

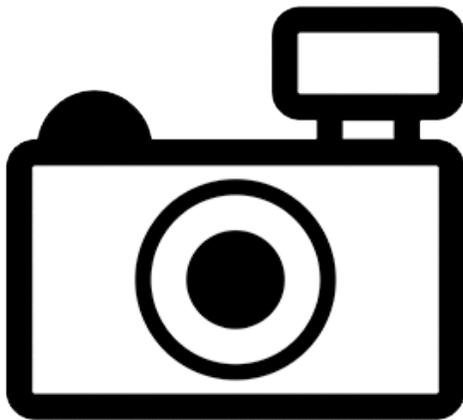
***Hypostomus luetkeni* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2013

Revised, August 2018

Web Version, 9/13/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“South America: Rio de Janeiro, Brazil.”

From Mazzoni and Caramaschi (1997):

“According to Mazzoni, Caramaschi & Weber (1994), the distribution of “*Cascudo largeiro*” (*Hypostomus luetkeni* Lacepede, 1803) is restricted to the River Paraíba do Sul Basin (southeastern Brazil).”

Status in the United States

No records of *Hypostomus luetkeni* in trade or in the wild in the United States were found.

Means of Introductions in the United States

No records of *Hypostomus luetkeni* in the wild in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Hypostomus luetkeni* (Steindachner 1877) is the current valid name of this species. *Hypostomus luetkeni* was originally described as *Plecostomus luetkeni* (Steindachner 1877).

From ITIS (2018):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysii
Order Siluriformes
Family Loricariidae
Subfamily Hypostominae
Genus *Hypostomus*
Species *Hypostomus luetkeni* (Steindachner, 1877)”

Size, Weight, and Age Range

From Terra et al. (2007):

“[...], and *H. luetkeni* ranged from 170 to 240 mm TL.”

Environment

From Froese and Pauly (2018):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“South America: Rio de Janeiro, Brazil.”

From Mazzoni and Caramaschi (1997):

“According to Mazzoni, Caramashchi & Weber (1994), the distribution of “Cascudo largeiro” (*Hypostomus luetkeni* Lacepede, 1803) is restricted to the River Paraiba do Sul Basin (southeastern Brazil).”

Introduced

No records of introduction were found for *Hypostomus luetkeni*.

Means of Introduction Outside the United States

No records of introduction were found for *Hypostomus luetkeni*.

Short Description

No description of *Hypostomus luetkeni* was found.

Biology

From Mazzoni and Caramaschi (1997):

“Nonetheless, the fecundity of *H. luetkeni* is similar to other reported Loricariidae species (Azevedo, 1938), which are characterized by a small number (<2,500) of large eggs (5-6 mm). This might be indicative of parental care behavior (Mazzoni & Caramaschi 1995).”

Human Uses

No information on human uses of *Hypostomus luetkeni* was found.

Diseases

No records of diseases were found for *Hypostomus luetkeni*.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

From Terra et al. (2007):

“The major findings of this study are that heavy Cr [chromium] and Pb [lead] concentrations in muscles tissues of [...] *H. luetkeni* and that human population should avoid to consume these fishes species from the Paraíba do Sul river.”

3 Impacts of Introductions

No records of introduction were found for *Hypostomus luetkeni*.

4 Global Distribution

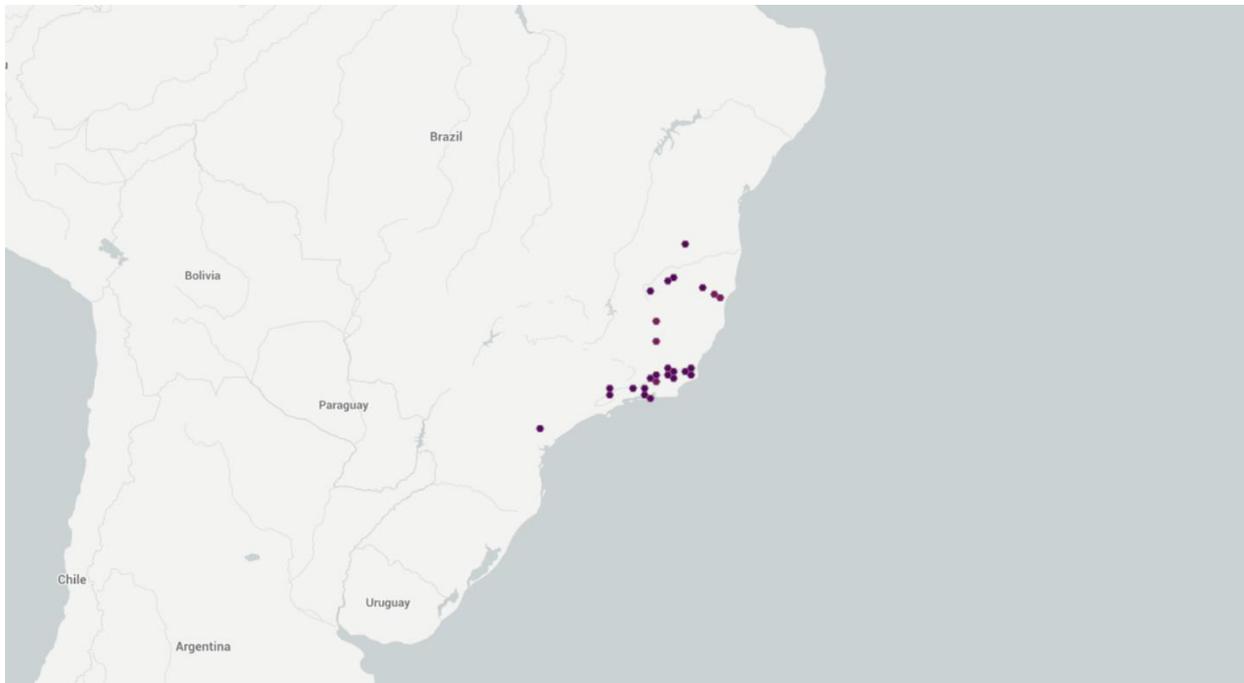


Figure 1. Known global distribution of *Hypostomus luetkeni*. Locations are in Brazil. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

No records of *Hypostomus luetkeni* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus luetkeni* was high through most of Florida and along parts of the Texas coast, medium in coastal areas from Maryland to Texas and in east Texas, and low elsewhere in the contiguous United States. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.025, medium. The range for a medium climate score is between 0.005 and 0.103. The majority of states had low individual climate scores. Texas had a medium individual climate score and Florida, Georgia, and South Carolina had high individual climate scores.

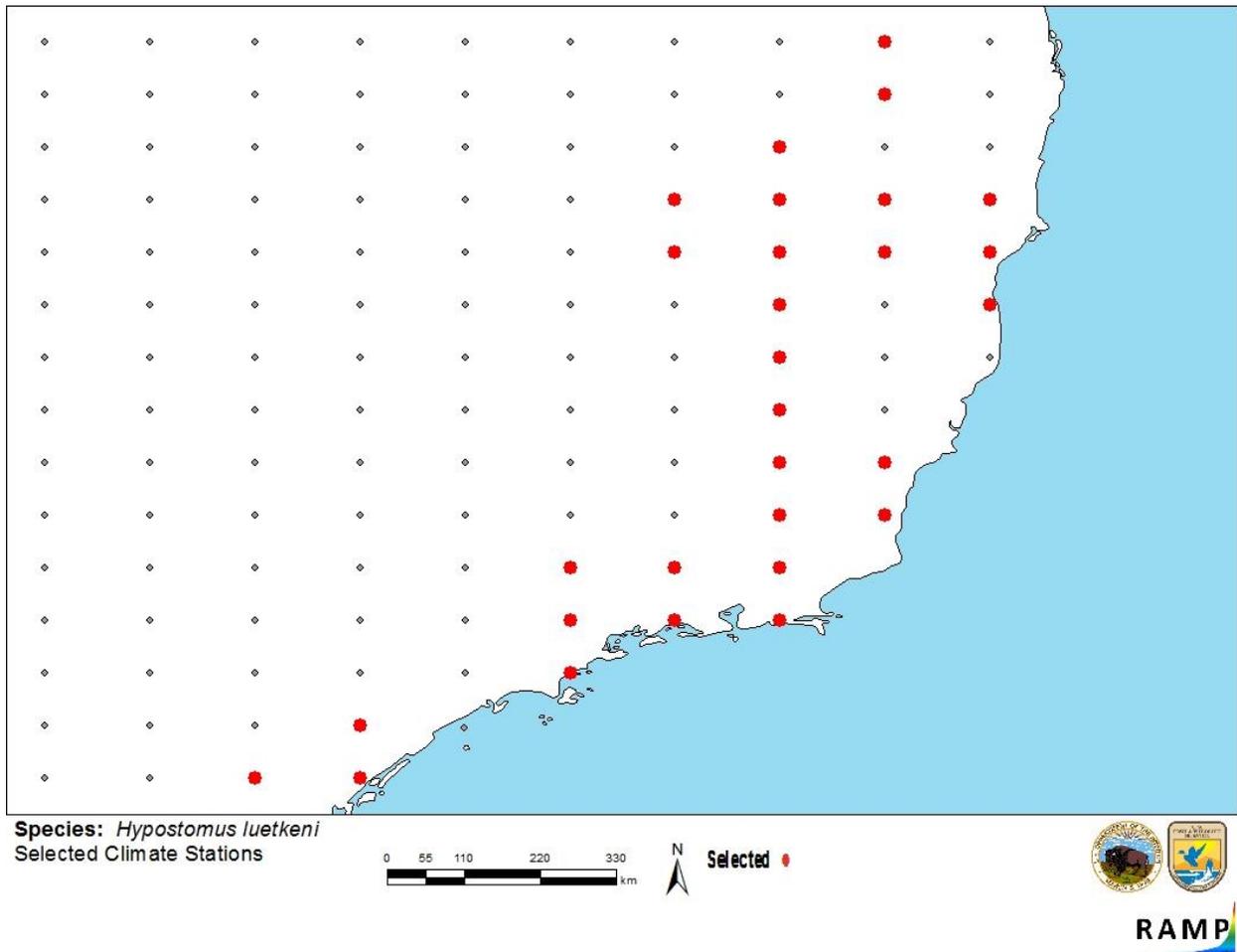


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Brazil selected as source locations (red) and non-source locations (gray) for *Hypostomus luetkeni* climate matching. Source locations from GBIF Secretariat (2018).

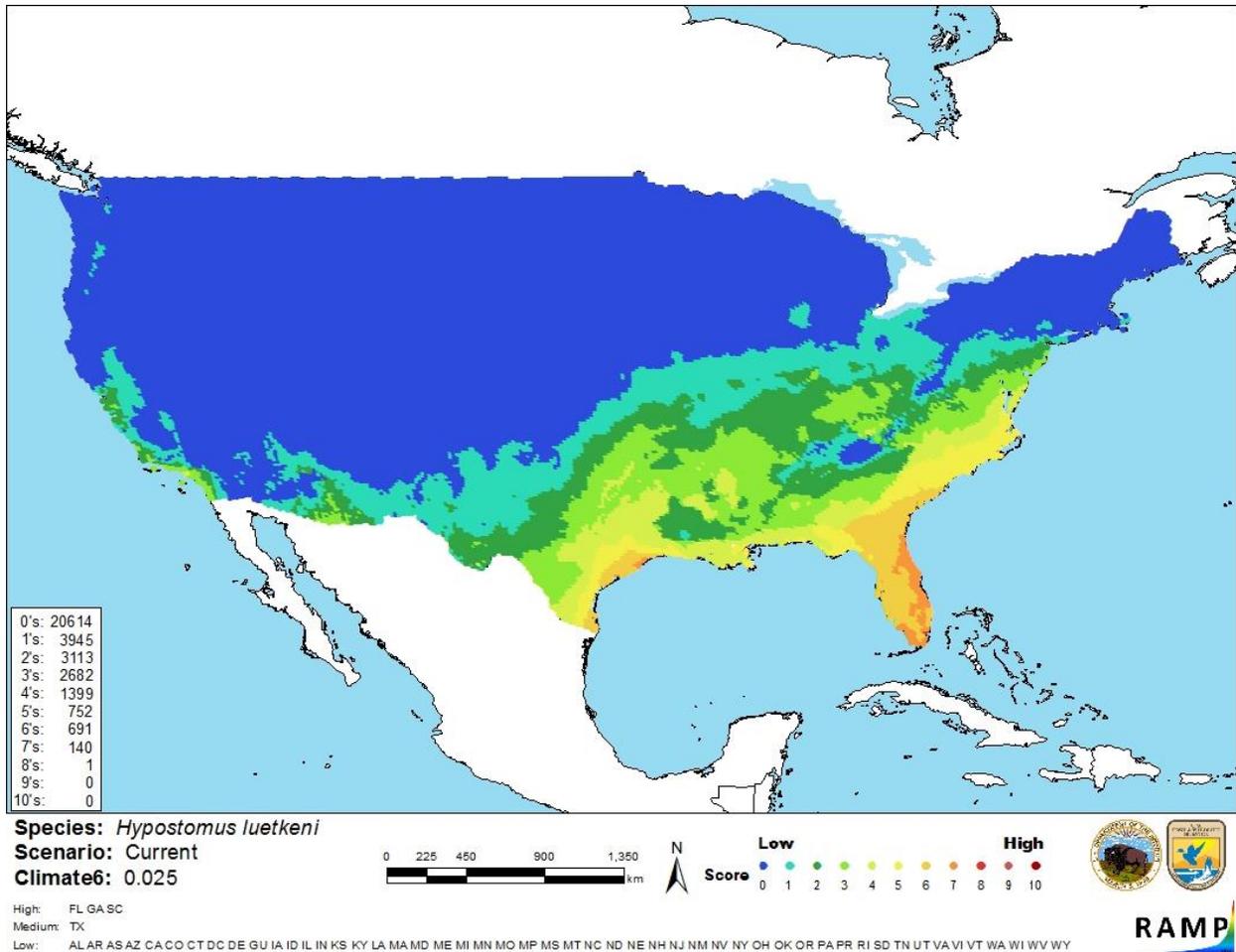


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus luetkeni* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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

The certainty of assessment is low. There was minimal information available for this species. There were no records of introductions found, so impacts of introduction are unknown.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus luetkeni is a member of the suckermouth armored catfish family (Loricariidae), native to the Paraíba do Sul River, Brazil. One study reported high lead and chromium levels in flesh of *H. luetkeni*, warning against consumption. The history of invasiveness is uncertain. No records of introductions were found. The climate match with the contiguous United States was medium, with Florida, South Carolina, and Georgia having individual high climate scores. The certainty of assessment is low due to lack of information; the overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **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.

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (August 2018).

Froese, R., and D. Pauly, editors. 2018. *Hypostomus luetkeni* Steindachner, 1877. FishBase. Available: <https://www.fishbase.de/summary/Hypostomus-luetkeni.html>. (August 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus luetkeni* (Steindachner, 1877). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5202156>. (August 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Hypostomus luetkeni* (Steindachner, 1877). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680194#null. (August 2018).

Mazzoni, R., and E. P. Caramaschi. 1997. Observations on the reproductive biology of female *Hypostomus luetkeni* Lacepede 1803. Ecology of Freshwater Fish 6:53–56.

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

Terra, B. F., F. G. Araujo, C. F. Calza, R. T. Lopes, and T. P. Teixeira. 2007. Heavy metal in tissues of three fish species from different trophic levels in a tropical Brazilian river. *Water, Air, and Soil Pollution* 187:275–284.

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.

Azevedo, P. 1938. O cascudo dos aquedus nordestinos *Plecostomus plecostomus*. *Arquivos do Instituto de Biologia (São Paulo)* 9:211–224.

Caramaschi, E. P. 1991. Levantamento da ictiofauna do rio Paraíba do Sul e ciclo reprodutivo das principais espécies, no trecho compreendido entre Tres Rios e Campos. Universidade Federal do Rio de Janeiro. *FURNAS-ENGEVIX/UFRJ* 1:1–269.

Mazzoni, R., U. Caramaschi, and C. Weber. 1994. Taxonomical revision of the species of *Hypostomus* Lacepède, 1803 (Siluriformes, Loricariidae) from lower rio Paraíba do Sul, Rio de Janeiro, Brazil. *Revue Suisse Zoologie* 101:1–16.

Mazzoni, R., and F. P. Caramaschi. 1995. Size structure, sex ratio and onset of sexual maturity of two species of *Hypostomus* Lacepede, 1803 (Osteichthyes, Loricariidae). *Journal of Fish Biology* 47:841–849.

Steindachner, F. 1877. Die Süßwasserfische des südöstlichen Brasilien. (IV). *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe* 76(1):217–230.