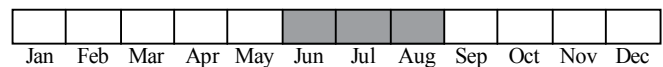


Best Survey Period



Status: State Endangered

Global and State Rank: G5/S1

Family: Percidae (Perches and Darters)

Total Range: The river darter is widely distributed from Southern Canada to the Gulf of Mexico. It is found in the Hudson Bay basin (Manitoba, Ontario and North Dakota), the Great Lakes basin (Michigan and Ohio) and in the Mississippi River and its tributaries from Wisconsin south to Louisiana and Texas. The river darter is considered vulnerable (S3) in Ontario, Iowa, Missouri, Arkansas and Alabama, and imperiled (S2) in Illinois and Oklahoma. In Michigan, Ohio, Kansas and West Virginia, the species is considered critically imperiled (S1), and it is possibly extirpated (SH) from Georgia (NatureServe). While the river darter is increasingly rare throughout in much of its range, it is the most common darter in the upper Mississippi River (Page and Burr 1991).

State Distribution: Historically, the river darter was present in rivers and nearshore areas of eastern Michigan. It was distributed in the Cass and AuSable Rivers in Saginaw and Iosco Counties, and in nearshore areas of Saginaw Bay off Huron and Tuscola counties. The most recent report of the river darter in Michigan is

in the Lake Erie drainage, from the Huron River in Monroe County, in 1941. Surveys in 1986 and 1994 found no river darters present at any of these sites.

Recognition: Darters are small fish and are characterized by two dorsal fins. Darters of the genus *Percina* have dorsal scutes, a line of modified scales on the midline of the breast and belly. They have two anal spines and a complete lateral line. The river darter has small black blotches near the front and rear of the first dorsal fin. It is olive-colored above, with indistinct dorsal saddles. There are eight to fifteen dark lateral bars along the length of the fish. The anal fin is long, reaching well beyond the dorsal fin to the caudal fin in large males. A black spot is present on the caudal fin, and a distinct teardrop mark is present beneath the eye. The river darter reaches a maximum length of three inches (Page 1983, Page and Burr 1991). Males are darker and more distinctly marked during spawning season, but do not develop bright colors like many other darters. Tubercles develop on the caudal, pelvic and anal fins, and occasionally also occur on the head (Page 1983). Similar fish in Michigan include the channel darter (*P. copelandi*), the blackside darter (*P. maculata*) and the logperch (*P. caprodes*). All of these species lack the front and rear spots characteristic of the river darter dorsal fin.



Best Survey Time: The river darter is best surveyed in the summer, when water levels are typically at their lowest.

Habitat: The river darter lives in rivers and large streams. It prefers deep fast-flowing riffles with cobble and boulder bottoms (Trautman 1981). Adults are usually only found in shallow areas at night, or when turbidity is high (Becker 1983). The river darter may move upstream to spawn in the spring (Trautman 1981, Shultz 1986). The river darter has also been found in nearshore areas of the Great Lakes at depths around five meters. This species is turbidity tolerant, which may explain its continued presence in the Mississippi River and its tributaries (Trautman 1981, Evers 1994).

Biology: Spawning occurs later in the northern part of the river darter's range compared to the south. In southern areas, such as Texas and Tennessee, the river darter spawns in late winter/early spring. In Illinois, spawning occurs from April through May, while in Manitoba, spawning occurs in June or July (Suttkus 1985).

Adults are thought to migrate upstream in the spring for spawning (Trautman 1981). Darters of the genus *Percina* are egg-burying spawners. The female partially buries her body in loose gravel or sand. A male mounts the partially buried female from behind, at which time she expels eggs into the substrate. The male and female spawn like this several times, often with different partners (Page 1983). No parental care is provided to the young.

The river darter attains much of its adult size during the first year of development, and sexual maturity is reached at age one. Males tend to be larger than females and may reach three inches in length (Becker 1983). River darters are thought to live two to four years (Kuehne and Barbour 1983, Dalton 1990). River darters feed on a variety of small aquatic invertebrates during the day. Adult prey items include midge and caddisfly larvae, as well as some snails (Thomas 1970). Small zooplankters are the primary food of juvenile river darters (Becker 1983).

Conservation/Management: The abundance of the river darter in the Mississippi River and tributaries indicates that it is not extremely sensitive to turbidity and water pollution. However, the river darter does require

deep swift water habitats, which are quickly disappearing with flood control and river impoundment projects. In order to protect the river darter, rivers need to be restored and maintained in their natural state with intact flow regimes.

Research Needs: The river darter prefers deep fast habitat that is difficult to survey. While no populations of the river darter have been found in Michigan since 1941, populations may have been missed in previous surveys. Thorough surveys of historical sites, as well as sites with potential habitat, need to be undertaken. These surveys may require the use of electro-shocking equipment and SCUBA diving in addition to traditional seine methods.

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