

***Pseudacanthicus spinosus* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2012

Revised, November 2018

Web Version, 1/29/2021

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



Image: Francis de Laporte de Castelnau. Image is in the Public Domain, original publication was in 1856. Available: https://commons.wikimedia.org/wiki/File:F_de_Castelnau-poissonsPl22_-_Pseudacanthicus_spinosus.jpg. (November 2018).

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“South America: Amazon River basin [Brazil].”

Status in the United States

No records of *Pseudacanthicus spinosus* in the wild or in trade in the United States were found.

Pseudacanthicus spinosus falls within Group I of New Mexico's Department of Game and Fish Director's Species Importation List (New Mexico Department of Game and Fish 2010). Group I species "are designated semi-domesticated animals and do not require an importation permit."

Means of Introductions in the United States

No records of *Pseudacanthicus spinosus* in the wild in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2018), *Pseudacanthicus spinosus* (Castelnau, 1855) is the current valid name of this species. *Pseudacanthicus spinosus* was originally described as *Hypostomus spinosus* (Castelnau, 1855).

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 *Pseudacanthicus*
Species *Pseudacanthicus spinosus* (Castelnau, 1855)

Size, Weight, and Age Range

From Froese and Pauly (2018):

"Max length : 26.0 cm SL male/unsexed; [Fisch-Muller 2003]"

Environment

From Froese and Pauly (2018):

"Freshwater; demersal."

"20°C - 24°C [assumed to be recommended aquarium temperature] [Baensch and Riehl 1991]"

Climate

From Froes and Pauly (2018):

“Tropical;”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“South America: Amazon River basin [Brazil].”

Introduced

No records of introductions of *Pseudacanthicus spinosus* were found.

Means of Introduction Outside the United States

No records of introductions of *Pseudacanthicus spinosus* were found.

Short Description

No information on a short description of *Pseudacanthicus spinosus* were found.

Biology

From Sá-Oliveira et al. (2014):

“Similarly, detritus was consumed by specialists, such as [...], *Pseudocanthicus spinosus*, [...], which fed exclusively on this material, but also consumed by omnivores.”

Human Uses

No information on human uses of *Pseudacanthicus spinosus* was found.

Diseases

From Fujimoto et al. (2014):

“The infection by *Trypanosoma* spp. was inspected. [...]. *Leporacanthicus galaxias* and *Pseudacanthicus spinosus* presented 100% infection prevalence, and the other species showed a variable prevalence of infection.”

No records of OIE-reportable diseases (OIE 2021) were found for *P. spinosus*.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of introductions of *Pseudacanthicus spinosus* were found.

4 History of Invasiveness

No records of introductions of *Pseudacanthicus spinosus* were found, therefore the history of invasiveness is classified as “no known nonnative population.”

5 Global Distribution

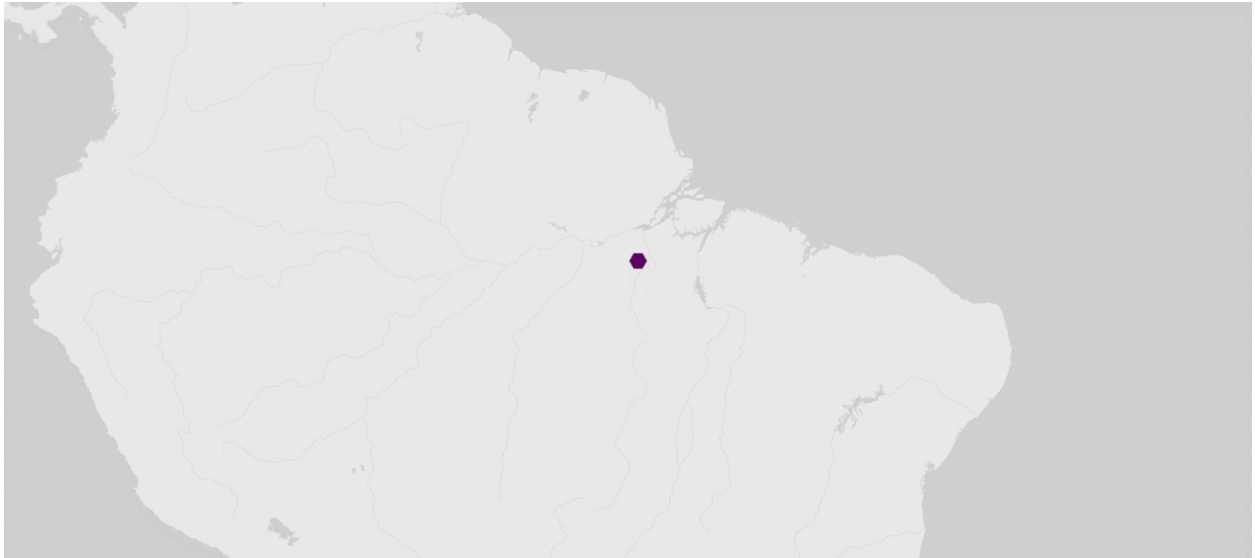


Figure 1. Map of northern South America showing locations where *Pseudacanthicus spinosus* has been reported. Location is in Brazil. Map from GBIF Secretariat (2018).

6 Distribution Within the United States

No records of *Pseudacanthicus spinosus* in the wild in the United States were found.

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Pseudacanthicus spinosus* was low for the entire contiguous United States. There were no areas of high or medium match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low), with all States having low individual climate 6 scores.

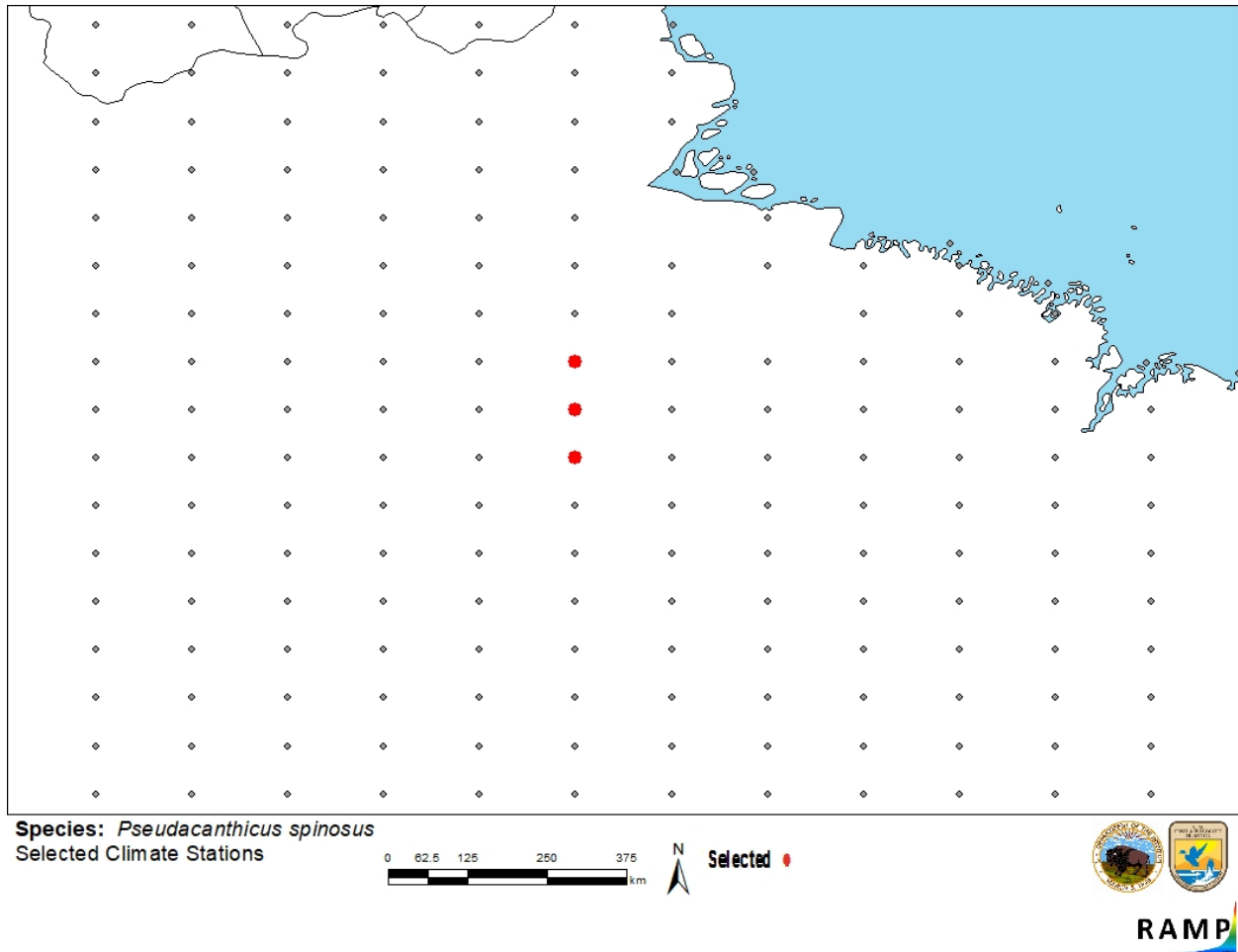


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in South America selected as source locations (red; Brazil) and non-source locations (gray) for *Pseudacanthicus spinosus* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

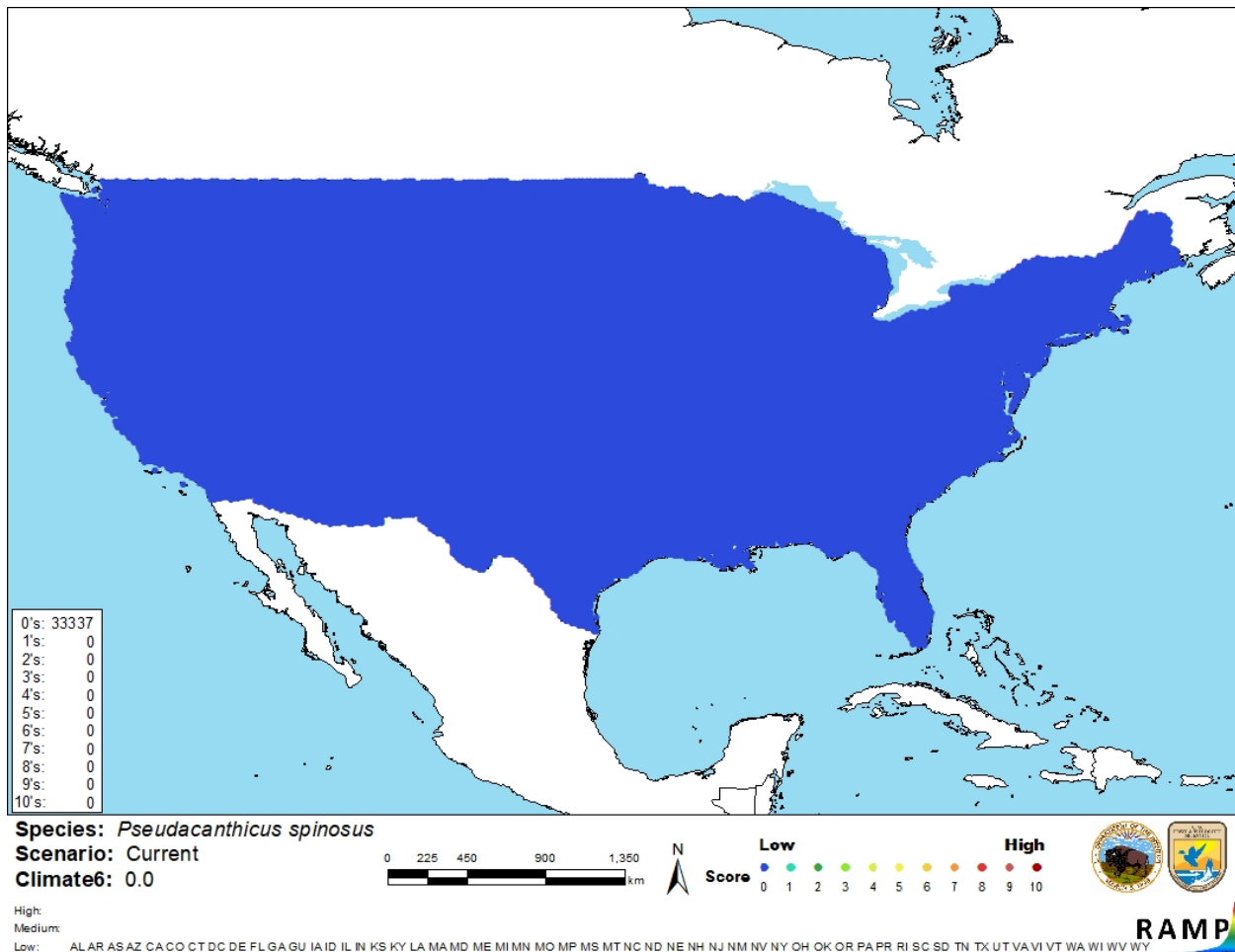


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Pseudacanthicus spinosus* in the contiguous United States based on source locations reported from GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: (Count of target points with climate scores 6-10)/ (Count of all target points)	Overall Climate Match Category
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

8 Certainty of Assessment

The certainty of assessment for *Pseudacanthicus spinosus* is low. There is minimal information available for this species. No information on introductions of *Pseudacanthicus spinosus* was found.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Pseudacanthicus spinosus is an armored catfish native to Brazil. The history of invasiveness is classified as “no known nonnative population.” It has not been reported as introduced or established anywhere in the world. The climate match for the contiguous United States was low with all states having a low individual climate score. The certainty of assessment is low. The overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 4): No Known Nonnative Population**
- **Overall Climate Match Category (Sec. 7): Low**
- **Certainty of Assessment (Sec. 8): Low**
- **Remarks/Important additional information: No additional information**
- **Overall Risk Assessment Category: Uncertain**

10 Literature Cited

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.

Fricke R, Eschmeyer WN, van der Laan R, editors. 2018. Catalog of fishes: genera, species, references. California Academy of Science. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp> (November 2018).

Froese R, Pauly D, editors. 2018. *Pseudacanthicus spinosus* (Castelnau, 1855). FishBase. Available: <http://www.fishbase.org/summary/Pseudacanthicus-spinosus.html> (November 2018).

Fujimoto RY, Neves M, Santos RFB, Souza NC, Do Couto MVS, Lopes JNS, Diniz DG, Eiras JC. 2013. Morphological and hematological studies of *Trypanosoma* spp. infecting ornamental armored catfish from Guamá River-PA, Brazil. *Anais da Academia Brasileira de Ciências* 85:1149–1156.

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Pseudacanthicus spinosus* (Castelnau, 1855). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/2339445> (November 2018).

[ITIS] Integrated Taxonomic Information System. 2018. *Pseudacanthicus spinosus* (Castelnau, 1855). Reston, Virginia: Integrated Taxonomic Information System. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680330#null (November 2018).

New Mexico Department of Game and Fish. 2010. Director's species importation list. Santa Fe, New Mexico: New Mexico Department of Game and Fish. Available: http://www.wildlife.state.nm.us/download/enforcement/importation/information/Director-s-Species-Importation-List-08_03_2010.pdf (November 2020).

[OIE] World Organisation for Animal Health. 2021. OIE-listed diseases, infections and infestations in force in 2021. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2021/> (January 2021).

Sá-Oliveira JC, Angelini R, Isaac-Nahum VJ. 2014. Diet and niche breadth and overlap in fish communities within the area by an Amazonian reservoir (Amapá, Brazil). *Anais da Academia Brasileira de Ciências* 86:383–405.

Sanders S, Castiglione C, Hoff M. 2018. Risk Assessment Mapping Program: RAMP. Version 3.1. U.S. Fish and Wildlife Service.

11 Literature Cited in Quoted Material

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 HA, Riehl R. 1991. *Aquarien atlas*. Bd. 3. Melle, Germany: Mergus, Verlag für Natur- und Heimtierkunde.

Castelnau FL. 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. *Zoologie* 2:1–50.

Fisch-Muller S. 2003. Loricariidae-Ancistrinae (armored catfishes). Pages 373–400 in Reis RE, Kullander SO, Ferraris CJ Jr, editors. *Checklist of the freshwater fishes of South and Central America*. Porto Alegre, Brazil: EDIPUCRS.