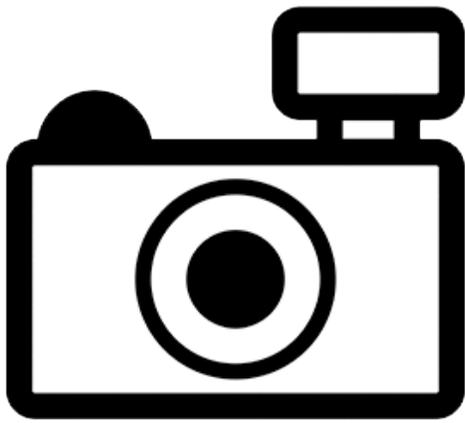


***Hypostomus simios* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2012
Revised, November 2018
Web Version, 8/13/2019



No Photo Available

1 Native Range and Status in the United States

Native Range

From Hollanda Carvalho and Weber (2005):

“*Hypostomus simios* is only known from its type locality, in the Cupixi River, State of Amapá, Brazil.”

Status in the United States

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

Means of Introductions in the United States

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

Remarks

Species first described to science in 2005 (Fricke et al. 2018).

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2018):

“**Current status:** Valid as *Hypostomus simios* Hollanda Carvalho & Weber 2005.”

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* – suckermouth catfishes
Species *Hypostomus simios* Carvalho and Weber, 2005”

Size, Weight, and Age Range

From Hollanda Carvalho and Weber (2005):

“Standard length of examined specimens 108.8 to 157.9 mm; [...]”

Environment

From Froese and Pauly (2018):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Hollanda Carvalho and Weber (2005):

“*Hypostomus simios* is only known from its type locality, in the Cupixi River, State of Amapá, Brazil.”

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Hollanda Carvalho and Weber (2005):

“*Hypostomus simios* is distinguished from *H. waiampi*, *H. oculus*, *H. pyrineusi*, *H. ericius*, *H. ericae* and *H. paucipunctatus* by the number of odontodes in the opercle (more than 10 versus less than 10); from *H. soniae* by its colour pattern (spotted versus unspotted, sometimes with longitudinal stripes); from *H. sculpodon* by the pattern of spots on body (widely spaced versus close-set spots) and larger interorbital width (2.0 to 2.2 in head length versus 2.2 to 2.6); from *H. hemicochliodon* by its upper margin of orbits elevated, higher than frontal head profile (versus eye orbits at the same level of frontal head profile) and occipital bone, whose tip is higher than first predorsal plate (versus tip at the same level); from *H. levis* by the presence of adipose fin (versus absence).”

“Head dorsally covered with dermal ossifications, except for small amorphous naked area on snout tip, as large as nostril. Profile almost straight, with light depression between eyes; tip of occipital higher than first predorsal plate. Orbits large with dorsal margin very elevated, weakly continuing in inconspicuous ridge on posttemporal plate and following plates. A single plate bordering posterior margin of supraoccipital. Opercle supporting more than 10 odontodes. Outer face of upper lip covered with small odontodes. Barbells short. Several small spoon-shaped teeth (12 to 15) with a small outer cuspid in younger specimens.

Body relatively deep and wide, covered with five rows of plates on each side, relatively smoother in younger specimens. Ridges well developed on largest specimen (holotype). Dorsal profile almost straight descending from dorsal-fin spine usually up to the second plate after adipose fin. Caudal peduncle roughly ovoid in cross section, sometimes slightly laterally compressed. Dorsal plates between end of dorsal fin and preadipose azyguous plate flattened in their dorsal portion, those closer to dorsal fin usually not meeting in the midline, leaving naked central area. Abdomen and ventral surface of the head covered by small platelets, except the areas around urogenital opening, lower lip and fin insertions, and in some specimens a small naked area in the middle of the pectoral girdle.

Pectoral-fin spines covered with odontodes, slightly larger as approaching distal tip, and more developed in larger specimens. Adipose fin spine slightly curved [...]. Caudal fin concave to strongly concave. Medium sized outer rays; lower lobe longer than upper one. Dorsal fin when laid down usually reaching up to the first or second preadipose plate.”

Biology

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

Human Uses

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

Diseases

No information was found on diseases of *Hypostomus simios*. **No records were found of OIE-reportable diseases (OIE 2019) for *H. simios*.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

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

4 Global Distribution



Figure 1. Map of South America showing locations where *Hypostomus simios* has been reported. Locations are in Brazil. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

This species has not been reported in the wild in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus simios* was low for the entire contiguous United States. There were no areas of medium or high match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had low individual Climate 6 scores.

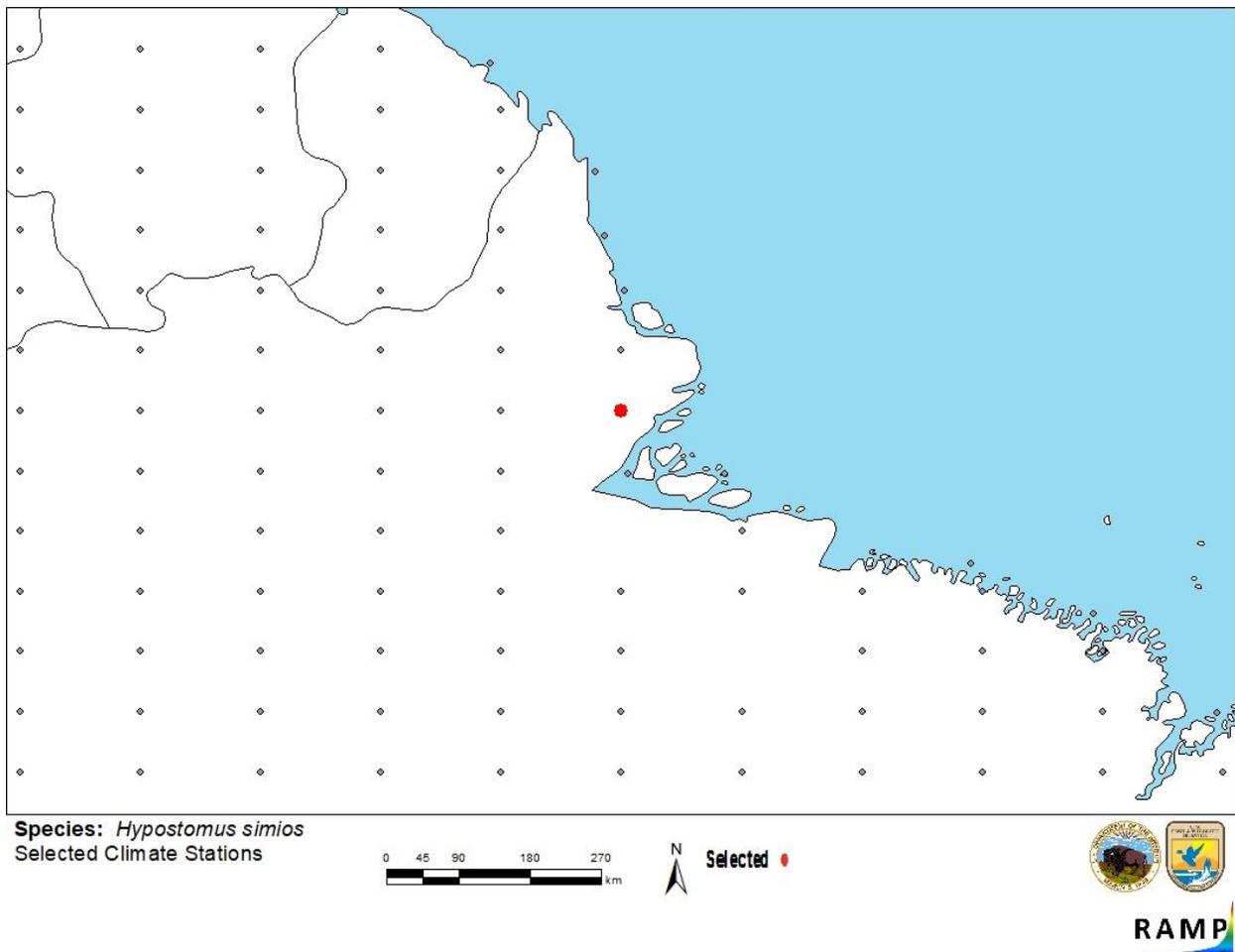


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in South America selected as source locations (red; Brazil) and non-source locations (gray) for *Hypostomus simios* climate matching. Source locations are from GBIF Secretariat (2018). Selected source locations are within 100 km of one or more species occurrences and do not necessarily represent the locations of occurrences themselves.

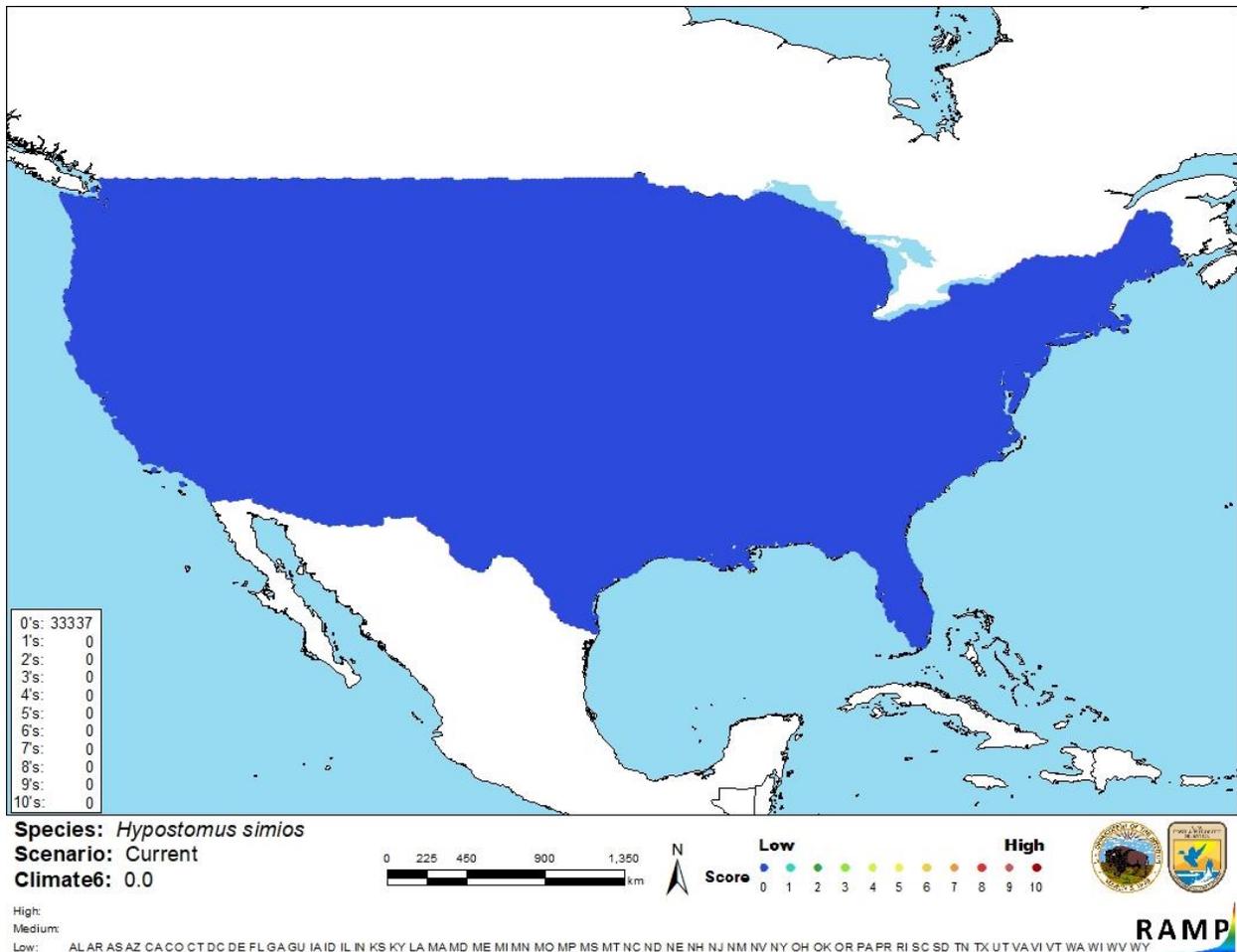


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus simios* in the contiguous United States based on source locations reported from GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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
$0.000 \leq X < 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

There is minimal information available for *Hypostomus simios*. No information was found on introductions of *H. simios*; therefore, there is no information on impacts of introduction. The certainty of assessment for *H. simios* is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus simios is a South American suckermouth catfish native to the Cupixi River, State of Amapá, Brazil. It has not been reported as introduced or established anywhere in the world outside of its native range; therefore, there is no information on impact of introduction. It is not found in trade. The history of invasiveness is uncertain. The overall climate match for the contiguous United States was low. There were no areas of medium or high match. Due to lack of information, the certainty of assessment is low. The overall risk assessment category for *Hypostomus simios* 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.

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

Froese, R., and D. Pauly, editors. 2018. *Hypostomus simios* Hollanda Carvalho and Weber, 2005. FishBase. Available: <https://www.fishbase.de/summary/Hypostomus-simios.html>. (November 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus simios* Carvalho and Weber, 2005. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5202211>. (November 2018).

Hollanda Carvalho, P., and C. Weber. 2005. Five new species of the *Hypostomus cochliodon* group (Siluriformes: Loricariidae) from the middle and lower Amazon System. *Revue Suisse de Zoologie* 111(4):953–978.

ITIS (Integrated Taxonomic Information System). 2018. *Hypostomus simios* Carvalho and Weber, 2005. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680236#null. (November 2018).

OIE (World Organisation for Animal Health). 2019. OIE listed diseases, infections and infestations in Force In 2019. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2019/>. (August 2019).

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.

No references in this section.