

# *Henonemus taxistigmus* (a catfish, no common name)

## Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, December 2016

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Web Version, 1/16/2018

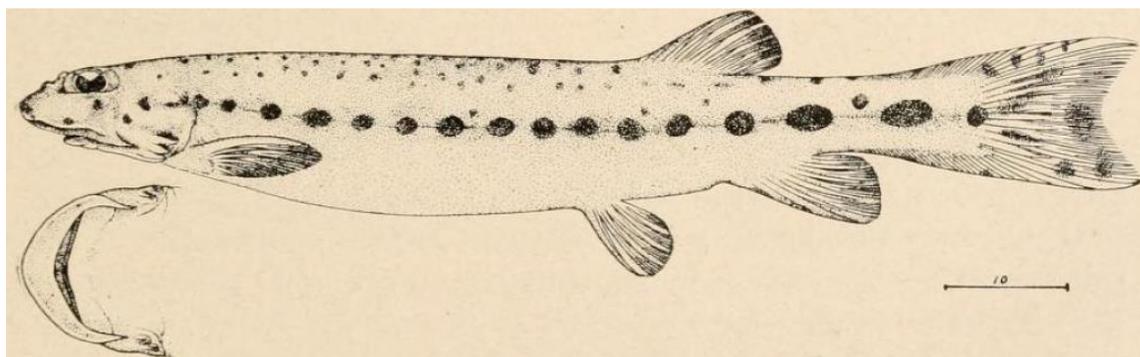


Image: Fowler (1914). Public domain.

## 1 Native Range and Status in the United States

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### Native Range

From Froese and Pauly (2016):

“South America: Rupununi River basin in Guyana.”

From DoNascimento and Provenzano (2006):

“[...] restricted to the Cuyuní River basin [...]”

### 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 taxistigmus*”

## Means of Introduction into the United States

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

## Remarks

From GBIF (2016):

“Synonyms

*Ochmacanthus taxistigma* Fowler, 1914

*Stegophilus taxistigmus* (Fowler, 1914)”

From Fowler (1914):

“This species resembles *Ochmacanthus flabelliferus* Eigenmann, but differs in its dentition, coloration, and position of its fins.”

## 2 Biology and Ecology

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### 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	<i>Henonemus</i>
Species	<i>Henonemus taxistigmus</i> (Fowler, 1914)”

“Current Standing: valid”

### Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 9.3 cm NG male/unsexed; [de Pinna and Wosiacki 2003]”

## **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: Rupununi River basin in Guyana.”

From DoNascimento and Provenzano (2006):

“[...] restricted to the Cuyuní River basin [...]”

### **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 Fowler (1914):

“Body elongate, slender, well compressed, belly bulging so that deepest about midway in space between pectoral and ventral bases, edges convex. Caudal peduncle well compressed, rather slender, least depth about 1/3 its length. Head well depressed, broad, upper profile a little more convex than lower, and lower sides bulge a little so that they slope slightly in above, lower surface nearly level. Snout broadly depressed, nearly evenly convex as seen from above, well protruded, and length about 2/5 its greatest width about opposite front of eyes. Eyes without free eyelids, skin of head extending over, superior, elongate, and slightly ovoid, and placed about first 3/7 in head length. Mouth broad and moderately crescentic as seen from below. [...] Gill-opening small, lateral, just before pectoral base. [...] Body naked, covered with smooth skin. [...] Dorsal origin a little nearer caudal base than pectoral origin, first branched ray longest, and depressed fin extends about 2/5 to caudal base. Anal inserted just behind dorsal base, first branched ray longest or extends back beyond tip of last so that fin reaches 4/7 to caudal base. Caudal slightly emarginate, elongate and with well-developed fulcra. Pectoral low, broad, extend about 1/3 to ventral. Latter inserted well before dorsal origin or about midway between pectoral origin and caudal base, and extends back 2/3 to anal origin. Vent midway between depressed

pectoral tip and anal origin. Color in alcohol pale or very light brownish, shading to whitish on lower or under surface. Predorsal region with about four series of dusky irregular spots. From behind dorsal only a few median dusky spots, though upper surface of head with spots of similar size to those of predorsal region. One of these blotches marks opercular spines and another preopercular spines. Also a dark spot above pectoral base. [...] Fins all pale or whitish, several obscure spots of dusky on dorsal, caudal, and pectoral base, others uniform.”

## **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**

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No introductions of this species have been reported.

From FFWCC (2016):

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Freshwater Aquatic Species [...]

Parasitic catfishes [...]

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## 4 Global Distribution

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**Figure 1.** Known global established locations of *Henonemus taxistigmus* in northeastern South America. Map from GBIF (2016). The point in Venezuela (far left) was reported in GBIF (2016) but not included in climate matching because the species is not established there. All other points shown on the map and included in climate matching are located in Guyana.

## 5 Distribution Within the United States

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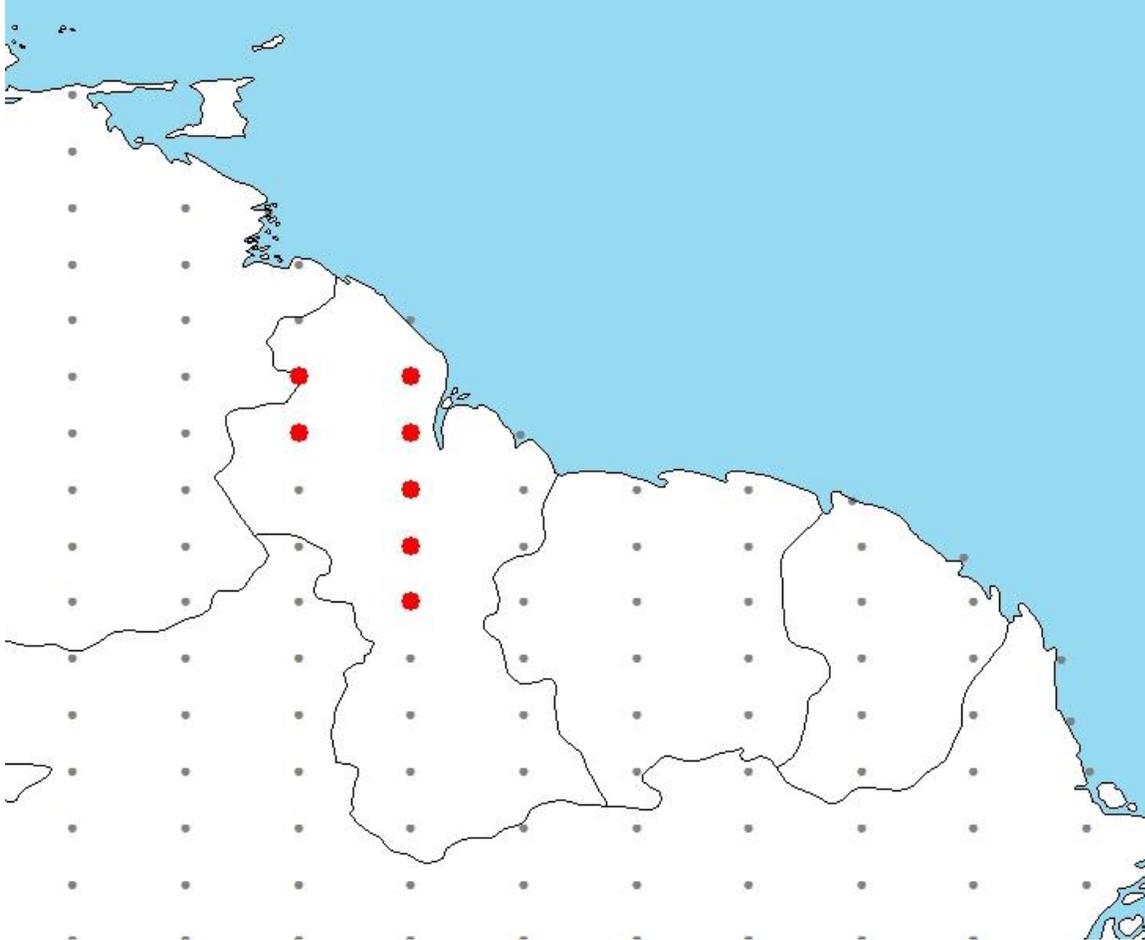
This species has not been reported in the United States.

## 6 Climate Matching

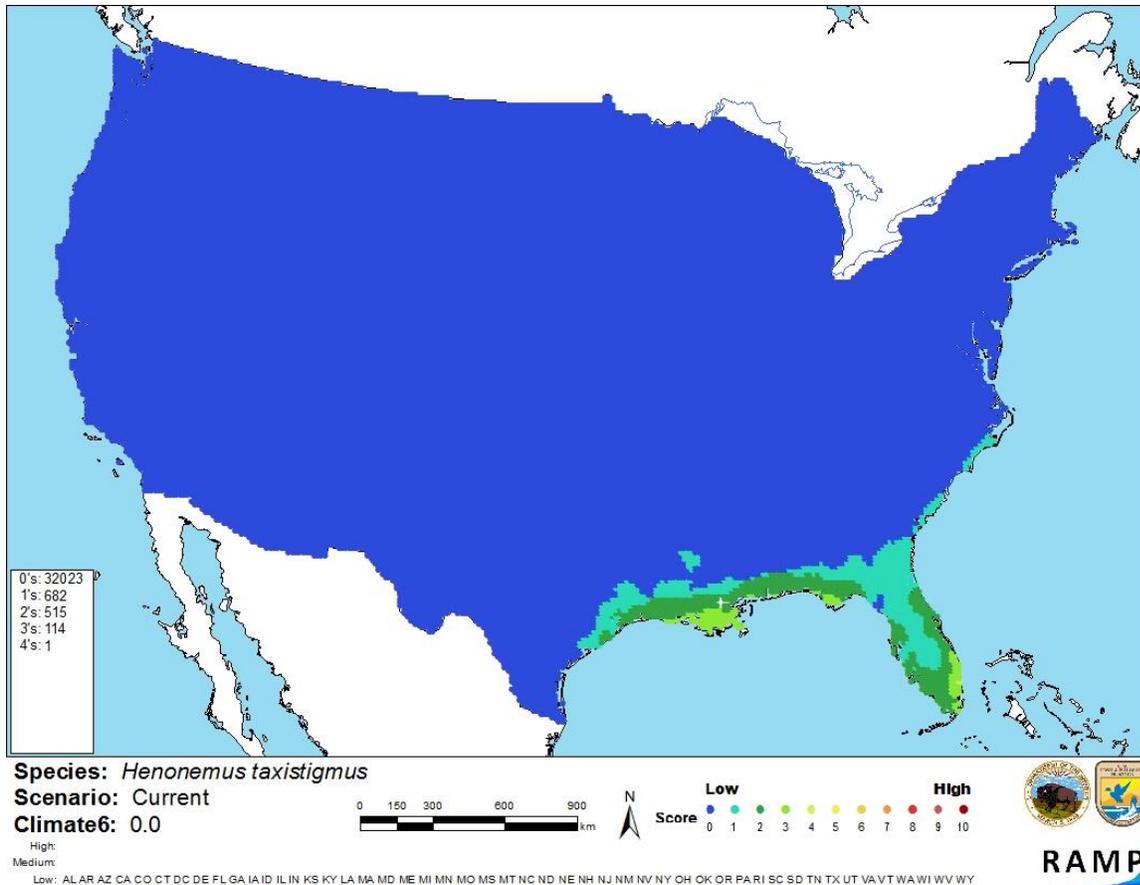
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### Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low throughout the contiguous U.S., reflected in a Climate 6 proportion of 0.0. Parts of coastal Florida and Louisiana have a slightly higher climate match that is still classified as low. The range for Climate 6 proportions indicating a low climate match is 0.000 to 0.005, inclusive.



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



**Figure 2.** Map of RAMP (Sanders et al. 2014) climate matches for *Henonemus taxistigmus* 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 also very limited information available on the biology of *Henonemus taxistigmus* and conflicting information about the species’ distribution. The potential impacts of an introduction are unknown. Due to the lack of information, the certainty of this assessment is low.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Henonemus taxistigmus* is a trichomycterid catfish species native to Guyana in northern South America. 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. taxistigmus* 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

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**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).
- Fowler, H. W. 1914. Fishes from the Rupununi River, British Guiana. *Proceedings of the Academy of Natural Sciences of Philadelphia* 66:268-270.
- Froese, R., and D. Pauly, editors. 2016. *Henonemus taxistigmus* (Fowler, 1914). FishBase. Available: <http://www.fishbase.se/summary/48116>. (December 2016).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Henonemus taxistigmus* (Fowler, 1914). Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343252>. (December 2016).
- ITIS (Integrated Taxonomic Information System). 2016. *Henonemus taxistigmus* (Fowler, 1914). Integrated Taxonomic Information System, Reston, Virginia. Available: [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=682111#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682111#null). (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

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**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.

de Pínna, M. C. C., and W. Wosiacki. 2003. Trichomycteridae (pencil or parasitic catfishes). Pages 270-290 in R. E. Reis, S. O. Kullander, and C. J. Ferraris, Jr., editors. *Checklist of the freshwater fishes of South and Central America*. EDIPUCRS, Porto Alegre, Brazil.

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