

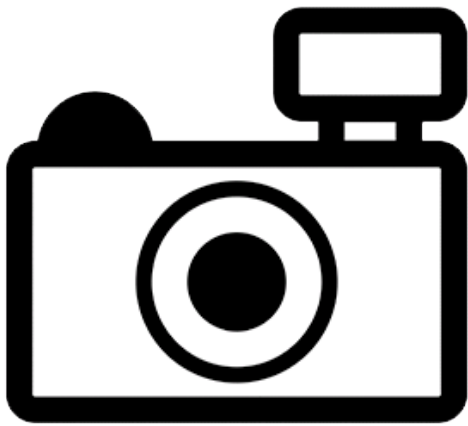
***Hypostomus garmani* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2013

Revised, August 2018

Web Version, 9/11/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“South America: São Francisco River basin [southern Brazil].”

Status in the United States

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

Means of Introductions in the United States

No records of *Hypostomus garmani* 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 garmani* (Regan 1904) is the current valid name for this species. It was originally described as *Plecostomus garmani*.

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 *Hypostomus*
Species *Hypostomus garmani* (Regan, 1904)”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 13.0 cm SL male/unsexed; [Casatti and Castro 1998]”

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: São Francisco River basin [southern Brazil].”

Introduced

No records of *Hypostomus garmani* introductions were found.

Means of Introduction Outside the United States

No records of *Hypostomus garmani* introductions were found.

Short Description

A short description of the species was not found.

Biology

From Froese and Pauly (2018):

“Feed on attached algae growing on rocks. Maintain their position over the rock surfaces with the help of their well-developed and horizontally orientated paired fins, scraping algae off the rocks with their pedicellate mobile and spatulate upper jaw teeth [Casatti and Castro 1998].”

Human Uses

Information on human uses of *Hypostomus garmani* was not found.

Diseases

Information on diseases of *Hypostomus garmani* was not found.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of *Hypostomus garmani* introductions were found, therefore there is no information on impacts of introductions.

4 Global Distribution



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

The northernmost point in Brazil (Figure 1) was not used as a source point for the climate match. The occurrence is outside the stated range of the species and the records remarks indicate the specimen was too young to be confident in the species identification (GBIF Secretariat 2018).

5 Distribution Within the United States

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

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus garmani* was generally low for most of the contiguous United States. There were small areas of medium match in southern Florida and Texas. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.000. All States had a low individual climate score except for Florida, which had a medium climate score.

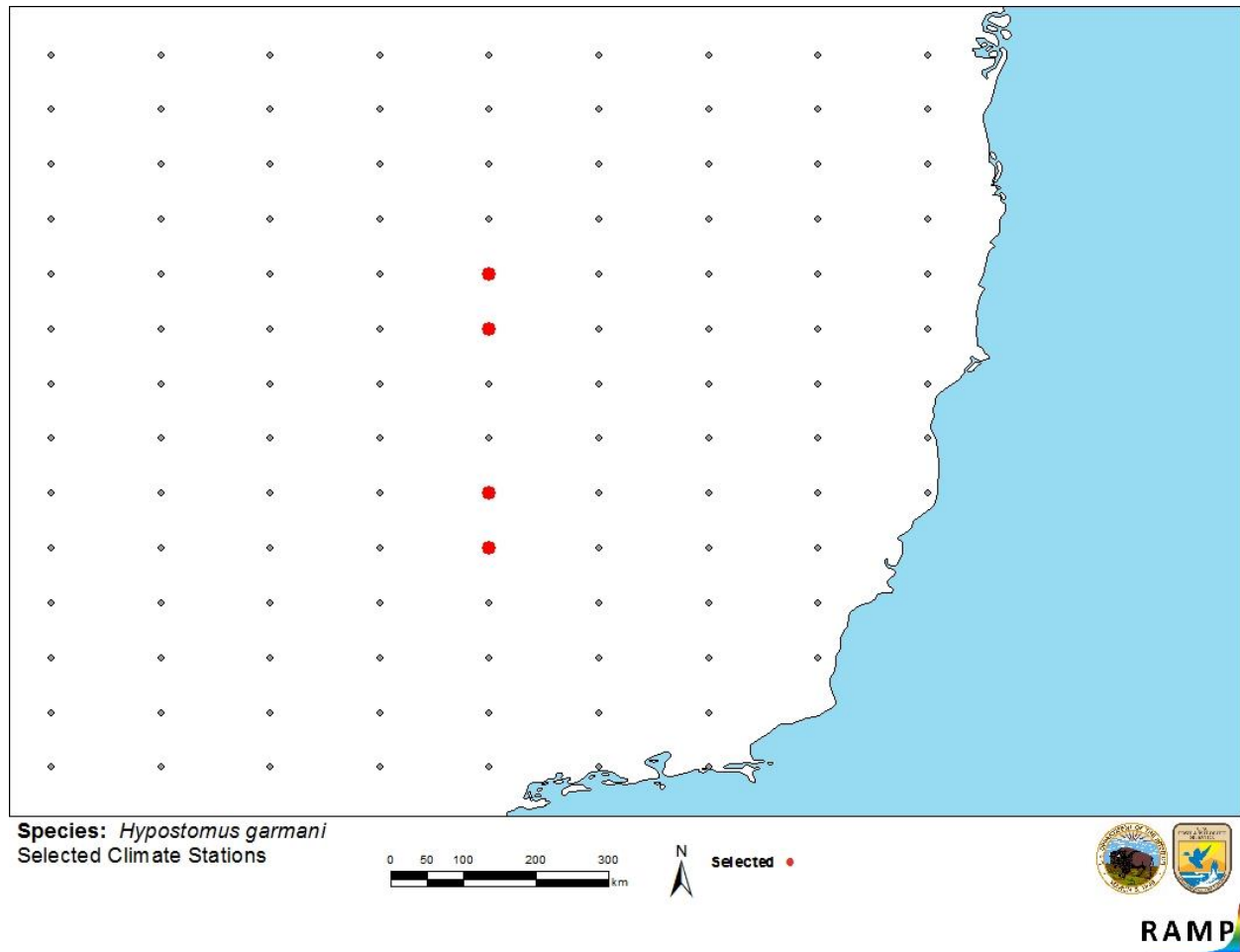


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Brazil) and non-source locations (gray) for *Hypostomus garmani* climate matching. Source locations from GBIF Secretariat (2018).

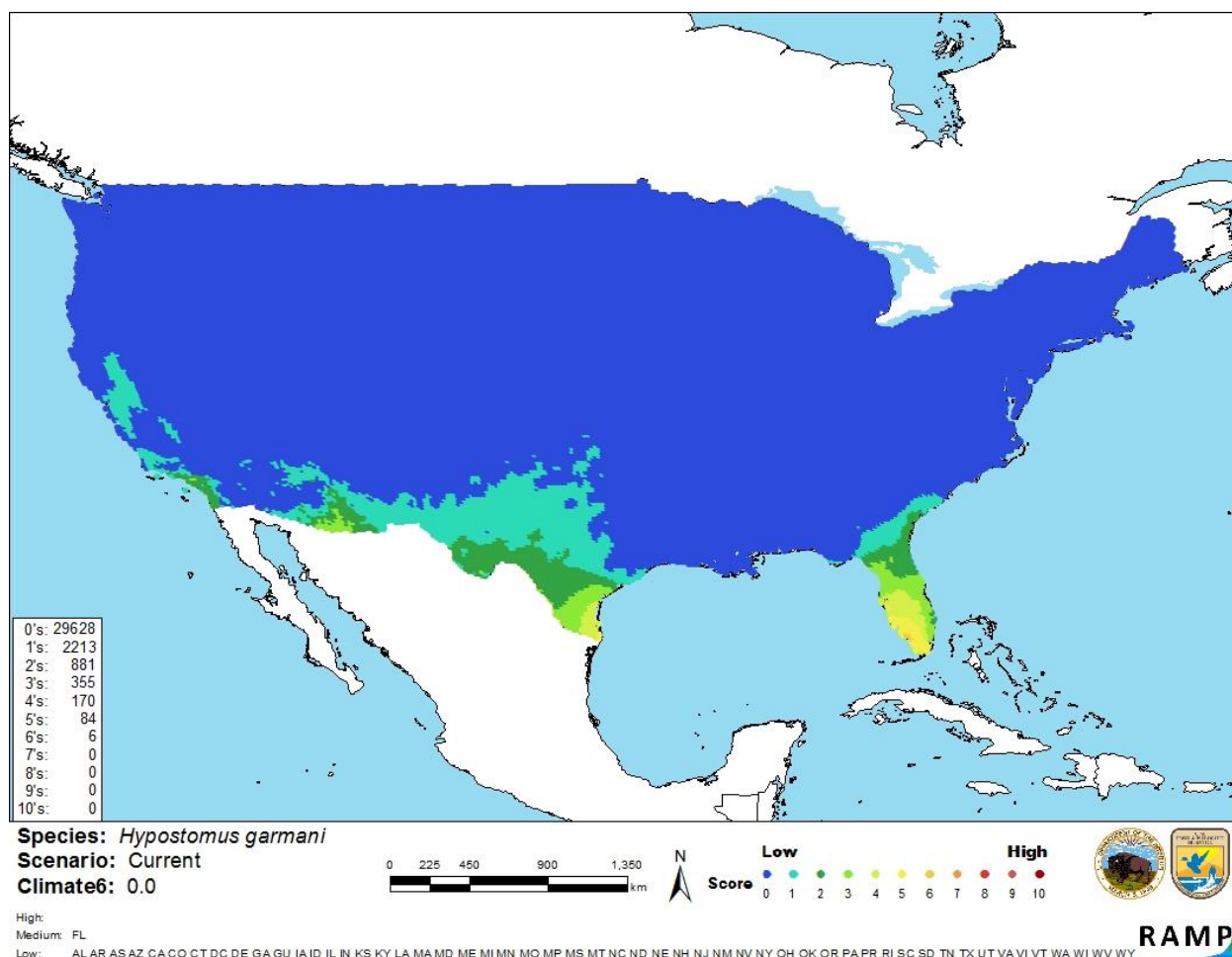


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus garmani* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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 for *Hypostomus garmani* is low. There was minimal general information available for the species and no records of introduction were found. The lack of introductions results in no information on impacts of introductions.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus garmani is an armored catfish native to the São Francisco River basin in southern Brazil. The history of invasiveness is uncertain, no records of introduction were found. The climate match was low; however, Florida had a medium individual climate score. 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.

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 garmani* (Regan, 1904). FishBase. Available: <http://www.fishbase.se/summary/Hypostomus-garmani.html>. (August 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus garmani* (Regan, 1904). Global Biodiversity Information Facility, Copenhagen. Available:
<https://www.gbif.org/species/5202150>. (August 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Hypostomus garmani* (Regan, 1904). Integrated Taxonomic Information System, Reston, Virginia. Available:
https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680171#null. (August 2018).

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

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.

Casatti, L., and R. M. C. Castro. 1998. A fish community of the São Francisco River headwaters riffles, southeastern Brazil. *Ichthyological Explorations of Freshwater* 9(3):229–242.