

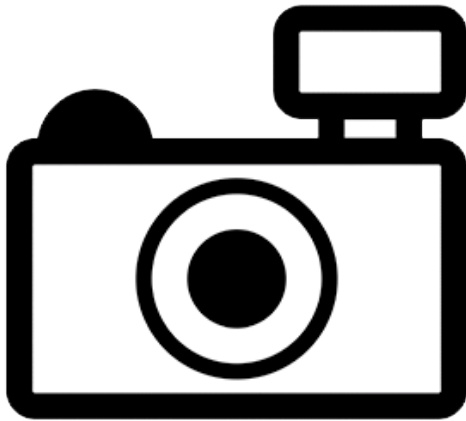
***Trichomycterus taeniops* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2016

Revised, February 2018

Web Version, 2/28/2020



No Photo Available

1 Native Range and Status in the United States

Native Range

From Hidalgo del Aguila and Velasquez (2016):

“This species occurs in the Peruvian Amazon (Ortega et al. 2012), where it is known only from its type locality in Acobamba, near Tarma, in the Ucayali River basin at an altitude of 2,000 m (Fowler 1954).”

Status in the United States

This species has not been reported as introduced or established in the United States. There is no indication that this species is in trade in the United States.

From Arizona Secretary of State (2006):

“Fish listed below are restricted live wildlife [in Arizona] as defined in R12-4-401. [...] South American parasitic catfish, all species of the family Trichomycteridae and Cetopsidae [...]”

From Dill and Cordone (1997):

“[...] At the present time, 22 families of bony and cartilaginous fishes are listed [as prohibited in California], e.g. all parasitic catfishes (family Trichomycteridae) [...]”

From FFWCC (2019):

“Nonnative Conditional species (formerly referred to as restricted species) and Prohibited species are considered to be dangerous to Florida’s native species and habitats or could pose threats to the health and welfare of the people of Florida. These species are not allowed to be personally possessed, but can be imported and possessed by permit for research or public exhibition; Conditional species may also be possessed by permit for commercial sales. Facilities where Conditional or Prohibited species are held must meet certain biosecurity criteria to prevent escape.”

Trichomycterus taeniops is listed as a Prohibited species in Florida.

From Louisiana House of Representatives Database (2010):

“No person, firm, or corporation shall at any time possess, sell, or cause to be transported into this state [Louisiana] by any other person, firm, or corporation, without first obtaining the written permission of the secretary of the Department of Wildlife and Fisheries, any of the following species of fish: [...] all members of the families [...] *Trichomycteridae* (pencil catfishes) [...]”

From Mississippi Secretary of State (2019):

“All species of the following animals and plants have been determined to be detrimental to the State's native resources and further sales or distribution are prohibited in Mississippi. No person shall import, sell, possess, transport, release or cause to be released into the waters of the state any of the following aquatic species or hybrids thereof.
[The list includes all species of] Family Trichomycteridae”

From Legislative Council Bureau (2018):

“Except as otherwise provided in this section and NAC [Nevada Administrative Code] 504.486, the importation, transportation or possession of the following species of live wildlife or hybrids thereof, including viable embryos or gametes, is prohibited [in Nevada]: [...] All species in the families Cetopsidae and Trichomycteridae”

From Utah DNR (2012):

“All species of fish listed in Subsections (2) through (30) are classified [in Utah] as prohibited for collection, importation and possession [...] Parasitic catfish (candiru, carnero) family Trichomycteridae (All species)”

Means of Introductions in the United States

This species has not been reported as introduced or established 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 Trichomycterinae
Genus *Trichomycterus*
Species *Trichomycterus taeniops*

From Eschmeyer et al. (2016):

“Current status: Valid as *Trichomycterus taeniops* Fowler 1954. Trichomycteridae: Trichomycterinae.”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 9.2 cm male/unsexed; [de Pínna and Wosiacki 2003]”

Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic.”

From Hidalgo del Aguila and Velasquez (2016):

“It probably occurs in clear waters and has insectivorous habits. The quality of its habitat is inferred to be declining due to pollution from urban waste waters.”

Climate/Range

From Froese and Pauly (2016):

“Tropical”

Distribution Outside the United States

Native

From Hidalgo del Aguila and Velasquez (2016):

“This species occurs in the Peruvian Amazon (Ortega et al. 2012), where it is known only from its type locality in Acobamba, near Tarma, in the Ucayali River basin at an altitude of 2,000 m (Fowler 1954).”

Introduced

This species has not been reported as introduced or established outside of its native range.

Means of Introduction Outside the United States

This species has not been reported as introduced or established outside of its native range.

Short Description

No information reported for this species.

Biology

From Hidalgo del Aguila and Velasquez (2016):

“It probably occurs in clear waters and has insectivorous habits.”

Human Uses

From Hidalgo del Aguila and Velasquez (2016):

“The species is not utilized.”

Diseases

No OIE-reportable diseases (OIE 2020) have been documented for this species.

Threat to Humans

From Froese and Pauly (2016):

“Harmless”

3 Impacts of Introductions

This species has not been reported as introduced or established outside of its native range.

The importation, possession, or trade of the catfish *T. taeniops* is prohibited or restricted in the following states: Arizona (Arizona Secretary of State 2006), California (Dill and Cordone 1997), Florida (FFWCC 2019), Louisiana (Louisiana House of Representatives Database 2010), Mississippi (Mississippi Secretary of State 2019), Nevada (Legislative Council Bureau 2018), and Utah (Utah DNR 2012).

4 Global Distribution

No georeferenced occurrences were available for this species (GBIF Secretariat 2019).



Figure 1. Map of northern South America showing the Ucayali River (pink highlight) in the Amazon River Basin in Peru, described as the range of *Trichomycterus taeniops* (Hidalgo del Aguila and Velasquez 2016). Map by Kmusser. Licensed under Creative Commons (CC BY-SA). Available: <https://commons.wikimedia.org/w/index.php?curid=4747525>. (February 2020).

5 Distribution Within the United States

This species has not been reported as introduced or established in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

Note: There were no georeferenced occurrences available for this species. Source locations were estimated based on the described range, Ucayali River basin, in Hidalgo del Aguila (2016). The climate match is an approximation and likely an overestimate.

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was high in far southeastern Florida, medium in peninsular Florida and scattered small areas around the Gulf of Mexico coastline. The climate match was low throughout the rest of the contiguous United States. The Climate 6 score of *Trichomycterus taeniops* was 0.002, indicating that the contiguous United States has a low overall climate match. (Scores between 0.000 and 0.005, inclusive, are classified as low.) Florida had a medium individual climate score; all other States had a low climate score.

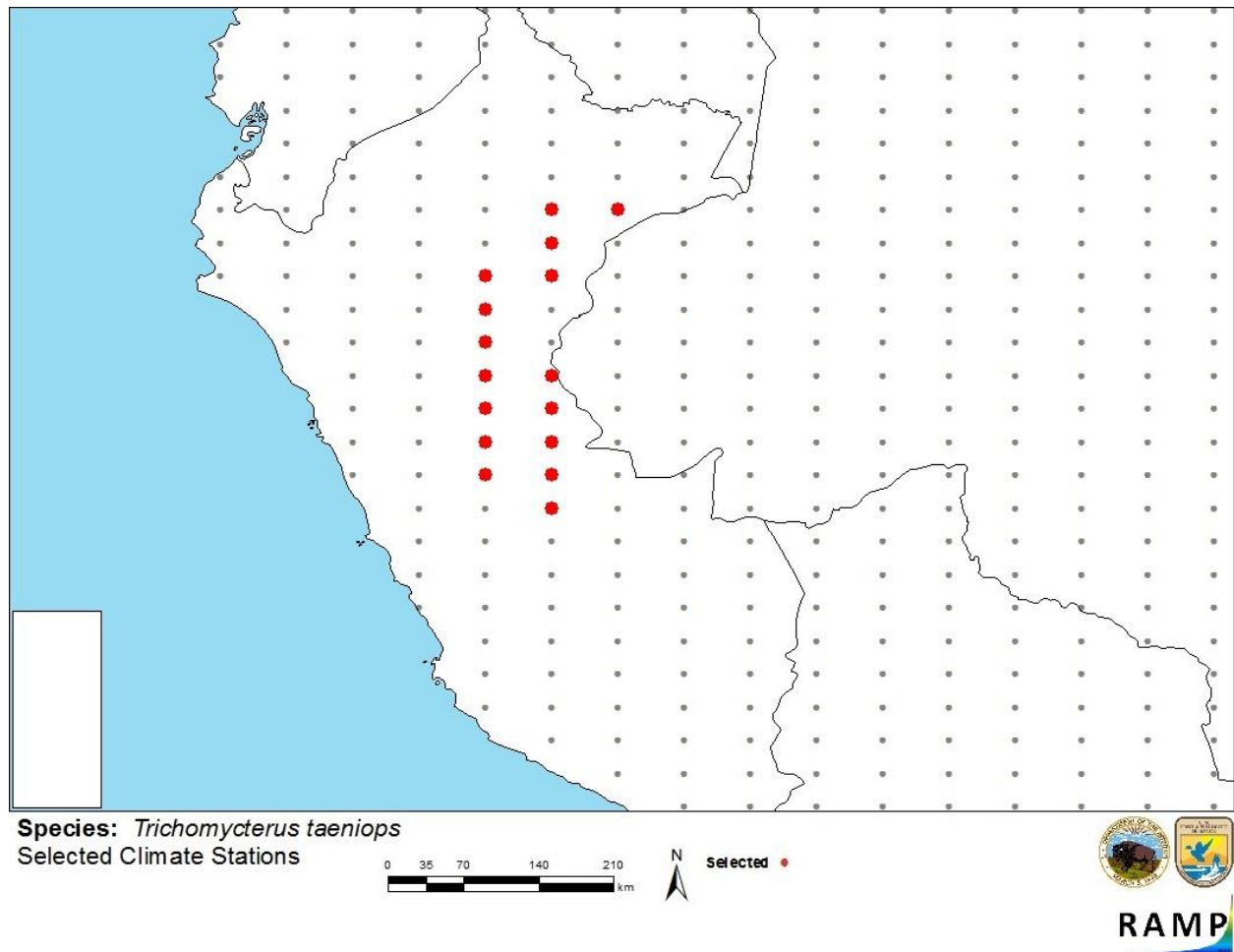


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Peru) and non-source locations (gray) for *Trichomycterus taeniops* climate matching. Source locations approximated from the distribution reported by Hidalgo del Aguila (2016).

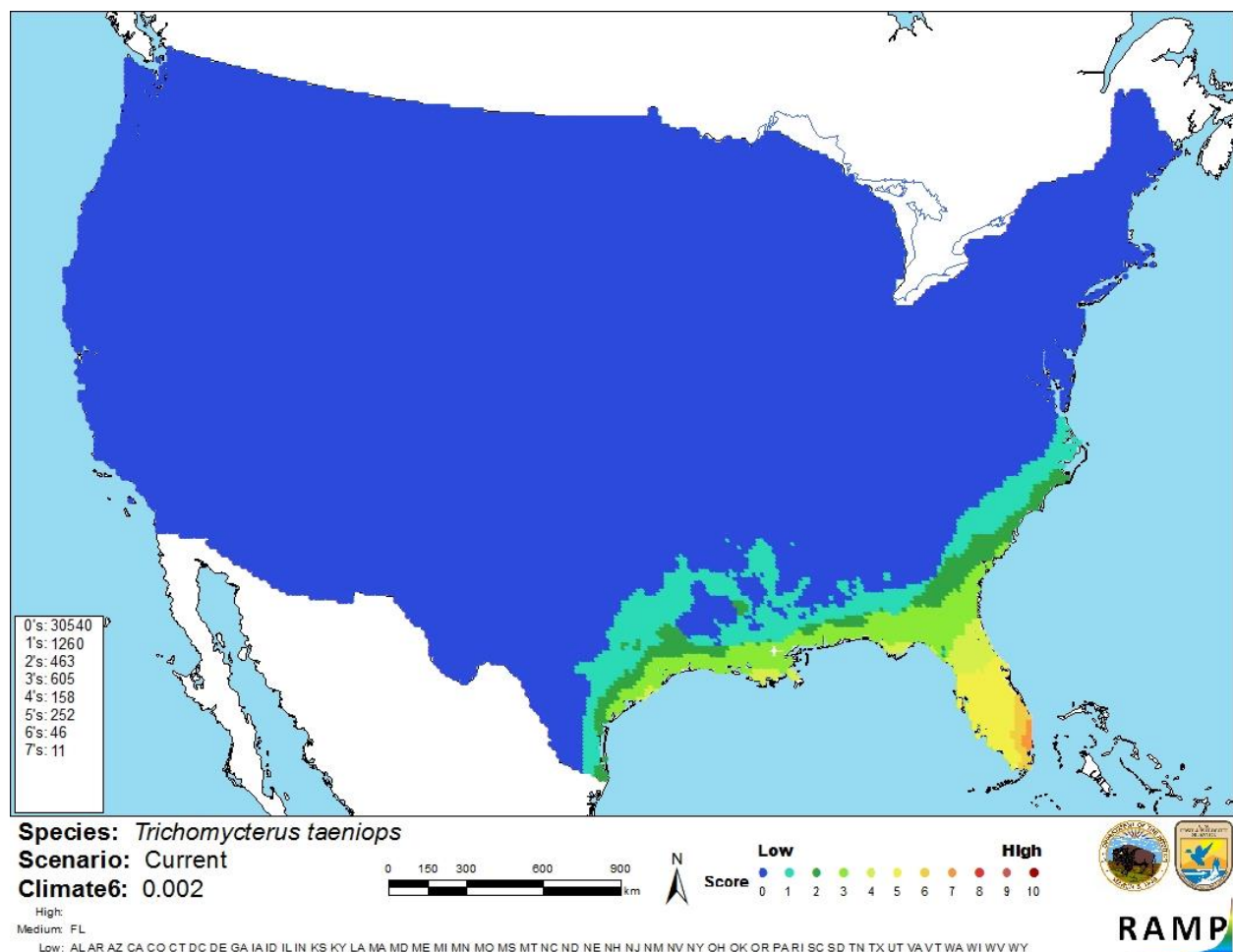


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Trichomycterus taeniops* in the contiguous United States based on source locations approximated from the species distribution reported by Hidalgo del Aguila (2016). 0= Lowest match, 10= Highest match. Counts of climate match scores are 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
≥ 0.103	High

7 Certainty of Assessment

Information on the biology of *T. taeniops* is not widely available, and no georeferenced occurrences were available to inform climate matching analysis. There have been no introductions of this species outside its native range, so no information is available on impacts of

introduction. Absence of both georeferenced locations and information on impacts makes the certainty of this assessment low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Trichomycterus taeniops is a catfish native to one river basin in Peru. It has not been reported as introduced outside of its native range. History of invasiveness is uncertain. Several U.S. States prohibit or restrict the possession, transport, or trade of this species along with other members of the family Trichomycteridae. Georeferenced occurrence data were not available, so the climate matching analysis was conducted using approximated source locations, as described in the literature. The climate match with the contiguous United States was low overall, with limited medium to high match in the Southeast. The certainty of this assessment is low due to a lack of georeferenced occurrences for the climate match and lack of information on impacts of introduction. 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.

Arizona Secretary of State. 2006. Restricted live wildlife. Arizona Administrative Code, R12-4-406.

Dill, W. A., and A. J. Cordone. 1997. History and status of introduced fishes in California, 1871-1996. California Department of Fish and Game. Fish Bulletin 178.

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2016. Catalog of fishes: genera, species, references. Available:
<http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>
(December 2016).

FFWCC (Florida Fish and Wildlife Conservation Commission). 2019. Florida's nonnative fish and wildlife. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. Available: <https://myfwc.com/wildlifehabitats/nonnatives/>. (November 2019).

Froese, R., and D. Pauly, editors. 2016. *Trichomycterus taeniops* (Fowler 1954). FishBase. Available: <http://www.fishbase.ca/summary/Trichomycterus-taeniops.html>
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- Hidalgo del Aguila, M., and M. Velasquez. 2016. *Trichomycterus taeniops*. The IUCN Red List of Threatened Species 2016. Available: <http://www.iucnredlist.org/details/49830627/0> (December 2016).
- ITIS (Integrated Taxonomic Information System). 2016. *Trichomycterus taeniops* (Fowler 1954). Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682269#null (December 2016).
- Legislative Council Bureau. 2018. Restrictions on importation, transportation and possession of certain species. Nevada Administrative Code, Section 503.110.
- Louisiana House of Representatives Database. 2010. Exotic fish; importation, sale, and possession of certain exotic species prohibited; permit required; penalty. Louisiana Revised Statutes, Title 56, Section 319.
- Mississippi Secretary of State. 2019. Guidelines for aquaculture activities. Mississippi Administrative Code, Title 2, Part 1, Subpart 4, Chapter 11. Regulatory and Enforcement Division, Office of the Mississippi Secretary of State, Jackson, Mississippi.
- OIE (World Organisation for Animal Health). 2020. OIE-listed diseases, infections and infestations in force in 2020. World Organisation for Animal Health, Paris. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2019/>. (February 2020).
- Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.
- Utah DNR. 2012. R657-3 – collection, importation, transportation, and possession of animals. Utah Division of Natural Resources, Salt Lake City, Utah. Available: <https://wildlife.utah.gov/hunting-in-utah/guidebooks/46-rules/rules-regulations/940-r657-3--collection-importation-transportation-and-possession-of-animals.html>. (May 2018).

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.

- Fowler, H. W. 1954. Os peixes de água doce do Brasil, volume 2. Arquivos de Zoologia do Estado de São Paulo 9:1-400.

- Ortega, H., M. Hidalgo, G. Trevejo, E. Correa, A. M. Cortijo, V. Meza, and J. Espino. 2012. Lista anotada de los peces de aguas continentales del Perú: Estado actual del conocimiento, distribución, usos y aspectos de conservación. Ministerio del Ambiente, Dirección General de Diversidad Biológica - Museo de Historia Natural, UNMSM, Lima, Peru.
- 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.