

***Ancistrus piriformis* (freshwater fish; no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, January 2017

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No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2017):

“South America: Acaray River basin in middle Paraná River drainage, Paraguay. Reported from Argentina [López et al. 2005].”

Status in the United States

This species has not been reported in the United States.

Means of Introductions in the United States

This species has not been reported in the United States.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2017):

“Kingdom Animalia
Subkingdom Bilateria

Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Loricariidae
Subfamily Hypostominae
Genus *Ancistrus*
Species *Ancistrus piriformis* Muller, 1989”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2017):

“Max length : 8.3 cm SL male/unsexed; [Fisch-Muller 2003]”

Environment

From Froese and Pauly (2017):

“Freshwater; demersal.”

From Reis and Lima (2009):

“*A. piriformis* is a demersal (living at or near the bottom of the water body) species. Occurs in mid sized streams and rivers with rocky substrate.”

Climate/Range

From Froese and Pauly (2017):

“Temperate, preferred ?”

Distribution Outside the United States

Native

From Froese and Pauly (2017):

“South America: Acaray River basin in middle Paraná River drainage, Paraguay. Reported from Argentina [López et al. 2005].”

Introduced

This species has not been reported as introduced outside of its native range.

Means of Introduction Outside the United States

This species has not been reported as introduced outside of its native range.

Short Description

From de Oliveira et al. (2009):

“The genus *Ancistrus* is characterized morphologically by the naked anterior margin of the snout, with cutaneous tentacles that develop during growth (Fisch-Muller *et al.*, [2005]).”

From Sabaj et al. (1999):

“Loricariidae is a large family [...] characterized by a body covering of bony plates and a ventral suctorial mouth (Isbrücker, 1980).”

“*Ancistrus* is a large genus (ca. 57 species) in the subfamily Ancistrinae (Isbrücker, 1980), a group of loricariids with sharp evertible cheek spines (elongate odontodes or integumentary teeth). In *Ancistrus*, as in nearly all Ancistrinae, the cheek spines often are more developed in males (Regan, 1904; Isbrücker & Nijssen, 1992; pers. obs.) [...] *Ancistrus* is distinguished by another sexually dimorphic feature unique among loricariids: mature males in most species have conspicuous fleshy tentacles on their snouts. Snout tentacles also occur in females and juveniles, but are generally much smaller, fewer, and more restricted in distribution.”

From Petry and Schulz (2006):

“Loricariids [...] display morphological characteristics adapted to high flow velocities: a compact hydrodynamic body shape with large pectoral fins, which prevent displacement.”

Biology

From Sabaj et al. (1999):

“*Ancistrus* is a cavity-nester. The male typically selects a dark cavity in wood or rock as a nest site. In aquaria, a male will nest in clay flowerpots and bamboo tubes or excavate a cavity beneath a flat stone or driftwood placed over sand or fine gravel. The nesting male is territorial and guards the site against all intruders, especially conspecific males. The male may clean the cavity with his mouth and, eventually, allows females to approach and inspect the nest. Courtship consists largely of displays of raised dorsal and caudal fins, and leading behaviors whereby the male attempts to escort the female back to his nest.”

“At times during courtship the female may remain in the nest cavity to inspect the nest site and clean it with her mouth. While she is in the cavity, there is a great deal of contact between the pair as the male arches his body over hers. If the female leaves the nest, the male may follow and resume leading behaviors. If she chooses to spawn, the male fertilizes the eggs as they are

released, while constantly prodding her with his snout. The female deposits a clump of 20-200 eggs usually on the ceiling but also on the sides and floor of the cavity. The eggs are about 2-3.2 mm in diameter, adhesive, and yellowish orange. The spawning act may be repeated until the female releases all of her eggs. After oviposition, the female either leaves the nest or is forcibly evicted, and takes no more interest in eggs or fry.”

“Male *Ancistrus* care for eggs and fry in the nest cavity. A male uses his fins and mouth to clean the eggs and clear the cavity of detritus. He aerates the clutch by fanning it with his pectoral fins, and may inspect it to remove infertile or diseased eggs. According to several accounts (Burgess, 1989; Schopfel, 1991; Neal, 1996), parental males seldom leave their brood and either do not feed or only occasionally take food and quickly return to the nest. The eggs hatch in 4-10 days, over a 2-6 hour period, depending on incubation temperature and possibly species. The yolk sac larvae remain clustered and attached by their mouths to the ceiling and sides of the cavity. The yolk sacs are absorbed 2-4 days after hatching, and the fry become free swimming. The fry remain grouped together in the nest cavity where they are guarded by the male for 7-10 days after hatching [...]”

“Nesting males are extremely territorial and aggressively defend the nest cavity from rival males and potential predators. A nesting male and an intruder may engage in agonistic displays during which the two fish remain parallel, head to tail, with their dorsal and caudal fins raised and cheek spines everted. If escalated to combat, the two males may circle each other while directing attacks at their opponent's head. If a non-nesting male successfully evicts a parental male from his nest, the usurping male may cannibalize eggs guarded by the parental male (Teague, 1996).”

Human Uses

From de Oliveira et al. (2009):

“Species of this genus are generally small with attractive colours and are often exploited in the ornamental fish trade. Official reports on the Brazilian ornamental fish trade indicate that nearly 148 000 and 134 000 *Ancistrus* specimens were legally exported in 2006 and 2007, respectively (IBAMA, 2008).”

Diseases

No information available.

Threat to Humans

From Froese and Pauly (2017):

“Harmless”

3 Impacts of Introductions

This species has not been reported as introduced outside of its native range, so impacts of introductions are unknown.

4 Global Distribution



Figure 1. Known global established locations of *Ancistrus piriformis*. Map from GBIF (2016).

5 Distribution Within the United States

This species has not been reported within the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean Distance) for the contiguous U.S. indicated a medium climate match overall. The range of scores for a medium climate match is 0.005 to 0.103; the Climate 6 score of *Ancistrus piriformis* was 0.046. High climate matches occurred in peninsular Florida and medium matches occurred in the southeastern United States. The remainder of the contiguous U.S. had a low climate match.

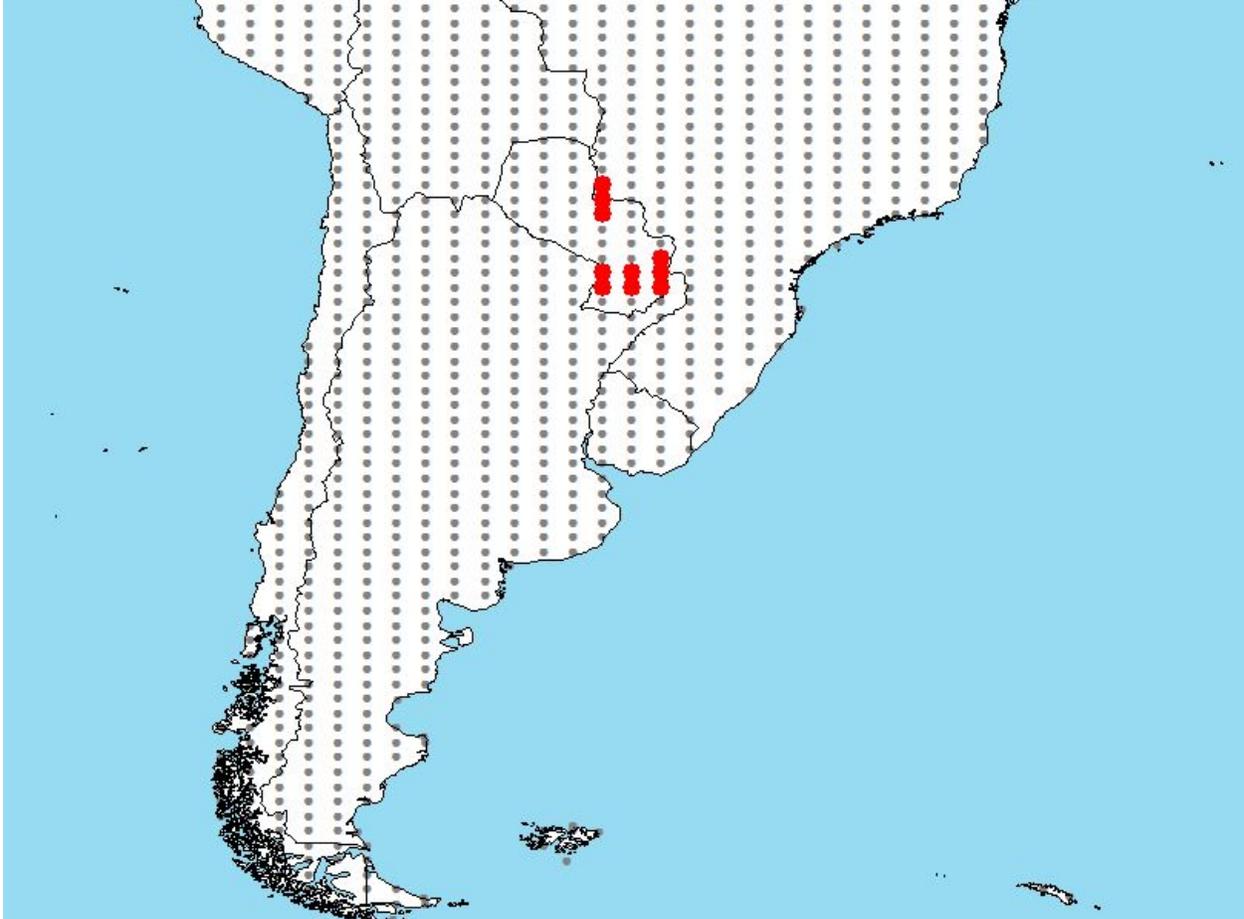


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (gray) for *Ancistrus piriformis* climate matching. Source locations from GBIF (2016).

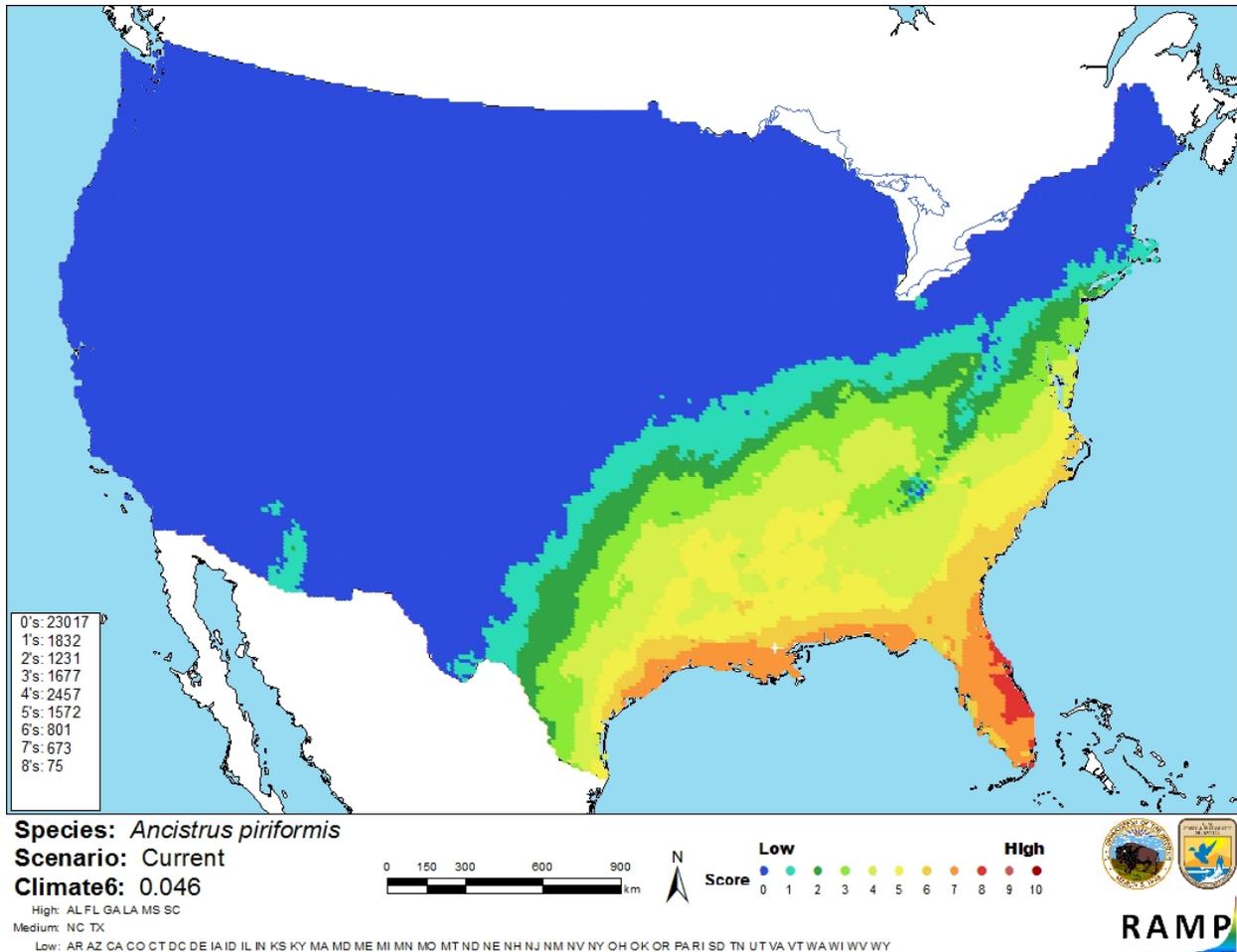


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Ancistrus piriformis* in the contiguous United States based on source locations reported by GBIF (2016). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

The “High”, “Medium”, and “Low” climate match categories are based on the following table:

Climate 6: Proportion of (Sum of Climate Scores 6-10) / (Sum of total Climate Scores)	Climate Match Category
$0.000 < X < 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

There was limited information available on the species *Ancistrus piriformis*; much knowledge is focused at the level of the genus rather than the species. This species has not been reported outside of its native range so impacts of introduction are unknown. With such little information on this species the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Ancistrus piriformis is a South American catfish found in the Acaray River basin in the middle Paraná River drainage in Paraguay. The genus is used within the ornamental fish trade, with over 100,000 individuals exported from Brazil annually. There have been no reports of this fish outside of its native range. Due to its medium Climate 6 score and absence of introduction history, the overall risk for this species is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **Certainty of Assessment (Sec. 7): Low**
- **Overall Risk Assessment Category: Uncertain**

9 References

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.

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10 References Quoted But Not Accessed

Note: The following references are cited within quoted text within this ERSS, but were not accessed for its preparation. They are included here to provide the reader with more information.

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