

LONGHEAD DARTER REDISCOVERY IN OHIO



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The Longhead Darter *Percina macrocephala* has long been considered extirpated from the state of Ohio. The only historical records for the species in Ohio are from the Walhonding River. They were captured twice in 1939 by Milton B. Trautman of The Ohio State University (OSU). He captured a total of seven individuals at two locations about one mile apart above and below the former location of Six Mile Dam (removed in 2020). These fish are preserved in The Ohio State University Museum of Biological Diversity: OSUM 14 is two individuals caught just below Six Mile Dam on 30th of Sept 1939, and OSUM 977 is five individuals caught from one mile above the dam on 20th of October 1939. Since that date, many people (myself included) have unsuccessfully tried to find this species in the Walhonding River and in other parts of the upper Muskingum River basin.

In 2018 The Ohio State University Stream and River Ecology Lab (STRIVE) began an effort to restore this species to the upper Muskingum River basin by way of translocation. This project is funded by a state wildlife grant from the Ohio Division of Wildlife. Our plan was to capture 1,200 individuals each year for five years from the Allegheny River in Pennsylvania and transfer them to six sites in the upper Muskingum River basin around the historical occurrences from 1939. To date (December 2021), we have captured, tagged with visible implant elastomer, and released, 4,687 Longhead Darter across these six sites. We have done

annual surveys in October for three years that have resulted in 24 recaptures of tagged Longhead Darter and two untagged natural recruits thus far.

While working on this project jointly with Pennsylvania Fish and Boat Commission non-game fish biologist Douglas Fischer, I have discussed the possibility of Longhead Darter returning on its own to Ohio in the mainstem Ohio River or its direct tributaries along the eastern edge of Ohio. There are no historical records for Longhead Darter for the upper Ohio River; however, many species thought to be sensitive to water quality have expanded into this area over the past 15–20 years. Many of these species were first documented by my statewide distribution inventory project that ran from 2011–2018. Some of the species that have naturally expanded into this area include Bluebreast Darter *Etheostoma camurum*, Tippecanoe Darter *E. tippecanoe*, Gilt Darter *Percina evides*, Streamline Chub *Erimystax dissimilis*, and Bigeye Chub *Hybopsis amblops*. Additionally, the Spotted Darter *E. maculatum* has been captured a few miles upstream of the Ohio border in Pennsylvania in the mainstem Ohio River. All of these other species have experienced an incredible recovery throughout the Allegheny River and are now found throughout the entire river from Kinzua Dam down to Pittsburg, Pennsylvania and down into the upper Ohio River mainstem. Doug and I have discussed several times that Longheads, although found down to Pittsburg, had not yet been found down in the mainstem Ohio, but we both had our suspicions they should be present.

Our translocation effort went very smoothly in 2021, thus freeing up my schedule and allowing for a day or two of sampling on the upper Ohio River mainstem to look for Longhead Darter. Meanwhile, the Ohio Division of Wildlife was out on the Ohio River below the New Cumberland Dam for their annual black bass and temperate bass survey on 20th of October 2021, and they beat me to it when they captured a Longhead Darter along the Ohio shoreline (Figure 1). Cameron McCune sent me a photo of the fish for identification with no details of where it was captured. I guessed where they captured it before he even told me because of my familiarity with where and when the Ohio Division of Wildlife does their sampling. I asked them to keep the fish for the OSU Museum Collection, but he replied that they had already released it. As fate would have it, he called me back a couple hours later when they had completed their sampling and were loading up the boat: the Longhead had fallen through a hole in the net when they went to release it, and they found it laying on the deck of the boat. It is now cataloged in the

Brian Zimmerman has been interested in North American Native Fishes for almost his whole life. His father has photos of him playing in a stream at 2 years old. His clever parents interested him in reading by giving him fish books; he had no interest in other topics. In middle school he knew he wanted a career working with fish. In high school he focused on natives, breeding them in aquariums. He dug a quarter-acre wetland in his yard to breed Grass Pickerel *Esox americanus vermiculatus*. He attended Heidelberg University in Tiffin, Ohio, double majoring in water resources and environmental biology. Before graduating he started Zimmerman's Fish, selling natives to fish enthusiasts. He continued his education at Bowling Green State University in Bowling Green, Ohio, receiving a Masters in Aquatic Ecology. His thesis research on Redside Dace *Clinostomus elongatus* was partially funded with a NANFA conservation grant. He has worked for The Ohio State University since 2007 spanning 4 different positions. He has been in his current position with STRIVE lab since 2015 focusing on reintroductions of rare and endangered Ohio fish species.



Figure 1. Repatriated Longhead Darter captured in late October 2021 from two Ohio River localities: left, from below the New Cumberland Dam in Ohio (photo by Cameron McCune); right, from below the Montgomery Dam in Pennsylvania (photo by Curt Wagner).

OSU Museum as OSUM 121115. A week later, on another sport-fish survey conducted jointly between Ohio Division of Wildlife and Pennsylvania Fish and Boat Commission, they captured a second Longhead Darter below the Montgomery Dam on the Ohio River in Pennsylvania 8.3 miles upstream of the Ohio state line (Figure 1).

Despite these guys stealing my thunder and beating me to my predicted find, I still went out on the 9th of November 2021 to look for additional Longhead Darter. Using both boat electro-fishing and benthic trawls, I sampled a few miles downstream of the New Cumberland Dam in several areas near Browns Island, but I was unable to repeat their finds. I do plan to make another effort next year (2022) to see if more individuals can be found in the upper Ohio River. Hopefully, the population continues to expand there in the future and, due to our reintroduction efforts, in the upper Muskingum River basin as well. The future of the species in Ohio looks bright.

(Topminnow Diversity in North Carolina, continued from page 26)

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