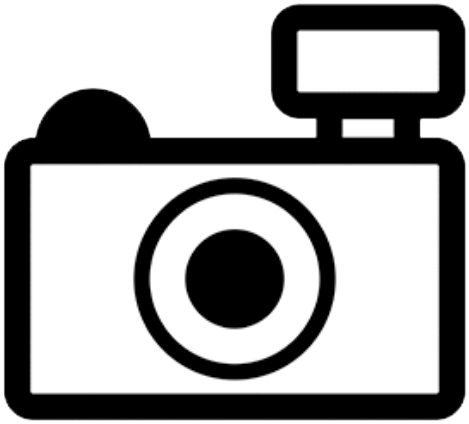
Wara Wara (*Hypostomus ventromaculatus*) (a catfish)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2012
Revised, November 2018
Web Version, 8/14/2019



No Photo Available

1 Native Range and Status in the United States

Native Range

From Boesman (1986):

"Distribution. — Hitherto with certainty only known to occur in the Surinam River and Marowijne River basins, in or below the lowermost rapids, but probably also in similar areas of Guyane and (possibly) Guyana […]."

Status in the United States

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

Means of Introductions in the United States

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

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2018):

"**Current status:** Valid as *Hypostomus ventromaculatus* Boeseman 1968."

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 Rafinesque, 1815
Subfamily Hypostominae
Genus *Hypostomus* Lacepède, 1803 – suckermouth catfishes
Species *Hypostomus ventromaculatus* Boeseman, 1968"

Size, Weight, and Age Range

From Froese and Pauly (2018):

"Max length : 25.0 cm SL male/unsexed; [Le Bail et al. 2000]"

Environment

From Froese and Pauly (2018):

"Freshwater; brackish; demersal."

Climate/Range

From Froese and Pauly (2018):

"Tropical"

Distribution Outside the United States

Native

From Boesman (1986):

"Distribution. — Hitherto with certainty only known to occur in the Surinam River and Marowijne River basins, in or below the lowermost rapids, but probably also in similar areas of Guyane and (possibly) Guyana […]."

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Boesman (1968):

"Description. — This is a rather robust species, with a stout peduncle; the snout outline is about ovate in dorsal view, though occasionally somewhat sinuous.

Depth of head at tip of occipital process 4.6-5.25 […], width at cleithra 2.9-3.25 […], in standard length. Diameter of orbit 2.35-3.35 m snout, 1.8-2.3 m interorbital width, relatively decreasing with age."

"Scutes in longitudinal lateral series 26/27 (2 ex.), 27/27 (12 ex.), 27/28 (1 ex.), neglecting the elongate scute on caudal base. There are 5 or 6 interdorsal scutes, 2 or 3 between second dorsal and caudal, and 12 or 13 post-anal, one or two additional small scutelets at the origins of these fins not included. The post-occipital scute is single, though in juveniles occasionally with one or two sutures still visible. The belly is wholly or almost wholly naked up to a size of about 60 mm, partly covered with usually coracoidal, lateral and median scutes up to about 75 mm, mostly covered up to about 100 mm, still larger examples being wholly covered excepting a pair of small areas near the ventral insertions, but some variation in this character occurs. In small examples, the lower surface of the head has, as usual, a narrow lateral marginal area covered by the extending dorsal armature, but with a wide transverse extension before each gill aperture, while the lower snout surface only shows the two narrow extensions of the upper snout armature curving around the margin and bordering the narrow naked snout tip; in large examples, the lateral marginal area extends to near the oral disc, while the lower snout is wholly covered except the small naked snout tip.

The number of mandibular teeth counted on each ramus varies between 20 and 30, with some additional teeth probably hidden in the gums and presumably accounting for the low numbers.

The deflated first dorsal fin just reaches the base of the spine of the second dorsal fin (8 ex.) or falls just short of that spine (7 ex.).

The whole specimens, including the belly, are covered with dark, round, somewhat vague spots, usually rather large but much smaller and better defined on the head; on the dorsal surface of body and peduncle rather obscure on account of the brownish ground colour, but very distinct on belly and fins, irregularly arranged except on the caudal fin where they form distinct cross-bands, more vague on juveniles."

Biology

From Boeseman (1968):

"Habitat. — The species has hitherto (in Surinam) been collected in or slightly below the lowermost rapids, or in tributaries below these rapids, thus seems less restricted to the usual habitat (rapids and cataracts) of the inland species; one example […] was captured in a stagnant pool in the dry river bed after the Afobaka barrage had been closed for more than three months, but other species are known to have survived in exactly the same circumstances, probably as a result of the high oxygen content of these pools."

From Froese and Pauly (2018):

"Lives in the lower reaches of rivers within the limit of the brackish water and the first rapids [Le Bail et al. 2000]. Very abundant in estuaries; prefers dead tree trunks and the vast zones of flooded vegetation [Boujard et al. 1997]. Also occurs on the muddy bottoms of the banks occupied by *Montrichardia arborescens*, moving together *Loricaria cataphracta* and *Pimelodus blochii* according to the tide. May use its stomach as an accessory breathing organ. Feeds mainly on unicellular algae and then on protozoa, rotifers, nematodes and arthropods as accessory food items [Le Bail et al. 2000]."

Human Uses

From Froese and Pauly (2018):

"Aquarium: commercial"

This species may be in international trade, but no trade records were found of this species in the United States.

Diseases

No information was found on diseases of *Hypostomus ventromaculatus*. **No records were found of OIE-reportable diseases (OIE 2019) for *H. ventromaculatus.***

Threat to Humans

From Froese and Pauly (2018):

"Harmless"

3 Impacts of Introductions

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

4 Global Distribution

Figure 1. Map of South America showing locations where *Hypostomus ventromaculatus* has been reported. Locations are in French Guiana. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

This species has not been reported in the wild in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus ventromaculatus* was low for the entire contiguous United States. There were no areas of high or medium match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had low individual Climate 6 scores.

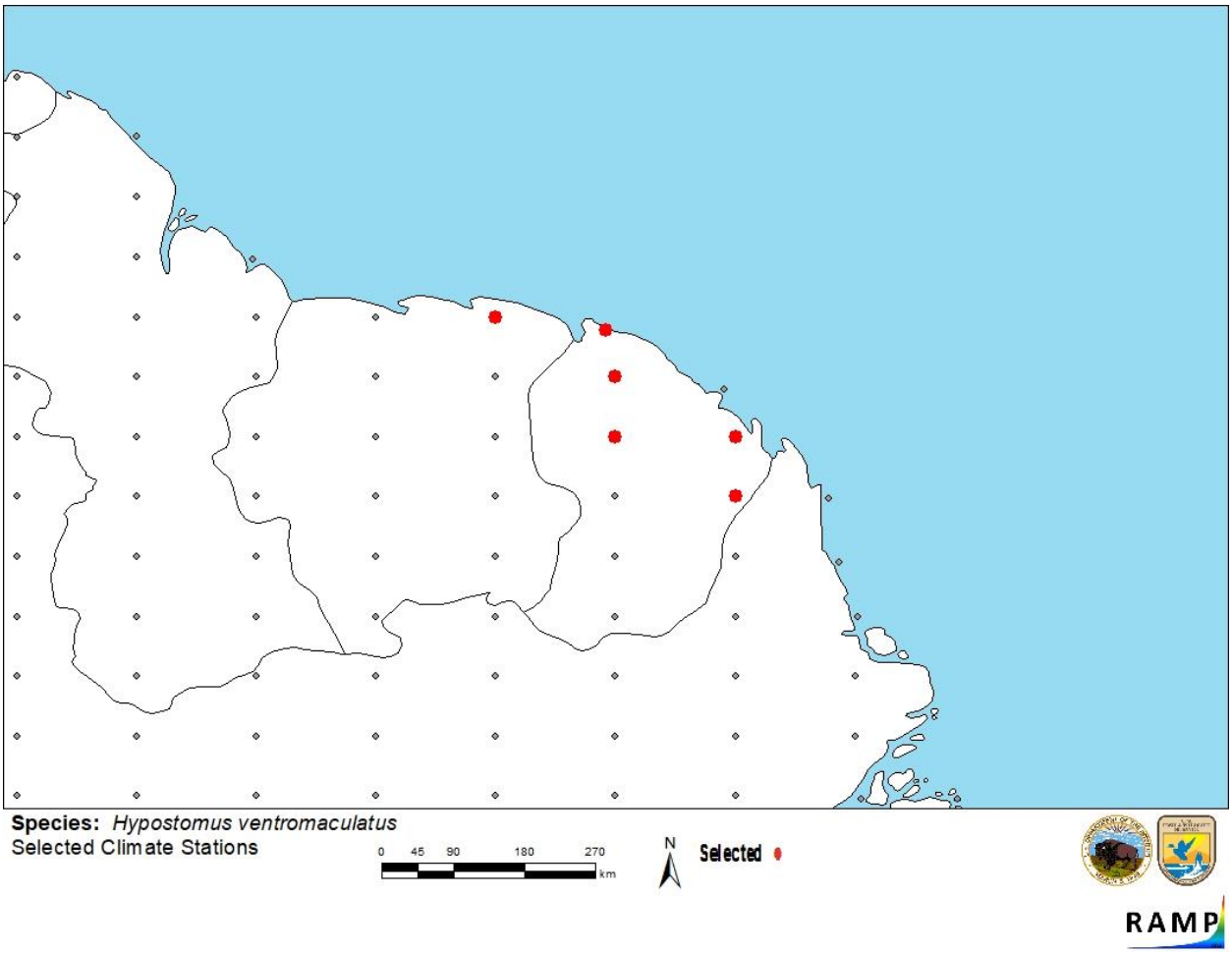


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in South America selected as source locations (red; French Guiana, Suriname) and non-source locations (gray) for *Hypostomus ventromaculatus* climate matching. Source locations are from GBIF Secretariat (2018). Selected source locations are within 100 km of one or more species occurrences and do not necessarily represent the locations of occurrences themselves.

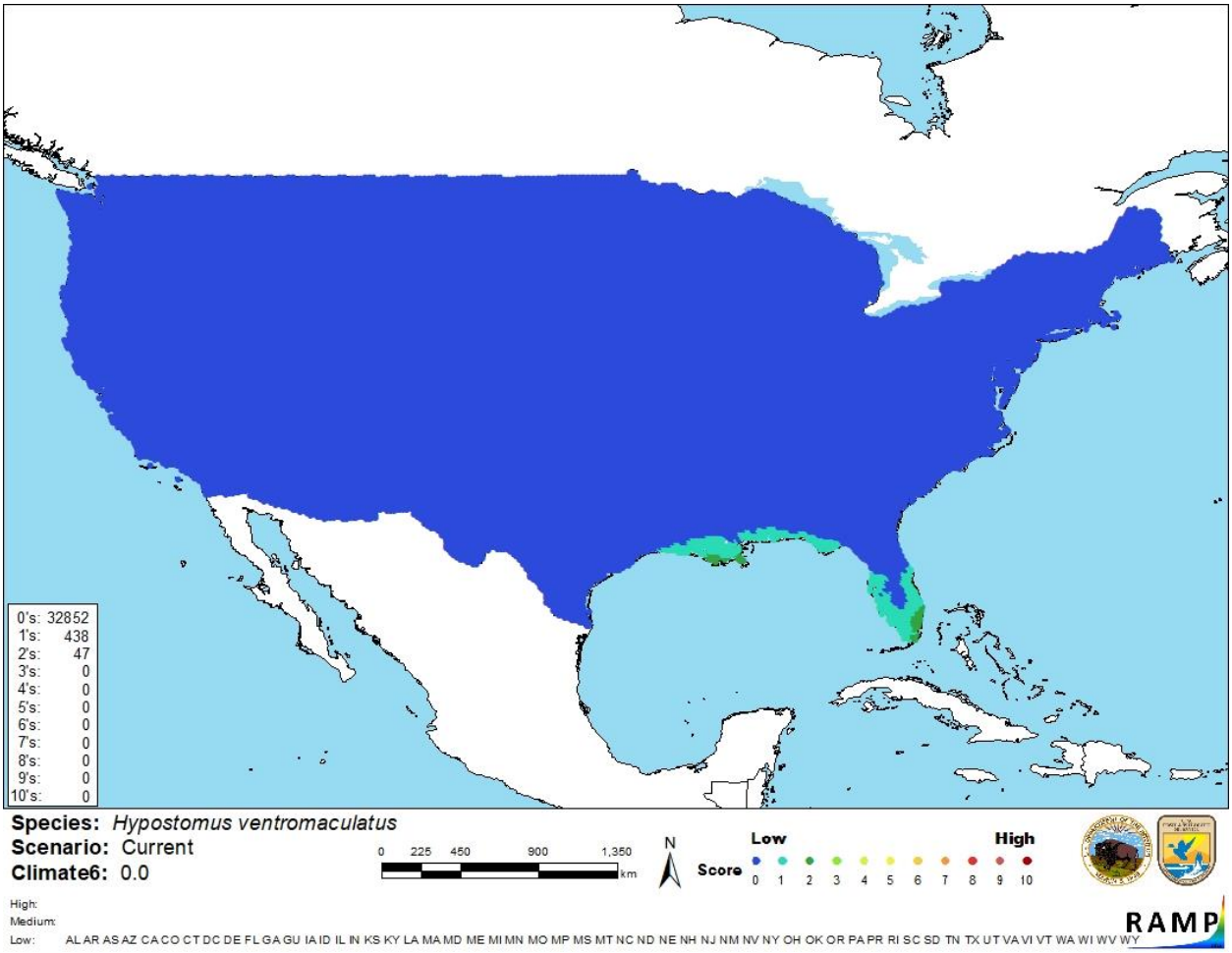


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus ventromaculatus* in the contiguous United States based on source locations reported from GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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

There is some information on ecology, biology, and distribution available for *Hypostomus ventromaculatus*. No information was found on introductions of *H. ventromaculatus*; therefore, there is no information on impacts of introduction. The certainty of assessment for *Hypostomus ventromaculatus* is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus ventromaculatus is a South American suckermouth catfish native to Brazil. It has not been reported as introduced or established anywhere in the world outside of its native range; therefore, there is no information on impact of introduction. The history of invasiveness is uncertain. The overall climate match for the contiguous United States was low. There were no areas of medium or high match in the contiguous United States. Due to lack of information, the certainty of assessment is low. The overall risk assessment category for this species 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.

Boeseman, M. 1968. The genus *Hypostomus* Lacépède, 1803, and its Surinam representatives (Siluriformes, Loricariidae). Zoologische Verhandelingen (Leiden) 99:1–89.

Fricke, R., W. N. Eschmeyer, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp. (November 2018).

Froese, R., and D. Pauly, editors. 2018. *Hypostomus ventromaculatus* Boeseman, 1968. FishBase. Available: https://www.fishbase.de/summary/Hypostomus-ventromaculatus.html. (November 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Hypostomus ventromaculatus* Boeseman, 1968. Global Biodiversity Information Facility, Copenhagen. Available: https://www.gbif.org/species/5202236. (November 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Hypostomus ventromaculatus* Boeseman, 1968. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680258#null. (November 2018).

OIE (World Organisation for Animal Health). 2019. OIE listed diseases, infections and infestations in force in 2019. Available: http:www.oie.int/animal-health-in-the-world/oie-listed-diseases-2019/. (August 2019).

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.

Boujard, T., M. Pascal, F. J. Meunier, and P. Y. Le Bail. 1997. Poissons de Guyane. Guide écologique de l'Approuague et de la réserve des Nouragues. Institut National de la Recherche Agronomique, Paris.

Le Bail, P. Y., P. Keith, and P. Planquette. 2000. Atlas des poissons d'eau douce de Guyane. Tome 2, Fascicule II: Siluriformes. Collection Patr imoines Naturels 43(2):1–307.