

Lab Lines



DIRECTOR'S VIEW

This is the most difficult piece I have written for the newsletter while I have been Director. We have celebrated the re-initiation of our research enterprise with faculty, staff and students back on campus in our research buildings. It brings the campus alive again. But I recognize that for many the health pandemic continues to be a daily challenge, balancing home and work, taking care of children, being IT support and tutors while the children were still in school, and now camp coordinators that school has ended, and for many taking care of parents and other relatives.

We have also been working through how to fully respond to the killing of George Floyd. Words alone are insufficient; we now need action. But the question of what actions to take are unclear. How do we offer implicit bias training when we can't meet in person? How do we contribute to changing our scientific fields, our lab and our communities? One opportunity to contribute is the UMCES Diversity, Equity and Inclusion Collaborative. The DEIC had been in the works since October 2019, but launching it during the Black Lives Matter protests make it seem responsive and not the proactive action it was designed to be. The group is designed to be an open, transparent and inclusive forum to discuss all issues and I encourage you to engage with the DEIC (<https://www.umces.edu/diversity-equity-and-inclusion-collaborative>).

Now we mourn the loss of Linton Beaven who passed away the evening of June 29th. She was due to retire the next day. Linton has been a seemingly permanent fixture at CBL. She was one of a group of dedicated, talented experts who have had long and impactful careers as faculty research assistants at CBL. Linton contributed a more than 40 year career to CBL on a wide range of projects involving field and lab work. She was a fierce friend and a generous teacher of those of us who struggled with id'ing plankton samples, larval fish and most recently Arctic bivalves. There are literally generations of students who benefitted from her patient help during their degrees. You will find her name on few papers – but you will find it in the acknowledgement sections of a huge number of thesis and dissertations in the library. Linton leaves her husband, Melvin, two daughters, Loni and Emma and grandchildren. She also leaves a permanent handprint on the hearts of many at CBL – a lasting legacy.

The lessons from all of this. Tomorrow is not guaranteed. We should recommit to work everyday to make the lab, our communities and the world a better place. Remember to hug the ones your love. And tell them you do.

JUNE 2020

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NOTEWORTHY AWARDS AND SUCCESSES

Janet Barnes received the inaugural (2020) President's Award for Outstanding Research Support at the UMCES commencement ceremony.



Mike Wilberg was awarded the President's Award for Excellence in Application of Science.



The Bay Net shared an article on June 4th recognizing both faculty members for their accomplishments. [Check out the full article here!](#)

Hadley McIntosh Marcek was accepted to participate in DISCO (Dissertations Symposium in Chemical Oceanography) XXVII in Lihue, Kaua'i from 18–22 October 2020. This meeting is sponsored by NSF and NOAA.

Lisa Wainger has officially been appointed to the Delta Independent Science Board!

IN CASE YOU MISSED IT

Lora Harris is teaching her summer course remotely to Centro TORTUGA students in Puerto Rico. She wishes she were there in person for the field trips, but seeing the students is a real treat!

Lora Harris is presenting work from our research in Rock Creek on engineered aeration at the Chesapeake Research Symposium with collaborators Jeremy Testa, Laura Lapham, Andrew Heyes, Mindy Forsyth, Casey Hodgkins, Drew Hobbs, and Zack Gotthardt.

Lora Harris, Jeremy Testa, and Mindy Forsyth presented the Calvert Creeks and Solomons Harbor 2019 Monitoring Results to the Calvert County Board of County Commissioners on June 16th in a virtual session. <https://www.co.cal.md.us/1501/Meetings-On-Demand>

Helen Bailey's FRA Alexandra Carroll did a Skype A Scientist session with a Kindergarten classroom of 20 students from the Amherst & Pelham Public School District in Massachusetts. They talked about life as a Marine Biologist, including marine mammals and acoustics.

Jeremy Testa presented research (with many CBL co-authors) at the Virtual Chesapeake Community Research

Symposium on June 10.

CBL-UMCES are inaugural members of the Mid-Atlantic Acoustic Telemetry Observation System. FRA Mike O'Brien has assisted with beta-testing this telemetry data sharing portal, and supplied hundreds of thousands of records from past Secor Lab projects (Black Sea Bass and Offshore Construction, Potomac and Atlantic Striped Bass Telemetry Study, BOEM Offshore Wind, and Hudson River Striped Bass Spawning). Descriptions of these projects and data can be accessed through <https://matos.asascience.com/project>.

We received our first report of dolphins in the Upper Bay region in the Chester River on Sat May 30. The video is posted on our Chesapeake DolphinWatch Facebook page, which has had over 7,000 views and nearly 1,300 engagements: <https://www.facebook.com/ChesapeakeDolphinWatch/>



PUBLICATIONS

Wiernicki, C.J., D Liang, H Bailey, and DH Secor. 2020. The effect of swim bladder presence and morphology on sound frequency detection for fishes. *Reviews in Fisheries Science and Aquaculture* <https://doi.org/10.1080/23308249.2020.1762536> (UMCES Cont. No. 5856)

Secor, D.H., M.H.P O'Brien, B.J. Gahagan, J.C Watterson, and D. Fox. 2020. Differential migration in Chesapeake Bay striped bass. *Plos One* 15: e0233103. <https://doi.org/10.1371/journal.pone.0233103> (UMCES Cont. No. 5857)

Shen, C., J.M. Testa, W.-J. Cai, and M. Li. 2020. Understanding anthropogenic impacts on pH and aragonite saturation in Chesapeake Bay: insights from a 30-year model study. *Journal of Geophysical Research – Biogeosciences*, <https://doi.org/10.1029/2019JG005620>. (UMCES Cont. No. 5863)

Ni, W., M. Li, and J.M. Testa. 2020. Discerning effects of warming, sea level rise and nutrient management on long-term hypoxia trends in Chesapeake Bay. *Science of the Total Environment*. <https://doi.org/10.1016/j.scitotenv.2020.139717> (UMCES Cont. No. 5866)

Powers, L., Conway, A., Mitchelmore, C., Fleischacker, S., Harir, M., Westerman, D., Croue, J., Schmitt-Kopplin, P., Richardson, S., Gonsior, M., 2020. Tracking the formation of new brominated disinfection by-products during the seawater desalination process. *Environ. Sci.: Water Res. Technol.* <https://doi.org/10.1039/D0EW00426J>

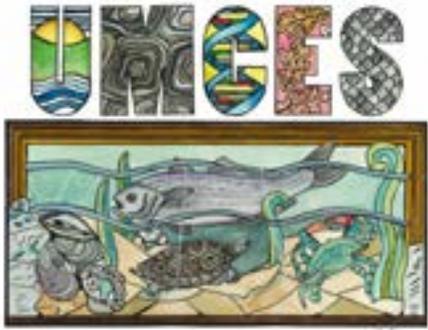
Outreach

Creativity Challenges

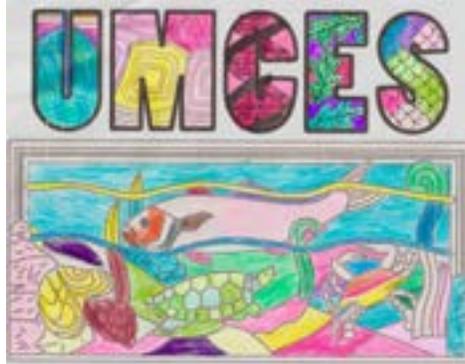
During the telework period, Creativity Challenges are being hosted to try to keep a sense of community and to combat stress during this difficult time. These activities are intended to be family-friendly fun - You can get your kids involved, or any other family or friends who you are self-isolating with.

The UMCES Coloring Challenge has received some wonderful results from adults and children alike. [View all the entries from this challenge.](#)

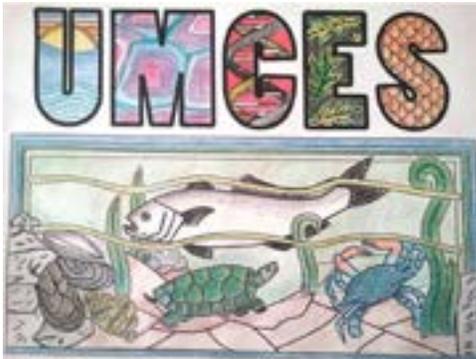
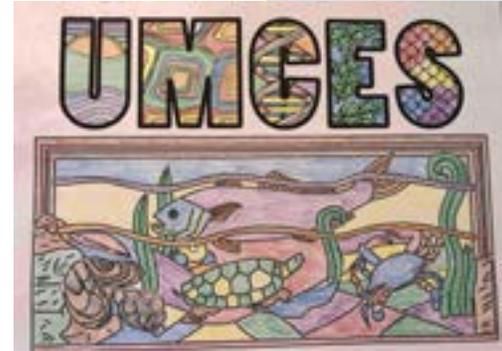
Keep your eyes open for future Creativity Challenge, usually released on Friday's!



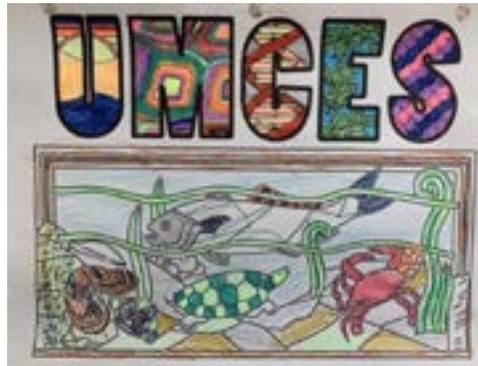
Julie Trommatter - Most Artistic
UMCES Coloring



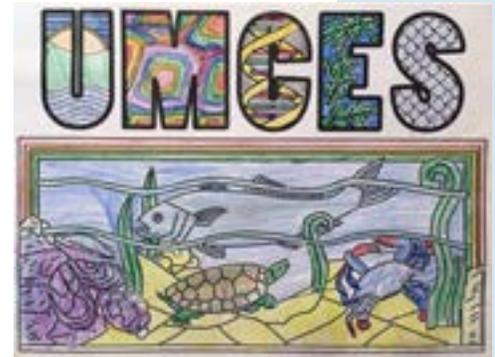
Sophie Hernandez and Carin Starr - Best Family Entries



Laura Olivera - Best Youth Entry
Ages 13 and Up



Delia Parnell - Best Youth Entry
Ages 7-12



Nelleke Schijf - Best Youth Entry Ages
6 and Under

Visitor Center

The Chesapeake Biological Laboratory Visitor Center will be closed through at least July 10th.

Events

All on and off campus CBL Outreach activities have been cancelled through July 10th due to continued concerns about the COVID-19 coronavirus. Regrettably, we have had to cancel our participation in several events, including the Green Living Festival at Annmarie Gardens and Bernie Fowler's Patuxent River Wade-In at Jefferson Patterson Park.

Bernie Fowler's Patuxent River Wade-In

This year, former Senator Bernie Fowler hosted a virtual Patuxent River Wade in on June 14th. Dr. Tom Miller submitted a pre-recorded video in support of this event and the man for whom the Chesapeake Biological Laboratory's Bernie Fowler Laboratory is named.

ROUTES OF ENTRY

Exposure to chemicals can occur by entering the body at four points of entry – absorption through the skin and eyes, inhalation, ingestion and injection. You can decrease or eliminate exposure by taking measures to protect yourself and your co-workers. You should always read the Safety Data Sheets (SDS) for the chemicals you are working with, clean up after yourself, report any spills and remember to wear the appropriate personal protective equipment (PPE).

Absorption through the skin and eyes

This is the simplest way for chemicals to enter the body. The skin is made up of hair follicles, sebaceous glands and sweat glands which are abundantly supplied with blood vessels which help to facilitate the absorption of chemicals. The skin also has a keratin layer which contains fat and fat cells which can make it easier for solvents and other organics to pass through the skin. Once the chemical enters the bloodstream, it can cause injury to other organs. Chemicals can also enter into the skin through cuts and abrasions or if the skin is very dry and cracked. Injuries can range from redness and mild dermatitis to serious burns and destruction of skin tissue. If exposed, flush injured area with water for 15 minutes and remove any contaminated clothing.

The eyes are another avenue for the absorption of chemicals into the body. Some chemicals, such as corrosives and phenol, can cause a very painful injury or blindness. The eyes also have a vascular system which can aid the absorption of some chemicals into the bloodstream and then to other organs. If chemicals get into the eyes, flush the eyes for 15 minutes at an eyewash station and get medical attention if necessary. In order to avoid these type of injuries, please be sure to wear the appropriate personal protective equipment – lab coat, gloves and goggles.

Inhalation

This involves gas and vapors, dust, fumes and smoke. The chemicals can pass through the mucous membranes in the mouth, throat and lungs and into the bloodstream. The lungs have a very dense capillary system through which chemicals can pass very quickly. The degree of injury will depend on the toxicity of the chemical, its concentration, solubility in tissues and the duration of exposure. There are instances where an injury is not acute, but may occur over a long time. The olfactory system in our nose can become desensitized to smells to the point where we may not realize we are inhaling anything. Some chemicals such as mercury are cumulative poisons. They can cause damage from small concentrations being inhaled over a long period of time. If there is an incident, get victim to fresh air. When working in the lab, be sure to have adequate ventilation or work in a hood and if necessary use a respirator.

Ingestion

Chemicals can be absorbed through the digestive tract. This does not usually occur because someone ate chemicals, but because contaminated food was ingested or someone touches their mouth with contaminated hands. It is also possible to have chemicals trapped in lip balm or chewing gum. Once chemicals enter the digestive tract, they can pass through the intestinal wall and into the bloodstream. Acids and bases can cause severe burns in the throat and stomach. If someone has ingested chemicals call Poison Control. Do not induce vomiting unless directed to do so by a physician. In order to avoid this situation, do not store food and beverages in the laboratories. Do not perform any pipetting or siphoning by mouth. You must also remember to wash your hands after working in the lab and before eating.

Injection

Chemicals can enter through accidental injection by syringe or being cut by a contaminated piece of glass or metal. If this occurs, wash area with soap and water.

In all of these instances, if it is necessary, please get medical attention.

References

https://ehs.unl.edu/documents/tox_exposure_guidelines.pdf

https://www.ccohs.ca/oshanswers/chemicals/how_chem.html

<https://www.clemson.edu/research/safety/manuals/labSafety/exposureRoutes.html>

<https://ehs.princeton.edu/book/export/html/60>

https://ehs.unl.edu/documents/tox_exposure_guidelines.pdf



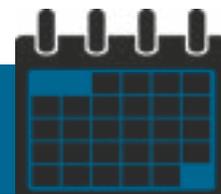
Development Activity

The second quarter has seen donations from corporations, a small family foundation, and several individual philanthropists. Gifts have been designated for Chesapeake DolphinWatch, CBL Terrapin, Turtle and Amphibian Research, and to the support of CBL students. Donor support has increased from this period in 2019. Many non-profit charities have been hard-hit as donors face lay-offs and business closures, yet gifts to education and environmental entities continue to remain somewhat steady.

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

Wharton continues to stay in contact with donors and prospective donors through emails, texts and phone calls. Wharton and Outreach Coordinator, Sarah Brzezinski, work with CBL Director Dr. Tom Miller and UMCES Communications Director, Amy Pelsinsky on messaging concerning the postponement and cancellation of events. At the present time, the Visitors Center is closed until July and the fall Open House will probably be an online event such as the Open House for IMET in May.

UPCOMING EVENTS



Due to the Covid-19 Outbreak: All campus events, including sponsored on-campus and off-campus events, are cancelled through July 10, 2020, and no new events will be scheduled until further notice.

Invitation to UMCES Weekly Mindfulness

Join Denise Yost and your colleagues as we continue to find small ways to practice mindfulness and find a bit more ease during our continued quarantine. Practice continues in the usual friendly format, no experience necessary. Practice in real time and engage with others in short discussion questions as you'd like.

Moving forward there will be one offering per week for all at UMCES. These sessions will be paused over the next two weeks and are scheduled to resume July 16th.

Thursdays @ 2:00pm, Staff/FRAs/Faculty/Graduate students

Join Zoom Meeting

<https://zoom.us/j/238254703?pwd=Y3Rwd2F2ak4xK0V6anRxak50ekxVZz09>

Dial +13017158592

Meeting ID: 238 254 703

Password: 466575

