

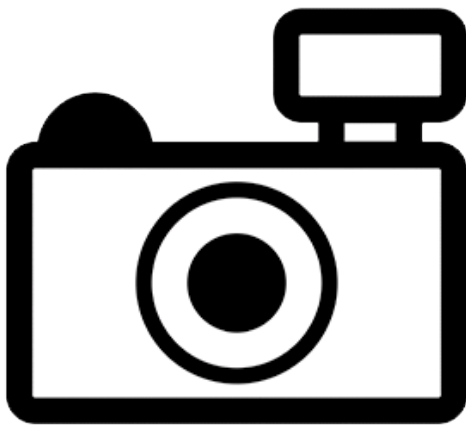
***Ancistrus ranunculus* (a freshwater fish, no English common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, September 2017

Revised, January 2018

Web Version, 6/26/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2017):

“South America: Xingu and Tocantins River basins in Brazil.”

From Nico et al. (2017):

“Tropical America. Central and South America (Armbruster 1997)”

Status in the United States

This species has not been reported in the United States; however, individuals of this genus, but unknown species, have been collected in Florida (Nico et al. 2017).

From Nico et al. (2017):

“Unknown. Shafland et al. (2008) listed this species [*Ancistrus* sp.] as 'possibly established', citing the collection of a small (122 mm TL) individual as evidence of reproduction. However, individuals of this size are common in the aquarium trade [in the United States], and no further specimens have been reported.”

Means of Introductions in the United States

Ancistrus ranunculus has not been reported in the United States. Unidentified species of the genus *Ancistrus* were likely introduced through aquarium trade (Nico et al. 2017).

From Nico et al. (2017):

“Aquarium release; bristlenosed catfish [*Ancistrus* sp.] (along with many other species of the armored catfish family Loricariidae) are highly popular in the aquarium trade.”

Remarks

From Nico et al. (2017):

“Several specimens of bristlenosed catfish [*Ancistrus* sp.] have been collected in the Tamiami and Snapper Creek Canals, Miami-Dade County, Florida, between 2001 and 2006 [Shafland et al. 2008a, b].

No known voucher specimens exist.

According to aquarium information, it appears that the species found [in Florida] is most likely *A. cf. cirrhosis*. This [*Ancistrus* sp.] is the most common species in the trade; however, no one really knows the origin of the stock or even if they are still pure. They may be a hybrid. This species so commonly is raised in captivity that it is called *Ancistrus* sp. [SeriouslyFish 2012].”

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Ancistrus ranunculus* Muller, Rapp Py-Daniel & Zuanon 1994 is the valid name for this species; it is also the original name.

From ITIS (2017):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata

Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Loricariidae Rafinesque, 1815
Subfamily Hypostominae
Genus *Ancistrus* Kner, 1854
Species *Ancistrus ranunculus* (Muller, Rapp Py-Daniel and Zuanon, 1994)”

Size, Weight, and Age Range

From Froese and Pauly (2017):

“Max length : 19.5 cm TL male/unsexed; max. published weight: 153.67 g; [Giarrizzo et al. 2015]”

Environment

From Froese and Pauly (2017):

“Freshwater; demersal. [...]; 25°C - 28°C [assumed to be recommended aquarium temperature] [Baensch & Riehl 1997]”

Climate/Range

From Froese and Pauly (2017):

“Subtropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2017):

“South America: Xingu and Tocantins River basins in Brazil.”

From Nico et al. (2017):

“Tropical America. Central and South America (Armbruster 1997)”

Introduced

No records of *Ancistrus ranunculus* introductions were found.

Means of Introduction Outside the United States

No records of *Ancistrus ranunculus* introductions were found.

Short Description

From Nico et al (2017):

“The genus *Ancistrus* contains ~50 described species (Burgess 1989; Armbruster 1997). Members of this genus exhibit marked sexual dimorphism (Ferraris 1991) and are primarily identified by the presence of fleshy tentacles on and around the snout (Burgess 1989). Burgess (1989) and Armbruster (1997) gave distinguishing characteristics of the genus and a key to loricariid genera; Burgess (1989) also provided key to selected species. Photographs were given in Burgess (1989) and Ferraris (1991).”

Biology

From Froese and Pauly (2017):

“Inhabits clear running water, without a strong current to a depth of 3 meters during dry season. Prefers narrow cracks of submerged rocks, small passages between superimposed rocks, or lives below flat rocks on the bottom.”

From Nico et al. (2017):

“Bristlenosed catfish, like many other loricariid catfishes, are benthic fishes that primarily consume algae and detritus (Burgess 1989).

Species in this genus are found throughout rivers and floodplain areas. [...] The unique tentacles are thought to be used in sensing speed and direction of stream currents and perhaps in detecting odors (Burgess, 1989). Another hypothesis is that they resemble juvenile fish and are used to attract females (Sabaj et al. 1999). Only the males develop the bull, bushy tentacles (Sabaj et al. 1999).

Ancistrus species have the capability of obtaining oxygen by breathing air their modified stomach. This allows them to survive in conditions with low oxygen levels (Gee 1976; Sabaj et al. 1999).

Breeding takes place in hollows, caves, and mud holes in banks. The female may lay 20–200 adhesive eggs, usually to the ceiling of the cavity. The male takes care of the young. During this time, a male usually will not leave the cavity to feed, or will leave occasionally and quickly return. The eggs hatch in 4–10 days; the male guards the eggs for 7–10 days after hatching. The fry remain in the cave and become free swimming in 2–4 days (Sabaj et al. 1999).”

Human Uses

From de Oliveira et al. (2007):

“*Ancistrus ranunculus* Muller et al., 1994: five specimens (three males and two females) acquired from ornamental fish exporters (Turkys Aquarium, Manaus), from the rio Xingu, Altamira, Pará (03°15'21"S, 52°12'45"W) [...]”

Diseases

No information on diseases was found for *Ancistrus ranunculus*.

Threat to Humans

From Froese and Pauly (2017):

“Harmless”

3 Impacts of Introductions

No records of *Ancistrus ranunculus* introductions were found.

4 Global Distribution

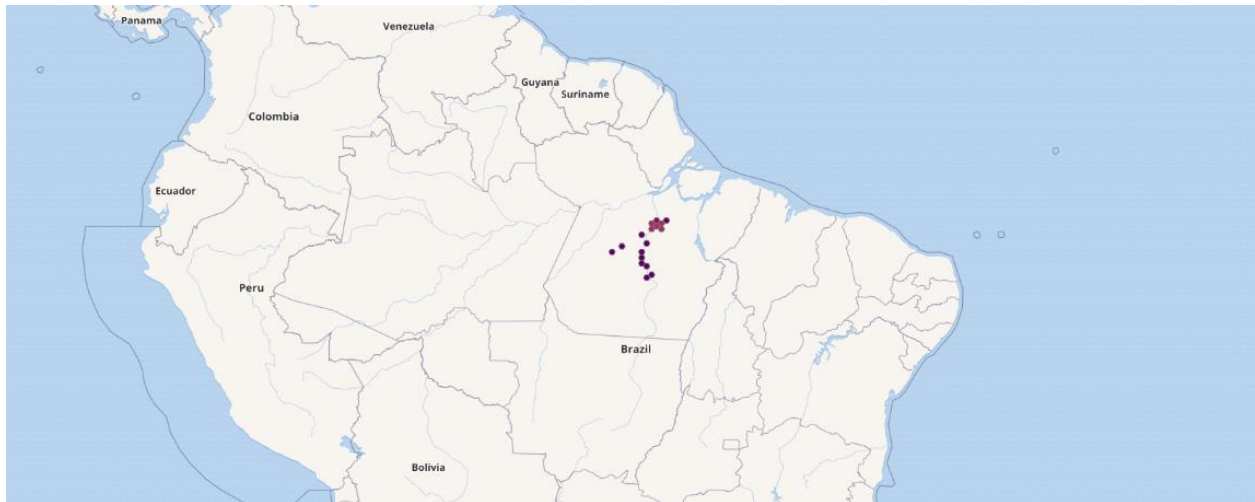


Figure 1. Known global established locations of *Ancistrus ranunculus*. Locations are all in Brazil. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

No records of *Ancistrus ranunculus* populations in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean Distance) for the contiguous United States was 0.000, low. Low climate match scores occurred throughout the contiguous United States with a small area of medium match in southern Florida.

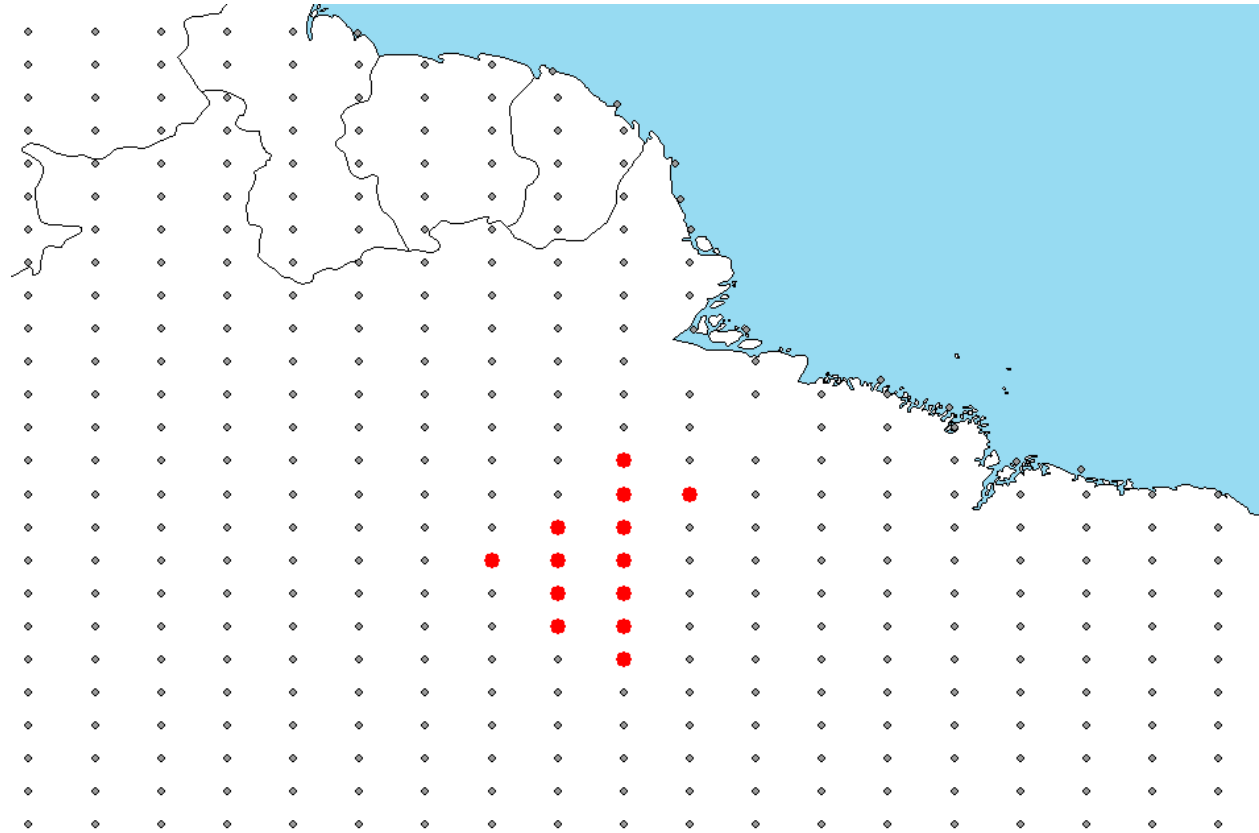


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in eastern Brazil selected as source locations (red) and non-source locations (gray) for *Ancistrus ranunculus* climate matching. Source locations from GBIF Secretariat (2018).

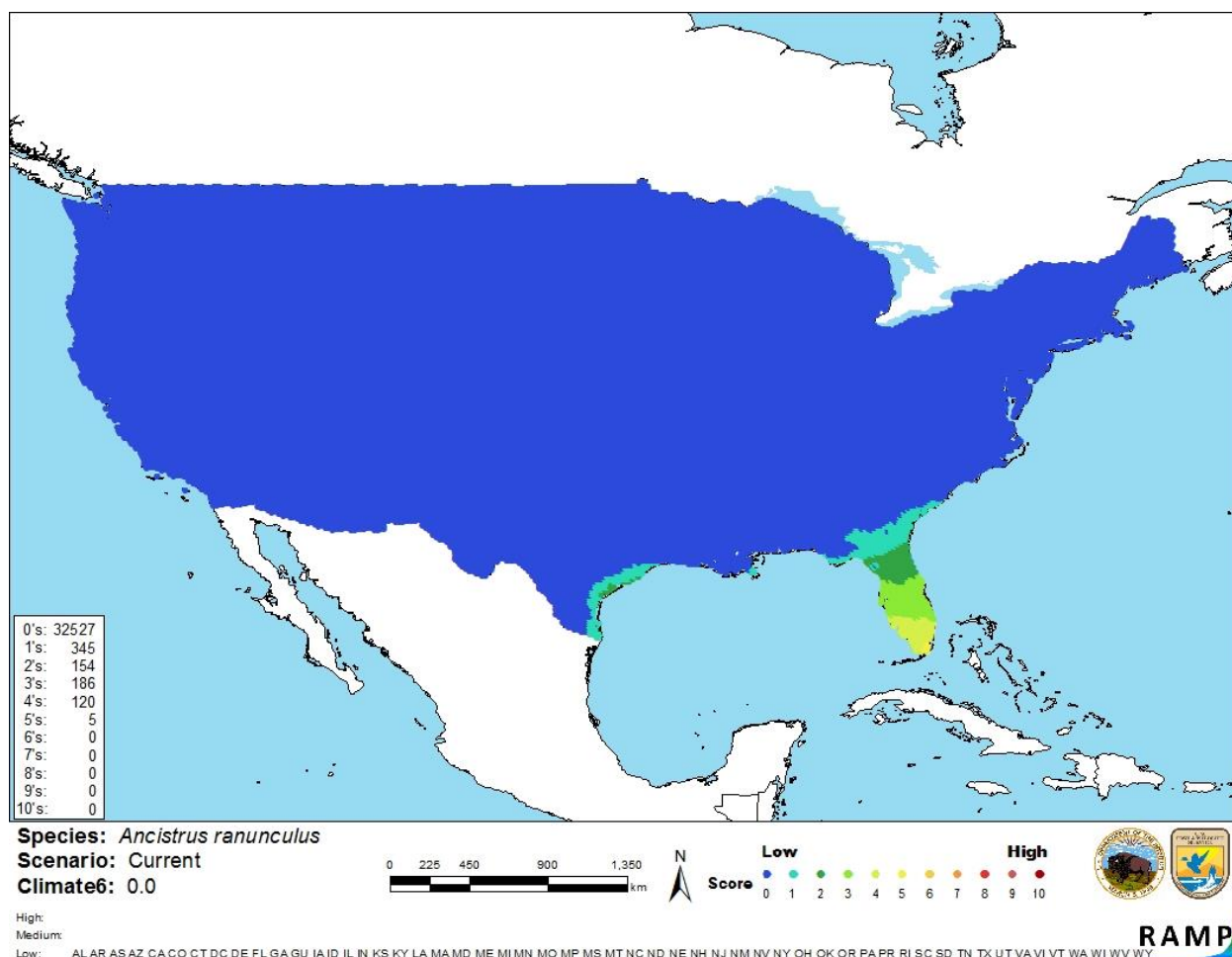


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Ancistrus ranunculus* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match. Counts of climate match scores are tabulated on the left.

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
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

The certainty of this assessment is low. There was limited information available on the species *Ancistrus ranunculus*. This species has not been reported outside of its native range; therefore, impacts of introduction are unknown. With the paucity of information available for this species, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Ancistrus ranunculus is a Brazilian, armored catfish found in the Xingu and Tocantins River basins. The history of invasiveness is uncertain as there have been no reports of this fish outside of its native range. Due to its low climate match 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): Low**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information** No additional remarks
- **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.

- de Oliveira, R. R., E. Feldberg, M. B. dos Anjos, and J. Zuanon. 2007. Karyotype characterization and ZZ/ZW sex chromosome heteromorphism in two species of the catfish genus *Ancistrus* Kner, 1854 (Siluriformes: Loricariidae) from the Amazon Basin. *Neotropical Ichthyology* 5(3):301–306.
- Froese, R., and D. Pauly. 2017. *Ancistrus ranunculus* Muller, Rapp Py-Daniel & Zuanon 1994. FishBase. Available: <http://www.fishbase.org/summary/Ancistrus-ranunculus.html>. (September 2017).
- GBIF Secretariat. 2018. GBIF backbone taxonomy: *Ancistrus ranunculus* Muller, Rapp Py-Daniel & Zuanon 1994. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5961416>. (June 2018).
- ITIS (Integrated Taxonomic Information System). 2017. *Ancistrus ranunculus* Muller, Rapp Py-Daniel & Zuanon 1994. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680030. (September 2017).
- Nico, L., P. Fuller, and M. Neilson. 2017. *Ancistrus* sp. Kner, 1854. U.S. Geological Survey, Nonindigenous Aquatic Species Database, Gainesville, Florida. Available: <https://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=2598>. (September 2017).
- Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. U.S. Fish and Wildlife Service.

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.

- Armbruster, J. W. 1997. Phylogenetic relationships of the sucker-mouth armored catfishes (Loricariidae) with particular emphasis on the Ancistrinae, Hypostominae, and Neoplecostominae. Doctoral dissertation. University of Illinois, Champaign-Urbana.
- Baensch, H. A., and R. Riehl. 1997. Aquarien atlas, Band 5. Mergus Verlag, Melle, Germany.
- Burgess, W. E. 1989. An atlas of freshwater and marine catfishes: a preliminary survey of the Siluriformes. Tropical Fish Hobbyist Publications, Neptune City, New Jersey.
- Ferraris, C. J., Jr. 1991. Catfish in the aquarium. Tetra Press, Morris Plains, New Jersey.
- Giarrizzo, T., R. R. de Sena Oliveira, M. C. Andrade, A. P. Gonçalves, T. A. P. Barbosa, A. R. Martins, D. K. Marques, J. L. B. dos Santos, R. de P. da S. Frois, T. P. O. de Albuquerque, L. F. de A. Montag, M. Camargo, and L. M. de Sousa. 2015. Length-weight and length-length relationships for 135 fish species from the Xingu River (Amazon basin, Brazil). *Journal of Applied Ichthyology* 31:514–424.
- Muller, S., L. H. Rapp Py-Daniel, and J. Zuanon. 1994. *Ancistrus ranunculus*, a new species of loricariidae fish (Siluriformes: Loricariidae) from the Xingu and Tocantins rivers, Brazil. *Ichthyological Explorations of Freshwaters* 5(4):289–296.
- Sabaj, M. H., and R. A. Englund. 1999. Preliminary identification and current distribution of two suckermouth armored catfishes (Loricariidae) introduced to Oahu streams. *Bishop Museum Occasional Papers* 59:50–55.
- SeriouslyFish. 2012. *Ancistrus cf. cirrhosus* Common Bristlenose Catfish. Available from: <http://www.seriouslyfish.com/species/ancistrus-sp-3/>. (March 2013).
- Shafland, P. L., K. B. Gestring, and M. S. Stanford. 2008a. Categorizing introduced fishes collected from public waters. *Southeastern Naturalist* 7(4):627–636.
- Shafland, P. L., K. B. Gestring, and M. S. Stanford. 2008b. Florida's exotic freshwater fishes - 2007. *Florida Scientist* 71(3):220–245.