

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

## **Ecological Risk Screening Summary**

U.S. Fish & Wildlife Service, March 2013

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Photo: Cardoso et al. (2011, Figure 2). Published under Creative Commons BY License.

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

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### **Native Range**

From Ribeiro (2006):

“Reis et al. (1990), revising the armored catfishes of the genus *Hypostomus* (Siluriformes: Loricariidae) from southern Brazil demonstrate the same fact: *Hypostomus commersonii* and *H. aspilogaster* occur in rio Uruguay, rio Jacuí and other tributaries of the coastal laguna dos Patos system [Brazil and Uruguay].”

From Cardoso et al. (2011):

“As an outcome of this integrated analysis, we allow to extend the distribution of *H. aspilogaster* in the Neotropical Region and present the first record of this species in Argentina.”

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

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

## Means of Introductions in the United States

No records of *Hypostomus aspilogaster* 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 aspilogaster* (Cope 1894) is the current valid name for this species. It was originally described as *Plecostomus aspilogastger* Cope 1894.

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 aspilogaster* (Cope, 1894)”

### Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 26.5 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 Ribeiro (2006):

“Reis et al. (1990), revising the armored catfishes of the genus *Hypostomus* (Siluriformes: Loricariidae) from southern Brazil demonstrate the same fact: *Hypostomus commersonii* and *H. aspirogaster* occur in rio Uruguay, rio Jacuí and other tributaries of the coastal laguna dos Patos system [Brazil and Uruguay].”

From Cardoso et al. (2011):

“As an outcome of this integrated analysis, we allow to extend the distribution of *H. aspirogaster* in the Neotropical Region and present the first record of this species in Argentina.”

### Introduced

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

## Means of Introduction Outside the United States

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

## Short Description

From Reis et al. (1990):

“*Hypostomus aspirogaster* is distinguished from all other *Hypostomus* species in Southern Brazil by the larger number of lateral scutes: 29-31 versus 25-27 in all other species except *H. commersonii* and *H. regani*. From *H. commersonii* it is distinguished by the number of scutes bordering the posterior margin of the supraoccipital bone: 3-5 in *H. aspirogaster* and 1-2 in *H. commersonii*. *H. commersonii* also has a longer lower caudal fin spine (2.5-2.9 in SL; 3.0-3.5 in *H. aspirogaster*), and the lateral scutes are much rougher than those of *H. aspirogaster*.”

“Description: standard length of examined specimens 120.9 to 266.2 mm; [...].

Head completely covered with dermal ossifications dorsally except for a comparatively large, roughly ovate naked area on snout tip. Dorsal margin of orbit slightly elevated, hardly continuing in an inconspicuous ridge on posttemporal plate and following scutes. Usually three, sometimes 4 or 5 scutes bordering posterior margin of supraoccipital bone. Body moderately low; dorsal profile gently descending from origin of dorsal fin to end of caudal peduncle. Caudal peduncle wide, roughly ovate in cross-section; widely flattened ventrally. Dorsal scutes between end of dorsal fin base and adipose fin flattened in their dorsal portion; those closer to dorsal fin usually not meeting in midline and with a central area lacking odontodes.

Outer face of upper lip covered with small scutelets; maxillary barbel comparatively short. Teeth very thin but not very numerous, with very small outer cusp.

Body completely covered with rows of smooth scutes dorsally, even in larger specimens. Abdomen and ventral surface of head ranging from completely naked in smaller specimens to completely covered with small scutelets in larger individuals.

Adipose fin spine short and curved. Caudal fin margin concave.

Colour in alcohol: ground colour of dorsal surface light- or yellowish-brown to dark grey-brown; lighter ventrally. Black or dark-brown small, roundish dots scattered all over dorsal surface, fins, and abdomen; smaller and closer together on head. This pattern usually inconspicuous on caudal fin.

Colour in life: living specimens of *H. aspilogaster* just a like alcohol preserved specimens.”

## **Biology**

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

## **Human Uses**

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

## **Diseases**

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

## **Threat to Humans**

From Froese and Pauly (2018):

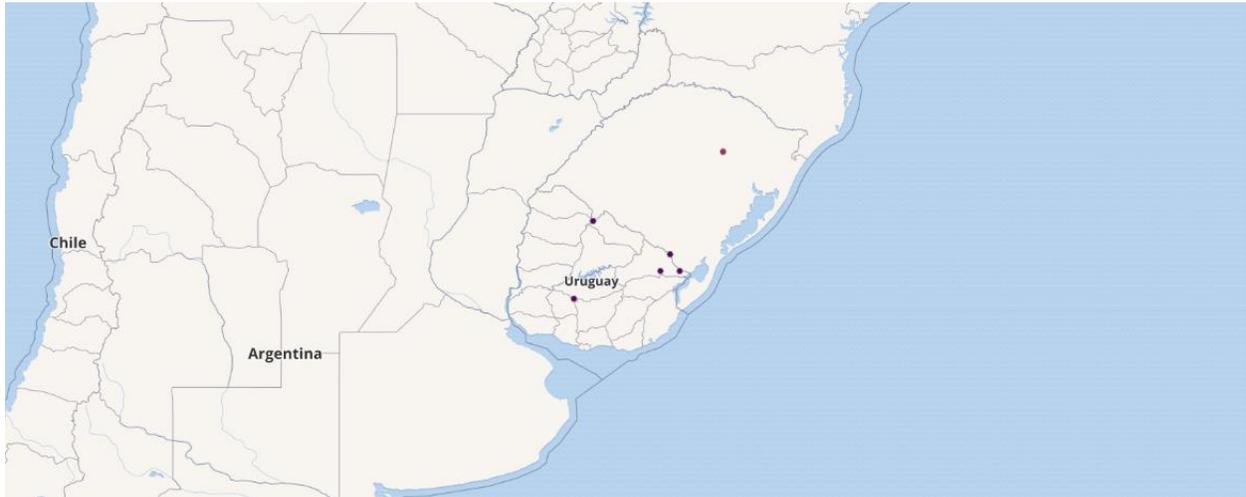
“Harmless”

## **3 Impacts of Introductions**

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

## 4 Global Distribution



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



**Figure 2.** Additional known distribution of *Hypostomus aspilogaster*. All circles and squares represent observations of *H. aspilogaster*. Locations are in Brazil, Uruguay, and Argentina. Map from Cardoso et al. (2011).

Additional known locations in Uruguay and southern Brazil are given by Reis et al. (1990).

## 5 Distribution Within the United States

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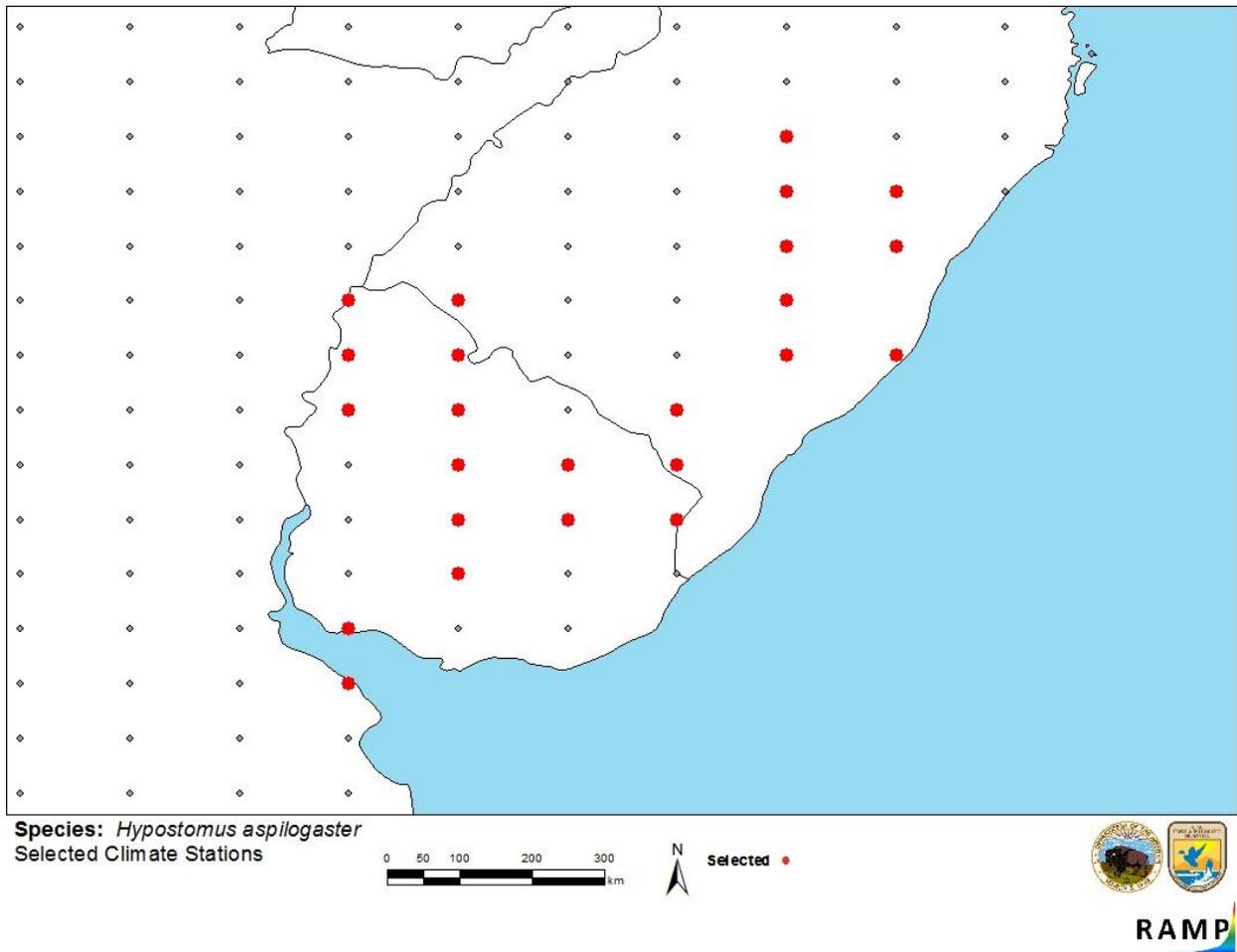
No records of *Hypostomus aspilogaster* in the wild in the United States were found.

## 6 Climate Matching

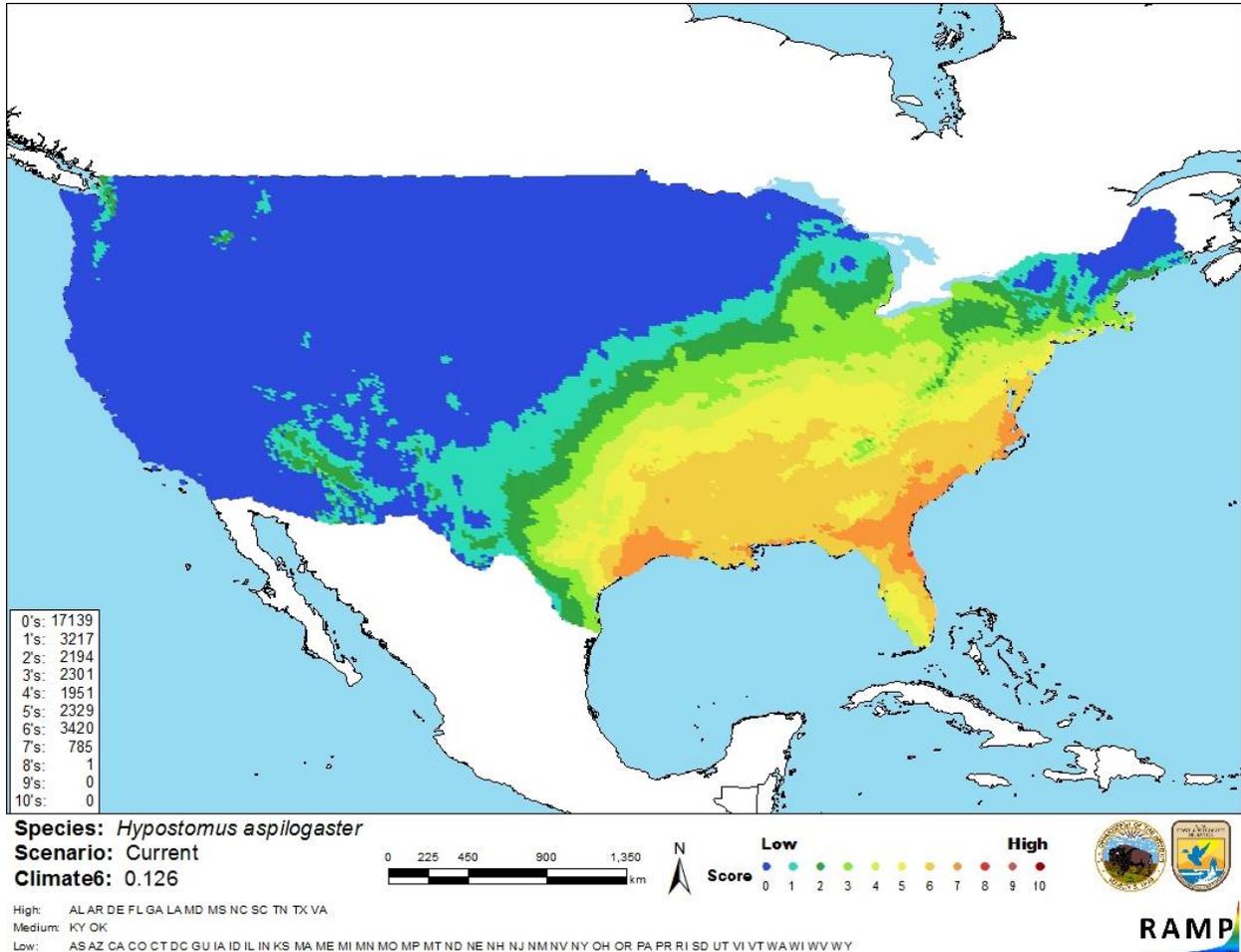
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### Summary of Climate Matching Analysis

The climate match for *Hypostomus aspilogaster* was high in the southern United States from Texas to Virginia. The climate match was medium in a band from the Massachusetts coast to central Texas and in southwestern Florida. The remainder of the contiguous United States had a low climate match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.126, high. Scores of 0.103 and above are a high match. The following states had high individual Climate 6 scores: Alabama, Arkansas, Delaware, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia.



**Figure 3.** RAMP (Sanders et al. 2018) source map showing weather stations in South America selected as source locations (red; Brazil, Uruguay, Argentina) and non-source locations (gray) for *Hypostomus aspilogaster* climate matching. Source locations from Cardoso et al. (2011), GBIF Secretariat (2018), and Reis et al. (1990).



**Figure 4.** Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus aspilogaster* in the contiguous United States based on source locations reported by Cardoso et al. (2011), GBIF Secretariat (2018), and Reis et al. (1990). 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 for *Hypostomus aspilogaster* is low. There is very little information in general about this species. No records of introduction were found, therefore there is no information regarding impacts of introduction.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Hypostomus aspilogaster* is an armored catfish that is native to southern South America. The history of invasiveness is uncertain. There were no records of introductions found, therefore there is no information on impacts of introductions. The climate match was high. The high climate match was focused in the Southeast. There were no records found of *H. aspilogaster* in the wild or in trade in the United States. 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): High**
- **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.**

- Cardoso, Y. P., F. Brancolini, L. Protogino, and M. Lizarralde. 2011. Actinopterygii, Siluriformes, Loricariidae, *Hypostomus aspilogaster* (Cope, 1894). Distribution extension and first record for Argentina. *CheckList* 7(5):596–598.
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- Froese, R., and D. Pauly, editors. 2018. *Hypostomus aspilogaster* (Cope, 1894). FishBase. Available: <http://www.fishbase.org/summary/Hypostomus-aspilogaster.html>. (August 2018).
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Reis, R. E., C. Weber, and L. R. Malabarba. 1990. Review of the genus *Hypostomus* Lacépède, 1803 from southern Brazil, with descriptions of three new species (Pisces, Siluriformes, Loricariidae). *Revue Suisse de Zoologie* 97(3):729–766.

Ribeiro, A. C. 2006. Tectonic history and the biogeography of the freshwater fishes from the coastal drainages of eastern Brazil: an example of faunal evolution associated with a divergent continental margin. *Neotropical Ichthyology* 4(2):225–246.

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.**

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.