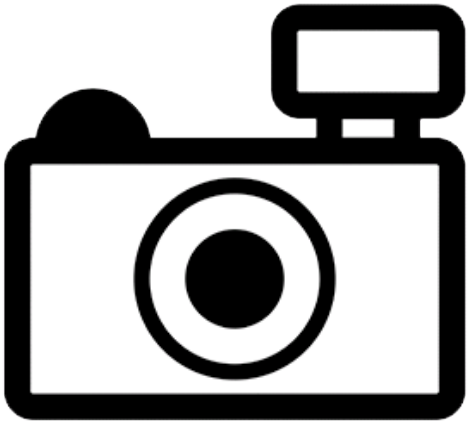
Hypostomus agna (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, August 2011
Revised, August 2018
Web Version, 8/31/2018



1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

"South America: Ribeira de Iguapé River basin [Brazil]."

From Oyakawa et al. (2005):

"Distribution and notes. *Hypostomus agna* occurs exclusively in the Ribeira de Iguape river basin […]. The species was found to live mainly in the channel of the largest rivers, as exemplified by rio Ribeira de Iguape itself, rio Batatal, rio Pardo, and rio Catas Altas. *Hypostomus agna* is one of the largest species of loricariids of this basin, just smaller than *H. tapijara*."

Status in the United States

No records of *Hypostomus agna* occurrences in the United States were found.
No information on trade of *H. agna* in the United States was found.

Means of Introductions in the United States
No records of *Hypostomus agna* occurrences 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 agna* (Miranda Ribeiro 1907) is the current valid name of this species. *Hypostomus agna* was originally described as *Plecostomus agna* Miranda Ribeiro 1907.

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 agna* (Miranda Ribeiro, 1907)"

Size, Weight, and Age Range
From Froese and Pauly (2018):

"Max length : 22.0 cm TL male/unsexed; [Weber 2003]"

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: Ribeira de Iguapé River basin [Brazil]."

From Oyakawa et al. (2005):

"Distribution and notes. *Hypostomus agna* occurs exclusively in the Ribeira de Iguape river basin […]. The species was found to live mainly in the channel of the largest rivers, as exemplified by rio Ribeira de Iguape itself, rio Batatal, rio Pardo, and rio Catas Altas. *Hypostomus agna* is one of the largest species of loricariids of this basin, just smaller than *H. tapijara*."

Introduced
No records of *Hypostomus agna* introductions were found.

Means of Introduction Outside the United States
No records of *Hypostomus agna* introductions were found.

Short Description
From Oyakawa et al. (2005):

"Keels absent or poorly developed; anterior plates of mid-dorsal series longitudinally aligned with those of posterior portion of trunk, not interrupted by the first plate of dorsal series […]; caudal peduncle trapezoid in cross-section; 3 to 5 plates around supraoccipital […]."

Biology
No information on the biology of *Hypostomus agna* was found.

Human Uses
No information on the human uses of *Hypostomus agna* were found.

Diseases
No information on parasites or pathogens of *Hypostomus agna* was found. No records of OIE-reportable diseases were found.

Threat to Humans

From Froese and Pauly (2018):

"Harmless"

3 Impacts of Introductions

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

4 Global Distribution

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

5 Distribution Within the United States

No records of *Hypostomus agna* occurrences in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus agna* was low for the majority of the contiguous United States with high match in eastern Florida and a small area of eastern Texas. There were areas of medium matches in coastal areas of the Southeast from Virginia to Texas. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.024, medium. The range for a medium climate match is between 0.005 and 0.103. Florida, Georgia, and South Carolina had high individual climate scores.

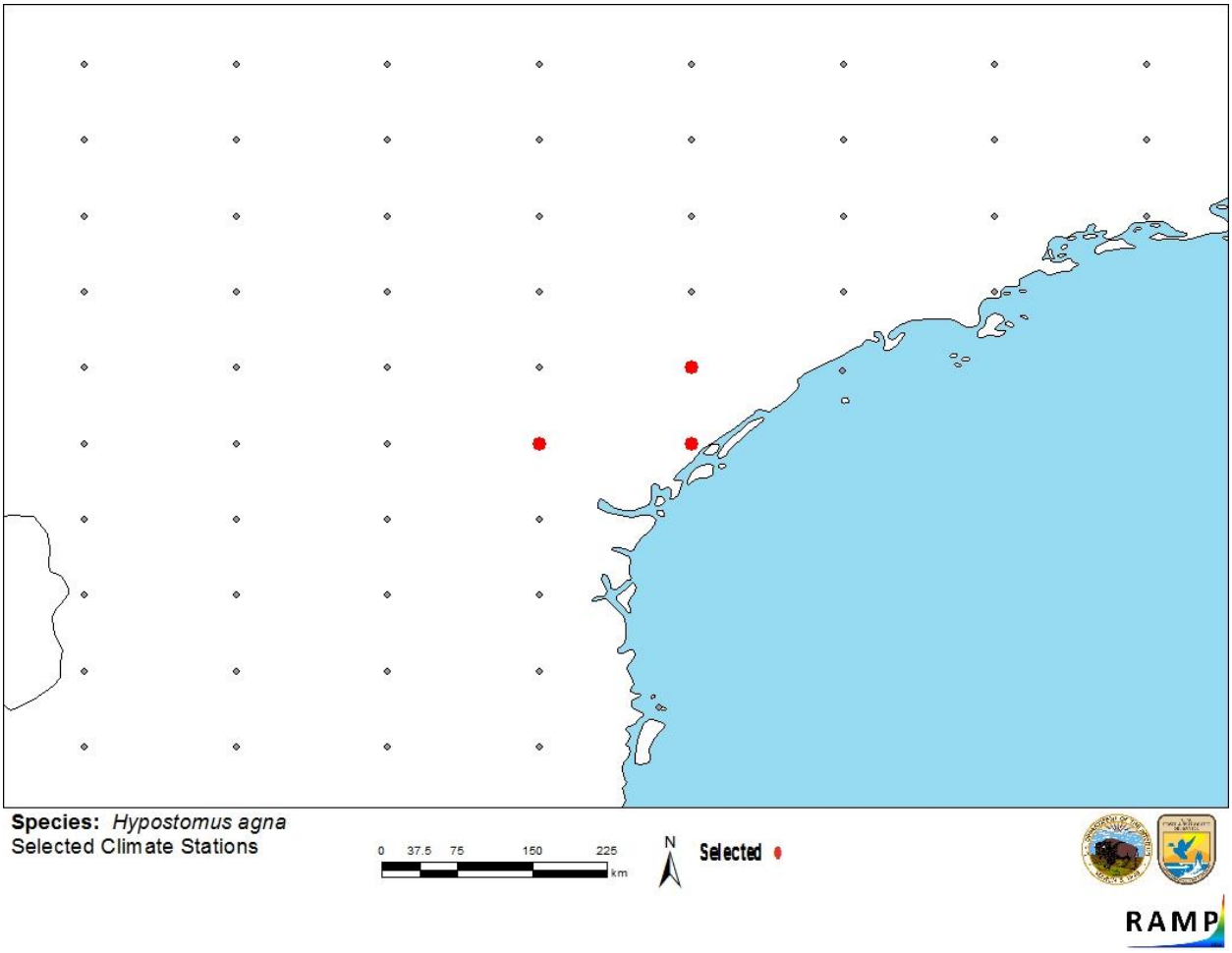


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Brazil) and non-source locations (gray) for *Hypostomus agna* climate matching. Source locations from GBIF Secretariat (2018).

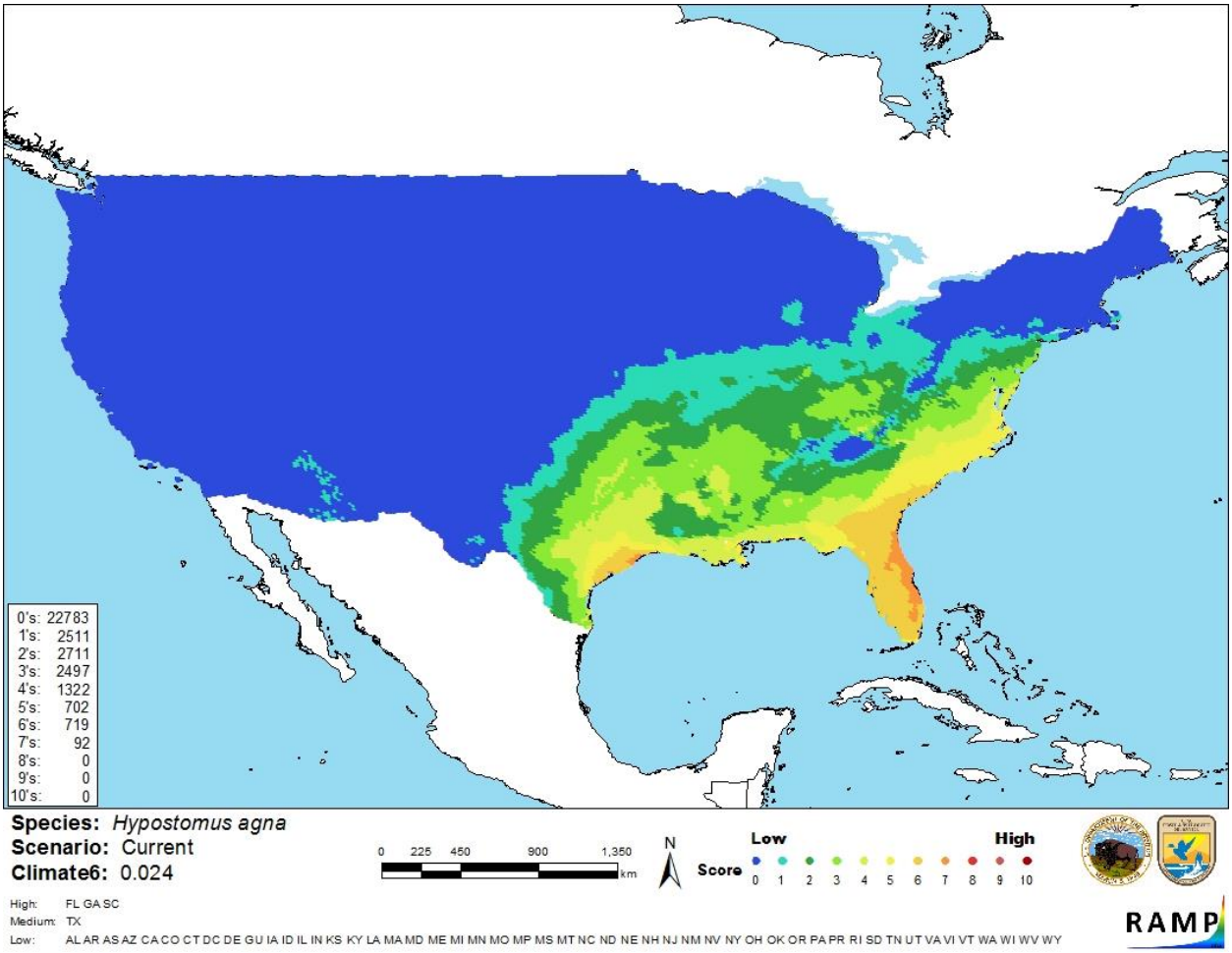


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus agna* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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

7 Certainty of Assessment

The certainty of this assessment is low. There is minimal information for *Hypostomus agna* and a lack of peer-reviewed literature. No introductions of this species have been reported, so impacts of introduction are unknown.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus agna is an armored catfish native to Brazil. There is little information available for this species. The history of invasiveness is uncertain. It has not been reported as introduced or established outside of its native range, so impacts of introduction are unknown. The climate match analysis resulted in a medium match for the contiguous United States with high individual climate scores for Florida, Georgia, and South Carolina. The certainty of this assessment is low. The overall risk assessment category in 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 agna* Miranda Ribeiro, 1907. FishBase. Available: https://www.fishbase.de/summary/Hypostomus-agna.html. (August 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus agna* (Miranda Ribeiro, 1907). Global Biodiversity Information Facility, Copenhagen. Available: https://www.gbif.org/species/5202198. (August 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Hypostomus agna* (Miranda Ribeiro, 1907). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680134#null. (August 2018).

Oyakawa, O. T., A. Akama, and A. M. Zanata. 2005. Review of the genus *Hypostomus* Lacépède, 1803 from rio Ribeira de Iguape basin, with description of a new species (Pisces, Siluriformes, Loricariidae). Zootaxa 921:1–27.

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.

Miranda Ribeiro, A. de. 1907. Peixes do Iporanga -- S. Paulo. Resultados de excursões do Sr. Ricardo Krone, membro correspondente do Museu Nacional do Rio de Janeiro. Boletim Sociedade Nacional Agricultura, Rio de Janeiro [Lavoura] 11(5):185–190.

Weber, C. 2003. Loricariidae - Hypostominae (armored catfishes). Pages 351–372 *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.