individual donors with Faculty Wish List items, including \$1,000 for a student researching microplastics, \$2,500 for a fisheries student, \$3,000 for equipment for "investigating new sustainable sources of rare earth elements," and a \$10,000 donation for research of terrapins and sea turtles.



## LABORATORY CLEANLINESS

We all know that cleanliness and order are important in our homes, but it is fundamental in the laboratory due to the many safety concerns that are present and also for quality control of your samples. The overall efficiency of the laboratory can be greatly improved through cleanliness and orderly arrangement of laboratory chemicals and other items.

There are several reasons to keep the laboratory in order - 1) to avoid accidental contamination of yourself or other people in the lab, 2) avoid loss of samples and 3) prevent equipment malfunction. Cleanliness will also help to avoid cross contamination of samples and can save you the time and money involved from trying to determine why the sample blanks are not blank. It also helps to have a place for everything so you do not waste time trying to find something you need. A lack of organization and clutter can also lead to accidents and the easier start and spread of a fire.

Here are some ideas to help you keep your laboratory space clean:

- Clean the weighing balance pans and powder spills, if any, around the balance after weighing your samples or reagents.
- Properly dispose of chemicals and wastes. Old and unused chemicals should be disposed of promptly and properly.
- Provide a workplace that is free of physical hazards. Aisles and corridors should be free of tripping and slipping hazards. Sweep the floor and mop any spills.
- Attention should be paid to electrical safety - the use of extension cords, proper grounding of equipment, avoidance of overloaded electrical circuits and avoidance of the creation of electrical hazards in wet areas. Make sure all electrical cords are in good working order, not frayed or damaged.
- Clean up every day. Wipe down countertops and hood surfaces to prevent any accidental contact with chemicals. Surfaces need to be free of clutter.
- Refrigerators and freezers should be cleaned regularly and free of clutter.
- Hoods are not to be used for storage and should be free of debris. Do not allow paper or other trash to get drawn up into the hood. Make sure any cords or tubing are under the airfoil.
- Make sure the sinks are clean and glassware has been washed and put away. If any glass is broken or chipped, please be sure to discard it in the broken glassware box.
- Discard of any sharps in a sharp box.
- All chemicals are properly stored away and in their appropriate cabinets, refrigerators or freezers.
- Make sure equipment is working properly. Inspect any lines or tubing to make sure they are not clogged, blocked or pinched.

This is a general list of things you could incorporate into your laboratory routine. I know that each laboratory is different, so be sure to determine what it is you need to do in your lab to keep it clean, organized and safe.

### References:

[http://www.sfasu.edu/safety/documents/house\\_keeping.pdf](http://www.sfasu.edu/safety/documents/house_keeping.pdf)

<http://lab-training.com/2017/08/21/importance-cleanliness-laboratories/>

<https://extranet.who.int/lqsi/content/arrange-standardized-regular-cleaning-laboratory>

<https://www.chem.tamu.edu/rgroup/wooley/safety/20%20Checklist%20for%20Lab%20Clean%20Up.pdf>

<https://www.servicemasterbyzaba.com/blog/laboratory-maintenance-checklist/>

# Outreach

## 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! Members of the public, CBL, and UMCES are invited to attend! Registration is required at: <https://www.usmf.org/scienceforcitizens/>

Tuesday, April 20th at 7:00pm

Stream Restoration: Is it Helping Our Streams and the Chesapeake Bay?

Presented by Dr. Solange Filoso

Healthy streams are dynamic, diverse ecosystems that provide society with many benefits. Since many streams in the Chesapeake Bay watershed are severely degraded, stream restoration is increasingly used to improve their water quality. Yet, the effectiveness of projects implemented is still questionable, and recovery is a slow, complex task. Dr. Solange Filoso has monitored restored streams in Maryland for over a decade. In this seminar, she will share her assessment of restoration effectiveness, and discuss the importance of monitoring data to policy and management decisions in the region.

Tuesday, April 27th at 7:00pm

Changing Weather, Changing Farms, Opportunities to Reduce Chesapeake Harm

Presented by Dr. Lisa Wainger

Future Chesapeake Bay health will depend on the combined influence of environmental changes and peoples' responses to those changes. Dr. Lisa Wainger will describe research into these combined effects that found that adaptations that farmers are already making to improve crop growth under changing weather are likely to prevent some harm to Chesapeake Bay water quality. This beneficial effect could be enhanced by looking for additional opportunities to change the timing of nutrients to water bodies.

Registration is required at: <https://www.usmf.org/scienceforcitizens/>

Science for Citizens is sponsored by:



## Visitor Center

Out of an abundance of concern related to the COVID-19 pandemic, the Chesapeake Biological Laboratory Visitor Center will remain closed through at least September 1st.

## Publications

Arai, K., Castonguay, M. & Secor, D.H. 2021. Multi-decadal trends in contingent mixing of Atlantic mackerel (*Scomber scombrus*) in the Northwest Atlantic from otolith stable isotopes. *Scientific Reports*: <https://doi.org/10.1038/s41598-021-86116-2>

Coleman NC, Burge EJ. 2021. Association behavior between sand tiger sharks and round scad is driven by mesopredators. *PeerJ* 9:e11164 <https://doi.org/10.7717/peerj.11164>

Gemery, L., Cooper, L.W., Magen, C., Cronin, T.M., Grebmeier, J.M., 2021. Stable oxygen isotopes in shallow marine ostracodes from the northern Bering and Chukchi Seas. *Marine Micropaleontology*, <https://doi.org/10.1016/j.marmicro.2021.101979>

Kędra, M., Cooper, L.W., Silberberger, M.J., Zhang, M., Biasatti, D., Grebmeier, J.M., 2021. Organic carbon source variability in Arctic bivalves as deduced from the compound specific carbon isotopic composition of amino acids. *Journal of Marine Systems*, <http://doi.org/10.1016/j.marsys.2021.103547>



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