

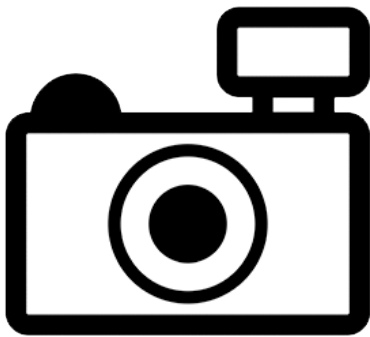
***Trichomycterus concolor* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2016

Revised, April 2017

Web Version, 5/1/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

“South America: upper São Francisco River basin in Brazil.”

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. [...] [The list of prohibited nonnative species includes] *Trichomycterus concolor*”

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 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 concolor* Costa, 1992”

“Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length: 6.4 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: upper São Francisco River basin in 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):

“[...] *T. concolor* Costa has body color mostly uniform, subtly denser on the back and along the midlateral line [...].”

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

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 *Trichomycterus concolor* as a prohibited species.

4 Global Distribution



Figure 1. Known global established locations of *T. concolor*, reported from Brazil. Map from GBIF (2016).

5 Distribution Within the United States

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

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 throughout the remainder of the contiguous U.S. Climate 6 proportion indicated a low climate match for the contiguous U.S. The range of proportions indicating a low climate match is 0.000 to 0.005; the Climate 6 proportion for *T. concolor* was 0.001.



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

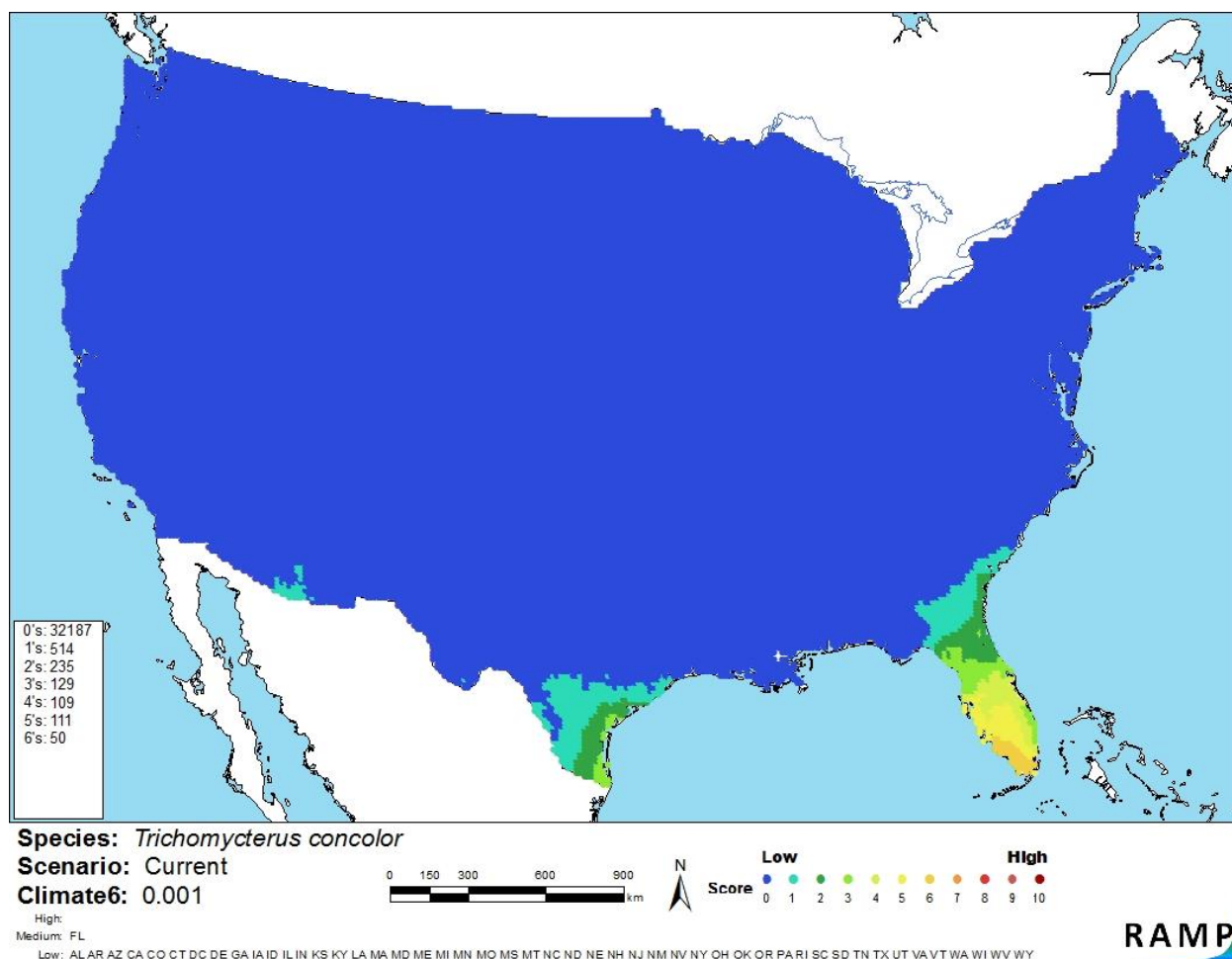


Figure 1. Map of RAMP (Sanders et al. 2014) climate matches for *T. concolor* in the contiguous United States based on source locations reported by GBIF (2016). 0=Lowest match, 10=Highest match. Climate match scores are tabulated on the left.

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. concolor* are poorly known. It has never been introduced outside its native range. 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 concolor is a trichomycterid catfish known from the upper São Francisco River basin in southern Brazil. It has not been 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. concolor* to the U.S. The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *T. concolor* as a prohibited species. Climate match to the contiguous U.S. was low. The overall risk posed by 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.

Bockmann, A. F., 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.

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

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).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Trichomycterus concolor* Costa, 1992. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343111>. (December 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Trichomycterus concolor* Costa, 1992. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682196#null. (December 2016).

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