Hypostomus hondae (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2013
Revised, August 2018
Web Version, 9/13/2018

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1 Native Range and Status in the United States

Native Range

From Armbruster (2003):

"Lago Maracaibo drainage of Colombia and Venezuela, and the Río Magdalena, Río Sinú, and Río Atrato drainages of Colombia […]."

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

According to Chapman et al. (1994), *Hypostomus hondae* (under the name *Cochliodon hondae*) was imported to the United States during October 1992 for the aquarium trade.

Means of Introductions in the United States
No records of *Hypostomus hondae* in the wild in the United States were found.

Remarks
Information searches were conducted using the valid name, *Hypostomus hondae*, and a recent synonym, *Cochliodon hondae*.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing
According to Eschmeyer et al. (2018), *Hypostomus hondae* (Regan 1912) is the valid name for the species. It was originally described as *Plecostomus hondae* and was previously known as *Cochliodon hondae*.

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 hondae* (Regan, 1912)"

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

"Max length : 35.0 cm SL male/unsexed; [Galvis et al. 1997]"

Environment
From Froese and Pauly (2018):

"Freshwater; benthopelagic."

Climate/Range
From Froese and Pauly (2018):

"Tropical"

Distribution Outside the United States
Native
From Armbruster (2003):

"Lago Maracaibo drainage of Colombia and Venezuela, and the Río Magdalena, Río Sinú, and Río Atrato drainages of Colombia […]."

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

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

Short Description
From Armbruster (2003):

"Body dark brown with round spots present almost everywhere; most specimens with spots fading posteriorly with none present on caudal peduncle. Size of spots on body from medium to large, size increases posteriorly. Some specimens (particularly juveniles) with four dorsal saddles visible: first below anterior rays of dorsal fin, second below posterior rays of dorsal fin and slightly posterior to dorsal fin, third below adipose fin and slightly anterior to adipose fin, and fourth at base of caudal fin; dark bar also present between the eyes. Caudal fin always with spots except in strongly melanistic specimens in which caudal fin appears almost black. Caudal fin often lighter basally than distally. Abdomen slightly lighter than sides in adults; in juveniles, abdomen much lighter than sides and spots may be faint or absent."

"Dorsal fin usually short, when depressed in most specimens, not reaching preadipose plate. Depressed pectoral-fin spine ventral to pelvic fin reaches 2-3 plates beyond pelvic-fin rays. Tip of pectoral-fin spine of nuptial males with stout, recurved, hypertrophied odontodes."

"Keels weak to moderately developed. Orbit forming ridge distinctly raised above medial surface of head; ridges of dorsal and lateral aspect of head well-developed. Longitudinal ridge on pterotic-supracleithrum beginning at posterodorsal corner of eye formed from raised bone and slightly larger odontodes absent. Opercle distinctly exposed, always supporting much more than

ten odontodes. Nuptial body odontodes absent […]. Plates in skin anterior to dorsal-fin spine almost always present and more numerous than in comparatively-sized specimens of other species of the *H. cochliodon* group […]. Most specimens less than 70 mm SL with at least one or two free odontodes in skin anterior to dorsal-fin spine; some Colombian specimens lack this characteristic."

"Each jaw with 8-22 teeth […], teeth almost always large and spoon-shaped, some individuals with smaller, more numerous teeth. Average angle between dentaries 65° […]. Lateral line plates 27-29; dorsal plates 8-10; interdorsal plates 6-8; adipose caudal plates 8-10."

Biology

From Froese and Pauly (2018):

"Feeds on detritus with algae [Galvis et al. 1997]."

Human Uses

From Granado-Lorencio et al. (2012):

"[…] species suffer from intense pressure from fishing (*Ageneiosus pardalis*, *Curimata mivarti*, *Hypostomus hondae*, […]"

According to Chapman et al. (1994), *Hypostomus hondae* (under the name *Cochliodon hondae*) was imported to the United States during October 1992 for the aquarium trade.

Diseases

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

Threat to Humans

From Froese and Pauly (2018):

"Harmless"

3 Impacts of Introductions

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

4 Global Distribution

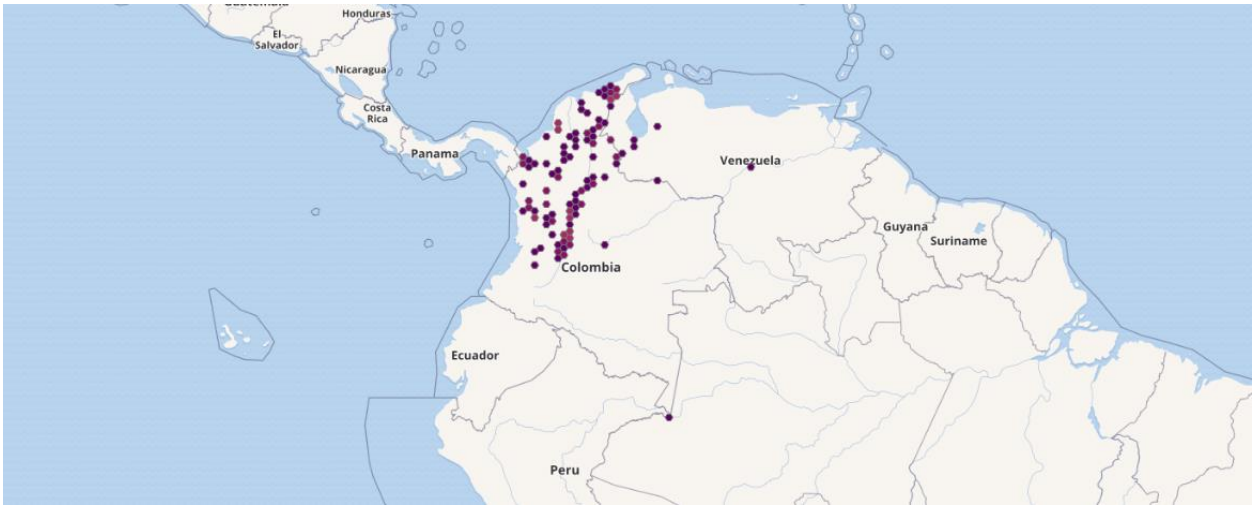

Figure 1. Known global distribution of *Hypostomus hondae*. Locations are in Colombia and Venezuela. Map from GBIF Secretariat (2018).

The southernmost location in Colombia (Figure 1) was not used as a source point for the climate match. The observation is from the Amazon River (GBIF Secretariat 2018). There was no information found supporting the existence of an established population of *Hypostomus hondae* in the Amazon River.

The location in the center of Colombia was not used as a source point for the climate match. The accuracy of the location was only to the country level (GBIF Secretariat 2018).

The single location on the border of Colombia and Venezuela and the one in the center of Venezuela (Figure 1) were not used as source points for the climate match. They are in the Orinoco River drainage (GBIF Secretariat 2018) and there is no information supporting the existence of established populations of *Hypostomus hondae* in this drainage.

5 Distribution Within the United States

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

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus hondae* was generally low across the contiguous United States. There were areas of medium match in southern Florida, coastal Texas, and surrounding the Puget Sound. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.001, low. The range for a low climate score is from 0.0 to 0.005, inclusive. All States had a low individual climate score except for Florida, which had a medium score.

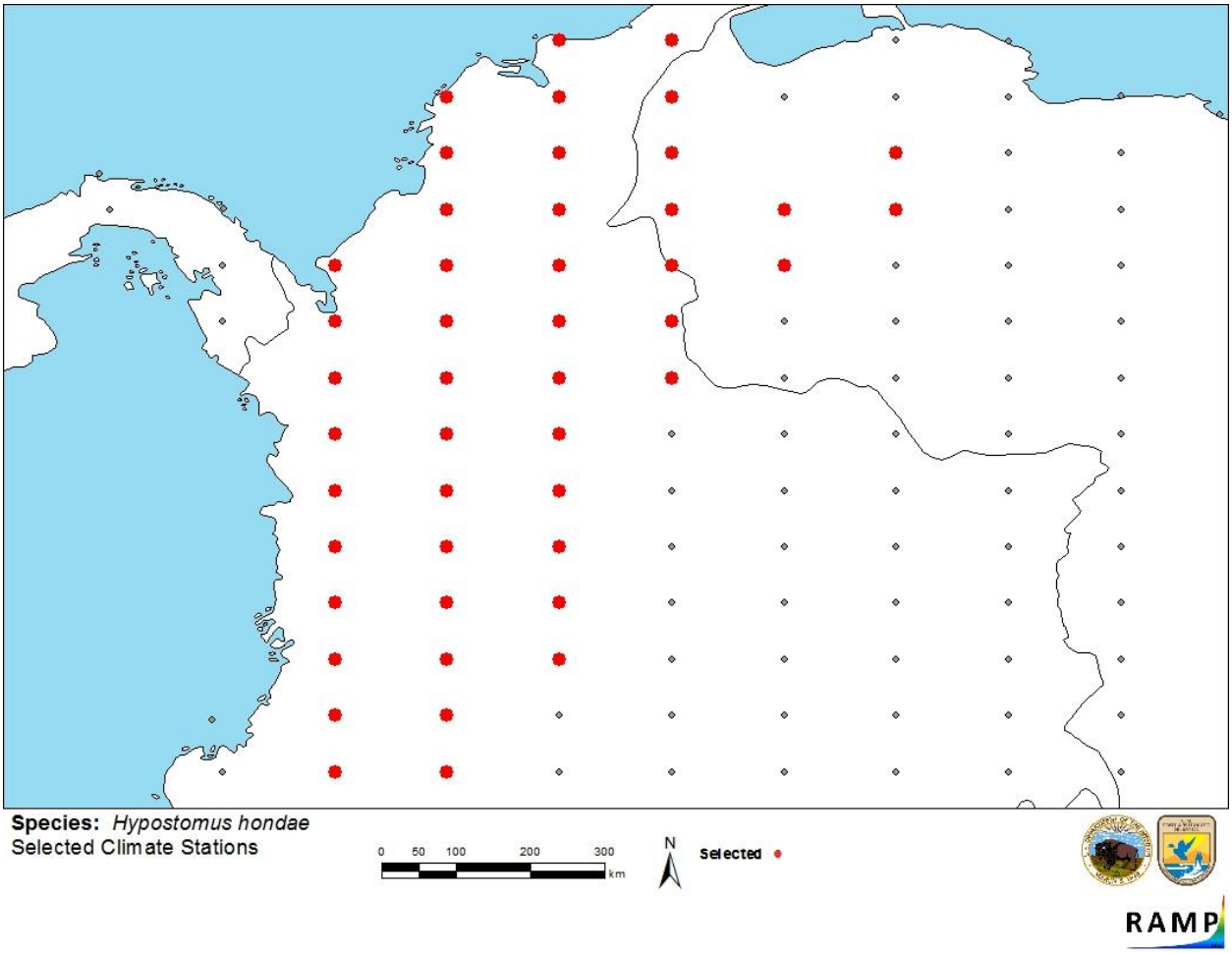

Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in northern South America selected as source locations (red; Columbia and Venezuela) and non-source locations (gray) for *Hypostomus hondae* climate matching. Source locations from GBIF Secretariat (2018).

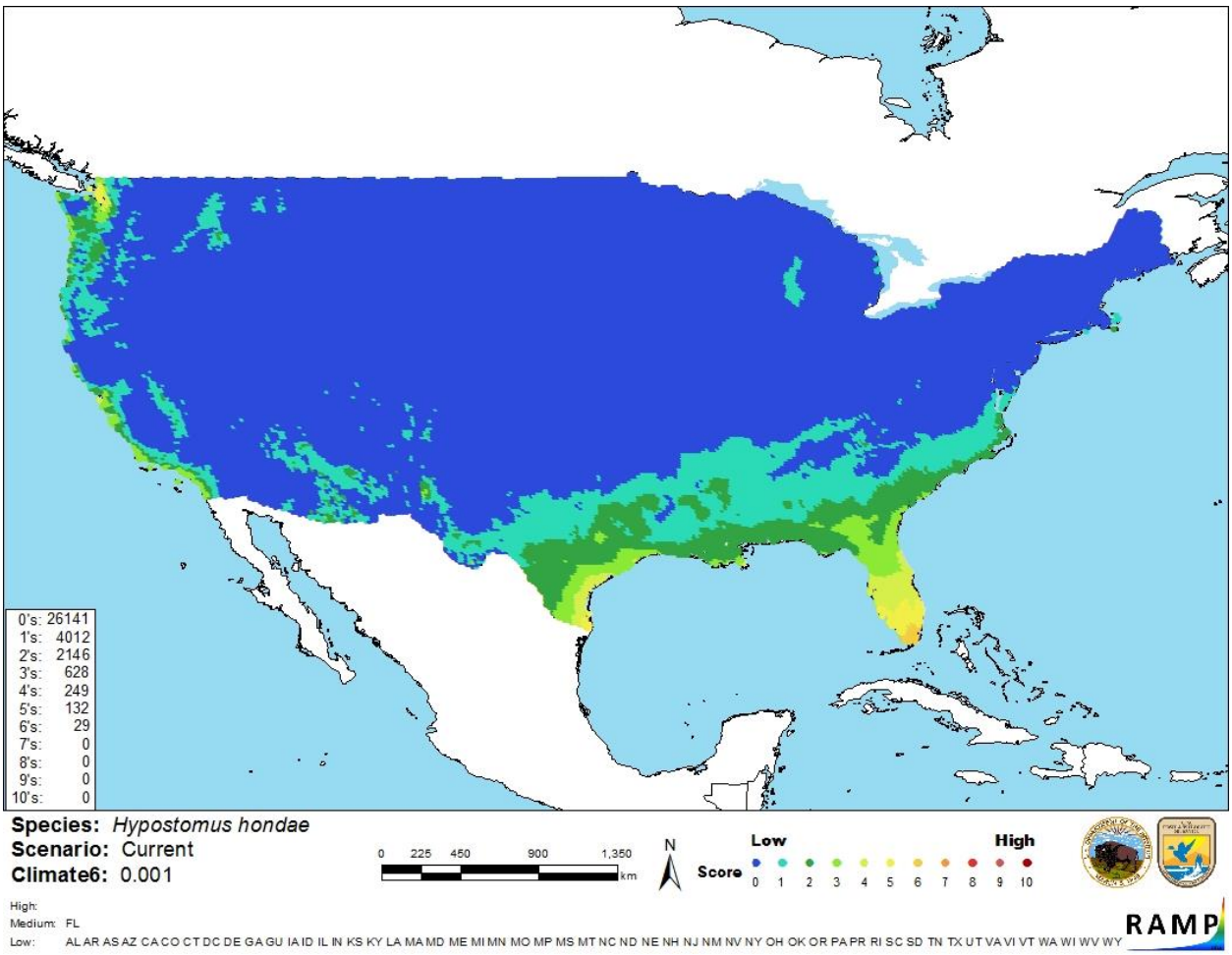

Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus hondae* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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 assessment is low. There was some general information about the species available from peer-reviewed sources. There were no records of introductions found and therefore there is no information on impacts available to evaluate.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus hondae is a species of catfish native to river drainages in Colombia and Venezuela. This species is used as a fishery and in the aquarium trade. The history of invasiveness is uncertain. There were no records of introductions to the wild found. *H. hondae* has been imported into the United States for the aquarium trade in the past, but no information on the volume or duration of trade was available. The climate match with the contiguous United States was low. There were small areas of medium match in Florida, Texas, and the area surrounding the Puget Sound. The certainty of assessment is low due to lack of information. The overall risk assessment 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:** This species has been in trade in the past in the United States.
- **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.

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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).

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GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus hondae* (Regan, 1912). Global Biodiversity Information Facility, Copenhagen. Available: https://www.gbif.org/species/5202142. (August 2018).

Granado-Lorencio, C., A. H. Serna, J. D. Carvajal, L. F. Jiménez-Sgura, A. Gulfo, and F. Alvarez. 2012. Regionally nested patterns of fish assemblages in floodplain lakes of the Magdalena River (Colombia). Ecology and Evolution 2(6):1296–1303.

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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.

Galvis, G., J. I. Mojica, and M. Camargo. 1997. Peces del Catatumbo. Asociación Cravo Norte, Santafé de Bogotá.