

Everglades Pygmy Sunfish*Elassoma evergladei*

Contributors (2013): Kevin Kubach and Mark Scott [SCDNR]

DESCRIPTION

Taxonomy and Basic Description

The Everglades Pygmy Sunfish is one of 6 known species in the family Elassomatidae (Pygmy Sunfishes), which are restricted entirely to the Southeastern United States (Rohde et al. 2009). In addition to the Everglades Pygmy Sunfish, 3 other Elassomatids occur in South Carolina: the Banded Pygmy Sunfish (*E. zonatum*), Bluebarred Pygmy Sunfish (*E. okatie*) and Carolina Pygmy Sunfish (*E. boehlkei*).

Everglades Pygmy Sunfish reach an adult size of only 0.9 to 1.3 in. total length (23 to 32 mm) (Rohde et al. 2009). They lack a lateral line and have a rounded caudal fin. Overall coloration varies and may be plain, mottled, or streaked with indistinct bars posteriorly and scattered blue flecks on the body and head. The breeding male is black with a bright blue spot behind and below the eye. Unlike the other three species of *Elassoma* in South Carolina, the Everglades Pygmy Sunfish has scales on the top of its head, which are often embedded (Rohde et al. 2009).

Status

The Everglades Pygmy Sunfish is considered secure (G5) on a global scale and is not currently ranked in South Carolina (SNR) (NatureServe 2013). It is currently stable according to Warren et al. (2000).

POPULATION SIZE AND DISTRIBUTION

The Everglades Pygmy Sunfish is distributed along the southern Atlantic Coastal Plain from the Cape Fear River Basin in North Carolina south to the Florida Everglades and west to Mobile Bay, Alabama (Rohde et al. 2009). It has been collected at scattered localities on the coastal plain across all of South Carolina's river drainages, although the highest concentration of points appears to be in the southern corner of the State (Rohde et al. 2009). The Everglades Pygmy Sunfish was not collected at any randomly selected wadeable stream sites in the South Carolina Stream Assessment (2006-2011); however, this likely reflects its preference for swamps and other densely vegetated backwaters which were not included in the Stream Assessment.

HABITAT OR NATURAL COMMUNITY REQUIREMENTS

The Everglades Pygmy Sunfish prefers quiet backwaters of creeks, sloughs and swamps with abundant aquatic vegetation (Rohde et al. 2009).

CHALLENGES

Primary threats to the Everglades Pygmy Sunfish include loss of forested land and especially the removal of riparian cover along Coastal Plain streams. Mature forest and riparian vegetation is an important source of large woody debris in Coastal Plain streams, which provides critical habitat for many endemic southern Atlantic Coastal Plain species including the Everglades Pygmy Sunfish (Marion 2008). Land development, siltation, and hydrologic alterations such as channelization and construction of impoundments also threaten this species. The conversion of naturally stagnant lowland swamps and streams into channelized, shallow drainage ditches with consistently high current velocities represents a principal threat to Everglades Pygmy Sunfish habitat.

CONSERVATION ACCOMPLISHMENTS

Educational materials have been developed in order to raise public awareness of nongame species and their ecological importance to the natural history of South Carolina's aquatic habitats, including:

- The Reel Art program creates a topic for secondary school students and judges the artists' submissions (e.g. a list of the Piedmont Fishes of SC to select from as subjects for drawing or painting).
- We compiled information and photographs for the development of nongame fish description web pages which are currently in development.
- We developed the Blackwater River Guide and interactive Powerpoint.
 - <http://www.dnr.sc.gov/education/pdf/BlackwaterInteractivePoster.pdf>
 - <http://www.dnr.sc.gov/education/pdf/BlackwaterRivEdGuide.pdf>
- We developed and printed the Fish Species of Concern Coloring Book (2009).
 - <http://www.dnr.sc.gov/aquaticed/pdf/SCFishesofConcernColoringBook.pdf>

CONSERVATION RECOMMENDATIONS

- Identify and protect critical habitats from future development and further habitat degradation by following Best Management Practices and protecting and purchasing riparian areas.
- Promote land stewardship practices through educational programs both within critical habitats with healthy populations and in other areas that contain available habitat.
- Encourage responsible land use planning.
- Consider this species' needs when participating in the environmental permit review process.
- Continue to develop educational materials in order to raise public awareness of nongame species and their ecological importance to the natural history of South Carolina's aquatic habitats.
- Educate motor vehicle operators of the negative effects of crossing streams at multiple locations and using stream bottoms as trails.

MEASURES OF SUCCESS

Successful conservation of Everglades Pygmy Sunfish habitats would produce expected population densities comparable to or exceeding those observed in the South Carolina Stream Assessment (2006 – 2011) for given ecoregions, river basins and ecobasins. A success criterion would be cooperation of SC landowners in achieving the foremost goal of the Southeastern Aquatic Resource Partnership's 2008 Southeast Aquatic Habitat Plan that 85% of lands within 30 m (100 ft.) of streams or rivers be maintained in natural vegetation. Preservation of large tracts of forested Coastal Plain landscapes would represent a major accomplishment.

LITERATURE CITED

- Marion, C.A. 2008. The effects of land use on sedimentation, inorganic substrate, organic substrate, and fish assemblages in south carolina's coastal plain streams. Master's Thesis, Clemson University. 200 pp.
- NatureServe. 2013. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: March 26, 2013).
- Rohde, F. C., R. G. Arndt, J. W. Foltz and J. M. Quattro. 2009. Freshwater Fishes of South Carolina. The University of South Carolina Press, Columbia. 544 pp.