

Trichomycterus mondolfi (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, May 2012
Revised, June 2018
Web Version, 10/13/2021

Organism Type: Fish
Overall Risk Assessment Category: Uncertain



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“South America: Tuy River basin in Venezuela.”

Status in the United States

Trichomycterus mondolfi has not been reported in the wild or in trade in the United States.

From Arizona Office of the Secretary of State (2013):

“I. Fish listed below are considered restricted wildlife: [...]

9. All species of the family Cetopsidae and Trichomycteridae. Common name: South American catfish.”

From California Department of Fish and Wildlife (2019):

“It shall be unlawful to import, transport, or possess live animals restricted in subsection (c) below except under permit issued by the department. [...] Family Trichomycteridae (Pygidiidae)-Parasitic Catfishes.: All species”

The Florida Fish and Wildlife Conservation Commission has listed *Trichomycterus mondolfi* as a prohibited species. Prohibited nonnative species (FFWCC 2018), "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.”

From Georgia DNR (2020):

“The exotic species listed below, except where otherwise noted, may not be held as pets in Georgia. This list is not all inclusive. [...] Parasitic catfishes; all species”

From Louisiana State Legislature (2019):

“No person, firm, or corporation shall at any time possess, sell, or cause to be transported into this state 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: freshwater electric eel (*Electrophorus* sp.); rudd (*Scardinius erythrophthalmus*); all members of the families Synbranchidae (Asian swamp eels); Channidae (snakeheads); Clariidae (walking catfishes); 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. However, species listed as prohibited may be allowed under a permitting process where environmental impact has been assessed. [...] Pencil or parasitic catfishes Family Trichomycteridae **** [indicating all species within the family are included in the regulation]”

From State of Nevada (2018):

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

From Oklahoma Secretary of State (2019):

“Until such time as is necessary for the Department of Wildlife Conservation to obtain adequate information for the determination of other harmful or potentially harmful exotic species, the importation into the State and/or the possession of the following exotic fish or their eggs is prohibited: [...]

Parasitic South American Catfish group (Candiru), genera & species of the Trichomycteridae family. *Vandellia* spp., *Tridens* spp., and *Pygidium* spp.”

From Texas Parks and Wildlife (2020):

“The organisms listed here are legally classified as exotic, harmful, or potentially harmful. No person may possess or place them into water of this state except as authorized by the department. Permits are required for any individual to possess, sell, import, export, transport or propagate listed species for zoological or research purposes; for aquaculture (allowed only for Blue, Nile, or Mozambique tilapia, Triploid Grass Carp, or Pacific White Shrimp); or for aquatic weed control (for example, Triploid Grass Carp in private ponds). [...]

South American Parasitic Candiru Catfishes, Family Trichomycteridae All species”

From Utah Office of Administrative Rules (2019):

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

Means of Introductions in the United States

Trichomycterus mondolfi has not been reported in the United States.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Trichomycterus mondolfi* (Schultz 1945) is the current valid name of this species. *Trichomycterus mondolfi* was originally described as *Pygidium mondolfi* Schultz 1945.

From ITIS (2018):

Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata

Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Trichomycteridae
Subfamily Trichomycterinae
Genus *Trichomycterus*
Species *Trichomycterus mondolfi* (Schultz, 1945)

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 6.1 cm male/unsexed; [de Pínna and Wosiacki 2003].”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

Climate

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“South America: Tuy River basin in Venezuela.”

Introduced

No records of *Trichomycterus mondolfi* introductions were found.

Means of Introduction Outside the United States

No records of *Trichomycterus mondolfi* introductions were found.

Short Description

No information on a short description of *Trichomycterus mondolfi* was found.

Biology

No information on the biology of *Trichomycterus mondolfi* was found.

Human Uses

No information on the human uses of *Trichomycterus mondolfi* was found.

Diseases

No information on parasites or pathogens of *Trichomycterus mondolfi* was found. **No records of OIE-reportable diseases (2021) were found for *T. mondolfi*.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of *Trichomycterus mondolfi* introductions were found.

T. mondolfi is regulated in multiple States.

4 History of Invasiveness

There were no records of introduction found for *Trichomycterus mondolfi*. No indication of this species in trade was found. The history of invasiveness is classified as No Known Nonnative Population.

5 Global Distribution



6 Distribution Within the United States

Trichomycterus mondolfi has not been reported in the United States.

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Trichomycterus mondolfi* was low for the majority of the country with small patches of medium match in southern Texas and southern Florida. The overall Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are considered low). All States in the contiguous United States had a low individual Climate 6 score.



Species: *Trichomycterus mondolfi*
Selected Climate Stations



Selected •



RAMP

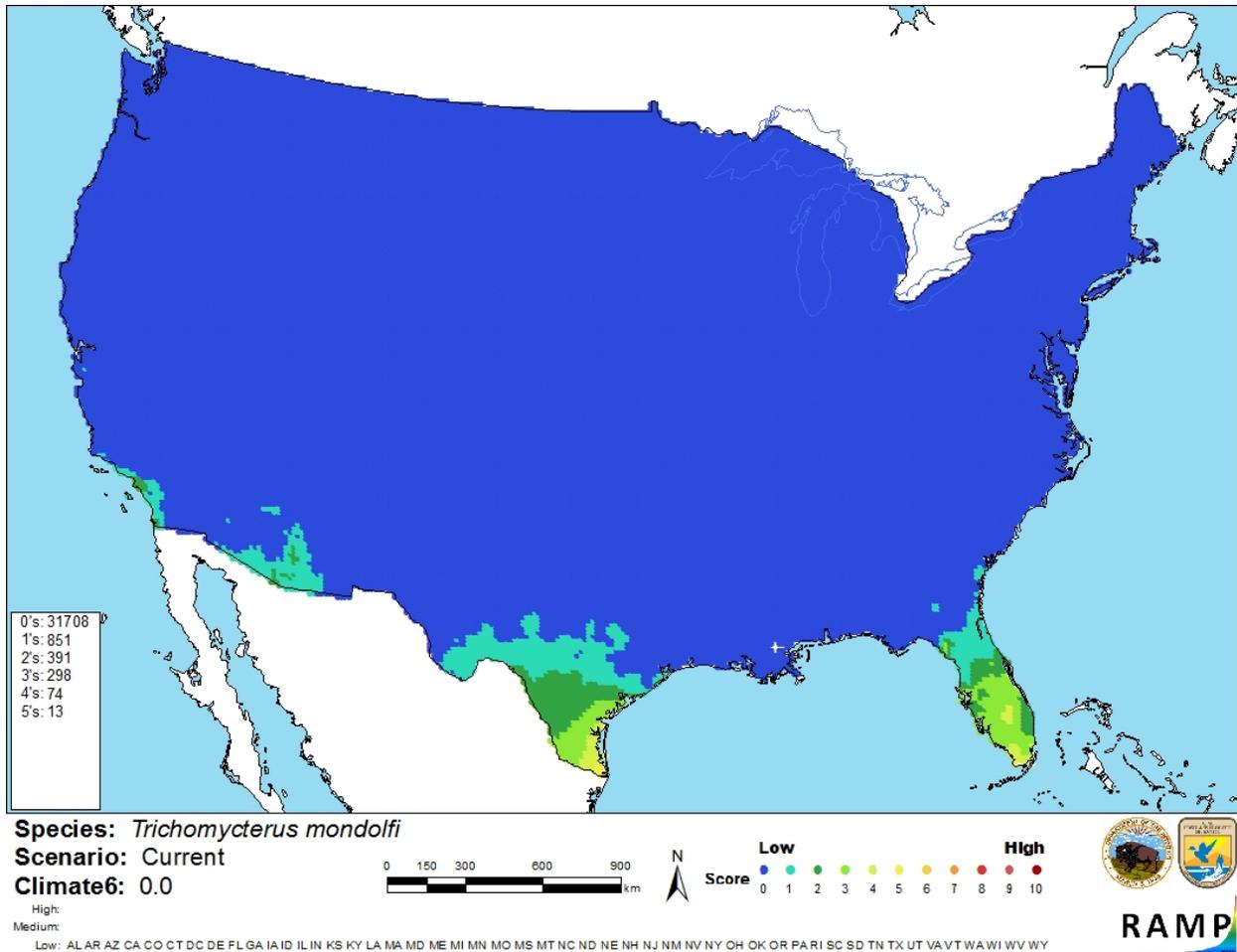


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Trichomycterus mondolfi* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: (Count of target points with climate scores 6-10)/ (Count of all target points)	Overall Climate Match Category
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

8 Certainty of Assessment

The certainty of this assessment is low. There is minimal information for *Trichomycterus mondolfi* and a lack of peer-reviewed literature.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Trichomycterus mondolfi is a freshwater catfish native to Venezuela. *T. mondolfi* is regulated in multiple States. The history of invasiveness is classified as No Known Nonnative Population, as it has not been reported as introduced or established outside of its native range. There was no indication of this species in trade. The overall climate match was Low with only a few small areas of medium match in southern Florida and Texas. The certainty of this assessment is Low due to a general lack of information. The overall risk assessment category is Uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 4): No Known Nonnative Population**
- **Overall Climate Match (Sec. 7): Low**
- **Certainty of Assessment (Sec. 8): Low**
- **Remarks/Important additional information:** No additional remarks.
- **Overall Risk Assessment Category: Uncertain**

10 Literature Cited

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.

Arizona Office of the Secretary of State. 2013. Live wildlife. Arizona Administrative Code, Game and Fish Commission, Title 12, Chapter 4, Article 4.

California Department of Fish and Wildlife. 2019. Restricted species laws and regulations manual. Available: <https://wildlife.ca.gov/Conservation/Invasives/Regulations> (November 2020).

Eschmeyer WN, Fricke R, van der Laan R, editors. 2018. Catalog of fishes: genera, species, references. California Academy of Science. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp> (June 2018).

[FFWCC] Florida Fish and Wildlife Conservation Commission. 2018. Prohibited species list. Tallahassee, Florida: Florida Fish and Wildlife Conservation Commission. Available: <http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/#nogo> (June 2018).

Froese R, Pauly D, editors. 2018. *Trichomycterus mondolfi* (Schultz, 1945). FishBase. Available: <http://www.fishbase.se/summary/Trichomycterus-mondolfi.html> (June 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Trichomycterus mondolfi* (Schultz, 1945). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/2343214> (June 2018).

Georgia [DNR] Department of Natural Resources. 2020. Wild animals/exotics. Social Circle: Georgia Department of Natural Resources Law Enforcement Division. Available: <http://gadnrle.org/exotics> (November 2020).

[ITIS] Integrated Taxonomic Information System. 2018. *Trichomycterus mondolfi* (Schultz, 1945). Reston, Virginia: Integrated Taxonomic Information System. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682236 (June 2018).

Louisiana State Legislature. 2019. 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. Jackson: Office of the Mississippi Secretary of State, Regulatory and Enforcement Division.

[OIE] World Organisation for Animal Health. 2021. Animal diseases. Available: <https://www.oie.int/en/what-we-do/animal-health-and-welfare/animal-diseases/> (May 2021).

Oklahoma Secretary of State. 2019. List of restricted exotic species. Oklahoma Administrative Code, Title 800, Chapter 20-1-2.

Sanders S, Castiglione C, Hoff M. 2014. Risk Assessment Mapping Program: RAMP. Version 2.81. U.S. Fish and Wildlife Service.

State of Nevada. 2018. Restrictions on importation, transportation and possession of certain species. Nevada Administrative Code, Chapter 503, Section 110.

Texas Parks and Wildlife. 2020. Invasive, prohibited and exotic species. Austin: Texas Parks and Wildlife. Available: https://tpwd.texas.gov/huntwild/wild/species/exotic/prohibited_aquatic.phtml (November 2020).

Utah Office of Administrative Rules. 2019. Classification and specific rules for fish. Utah Administrative Code, Rule R657-3-23.

11 Literature Cited in Quoted Material

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 Pinna MCC, Wosiacki W. 2003. Trichomycteridae (pencil or parasitic catfishes). Pages 270–290 in Reis RE, Kullander SO, Ferraris CJ Jr, editors. Checklist of the freshwater fishes of South and Central America. Porto Alegre, Brazil: EDIPUCRS.

Schultz LP. 1945. *Pygidium mondolfi*, a new catfish from Venezuela. Journal of the Washington Academy of Sciences 35:29–31.