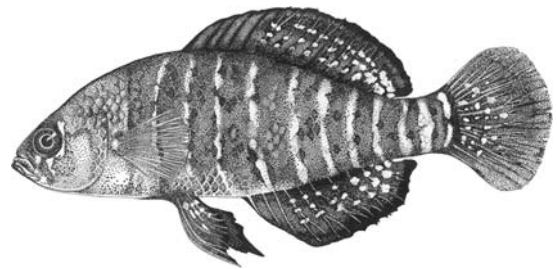


## Threatened fishes of the world: *Elassoma okatie* Rohde and Arndt 1987 (Elassomatidae)

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**Common name:** Bluebarred pygmy sunfish. **Conservation status:** Vulnerable, as defined by Red List of Endangered Species (Gimenez Dixon 1996). Current legal status in South Carolina is Special Concern but status is under review (SCDNR 2003). Recognized as a species of special concern by the American Fisheries Society (Williams et al. 1989). Critically imperiled in Georgia. **Identification:** D (III)IV-V(VI)/(8)10–12(14), A III/(4)5–7(8), C 14, P1 14–17, P2 I/4, L1 (24)25–29(30), mouth terminal and upturned (Rohde and Arndt 1987; Marcy et al. 2005). Maximum size 35 mm TL. Sexually dichromatic. Dark vertical bars (8)9–12(14) are three times wider than interbars, distinguishing it from *E. boehlkei* (Rohde and Arndt 1987). Narrow interbars are light beige in females; iridescent blue in males. Female base coloration pinkish-brown. Males blue-grey to black, depending on turbidity and reproductive and diel activity (Rohde et al. 1994). Iridescent blue interbars are most distinct during spawning season, when male base coloration is darkest. Illustration by Ellen S. Strack-Heiler. **Distribution:** Edisto, New and Savannah River drainages in coastal South Carolina, with a disjunct population in Fort Gordon, Georgia



(Hoover unpublished 1998, Marcy et al. 2005). **Abundance:** As typical of congeners, populations fluctuate seasonally and geographically. *Elassoma okatie* is strongly associated with specific microhabitats, which are patchy and often unpredictable. **Habitat and ecology:** Found in heavily vegetated creeks and sloughs, but also in leaf pack of tannic ponds and ditches. *Elassoma okatie* is more widespread than the sister-species, *E. boehlkei*, but equally localized and uncommon. Populations are known to fluctuate seasonally, and local extirpation events may occur naturally. The bluebarred pygmy sunfish is rarely found with congeners, which suggests competition or resource partitioning as a determining factor of fine scale range limits. **Reproduction:** Based on observation of gravid females, spawning occurs in late February and March. Males defend the nesting site from intruders. Very few individuals live beyond one year (Rohde personal communication). **Threats:** Most known populations are threatened by human activity. Roadside

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populations are at obvious risk of pollution, especially near areas of industry. Paper mills, silviculture, and concrete distributors are associated with point source pollution and localized sedimentation. Prolonged siltation is likely responsible for local extirpation events in small waterbodies. **Conservation actions:** Disjunct population within Fort Gordon is protected from private industry, and a species management plan has been proposed (Hoover unpublished 2004). Healthy populations are known from large private hunting clubs in South Carolina, which provide indirect protection from urbanization. **Conservation recommendations:** Unprotected populations should be monitored annually, especially those nearest urbanized areas. Conservation easements should be sought for landowners who voluntarily protect local populations. A life-history study is necessary to determine environmental factors influencing seasonal reproduction. We recommend a federal listing of special concern for this species.

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