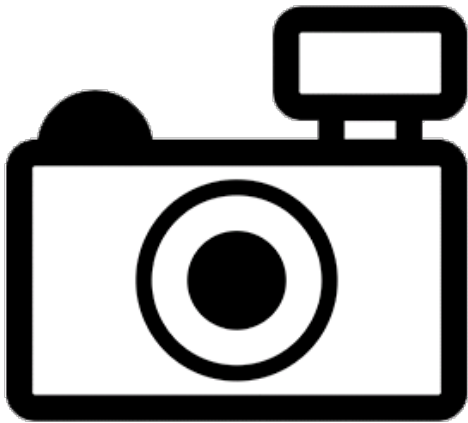


Trichomycterus pradensis (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, December 2016
Revised, June 2018
Web Version, 9/1/2021

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: Brazil.”

From Sarmiento-Soares et al. (2005):

“*Trichomycterus pradensis*, new species, is described from the upper and middle course of coastal river drainages running from Minas Gerais State towards Bahia State, in the rio Peruípe, rio Itanhém, and rio Jucuruçu basins.”

Status in the United States

This species 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 all species in the family Trichomycteridae as prohibited species. Prohibited nonnative species (FFWCC 2021), “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.”

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

This species 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 pradensis* Sarmiento-Soares, Martins-Pinheiro, Arnada & Chamon 2005 is the current valid name for this species; it is also the original name for this species.

From Froese and Pauly (2018):

“Actinopterygii (ray-finned fishes) > Siluriformes (Catfish) > Trichomycteridae (Pencil or parasitic catfishes) > Trichomycterinae”

Size, Weight, and Age Range

Froese and Pauly (2018):

“Max length : 11.2 cm SL male/unsexed; [Sarmiento-Soares et al. 2005]”

Environment

Froese and Pauly (2018):

“Freshwater; demersal.”

Climate

Froese and Pauly (2018):

“Tropical, [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“South America: Brazil.”

From Sarmiento-Soares et al. (2005):

“*Trichomycterus pradensis*, new species, is described from the upper and middle course of coastal river drainages running from Minas Gerais State towards Bahia State, in the rio Peruípe, rio Itanhém, and rio Jucuruçu basins.”

Introduced

No known introductions outside of native range.

Means of Introduction Outside the United States

No known introductions outside of native range.

Short Description

Froese and Pauly (2018):

“Vertebrae: 36 - 37. Differs from its congeners by possessing the supraorbital sensory pores s6 placed close together, a narrow opercular patch of developed odontodes, with 8-10 odontodes, and 8 branched pectoral rays. [Sarmiento-Soares et al. 2005]”

Biology

Froese and Pauly (2018):

“Found mainly in fast moving clear water [Sarmiento-Soares et al. 2005]”

From Sarmiento-Soares et al. (2005):

“*Trichomycterus pradensis*, new species, is described from the upper and middle course of coastal river drainages running from Minas Gerais State towards Bahia State, in the rio Peruípe, rio Itanhém, and rio Jucuruçu basins. It is distinguished from its congeners by having the supraorbital sensory pores s6 placed close together, a narrow opercular patch of developed odontodes, with 8-10 odontodes, and 8 branched pectoral rays. These features make *T. pradensis* unique within *Trichomycterus*.”

Human Uses

No information about human uses of *Trichomycterus pradensis* was found.

Diseases

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

Threat to Humans

Froese and Pauly (2018):

“Harmless.”

3 Impacts of Introductions

This species has not been reported outside of its native range; therefore, no impacts of introductions have been documented.

Trichomycterus pardensis is regulated in multiple States.

4 History of Invasiveness

This species has not been reported outside of its native range; therefore, the history of invasiveness is classified as No Known Nonnative Population.

5 Global Distribution



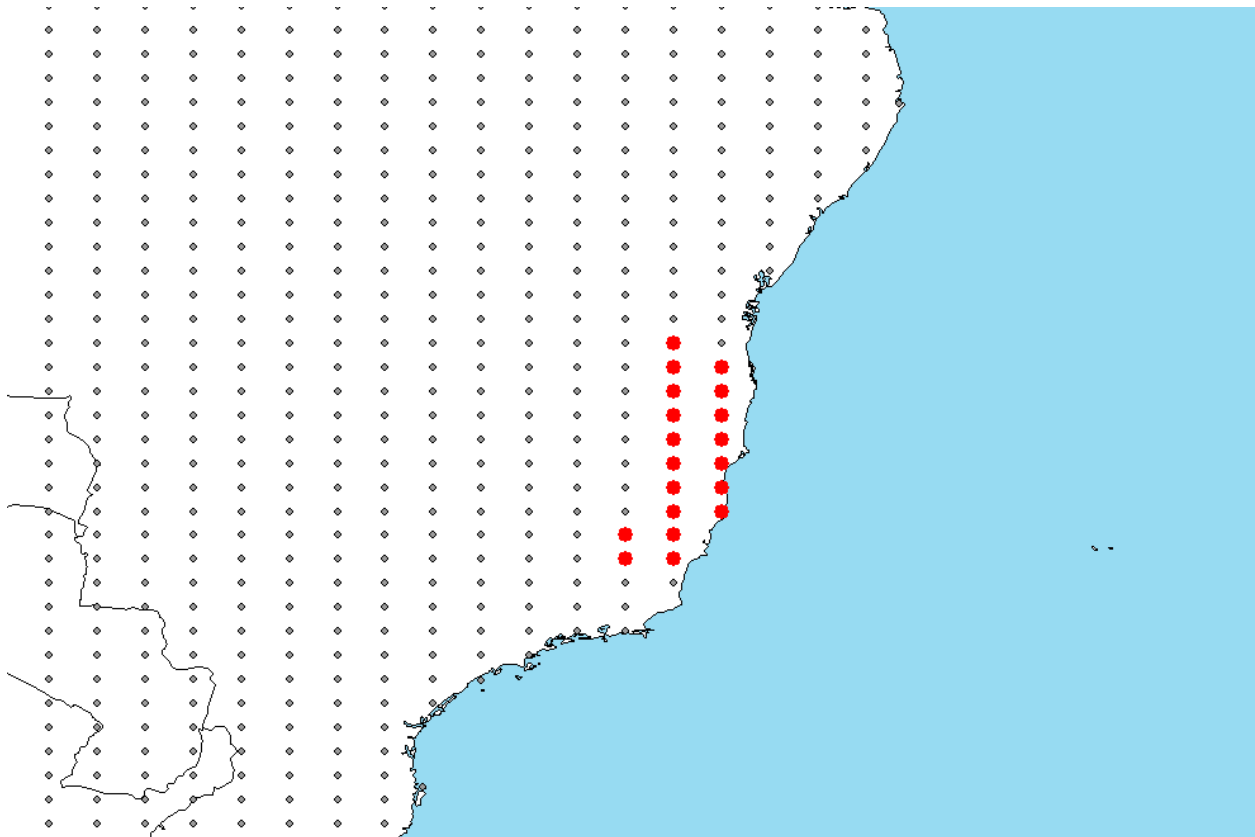
6 Distribution Within the United States

This species has not been reported in the United States.

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Trichomycterus pradensis* was low for most of the contiguous United States. There were areas of medium match in coastal Texas and throughout much of Florida. Small areas of medium match were also found in southern California, southern Louisiana, and coastal Georgia and South Carolina. Small areas of high match were found in southern Florida. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean Distance) for the contiguous United States was 0.008, medium (scores between 0.005 and 0.103, exclusive, are classified as medium). Florida had a high individual Climate 6 score. Texas had a medium individual score. All other States had low individual scores.



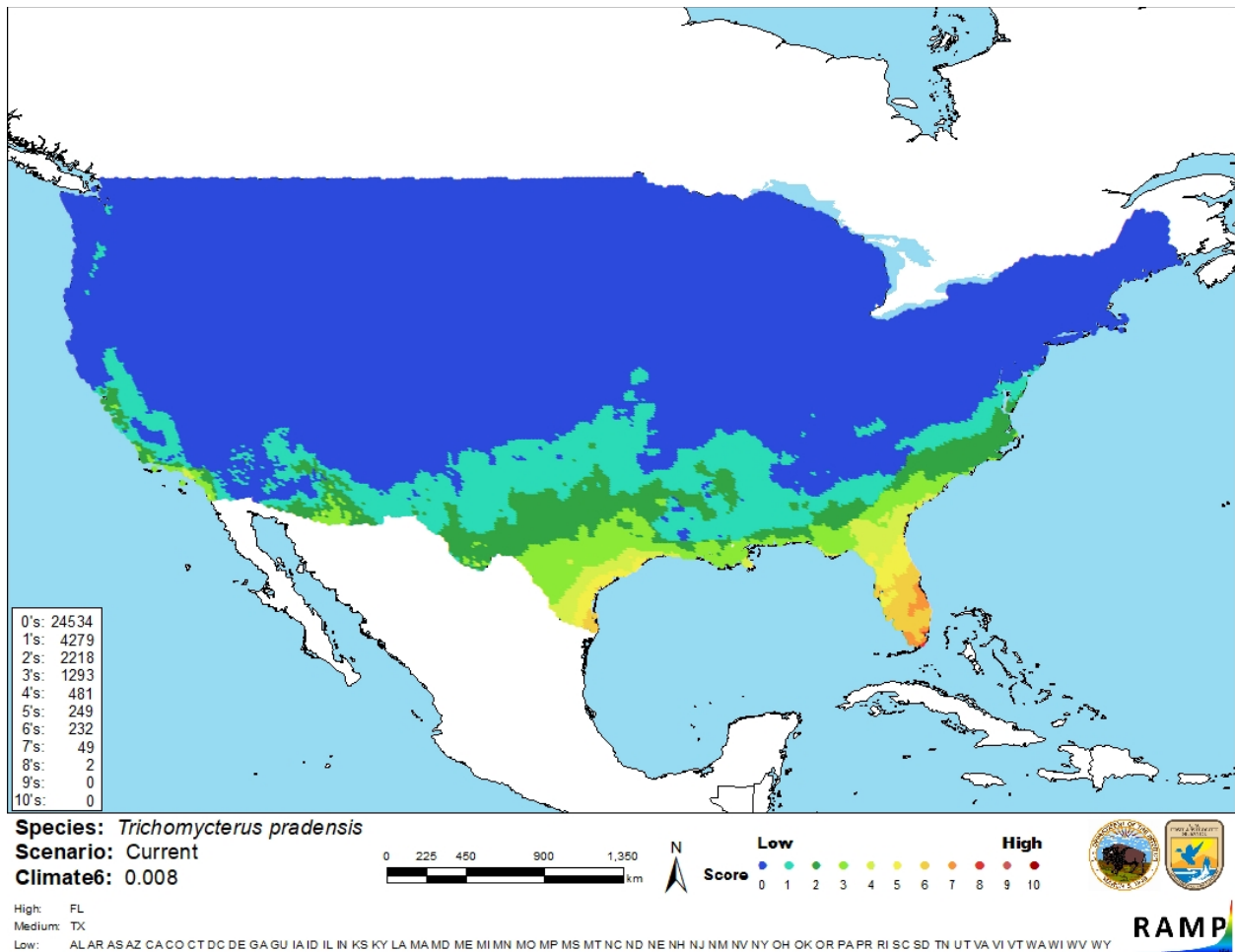


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Trichomycterus pradensis* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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

There was very little information available on the species *Trichomycterus pradensis*. *T. pradensis* is not known to have been introduced outside of its native range, so no information is available on invasiveness. With such little information available, the certainty of this assessment is low.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Trichomycterus pradensis is a species of catfish that has been subject to very limited study. Its known distribution is southeast coastal Brazil. *T. pardensis* is regulated in multiple States. There is little information on the biology of the fish. The history of invasiveness is classified as No Known Nonnative Population. There have been no reports of the species outside of its native range. The climate match to the contiguous United States is medium. Most of the contiguous United States has a low match, except Florida and southeastern Texas, which have a medium match, and southern Florida which had areas of high match. The certainty of assessment is low. The overall risk for this species is Uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): No Known Nonnative Population**
- **Climate Match (Sec. 6): Medium**
- **Certainty of Assessment (Sec. 7): 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.

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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. 2021. Prohibited nonnative species list. Tallahassee: Florida Fish and Wildlife Conservation Commission. Available: <https://myfwc.com/wildlifehabitats/nonnatives/prohibited-species-list/> (August 2021).

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- Sarmiento-Soares LM, Martins-Pinheiro RF, Aranda AT, Chamon CC. 2005. *Trichomycterus pradensis*, a new catfish from southern Bahia coastal rivers, northeastern Brazil (Siluriformes: Trichomycteridae). *Ichthyological Exploration of Freshwaters* 16:289–302.
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- 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.

No additional references.