

# BLUEBREAST DARTER REMOVED FROM OHIO'S LIST OF ENDANGERED AND THREATENED FISHES



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The range expansion of the Bluebreast Darter (*Etheostoma camurum*) and several other rare or protected species of fish in Ohio's waters is likely the result of dramatically improved water quality since the beginning of the Clean Water Act of 1972, which began to regulate point source pollution including industries and municipal water treatment facilities. The Ohio EPA began to use fish populations to monitor water quality in the late 1970s, leading to a robust program that is still monitoring water quality in Ohio surface waters today. Other factors have also contributed to this and other species' range expansions. Better conservation of flood plains and riparian corridors and improvements in agricultural practices to reduce the amount of soil being washed from fields into streams and rivers have undoubtedly played a role. This shows that we, as a society, have good reason to continue to improve how we care for our waterways and other parts of our environment so more species can enjoy such a dramatic recovery as the Ohio population of Bluebreast Darter.

Between 1900 and 1980 (Map 1), the Bluebreast Darter was known to occur in several streams in the Scioto River drainage and limited portions of the Muskingum drainage. There are also three pre-1900 (Map 1) records of this species occurring in the Great Miami, Licking, and Mahoning River drainages. Many of the known populations were rather small as of 1980, and only a few individuals could be found at any given location.

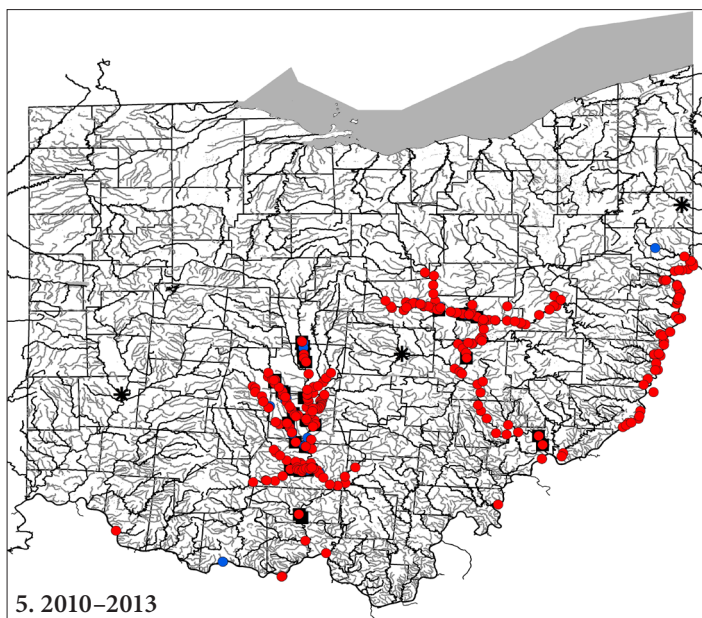
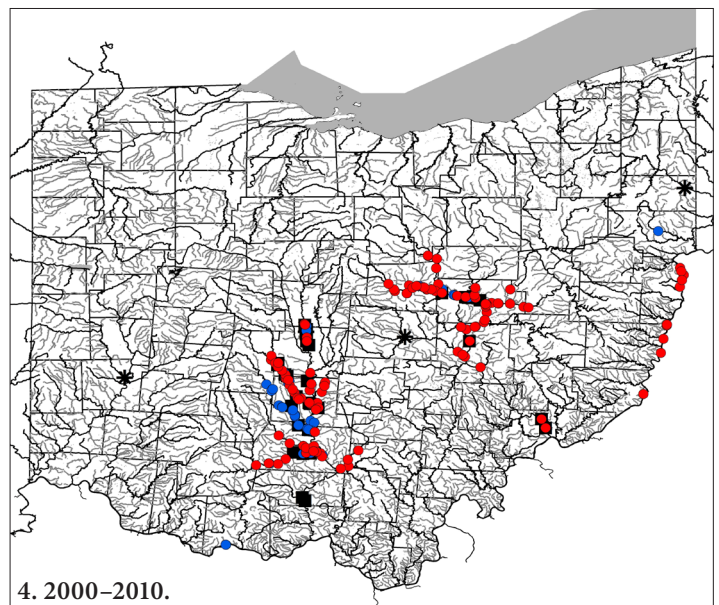
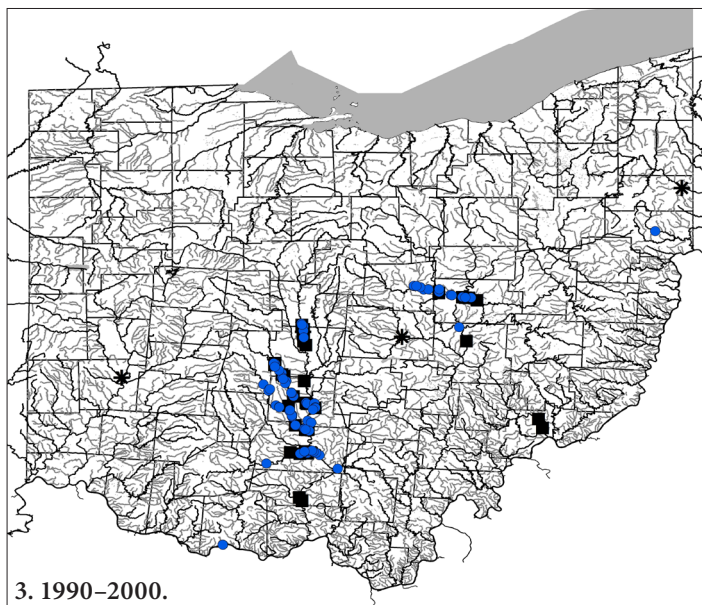
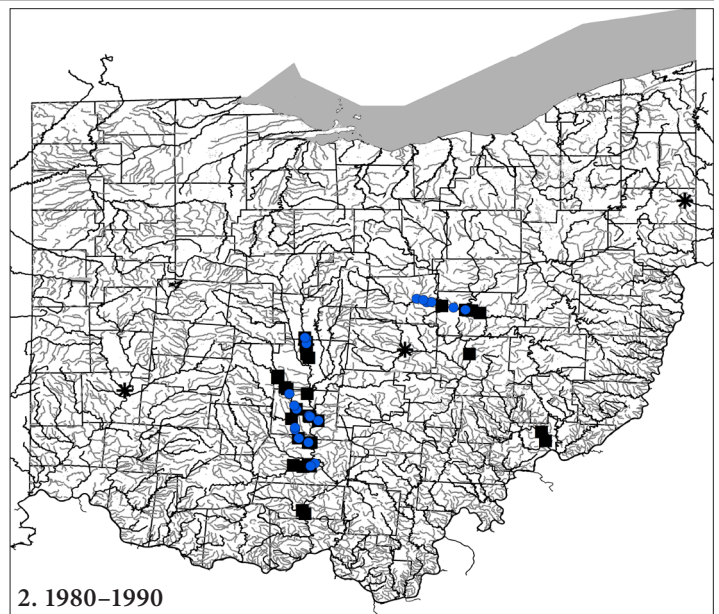
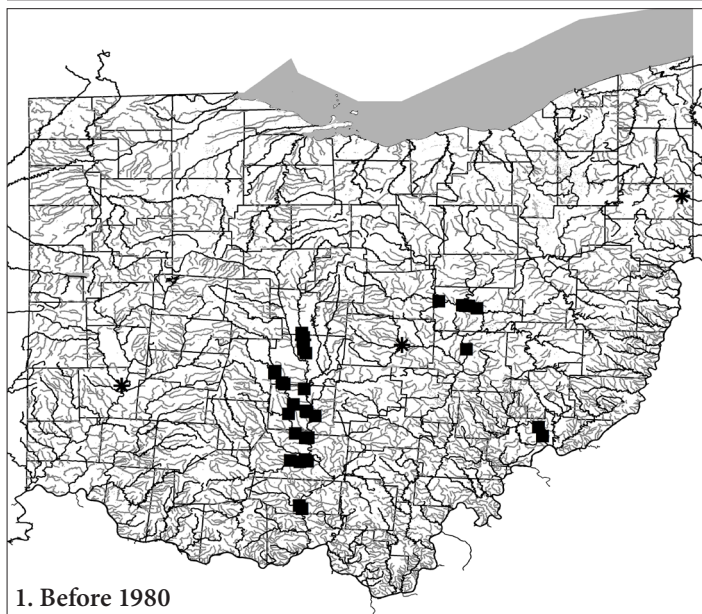
By 1990 (Map 2), some expansion of the Bluebreast Darter's distribution could be seen. In the Scioto River drainage the species has become more abundant

and widespread in Big Darby and Deer Creeks. It has expanded slightly in the Muskingum drainage, becoming more abundant in the Walhonding River, and has been found further upstream in the lower Kokosing River, one of two rivers that form the Walhonding River.

By the year 2000 (Map 3), the Bluebreast Darter's expansion was even more apparent, as they were found in a good portion of the main-stem Scioto River and several of its tributaries. The species was found in one location in the main-stem Muskingum River and one in the Ohio River proper, and in 1998 was found for the first time in Little Beaver Creek, a direct tributary to the upper Ohio River on the eastern side of the state.

By 2010 (Map 4), the species had dramatically increased its known distribution in Ohio. It was now found in almost every major tributary to the Scioto River from Columbus downstream to the Ohio River, including a significant portion of the main-stem of the Scioto. In the Muskingum drainage a similar expansion had occurred and it could now be found by the hundreds at some locations, including sites on the upper main-stem of this system. Most impressive is its expansion along the eastern border of Ohio, where it was first found by ORSANCO, which had contracted some benthic trawling in the upper Ohio River. Further, the Ohio EPA found the species in the lower end of several direct tributaries to the Ohio River in the same area. I found them to be abundant below the Pike Island Lock and Dam on the Ohio River in 2009.

The species has continued to expand even in the last four years, from 2010–2013 (Map 5), and I am sure new



\* = Before 1900      ■ = Between 1900 and 1980.  
 ● = 1980s and 1990s.      ● = 2000s and 2010s.

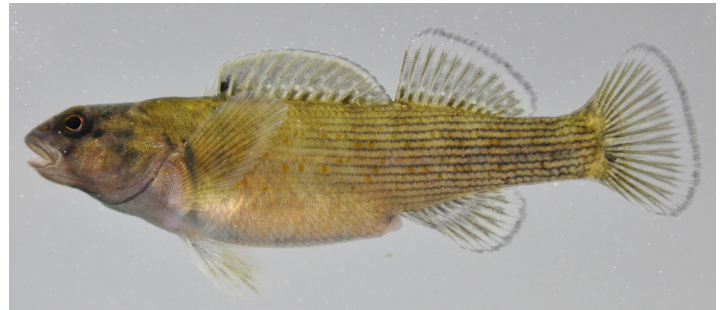
records will be added in 2014 as well. In 2011 I began a new project with the intent to build new distribution maps for every species of fish found in Ohio. The eventual goal is a new *Fishes of Ohio* book. The project is being funded by the Ohio Division of Wildlife through the Ohio State University (OSU). One of the main data gaps we discovered is a lack of up-to-date distribution data for large river benthic species including the Blue-breast Darter. In the past several years we have done a significant amount of field sampling in Ohio's large rivers, which has led to our current picture of the Blue-breast Darter's distribution. We have found it in the lower 2–5 miles of nearly every major tributary to the



Ohio River along the eastern side of the state. It is now present in some abundance 10 miles or more up Little Beaver Creek (the largest eastern Ohio tributary to the Ohio River). We have occasionally found specimens much further down the Ohio River proper, including one not far from the Cincinnati area. They are found in the tailwaters of every dam on the Muskingum River. Additionally, they have expanded to the east in the upper Muskingum basin well up the Tuscarawas River, one of the two rivers that form the Muskingum River. We will be sampling the lower Scioto River in the upcoming summer 2014 field season and expect to find them there as well. I anticipate that the map will show a rather continuous distribution in that system all the way downstream to the Ohio River, as it already does for its distribution in the Muskingum River.

In the second year of the Fishes of Ohio Inventory and Distribution project, the Ohio Division of Wildlife conducted a 5-year review of the status of fish species in the state. Based on our (myself and others working on the project at OSU) experience and the data we already had in hand at that time, we recommended that the Bluebreast Darter be removed from the state Endangered and Threatened list. The Division of Wildlife took our recommendation and the Bluebreast Darter was officially delisted as of July 1, 2012.

The Division of Wildlife lists 20 species of fish as endangered, 13 as threatened, and 9 as being of special concern. Hopefully some of these species will, with continued improvement of water quality in the state, expand their ranges to the point that protection is no longer warranted.



Bluebreast darter: male (left), Wakatomika Creek, OH; female (right), Big Darby Creek, OH. (Photos by Brian Zimmerman)