

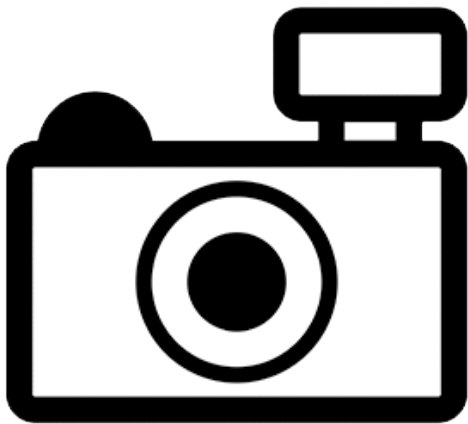
## ***Hypostomus alatus* (a catfish, no common name)**

### **Ecological Risk Screening Summary**

U.S Fish & Wildlife Service, August 2011

Revised, August 2018

Web Version, 9/11/2018



No Photo Available

## **1 Native Range and Status in the United States**

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### **Native Range**

From Froese and Pauly (2018):

“South America: Eastern Brazilian coastal drainage: São Francisco basin: das Velhas drainage and Argentina [Lopez et al. 1987].”

### **Status in the United States**

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

### **Means of Introductions in the United States**

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

### **Remarks**

No additional remarks.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Hypostomus alatus* (Castelnau 1855) is the valid name for this species; it is also the original name.

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 alatus* Castelnau, 1855”

### Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 28.8 cm SL male/unsexed; [Zanata and Pitanga 2016]

### 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: Eastern Brazilian coastal drainage: São Francisco basin: das Velhas drainage and Argentina [Lopez et al. 1987].”

### **Introduced**

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

## **Means of Introduction Outside the United States**

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

## **Short Description**

From Ramos et al. (2017):

“*Hypostomus johnii* is also distinguishable from its congeners from the rio São Francisco basin by means of coloration: *H. alatus*, *H. francisci* and *H. cf. margaritifer* have pale spots with a darker body and fins, *H. garmani* and *H. macrops* have large dark spots on the body and fins that are larger than eye diameter (vs. dark spots usually smaller than eye diameter).”

## **Biology**

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

## **Human Uses**

No information on the human uses of *Hypostomus alatus* were found.

## **Diseases**

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

From Lopes et al. (1989):

“*Trypanosoma dominguesi* sp. n. is described from the blood of the armored catfish *Hypostomus alatus* Castelnau 1855 (Pisces, Loricariidae).”

## **Threat to Humans**

From Froese and Pauly (2018):

“Harmless”

### 3 Impacts of Introductions

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

### 4 Global Distribution

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

The point in Ecuador was not used as a source location as there was no peer-reviewed literature to support that this point was an established population. No georeferenced locations were available for the population reported in Argentina.

### 5 Distribution Within the United States

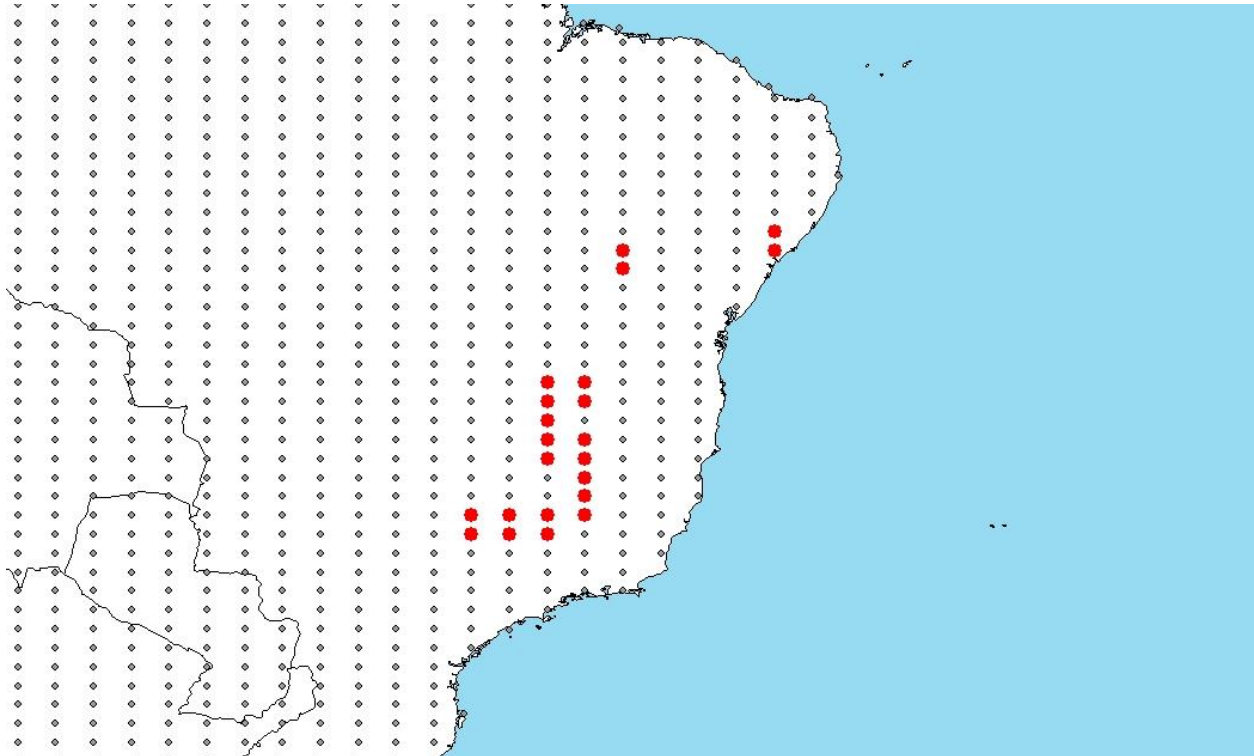
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No records of *Hypostomus alatus* in the wild in the United States were found.

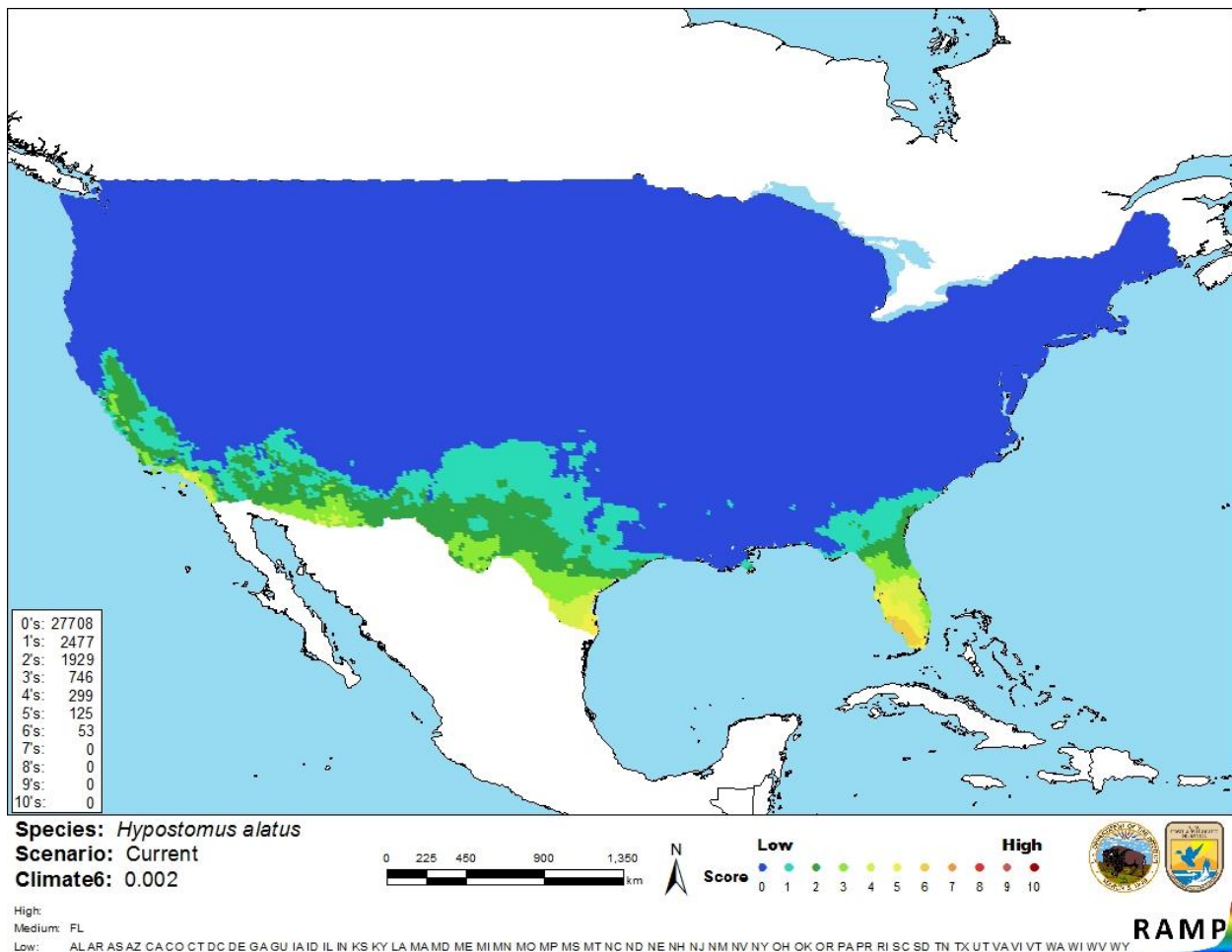
## 6 Climate Matching

### Summary of Climate Matching Analysis

The climate match for *Hypostomus alatus* was low for the entire contiguous United States with a medium to high match in southern Florida, and small patches of medium match in south Texas, southeastern Arizona and along the southern California coast. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.002, low. The range for a low climate match is from 0.0 to 0.005, inclusive. All states have low individual climate scores except for Florida which had a medium individual climate score.



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



**Figure 3.** Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus alatus* 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
$\geq 0.103$	High

## 7 Certainty of Assessment

The certainty of assessment is low. There was minimal biological information available for this species. There were no records of introductions, so there is no information on impacts of introductions to be evaluated.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Hypostomus alatus* is an armored catfish native to Brazil. The history of invasiveness is uncertain. No records of introductions were found. It can carry the parasite *Trypanosoma dominguesi*. The climate match is low for the entire contiguous United States except for southern Florida, which is medium to high, and patches in south Texas, southeastern Arizona and along the southern California coast, which are medium. Florida had an individual climate score of medium. The certainty of assessment is 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

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**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).

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GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus alatus* (Castelnau, 1855). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5202187>. (August 2018).

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Lopes, R. A., T. Satake, L. G. Brentegani, A. Nuti-Sobrinho, H. A. Britski, and R. D. Ribeiro. 1989. Mémoires originaux trypanosomes of Brazilian fishes. III. *Trypanosoma dominguesi* sp. n. from armored catfish *Hypostomus alatus* Castelnau 1855 (pisces, loricariidae). Annales de Parasitologie Humaine et Compare 64:83–88.

Ramos, T. P. A., C. H. Zawadzki, R. T. da C. Ramos, and H. A. Britski. 2017. Redescription of *Hypostomus johnii*, a senior synonym of *Hypostomus eptingi* (Siluriformes: Loricariidae), Northeastern Brazil. *Neotropical Ichthyology* 15:1–10.

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

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**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.**

Castelnau, F. L. 1855. Poissons. *In* Animaux nouveaux or rares recueillis pendant l'expédition dans les parties centrales de l'Amérique du Sud, de Rio de Janeiro a Lima, et de Lima au Para; exécutée par ordre du gouvernement Français pendant les années 1843 a 1847 Part 7, *Zoologie* 2:1–50.

Lopez, H. L., R. C. Menni, and A. M. Miguelarena. 1987. Lista de los peces de agua dulce de la Argentina. *Biologia Acuatica* 12:1–50.

Zanata, A. M., and B. R. Pitanga. 2016. A new species of *Hypostomus* Lacépède, 1803 (Siluriformes: Loricariidae) from rio Itapicuru basin, Bahia State, Brazil. *Zootaxa* 4137:223–232.