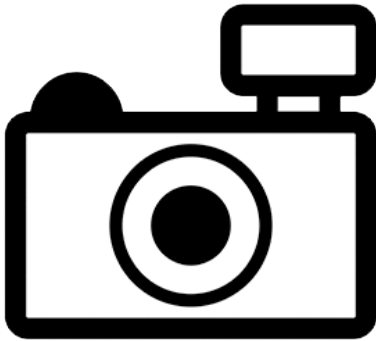


# ***Trichomycterus belensis* (a catfish, no common name)**

## **Ecological Risk Screening Summary**

U.S. Fish and Wildlife Service, December 2016  
Revised, April 2017  
Web Version, 4/26/2018



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: Laguna Blanca basin in Argentina.”

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

This species has not been reported in the U.S. No evidence suggested that this species is in trade in the U.S.

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. Very limited exceptions may be made by permit from the Executive Director [...] [The list of prohibited nonnative species includes] *Trichomycterus belensis*”

### **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 Ostariophysii  
Order Siluriformes  
Family Trichomycteridae  
Subfamily Trichomycterinae  
Genus *Trichomycterus*  
Species *Trichomycterus belensis* Fernández and Vari, 2002”

“Taxonomic Status: valid”

### Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 6.4 cm SL male/unsexed; [Fernández and Vari 2002]”

### 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: Laguna Blanca basin in Argentina.”

### **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 Froese and Pauly (2016):

“Dorsal soft rays (total): 11-13; Anal soft rays: 9 - 10; Vertebrae: 36 - 39. Oval premaxilla smaller than the maxilla. Pelvic fins with associated pelvic girdle. Branched dorsal fin rays 7-8. Ribs 15-17. Caudal peduncle compressed. The region anteroventral to the dorsal fin origin unpigmented. Head and body lack the very thick, rugose layer of fatty tissue. Lacks extensive perforation on the skin's surface by ampullary organs [Fernández and Vari 2002].”

## **Biology**

From Fernández and Vari (2002):

“The type locality for *T. belensis*, which is at approximately 3500 m, is a small, clear water stream, approximately 0.5 m deep, running over a sandy bottom and with marginal vegetation limited to grasses. The stream disappears into the substrate at its lower terminus with an apparently subterranean flow into the saline Laguna Blanca. As noted by Fernández and Vari (2000) few other Neotropical fishes occur at such elevations, with only four other *Trichomycterus* species reported to inhabit higher-elevation water bodies. This total has been increased by the subsequent description of *T. ramosus* from a location at 3680 m (Fernández 2000[a]).”

“The stomachs of three cleared-and-stained *T. belensis* specimens contained dipteran larvae (Chironomidae and Simuliidae), coleopterans (Elmidae), trichopterans, and plecopterans (Perlidae). Thus, the species apparently shares the diet of autochthonous benthic macroinvertebrates common to many congeners (Casatti and Castro, 1998; Ferriz, 1998; Fernández, 2000b).”

## **Human Uses**

No information available.

## **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 (2016) has listed the parasitic catfish *T. belensis* as a prohibited species.

## 4 Global Distribution

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**Figure 1.** Known global established locations of *T. belensis* in Argentina. Map from GBIF (2016).

## 5 Distribution within the United States

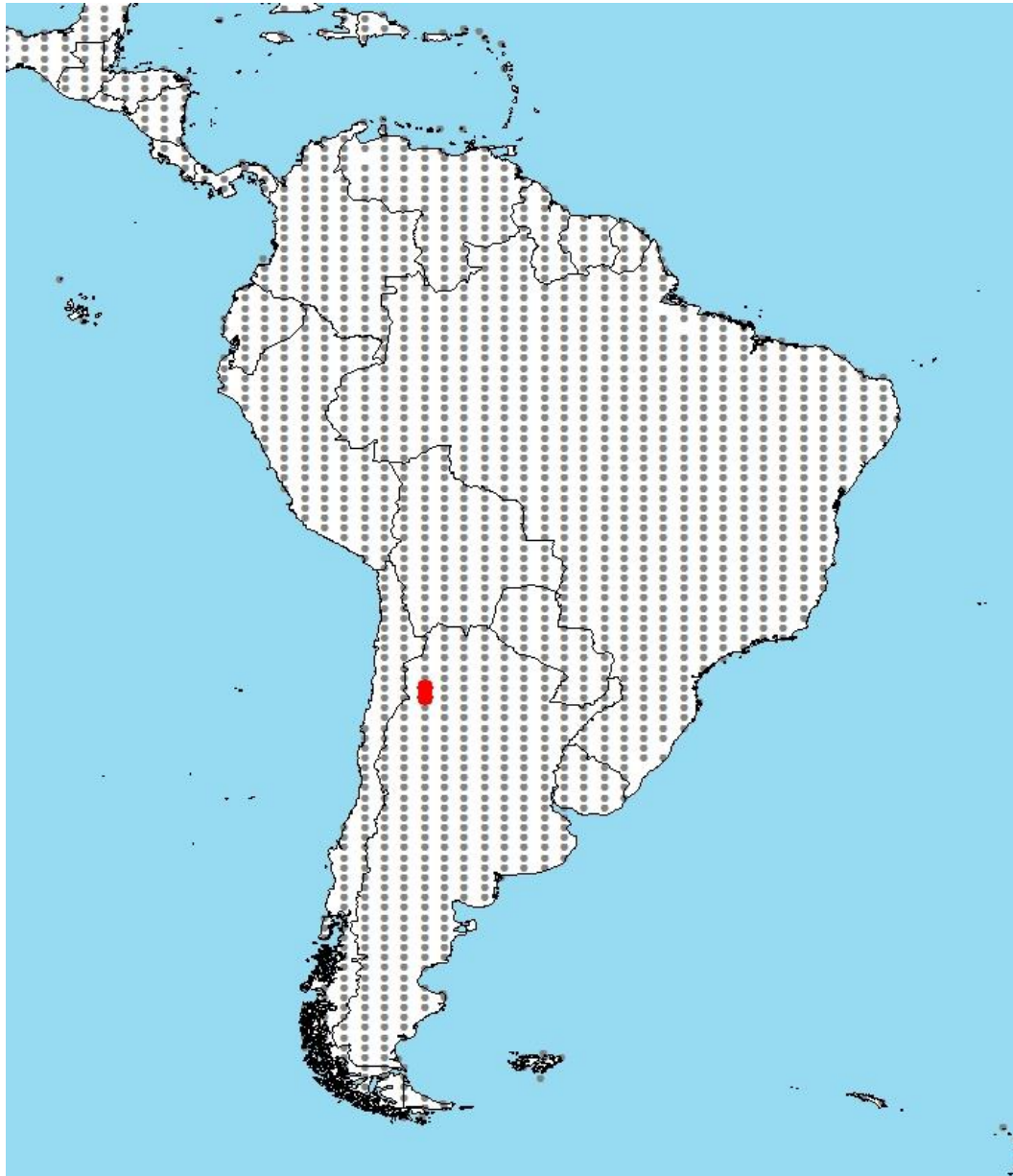
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This species has not been reported in the United States.

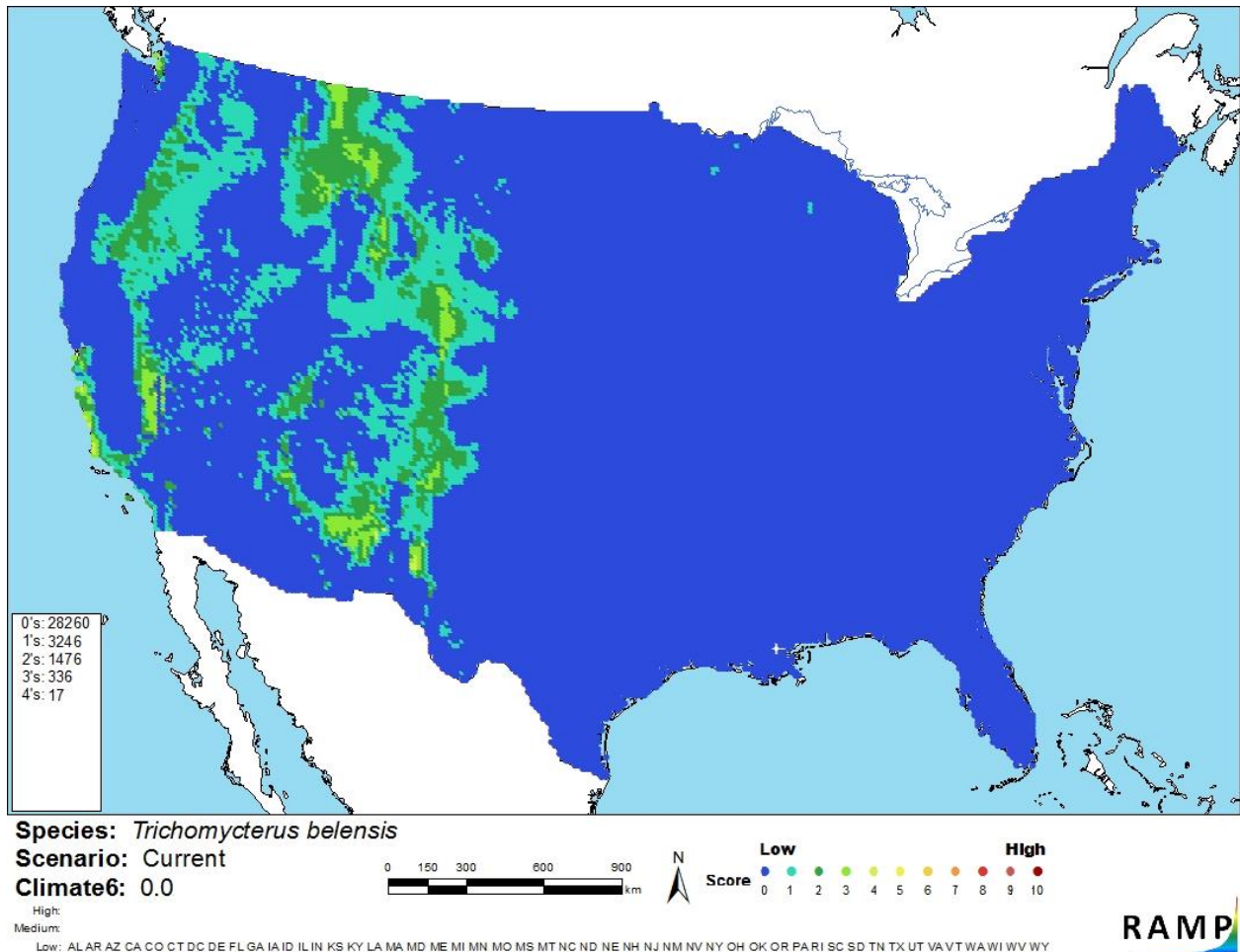
## 6 Climate Matching

### Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean distance) was medium in scattered locations along the southern California coast and in the Southwest, and low elsewhere. Climate 6 proportion indicated a low climate match overall for the contiguous U.S. Proportions of 0.005 and under are designated as low climate match; the Climate 6 proportion for *T. belensis* was 0.000.



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



**Figure 3.** Map of RAMP (Sanders et al. 2014) climate matches for *T. belensis* 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
$\geq 0.103$	High

## 7 Certainty of Assessment

The ecology of *T. belensis* is 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 belensis* is a trichomycterid catfish known only from its type locality in northern Argentina. 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. belensis* to the U.S. The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *T. belensis* as a prohibited species. Climate match to the contiguous U.S. is low. The overall risk posed by *T. belensis* 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.**

- Fernández, L., and R. P. Vari, 2002. New species of *Trichomycterus* from the Andes of Argentina with a redescription of *Trichomycterus alterus* (Siluriformes: Trichomycteridae). *Copeia* 2002(3):739-747.
- 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).
- Froese, R., and D. Pauly, editors. 2016. *Trichomycterus belensis* Fernández & Vari, 2002. FishBase. Available: <http://www.fishbase.se/summary/59838>. (December 2016).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Trichomycterus belensis* Fernández & Vari, 2002. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343176>. (December 2016).
- ITIS (Integrated Taxonomic Information System). 2016 *Trichomycterus belensis* Fernández & Vari, 2002. Integrated Taxonomic Information System, Reston, Virginia. Available: [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=682180#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682180#null). (December 2016).
- 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

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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.**

Casatti, L., and R. M. C. Castro. 1998. The fish fauna from a small forest stream of the upper Paraná River basin, southeastern Brazil. *Ichthyological Exploration of Freshwaters* 7:337-352.

Fernández, L. 2000a. A new species of *Trichomycterus* from northwestern Argentina (Ostariophysi: Trichomycteridae). *Ichthyological Exploration of Freshwaters* 11:349-354.

Fernández, L. 2000b. Redescription of the teleost *Trichomycterus barbouri* (Eigenmann, 1911), occurrence in Argentina and comparison with related species (Ostariophysi: Siluriformes: Trichomycteridae). *Studies on Neotropical Fauna and Environment* 35:27-33.

Fernández, L., and R. P. Vari. 2000. A new species of *Trichomycterus* (Teleostei: Siluriformes: Trichomycteridae) lacking a pelvic girdle from the Andes of Argentina. *Copeia* 2000:990-996.

Ferriz, R. A. 1998. Alimentación de *Trichomycterus coduvense* Weyenbergh, 1879 (Teleostei: Trichomycteridae) en dos rios serranos de San Luis, Argentina. *Revista del Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"* series 8, 5:43-49.