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Chesapeake states look to grass beds to help blue crabs

By KRISTEN WYATT, Associated Press Writer

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CRISFIELD, Md. - Quick ecology quiz: What does a hulking scraper dragging grass strands out of a river near the Chesapeake Bay have to do with reviving blue crabs?

It could mean the difference between a restored population of the bay's hallmark seafood and the decline of the region's bestloved critter.

Maryland and Virginia fishery managers are dragging the bottoms of the Chesapeake and Atlantic coastal bays in search of seeds from eelgrass, a type of underwater vegetation crucial to blue crabs. The submerged grass is in serious trouble from water pollution and warmer, saltier water creeping up the Chesapeake Bay due to the rising sea level.

"It's a very long day and it wears on you, but it's a good deed," says Warren Teets, a tugboat operator hired by the Maryland Department of Natural Resources. Teets runs a "subaquatic harvester," a 30-foot-long blue



Kristen Wyatt - Associated Press

Warren Teets, a tugboat operator, hired by the Maryland Department of Natural Resources, uses an underwater harvester to collect eelgrass clippings from the Little Annemessex River in Crisfield, Md., on May 28. The boat operates like an underwater lawn mower and takes off about a foot from eelgrass plants while leaving the roots intact.









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boat that works like an

underwater lawn mower, sawing off the top 12 inches or so of eelgrasses and bringing them up with a conveyer.

Teets has spent nine-hour days this spring "mowing" the Little Annemessex River in Crisfield to harvest eelgrass seeds, which Maryland biologists will separate and replant.

Virginia pioneered eelgrass harvesting more than 20 years ago. Virginia gathers seeds by hand, a process Maryland officials deemed too labor intensive because eelgrass in the Maryland portion of the Chesapeake grows in deeper water than in the coastal bays Virginia works.

The goal in both states is the same: to revive a grass biologists say may be pivotal to blue crab restoration.

Juvenile crabs hide out in eelgrass beds in the southern portion of the Chesapeake, feasting on tiny insects and plant matter to grow big enough to travel further up the bay. The crabs seem to rely heavily on the grass cover. Virginia studies have shown that grass-covered beds contain about 30 times more juvenile crabs than water floors with no grass.

But pollution and higher temperatures in the Chesapeake have taken a toll on eelgrass. Aerial surveys indicate that eelgrass coverage in the southern Chesapeake is about half what it was in the early 1990s. And when the eelgrass goes, so do baby crabs.

Without thick eelgrass beds, juvenile crabs either venture north without cover or run to tributaries, where they're more likely to be gobbled by predator fish such as striped bass.

An eelgrass bed "provides a refuge and sort of a mini buffet," explains Lee Karrh, a Maryland DNR biologist who heads up Maryland's eelgrass harvest.

With surveys showing the Chesapeake blue crab population nearing possibly irreversible lows, biologists are looking to eelgrass to reverse the trend. Maryland started using a subaquatic harvester a few years ago, collecting more than 100 mesh laundry bags full of clippings daily for about a week in late spring, the only time of year seeds are present on eelgrass blades.

From Crisfield, the grass clippings are taken across the bay to a state DNR lab in Piney Point. There, the clippings go in 30-by-30-foot water tanks, where scientists wait for the grasses to break down and the seeds to drop to the bottom.

After collecting the seeds, Karrh's crew either tosses them by hand from boats, or puts them in mesh bags tied to buoys, allowing waves and currents to release the seeds to germinate.

The project has had mixed results. Efforts to plant eelgrass in the Patapsco River, near Baltimore, failed completely, Karrh says. But where seeds were placed in the Potomac River, a small eelgrass community has returned.

"There is now an eelgrass population in the Potomac for the first time in decades, probably since the '60s or '70s," Karrh said. But he conceded that the human efforts to spread eelgrass are having little impact so far.

"The 30 acres we put in the Potomac is a blip, but the hope is that once the population is established, it will expand," he said.



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Scientists are experimenting with trying similar cultivation with other underwater grasses. Although eelgrass is of particular interest for blue crab revival, many other species of submerged vegetation live in the Chesapeake and its tributaries. They provide habitat, food for waterfowl and protection from storms while filtering pollutants washing into the Chesapeake from a watershed spanning parts of six states and nearly 14,700 square miles.

Scientists are experimenting to see if seed harvesting could be used on a large scale with other grasses, said Bob Orth, a professor with the Virginia Institute of Marine Science who developed the eelgrass harvesting technique in the 1980s.

But Orth said that even with two decades of experience in eelgrass seed harvesting, scientists see only limited advances in coverage of the slow-growing grass. Just when eelgrass beds start to take hold, declining water quality and higher salinity seem to finish them off, he said. Virginia has abandoned eelgrass planting in the Chesapeake.

"It's not going to be easy with eelgrass," Orth said, pointing out that Virginia has found much more success planting eelgrass in the shallow bays between its mainland and its barrier islands along the Atlantic Ocean.

In Maryland, where a handful of DNR biologists are joined by high school students and conservation workers in harvesting the grasses in spring, Karrh says he's not deterred by slow progress.

"It's up," he said when asked whether five years' worth of eelgrass harvesting and planting in Maryland have boosted the species. "It's slow but steady, and a lot of that has to do with how eelgrass grows. It's a slow-growing plant. But it's up."

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On the Net:
Maryland DNR: http://www.dnr.state.md.us
Chesapeake Bay Program: http://www.chesapeakebay.net
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