

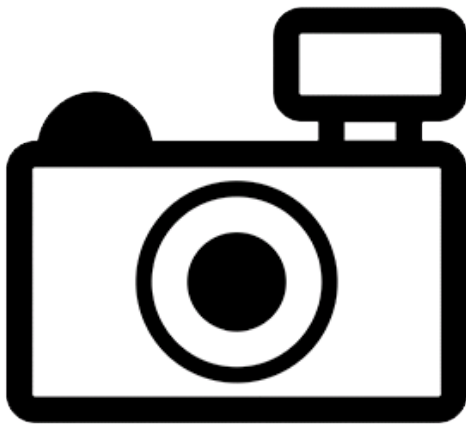
***Hypostomus chrysostiktos* (a fish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2013

Revised, August 2018

Web Version, 8/31/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“South America: known only from rio Paraguaçu basin in Brazil.”

Status in the United States

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

Means of Introductions in the United States

No records of *Hypostomus chrysostiktos* 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 chrysostiktos* Birindelli, Zanata, and Lima 2007 is the valid name for this species; it is also the original name.

From Baily (2017):

“Biota Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) > Pisces (Superclass) > Actinopterygii (Class) > Siluriformes (Order) > Loricariidae (Family) > Hypostominae (Subfamily) > *Hypostomus* (Genus) > *Hypostomus chrysostiktos* (Species)”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 26.0 cm SL male/unsexed; [Birindelli et al. 2007]”

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: known only from rio Paraguaçu basin in Brazil.”

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Birindelli et al. (2007):

“*Hypostomus chrysostiktos*, a new species of armored catfish of the family Loricariidae, is described. The most remarkable characteristic of the new species, which allows its prompt diagnosis from congeners, is the high number of branched rays in the dorsal fin (10-11). In addition, the new species can be diagnosed from the remaining Loricariidae by the combination of the following characters: slightly evertible cheek plates, four branched anal-fin rays, naked abdomen, and snout almost completely plated. The characters states shared by *H. chrysostiktos* and the tribe Hypostomini, which indicates it as belonging to that group, are: a hatched-shaped opercle, the anterior process of the pterotic-supracleithrum passing halfway the orbit, a pointed post-cleithral process, and slightly evertible cheek plates.”

“Dorsal profile of body convex from snout tip to dorsal-fin origin, and straight from this point to middle of caudal peduncle. Ventral profile of body straight from snout to caudal-fin base. Body relatively depressed; greatest body width at cleithral region, progressively tapering posteriorly from cleithrum. Greatest body depth at dorsal-fin origin, gradually tapering to caudal peduncle. Caudal peduncle robust and roughly trapezoid in cross-section; somewhat flattened on ventral portion.”

“Body entirely covered by plates, except for ventral surface from mouth to anus and areas around dorsal, pectoral, pelvic, and anal-fin insertions. Cheeks, snout, and rostrum completely plated, except for naked area on snout tip that continues ventrally to margin of upper lip, and small areas around nares.”

“Plates on dorsal and lateral portion of body relatively smooth in all specimens examined. Defined keels present only in mid-ventral series of plates, more developed on first five plates.”

“Ground color brown with bright yellow spots, much more evident than in preserved specimens. Ventral surface of body yellowish. Yellow spots on fins more conspicuous over rays.”

Biology

From Birindelli et al. (2007):

“*Hypostomus chrysostiktos* was collected in dark water stretches of the rio Paraguaçu and its tributaries, with rocky bottom, at altitudes ranging from 50 to 662 meters above sea level.”

Human Uses

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

Diseases

No information on diseases of *Hypostomus chrysostiktos* was found. **No records of OIE-reportable diseases were found for *H. chrysostiktos*.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

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

4 Global Distribution

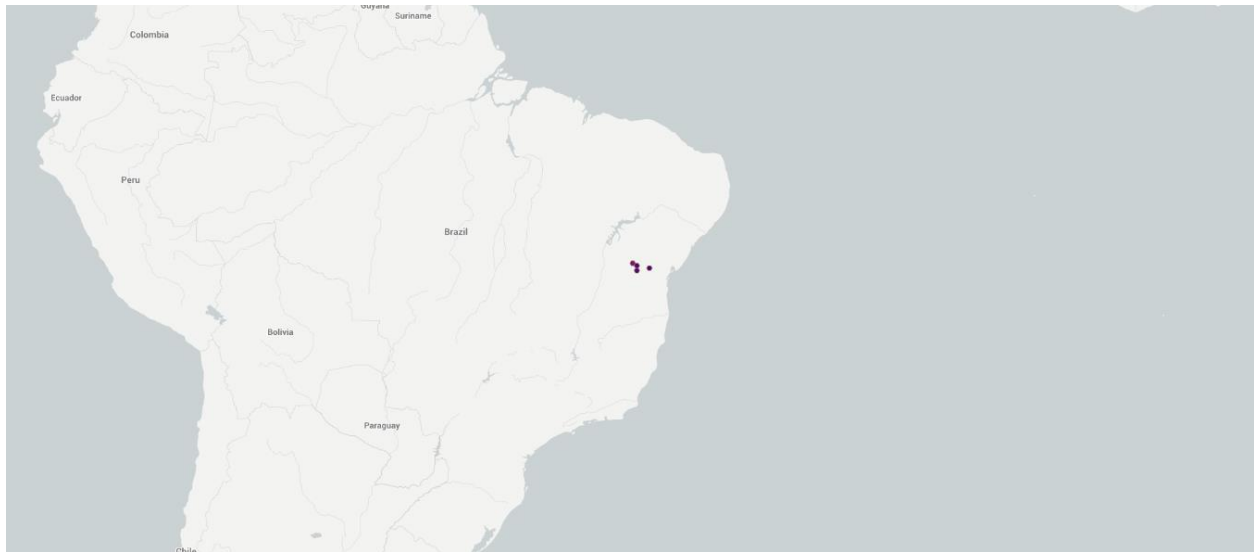


Figure 1. Known global distribution of *Hypostomus chrysostiktos*. Locations are in central eastern Brazil. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

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

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus chrysostiktos* was low for the contiguous United States, except for a medium match in south Florida and along the Gulf Coast of Texas. 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 have low individual climate scores except for Florida which has a medium individual climate score.

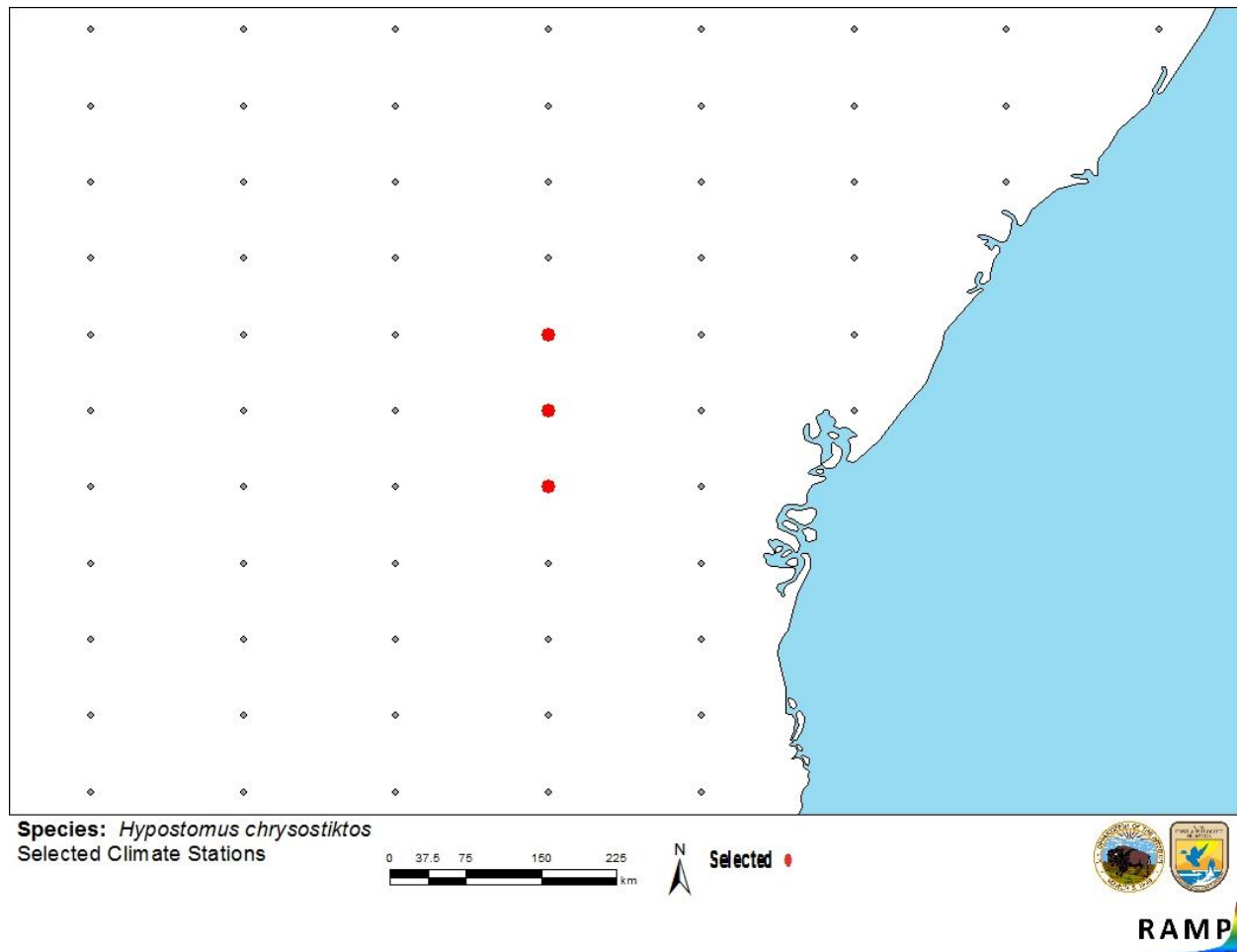


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in central eastern Brazil selected as source locations (red) and non-source locations (gray) for *Hypostomus chrysostiktos* climate matching. Source locations from GBIF Secretariat (2018).

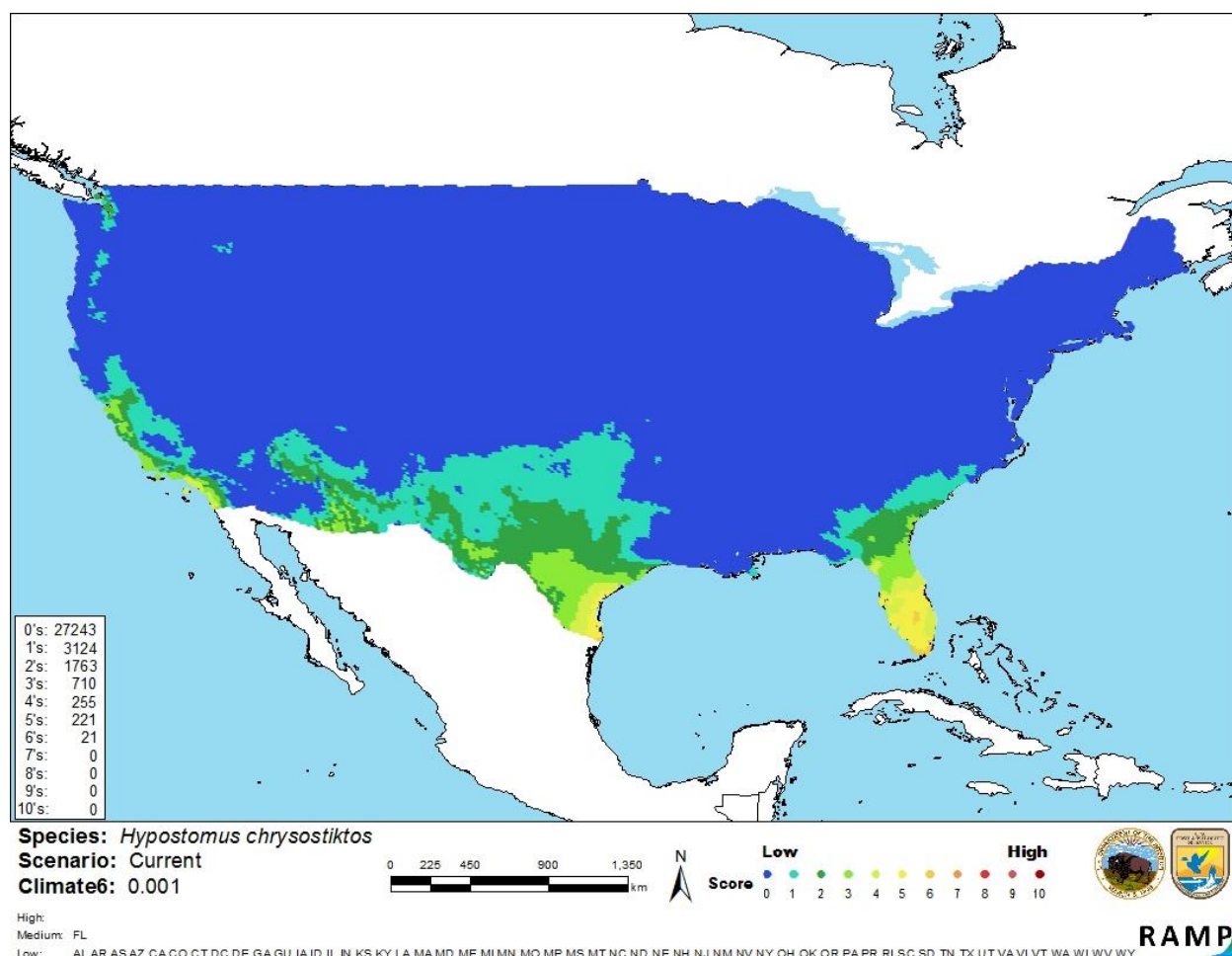


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus chrysostiktos* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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 is low. There was limited biological information available for this species. There were no records of introductions found, so impacts of introduction are unknown.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus chrysostiktos is a member of the suckermouth armored catfish family (Loricariidae), native to South America. The history of invasiveness is uncertain. No records of introductions were found. The climate match is low for the majority of the contiguous United States. Florida had a medium individual climate score. 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

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.

- Baily, N. 2017. *Hypostomus chrysostiktos*. In World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1008676>. (August 2018).
- Birindelli, J. L. O., A. M. Zanata, and F. C. T. Lima. 2007. *Hypostomus chrysostiktos*, a new species of armored catfish (Siluriformes: Loricariidae) from rio Paraguaçu, Bahia State, Brazil. *Neotropical Ichthyology* 5:271–278.
- 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 chrysostiktos* Birindelli, Zanata & Lima, 2007. FishBase. Available: <https://www.fishbase.de/summary/Hypostomus-chrysostiktos.html>. (August 2018).
- GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus chrysostiktos* Birindelli, Zanata & Lima, 2007. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5202202>. (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.

No references in this section.