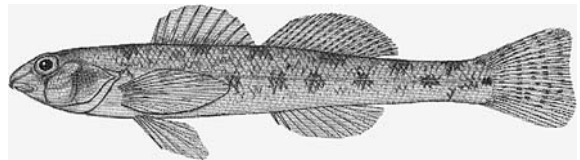


## Threatened fishes of the world: *Etheostoma perlongum* (Hubbs and Raney 1946) (Percidae)

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**Common names:** Waccamaw darter. **Conservation status:** Threatened (Warren et al. 2000); Threatened in North Carolina (Shute 1997). **Identification:** Subgenus *Boleosoma*. Adults reaching 45–75 mm SL (Shute et al. 1982). Similar to its sister species, *Etheostoma olmstedi*, with the exception of having a more-slender body and higher vertebral and lateral scale counts. D1 IX–XII; D2 13–15; A II + 8–9; Vertebrae 39–42; Lateral scales 59–64. Lateral line complete. Illustration by E. F. Menhinick. **Distribution:** Along with *Menidia extensa* and *Fundulus diaphanus*, one of three endemic fishes in Lake Waccamaw, North Carolina, (Hubbs and Raney 1946). Specimens from the headwaters of the Waccamaw River, just below the Lake Waccamaw dam are morphological intermediates between *E. perlongum* and *E. olmstedi*. **Abundance:** The least common of the three Lake Waccamaw endemics; Lindquist and Yarbrough (1982) estimated the population to be approximately 125,000 individuals,  $\pm 25\%$ . **Habitat and ecology:**



Diet consists primarily of aquatic insects, particularly chironomid larvae. Found in offshore waters in fall and winter, they migrate to shallow inshore waters in March to spawn. **Reproduction:** Spawning occurs from March through June beneath woody debris and rocks, typically in <1 m depth (Lindquist et al. 1981). Males guard nests where several females may spawn (Lindquist et al. 1981, 1984). An annual species; most individuals die shortly after spawning (Shute et al. 1982), perhaps due to depleted somatic lipid levels (Schultz 1999). **Threats:** Two primary threats to *E. perlongum* are degradation of water quality and destruction of habitat (Shute 1997). The Lake Waccamaw shoreline is densely developed with homes and cottages. Development is likely to increase nutrient loading in the lake (Shute 1997), causing wide-scale algal blooms. Additionally, suitable spawning habitat such as fallen trees and rocks are considered dangerous to boaters and are often removed. Because *E. perlongum* has an annual life cycle, reproductive failure for even a single year could lead to rapid extinction. **Conservation actions:** Habitat is indirectly protected because Lake Waccamaw has been designated

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Critical Habitat for federally Threatened *Menidia extensa* (U.S. Fish & Wildlife Service 1999). **Conservation recommendations:** Closely monitor the lake's water quality. Sources of nutrient input should be controlled. Spawning habitat should be protected, particularly in low-traffic areas of the lake. If necessary, spawning sites should be supplemented with artificial habitat (Lindquist et al. 1984). **Remarks:** Based on allozyme and morphological data, Shute (1984) concluded that *E. perlongum* is a lacustrine ecomorph of *E. olmstedii*. A thorough systematic study is needed to assess the validity of *E. perlongum*. Regardless, the Lake Waccamaw population is an entity with unique morphological and life history attributes and should be managed separately.

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