

## Moderate Conservation Priority – Other Species

**Snail Bullhead** *Ameiurus brunneus*

**Flat Bullhead** *Ameiurus platycephalus*

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### DESCRIPTION

#### Taxonomy and Basic Description

The snail bullhead is a member of the family Ictaluridae. The ictalurids, with approximately 46 species, represent the largest family of fishes indigenous to only North America (Jenkins and

Burkhead 1993). The genus *Ameiurus* contains the moderately sized (reaching only a few pounds) catfish collectively known as the “bullheads.” Snail bullheads have a large flat head, a decurved snout profile, uniformly colored maxillary barbel, short rounded anal fin, emarginate tail and a large dusky blotch at the base of the dorsal fin. Snail bullheads vary greatly in color and pattern, but in general they have a brown or yellow-green back, mottled sides of the same colors and white belly. In their natural habitats (rivers and streams) snail bullheads typically reach maximum adult sizes of 294 mm (11.4 inches) (Rohde et al. 1994); however, in disturbed habitat such as impounded river reaches and reservoirs, they reach substantially greater sizes (443 mm, 17.6 inches) (SCDNR unpublished data).

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The flat bullhead, also a member of the family Ictaluridae and the genus *Ameiurus*, is very similar to the snail bullhead in appearance. Flat bullheads differ from snail bullheads by having a bicolor maxillary barbel that has white leading edge, a relatively straight snout profile, gold yellow to dark brown colored back, dark mottling along the sides, and a cream colored belly.

#### Status

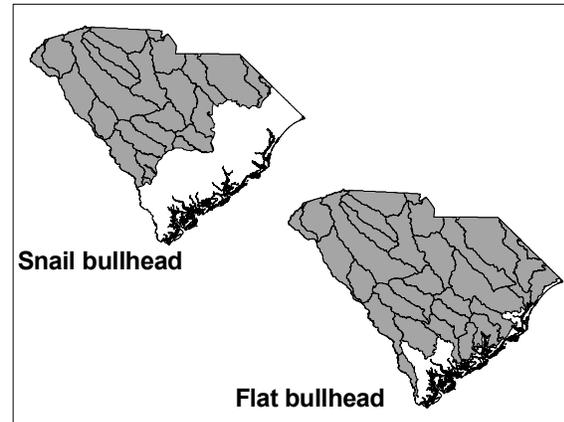
Neither the snail bullhead nor flat bullhead is listed in South Carolina. However, in a recent assessment of southeastern fishes, each of these species was considered vulnerable to imperilment (Warren et al. 2000). The snail bullhead is considered at least vulnerable to imperilment in four of the six states where it occurs. It is considered imperiled (S2) in Virginia, vulnerable (S3) to imperilment in North Carolina, Alabama and Florida, and apparently secure (S4) in Georgia (NatureServe 2004). The flat bullhead was considered vulnerable (S3) to imperilment in Virginia and apparently secure (S4) to secure in Georgia and North Carolina (NatureServe 2004).

## POPULATION DISTRIBUTION AND SIZE

### Distribution

Snail bullheads occur along the Atlantic Slope from the Dan River system in Virginia and North Carolina south to the Altamaha River system in Georgia and the Saint Johns River drainage in Florida (NatureServe 2004). They also occur in Gulf slope drainages of the Apalachicola River system in Georgia, Alabama and Florida and the upper Coosa

River system in northern Georgia (Page and Burr 1991). Flat bullheads occur in the piedmont and coastal plain of the Atlantic Slope, from the Roanoke River drainage, Virginia south to the Altamaha River drainage, Georgia. In South Carolina, both species occur from the mountains to the piedmont in nearly every major drainage, but are most common above the fall line.



### Population Size and Trend

Both species appear to be relatively stable in South Carolina streams; however, their fate in the larger rivers is uncertain due to the presence of the nonnative flathead catfish. They are common to abundant in the upper Santee drainage, but decreasing trends have been noted in many coastal rivers like the Edisto River, following the introduction of flathead catfish (C. Thomason, SCDNR, pers. comm.). The largest populations of snail bullhead and flat bullhead are probably located in the Broad River system, a system where the flathead catfish has yet to be introduced.

## HABITAT AND NATURAL COMMUNITY REQUIREMENTS

The snail bullhead is found in rocky riffles, shoals, runs and pools in streams and rivers. The flat bullhead is typically found in streams, rivers and impoundments occupying areas with mud, sand or rock bottoms, with slow flowing water. Both species can be found in the same stream or river, with the snail bullhead typically inhabiting the shoals and riffles, while the flat bullhead can be found along the banks and in pool areas (Jenkins and Burkhead 1993; Rohde et al. 1994; NatureServe 2004).

## CHALLENGES

Both these bullheads are adversely affected by the same myriad of challenges for all aquatic species, such as sedimentation, hydrologic modification, impoundments, nonpoint source pollution, and development. Additionally, these species are also threatened by the introduction of nonnative ictalurids like the flathead catfish and the blue catfish; both of these non-native species displace and prey on the smaller bullheads. Flathead catfish have been shown to prey on bullhead species and greatly reduce their numbers (Guire et al. 1984; Ashley and Buff 1986; Quinn 1988; Bart et al. 1994).

## CONSERVATION ACCOMPLISHMENTS

There are currently no conservation accomplishments known at this time for these species.

## CONSERVATION RECOMMENDATIONS

- Determine statewide distribution, population status, life history and habitat requirements of the snail bullhead and flat bullhead with statewide stream surveys.
- Identify critical habitats and areas with healthy populations of the snail bullhead and flat bullhead. Protect these areas, once identified.
- 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 landuse planning.
- Consider species needs when participating in the environmental permit review process.
- Develop a Non-Game Fishes of South Carolina poster and other 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 affects of crossing streams at multiple locations and using stream bottoms as trails.
- Prevent the spread of flathead catfish and other nonindigenous aquatic species.
- Educate the public as to the discontents of stocking nonnative species.

## MEASURES OF SUCCESS

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