

Bannerfin Shiner

Cyprinella leedsii

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DESCRIPTION

Taxonomy and Basic Description

The Bannerfin Shiner is a member of the family Cyprinidae. This is the world's largest family of fishes, containing about 194 genera and almost 2,440 species. Eighty-six species occur in the mid-Atlantic region. With 29 species, *Cyprinella* is the second largest genus of American cyprinids after *Notropis* (Jenkins and Burkhead 1994). Members of the genus *Cyprinella* are distinguished from other cyprinids by their large, vertical, diamond-shaped scales and a black blotch in the dorsal fin (Rohde et al. 1994). Bannerfin Shiner can be distinguished from other *Cyprinella* by the position of the black blotch; which occurs on the anterior portion of the dorsal fin. Bannerfin Shiners are deep-bodied, slender fish with a flattened underside and long, rounded snout. The back is olive-tan with a black middorsal stripe; the belly is white and the flanks are silvery gray. Bannerfin Shiners reach lengths of 100 mm (3.9 in.) (Rohde 1994 et al.).

Status

The Bannerfin Shiner is considered apparently secure (G4) globally, but is considered imperiled (S2) in South Carolina (NatureServe 2013).

POPULATION SIZE AND DISTRIBUTION

The Bannerfin Shiner occurs in Atlantic slope drainages from the Edisto River, South Carolina to the Altamaha River, Georgia (NatureServe 2004). It also occurs in the gulf slope drainages of the Ochlockonee and Suwanee Rivers in Georgia and Florida (Marcy et al. 2005). In South Carolina, the species is restricted to the Coastal Plain ecoregion in the Edisto and Savannah River drainages (SCDNR unpublished data). Bannerfin Shiner populations appear to be stable (Warren et al. 2000; NatureServe 2004), although it is uncommon and sometimes rare (Page and Burr 1991; NatureServe 2004). Collections have been made at numerous sites throughout its limited range. The Bannerfin Shiner was not collected at any randomly selected wadeable stream sites in the South Carolina Stream Assessment (2006-2011), although it prefers larger rivers rather than streams.

HABITAT OR NATURAL COMMUNITY REQUIREMENTS

The Bannerfin Shiner inhabits channels of medium- to large-sized, sand-bottomed, Coastal Plain rivers. Schools often gather in eddies behind woody debris or in-stream structures. They rarely

enter tributary streams further upstream than the modern floodplain (Marcy et al. 2005). As with other *Cyprinella* species, the Bannerfin Shiner is a crevice spawner, depositing eggs in crevices of logs and rocks and thus requires coarse substrates and instream structures such as logs to deposit its eggs (Rohde et al 1994).

CHALLENGES

The Bannerfin Shiner appears to be stable and widely distributed throughout its range. The major challenge to this species is from pollution (NatureServe 2013). However, habitat alterations could present isolated problems (NatureServe 2013).

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 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 streams and rivers with healthy Bannerfin Shiner populations and intact critical habitat in the Savannah River drainage below the Fall Line, the Edisto River System, and the ACE basin. Protect these areas, once identified.
- Protect critical habitats from future development and further habitat degradation by following Best Management Practices as well as protecting and purchasing riparian areas.
- Promote land stewardship practices through educational programs both within critical habitats with healthy populations and 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.
- Educate aquarists as to the adverse impacts of removing fish from the wild.

MEASURES OF SUCCESS

Determining the distribution, life history, habitat needs, and Southeastern population structure and trends would represent a measure of success for this species. Methods that protect water quality are also likely to protect this species. In the event that more protective BMPs are implemented, population studies of this fish could assist in determining the effectiveness of those measures.

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