



# Chessie

by Rob Criswell photos by the author

In 1842, S. S. Haldeman described a tiger-striped darter of the genus *Percina* from the Susquehanna River at Columbia, Lancaster County. It has not been seen that far upriver since that time. A few years later, this same fish was collected from the Potomac River in Washington, D.C.

Haldeman's find, which eventually became known as the Chesapeake Logperch (*Percina bimaculata*), was then all but forgotten, having been lumped together with the common and widespread generically named Logperch (*P. caprodes*) that inhabits the Ohio River and Lake Erie drainages, and other river systems to our north and west. Recently, however, genetic studies determined that those Potomac River and Susquehanna River logperch populations are in fact a distinct species, as Haldeman had indicated, and are more closely related to southern logperch species than the one with which it was lumped.

Although relatively little is known about the Chesapeake Logperch, its habits and biology are likely similar to those of its close relatives. Logperch possess a pointed snout that has been described as "pig-like" in at least one species. This adaptation is useful for moving material on the bottom and flipping stones to expose menu items while hunting. Those hapless victims consist mainly of insect larva and other aquatic odds and ends.

Like most other darters, the gas or swim bladder of logperch is poorly developed, relegating them to a life on the bottom, where they sit propped up on fins much as a

kid watches television from the floor. They move about in short bursts, hence the name "darter." The more specific term "logperch" describes their frequent habit of hiding in woody debris or rocky cover during daylight hours.

Logperch occupy a variety of habitats including lakes, sluggish pools and runs. They spawn in swift and turbulent water—riffles in streams and wave-washed shallows in lakes. The Chesapeake Logperch is an occupant of larger creeks and rivers. However, it also utilizes the lowermost sections of smaller tributaries to these waterways as far as ¼ mile or so upstream. The primary waterway is generally at least 50 feet in average width.

Chessies are handsome fish. They grow to a little more than 4 inches long with irregular, bold, black vertical bands painted over a yellow background. The background may be subdued or more intense depending on the time of year and the light intensity in its environs. A distinct black spot at the base of the tail on each side of the body may account for its scientific species name (*bimaculata*), meaning two spots. The genus name (*Percina*) means "little perch."

Although spawning observations have not been reported, this species probably breeds in May and June in a fashion similar to other logperch. They often spawn in groups, with several males vying for the affections of the female. Approximately, 100 to 3,000 eggs are produced and buried during mating activities. Those ova that aren't completely covered are eaten.

Chessies are endemic to (only occur in) the Chesapeake Bay watershed, specifically the Susquehanna River in Pennsylvania. Today, they occupy a very small area of Pennsylvania and Maryland. They are quite susceptible to habitat alterations, and pollution and sedimentation have taken a heavy toll. Although they were reported to be common at locations in Washington, D.C. and nearby in Maryland and Virginia, the degradation brought on by development and industrialization wiped them out in the Potomac River by 1940.

They have fared a bit better in the Susquehanna River but no longer occur above the river pool created by Conowingo Dam in Maryland. Their long-term viability is in question. Water quality in the lower Susquehanna River has been affected by historic mining activity, industrial pollution, wastewater and urban and agricultural runoff. The results have been high levels of siltation, nutrients and chemicals in the river with periods of low oxygen levels.

This logperch also survives in Octoraro Creek, a direct tributary to the Chesapeake Bay, but there are problems there as well. High nitrate levels remained steady during the period of 1995 to 2004 despite a concerted effort to implement best management practices in the Octoraro watershed. In addition, elevated levels of Polychlorinated biphenyls (PCBs) and the pesticide Chlordane have been documented in Octoraro's East Branch.

One of the more dangerous threats to the future well-being of the Chessie is an onslaught of alien invaders. Banded and Greenside darters, smaller relatives of the logperch that are native to the Ohio and Lake Erie drainages, appeared up in the Susquehanna River in the 1960s, and later in Octoraro Creek, and are now common throughout the drainages. It is unknown how these non-natives have impacted the logperch, but studies conducted in 2000 through 2001 documented negative effects on other native darters in other areas of the basin.

Equally disconcerting as the arrival of these small aliens is the introduction of a giant—the Flathead Catfish. This huge bottom-feeding machine may grow as large as 100 pounds, and 30 to 40 pounders are now common in the Susquehanna River. What affect these behemoths are having on native species is not yet well understood. And, as if that isn't enough, Zebra Mussels have been recently found in the Conowingo Dam vicinity.

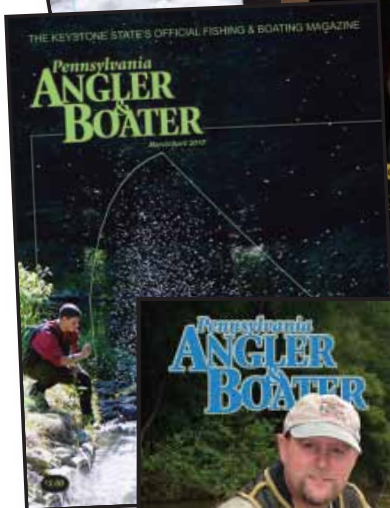
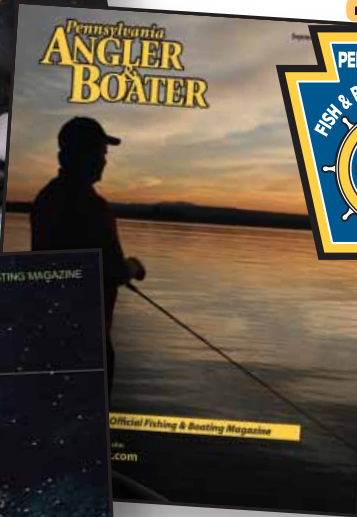
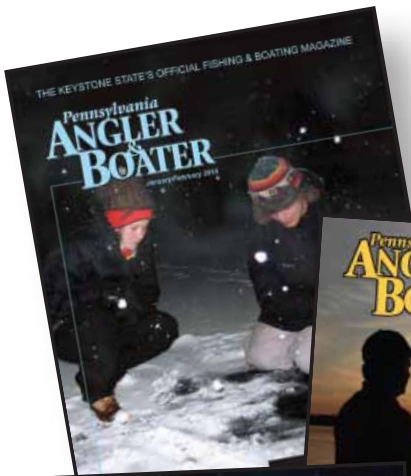
Based on its reduced range and these threats, Maryland listed the Chesapeake Logperch as threatened. In early 2012, the Pennsylvania Fish & Boat Commission followed suit, also listing it as threatened. Given its global rarity, this darter may be a candidate for listing under the federal Endangered Species Act.

If the Chessie is to survive, it will take a concerted commitment to continue to work toward improved water quality throughout the Chesapeake Bay watershed. The logperch lives in its lowermost reaches, and it all runs downhill. □



*The Chesapeake Logperch is a threatened species in Pennsylvania.*





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