

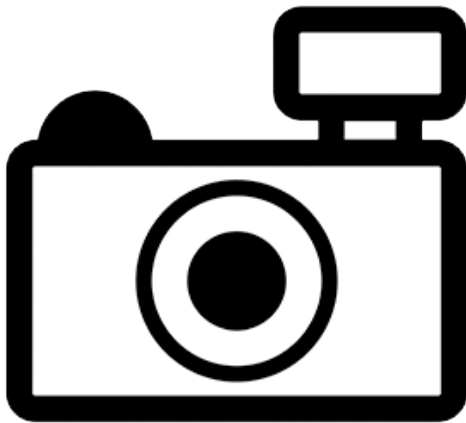
***Hypostomus hemicochliodon* (a catfish, no common name)**

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 Amazonas in Peru, Ecuador and Brazil, and the upper Rio Negro drainage and the upper Rio Orinoco drainage in Venezuela.”

From Armbruster (2003):

“Has a wide range across central South America in the Ríos Marañon, Itaya, Nanay, Napo, and Orosa of the upper Río Amazonas of Peru, the Río Napo drainage of the Upper Río Amazonas drainage of Ecuador, the Rios Tapajos and Xingu of the lower Rio Amazonas drainage of Brazil, and the upper Río Negro drainage (middle Río Amazonas drainage) and upper Río Orinoco drainage of Venezuela. [...]”

From Carvalho and Weber (2004):

“This population of *Hypostomus hemicochliodon* was collected at Branco River, in Roraima, Brazil.”

Status in the United States

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

Means of Introductions in the United States

No records of *Hypostomus hemicochliodon* 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 hemicochliodon* (Armbruster 2003) is the current valid name and the original name for this species.

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 hemicochliodon* Armbruster, 2003”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 36.2 cm TL male/unsexed; [Giarrizzo et al. 2015]; max. published weight: 510.00 g [Giarrizzo et al. 2015]”

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 Amazonas in Peru, Ecuador and Brazil, and the upper Rio Negro drainage and the upper Rio Orinoco drainage in Venezuela.”

From Armbruster (2003):

“Has a wide range across central South America in the Ríos Marañón, Itaya, Nanay, Napo, and Orosa of the upper Río Amazonas of Peru, the Río Napo drainage of the Upper Río Amazonas drainage of Ecuador, the Rios Tapajos and Xingu of the lower Rio Amazonas drainage of Brazil, and the upper Río Negro drainage (middle Río Amazonas drainage) and upper Río Orinoco drainage of Venezuela. [...]”

From Carvalho and Weber (2004):

“This population of *Hypostomus hemicochliodon* was collected at Branco River, in Roraima, Brazil.”

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Froese and Pauly (2018):

“Distinguished from all other members of *Hypostomus cochliodon* group except *H. sculpodon* by having a medium-sized buccal papilla, intermediately developed teeth and a large patch of odontodes on the opercle. Differs from *H. sculpodon* by its dark brown color with closely spaced spots, by having a greater dorsal-anal length to anal-fin length ratio (average=111.1%, 92.5-132.6% vs. average=79.2%, 69.6-89.7%) and almost completely by having a larger interorbital

width/HL ratio (average=49.9, 44.1-55.6% vs. average=51.4%, 38.5-45.4%) [Armbruster 2003].”

From Armbruster (2003):

“Color brown with medium to large spots. Spots become larger posteriorly, often coalescing on caudal peduncle to form large, longitudinally oval dashes or stripes. Some adults with spots on body absent. Spots on abdomen variable; fairly large specimens often have few or no spots on the abdomen; abdomen often significantly lighter than sides, almost white. Four faint dorsal saddles often present: first below anterior rays of dorsal fin, second below posterior rays of and slightly posterior to dorsal fin, third slightly anterior to and ventral to adipose fin, and fourth at base of caudal fin. One captive *Hypostomus hemicochliodon* demonstrated well-developed ability to change color, particularly ability to lighten coloration of abdomen and intensify lateral spots or dorsal saddles (either spots or the saddles dominant, but never both dark at same time).”

“Dorsal fin fairly short, usually falls short of preadipose plate when depressed. Depressed pectoral-fin spine ventral to pelvic fin reaches 2-3 plates beyond bases of pelvic-fin rays.”

“Keels strong, sharp. Orbit forming ridge distinctly raised above medial surface of head; ridges of dorsal and lateral aspect of head well-developed. Longitudinal ridge formed of raised bone and slightly larger odontodes present on pterotic-supracleithrum beginning at postdorsal corner of orbit. Opercle broadly exposed, always supporting much more than ten odontodes. Nuptial body odontodes absent [...]. Plates in skin anterior to dorsal-fin spine absent or few [...].”

“Each jaw with 7-23 teeth [...], teeth of intermediate size [...]. Average angle between dentaries 63° [...]. Lateral line plates 28-30; dorsal plates 8-9; interdorsal plates 6-8; adipose caudal plates 8-10.”

Biology

From Armbruster (2003):

“*Hypostomus hemicochliodon* and *H. sculpodon* predominantly eat wood, but do not have spoon-shaped teeth.”

“In *H. hemicochliodon* and *H. sculpodon* the intestine mostly contains wood, but other organic matter makes up a major portion of the diet (not greater than 50%). It is apparent that *H. hemicochliodon* and *H. sculpodon* are wood eaters but not wood specialists.”

Human Uses

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

Diseases

No information on diseases of *Hypostomus hemicochliodon* was found.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

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

4 Global Distribution



Figure 1. Known global distribution of *Hypostomus hemicochliodon*. Locations are in Venezuela, Colombia, Ecuador, Peru, Brazil, and Bolivia. Map from GBIF Secretariat (2018).

The location in Bolivia (Figure 1) was not used as a source point for the climate match. It is located in a river that drains to the Pacific Ocean (GBIF Secretariat 2018). The record information indicates that there were many individuals present at the location but no other sources support the presence of a population in that drainage.

The locations in Colombia (Figure 1) were used as source points in the climate match. While none of the text descriptions of the range explicitly state that the species is in Colombia, those locations are within the drainages named (Armbruster 2003; GBIF Secretariat 2018).

5 Distribution Within the United States

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

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus hemicochliodon* was generally low across the contiguous United States. There was a small area of medium match in southern Florida. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low. The range for a low climate score is from 0.0 to 0.005, inclusive. All states had low individual climate scores.

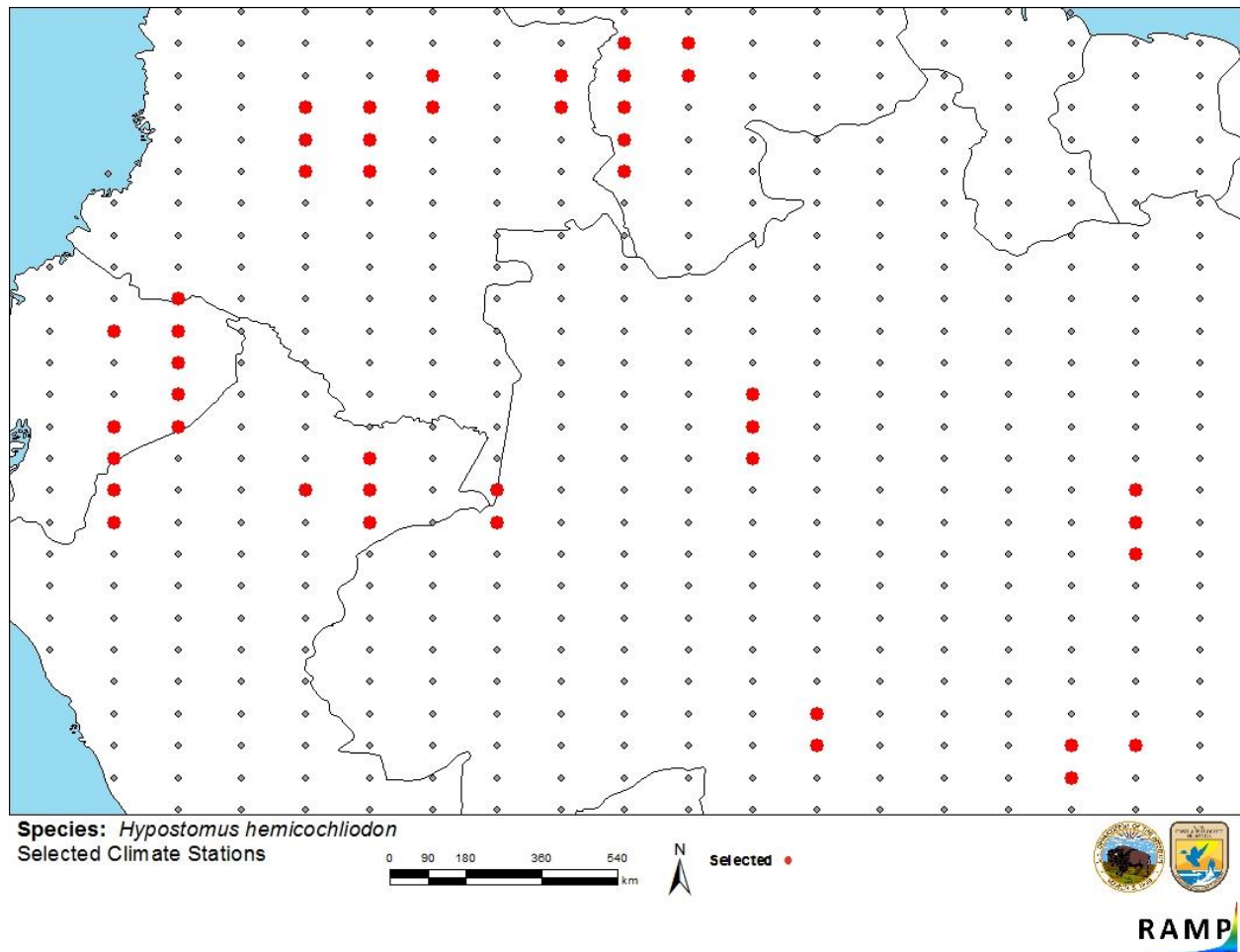


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Venezuela, Colombia, Ecuador, Peru, Brazil) and non-source locations (gray) for *Hypostomus hemicochliodon* climate matching. Source locations from GBIF Secretariat (2018).

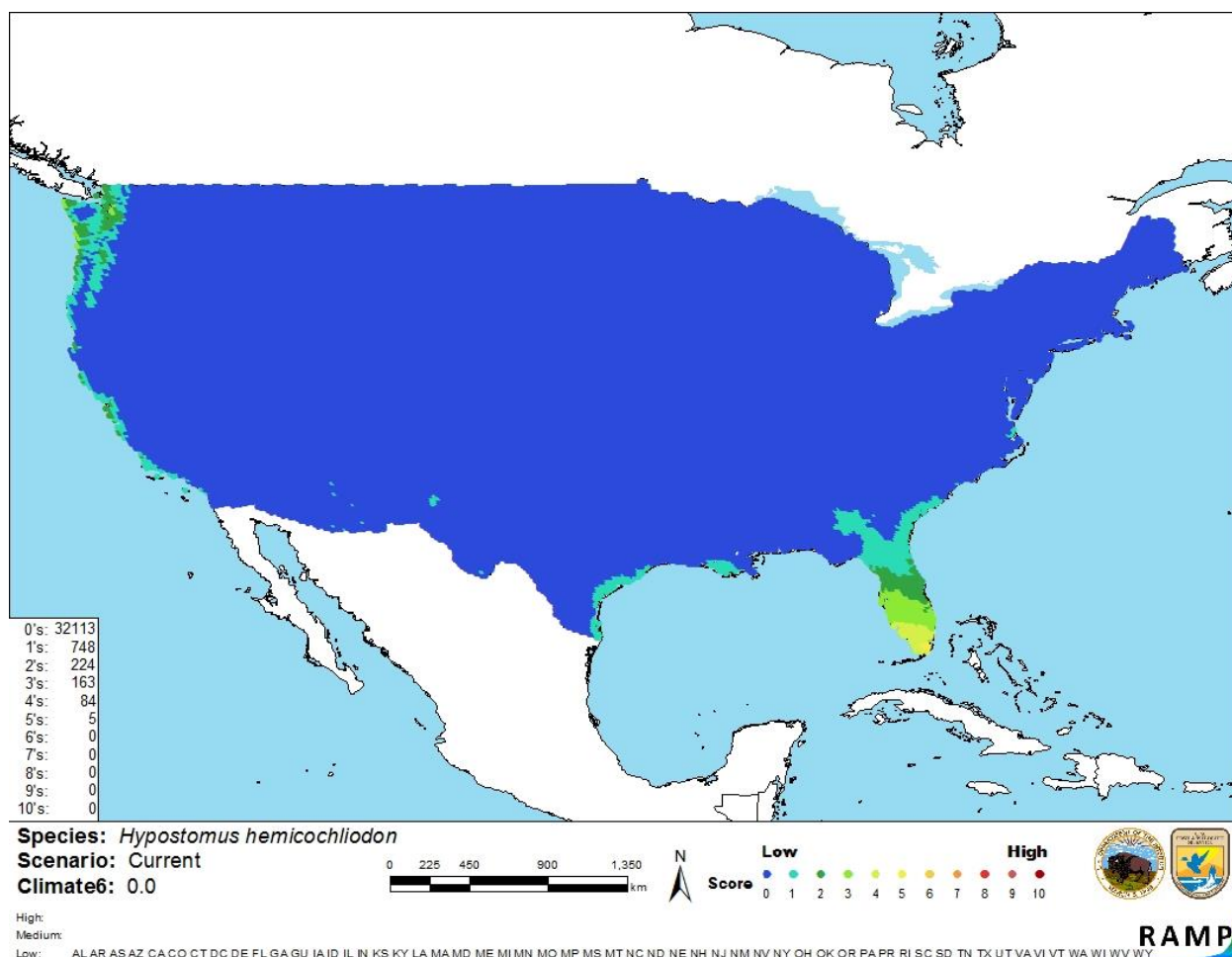


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus hemicochliodon* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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 hemicochliodon* is low. There is some quality information about the biology and ecology of the species available. There were no records of introduction found and therefore there is no information on impacts to be evaluated.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus hemicochliodon is an armored catfish that is native to many river drainages in northern South America. It eats wood and other organic matter. The history of invasiveness is uncertain. No records of introduction were found, and therefore there is no information on impacts. In addition, there is no indication that *H. hemicochliodon* is in trade. The climate match with the contiguous United States was low. The certainty of assessment was 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.

- Armbruster, J. W. 2003. The species of the *Hypostomus cochliodon* group (Siluriformes: Loricariidae). *Zootaxa* 249:1–60.
- Carvalho, P. H., and C. Weber. 2004. 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.
- 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 hemicochliodon* Armbruster, 2003. FishBase. Available: <http://www.fishbase.se/summary/Hypostomus-hemicochliodon.html>. (August 2018).
- GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus hemicochliodon* (Armbruster, 2003). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5202222>. (August 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Hypostomus hemicochliodon* Armbruster, 2003. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680175#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.

Giarrizzo, T., R. R. de Sena Oliveira, M. C. Andrade, A. P. Gonçalves, T. A. P. Barbosa, A. R. Martins, D. K. Marques, J. L. B. dos Santos, R. de P. da S. Frois, T. P. O. de Albuquerque, L. F. de A. Montag, M. Camargo, and L. M. de Sousa. 2015. Length-weight and length-length relationships for 135 fish species from the Xingu River (Amazon basin, Brazil). *Journal of Applied Ichthyology* 31:514–424.