

Henonemus triacanthopomus (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, December 2016

Revised, February 2017

Web Version, 1/14/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From DoNascimento and Provenzano (2006):

“*Henonemus triacanthopomus* is distributed in the Apure and Arauca Rivers and in Caño Macareo in the Orinoco Delta [...] Apparently, the distribution of the species shows a disjunct pattern in this basin, but we believe that this situation is an artifact of sampling effort. We expect that the species ranges through the entire middle and lower reaches of the Orinoco River basin [Venezuela].”

Status in the United States

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

From FFWCC (2016):

“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. [...]

Freshwater Aquatic Species [...]
Parasitic catfishes [...]
Henonemus triacanthopomus”

Means of Introductions in the United States

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

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From GBIF (2016):

“KINGDOM Animalia
PHYLUM Chordata
CLASS Actinopterygii
ORDER Siluriformes
FAMILY Trichomycteridae
GENUS *Henonemus*
SPECIES *Henonemus triacanthopomus*”

“TAXONOMIC STATUS
accepted species”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 9.4 cm SL male/unsexed; [DoNascimento and Provenzano 2006]”

Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?”

Distribution Outside the United States

Native

From DoNascimento and Provenzano (2006):

“*Henonemus triacanthopomus* is distributed in the Apure and Arauca Rivers and in Caño Macareo in the Orinoco Delta [...] Apparently, the distribution of the species shows a

disjunct pattern in this basin, but we believe that this situation is an artifact of sampling effort. We expect that the species ranges through the entire middle and lower reaches of the Orinoco River basin [Venezuela].”

Introduced

No introductions of this species have been reported.

Means of Introduction Outside the United States

No introductions of this species have been reported.

Short Description

From Froese and Pauly (2016):

“Diagnosis: Differs from its congeners by having three or asymmetrically 4 opercular odontodes in specimens longer than 8 cm SL; a blackish ventral lobe of caudal fin; a row of mid-lateral dark blotches above the lateral line deflected dorsally on caudal peduncle; five interopercular odontodes inserted in the main series; and, lower jaw teeth arranged in seven rows [DoNascimento and Provenzano 2006].”

Biology

From DoNascimento and Provenzano (2006):

“Stegophilines are considered parasites or semi-parasites, because of their peculiar habit of feeding on scales, mucus, or skin of other fishes (Baskin et al., 1980; Winemiller and Yan, 1989; de Pinna and Britski, 1991).”

Human Uses

No information available.

Diseases

No information available.

Threat to Humans

From Froese and Pauly (2016):

“Harmless”

3 Impacts of Introductions

No introductions of this species have been reported.

From FFWCC (2016):

“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. [...]

Freshwater Aquatic Species [...]

Parasitic catfishes [...]

Henonemus triacanthopomus”

4 Global Distribution



Figure 1. Known global established locations of *Henonemus triacanthopomus*, all in Venezuela. Map from GBIF (2016).

5 Distribution Within the United States

This species has not been reported 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 medium in southern Florida and low elsewhere in the contiguous U.S. The Climate 6 proportion indicated a low climate match for the contiguous U.S. overall. The range of Climate 6 proportions indicating a low climate match is 0.000 to 0.005; the Climate 6 proportion of *Henonemus triacanthopomus* was 0.0.

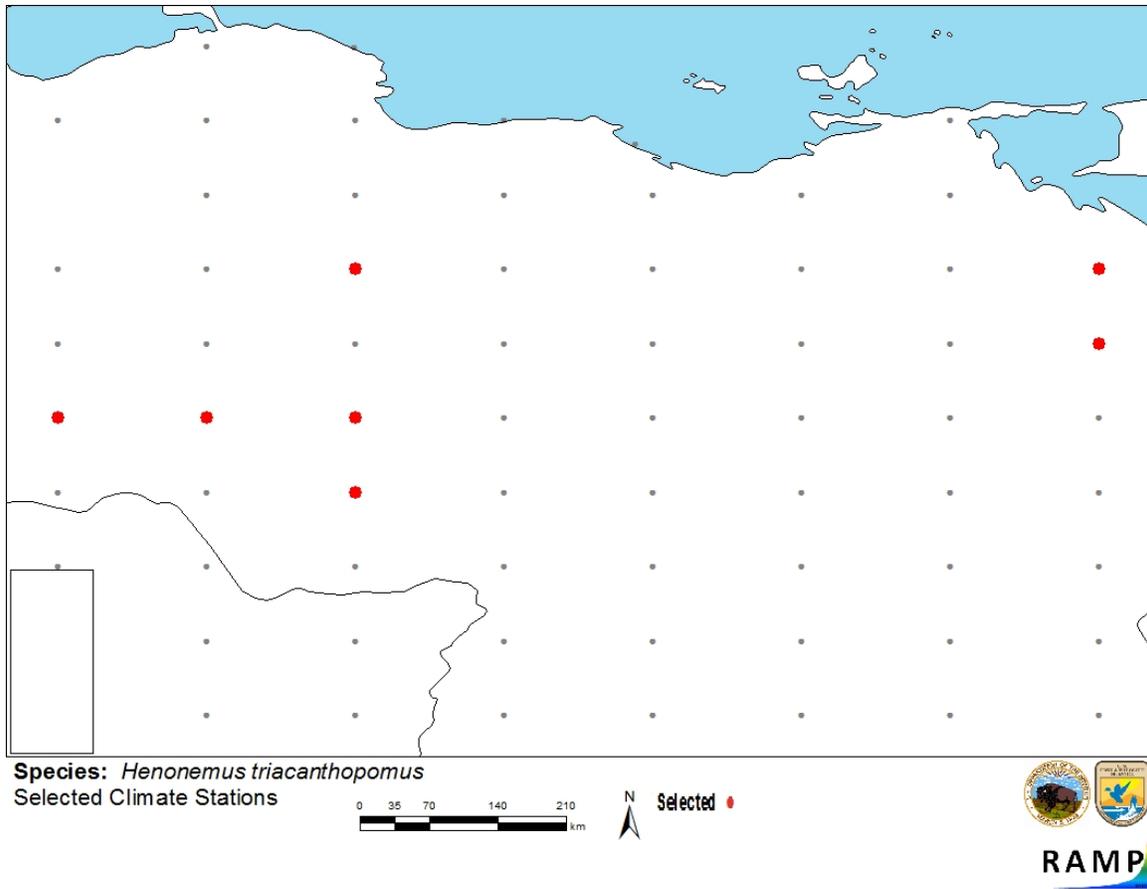


Figure 1. RAMP (Sanders et al. 2014) source map showing weather stations in Venezuela selected as source locations (red) and non-source locations (gray) for *Henonemus triacanthopomus* climate matching. Source locations from DoNascimento and Provenzano (2006) and GBIF (2016).

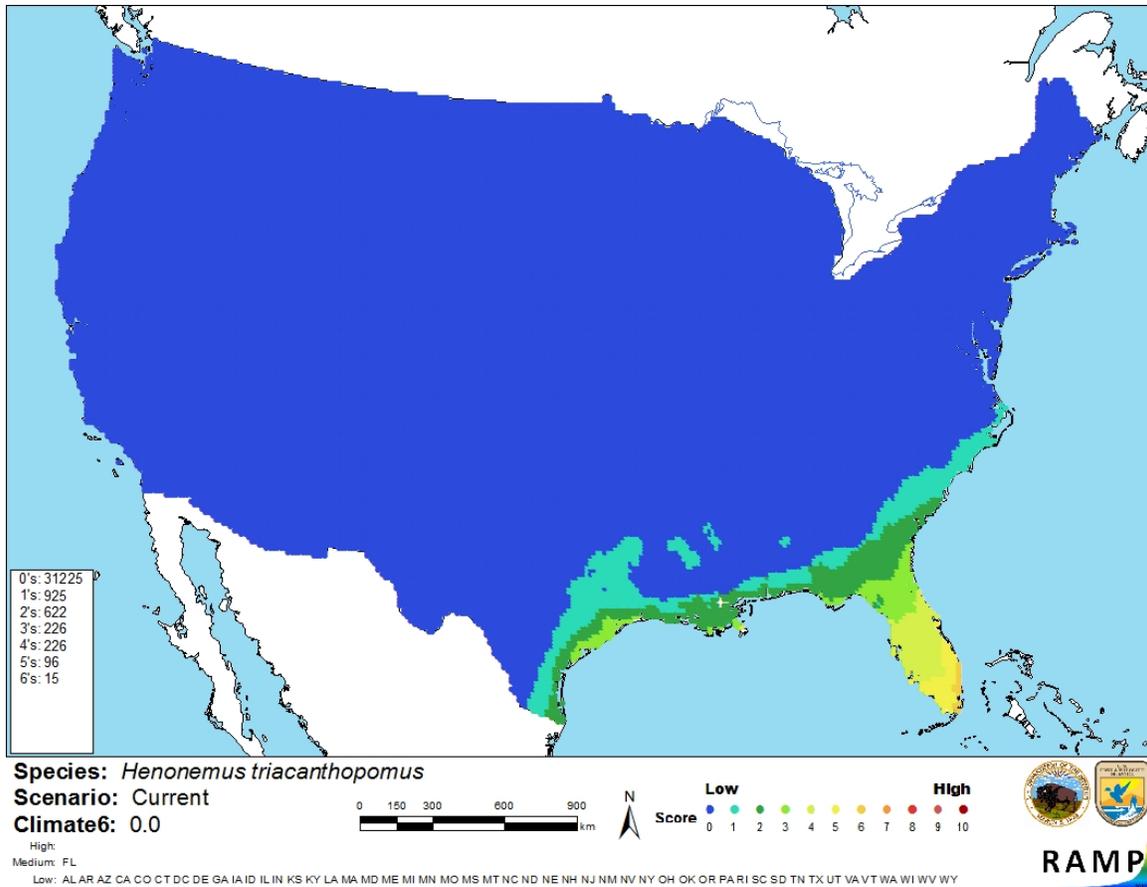


Figure 2. Map of RAMP (Sanders et al. 2014) climate matches for *Henonemus triacanthopomus* in the contiguous United States based on source locations reported by DoNascimento and Provenzano (2006) and GBIF (2016). 0= Lowest match, 10=Highest match.

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

There is also very limited information available on the biology of *H. triacanthopomus* and the authors who first described the species in 2006 wrote that the current understanding of its distribution was likely incomplete. Potential impacts of introduction in the U.S. are unknown because the species has not been observed in novel environments yet. Due to these sources of uncertainty, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Henonemus triacanthopomus is a trichomycterid catfish native to Venezuela. Very little is known about its biology, and it has not been reported as introduced outside its native range so impacts of introduction are unknown. Climate match to the contiguous U.S. is low. Overall risk posed by *H. triacanthopomus* 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.

- DoNascimento, C., and F. Provenzano. 2006. The genus *Henonemus* (Siluriformes: Trichomycteridae) with a description of a new species from Venezuela. *Copeia* 2006(2):198-205.
- FFWCC (Florida Fish and Wildlife Conservation Commission). 2016. Prohibited species list. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. Available: <http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/#nogo>. (December 2016).
- Froese, R., and D. Pauly, editors. 2016. *Henonemus triacanthopomus* DoNascimento & Provenzano, 2006. FishBase. Available: <http://www.fishbase.org/summary/Henonemus-triacanthopomus.html>. (December 2016).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Henonemus triacanthopomus*. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343249>. (December 2016).
- Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. 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.

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

de Pinna, M. C. C., and H. A. Britski. 1991. *Megalocentor*, a new genus of parasitic catfish from the Amazon basin: the sister group of *Apomatoceros* (Trichomycteridae: Stegophilinae). *Ichthyological Exploration of Freshwaters* 2:113-128.

Winemiller, K. O., and H. Y. Yan. 1989. Obligate mucus-feeding in a South American trichomycterid catfish (Pisces: Ostariophysi). *Copeia* 1989:511-514.