



***Etheostoma erythrozonum*, a new species of darter (Teleostei: Percidae) from the Meramec River drainage, Missouri**

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Abstract

A new species of darter, *Etheostoma erythrozonum*, is described from the Meramec River drainage of Missouri, USA. *Etheostoma erythrozonum* is the first known fish species endemic to the Meramec River drainage. It differs morphologically and genetically from populations of its sister species, *Etheostoma tetrazonum*, from the Gasconade River, Osage River, and Moreau River drainages.

Key words: darter, Percidae, *Etheostoma*, *Etheostoma erythrozonum*, *Etheostoma tetrazonum*, Meramec River, Missouri, Ozarks

Introduction

Etheostoma tetrazonum (Hubbs and Black), the Missouri Saddled Darter, is one of several darter species endemic to the northern Ozark region of Missouri. *Etheostoma tetrazonum* was described as a member of the *Etheostoma variatum* species group (Hubbs & Black, 1940) and is now classified as a member of subgenus *Poecilichthys* (Page, 2000). The type locality designated for *E. tetrazonum* is the Big Niangua River at the mouth of Greasy Creek, a tributary of the Osage River drainage. Specimens of *E. tetrazonum* were also identified from the Gasconade River system in the description. Both the Osage and Gasconade rivers are tributaries of the Missouri River. At the time of its description, *E. tetrazonum* was only known to exist in the Osage and Gasconade River systems. However, within a year of its description, individuals of *E. tetrazonum* were identified from the Meramec River system, a tributary of the Mississippi River. Since then the distribution of *E. tetrazonum* has been considered to include the Meramec, Gasconade, Osage, and Moreau River systems (Pflieger, 1971, 1997). The Moreau River is a tributary of the Missouri River.

An electrophoretic analysis of the *Etheostoma variatum* species group by McKeown *et al.* (1984) revealed considerable genetic divergence between populations of *Etheostoma tetrazonum* from the Meramec and Osage River drainages. This was the first evidence indicating that *E. tetrazonum* may represent more than one species. A recent molecular phylogenetic analysis of 13 populations of *E. tetrazonum* indicates that populations previously identified as *E. tetrazonum* represent two species. This conclusion is based on the resolution of these populations as two, well supported and reciprocally monophyletic groups: one comprised of individuals from the Moreau, Osage, and Gasconade River drainages; the other comprised of individuals from the Meramec River drainage (Switzer & Wood, 2002). The purpose of this study is to describe the morphological variation that exists between these species and provide a description of the first species of fish endemic to the Meramec River.