



Small members of the perch family live their lives on the bottoms of many Illinois streams—and go largely unnoticed.

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Fish of a Different Color

Logperch darter

As many amateur aquarists will attest, perhaps some of the most beautiful and unique fishes are found not in some faraway tropical paradise, but in streams running through the Prairie State.

Diminutive in size, this largely unknown group of fish is second only to the minnow family in diversity and abundance. They occupy a wide variety of habitat types, but many species have specialized requirements and are sensitive to degradation. Related to the walleye, sauger and yellow perch, which are more familiar to most anglers, this group of fishes is referred to as the darters.

Although predominantly stream-dwelling fish, some darters can be found in lakes and wetlands. Unlike most species, darters either completely lack or have an underdeveloped swim bladder—an adaptation that prohibits them from suspending in the water col-

umn, but allows them to stay put in fast-moving water, one of their favorite habitats.

Darters spend the majority of their lives in relative obscurity on the stream bottom, using their coloration to blend into their surroundings and avoid predation. Supported by their front fins, darters often remain motionless on the bottom, and when alarmed, they dart off quickly to the nearest cover, hence their name.

Darters are relatively restricted in their distribution in North America, occurring primarily in the Mississippi River system. Few darter species are found west of the Continental Divide.

The largest concentration of darter species occurs in the eastern half of Tennessee and northern Alabama. Illinois is home to three genera: *Percina*, which have five species in Illinois, are blandly-colored darters with a large anal fin; *Ammocrypta*, comprised of just two species in Illinois, are long, slender

Darters feed on a variety of items, including small crustaceans, midges, mayflies and crayfish.

Logperch (*Percina caprodes*) can use their snout to turn over rocks to find food and will do so quite readily in an aquarium setting.

darters which have pallid coloration and a preference for sand; and *Etheostoma*, a large and diverse genus with 16 species occurring in Illinois.

While most darter species require specific habitat conditions—swamps, sloughs, backwater areas or specific sizes of riffles—some are generalists and can be found in slow-moving water and larger streams throughout Illinois. A few species are somewhat tolerant to siltation and pollution.

Life history characteristics are quite varied among the darter species. The life expectancy for most darter species in Illinois averages three years, with few surviving past four years. The least

darter (*E. microperca*), growing to a maximum length of just 1.5 inches, rarely lives beyond two years. In contrast, logperch (*P. caprodes*) can reach 7 inches and often live beyond three years. In some systems, logperch are a mainstay in the diet of walleye which undoubtedly decreases their chances of living a long life and may explain their tendency to bury themselves up to their eyes in sand.

Most darters become mature in one year and spawn in the spring. While some darters retain their color throughout the year, these pigments become much more pronounced in males during the spawning season and result in spectacular looking fish. Brilliant scarlets, blues and greens adorn the fins and bodies of these colorful fish, putting them in league with many tropical species—even if only for a short period of time each year.

Darters either bury eggs in the sand or attach them to rocks, logs or some other objects. The female bluebreast darter (*E. camurum*), an extremely rare species in Illinois, will partially bury herself headfirst in the gravel dur-

In addition to their increased coloration during the spawning season, males of some species have special adaptations useful during this period. Slough darters (*Etheostoma gracile*) develop protuberances on their chins to stimulate females. Other species have modified knobs on the tips of their dorsal fins for preparing the spawning site and attracting females.



Slough darter

ing spawning, remaining so for 20 to 30 minutes.

Depending on the species, female darters can produce anywhere from just a few to several hundred eggs. The extremely territorial male spottail darter (*E. squamiceps*) will court several females, who will then deposit as many as 1,500 eggs on the underside of a stone.

In 68-degree Fahrenheit water, darter eggs hatch in about eight days. The males of some species zealously guard their nests, while little parental care is provided for others, such as Iowa darters (*E. exile*), which attach their eggs to plant material. Once the eggs of orangethroat darters (*E. spectabile*) hatch, the fry have been known to move into smallmouth bass nests and benefit from the protection provided by the guardian male bass.

For the most part, darters are intolerant of pollution and other environmental changes and can be considered as a barometer of water and stream quality.

The Department of Natural Resources utilizes the Index of Biotic Integrity (IBI) to rate Illinois streams. One component of the IBI is the number of darters present—the more darters the higher the quality rating for a given stream section. Unfortunately, extensive channelization and other forms of degradation have caused several darter species to be extirpated from Illinois, and others to be listed as state-endangered or state-threatened.

Darters are unknown to most people but play a vital role in the ecosystem of



Johnny darter



Orangethroat darter



Banded darter

The Johnny darter (*Etheostoma nigrum*), is tolerant of slow-moving water and can be found throughout the state. Orangethroat darters (*E. spectabile*) are similar in appearance to rainbow darters (*E. caeruleum*) and both can be found in the same stream. Orangethroats will reside in small, shallow riffles and rainbows in deeper riffles. The banded darter (*E. zonale*) occurs in northern Illinois and is one of the few darters somewhat tolerant to siltation and pollution.

our aquatic environments. The next time you're fishing your favorite smallie stream or wading in the creek, take a closer look at the rocky substrate. You just might get a quick glimpse of a truly marvelous little fish, just before it darts under another rock.



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