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Research barge will test ballast water treatment

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BALTIMORE - There's a big problem with shipping that's often not visible to the naked eye.

Pamela Wood — The CapitalThe Maritime Environmental Research Center, a partnership between the University of Maryland and the Maryland Port Administration, will use this barge to test ways to treat ballast water to kill or remove invasive species. Ballast water is a key way that invasive species travel around the globe.

When giant cargo ships criss-cross the world's oceans, they fill up ballast tanks with water to stay stabilized. That water can be discharged many continents away - and with it, tiny invasive critters.

Now a government and academic partnership is trying to advance scientific knowledge of invasive species in ballast water.

Last week, officials unveiled a research barge in Baltimore that will be used to test technologies for removing marine invaders from ballast water.

"The issue of ballast water treatment is a global issue," said Don Boesch, president of the University of Maryland Center for Environmental Science.

The barge was once used to transport oil and has been refitted to two hold ballast water tanks on the deck, each able to carry 300 cubic meters of water.

Also on the deck are an array of color-coded pipes, pumps and labs for experiments.

The barge, which doesn't have a name other than "mobile test platform," is 155 feet long and 50 feet wide.

The barge's equipment is being tested and verified. Experiments aboard the barge should start in the spring.

Money for the $2.5 million project came from the Maryland Port Administration and the U.S. Maritime Administration.

U.S. Rep. Elijah Cummings, D-Baltimore, has taken a keen interest in both shipping and environmental issues. He helped bring together the university, the port and the feds on this project.

At the dedication, Cummings noted that while shipping drives the economy - 95 percent of imports come into America via ocean-going ships - it can have downsides, such as ballast water that carries invasive species.

Cummings said that's "a significant threat" to American waterways.

Marine invaders that likely hitchhiked to America aboard ships include zebra mussels, rapa whelks and possibly mitten crabs.

And America has sent some of our critters overseas, including comb jellies that have caused problems in the Baltic Sea.

What makes the barge unique is that it can be moved up and down the Chesapeake Bay to test ballast treatment techniques that kill or remove invaders under different conditions.

For example, Norfolk at the mouth of the bay has much saltier water than Annapolis or Baltimore - thus, treatment techniques may need to be adjusted.

Previous research efforts have been stationary. The University of Maryland also runs tests on the M/V Cape Washington, a 700-foot freighter docked in Baltimore that's on loan from the federal government.

But it's prohibitively expensive to gear up the Cape Washington to move around for testing, said Mario Tamburri, who heads ballast water research for the University of Maryland's Maritime Environmental Resource Center.

The testing barge, in comparison is relatively nimble. It draws 2 feet of water when empty and just 5 feet when the ballast tanks are full.

Tamburri envisions taking the barge south into Virginia and well into freshwater sections of the Anacostia River in Washington, D.C.

"We can move her anywhere on the Chesapeake Bay," Tamburri said.

When the barge isn't out doing tests, it will be based in South Baltimore alongside the Cape Washington.

Tamburri said the effort to treat ballast water isn't just good for the environment, but it's good for business, too. The ballast treatment techniques being tested by his group are generally developed by private companies.

"What we're really trying to do is help the environment by stopping the spread of invasive species, but also helping new innovations," he said.

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