# *Baryancistrus niveatus* (a catfish, no common name)
## Ecological Risk Screening Summary

**U.S. Fish & Wildlife Service, March 2012**
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Photo: Gabriel Lelis Togni. Licensed under Creative Commons Attribution 3.0 Unported. Available: https://commons.wikimedia.org/wiki/File:Baryancistrus_niveatus.jpg. (January 2019).

# 1 Native Range and Status in the United States

## Native Range

From Froese and Pauly (2019):

"South America: Tocantins, Xingu, Tapajós and Trombetas River basins in Brazil."

## Status in the United States

BISON (2019) lists *Baryancistrus niveatus* as having been recorded in Alabama and Illinois. The observation in Alabama was from an aquarium specimen (GBIF Secretariat 2019). The record from Illinois is the result of a specimen at an aquarium dealer (Auburn University Museum, accessed through BISON 2019). No wild observations have been reported and there is no indication of establishment in the United States.

The record from an aquarium dealer in Illinois (BISON 2019) indicates that there is trade in this species in the United States.

## Means of Introductions in the United States

No records of *Baryancistrus niveatus* in the wild in the United States were found.

## Remarks

Information searches were conducted using the valid name *Baryancistrus niveatus*.

# 2 Biology and Ecology

## Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2019), *Baryancistrus niveatus* (Castelnau, 1855) is the current valid name of this species. *Baryancistrus niveatus* was originally described as *Hypostomus niveatus* (Castelnau, 1855) and has been previously known as *Parancistus niveatus*.

From ITIS (2019):

"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 *Baryancistrus*
Species *Baryancistrus niveatus* (Castelnau, 1855)"

## Size, Weight, and Age Range

From Froese and Pauly (2019):

"Max length : 34.0 cm TL male/unsexed; [Giarrizzo et al. 2015]; max. published weight: 520.00 g [Giarrizzo et al. 2015]"

From Py-Daneil (2011):

"*Baryancistrus beggini* seems to be a very small *Baryancistrus* species, reaching up to 80 mm SL, in contrast to *B. niveatus*, […] that can reach more than 200 mm SL."

## Environment

From Froese and Pauly (2019):

"Freshwater; demersal; pH range: 6.5 - 7.0; dH range: 8 - 10. […]; 22°C - 24°C [assumed to be recommended aquarium temperature] [Baensch and Riehl 1991]"

## Climate/Range

From Froese and Pauly (2019):

"Tropical; […]"

## Distribution Outside the United States

### Native

From Froese and Pauly (2019):

"South America: Tocantins, Xingu, Tapajós and Trombetas River basins in Brazil."

### Introduced

No records of introductions of *Baryancistrus niveatus* were found.

## Means of Introduction Outside the United States

No records of introductions of *Baryancistrus niveatus* were found.

## Short Description

From Py-Daniel et al. (2011):

"Absence of light band on border of dorsal and caudal fins in juveniles and adults"

"Abdomen is partially to almost completely plated in large specimens of *Baryancistrus niveatus*, *B. longipinnis*, and *B. demantoides*, with concentration of plates on gular area, pectoral girdle, and around anus. In *B. niveatus* from the rio Tocantins, patches of odontodes were observed in all specimens larger than 96 mm SL. Besides, large specimens of *B. niveatus* show dense concentration of plates even below lower lip."

"Finally, the spotted color pattern seems to be most generalized. *Baryancistrus niveatus, B. xanthellus, B. longipinnis,* and *B. demantoides* (although partially) have white to yellowish white dots over a darker background."

## Biology

No information on the biology of *Baryancistrus niveatus* was found.

## Human Uses

Youguang (2014) lists *Baryancistrus niveatus* as a fish species in the Singapore ornamental trade.

The record from an aquarium dealer in Illinois (BISON 2019) indicates that there is trade in this species in the United States.

## Diseases

No information on diseases of *Baryancistrus niveatus* was found. **No records of OIE-reportable diseases were found for *B. niveatus.***

## Threat to Humans

From Froese and Pauly (2018):

"Harmless"

# 3 Impacts of Introductions

No records of introductions of *Baryancistrus niveatus* were found.

# 4 Global Distribution

**Figure 1**. Map of North and South America showing locations where *Baryancistrus niveatus* has been reported. Locations are in the United States and Brazil. Map from GBIF Secretariat (2019).

The observation in Alabama (Figure 1) was from an aquarium specimen (GBIF Secretariat 2019) and was not used to select source points for the climate match.

# 5 Distribution Within the United States


**Figure 2**. Known distribution of *Baryancistrus niveatus* in the United States. Locations are in Illinois and Alabama. Map from BISON (2019).

The locations in Figure 2 were not used to selected source points for the climate match as they do not represent established, wild populations. The observation in Alabama was from an aquarium specimen (GBIF Secretariat 2019). The record from Illinois is the result of a specimen at an

aquarium dealer (Auburn University Museum, accessed through BISON 2019). There were no records of *Baryancistrus niveatus* in the wild in the United States.

# 6 Climate Matching

## Summary of Climate Matching Analysis

The climate match for *Baryancistrus niveatus* was low for the majority of the contiguous United States with the very southern tip of Florida having a medium match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low, with all States having a low individual climate score. The range for a low climate score is from 0.000 to 0.005, inclusive.

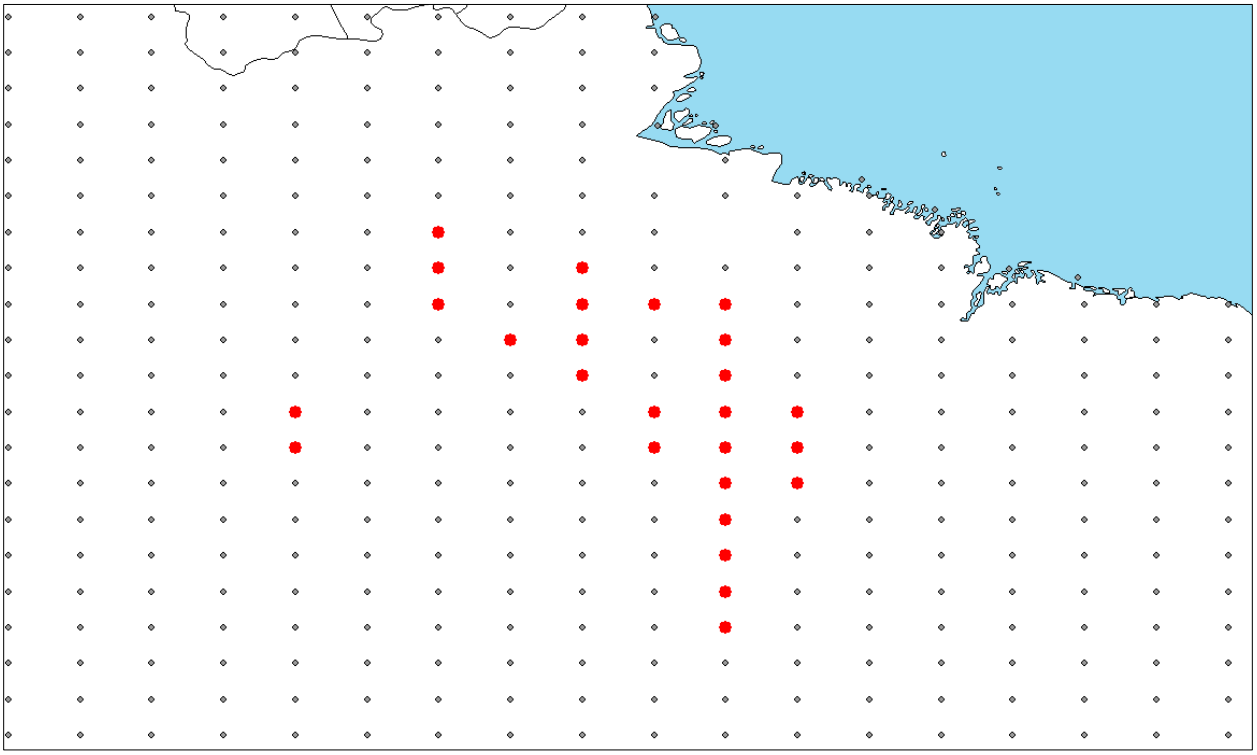

**Figure 3.** RAMP (Sanders et al. 2018) source map showing weather stations in northern South America selected as source locations (red; Brazil) and non-source locations (gray) for *Baryancistrus niveatus* climate matching. Source locations from GBIF Secretariat (2019).

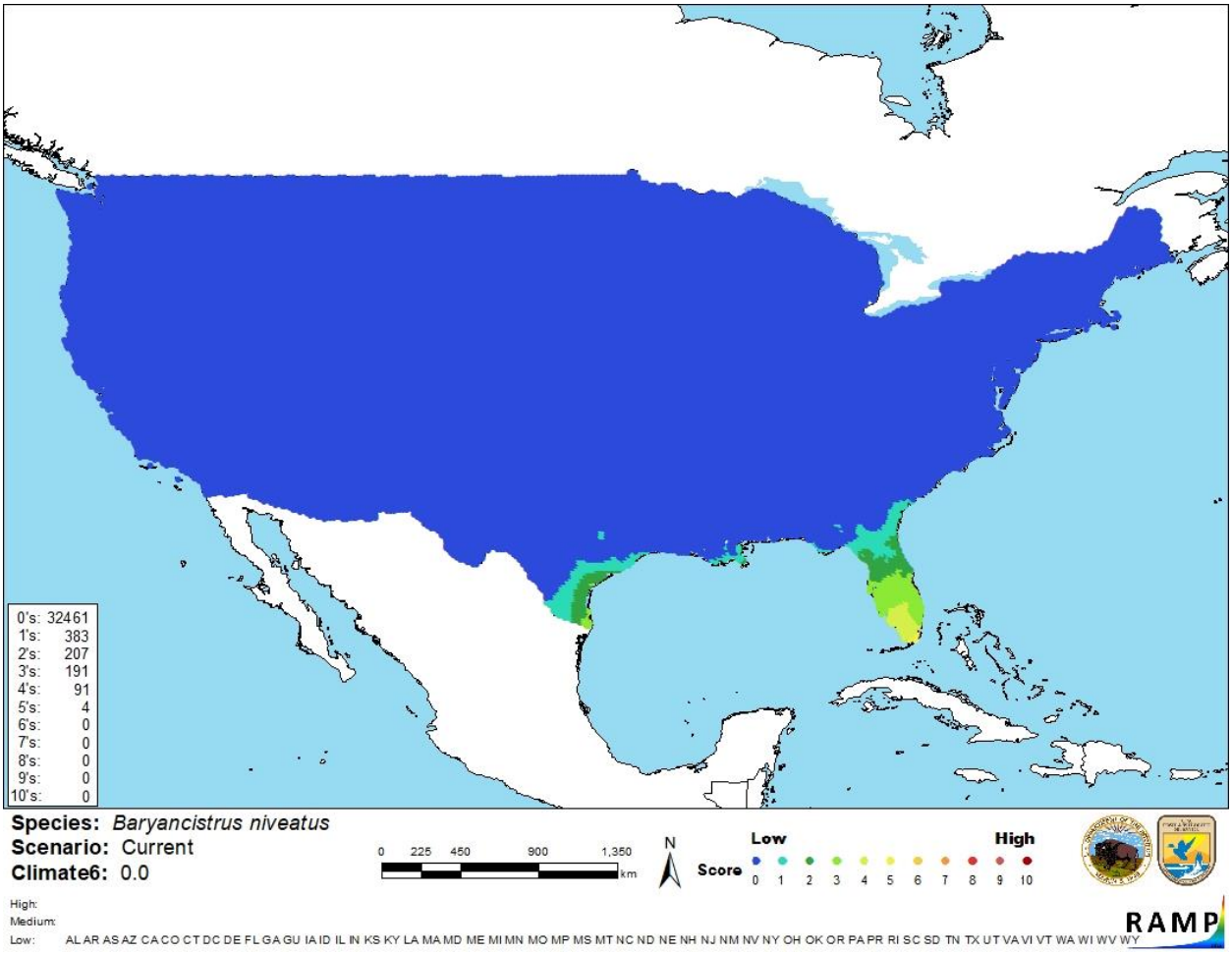


**Figure 4**. Map of RAMP (Sanders et al. 2018) climate matches for *Baryancistrus niveatus* in the contiguous United States based on source locations reported from GBIF Secretariat (2019). 0 = Lowest match, 10 = Highest match.

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≤X≤0.005 | Low |
| 0.005<X<0.103 | Medium |
| ≥0.103 | High |

# 7 Certainty of Assessment

The certainty of assessment for *Baryancistrus niveatus* is low. There is minimal information available for this species. BISON (2019) indicates that *Baryancistrus niveatus* has been found in Alabama and Illinois, however, these are aquaria specimens and there is no evidence of wild established populations present in the United States, or elsewhere in the world.

# 8 Risk Assessment

## Summary of Risk to the Contiguous United States

*Baryancistrus niveatus* is a South American armored catfish native to Brazil. This species is known to be traded in Singapore and the United States. The history of invasiveness is uncertain. There is no evidence of wild established populations present in the United States, or elsewhere in the world. The climate match for the contiguous United States was low with only far southwestern Florida having a medium climate match. The certainty of assessment is low. The overall risk assessment category 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 information.
- **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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Fricke, R., W. N. Eschmeyer, and R. van der Laan, editors. 2019. Catalog of fishes: genera, species, references. Available: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp. (January 2019).

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Py-Daneil, L., J. Zuanon, and R. R. de Oliveira. 2011. Two new ornamental loricariid catfishes of *Baryancistrus* from rio Xingu drainage (Siluriformes: Hypostominae). Neotropical Ichthyology 9(2):241–252.

Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. U.S. Fish and Wildlife Service.

Youguang, Y. 2014. Developing monitoring tools for tomorrow's invasives: species lists, DNA barcodes, and images for ornamental fish. Doctoral dissertation. National University of Singapore, Singapore.

# 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.**

Baensch, H. A., and R. Riehl. 1991. Aquarien atlas. Bd. 3. Melle: Mergus, Verlag für Natur-und Heimtierkunde, Germany.

Castelnau, F. L. 1855. Poissons. In: Animaux nouveaux or rares recueillis pendant l'expédition dans les parties centrales de l'Amérique du Sud, de Rio de Janeiro a Lima, et de Lima au Para; exécutée par ordre du gouvernement Français pendant les années 1843 a 1847; Part 7, Zoologie. Paris (P. Bertrand) 2:1–112.

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.