# *Haemomaster venezuelae* (catfish, no common name)
## Ecological Risk Screening Summary

**U.S. Fish & Wildlife Service, November, 2016**
**Revised, December 2016, March 2017**
**Web Version, 12/28/2017**

Photo: Museum of Comparative Zoology, Harvard University. X-ray image. Licensed under Creative Commons BY-NC-SA. Available: http://eol.org/data_objects/26683838. (December 2016).

# 1 Native Range and Status in the United States

## Native Range

From Froese and Pauly (2016):

"South America: Amazon and Orinoco River basins [Brazil, Venezuela, Guyana, and Colombia]."

## Status in the United States

This species has not been reported as introduced or established in the United States.

From FFWCC (2017):

"Prohibited nonnative species 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. Very limited exceptions may be made by permit from the Executive Director […]
Freshwater Aquatic Species […]

Parasitic catfishes […]
*Haemomaster venezuelae*"

## Means of Introductions in the United States

This species has not been reported as introduced or established in the United States.

# 2 Biology and Ecology

## Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2016):

"Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Trichomycteridae
Subfamily Stegophilinae
Genus Haemomaster
Species *Haemomaster venezuelae* Myers, 1927"

"Taxonomic Status: valid"

## Size, Weight, and Age Range

From Froese and Pauly (2016):

"Max length : 6.6 cm SL male/unsexed (de Pínna and Wosiacki 2013)"

## Environment

From Froese and Pauly (2016):

"Freshwater; demersal."

## Climate/Range

From Froese and Pauly (2016):

"Tropical, preferred ?"

## Distribution Outside the United States

### Native

From Froese and Pauly (2016):

"South America: Amazon and Orinoco River basins [Brazil, Venezuela, Guyana, and Colombia]."

### Introduced

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

## Means of Introduction Outside the United States

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

## Short Description

From Schmidt (1993):

"In the following summary, meristic and morphometric data of the paratype are given first followed by the range of values for all other specimens, if different from the paratype, in parentheses. Dorsal- 7, anal- 6(5-6), pelvic- 5, pectoral- 6. Standard length (SL) in mm- 59(29-45), SL/head length- 6.5(6.0- 7.0), SL/predorsal- 1.5(1.4-1.5), SL/prepelvic- 1.6(1.5-1.7), SL/preanal-1.3(1.3-1.4), head/snout- 2.3(1.7-2.3), head/eye- 3.6(2.4-5.2), head/gape- 1.7(1.3-2.1), interorbital/eye diameter- 1.8(1.1-2.2)."

"In addition to the meristic and morphometric variation seen among the compared specimens, the following notes on color pattern expand the species description. Scattered melanophores arranged in a wide band on the dorsal surface from head to caudal fin, surrounding the dorsal fin and then becoming narrower and darker to the tail. Pectorals with first ray strongly outlined by melanophores and with less dense melanophores on next 4 or 5 rays. Pelvics with weak melanophores on first ray. Dorsal fin with scattered melanophores on all rays. Anal with scattered melanophores only on first ray. Cheek covered with dense patch of melanophores, becoming denser at base of opercular tooth patch and then scattered over the scapula. Snout with scattered melanophores forward of and between the nares. A dark band along most of the premaxillary with a separate patch of melanophores at the base of the maxillary barbel. All specimens show a distinctive black lateral band on the posterior sides (Myers, 1944)."

## Biology

From Schmidt (1993):

"My Guyana specimens were all collected in seines over a muddy or sandy substrate. There was no blood or other gut contents visible in the specimens I examined (although they were not dissected). All stegophilines were considered mucous or scale feeders (Baskin et al., 1980)."

## Human Uses
No information available.

## Diseases
No OIE-reportable diseases have been documented for this species.

## Threat to Humans
From Froese and Pauly (2016):

"Harmless"

# 3 Impacts of Introductions
This species has not been reported as introduced or established outside of its native range.

From FFWCC (2017):

"Prohibited nonnative species 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. Very limited exceptions may be made by permit from the Executive Director […]
Freshwater Aquatic Species […]
Parasitic catfishes […]
*Haemomaster venezuelae*"

# 4 Global Distribution

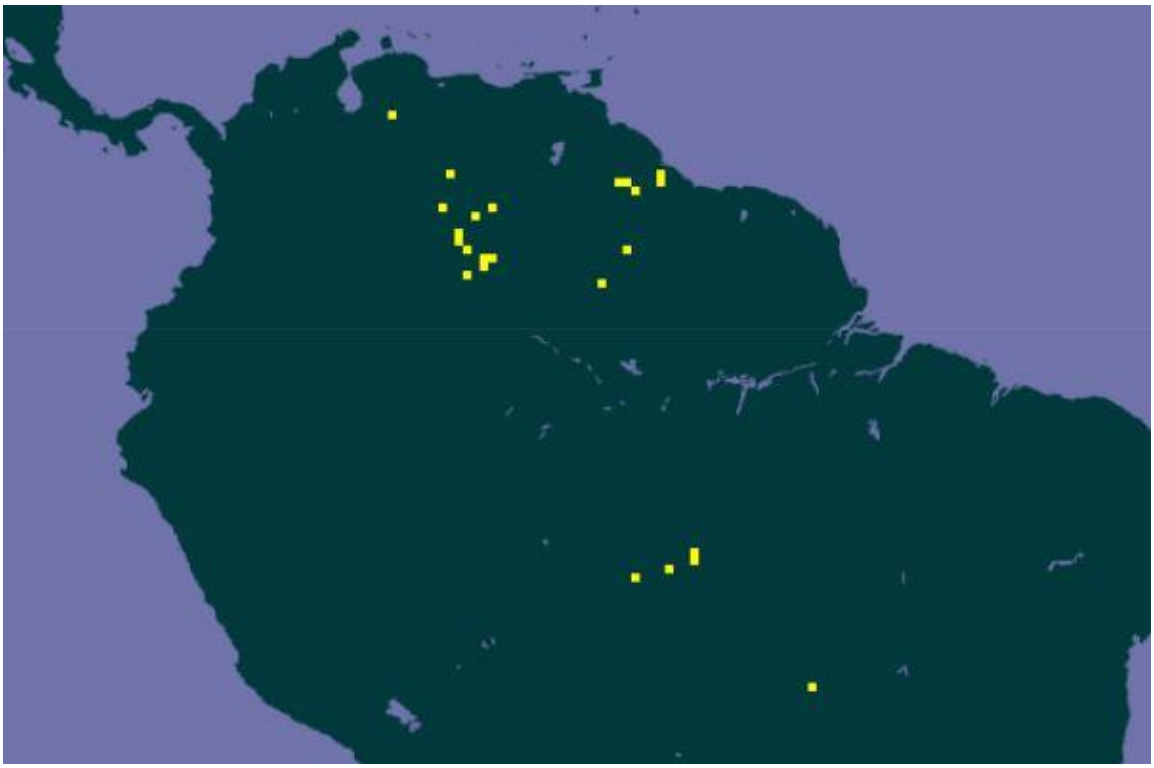

**Figure 1.** Distribution of *Haemomaster venezuelae* in northern South America. Map from GBIF (2016).

# 5 Distribution Within the United States

This species has not been reported as introduced or established in the United States.

# 6 Climate Matching

## Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low in all of the contiguous United States, with the exception of a medium match in southern Florida. Climate 6 proportion indicated that the contiguous U.S. has a low climate match. The range for a low climate match is 0.000-0.005; the Climate 6 proportion for *Haemomaster venezuelae* is 0.0.

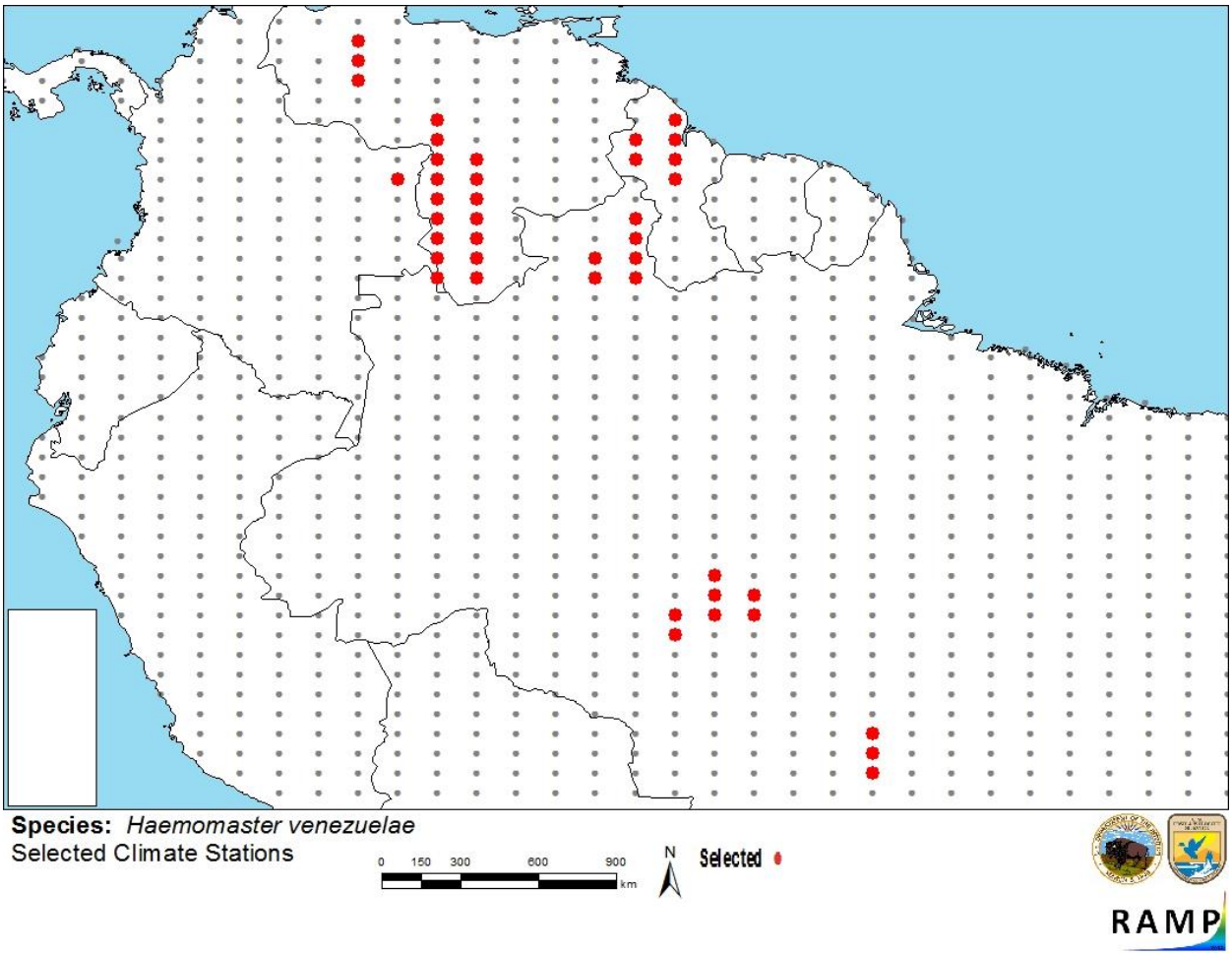


**Figure 2.** RAMP (Sanders et al. 2014) source map of northern South America showing weather stations selected as source locations (red) and non-source locations (gray) for *Haemomaster venezuelae* climate matching. Source locations from GBIF (2016).

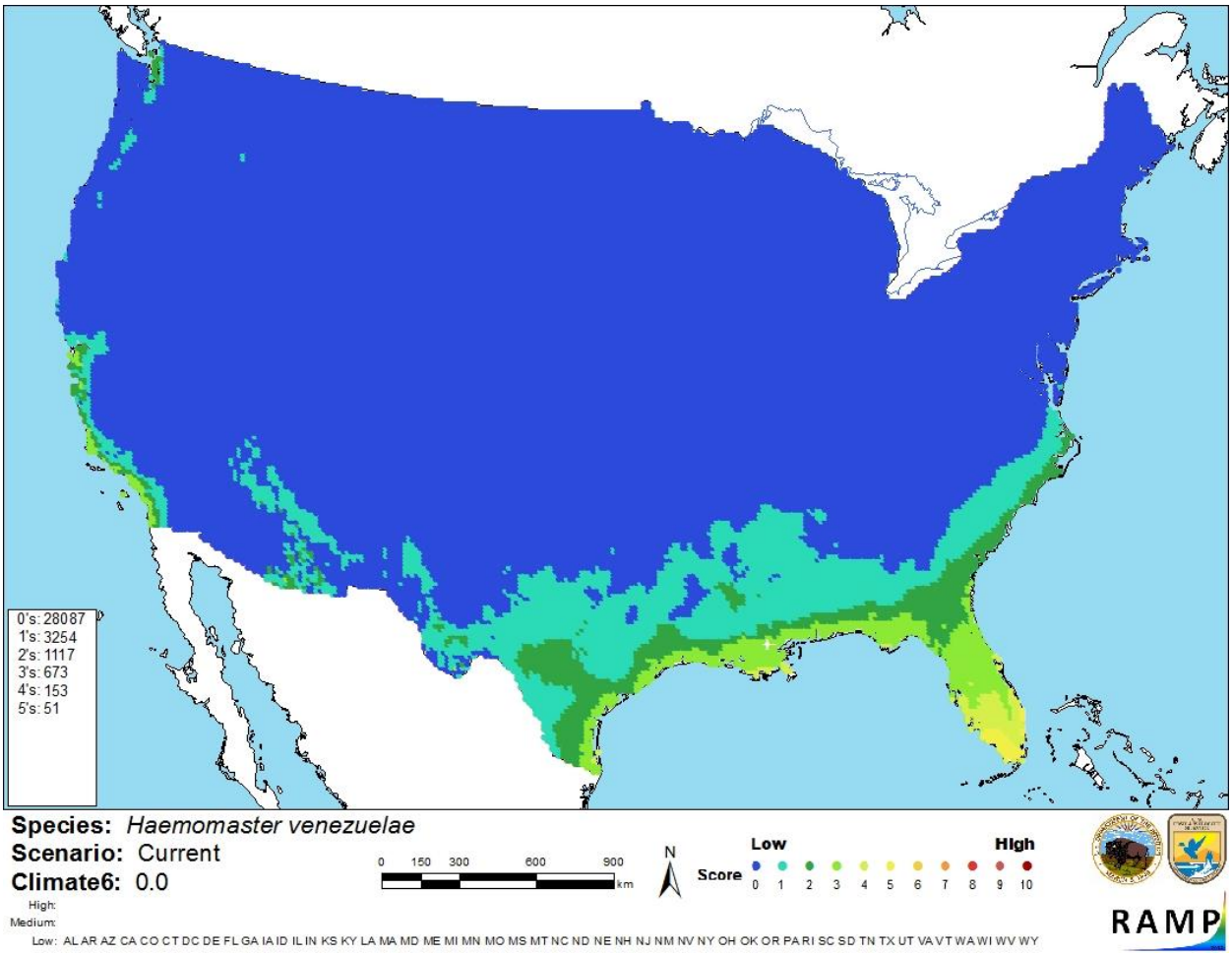


**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *Haemomaster venezuelae* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

There is very little information available for *Haemomaster venezuelae*. Further information on the biology and distribution of *H. venezuelae* is needed to conduct a thorough assessment of the risk and potential negative impacts of this species outside of its native range. Certainty of this assessment is low.

# 8 Risk Assessment

## Summary of Risk to the Contiguous United States

*Haemomaster venezuelae* is a catfish native to South America, specifically, the Amazon and Orinoco River basins. Very little information is available about the species biology. There has been no documentation on the invasiveness or introduction outside of its native range. *H. venezuelae* has a low climate match within the contiguous United States. 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**
- **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.**


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

Froese, R., and D. Pauly, editors. 2016. *Haemomaster venezuelae* (Koch, 2002). FishBase. Available: http://www.fishbase.org/summary/48772. (November 2016).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Haemomaster venezuelae* (Myers, 1927). Global Biodiversity Information Facility, Copenhagen. Available: http://www.gbif.org/species/2343268. (November 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Haemomaster venezuelae* Myers, 1927. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682106#null. (November 2016).

Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk Assessment Mapping Program: RAMP. US Fish and Wildlife Service.

Schmidt, R. E. 1985. New distribution records and complementary description of *Haemomaster venezuelae* (Siluriformes, Trichomycteridae), a rare and poorly known fish from northern South-America. Studies on Neotropical Fauna and Environment 20(2):93-96.

# 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.**

Baskin, J. N., T. M. Zaret, and F. Mago-Leccia. 1980. Feeding of reportedly parasitic catfishes (Trichomycteridae and Cetopsidae) in the Rio Portuguesa Basin, Venezuela. Biotropica 12(3):182-186.

Myers, G. S. 1944. Two extraordinary new blind Nematognath fishes from the Rio Negro, representing a new subfamily of Pygidiidae, with a rearrangement of the genera of the family, and illustrations of some previously described genera and species from Venezuela and Brazil. Proceedings of the California Academy of Sciences, 4th Series 23(40):591-602.