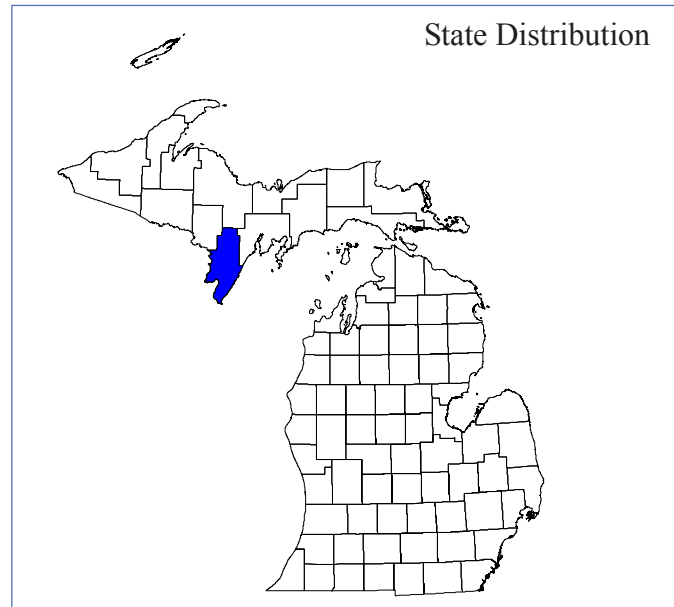
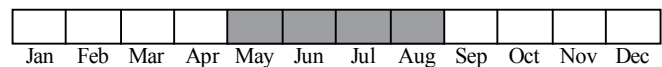




Photograph courtesy of Ohio Division of Natural Areas and Preserves



Best Survey Period



Status: State special concern

Global and state rank: G5/S1

Family: Percidae (Perch and Darters)

Total range: The banded darter has a wide range in North America. It is found in the Lake Michigan basin in Wisconsin and Michigan. In the Mississippi River basin, it is found from Minnesota south to northern Georgia, northern Alabama, and southern Arkansas, and from Kansas east to southwestern New York and Pennsylvania. In the Mississippi watershed, it is absent from the former Mississippi Embayment, the Wabash River drainage in Ohio, and streams in southern Illinois, southern Iowa and northern Missouri (Page and Burr 1991). In parts of its range (WV, OK, TN, WI, IN, KY, PA, AR), the banded darter is considered Secure or Apparently Secure (S5, S4). Throughout most of its range, however, the banded darter is Critically Imperiled (S1) (KS, MI, GA, SC), Imperiled (S2) (AL), or Vulnerable (S3) (IA, IL, NY, VA, NC). In a few states (MN, OH, MO), the banded darter remains unranked (S?) (NatureServe).

The banded darter has been introduced into several drainages, including the Savannah River in North and South Carolina, and the Susquehanna River in

Pennsylvania. The banded darter is also considered Exotic (SE) in Maryland (NatureServe).

State distribution: Historically, the banded darter was thought to exist only in the Wisconsin portion of the Lake Michigan basin. In 1979 and 1980, the banded darter was confirmed in the Little Cedar River in Menominee County (Erickson and Mahan 1982). This is the only known population in Michigan, and it has not been reconfirmed since.

Recognition: Darters are small, benthic (bottom-dwelling) fish with two dorsal fins who are often noted for their brilliant coloration. The banded darter is usually 1-½ to 2-½ inches long, although individuals have been reported over 3 inches long (Trautman 1981). It is generally yellow-green in color, with 9-13 large dark bars on the side that extend underneath to the other side. The first dorsal fin generally has dark spots at the base of the spines. A teardrop marking is common under the eye. Breeding males are more brightly colored than females and non-breeding males, with dark green side bands and a brick-red stripe on the first dorsal fin. The head and breast are bright green as well (Kuehne and Barbour 1983, Trautman 1981).

In Michigan, the banded darter would most be confused with the greenside darter (*Etheostoma blennioides*),



which has fewer than 9 dark side bars. It may also be confused with the johnny darter (*Etheostoma nigrum*) and channel darter (*Percina copelandi*), which tend to have more darkly colored bars.

Best survey time/phenology: The banded darter is best surveyed during the late spring, summer and early fall months during periods of low rainfall and concomitant low water and low turbidity. Like most darters, this species tends to be more active during the day, so midday surveys would be most effective.

Habitat: The banded darter prefers rocky riffles of creeks and small to medium rivers (Page and Burr 1991). During the breeding season, banded darters are most commonly found in shallow streams (<2 feet deep) with at least a medium gradient. Banded darters are commonly found in areas where the substrate (usually cobbles) is covered with algae (Trautman 1981). In Michigan, banded darters have been found over substrate that is primarily cobble 50% covered with the green algae *Cladophora* (Erickson and Mahan 1982).

Biology: In Michigan, the typical life span of the banded darter appears to be three years, although this is shorter than that reported for the species in other states. Growth is rapid, and fish usually attain over half of their final adult size by age one. Males typically grow faster and larger than females. The banded darter is sexually mature at two years of age. Banded darters deposit eggs onto filamentous algae and aquatic plants. Like all darters, fertilization is external, with the male mounting the female from behind and fertilizing the eggs as they are deposited. In Michigan, spawning appears to take



Photograph courtesy of Garold W. Sneegas

place in early July, between 20 and 25° C (Page 1983, Erickson and Mahan 1982).

Banded darters feed on aquatic insects, primarily midge larvae (Diptera). Like most darters, banded darters tend to feed more during the day, and visually detect their prey (Page 1983, Erickson and Mahan 1982). Banded darters are most commonly found with other darters throughout the range (Kuehne and Barbour 1983) and with dace, darters and sculpins in Michigan (Erickson and Mahan 1982).

Conservation/management: Little is known about the habitat requirements and potential threats to the banded darter. The banded darter is sensitive to siltation and pollution (Smith 1979), and dams are thought to limit its distribution (Erickson and Mahan 1982). Ensuring that the habitat remains intact and water pollution is limited will help to maintain the Michigan population. Like most aquatic species, the banded darter will be affected by changes in land use that increase surface run-off and siltation. Additionally, because the banded darter does require fast flowing water, it is essential that natural flow regimes be returned and protected.

Research Needs: The distribution of banded darters Michigan needs to be resurveyed, and potential other habitats need to be searched for additional populations. In order to protect better the species, the life history and habitat requirements of the banded darter also need to be further studied.

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