

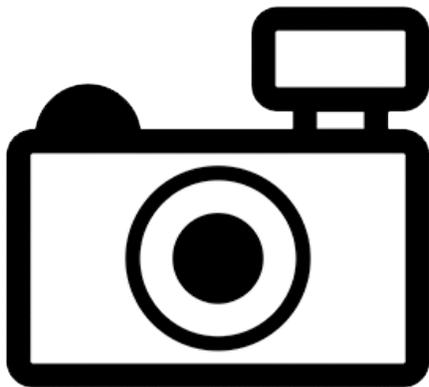
***Trichomycterus auroguttatus* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2016

Revised, April 2017

Web Version, 4/26/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

“South America: Marimbondo River, tributary of the Preto River, Paraíba do Sul River basin [in eastern Brazil].”

Status in the United States

This species has not been reported in the U.S. No evidence was found of trade in this species in the U.S.

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. Very limited exceptions may be made by permit from the

Executive Director [...] [The list of prohibited nonnative species includes] *Trichomycterus auroguttatus*”

Means of Introductions in the United States

This species has not been reported in the U.S.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2016):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebratas
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysii
Order Siluriformes
Family Trichomycteridae
Subfamily Trichomycterinae
Genus *Trichomycterus*
Species *Trichomycterus auroguttatus* Costa, 1992”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 6.1 cm male/unsexed; [de Pinna and Wosiacki 2003]”

Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred?”

Distribution Outside the United States

Native

From Froese and Pauly (2016):

“South America: Marimbondo River, tributary of the Preto River, Paraíba do Sul River basin [in eastern Brazil].”

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 Bockmann and Sazima (2004):

“Blotches on trunk arranged in four longitudinal rows may be plesiomorphic within Trichomycteridae, since this character is present in the sister group of the family, the Nematogenyidae [*Nematogenys inermis* (Guichenot)] and in the most basal members of family (e.g., *Copionodon pecten* de Pinna), being widespread among trichomycterines [e.g., [...] *T. auroguttatus* Costa [...]]. The blotches of each row [...] may fuse vertically with blotches of adjacent rows [e.g., *T. auroguttatus* [...]].”

“Pectoral-fin ray number is [...] usually I+7 (e.g. [...] *T. auroguttatus* [...]).”

“[...] in *T. alternatus*, *T. auroguttatus*, *T. variegatus*, and *T. zonatus* [...] the bases of the pelvic fins are distinctly spaced from each other.”

Biology

No information available.

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. The Florida Fish and Wildlife Conservation Commission (FFWCC 2016) has listed the parasitic catfish *T. auroguttatus* as a prohibited species.

4 Global Distribution



Figure 1. Known global established locations of *T. auroguttatus*, reported in eastern Brazil. 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 most of peninsular Florida and low elsewhere in the contiguous United States. Climate 6 proportion indicated a low climate match to the contiguous U.S. overall. Proportions between 0.000 and 0.005, inclusive, indicate a low match; the Climate 6 proportion for *T. auroguttatus* was 0.004.

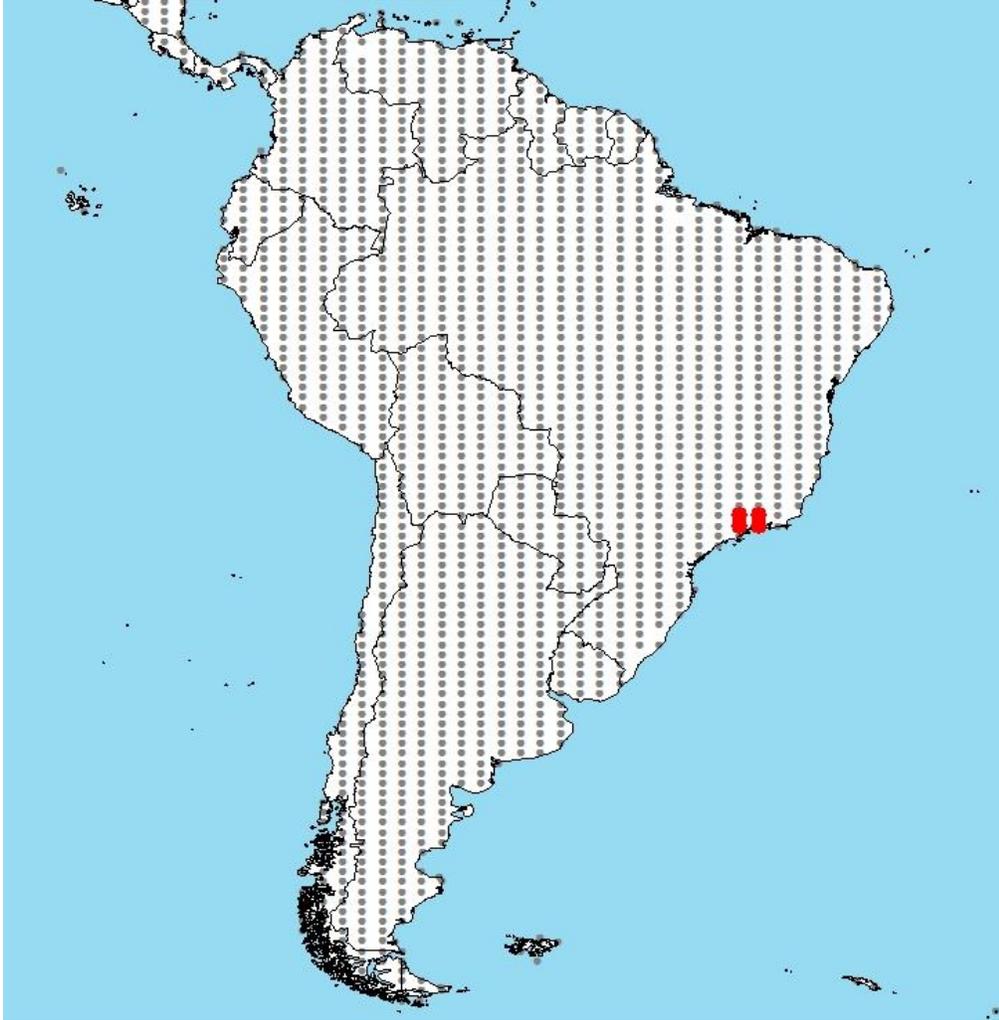


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (gray) for *T. auroguttatus* climate matching. Source locations from GBIF (2016).

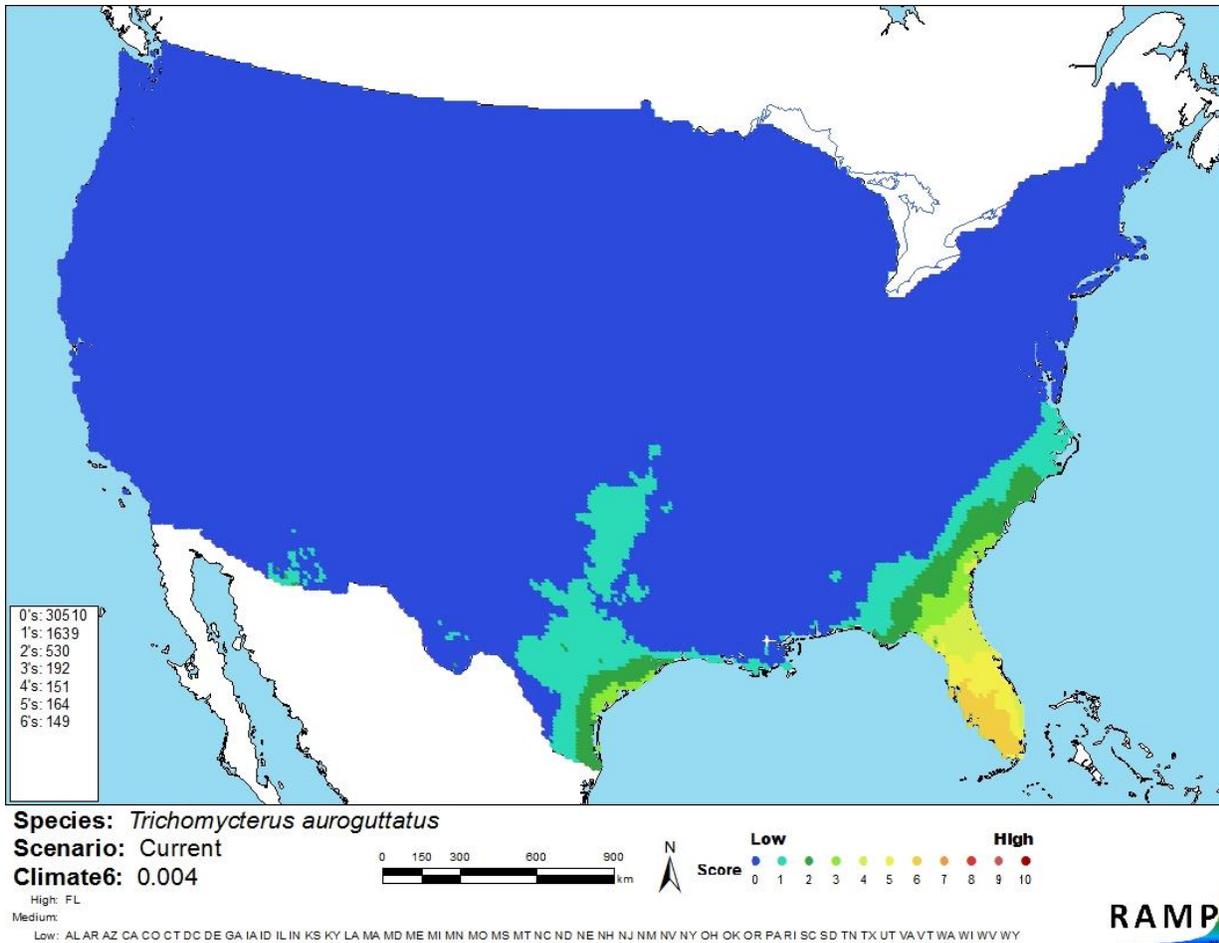


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *T. auroguttatus* in the contiguous United States based on source locations reported by GBIF (2016). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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
≥ 0.103	High

7 Certainty of Assessment

The biology and ecology of *T. auroguttatus* are poorly known. It has never been introduced outside its native range, so no information is available on impacts of introduction. The certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Trichomycterus auroguttatus is a trichomycterid catfish native to a tributary of the Paraíba do Sul River in eastern Brazil. The species has a low climate match to the contiguous United States, although much of Florida has a medium match. *T. auroguttatus* has not been reported as introduced outside of its native range. Without being able to observe introductions in other parts of the world, it is impossible to know the potential impacts of introduction of *T. auroguttatus* to the U.S. The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *T. auroguttatus* as a prohibited species. The overall risk posed by this species to the contiguous U.S. 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.

Bockmann, F. A., and I. Sazima. 2004. *Trichomycterus maracaya*, a new catfish from the upper rio Paraná, southeastern Brazil (Siluriformes: Trichomycteridae), with notes on the *T. brasiliensis* species-complex. *Neotropical Ichthyology* 2(2):61-74.

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/>. (December 2016).

Froese, R., and D. Pauly, editors. 2016. *Trichomycterus auroguttatus* Costa, 1992. FishBase. Available: <http://www.fishbase.org/summary/Trichomycterus-auroguttatus>. (December 2016).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Trichomycterus auroguttatus* Costa, 1992. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343203>. (December 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Trichomycterus auroguttatus* Costa, 1992. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682177#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

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, 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.