

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

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2013

Revised, August 2018

Web Version, 9/13/2018



Photo: Dias and Zawadzki (2018). Licensed under Creative Commons BY 4.0. Available: <https://checklist.pensoft.net/article/21679/>. (August 17, 2018).

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

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

Status in the United States

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

Means of Introductions in the United States

No records of *Hypostomus iheringii* 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 iheringii* (Regan 1908) is the valid name for the species. It was originally described as *Plecostomus iheringii*.

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 iheringii* (Regan, 1908)”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 11.6 cm SL 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: Tietê River basin [Brazil].”

Introduced

No records of introductions of *Hypostomus iheringii* were found.

Means of Introduction Outside the United States

No records of introductions of *Hypostomus iheringii* were found.

Short Description

From Dias and Zawadzki (2018):

“Body spots larger than the pupil diameter; raised superior orbital margin; orbital diameter 20.0–21.5% of head length”

From Batista-Silva et al. (2018):

“Deep body; inferior mouth; teeth bifid; premaxilla with 32–41 and dentary with 35–42 teeth. Mid-lateral series with 24–27 plates, predorsal series with 3, and dorsal-fin base series with 8 plates. Dorsal fin with I,7, pectoral fin with I,6, pelvic fin with i,5, and anal fin with 6, total rays. Ground color brownish; dark brown blotches, occasionally inconspicuous.”

Biology

No information on the biology of *Hypostomus iheringii* was found.

Human Uses

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

Diseases

No records of OIE-reportable diseases were found for *Hypostomus iheringii*.

From Zica et al. (2012):

“During a parasitological survey in *H. iheringii* (Regan, 1908), *H. regani* (Ihering, 1905), and *H. strigaticeps* (Regan, 1907), specimens of [*Unilatus*] *unilatus* were collected from the gill filaments.”

Zica et al. (2011) list *H. iheringii* as a host of *Austrodiplostomum compactum*.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

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

4 Global Distribution

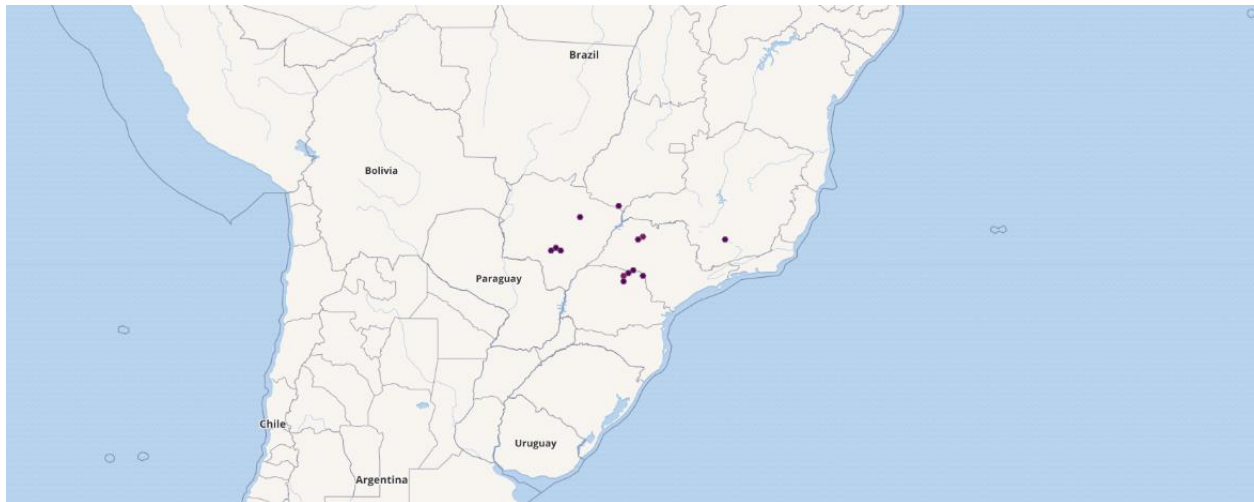


Figure 1. Known global distribution of *Hypostomus iheringii*. Locations are in southeastern Brazil. Map from GBIF Secretariat (2018).

Additional locations in southern Brazil given by Batista-Silva et al. (2018) and Dias and Zawadzki (2018) were used in the climate match.

5 Distribution Within the United States

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

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus iheringii* was low for the western and northeastern portions of the contiguous United States. The southern Atlantic and Gulf coasts had a medium match, while peninsular Florida had a high match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.032, medium. The range for a medium climate score is between 0.005 and 0.103. The following states had high individual climate scores: Florida, Georgia, Louisiana, and North Carolina.

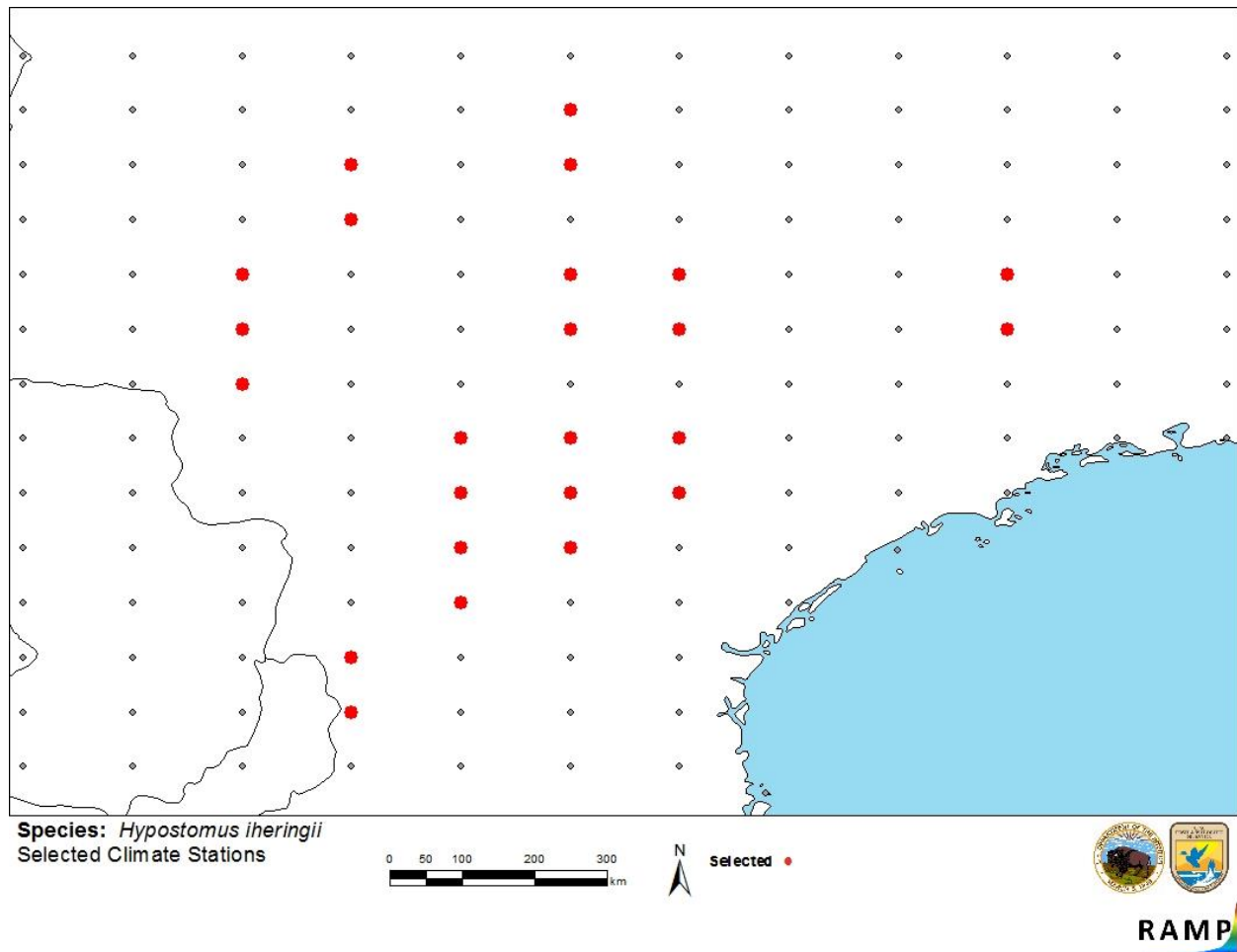


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Brazil) and non-source locations (gray) for *Hypostomus iheringii* climate matching. Source locations from Batista-Silva et al. (2018), Dias and Zawadzki (2018), and GBIF Secretariat (2018).

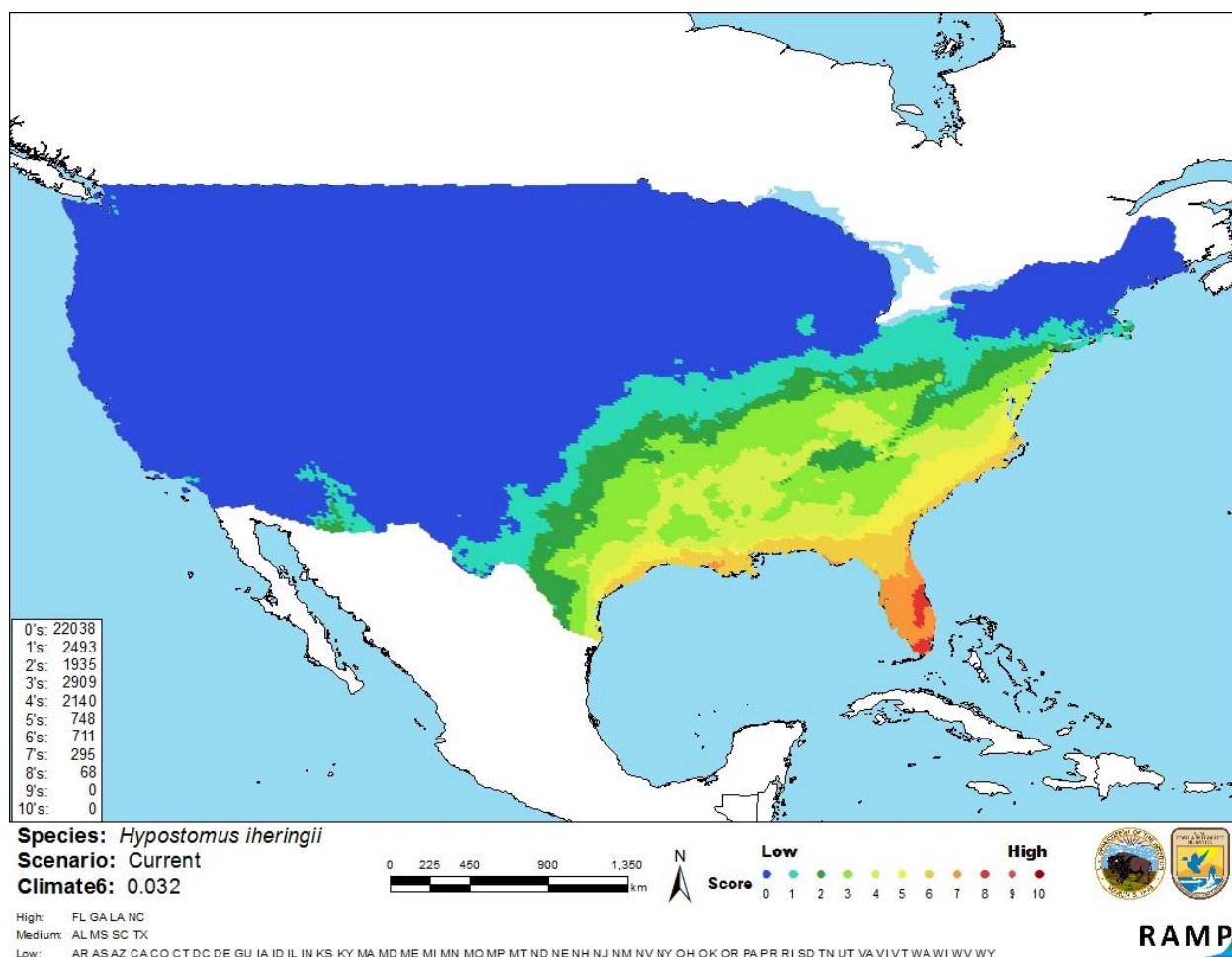


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus iheringii* in the contiguous United States based on source locations reported by Batista-Silva et al. (2018), Dias and Zawadzki (2018), and GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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 is some information available for *Hypostomus iheringii* which comes primarily from peer-reviewed journals. However no records of introductions were found so there is no information on impacts of introduction to evaluate.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus iheringii is a species of armored catfish that is native to the Tietê River basin, part of the Paraná River basin in southern Brazil. The history of invasiveness is uncertain. No records of introduction were found so there is no impact information to assess. The climate match is medium. The areas of highest match were along the Gulf and southern Atlantic coasts, particularly Florida. Florida, Georgia, Louisiana, and North Carolina had high individual climate scores. The certainty of assessment is low. While there is some quality information available for this species there is no information on introductions or impacts of introductions. The overall risk assessment 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.

- Batista-Silva, V. F., A. Frota, E. A. L. Kashiwaqui, M. C. F. Abelha, D. Bailly, É. A. Gubiani, W. J. da Graça. 2018. Ichthyofauna from three streams of the lower Iguatemi River in the upper Paraná River basin, Brazil. *Check List* 14(2):363–378.
- Dias, A. C., and C. H. Zawadzki. 2018. Identification key and pictures of the *Hypostomus* Lacépède, 1803 (Siluriformes, Loricariidae) from the rio Ivaí, upper rio Paraná basin. *Check List* 14(2):393–414.
- 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 iheringii* (Regan, 1908). FishBase. Available: <http://www.fishbase.se/summary/Hypostomus-iheringii.html>. (August 2018).
- GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus iheringii* (Regan, 1908). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5202159>. (October 2017).

ITIS (Integrated Taxonomic Information System). 2018. *Hypostomus iheringii* (Regan, 1908). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680181#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.

Zica, É. O. P., V. D. Abdallah, R. K. de Azevedo, A. C. Wunderlich, E. D. Carvalho, and R. J. Silva. 2012. *Unilatus unilatus* Mizelle & Kritsky, 1967 (Monogenea, Ancyrocephalinae) in *Hypostomus* spp. (Siluriformes, Loricariidae) from the Chavantes reservoir, São Paulo State, Brazil. *Helminthologia* 49(2):87–91.

Zica, E. O. P., H. Brandão, C. H. Zawadzki, A. B. Nobile, E. D. Carvalho, and R. J. da Silva. 2011. The occurrence of *Austrodiplostomum compactum* (Lutz, 1928) (Digenea: Diplostomidae) metacercariae in the eyes of loricariid fish (Siluriformes: Osteichthyes: Loricariidae) from Brazil. *Journal of Helminthology* 85:73–79.

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.

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.