

River herring making a comeback in Patapsco River

Presence of wild fish raises hope for full-scale stocking program.

- [Karl Blankenship](#) December 03, 2013



Steve Minkinnen, head of the USF&WS Maryland Fishery Resource Office holds a hickory shad caught during the survey. (U.S. Fish & Wildlife Service)

Given the traffic roaring by along Interstate 895 as a backdrop and century-long reputation as a dumping ground, the Patapsco River, where it runs beside Baltimore's South West Area Park, hardly seems a likely haven for rare fish.

Yet the river this year became the only place around the Bay to stock river herring.

River herring — alewife and blueback herring — were once among the most abundant species in the Chesapeake, but their populations are so low all along the East Coast that they were recently considered for listing under the federal Endangered Species Act.

Stocking river herring is a unique part of the Patapsco project, which also stocks American and hickory shad. Shad — which are a popular sport species — are stocked in several tributaries around the Bay, while there have only been a couple of experimental efforts to rear and release river herring in recent decades.

“We haven't done a full-scale herring project, so this is all kind of new for us,” said Brian Richardson, who oversees hatchery operations for the Maryland Department of Natural Resources.

The stocking takes place in the portion of the river upstream from Baltimore Harbor and is funded with mitigation money from the Masonville Dredged Material Containment Facility constructed to hold material dredged by the Maryland Port Administration.

The port's mitigation efforts have also supported numerous other projects in the area, including the restoration of wetlands and other areas around nearby Masonville Cove, which was recently designated as the nation's first urban National Wildlife Refuge.



Those projects are helping to bring back the highly urbanized river, which has suffered from pollution, development, sewage discharges and outright dumping. Even refuse from the massive 1904 Baltimore fire was dumped nearby.

“When I grew up, it smelled like an open sewer,” said John Gill, a fisheries biologist with the U.S. Fish and Wildlife

Service Maryland Fishery Resource Office, who was raised near the river in Ellicott City, a few miles upstream. “It was an open sewer. You didn’t swim in it.”

Some problems, such as wastewater discharges, have been cleaned up. “The river is a lot better than it used to be,” Gill said.

Still, it is far from pristine. Biologists were reminded of the river’s degraded legacy as they towed nets in the water. Sometimes they passed under trash dangling in trees overhead — debris left by the flood of stormwater flushed off streets and parking lots after heavy rains. And the water is often murky with silt.

Nonetheless, the actual biology in the stream tells of a river that has managed to hang onto some of the key components of its ecosystem. In surveys this spring, biologists caught 158 adult shad and river herring.

“It’s much more productive than we assumed,” Gill said. “It’s not dead.”

Shad and herring are anadromous fish, which live most of their lives in the ocean but return to their native river to spawn. Finding adult shad and herring suggests the Patapsco, despite decades of insults, has managed to hang onto small breeding populations of the fish.

“Our results so far are surprising to me,” said Steve Minkinen, who heads the USF&WS Maryland Fishery Resource Office. “The fact there are adults here means there is still reproduction and survival going on, which is cool.”

This year, about 1.8 million hatchery-reared shad and herring larvae and juvenile fish were stocked in the river. Surveys later in the year found scores of juvenile fish, both from the hatchery and fish produced from the “wild” population already in the river, showing the Patapsco also supports young fish, which are often more sensitive to environmental conditions than adults.

Biologists are hoping that the stocking effort will jump-start the spawning population. Juvenile herring and hickory shad stocked this year could start returning to spawn in about three years, while American shad could start coming back in five.

“If our experience is similar to other tributaries,” said the DNR’s Richardson, “we are able to create juvenile populations, and they can result in returning adults. Certainly, catching hatchery-origin juveniles is a good first start, but of course it is way early in this process.”

The mitigation funding is supporting three years of stocking by the DNR, upgrades to its hatcheries and five years of monitoring by the USF&WS.

Herring, in particular, may also benefit from the planned removal of Bloede Dam a few miles upstream in Catonsville. The funding for the project was recently announced by the USF&WS. Two other upstream dams, Simpkins and Union, were removed in 2010, and when Bloede comes out, most of the river will be open to migrating fish.

“The river herring use much smaller streams and go farther upstream,” Minkinen said.

Once among the most abundant fish in the Bay, shad and river herring populations are at record lows along the East Coast. The decline of river herring in particular has sparked growing worries because of their importance as food for larger predators.

But if the little fish make a comeback in the Patapsco, their success will provide hope not only for a long-beleaguered river, but also that similar stocking efforts might help restore populations of river herring in other places.

“If you can stock them here, in a small, urban watershed and show success,” Minkinen said, “it might lead to the opportunity to stock them somewhere else as well.”