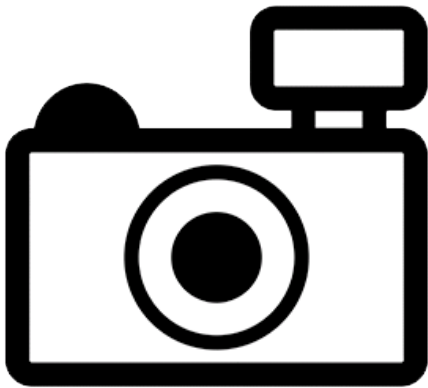


***Tridentopsis tocantinsi* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, December 2016

Web Version, 4/2/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

“South America: Tocantins River basin in Brazil.”

Status in the United States

This species has not been reported 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] *Tridentopsis tocatinsi*”

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 Tridentinae Eigenmann
Genus *Tridentopsis*
Species *Tridentopsis tocantinsi* (La Monte, 1939)”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 2.3 cm SL male/unsexed; [de Pínna 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: Tocantins River basin in Brazil.”

Introduced

No known introductions outside of native range.

Means of Introduction Outside the United States

No known introductions outside of native range.

Short Description

From La Monte (1939):

“Dorsal rays, 10; anal rays, 21. Body compressed; head depressed, flattish on top, as wide as long. Mouth wide, inferior. Teeth fine, long, conical, curved inward, in three rows in both jaws. A bunch of 10 long spines on opercle and another bunch of 8 on preopercle. Nostrils quite widely separated. No nasal barbels. Two maxillary barbels, the outer reaching to the anterior margin of eye; the inner to the first fourth of the outer. Eye large, lateral, nearer end of opercle than tip of snout. Snout broadly rounded. Fontanel large, kiteshaped, the apex forward. Gill membranes united, forming a large free fold across the isthmus. Dorsal origin slightly behind that of the anal. Pectoral less than head, not reaching half way from its base to the ventrals. Ventrals nearer snout than caudal. Distance between anal origin and tip of caudal, 2.1 in standard length. Origin of dorsal to base of caudal, 3 in standard length. Color in life, silvery yellow. Color in preservative, yellowish white with a patch of small dark dots on top of the head, some scattering dark dots on the dorsal line before the dorsal fin; a few along the fin bases, and a few more in a longitudinal line from opercle to caudal base. In the smallest (21 mm.) specimen there is an indication of a dark diagonal line from pectoral to anal origin.”

Biology

From Datovo and Bockmann (2010):

“The feeding habits of the Tridentinae in nature are as yet unknown. However, the teeth of the Tridentinae and Stegophilinae have a very peculiar morphology and arrangement on the jaws which suggests that these subfamilies share a similar mode of feeding. Furthermore, as noticed by Weitzman (*apud* Baskin, 1973: 146), specimens of tridentine appear to chase characids in aquarium settings. A similar behavior also was recently registered for *Tridentopsis* in both aquarium (FAB, pers. obs.) and field observations (Stewart *apud* Adriaens et al., 2010:352). This behavior may be indicative of lepidophagy and/or mucophagy [...]

Human Uses

No information available.

Diseases

No information available.

Threat to Humans

From Froese and Pauly (2016):

“Harmless”

3 Impacts of Introductions

This species has not been reported outside of its native range, therefore no impacts of introductions have been documented.

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] *Tridentopsis tocatinsi*”

4 Global Distribution



Figure 1. Tocantins watershed in eastern Brazil, where *T. tocatinsi* is endemic (see Native Range, above). Created by Karl Musser. Licensed under CC BY-SA 2.5. Available: <https://commons.wikimedia.org/w/index.php?curid=650718>. (December 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) is low across the contiguous U.S., apart from a small region of medium match in southern Florida. Climate 6 score indicated a low climate match. The range of Climate 6 scores indicating a low climate match is 0.000-0.005; the Climate 6 score for *Tridentopsis tocantinsi* is 0.000. Source locations used for climate matching included the entire known range of the species (Froese and Pauly 2016; see Native Range, above) because no point location data were available. Thus, the calculated climate match likely overestimates the actual climate match of *T. tocantinsi* to the contiguous U.S.

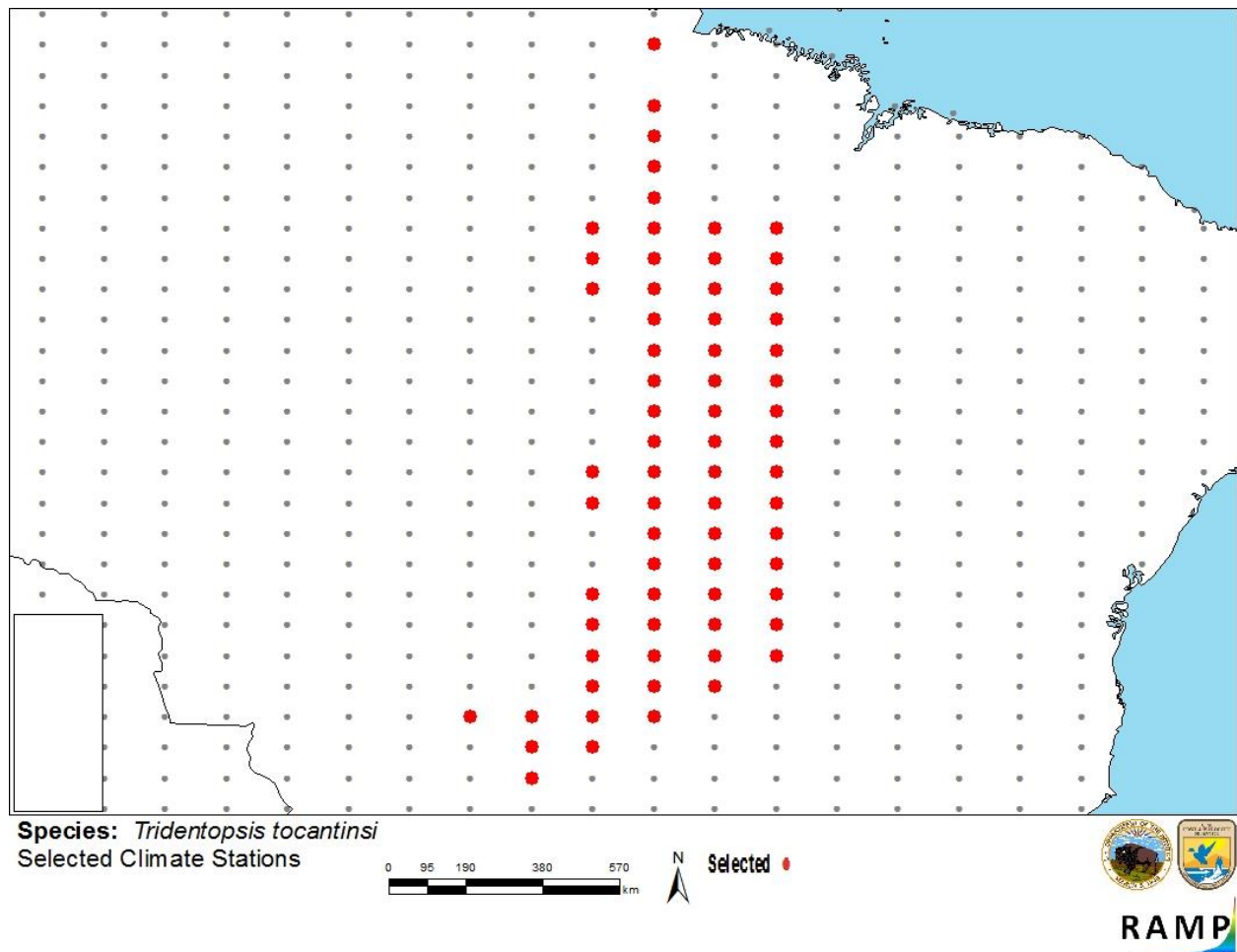


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in Brazil selected as source locations (red) and non-source locations (gray) for *Tridentopsis tocantinsi* climate matching. Source locations represent the known range of *T. tocantinsi* (Froese and Pauly 2016; see Native Range, above) because no point location data were available.

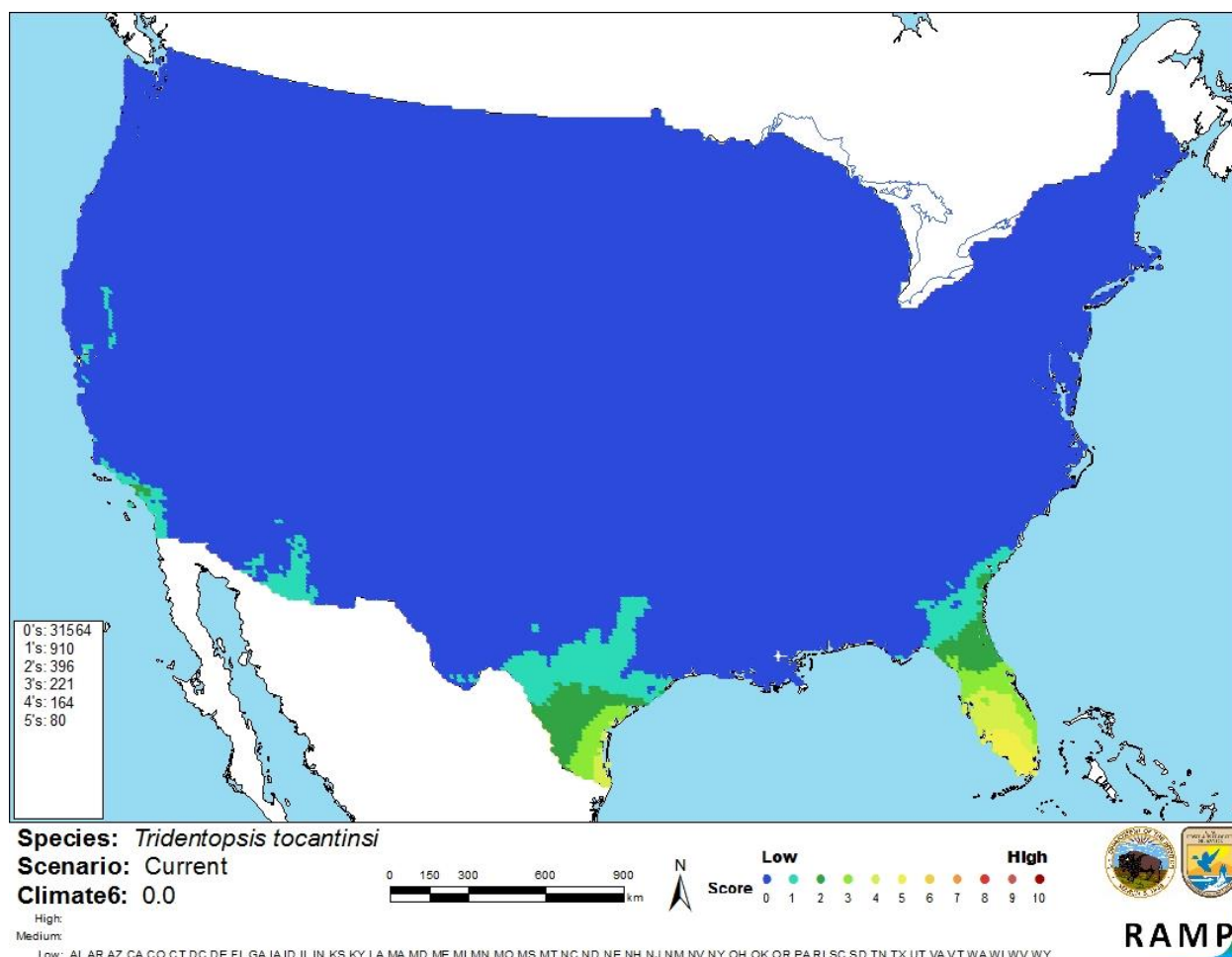


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Tridentopsis tocontinsi* in the contiguous United States based on the known range of the species (Froese and Pauly 2016; see Native Range, above). No point location data were available as source locations.

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 was very little information available on the species *Tridentopsis tocontinsi*. No point distribution data could be found, nor data on specific species characteristics. *T. tocontinsi* is not known to have been introduced outside its native range, so no history of invasiveness exists. With such limited information available, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Tridentopsis tocantinsi is a species of trichomycterid catfish that has been subject to very limited study. Its known distribution is the Toncantins watershed of Brazil. There is little information on the biology of the fish or point locations where it has been found. There have also been no reports of the species outside of its native range, and no impacts associated with it. Climate match to the contiguous U.S. is low. With such little information available, the overall risk 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.

- Datovo, A., and F. A. Bockmann. 2010. Dorsolateral head muscles of the catfish families Nematogenyidae and Trichomycteridae (Siluriformes: Loricarioidei): comparative anatomy and phylogenetic analysis. *Neotropical Ichthyology* 8(2):193-246.
- 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/#Tridentopsis>. (December 2016).
- Froese, R., and D. Pauly. 2016. *Tridentopsis tocantinsi* La Monte, 1939. FishBase. Available: <http://www.fishbase.se/summary/Tridentopsis-tocantinsi.html>. (December 2016).
- ITIS (Integrated Taxonomic Information System). 2016. *Tridentopsis tocantinsi* La Monte, 1939. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682288#null. (December 2016).
- La Monte, F. 1939. *Tridentopsis tocantinsi*, a new Pygidiid fish from Brazil. American Museum of Natural History, American Museum Novitates No. 1024, New York.
- Sanders, S., C. Castiglione, and M. 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.

Adriaens, D., J. N. Baskin, and H. Coppens. 2010. Evolutionary morphology of trichomycterid catfishes: about hanging on and digging in. Pages 337-362 *in* J. S. Nelson, H.-P. Schultze, and M. V. H. Wilson, editors. Origin and phylogenetic interrelationships of teleosts. Verlag Dr. Friedrich Pfeil, Munich, Germany.

Baskin, J. N. 1973. Structure and relationship of the Trichomycteridae. Doctoral dissertation. City University of New York, New York.

de Pínna, M.C.C. and W. Wosiacki, 2003. Trichomycteridae (pencil or parasitic catfishes). p. 270-290. In R.E. Reis, S.O. Kullander and C.J. Ferraris, Jr. (eds.) Checklist of the Freshwater Fishes of South and Central America. Porto Alegre: EDIPUCRS, Brasil.