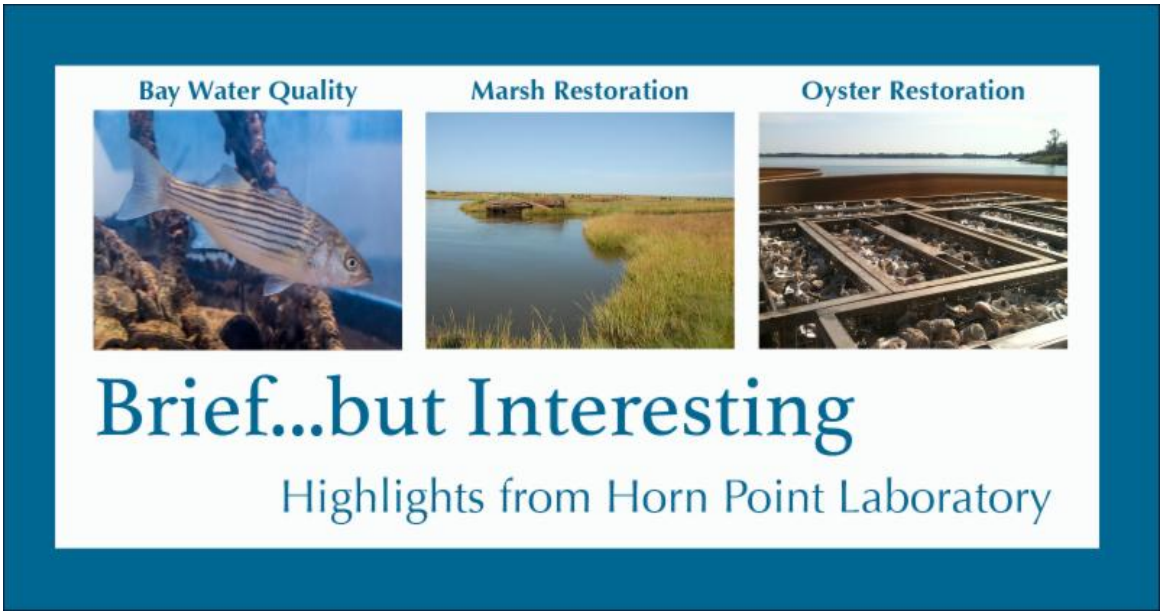
NEWS FROM THE UNIVERSITY OF MARYLAND CENTER FOR ENVIRONMENTAL SCIENCE –
Horn Point Laboratory

April 2020



Horn Point Laboratory (HPL) is responding to the COVID-19 pandemic by ensuring that our students, faculty, staff stay healthy via teleworking and online classes. HPL remains committed to our community and is helping those in need by distributing emergency supplies to local health agencies and food banks.

Warmer ocean surface produces stronger storms and leads to higher storm surge throughout the Chesapeake Bay. In addition, the hardening of shorelines will further raise the peak surge height in areas such as Baltimore, which reside in the upper parts of the Chesapeake.

IMPACTS OF OCEAN WARMING, SEA-LEVEL RISE, AND COASTLINE MANAGEMENT FOR CHESAPEAKE BAY

The recently published work of two HPL oceanographers displays how ocean warming, sea level rise, and the hardening of shorelines will lead to increased storm surges for Baltimore and other parts of the upper Chesapeake Bay. The research article by HPL Professor Ming Li and Assistant Research Scientist Fan Zhang was made available in a publication from *AGU*. **MORE**

A Letter from the Horn Point Laboratory Director

Professor/Director Mike Roman shares how HPL faculty, students, and staff are dealing with the COVID-19 pandemic. **MORE**

HORN POINT LABORATORY STUDENT MORGAN ROSS RECOGNIZED BY RATCLIFFE ENVIRONMENTAL ENTREPRENEURS FELLOWSHIP (REEF) PROGRAM

HPL Graduate Research Assistant **Morgan Ross** started to develop a product for the REEF program - a wearable toxin sensor for Brevetoxin aerosols. Her company “Breveazy” proposed a color-changing bracelet that would provide real-time detection of Brevetoxin aerosols. The product would have consisted of a single-use detection strip that could be inserted into a reusable bracelet. **MORE**

SHORERIVERS TEACHER TRAINING 'ACADEMY' TO BE HELD AT HORN POINT LAB

ShoreRivers and HPL co-host the MWEE Academy, which will (tentatively) begin in summer 2020 and continue through the 2020-2021 school year. Teachers will receive paid professional development, a free-of-cost field trip to Horn Point Laboratory for their students, and funds to support student-led action projects at their school. **MORE**

While the Horn Point Oyster Hatchery has scaled back oyster production in order to practice social distancing, dedicated, essential staff continue to produce oyster larvae for Maryland's oyster farmers and watermen. Photo: Dave Harp

CORONAVIRUS STALLS SOME CHESAPEAKE OYSTER RESTORATION PROJECTS

The (Oyster Recovery) Partnership supplies shell to the HPL hatchery in Cambridge operated by the University of Maryland Center for Environmental Science (UMCES). The hatchery seeds the shell with baby oysters, then the partnership arranges to transport them by boat to the designated restoration sites for putting overboard.But with the timetable for those projects now uncertain, the state's largest hatchery has scaled back its operation. "As of right now, restoration is kind of on hold," said Stephanie Alexander, the hatchery manager. **MORE**

Eastern brook trout (Salvelinus fontinalis) swim at the Virginia Living Museum in Newport News, Va., on Dec. 30, 2018. Photo: Will Parson/Chesapeake Bay Program

WHO LIVES HERE? TRACKING SPECIES BY THE DNA THEY LEAVE BEHIND

Through a collaboration between Smithsonian Environmental Research Center (SERC) and UMCES, *eDNA* is being applied in the hunt for two important prey species in Chesapeake rivers: alewife and blueback herring. HPL's Louis Plough is one of two scientists who collected nearly 500 water samples from 196 sites throughout the Chesapeake Bay watershed. Using eDNA, they tested for the presence of alewife and blueback herring in each sample and were able to get a picture of their habitat use over a very large area, a feat that could not realistically be accomplished with traditional sampling methods. "With *eDNA*, we recovered some expected patterns," says Plough. "For example, that alewife spawn earlier in the season than blueback. We also found some previously unseen patterns, such as a greater proportion of blueback herring *eDNA* detections on the Western Shore." **MORE**

HPL Graduate Student Anna Windle shares a recent blog post with the Horn Point community.

A DAY IN THE LIFE OF A SELF-ISOLATING PH.D. STUDENT

It's an interesting time to be alive right now. We'll remember this period for the rest of our lives and will tell our grandchildren about how all schools, colleges, most businesses, and companies had to shut down and people were told to stay home all day and work remotely, if possible. The COVID-19 pandemic is affecting all Americans in some way or another. I thought I'd write a blog about how I'm attempting to be as productive as possible, and pass on some tips for others who are finding themselves lost, unmotivated, or anxious. **MORE**

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With ongoing research programs spanning from the estuarine waters of the Chesapeake Bay to the open waters of the world's oceans, Horn Point Laboratory is a national leader in applying environmental research and discovery to solve society's most pressing environmental problems.
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