

## The Spottail Darter, *Etheostoma squamiceps* (Osteichthyes, Percidae), in Indiana

**ABSTRACT:** The spottail darter, *Etheostoma squamiceps*, was reported from two localities in Posey Co., Indiana, by Jordan in 1890. All subsequent authors on Indiana fishes failed to record any new observations on the species, but it is still present, though rare, in at least two localities in Posey County. The spottail darter should be added to the State's rare and endangered species list.

The range of the spottail darter, *Etheostoma squamiceps*, includes southern Illinois, western Kentucky, W-central Tennessee, the Tennessee River drainage of Alabama and Mississippi, and southwestern Indiana. Jordan (1890) reported this species in Indiana from two localities, both in Posey County: Gresham's Creek, 1.5 miles (2.5 km) E New Harmony; and Black River, New Harmony. Hay (1894), Meek (1908), Gerking (1945, 1955) and Nelson and Gerking (1968) failed to record any additional observations of spottail darters in Indiana, even though Gerking (1945) stated that "southwestern Indiana where Jordan caught this species was intensively collected."

Eigenmann and Beeson (1894) listed the spottail darter from Gresham's Creek and from Big Creek, Posey County, citing Jordan (1890) as the source for these records; they apparently erred in substituting Big Creek for Black River. Blatchley (1938) apparently used Eigenmann and Beeson (1894) as his source for records of this species, since he also listed Big Creek.

Based on specimens of spottail darters extant in the Illinois Natural History Survey (INHS) and in the Field Museum of Natural History (FMNH), Page (1974) included two Indiana localities in a spot distribution map. The specimens for which these localities were plotted were collected from tributary, Rush Creek, 3 km S New Harmony, Posey County, on 29 March 1963 (INHS — 12 specimens); and Poseyville, Posey County, on 28 April 1942 (FMNH 43952 — five specimens). No other localities for the spottail darter in Indiana have been published since Jordan's 1890 records.

To determine the present status of the spottail darter in Indiana the authors visited Posey County in July 1974. Eighteen sites were visited, including all those from which specimens were previously captured. Spottail darters were collected at only two localities: tributary, Rush Creek, 3 km S New Harmony; and tributary, Black River, 3 km W Stewartsville. Only one specimen was found at each site.

The present rarity of the species in Posey County is probably related to two factors, the poor condition of the streams and the scarcity of slab stones. The streams in Posey County suffer from severe siltation and agricultural pollution, and sporadically from oil pollution. In addition, many upstream headwater

areas dry up, perhaps because the water table is much lower during droughts than it was in the past.

Slab stones are used by the spottail darter for cover and as nesting sites (Page, 1974). Most of the streams in Posey County have bottoms of silt and sand, and slab stones are scarce or absent. Increased siltation has probably buried many of the stones previously exposed. Although substitute cover may be found, it is doubtful that another nesting substrate can be substituted.

Because the population is small, apparently limited to Posey County, and lives in seemingly marginal habitat, it is doubtful that the spottail darter can persist in Indiana and therefore should be added to the State's list of rare and endangered species. It is unlikely that siltation or agricultural and oil pollution will be abated or that stream desiccation can be remedied. Poor stream conditions probably prevent a reservoir of spottail darters from developing and replenishing the stock at localities where the habitat is not continuously suitable.

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