

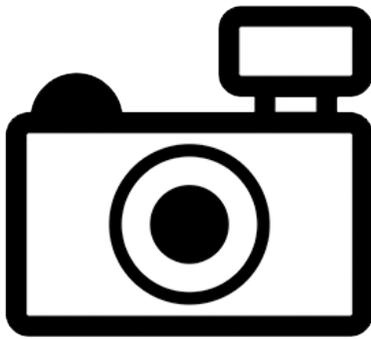
***Trichomycterus caudofasciatus* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2016

Revised, April 2017

Web Version, 4/30/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Alencar and Costa (2004):

“Upper Rio Itabapoana basin, Serra do Caparaó, southeastern Brazil.”

Status in the United States

This species has not been reported 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 [...] [The list of prohibited nonnative species includes] *Trichomycterus caudofasciatus*”

Means of Introductions in the United States

This species has not been reported 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 Trichomycterinae
Genus *Trichomycterus*
Species *Trichomycterus caudofasciatus* Alencar and Costa, 2004”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 5.3 cm SL male/unsexed; [Alencar and Costa 2004]”

Environment

From Froese and Pauly (2016):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?”

Distribution Outside the United States

Native

From Alencar and Costa (2004):

“Upper Rio Itabapoana basin, Serra do Caparaó, southeastern 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 Froese and Pauly (2016):

“Dorsal soft rays (total): 10-11; Anal soft rays: 9; Vertebrae: 35 - 37. Distinguishable from all other species of the genus by the combination of the following characters: 7-8 pectoral-fin rays, long filamentous first pectoral-fin ray (about 50-70% pectoral-fin length), 10-20 opercular odontodes, 30-52 interopercular odontodes, opercular patch of odontodes wide, and 6-7 branchiostegal rays. Can be easily distinguished from *T. alternatus*, *T. longibarbatulus* and *T. pantherinus* by possessing a single median last supraorbital pore (vs. paired pore). Distinguished from all other species of the genus from the Brazilian Shield River basins by having a unique color pattern of four gray bars on the caudal fin [Alencar and Costa 2004].”

Biology

From Froese and Pauly (2016):

“Inhabits both turbid and clear water with shallow water (40-100 cm deep). Sometimes found swimming in daylight, but mostly collected under marginal vegetation or under vegetal debris on the bottom [Alencar and Costa 2004].”

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 2017) has listed the parasitic catfish *T. caudofasciatus* as a prohibited species.

4 Global Distribution



Figure 1. Known global distribution of *T. caudofasciatus*, reported in Brazil. Map from GBIF (2016). Southernmost point may not represent an established population, so it was excluded from climate matching analysis.

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 on the high end of medium in southern coastal Texas and peninsular Florida, and low elsewhere.

Climate 6 proportion indicated a medium climate match overall for the contiguous U.S.

Proportions between 0.005 and 0.103 are classified as medium match; the Climate 6 proportion for *T. caudofasciatus* was 0.007.



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

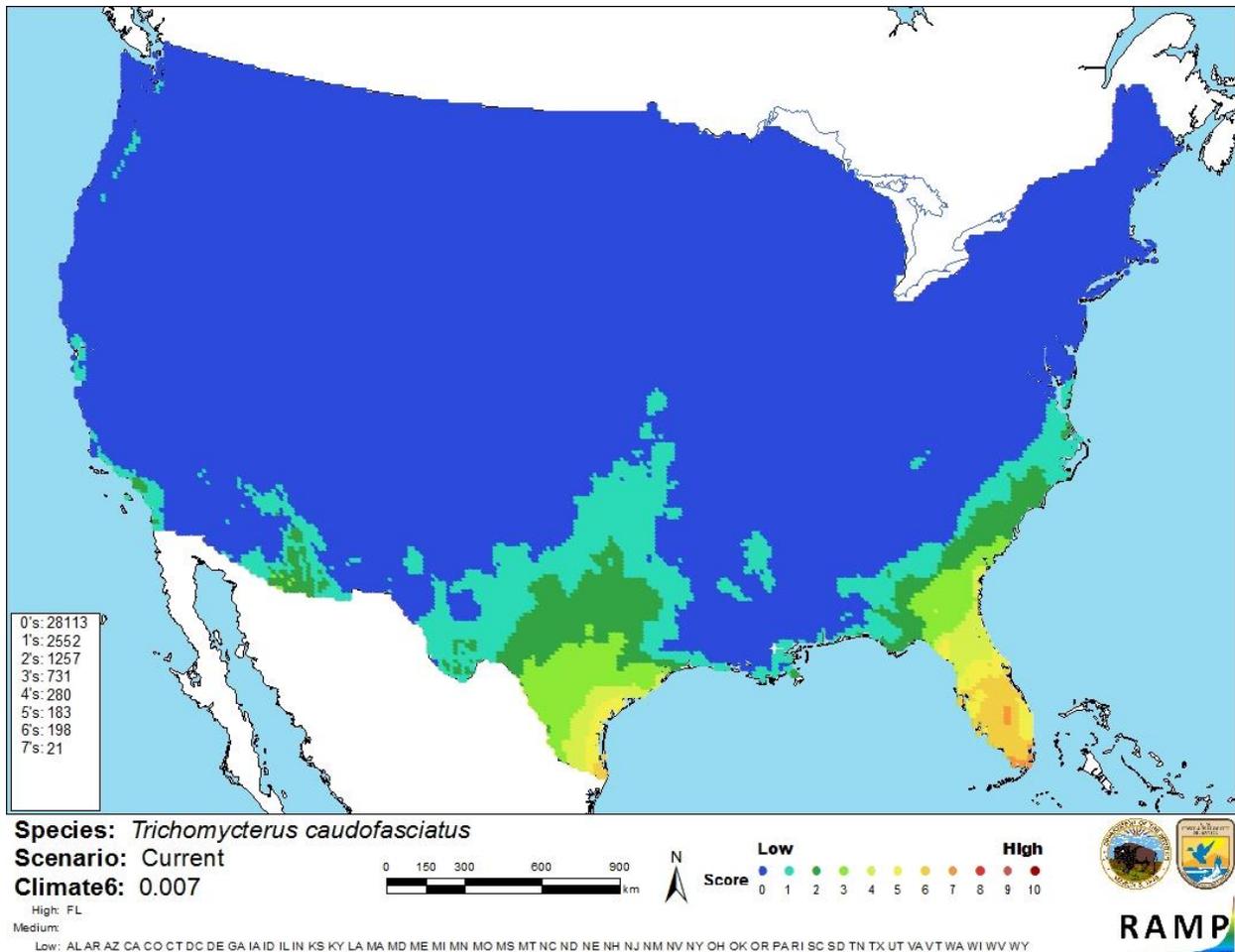


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *T. caudofasciatus* in the contiguous United States based on source locations reported by GBIF (20156). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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
$0.000 \leq X < 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

Little is known about the biology, ecology, or distribution of *T. caudofasciatus*. The species has never been introduced outside its native range, so impacts of introduction are unknown. The certainty of this assessment is low because of the lack of information about the species.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Trichomycterus caudofasciatus is a trichomycterid catfish native to southeastern Brazil. The species 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. caudofasciatus* to the U.S. The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *T. caudofasciatus* as a prohibited species. Climate match to the contiguous United States is medium. The overall risk of this species is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **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.

Alencar, A. R., and W. J. E. M. Costa. 2004. Description of two new species of the catfish genus *Trichomycterus* from southeastern Brazil (Siluriformes: Trichomycteridae). *Zootaxa* 744:1-8.

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/>. (January 2017).

Froese, R., and D. Pauly, editors. 2016. *Trichomycterus caudofasciatus* Alencar & Costa, 2004. FishBase. Available: <http://www.fishbase.org/summary/62131>. (December 2016).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Trichomycterus caudofasciatus* Alencar & Costa, 2004. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343185>. (December 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Trichomycterus caudofasciatus* Alencar and Costa, 2004. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682190#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.