

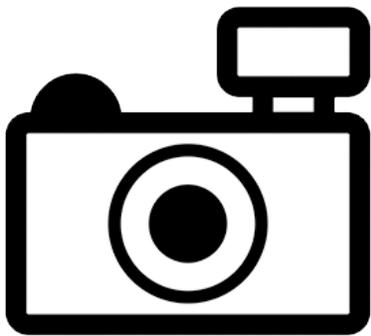
# ***Trichomycterus bomboizanus* (a catfish, no common name)**

## **Ecological Risk Screening Summary**

U.S. Fish and Wildlife Service, December 2016

Revised, April 2017

Web Version, 4/27/2018



No Photo Available

## **1 Native Range and Status in the United States**

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### **Native Range**

From Froese and Pauly (2016):

“South America: Bomboiza River basin in Ecuador.”

### **Status in the United States**

This species has not been reported in the U.S. There is no evidence of this species being in trade 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 bomboizanus*”

## Means of Introductions in the United States

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

## 2 Biology and Ecology

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### 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 bomboizanus* (Tortonese, 1942)”

“Taxonomic Status: valid”

### Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 11.2 cm male/unsexed; [de Pínna and Wosiacki 2003]”

### Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

From Arguello and Jimenez-Prado (2016):

“This benthonic fish inhabit fast flowing streams and rapids.”

## **Climate/Range**

From Froese and Pauly (2016):

“Tropical, preferred ?”

From Arguello and Jimenez-Prado (2016):

“This species probably occurs between 600 to 1,200 m asl.”

## **Distribution Outside the United States**

Native

From Froese and Pauly (2016):

“South America: Bomboiza River basin in Ecuador.”

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**

No information available.

## **Biology**

From Arguello and Jimenez-Prado (2016):

“There are no data on population size and trends for this species.”

## **Human Uses**

From Arguello and Jimenez-Prado (2016):

“This species is not used or traded.”

## **Diseases**

No information available.

## **Threat to Humans**

From Froese and Pauly (2016):

“Harmless”

### 3 Impacts of Introductions

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No introductions of this species have been reported. The Florida Fish and Wildlife Conservation Commission (2017) has listed the parasitic catfish *T. bomboizanus* as a prohibited species.

### 4 Global Distribution

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**Figure 1.** Known global distribution of *T. bomboizanus*, shown with orange shading in Ecuador. Map from Arguello and Jimenez-Prado (2016).

### 5 Distribution Within the United States

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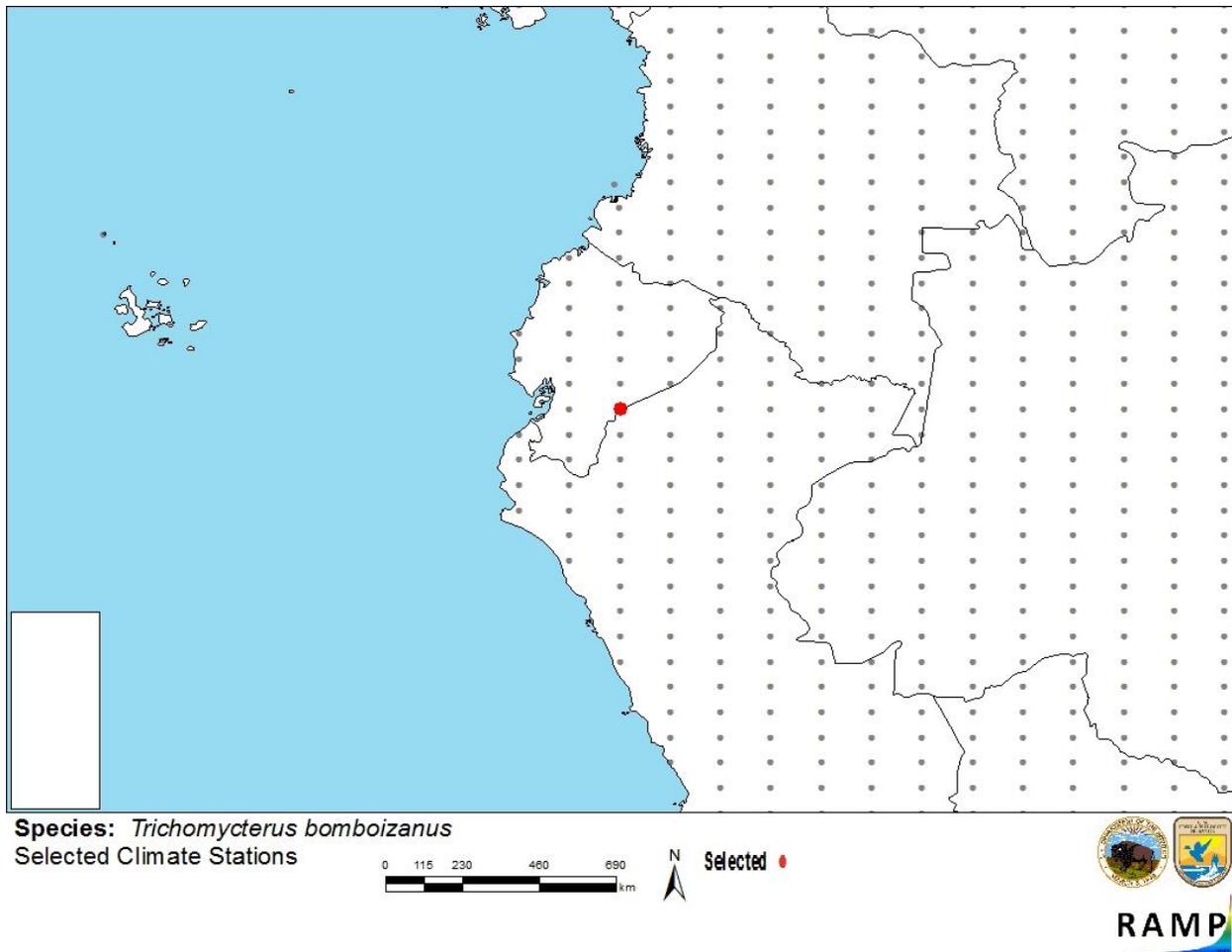
This species has not been reported in the U.S.

### 6 Climate Matching

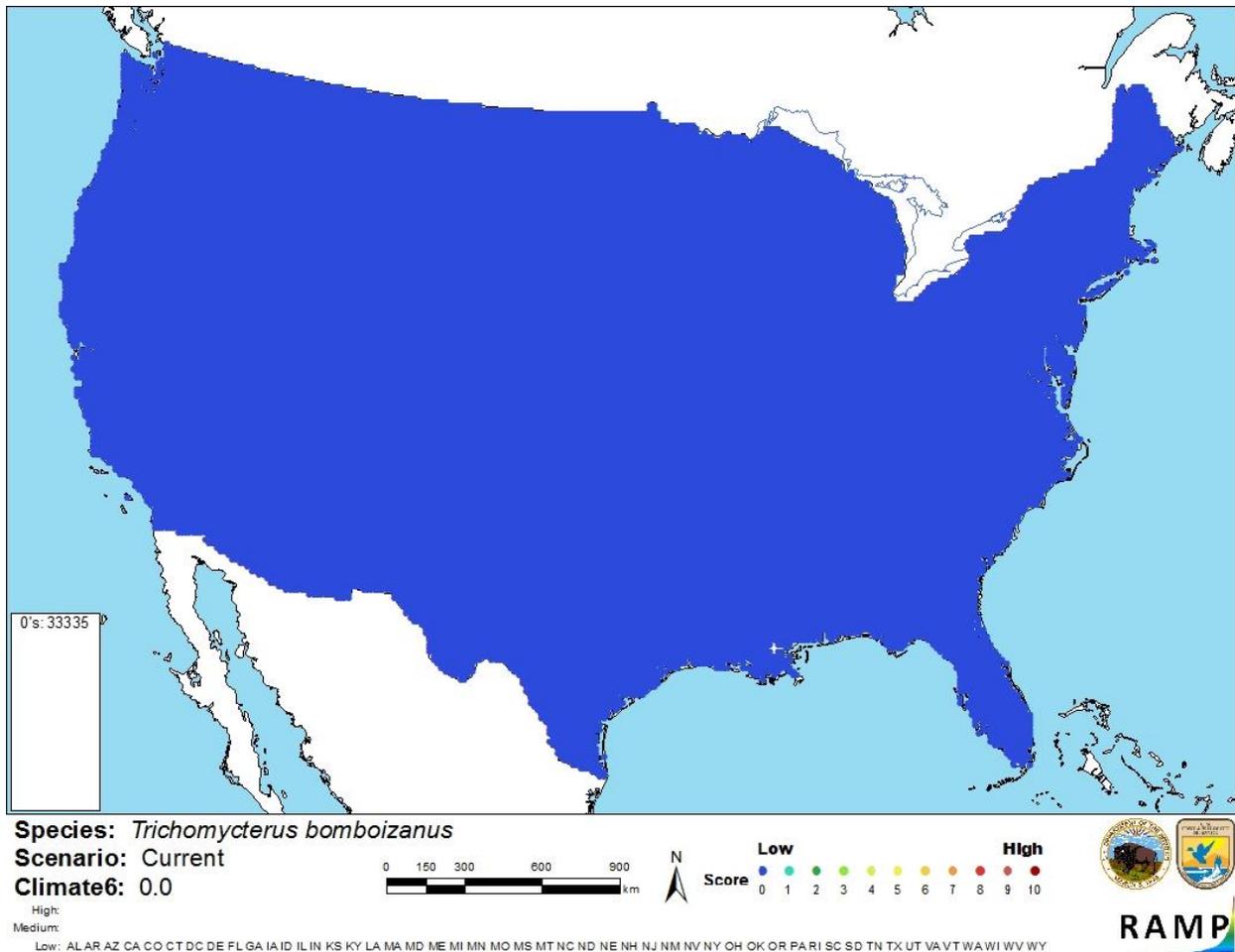
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#### Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low throughout the contiguous U.S., reflected in a Climate 6 proportion of 0.000. Proportions of 0.005 and lower indicate a low climate match.



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



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *T. bomboizanus* in the contiguous United States based on source locations reported by Arguello and Jimenez-Prado (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<br>(Sum of Climate Scores 6-10) / (Sum of total Climate Scores) | Climate Match<br>Category |
|--|---------------------------|
| $0.000 \leq X \leq 0.005$  | Low                       |
| $0.005 < X < 0.103$  | Medium                    |
| $\geq 0.103$   | High                      |

## 7 Certainty of Assessment

The distribution, ecology, and biology of *T. bomboizanus* are poorly known. It has never been reported outside its native range, so impacts of introduction are unknown. The certainty of this assessment is low.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Trichomycterus bomboizanus* is a catfish known only from a small region of Ecuador. 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. bomboizanus* to the U.S. The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *T. bomboizanus* as a prohibited species. Climate match to the contiguous U.S. is categorically low. The overall risk posed by *T. bomboizanus* 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

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**Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.**

Arguello, P., and P. Jimenez-Prado. 2016. *Trichomycterus bomboizanus*. The IUCN Red List of Threatened Species 2016: e.T49830648A67182387. Available: <http://www.iucnredlist.org/details/49830648/0>. (April 2017).

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 bomboizanus* (Tortonese, 1942). FishBase. Available: <http://www.fishbase.org/summary/58384>. (December 2016).

ITIS (Integrated Taxonomic Information System). 2016. *Trichomycterus bomboizanus* (Tortonese, 1942). Integrated Taxonomic Information System, Reston, Virginia. Available: [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=682182#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682182#null). (December 2016).

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

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**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.