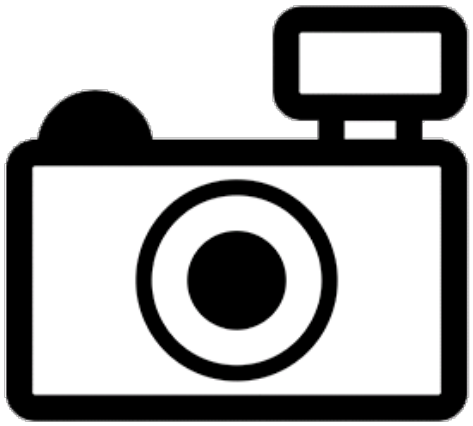
# *Potamoglanis hasemani* (a catfish, no common name)

## Ecological Risk Screening Summary

**U.S. Fish & Wildlife Service, January 2017**
**Revised, May 2018**
**Web Version, 10/22/2020**

Organism Type: Fish
Overall Risk Assessment Category: Uncertain




# 1 Native Range and Status in the United States

## Native Range

From Froese and Pauly (2018):

"South America: Amazon River basin."

From Eschmeyer et al. (2018):

"Distribution: Amazon River basin: Bolivia, Brazil, Ecuador, Guyana and Peru."

## Status in the United States

This species has not been reported in the United States. No records of this species in trade in the United States were found.

The Florida Fish and Wildlife Conservation Commission has listed *Potamoglanis hasemani* as a prohibited species. Prohibited nonnative species (FFWCC 2017), "are considered to be dangerous to the ecology and/or the health and welfare of the people of Florida. These species are not allowed to be personally possessed or used for commercial activities.

### Means of Introductions in the United States

This species has not been reported in the United States.

### Remarks

*Potamoglanis hasemani* was formally referred to under the synonym *Trichomycterus hasemani.* The information search was done using both names.

## 2 Biology and Ecology

### Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Potamoglanis hasemani* is the valid name for this species.

From GBIF Secretariat (2020):

Kingdom Animalia
Phylum Chordata
Class Actinopterygii
Order Siluriformes
Family Trichomycteridae
Genus *Potamoglanis*
Species *Potamoglanis hasemani*

### Size, Weight, and Age Range

From Froese and Pauly (2018):

"Max length : 1.8 cm male/unsexed; [de Pínna and Wosiacki 2003]"

### Environment

From Froese and Pauly (2018):

"Freshwater; benthopelagic. [de Pínna and Wosiacki 2003]"

### Climate

From Froese and Pauly (2018):

"Tropical, […] [de Pínna and Wosiacki 2003]"

## Distribution Outside the United States

### Native

From Froese and Pauly (2018):

"South America: Amazon River basin."

From Eschmeyer et al. (2018):

"Distribution: Amazon River basin: Bolivia, Brazil, Ecuador, Guyana and Peru."

### Introduced

This species has not been reported as introduced outside of its native range.

## Means of Introduction Outside the United States

This species has not been reported as introduced outside of its native range.

## Short Description

From Henschel (2016):

"Dutra et al. (2012) established the following character states to diagnose the *T. hasemani* group: 1 – a wide fontanel that occupies most of the skull roof and is delimited by the frontal and supraoccipital (Fig. 3 [in source material]); 2 – absence of the anterior portion of the infraorbital canal (pores i1 and i3); 3 – first pectoral-fin ray much longer than other rays; 4 – absence of branchiostegal rays on the posterior ceratohyal; and 5 – a large posterior process of the palatine, partly forked and expanded distally (Fig. 4 [in source material])."

From Brejão et al. (2013):

"*Trichomycterus hasemani* (Trichomycteridae), which shows translucent body or cryptic coloration pattern on the sand (Zuanon et al., 2006)."

## Biology

From Dutra et al. (2012):

"These catfish live interstitially on the sandy bottom and amongst the leaf litter and debris of riverbeds."

From Brejão et al. (2013):

"*Trichomycterus hasemani* swims fast and erratically over the bottom, searching for food and frequently burying itself into the substrate (usually sand patches)."

From Henschel et al. (2018):

"*Potamoglanis hasemani* is found in aquatic plants roots"

### Human Uses
No information available.

### Diseases
No information was available on diseases. **No records of OIE-reportable diseases (OIE 2020) were found for *Potamoglanis hasemani*.**

### Threat to Humans
From Froese and Pauly (2018):

"Harmless"

# 3 Impacts of Introductions
This species has not been reported as introduced outside of its native range, so impacts of introductions are unknown. *Potamoglanis hasemani* is listed as a prohibited nonnative species in Florida (FFWCC 2017).

# 4 History of Invasiveness
This species has not been reported as introduced outside of its native range. Therefore, history of invasiveness is classified as No Known Nonnative Population.

# 5 Global Distribution


**Figure 1.** Known global established locations of *Potamoglanis hasemani.* Map from GBIF Secretariat (2020). The southernmost observation in Brazil, the observations along the border of Colombia and Venezuela, in northern Guyana, and along the border of Guyana and Suriname were not used to select source points for the climate match as they are outside the Amazon River basin and there was no information found suggesting a distribution in other basins.

# 6 Distribution Within the United States

This species has not been reported within the United States.

# 7 Climate Matching

## Summary of Climate Matching Analysis

*Potamoglanis hasemani* had a medium climate match in southern Florida and the far southern tip of Texas. 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 0.000, low (Scores between 0.000 and 0.005, inclusive, are classified as low). All States had low individual Climate 6 scores.

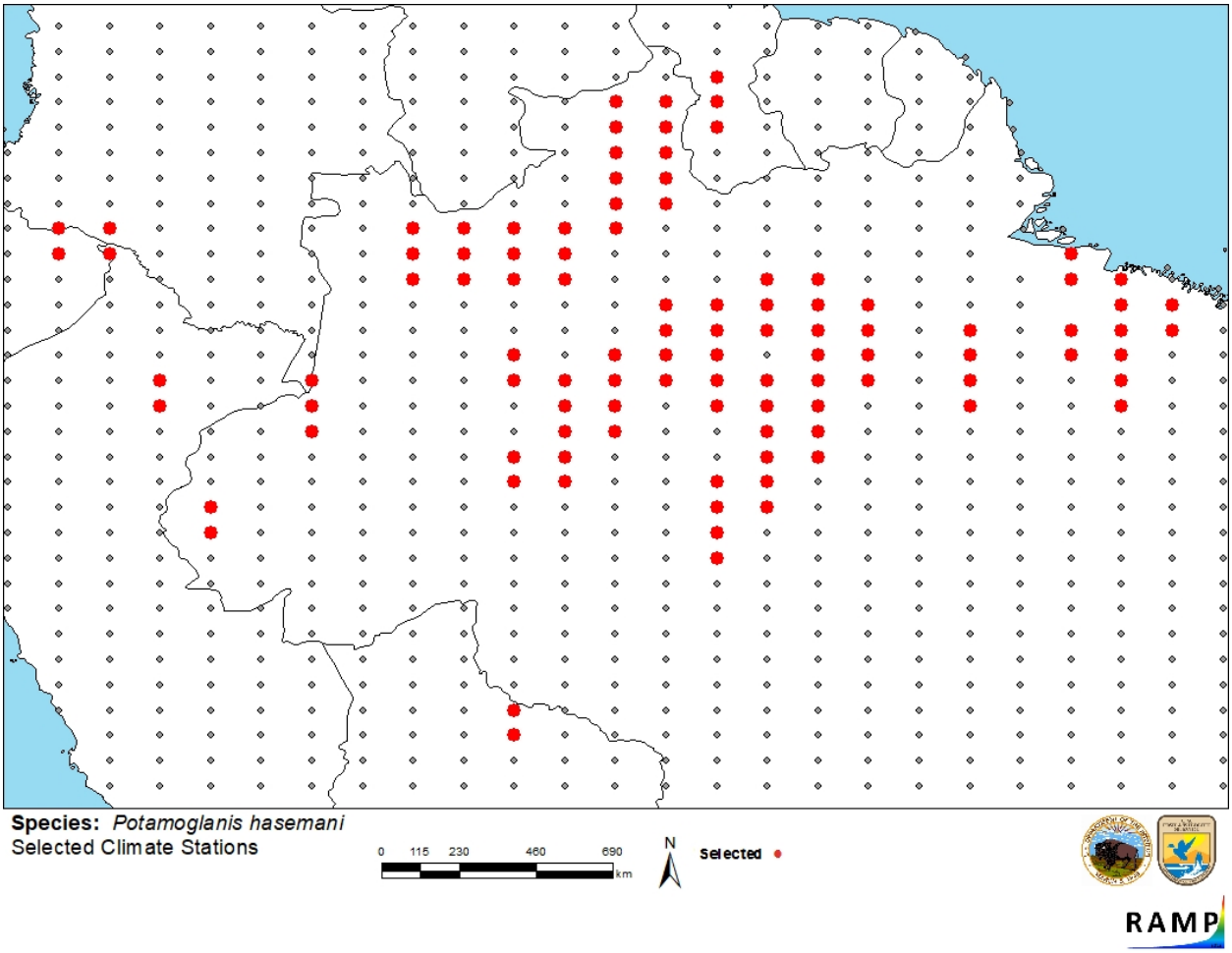



**Figure 2.** RAMP (Sanders et al. 2018) source map showing weather stations in South America selected as source locations (red; Ecuador, Colombia, Peru, Bolivia, Brazil, Guyana) and non-source locations (gray) for *Potamoglanis hasemani* climate matching. Source locations from GBIF Secretariat (2020). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

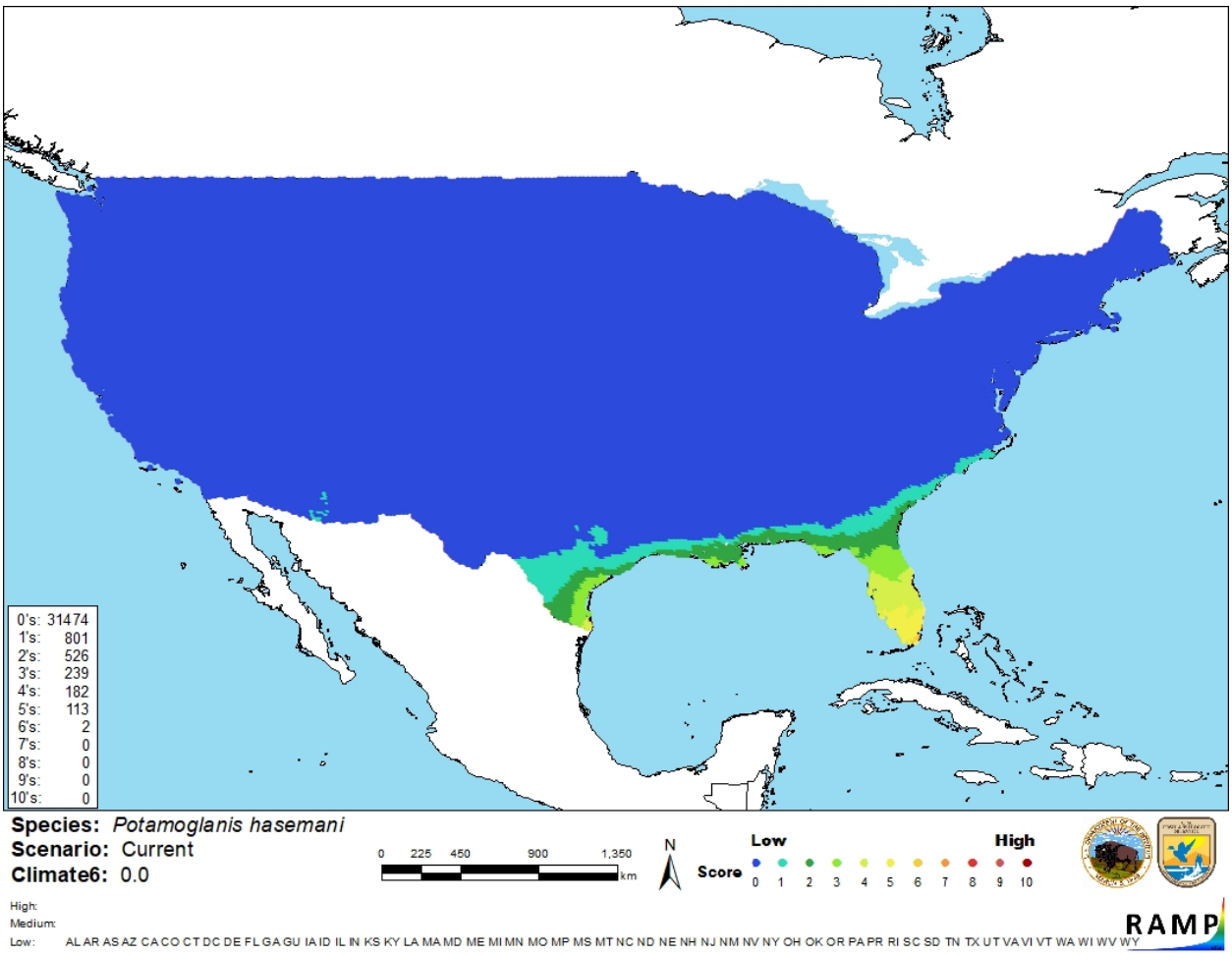



**Figure 3.** Map of RAMP (Sanders et al. 2018) climate matches for *Potamoglanis hasemani* in the contiguous United States based on source locations reported by GBIF Secretariat (2020). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

| Climate 6:<br>(Count of target points with climate scores 6-10)/<br>(Count of all target points) | Overall Climate Match Category |
|---|---|
| 0.000≤X≤0.005 | Low |
| 0.005<X<0.103 | Medium |
| ≥0.103 | High |

# 8 Certainty of Assessment

There was limited information available on the species *Potamoglanis hasemani*. This species has not been reported outside of its native range so impacts of introduction are unknown. However, there were a number of observations available for this species that were outside the described native range for the species. If those observations are accurate and the distribution of the species

is greater than currently understood, the results of the climate match may be underestimating the level of climatic similarity between the actual range of this species and the contiguous United States. With such little information known on this species the certainty of this assessment is low.

# 9 Risk Assessment

## Summary of Risk to the Contiguous United States

*Potamoglanis hasemani* is a South American catfish found in the Amazon River basin. The history of invasiveness is classified as No Known Nonnative Population. There have been no reports of this fish outside of its native range. *P. hasemani* is listed as a prohibited species in Florida. The climate match with the contiguous United States was low. However, there was an area of medium match in southern Florida and the far southern tip of Texas. The certainty of assessment is low due to lack of information. The overall risk assessment category is Uncertain.

## Assessment Elements

- **History of Invasiveness (Sec. 4): No Known Nonnative Population**
- **Overall Climate Match Category (Sec. 7): Low**
- **Certainty of Assessment (Sec. 8): Low**
- **Remarks/Important additional information: N/A**
- **Overall Risk Assessment Category: Uncertain**

# 10 Literature Cited

**Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.**


Brejão GL, Gerhard P, Zuanon J. 2013. Functional trophic composition of the ichthyofauna of forest streams in eastern Brazilian Amazon. Neotropical Ichthyology 11:361–373.

Dutra GM, Wosiacki WB, de Pinna MC. 2012. *Trichomycterus anhanga*, a new species of miniature catfish related to *T. hasemani* and *T. johnsoni* (Siluriformes: Trichomycteridae) from the Amazon basin, Brazil. Neotropical Ichthyology 10:225–231.

Eschmeyer WN, Fricke R, van der Laan R, editors. 2018. Catalog of fishes: genera, species, references. California Academy of Science. Available: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp (May 2018).

[FFWCC] Florida Fish and Wildlife Conservation Commission. 2017. Prohibited species list. Tallahassee, Florida: Florida Fish and Wildlife Conservation Commission. Available:http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/#nogo (January 2017).

Froese R, Pauly D, editors. 2018. *Potamoglanis hasemani* (Eigenmann, 1914). FishBase. Available: http://www.fishbase.se/summary/Potamoglanis-hasemani.html (May 2018).

GBIF Secretariat. 2020. GBIF backbone taxonomy: *Potamoglanis hasemani* (Eigenmann, 1914). Copenhagen: Global Biodiversity Information Facility. Available: https://www.gbif.org/species/9455625 (October 2020).

Henschel E. 2016. A new catfish species of the *Trichomycterus hasemani* group (Siluriformes: Trichomycteridae), from the Branco river basin, northern Brazil. Vertebrate Zoology 66:117–123.

Henschel EJ, Mattos LO, Katz AM, Costa WJEM. 2018. Position of enigmatic miniature trichomycterid catfishes inferred from molecular data (Siluriformes). Zoologica Scripta 47:44–53.

[OIE] World Organisation for Animal Health. 2020. OIE-listed diseases, infections and infestations in force in 2020. Available: http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2020/ (October 2020).

Sanders S, Castiglione C, Hoff M. 2018. Risk Assessment Mapping Program: RAMP. Version 3.1. U.S. Fish and Wildlife Service.

# 11 Literature Cited in Quoted Material

**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.**

de Pínna MCC, Wosiacki W. 2003. Trichomycteridae (pencil or parasitic catfishes). In Reis RE, Kullander SO, Ferraris Jr. CJ, editors. Checklist of the freshwater fishes of South and Central America. Porto Alegre, Brazil: EDIPUCRS.

Zuanon J, Bockmann FA, Sazima I. 2006. A remarkable sanddwelling fish assemblage from central Amazonia, with comments on the evolution of psammophily in South American freshwater fishes. Neotropical Ichthyology 4:107–118.