

Tridens melanops (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2017

Revised, February 2017

Web Version, 4/2/2018



Photo: Presidents and Fellows of Harvard College. Licensed under CC BY-NC-SA. Available: http://eol.org/data_objects/26685544. (February 2017).

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

“South America: Amazon River basin.”

Status in the United States

This species has not been reported as introduced 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. [...]

[The list includes] *Tridens melanops*”

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 (2017):

“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
Genus *Tridens*
Species *Tridens melanops* Eigenmann and Eigenmann, 1889”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length: 2.7 cm SL male/unsexed; [de Pínna and Wosiacki 2003]”

Environment

From Froese and Pauly (2016):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?”

Distribution Outside the United States

Native

From Froese and Pauly (2016):

“South America: Amazon River basin.”

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 Eigenmann and Eigenmann (1890):

“Body compressed, extremely slender. Head broad, the snout rounded; mouth broad, inferior. Opercle long and slender, terminating in three spines, trident-shaped. Preopercle with similar but smaller spines. Barbels minute, scarcely evident. Distance of origin of dorsal fin from extremity of caudal 3 in the length; origin of anal fin from extremity of caudal 2½ in the length. Anal rays rapidly decreasing in height backward, the last ray about over the last ray of the dorsal. Caudal rounded, without accessory rays. Yellowish; posterior half of the caudal fin dusky; a series of black spots along the base of the anal. Head 9; depth 13; D. 10-12; A. 20-25.”

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.

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. [...]

[The list includes] *Tridens melanops*”

4 Global Distribution



Figure 1. Known global established locations of *Tridens melanops* in South America. Map from GBIF (2016).

5 Distribution Within the United States

There are no known occurrences of *T. melanops* 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-high in southern Florida, medium across much of peninsular Florida, and low elsewhere in the contiguous U.S. The Climate 6 proportion indicated a low climate match for the contiguous U.S. overall. The range of Climate 6 proportions indicating a low climate match is 0.000-0.005; the Climate 6 proportion for *Tridens melanops* was 0.004.

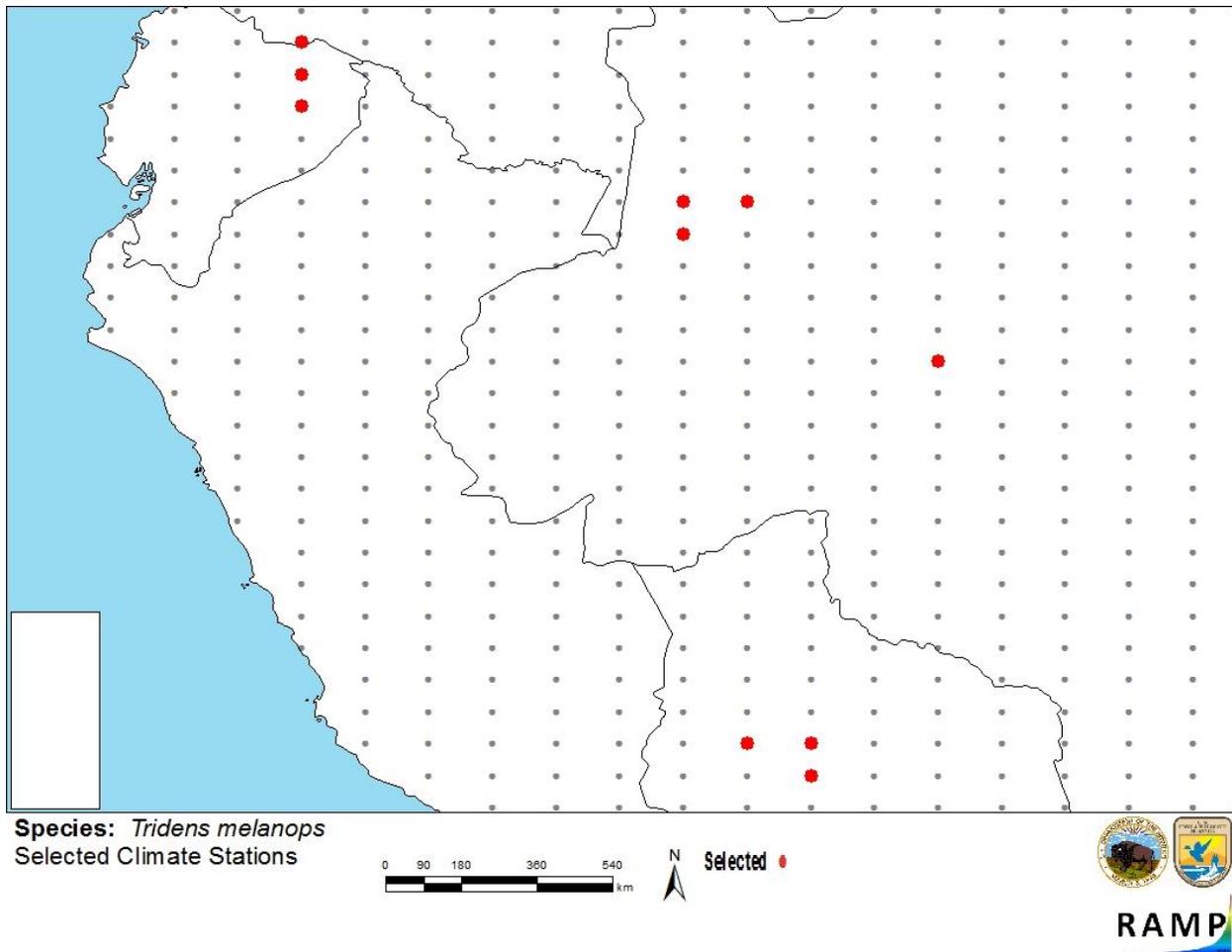


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in western South America selected as source locations (red; Ecuador, Brazil, Bolivia) and non-source locations (gray) for *T. melanops* climate matching. Source locations from GBIF (2016).

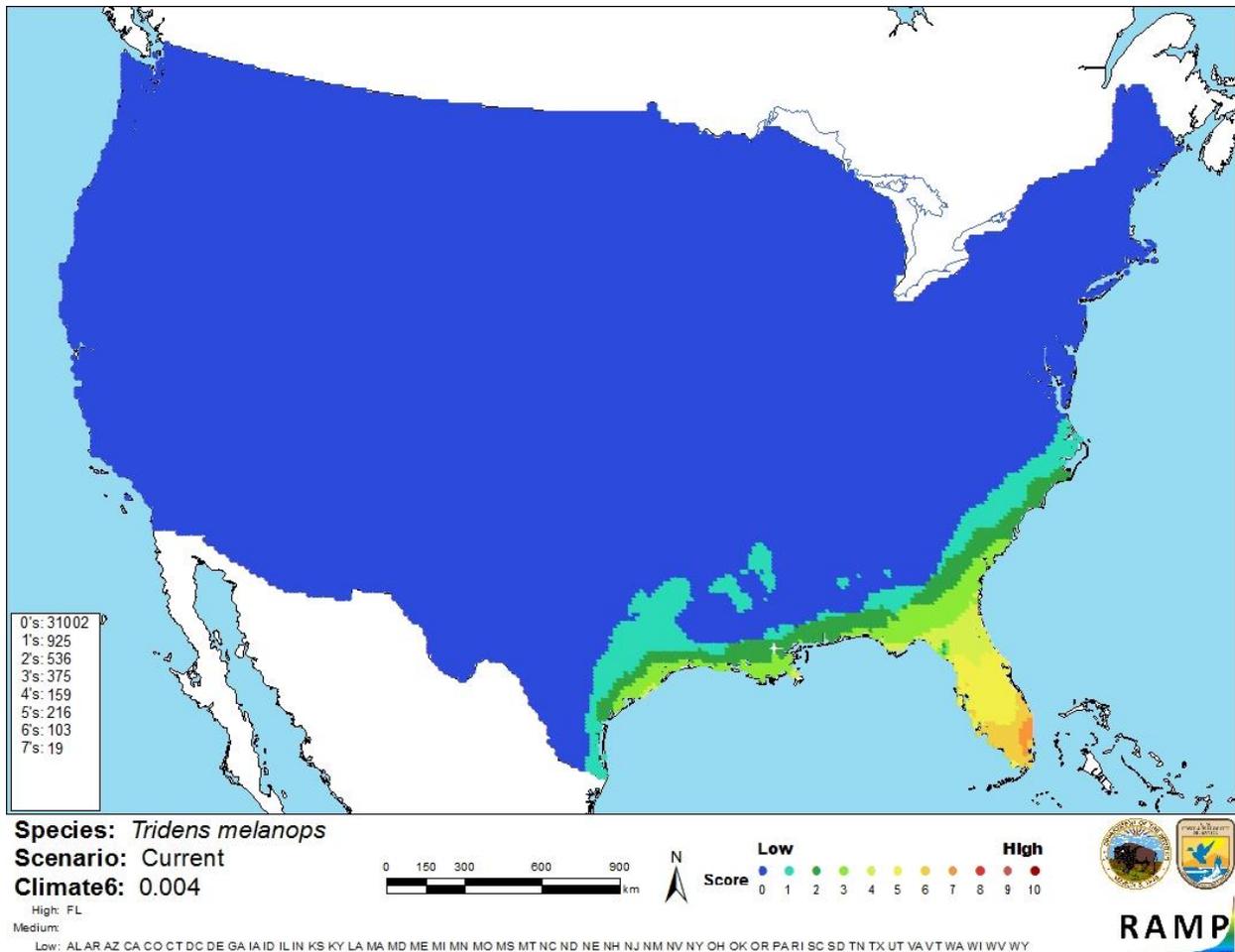


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *T. melanops* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

7 Certainty of Assessment

Little is known about the biology, ecology, and distribution of *Tridens melanops*. *T. melanops* has never been introduced outside its native range so impacts of its introduction are unknown. The certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Tridens melanops is a small trichomycterid catfish native to the Amazon River basin. The species has not been introduced outside of its native range, and without being able to observe introductions in other parts of the world, it is impossible to know the potential impacts of introduction of *T. melanops* to the U.S. Along with other trichomycterids, *T. melanops* is listed as a prohibited species by the state of Florida. *T. melanops* has a low climate match with the contiguous United States. The overall risk posed by *T. melanops* 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.

Eigenmann, C. H., and R. S. Eigenmann. 1890. A revision of the South American Nematognathi or cat-fishes. California Academy of Sciences, San Francisco.

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. *Tridens melanops* Eigenmann & Eigenmann, 1889. FishBase. Available: <http://www.fishbase.org/summary/48795>. (January 2017).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Tridens melanops* Eigenmann & Eigenmann, 1889. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/5202904>. (January 2017).

ITIS (Integrated Taxonomic Information System). 2017. *Tridens melanops* Eigenmann & Eigenmann, 1889. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682284#null. January 2017.

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.