

Tigerstriped Catfish (*Brachyplatystoma tigrinum*)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2014
Revised, October 2017, November 2017
Web Version, 9/7/2018



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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2010):

“South America: Amazon River basin.”

From Eschmeyer et al. (2017):

“Distribution: Amazon River basin: Brazil, Bolivia, Colombia and Peru.”

Status in the United States

No records of *Brachyplatystoma tigrinum* in the wild in the United States were found.

Chapman et al. (1994) list *Brachyplatystoma tigrinum*, under the name *Merodontotus tigrinus*, as imported to the United States in October 1992.

Means of Introductions in the United States

No records of *Brachyplatystoma tigrinum* in the wild in the United States were found.

Remarks

Brachyplatystoma tigrinum is the valid name for this species (Eschmeyer et al. 2017) but some databases have yet to incorporate this change and still use *Merodontotus tigrinus* as the valid name. Information searches were conducted using both names.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2017), *Brachyplatystoma tigrinum* (Britski 1981) is the valid name for this species. It was originally described as *Merodontotus tigrinus*.

From ITIS (2014):

“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 Pimelodidae
Genus *Merodontotus* Britski, 1981
Species *Merodontotus tigrinus* Britski, 1981”

Size, Weight, and Age Range

From Froese and Pauly (2010):

“Max length: 60.0 cm TL male/unsexed; [Lundberg and Littmann 2003].”

Environment

From Froese and Pauly (2010):

“Freshwater; demersal. [...]; 22°C - 26°C [assumed to be recommended aquarium temperature] [Baensch and Riehl 1995]”

Climate/Range

From Froese and Pauly (2010):

“Tropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2010):

“South America: Amazon River basin.”

From Eschmeyer et al. (2017):

“Distribution: Amazon River basin: Brazil, Bolivia, Colombia and Peru.”

Introduced

No records of *Brachyplatystoma tigrinum* introductions to the wild were found.

Xiong et al. (2015) lists *Brachyplatystoma tigrinum* as present in the ornamental trade in China.

Yi (2014) lists *Brachyplatystoma tigrinum* as present in the ornamental trade in Singapore.

Means of Introduction Outside the United States

No records of *Brachyplatystoma tigrinum* introductions to the wild were found.

Short Description

From Lundberg and Akama (2005):

“Elongated caudal filaments persist in adults of *B. juruense*, *B. platynemum*, and *B. tigrinum* [...].”

Biology

Information on the biology of *Brachyplatystoma tigrinum* was not available.

Human Uses

From Froese and Pauly (2010):

“Fisheries: of no interest”

Xiong et al. (2015) lists *Brachyplatystoma tigrinum* as present in the ornamental trade in China.

Yi (2014) lists *Brachyplatystoma tigrinum* as present in the ornamental trade in Singapore.

From Moreau and Coomes (2006):

“The next most economically important species (the red tail catfish or peje torre, *Phractocephalus hemiliopterus* and the tiger-striped catfish, *Merodontotus tigrinus*) each account for only 5% of [aquarium trade] export value.”

Chapman et al. (1994) list *Brachyplatystoma tigrinum*, under the name *Merodontotus tigrinus*, as imported to the United States in October 1992.

Diseases

Information on the diseases of *Brachyplatystoma tigrinum* was not available.

Threat to Humans

From Froese and Pauly (2010):

“Harmless”

3 Impacts of Introductions

No records of *Brachyplatystoma tigrinum* introductions to the wild were found, therefore there is no information on impacts of introduction.

4 Global Distribution



Figure 1. Known global distribution of *Brachyplatystoma tigrinum*. Locations are all in Brazil. Map from GBIF Secretariat (2017).

5 Distribution Within the United States

No records of *Brachyplatystoma tigrinum* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Brachyplatystoma tigrinum* was medium for the very southern tip of Florida; it was low everywhere else. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low, and no states had an individually high climate match.

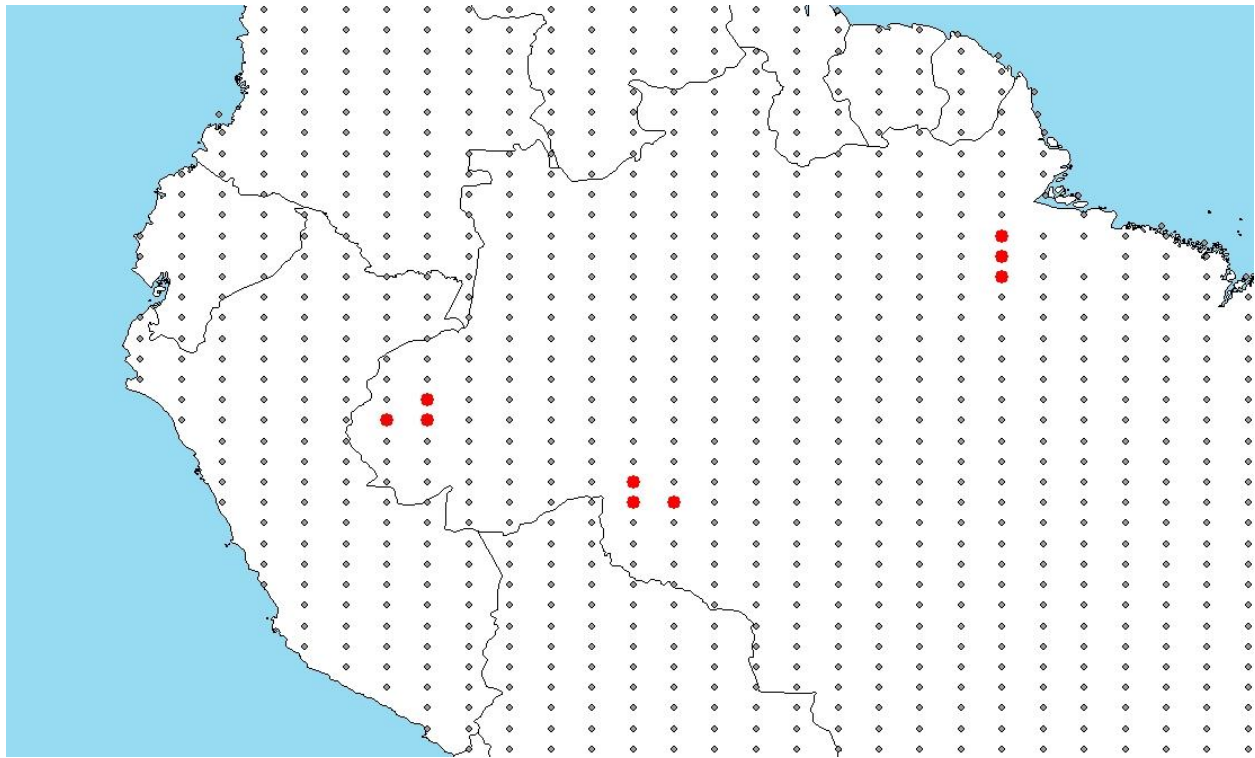


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in South America selected as source locations (red; Brazil) and non-source locations (grey) for *Brachyplatystoma tigrinum* climate matching. Source locations from GBIF Secretariat (2017).

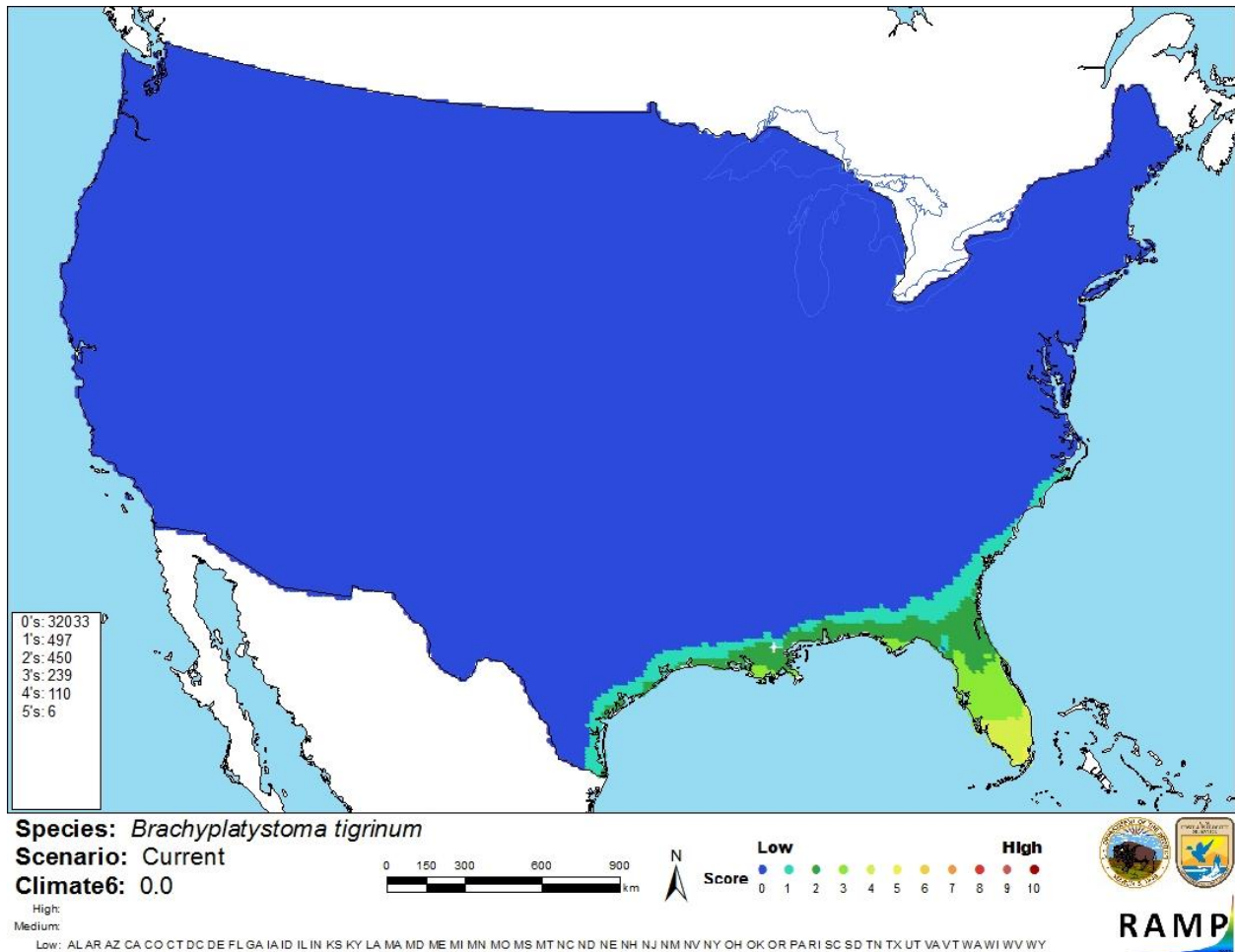


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Brachyplatystoma tigrinum* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0 = Lowest match, 10 = Highest match. Counts of climate match scores are tabulated on the left.

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 assessment is low. Very little information was available about *Brachyplatystoma tigrinum*. No records of introductions were found. Three peer reviewed records of the species' presence in the aquarium trade were found.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The Tigerstriped Catfish (*Brachyplatystoma tigrinum*) is a species of catfish native to the Amazon River basin in South America. The history of invasiveness for *B. tigrinum* is uncertain. There were no records of introductions to the wild found. Three peer reviewed records indicated the species' presence in the aquarium trade but did not indicate the volume or duration of trade. One of the records indicated that this species has been imported into the United States for the aquarium trade. The climate match is low; the Climate 6 score was 0.000. 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** *Brachyplatystoma tigrinum* has been imported into the United States for the aquarium trade.
- **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.

Chapman, F. A., S. Fitz-Coy, E. Thunberg, J. T. Rodrick, C. M. Adams, and M. Andre. 1994. An analysis of the United States of American international trade in ornamental fish. Project Final Report. University of Florida.

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- Xiong, W., X. Sui, S.-H. Liang, and Y. Chen. 2015. Non-native freshwater fish species in China. *Reviews in Fish Biology and Fisheries* 25(4):651–687.
- Yi, Y. 2014. Developing monitoring tools for tomorrow’s invasives: species lists, DNA barcodes, and images for ornamental fish. Doctoral dissertation. National University of 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. 1995. *Aquarien atlas*. Band 4. Mergus Verlag GmbH, Verlag für Natur-und Heimtierkunde, Melle, Germany.
- Britski, H. A. 1981. Sobre um novo gênero e espécie de Sorubiminae da Amazônia (Pisces, Siluriformes). *Papéis Avulsos do Departamento de Zoologia, Secretaria da Agricultura, São Paulo* 34(7):109–114.
- Lundberg, J. G., and M. W. Littmann. 2003. Pimelodidae (Long-whiskered catfishes). Pages 432–446 in R. E. Reis, S. O. Kullander, and C. J. Ferraris, Jr., editors. *Checklist of the freshwater fishes of South and Central America*. EDIPUCRS, Porto Alegre, Brazil.