

## Thicklip Chub

*Cyprinella labrosa*

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### DESCRIPTION

#### Taxonomy and Basic Description

The Thicklip Chub is a member of a group of 3 fishes known as the barbeled *Cyprinella*. The Thicklip Chub can be distinguished from non-barbeled *Cyprinella* by its chub-like appearance and the presence of barbels in the corner of its mouth. The Thicklip Chub is a slender fish with a horizontal, and inferior mouth. The back of the fish is marked with prominent cross-hatching and ranges in color from dark olive (juveniles and females) to steel blue (breeding males). All fins have cream-colored edges; males develop straw to red colored fins during the breeding season. Adults range in length from 46 to 75 mm (1.8 to 3 in.) (Rohde et al. 1994).



#### Status

The Thicklip Chub is neither federally listed or state listed in South Carolina as a fish of special concern. They are apparently secure (G4) and not ranked in South Carolina (SNR); however, there is some concern for their long-term status based on their limited distributions (NatureServe 2013). In North Carolina, the Thicklip Chub is considered vulnerable (S3) (NatureServe 2013).

### POPULATION SIZE AND DISTRIBUTION

The Thicklip Chub is largely restricted to the Carolinas; however, there was one record for the Thicklip Chub in the Pee Dee drainage of Virginia (Jenkins and Burkhead 1994). The Thicklip Chub, at least in South Carolina, appears to be restricted to the Broad and Saluda drainages of the Santee River system above the Fall Line. In North Carolina, it is found both in the upper Pee Dee and upper Santee drainages. Information on population size and status is limited. However the species appears currently stable in South Carolina (SCDNR unpublished data). Based on South Carolina Stream Assessment data (2006-2011), the mean statewide density estimate for Thicklip Chub in wadeable streams was 0.0001 per 100 m<sup>2</sup>.

### HABITAT OR NATURAL COMMUNITY REQUIREMENTS

The Thicklip Chub is found in cool to warm water creeks and small rivers with clear to turbid water. It is generally found in riffles and runs with sandy, gravelly and rocky bottoms (Page and Burr 1991; Jenkins and Burkhead 1994).

## CHALLENGES

The Thicklip Chub is currently stable with relatively large distributions throughout the State. They are of conservation concern because they are only found within a few major drainages. Approximately one-half of the global distributions of the Thicklip Chub occur in South Carolina. Conservation efforts within South Carolina are critical to the global preservation of these species. Challenges to this species are similar to those faced by other aquatic fauna and include point and non-point source pollution, deforestation and loss of riparian corridors, impoundment development, siltation from poor land use practices, and unplanned or poorly planned urban and suburban development. Development of the Interstate 85 corridor between Charlotte, North Carolina and Greenville, South Carolina could also result in adverse impacts to several of these species.

## CONSERVATION ACCOMPLISHMENTS

South Carolina Stream Assessment data have facilitated the calculation of standardized abundance (density) estimates for this species at multiple spatial strata including statewide, river basin, level-IV ecoregion, and “ecobasin” (ecoregion x river basin). These estimates, for the first time, provide an objective measure of current population status that will serve as a baseline for following future population trends and gauging the effectiveness of conservation actions.

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

- Use South Carolina Stream Assessment decision-support GIS modeling tools to identify levels and spatial distributions of critical habitat factors to sustain the species in geographic areas of interest.
- Use South Carolina Stream Assessment decision-support GIS modeling tools to identify priority regions and watersheds at greatest risk of decline in stream integrity.
- Describe life history and habitat requirements of the Thicklip Chub.
- 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 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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