

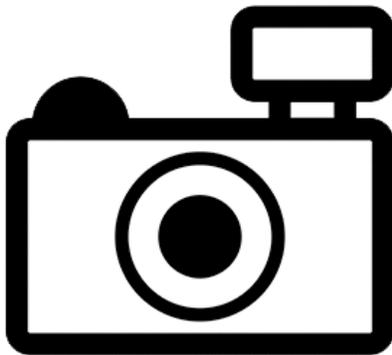
Trichomycterus sandovali (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2016

Revised, May 2017

Web Version, 5/4/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Villa-Navarro (2016):

“This species is endemic to Colombia where it is restricted to the subterranean system of the Don Juan cave, at 1,720 m of elevation, in the municipality of Zapatoca, Suárez River basin, Santander Department (Ardila Rodríguez 2006), in the Magdalena basin.”

Status in the United States

This species has not been reported as introduced or established in the U.S.

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 sandovali*”

Means of Introductions in the United States

This species has not been reported as introduced or established in the U.S.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From GBIF (2016):

“KINGDOM Animalia
PHYLUM Chordata
CLASS Actinopterygii
ORDER Siluriformes
FAMILY Trichomycteridae
GENUS *Trichomycterus*
SPECIES *Trichomycterus sandovali*”

From Eschmeyer et al. (2016):

“Current status: Valid as *Trichomycterus sandovali* Ardila Rodríguez 2006. Trichomycteridae: Trichomycterinae.”

Size, Weight, and Age Range

No information available.

Environment

From Villa-Navarro (2016):

“It inhabits subterranean caves, living in a small creek and medium-sized pools with big rocks.”

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

Climate/Range

From Villa-Navarro (2016):

“The extent of occurrence is estimated in 145 km².”

From Froese and Pauly (2016):

“Tropical, preferred ?”

Distribution Outside the United States

Native

From Villa-Navarro (2016):

“This species is endemic to Colombia where it is restricted to the subterranean system of the Don Juan cave, at 1,720 m of elevation, in the municipality of Zapatoca, Suárez River basin, Santander Department (Ardila Rodríguez 2006), in the Magdalena basin.”

Introduced

This species has not been reported as introduced or established outside of its native range.

Means of Introduction Outside the United States

This species has not been reported as introduced or established outside of its native range.

Short Description

No information available.

Biology

From Villa-Navarro (2016):

“No young fish were reported in summer. It feeds on macroinvertebrates and organic matter (Ardila-Rodríguez 2006).”

Human Uses

From Villa-Navarro (2016):

“The species is not utilized.”

Diseases

No information available. No OIE-reportable diseases have been documented for this species.

Threat to Humans

From Froese and Pauly (2016):

“Harmless”

3 Impacts of Introductions

This species has not been reported as introduced or established outside of its native range.

The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *Trichomycterus sandovali* as a prohibited species (FFWCC 2017).

4 Global Distribution

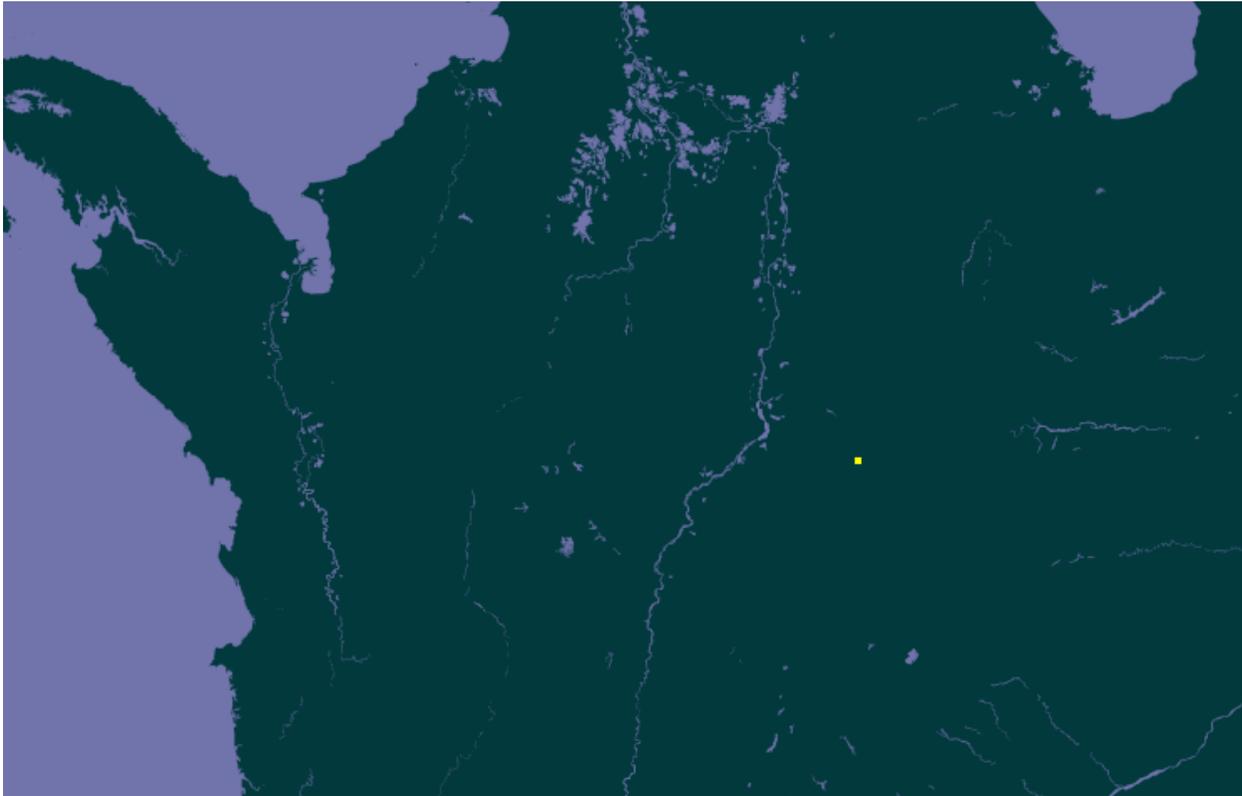


Figure 1. Known global established locations of *Trichomycterus sandovali*, reported from Colombia. Map from GBIF (2016).

5 Distribution Within the United States

This species has not been reported as introduced or established 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 low across the entire U.S. Climate 6 proportion indicated that the contiguous U.S. has a low climate match. Proportions equal to or less than 0.005 indicate a low climate match; the Climate 6 proportion of *Trichomycterus sandovali* was 0.0.

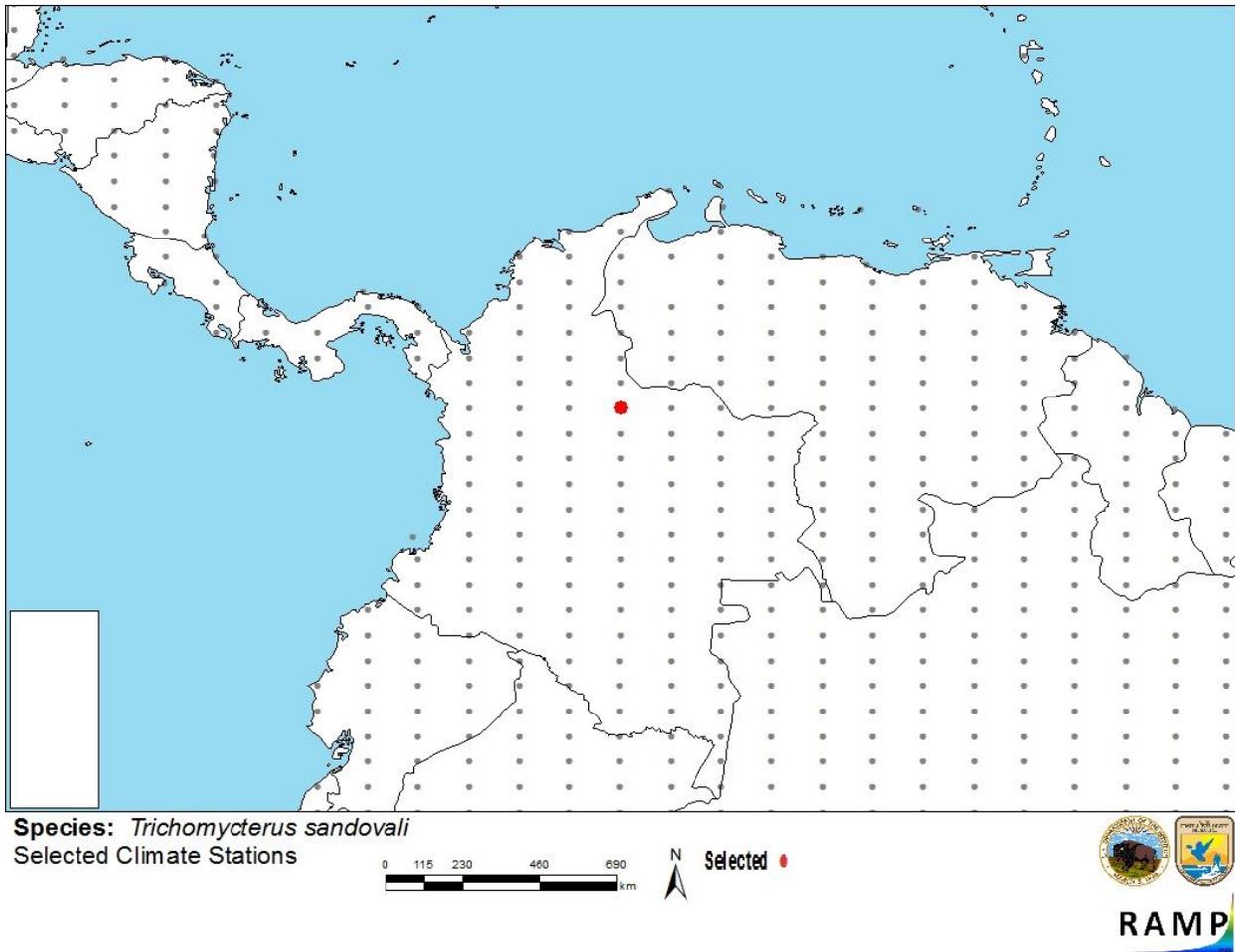


Figure 2. RAMP (Sanders et al. 2014) source map of northern South America showing weather stations selected as source locations (red; in Colombia) and non-source locations (gray) for *Trichomycterus sandovali* climate matching. Source locations from GBIF (2016).

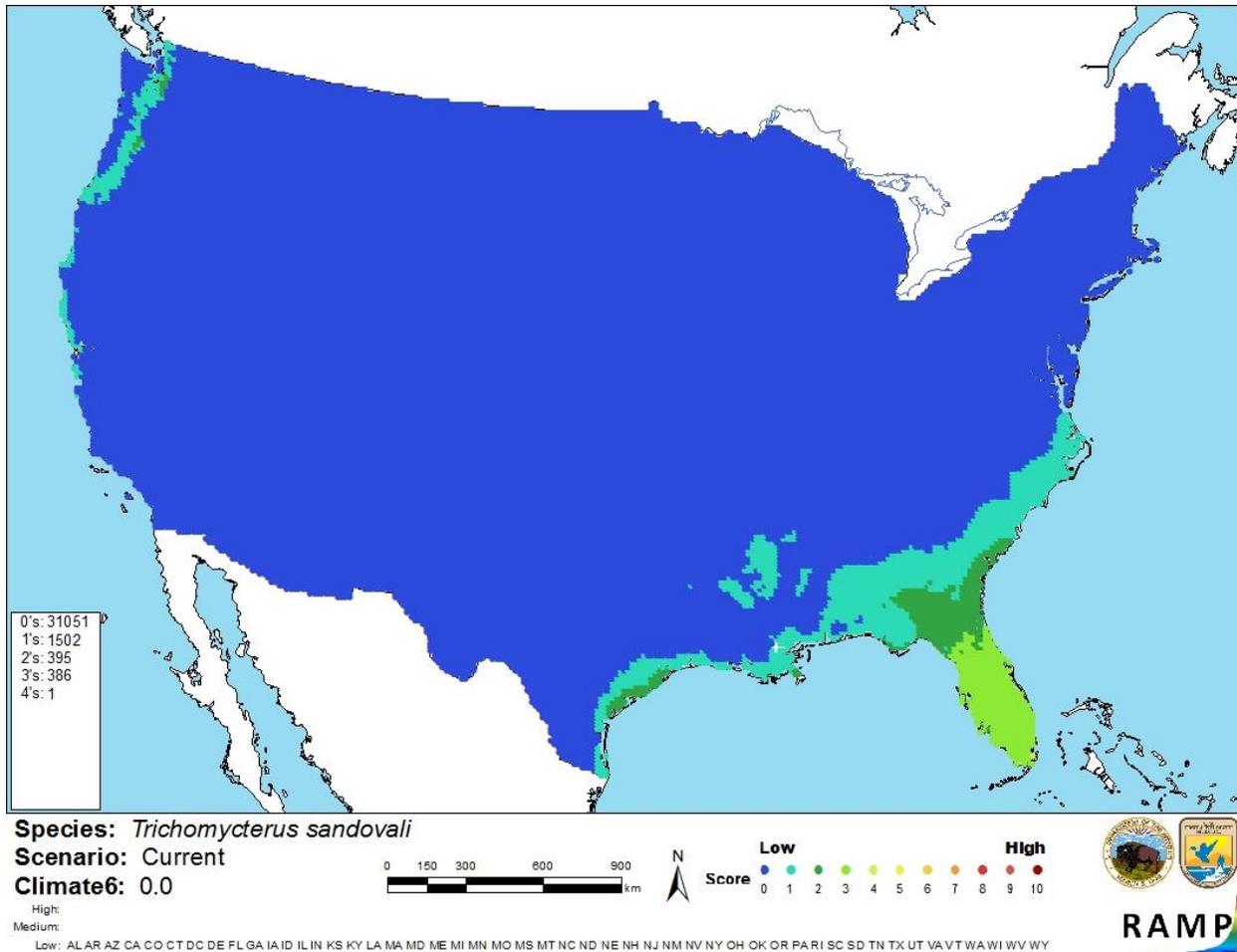


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Trichomycterus sandovali* in the contiguous United States based on source locations reported by GBIF (2016). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

There is some information available on the habitat of *T. sandovali*, but no information on the biology of this species. There is only one reported occurrence of this species on which to base the climate match. Further information would be needed to adequately assess the risk this species poses. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Trichomycterus sandovali is a subterranean freshwater catfish native to a cave system in Colombia. *T. sandovali* has a low climate match with the United States. There are no documented introductions of this species outside of its native range from which to evaluate a history of invasiveness. The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *T. sandovali* as a prohibited species. Overall risk assessment category for 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.

- Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2016. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (December 2016).
- 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/>. (May 2017).
- Froese, R., and D. Pauly, editors. 2016. *Trichomycterus sandovali* Ardila Rodríguez, 2006. FishBase. Available: <http://www.fishbase.org/summary/Trichomycterus-sandovali.html>. (December 2016).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Trichomycterus sandovali* Ardila Rodríguez, 2006. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343165>. (December 2016).
- Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.
- Villa-Navarro, F. 2016. *Trichomycterus sandovali*. The IUCN Red List of Threatened Species 2016. Available: <http://www.iucnredlist.org/details/64792690/0>. (December 2016).

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.

Ardila Rodríguez, C. A. 2006. *Trichomycterus sandovali*, (Siluriformes: Trichomycteridae) a new species of a troglodytic fish (cave restricted) for the Department of Santander - Colombia. *Peces del Departamento de Santander – Colombia* 2:1-16.