

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

## **Ecological Risk Screening Summary**

U.S. Fish & Wildlife Service, January 2013

Revised, August 2018

Web Version, 9/11/2018



Photo: Zawadzki et al. (2008). Licensed under Creative Commons BY.

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

---

### **Native Range**

From Froese and Pauly (2018a):

“South America: Rio Corumbá in the vicinity of the Corumbá Reservoir, upper rio Paraná basin in Brazil.”

“Known from the rio Corumbá in the vicinity of the Corumbá Reservoir of the upper rio Paraná basin, mostly collected in the reservoir of the rio Corumbá just upstream from the dam and its tributary the rio Areia [Zawadzki et al. 2008].”

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

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

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

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

### **Remarks**

*Hypostomus denticulatus* was first described by Zawadzki et al. in 2008.

## **2 Biology and Ecology**

---

### **Taxonomic Hierarchy and Taxonomic Standing**

According to Eschmeyer et al. (2018), *Hypostomus denticulatus* Zawadzki, Weber & Pavanelli 2008 is both the current valid name for this species and the original name.

From Froese and Pauly (2018b):

“Biota > Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) [...] > Actinopterygii (Class) > Siluriformes (Order), Loricariidae (Family) > Hypostominae (Subfamily) > *Hypostomus* (Genus) > *Hypostomus denticulatus* (Species)”

### **Size, Weight, and Age Range**

From Froese and Pauly (2018a):

“Max length : 19.1 cm SL male/unsexed; [Zawadzki et al. 2008]”

### **Environment**

From Froese and Pauly (2018a):

“Freshwater; demersal.”

From Zawadzki et al. (2008):

“Water was turbid, substrates rocky with sand, [...]”

### **Climate/Range**

From Froese and Pauly (2018a):

“Tropical”

## Distribution Outside the United States

### Native

From Froese and Pauly (2018a):

“South America: Rio Corumbá in the vicinity of the Corumbá Reservoir, upper rio Paraná basin in Brazil.”

“Known from the rio Corumbá in the vicinity of the Corumbá Reservoir of the upper rio Paraná basin, mostly collected in the reservoir of the rio Corumbá just upstream from the dam and its tributary the rio Areia [Zawadzki et al. 2008].”

### Introduced

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

## Means of Introduction Outside the United States

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

## Short Description

From Froese and Pauly (2018a):

“Dorsal spines (total): 1; Dorsal soft rays (total): 7; Anal spines: 1; Anal soft rays: 4. Differs from all other species of the genus *Hypostomus*, except *Hypostomus multidentis* and *Hypostomus ternetzi*, by the possession of more than 115 teeth (vs. less than 109) per ramus on dentary and premaxilla. Can be separated from *Hypostomus ternetzi* by having 116-214 teeth per jaw ramus, mean 167 (vs. 39-127 teeth per ramus, [...]); body with beige to light-brown color (vs. dark brown); larger orbital diameter, 18.5 to 21.2% of HL (vs. 14.5 to 16.1%); abdomen naked vs. abdomen partially plated; and teeth with two symmetrical cusps vs. two asymmetrical cusps. Can be differentiated from *Hypostomus multidentis* by its dark (vs. pale) spots over body and fins [Zawadzki et al. 2008].”

Froese and Pauly (2018a) also list that *H. denticulatus* has body plates or armor, pectoral fins with one spine and six soft rays, and pelvic fins with one spine and five soft rays.

## Biology

From Froese and Pauly (2018a):

“Occurs in turbid water and rocky substrates with sand. Syntopic with *Hypostomus ancistroides*, *Hypostomus iheringii*, *Hypostomus margaritifer*, *Hypostomus regani*, and *Hypostomus heraldoi* [Zawadzki et al. 2008].”

## Human Uses

Information on human uses of *Hypostomus denticulatus* was not found.

## Diseases

Information on disease of *Hypostomus denticulatus* was not found.

## Threat to Humans

From Froese and Pauly (2018a):

“Harmless”

## 3 Impacts of Introductions

---

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

## 4 Global Distribution

---



**Figure 1.** Known global distribution of *Hypostomus denticulatus*. Location is in Brazil. Map from VertNet (2018).

## 5 Distribution Within the United States

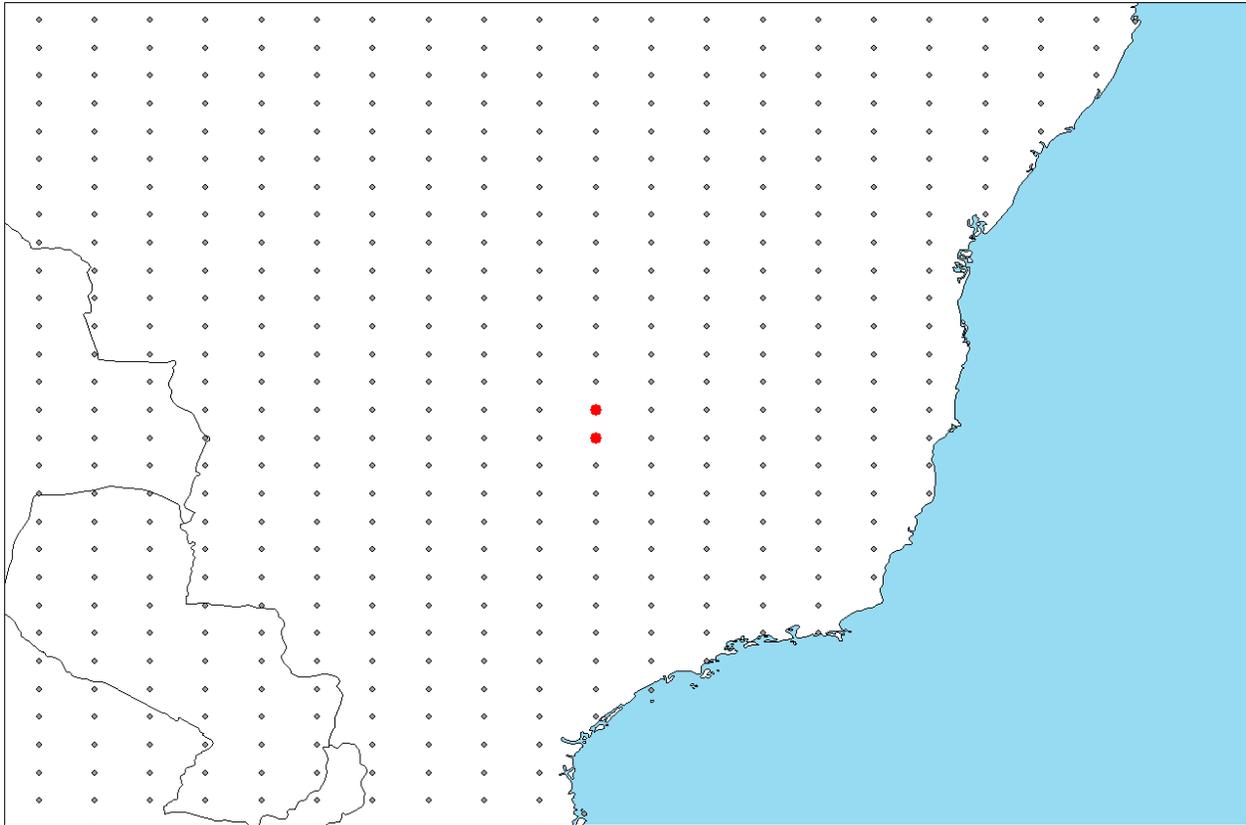
---

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

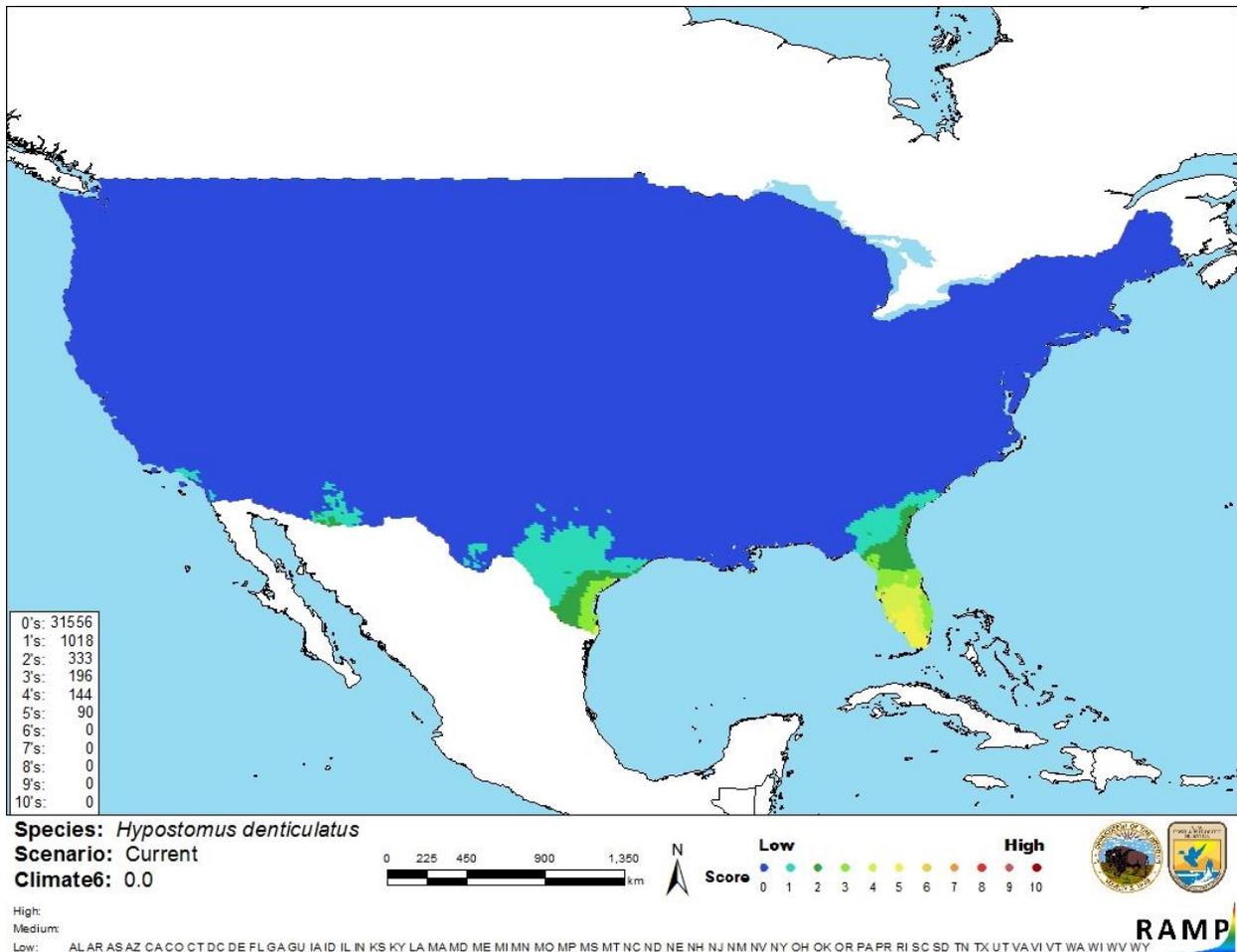
## 6 Climate Matching

### Summary of Climate Matching Analysis

The climate match for *Hypostomus denticulatus* was low for most of the contiguous United States. There was an area of medium match in southern Florida and a very small area of southern Texas. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.000, low. All states had low individual climate scores.



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



**Figure 3.** Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus denticulatus* in the contiguous United States based on source locations reported by VertNet (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<br>(Sum of Climate Scores 6-10) / (Sum of total Climate Scores) | Climate Match<br>Category |
|--|---------------------------|
| $0.000 \leq X < 0.005$   | Low                       |
| $0.005 < X < 0.103$  | Medium                    |
| $\geq 0.103$   | High                      |

## 7 Certainty of Assessment

The certainty of assessment for *Hypostomus denticulatus* is low. There is very little information in general about the species and no records of introduction. The lack of records of introduction mean that there is no information on impacts of introduction to evaluate.

## 8 Risk Assessment

---

### Summary of Risk to the Contiguous United States

*Hypostomus denticulatus* is a species of armored catfish native to southern Brazil. It was described in 2008 and all the information found comes from that paper. The history of invasiveness is uncertain. No records of introduction were found, subsequently there is no information on impacts of introduction. The climate match was low. However, southern Florida had a medium match. 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:** Species first described in 2008.
- **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.**

- Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2017. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (August 2018).
- Froese, R., and D. Pauly, editors. 2018a. *Hypostomus denticulatus* Zawadzki, Weber & Pavanelli, 2008. FishBase. Available: <http://www.fishbase.se/summary/Hypostomus-denticulatus.html>. (August 2018).
- Froese, R., and D. Pauly, editors. 2018b. *Hypostomus denticulatus*. In World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1008410>. (August 2018).
- Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. U.S. Fish and Wildlife Service.
- VertNet. 2018. VertNet. Available: <http://portal.vertnet.org/search?q=Hypostomus+denticulatus>. (August 2018).
- Zawadzki, C. H., C. Weber, and C. S. Pavanelli. 2008. Two new species of *Hypostomus* Lacépède (Teleostei: Loricariidae) from the upper rio Paraná basin, Central Brazil. *Neotropical Ichthyology* 6(3):403–412.

## **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.