

Whitetail Shiner*Cyprinella galactura*

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**DESCRIPTION****Taxonomy and Basic Description**

The Whitetail Shiner is a member of the cyprinid family (minnows) and belongs to the genus *Cyprinella*. Containing 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). As with the other *Cyprinella* species, the Whitetail Shiner is a crevice spawner (Jenkins and Burkhead 1994). Whitetail Shiners have moderately deep and compressed bodies. Two large creamy white spots at the base of the caudal fin separate the Whitetail Shiner from other similar *Cyprinella* species (Rohde et al. 1994). During the breeding season, males often display a red tint to the dorsal fin. Adults range in size from 44 to 150 mm (1.7 to 5.9 in.) (Rohde et al. 1994).

Status

Globally, this species is currently considered to be stable (Warren et al. 2000) and secure (G5), but it is listed as a species of special concern in South Carolina although it is not yet ranked (SNR) (NatureServe 2013).

POPULATION SIZE AND DISTRIBUTION

The upper Savannah River contains several fish species that are typically found in the Tennessee drainage, and not on the Atlantic Slope. The presence of the Whitetail Shiner in the Savannah River of the Southern Atlantic Slope is likely due to a stream capture from the Tennessee River (Ross 1970). In South Carolina, this species occurs only in the Chattooga and Seneca River systems of the upper Savannah River drainage.

Within South Carolina, the Whitetail Shiner is restricted to the Chattooga and Seneca River system in the upper Savannah River drainage. The Whitetail Shiner occurs east and west of the former Mississippi Embayment. It occurs in the Cumberland and Tennessee drainages of Virginia, Kentucky, North Carolina, Tennessee, Georgia, Alabama, and Mississippi. It also occurs in the upper Savannah drainage in South Carolina and the upper Savannah and Santee drainages in North Carolina. West of the Mississippi River, the Whitetail Shiner occurs in the St. Frances and White River drainages of Missouri and Arkansas (Page and Burr 1991). Within South Carolina, the Whitetail Shiner is restricted to the Chattooga and Seneca River system in the upper Savannah River drainage. It was not collected at any randomly selected wadeable stream sites in the South Carolina Stream Assessment (2006-2011).

HABITAT OR NATURAL COMMUNITY REQUIREMENTS

The Whitetail Shiner inhabits clear, cool water streams and rivers with moderate to high gradients (Jenkins and Burkhead 1994) and gravel and rubble substrates. This species is common in deep pools near riffles and is often associated with large boulders and rocky banks (Mayden 1989).

CHALLENGES

Although the Whitetail Shiner is currently stable throughout the majority of its range, its limited distribution in South Carolina makes it vulnerable to imperilment within the State. Because of its limited distribution within South Carolina, it is especially vulnerable to development within the Chattooga River system. The major challenges to this species are deforestation, loss of riparian cover, siltation, and impoundments.

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

- Describe life history and habitat requirements of the Whitetail Shiner.
- Identify critical habitats and areas with healthy populations of the Whitetail Shiner and protect these areas, once identified.
- Conduct targeted surveys of the Seneca River Basin to assess the existence or extirpation of the Whitetail Shiner. Surveys should be concentrated on the Toxaway River and the tributaries of Lake Jocassee. Once identified, these areas should be protected.
- 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

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.

LITERATURE CITED

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