

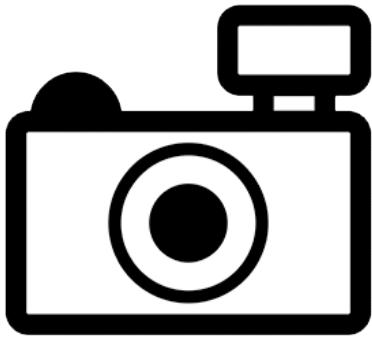
Trichomycterus banneai (a catfish, no common name)

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

Native Range

From Jimenez-Segura et al. (2016):

“This species occurs in the creeks and rivers of Tolima and Cundinamarca draining into the Upper and Middle Magdalena basin, and in the Catatumbo River in Colombia (Malonado-Ocampo et al. 2005). It also occurs in the Santiago River in northwestern Ecuador (Barriga 2012).”

Status in the United States

This species has not been reported in the U.S. No documentation of U.S. trade was found.

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 banneai*”

Means of Introductions in the United States

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

Remarks

From GBIF (2016):

“BASIONYM

Pygidium banneaui Eigenmann, 1912”

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 banneaui*”

“TAXONOMIC STATUS
accepted species”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Maturity: L_m ? range ? - ? cm”

Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

From Jimenez-Segura et al. (2016):

“It lives in environments with fast currents and shallow waters, with stony and sandy substrate [...]”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?”

From Jimenez-Segura et al. (2016):

“Lower elevation limit (metres): 100
Upper elevation limit (metres): 700”

Distribution Outside the United States

Native

From Jimenez-Segura et al. (2016):

“This species occurs in the creeks and rivers of Tolima and Cundinamarca draining into the Upper and Middle Magdalena basin, and in the Catatumbo River in Colombia (Maldonado-Ocampo et al. 2005). It also occurs in the Santiago River in northwestern Ecuador (Barriga 2012).”

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 Castellanos-Morales (2010):

“The following Inter-Andean species of *Trichomycterus* from Colombia share conical teeth, like those of *T. sketi*: *Trichomycterus banneai* [...]. *Trichomycterus sketi* differs from *T. banneai* by the obliquely rounded shape of caudal- fin (vs. emarginate caudal fin) and 10 pectoral fin rays (vs. 8).”

Biology

From Jimenez-Segura et al. (2016):

“It lives in environments with [...] good plant coverage and scarce submerged vegetation. It feeds mainly on small aquatic invertebrates (Maldonado-Ocampo et al. 2005).”

Human Uses

From Jimenez-Segura et al. (2016):

“The species is not utilized.”

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. The Florida Fish and Wildlife Conservation Commission (FFWCC 2016) has listed the parasitic catfish *T. banneai* as a prohibited species.

4 Global Distribution



Figure 1. Known global distribution of *T. banneai*, showing reported locations in Colombia and Venezuela. Map from GBIF (2016). *T. banneai* is not known to be established in Venezuela, so the location in Venezuela (reported from a museum specimen dated 1938) was not used in climate matching.

5 Distribution Within the United States

This species has not been reported 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 medium in southern Florida, coastal Texas, and around Puget Sound in Washington. The remainder of the contiguous U.S. showed a low climate match, reflected in a Climate 6 proportion of 0.000 for *T. banneai*. Proportions of 0.005 and less indicate a low climate match overall for the contiguous U.S.

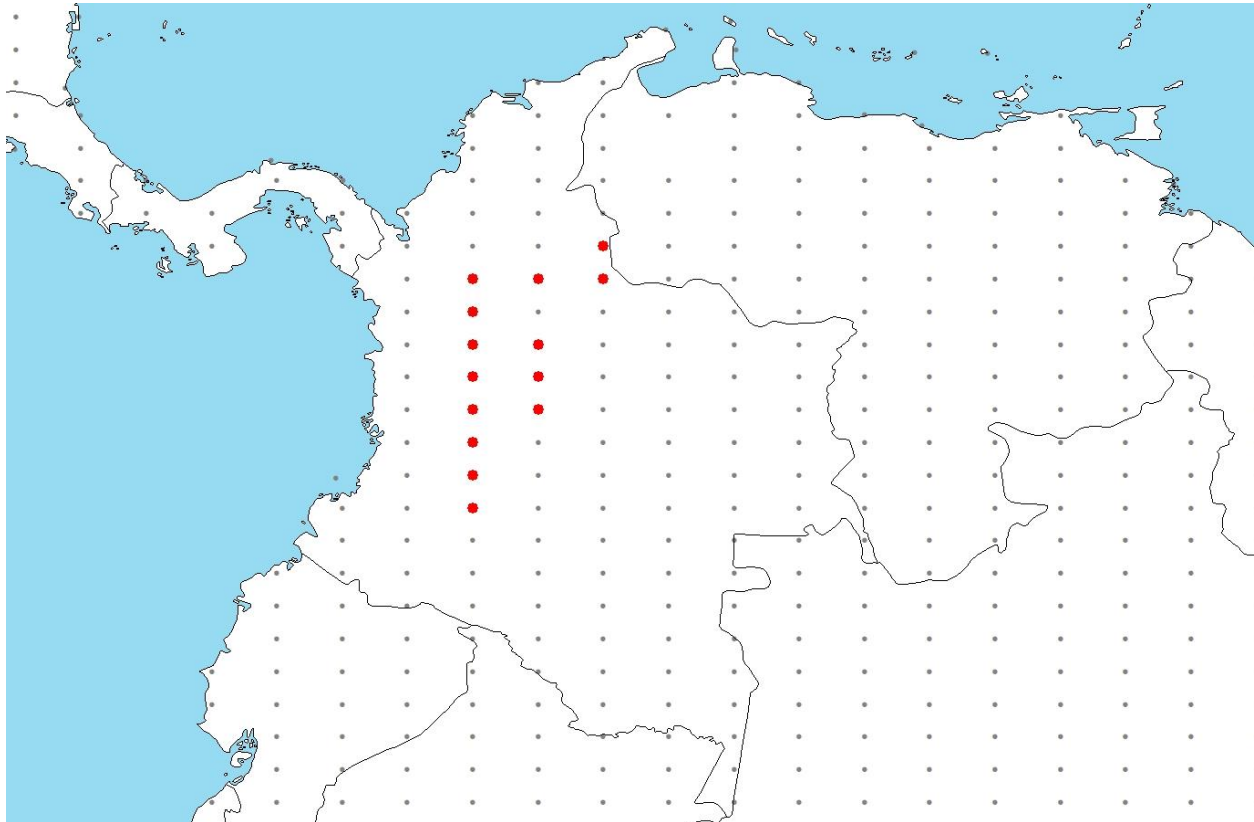


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; in Colombia) and non-source locations (gray) for *T. banneai* climate matching. Source locations from GBIF (2016). Although *T. banneai* is reported in Ecuador as well, no georeferenced occurrences were available from that country.

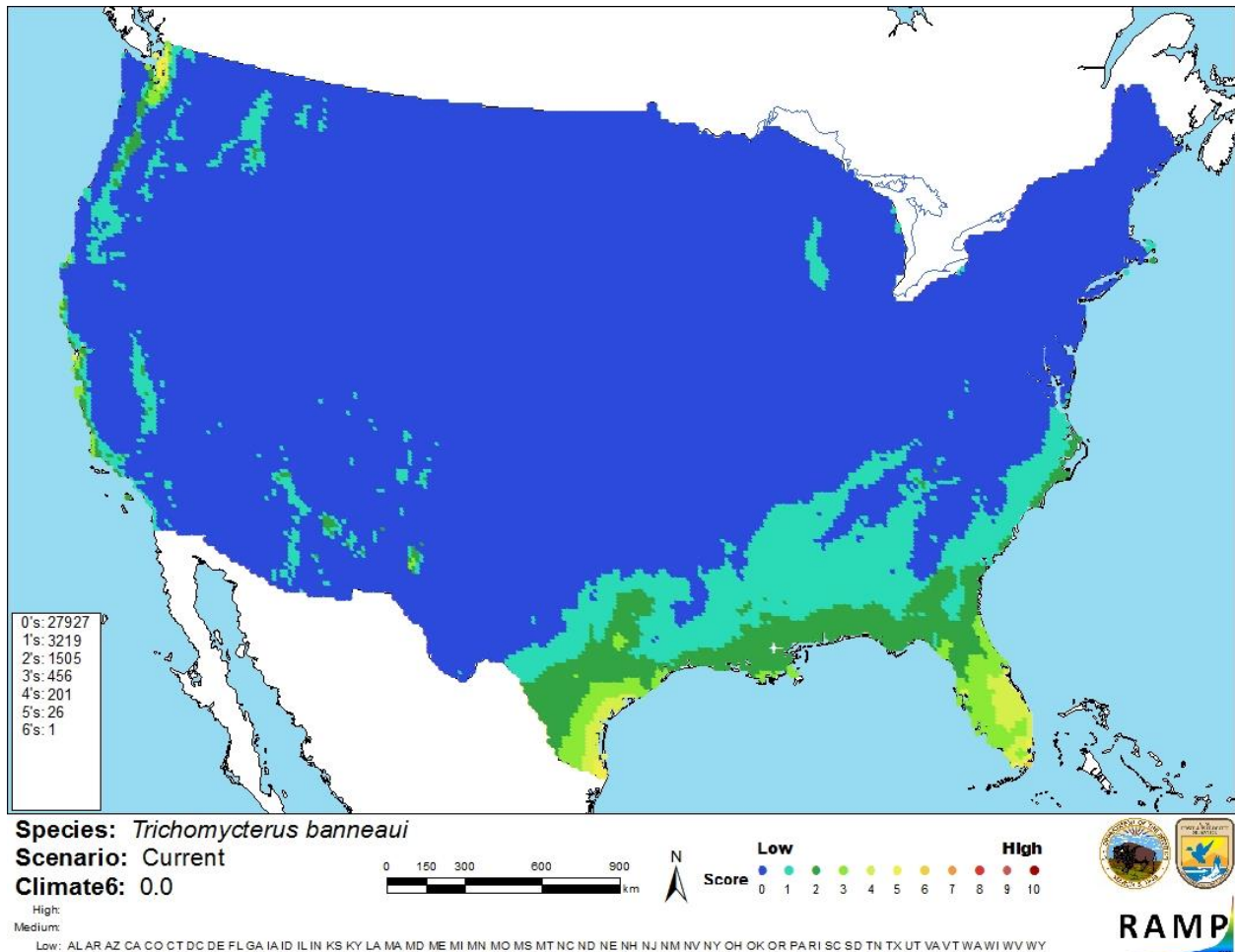


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *T. banneai* in the contiguous United States based on source locations reported by GBIF (2016). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

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

8 Risk Assessment

Summary of Risk to the Contiguous United States

Trichomycterus banneai is a trichomycterid catfish native to streams and rivers of Colombia and 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. banneai* to the U.S. The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *T. banneai* as a prohibited species. Climate match to the contiguous U.S. is low. The overall risk posed by 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.

Castellanos-Morales, C. A. 2010. *Trichomycterus sketi*: a new species of subterranean catfish (Siluriformes: Trichomycteridae) from the Andean Cordillera of Colombia. *Biota Colombiana* 11(1-2):33-41.

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 banneai* (Eigenmann, 1912). FishBase. Available: <http://www.fishbase.org/summary/> <http://www.fishbase.org/summary/48667>. (December 2016).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Trichomycterus banneai* (Eigenmann, 1912). Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2343032>. (December 2016).

Jimenez-Segura, L., F. Villa-Navarro, and P. Jimenez-Prado. 2016. *Trichomycterus banneai*. The IUCN Red List of Threatened Species 2016: e.T49830196A61473818. Available: <http://www.iucnredlist.org/details/summary/49830196/0>. (April 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.

Barriga 2012 [*Source did not provide complete citation for this reference.*]

Maldonado-Ocampo, J. A., A. Ortega-Lara, J. S. U. Oviedo, G. G. Vergara, F. A. Volla-Navarro, L. V. Gamboa, S. Prada-Pedreras, and C. A. Rodriguez. 2005. Peces de los Andes de Colombia. Guia de campo. Instituto de Investigacion de Recursos Biologicos Alexander von Humboldt, Bogota, Colombia.