

Jumbie Teta (*Ancistrus cirrhosus*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2011
Revised, October 2018
Web Version, 1/31/2019



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1 Native Range and Status in the United States

Native Range

From Fricke et al. (2018):

“Paraná River basin, Bolivia, Argentina and Uruguay.”

Prizon et al. (2017) report *A. cirrhosus* from the Paraná River basin in Brazil.

Status in the United States

Ancistrus sp. were recorded in Florida from 2001 through 2006 (Nico et al. 2018).

From Nico et al. (2018):

"Status: Unknown. Shafland et al. (2008) listed this [genus] as 'possibly established' [in Florida], 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, and no further specimens have been reported."

"According to aquarium information, it appears that the species found is most likely *A. cf. cirrhosus*. This 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."

Means of Introductions in the United States

From Nico et al. (2018):

"Aquarium release; bristlenosed catfish (along with many other species of the armored catfish family Loricariidae) are highly popular in the aquarium trade."

Remarks

Fricke et al. (2018) report that this species was originally described under the scientific name *Hypostomus cirrhosus*. Information searches were conducted using both the current scientific name and the original scientific name.

From Nico et al. (2018):

"This species so commonly is raised in captivity that it is called *Ancistrus* sp. 3 (SeriouslyFish, [2012]).

From Bifi et al. (2009):

"Probably, the real number of *Ancistrus* species is much higher than the number of described species. [...] A complete revisionary study of all *Ancistrus* species is necessary for further comprehension of this taxon, including redescriptions of species and designation of lectotypes, for solving problems such as mistaken descriptions and missing or ill-preserved types, in addition to descriptions of other probable new species."

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2018):

Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata

Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Loricariidae
Subfamily Hypostominae
Genus *Ancistrus*
Species *Ancistrus cirrhosus* (Valenciennes, 1836)”

From Fricke et al. (2018):

“**Current status:** Valid as *Ancistrus cirrhosus* (Valenciennes 1836). Loricariidae: Hypostominae.”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 8.9 cm SL male/unsexed; [Fisch-Muller 2003]”

Environment

From Froese and Pauly (2018):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Fricke et al. (2018):

“Paraná River basin, Bolivia, Argentina and Uruguay.”

Prizon et al. (2017) report *A. cirrhosus* from the Paraná River basin in Brazil.

Introduced

No known introductions.

Means of Introduction Outside the United States

No known introductions.

Short Description

From Bifi et al. (2009):

“Maxillary barbell longer and free from the lower lip [...]
No distinct color pattern among male and female [...]
Mandibular teeth row more than 15.2% of HL [...]
Occipital depth 17.9 to 18.7% of SL [...]”

From Nico et al. (2018):

“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).”

Biology

From Froese and Pauly (2018):

“Inhabits streams, from highly turbid standing water over a heavy clay substratum to free flowing clear water over gravel. Algae-eater [Burgess 1989].”

From Gilliam et al. (1993):

“The armored catfishes *Hypostomus robinii* and *Ancistrus cirrhosus* were difficult to catch in the seine because they often hid in small crevices along the bank and under stones on the bottom. By snorkeling, we could turn small stones in the pool and riffle sections and seize these fish by hand.”

From Nico et al. (2018):

“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. *Ancistrus cf. cirrhosus* inhabits streams ranging from still, turbid water with clay substrate to free-flowing, clear water with gravel substrate (Froese and Pauly, 2012). 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 Nico et al. (2018):

"According to aquarium information, it appears that the species found is most likely *A. cf. cirrhosus*. This 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."

Diseases

From Lom et al (2000):

“Another muscle-infecting species, *Heterosporis schuberti* Lom, Dyková, Körting & Klinger 1989, was described from ornamental fish *Ancistrus cirrhosus* and *Pseudocrenilabrus multicolor*.”

From Froese and Pauly (2018):

“Raphidascaris Disease, Parasitic infestations (protozoa, worms, etc.)
Raphidascaris Infection 2, Parasitic infestations (protozoa, worms, etc.)
Raphidascaris Infection 2, Parasitic infestations (protozoa, worms, etc.)”

No OIE-reportable diseases have been documented in this species.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

In reference to *Ancistrus sp.*, it is not confirmed which species was found in Florida.

From Nico et al (2018):

“The impacts of this species [i.e., *Ancistrus sp.*] are currently unknown, as no studies have been done to determine how it has affected ecosystems in the invaded range. The absence of data does not equate to lack of effects. It does, however, mean that research is required to evaluate effects before conclusions can be made.”

4 Global Distribution



Figure 1. Known global distribution of *Ancistrus cirrhosus*. Map from GBIF Secretariat (2017). Points in northern South America were not used in the climate matching analysis as there is no evidence that they represent established populations, and they may be misidentifications due to taxonomic uncertainty within the genus (Bifi et al. 2009).

5 Distribution Within the United States

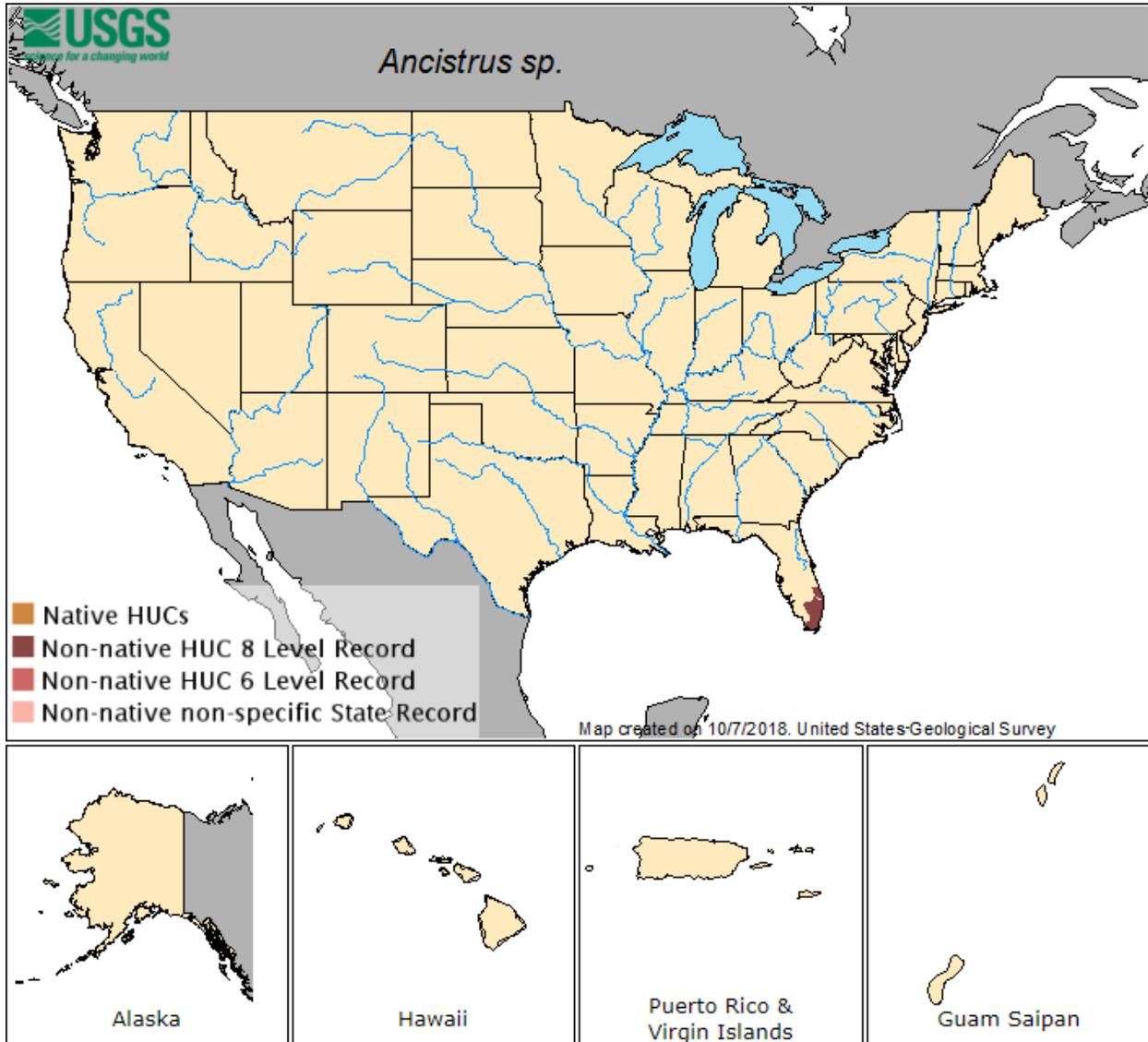


Figure 2. Known distribution of *Ancistrus sp.* (not confirmed *A. cirrhosus* but suspected to be) in the United States. Map from Nico et al. (2018). Unknown if population is established.

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 0.074, which is a medium score. The range for a medium climate match is between 0.005 and 0.103. Coastal areas from Virginia through the mid-Gulf coast of Texas had a high climate match, with the highest matches in southeast Florida and coastal eastern Texas. A swath of medium match areas extended out from the high match areas across the Southeast into the Mid-Atlantic and southern Midwest regions. The remainder of the

contiguous United States had low matches. Eight states (Alabama, Florida, Louisiana, Georgia, Mississippi, Texas, North Carolina and South Carolina) in the Southeast region had a high climate score, while two (Oklahoma and Virginia) had medium scores, and the remainder had low scores.

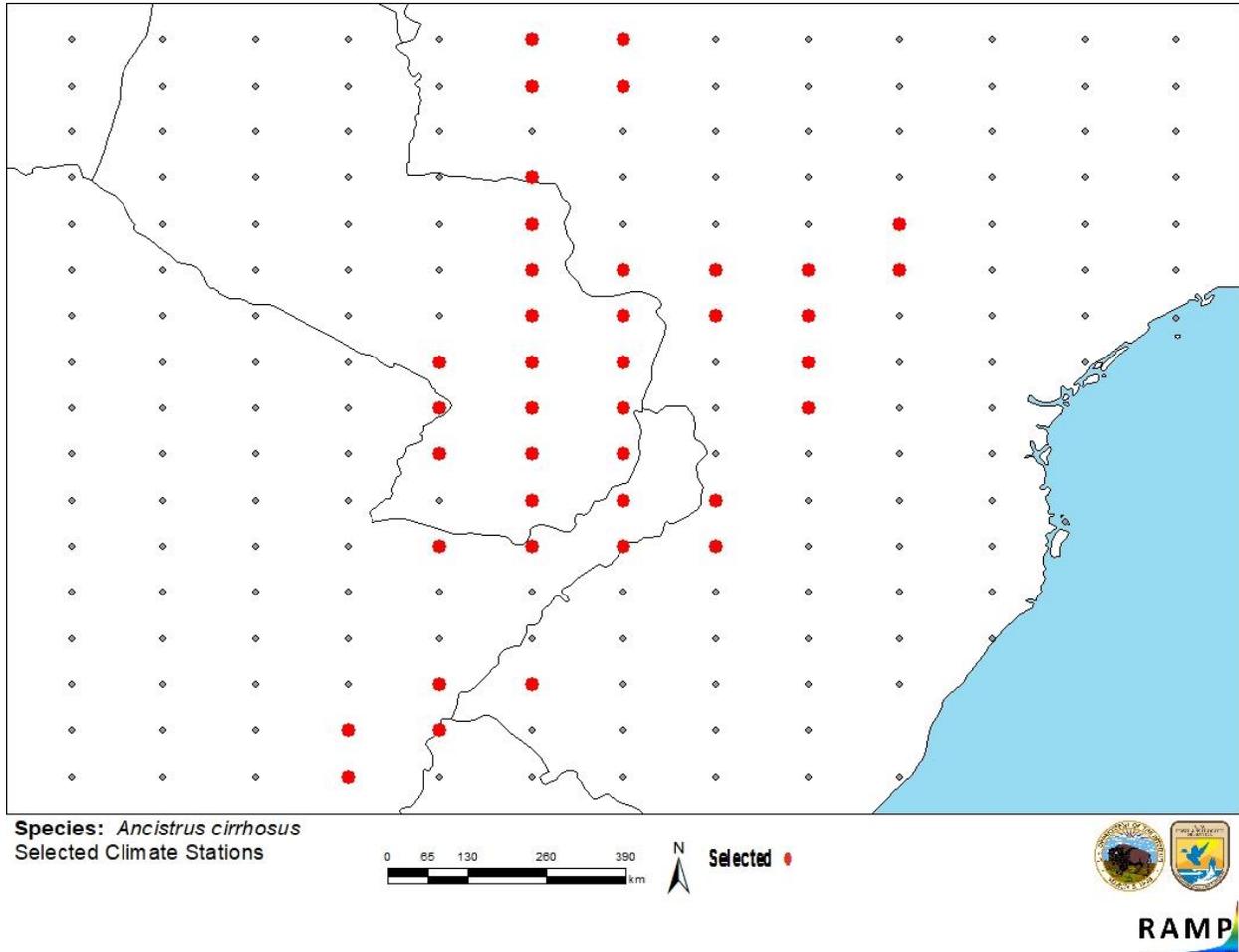


Figure 3. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Brazil, Paraguay, Argentina and Uruguay) and non-source locations (gray) for *Ancistrus cirrhosus* climate matching. Source locations from GBIF Secretariat (2017).

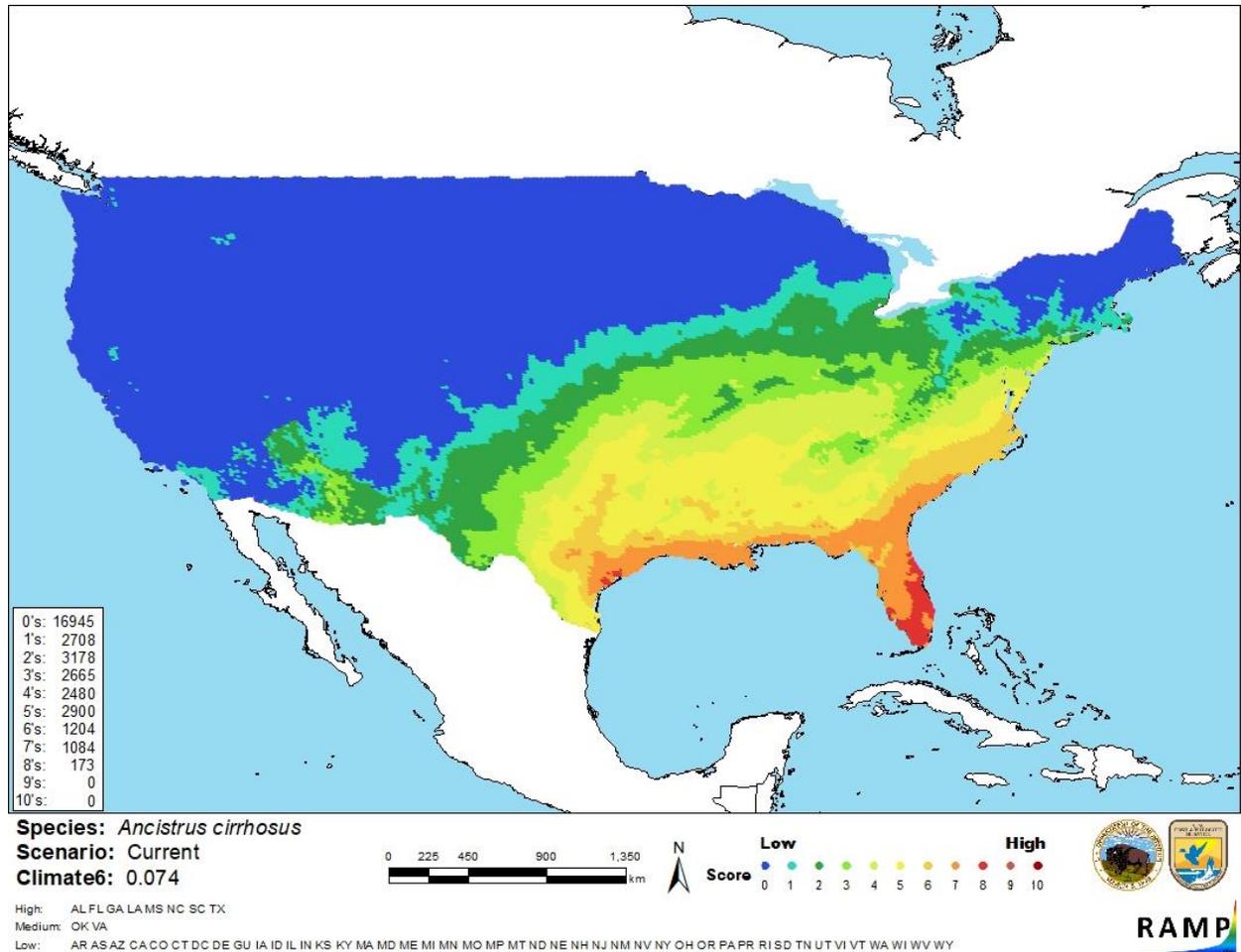


Figure 4. Map of RAMP (Sanders et al. 2018) climate matches for *Ancistrus cirrhosus* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0=Lowest match, 10=Highest match.”

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

Some information is known on the biology and ecology of *Ancistrus cirrhosus*. This fish has not been confirmed as introduced (an unidentified species within this genus has been introduced into Florida) and no information is available on potential impacts if this species was introduced. Taxonomic revision of the genus has been recommended. Due to lack of information and taxonomic uncertainty, the certainty of assessment is low. More information is needed to increase the certainty.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Ancistrus cirrhosus, the Jumbie Tetra, is an armored catfish that is native to the Paraná River basin in East Central South America (Brazil, Paraguay, Argentina and Uruguay). It has not been confirmed as introduced outside of its native range. The genus *Ancistrus* has been introduced to Florida, but the species is unknown. It is also unknown whether this is an established population. No information is available on the potential impacts of an introduction of this species. Therefore, history of invasiveness is uncertain. This genus, and in particular this species or a hybrid thereof, is heavily traded. The climate match with the contiguous United States is medium, with the highest matches occurring in Texas and Florida. In general, coastal areas in the Southeast had high matches. Due to lack of information and taxonomic uncertainty, certainty of this assessment is low and the overall risk posed by 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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