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

SEPTEMBER 2021

Research Highlights: Resilience, Innovation and Discovery

Freshwater Mussels Unsung Heroes At Risk In Chesapeake Bay Watershed

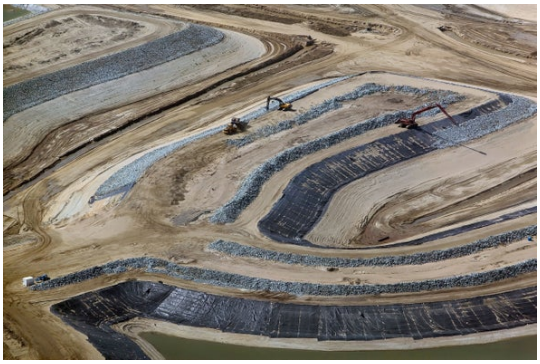
Jeff Cornwell and **Matt Gray**, HPL Faculty, sat on the Scientific and Technical Advisory Committee of the EPA's Chesapeake Bay Program offering a final report that freshwater mussels play an amazing yet little-known role in healthy rivers and streams in the Chesapeake Bay watershed. As their numbers dramatically decline we must now focus on restoring mussel populations. The report lays the groundwork for expanding mussel restoration in the Chesapeake Bay watershed with a growing coalition of advocates and scientists across the region. **MORE**

Harmful Algal Blooms, How can we predict and reduce these ecologically and economically harmful events?

Every drop of water is full of algae. Most of them are the beneficial variety. We need those algae because they are the base of the food web for all marine life. Unfortunately, a small fraction of that algal community can be harmful. The question that scientists, who are studying the increasingly problematic topic of harmful algal blooms (HAB's), are asking now is: How and why can one species become dominant in that small drop of water? Ecologist **Pat Glibert** has researched these diverse microorganisms at the University of Maryland Center for Environmental Science's Horn Point Laboratory since 1986. Her work has taken her across

the globe to study and aid in the prevention, management, and understanding of harmful algal blooms, a dangerous environmental phenomenon that is on the rise. Dive into a drop of water with Professor Glibert.
MORE

Walling Off One Coastal Area Can Flood Another



Seawalls and levees may simply shift rising water elsewhere—often into disadvantaged communities. The partially enclosed nature of estuaries and bays means floodwaters have limited room to spread when they hit a barrier.
“If you protect an open part of the coast, water can go lots of places,” says **Ming Li**, a physical oceanographer at the University of Maryland Center for Environmental Science, Horn Point Laboratory on Chesapeake Bay, the largest estuary in the U.S. “But estuaries are enclosed, with one connection to the ocean. If you protect part of an estuary with a seawall, water has to go somewhere else in the estuary."
MORE

FACULTY, STUDENT and STAFF

Advancing Agricultural Practices Through Collaboration

Dr. Matthew Houser joins the University of Maryland Center for Environmental Science, Horn Point Laboratory as its first Regenerative Agriculture Fellow. This is a new partnership between The Nature Conservancy (TNC) and the University of Maryland Center for Environmental Science, Horn Point Lab to build and execute collaborative projects that will advance their collective goals in regenerative agriculture and sustainable agricultural landscapes in the Chesapeake Bay.
MORE

Julianna Brush Recipient of the Board of Regents Staff Award

Julianna Brush, Contract and Grant Specialist at the University of Maryland Center for Environmental Science’s Horn Point Laboratory, has received the 2021 University System of Maryland (USM) Regents’ Staff Award for Exceptional Contribution to the Institution.
“Juli has provided essential support to our

faculty by helping them submit complex research proposals to address important environmental problems," said Michael Roman, director of the Horn Point Laboratory.
MORE

Bay Ecosystems: The Life and Biological Times of Dr. Thomas C. Malone

In a Spy Interview HPL Professor Emeritus Tom Malone reflects on his career and shares his reasons for optimism looking ahead.
MORE

INTERNS: near and far

Summer Internships: Developing the Next Generation of Environmental Scientists

Chesapeake Bay's oyster population was supported by a terrific group of summer interns on HPL's campus. The Hatchery and SAIL lab provided win-win experiences for

interns and these facilities.
Front row: Heather Delaplaine, Laura Dennison
Back row: (SAIL Interns)Rose Duane, Kailey Ramsing, (Hatchery Interns)Emma Weiser, Claire Spears, Jacqueline Harriot, Eli Gartner, Katherine Philipp, Cameron Okie

Ratcliffe Summer Intern Program to Promote Diversity in Geoscience

Thanks to the **Ratcliffe Foundation** for their vision and commitment to marine science and elevating diversity within the field, the Shellfish Aquaculture Innovation Laboratory (SAIL) hosted 2 summer interns and 2 more for fall. In this photo, the team is gearing up for their first temperature spawn of this season. Left to right; intern- Kailey Ramsing, Internship coordinator and HPL student, **Imani Black**, intern-Rose Dulane, SAIL manager-Alyssa O'prey and HPL student, Alan Williams.

Summer Intern Davonte Douglas Connects Environmental Science and Social Justice

Davonte Douglas interned this summer working at the Horn Point Laboratory with **Dr. Matt Gray**. Entering his Junior year at Howard University, Douglas is an Environmental Science major with a keen interest in the intersection between environmental science and social justice. Over the summer, Douglas helped Gray construct 'living breakwaters, which consist of special cinder blocks (seen in the tank) that are set with oysters and deployed to provide shoreline protection and marine habitat. A resident of the Eastern Shore, Douglas' home is just upriver from HPL in Preston, Maryland.
MORE

Maryland - Puerto Rican Partnership Elevates Undergraduates' Scientific Experience

Jamie Pierson (HPL) and **Lora Harris** (UMCES,Chesapeake Biological Laboratory) joined their colleagues at Universidad Ana G. Mendez in Puerto Rico for a week-

long field workshop for undergraduates. The students met with environmental science experts in Puerto Rico, learned important field and laboratory techniques, and shared cultural music and dance experiences with their Maryland and Puerto Rican mentors. This was the initial workshop to develop an environmental monitoring program for Laguna Grande, a bioluminescent bay in Puerto Rico. The program is designed and run by the students with the academic mentors providing oversight.

EVENTS: Growing Engagement and Education

2021 Chesapeake Champions for the Environment Beverly and Richard Tilghman

Join Us and Raise Your Glass to Beverly and Richard!
Thursday, September 30
5 -7pm
Tidewater Inn - Gold Garden
Easton, MD
Tickets $100 - Sponsorships available
umces.edu/chesapeake-champion
100% of proceeds will support HPL student's, the next generation of environmental leaders!
MORE - **WHCP Pod Cast**

CBS Mornings Visits HPL Oyster Hatchery

Gorgeous sunrise, check! Planting vessel full of spat-on-shell destined for the Tred Avon River, check! Successful oyster spawn, check! CBS News crew on site to capture it all, check!
The **Oyster Recovery Partnership** and the **HPL Oyster Hatchery** had a blast shooting the CBS Mornings feature with **Skyler Henry**.
CLICK HERE TO SEE THE BROADCAST

LOCAL EVENTS SUPPORTING OUR MISSION

Chesapeake Film Festival – Premier of "Water's Way: Thinking Like a Watershed"

by local producers Sandy Cannon-Brown, Dave Harp and Tom Horton.
https://chesapeakefilmfestival.com/

MD SeaGrant Webinar Series

Coastal Flooding and Climate Change Webinar Series

Thursdays 12:00-1:00 pm on Zoom

Climate Change Trends in Your Community, Sept. 9 12-1 pm
Learn about climate change trends in Maryland and online tools for finding climate change information about your city or county. We will focus on observed and expected changes in temperature and precipitation and share easy-to-use resources for local climate data.
Registration: https://go.umd.edu/climatechangetrends

Coastal Flooding Causes and Consequences, Sept. 16 12-1 pm
Learn about sources of coastal flooding, including storms, rain, and sea level rise. We will also share available tools for understanding your local flood risk today and in the future.
Registration: https://go.umd.edu/coastalflooding

Living with the Water: Strategies for Reducing Flood Impacts, Sept. 23 12-1 pm
Learn about strategies for reducing flood impacts at home and in your community. We will discuss actions you can take to protect your property, prepare your household, and make your community more resilient.
Registration: https://go.umd.edu/livingwithwater

For more information, or if you need a reasonable accommodation to participate, please contact Kate McClure (mcclure@umd.edu, 443-446-4263).

Science Serves Everyone! Support HPL Today!

Located in Cambridge, MD, Horn Point Laboratory is part of the University of Maryland Center for Environmental Science -- a fully-accredited graduate school and research facility conducting environmental research on a variety of ecosystems spanning from the estuarine waters of the Chesapeake Bay to the open waters of the world's oceans. Horn Point is a national leader in applying environmental research and discovery to solve society's most pressing environmental problems.

VISIT OUR WEBSITE

UMCES/HPL remains closed to the public until further notice. We look forward to sharing time with you on campus as soon as it is safe and possible. Until then, please stay safe and follow us on facebook

University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE
HORN POINT LABORATORY