

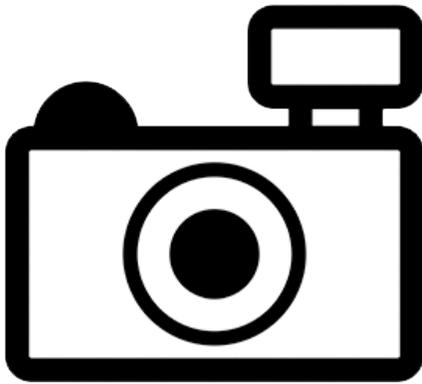
Ituglanis passensis (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, March 2012

Revised, September 2018

Web Version, 7/26/2019



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“South America: known only from Passa Três cave, Brazil.”

Status in the United States

This species has not been reported as introduced or established in the United States. This species is not known to be in trade in the United States.

The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *I. passensis* as a prohibited species. 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” (FFWCC 2018).

Means of Introduction into 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 (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 *Ituglanis* Costa and Bockmann, 1993
Species *Ituglanis passensis* Fernández and Bichuette, 2002”

From Fricke et al. (2019):

“**Current status:** Valid as *Ituglanis passensis* Fernández & Bichuette 2002.”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 7.0 cm SL male/unsexed; [de Pinna and Wosiacki 2003]”

Environment

From Froese and Pauly (2018):

“Freshwater; demersal; pH range: 7.6 - 8.4; depth range 0 - 1 m [Fernández and Bichuette 2002].”

From Fernández and Bichuette (2002):

“The pH shows a range of 7.6-8.4 and the water temperature a range of 19.0-20.0°C, presumably as a consequence of the buffering effect of the subterranean environment.”

Climate/Range

From Froese and Pauly (2018):

“Tropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“South America: known only from Passa Três cave, Brazil.”

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 (2018):

“Anal soft rays: 9; Vertebrae: 36. Reduced dark pigmentation on the head and body where pigmentation varies from yellowish to light gray, with scattered melanophores limited to the dorsal region of the body. Degree of development of the eyes ranges from their appearing as black dots to being externally invisible. Maxillary barbel extending to the anterior margin of pectoral fin. First pectoral-fin ray, a short filament. Ribs 7. Head length 16-17% SL. Premaxilla rectangular with 3-4 rows; outer row conical [Fernández and Bichuette 2002].”

Biology

From Fernández and Bichuette (2002):

“*Ituglanis passensis* inhabits small riffles with slow current 15-20 cm deep on average. It has cryptobiotic habits, hiding in the gravel bottom or under limestone blocks. No agonistic behavior was observed. Based on mark-recapture methods for estimating of population and on the length (for about 2,000 m) and width (1.0 m in average) of the stream section traversing the Passa Três cave, it is estimated that the total population of *I. passensis* in the cave is approximately 530 individuals (0.265 individuals/m²).”

Human Uses

No information available.

Diseases

No information available. No OIE-reportable diseases (OIE 2019) have been documented for this species.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No information available. No introductions reported.

The Florida Fish and Wildlife Conservation Commission has listed the parasitic catfish *I. passensis* as a prohibited species (FFWCC 2018).

4 Global Distribution



Figure 1. Known global distribution of *Ituglanis passensis*, reported from eastern Brazil. Map from GBIF Secretariat (2017).

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

The climate match (Sanders et al. 2018; 16 climate variables; Euclidean Distance) was low throughout the contiguous United States except in extreme southern Florida and extreme southern Texas, where the match was medium. Climate 6 score indicated that the contiguous United States has a low climate match overall. (Scores between 0.000 and 0.005, inclusive, are classified as low.) Climate 6 score for *I. passensis* was 0.000. All states had low individual climate scores.



Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Brazil) and non-source locations (gray) for *I. passensis* climate matching. Source locations from GBIF Secretariat (2017).

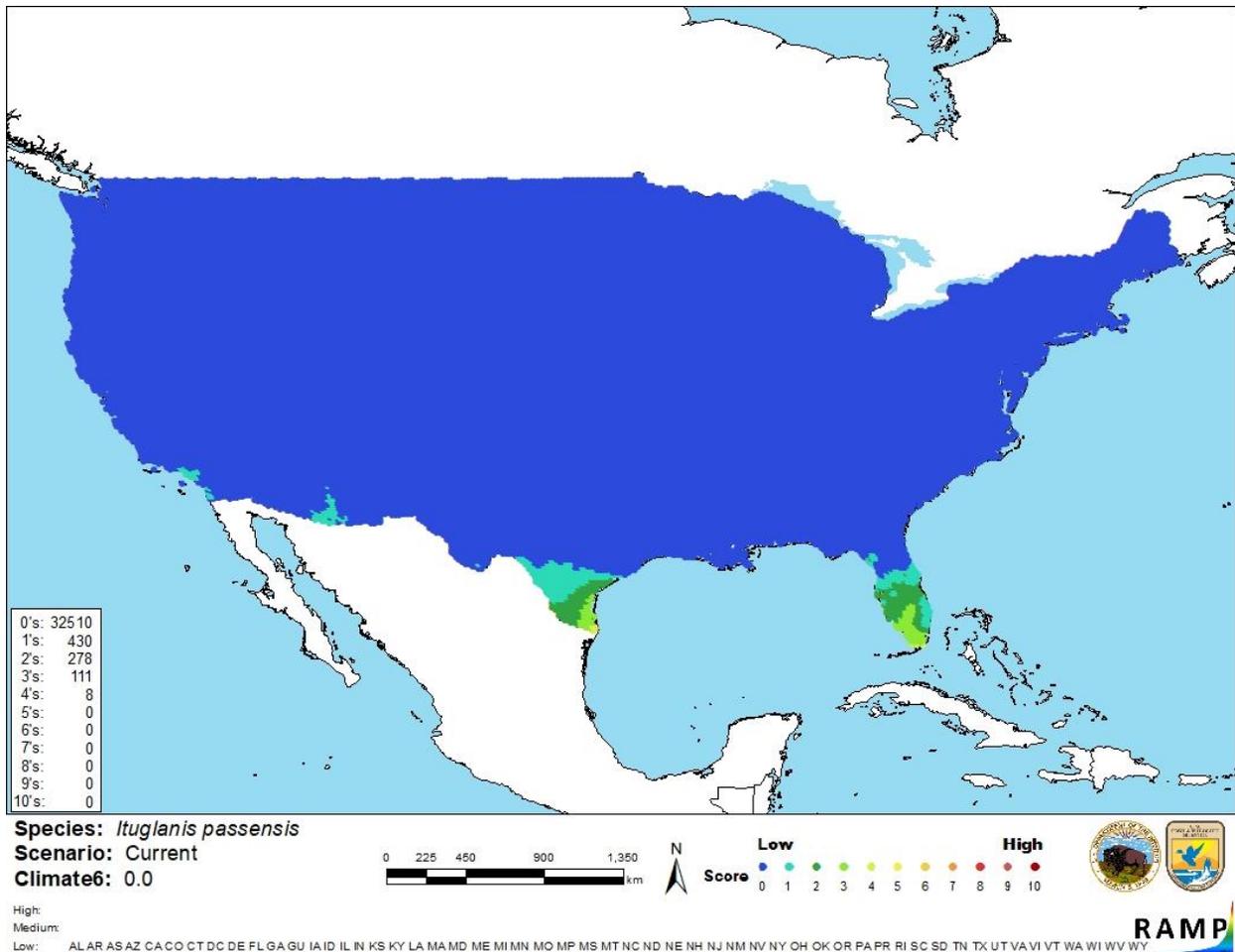


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *I. passensis* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0= Lowest match, 10= Highest match.

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

Little information is available on the biology and ecology of *I. passensis*. It has a highly restricted native distribution and has not been reported as introduced outside its native range, so any impacts of introduction are unknown. Because of the scarcity of information on *I. passensis* and its potential impacts, certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Ituglanis passensis is a catfish known from only one cave in Brazil. It has not been reported as introduced outside its native range, history of invasiveness is classified as uncertain. Like all species in the family Trichomycteridae, *I. passensis* is listed as a prohibited species by the State of Florida. Climate match to the contiguous United States is low overall, with medium matches occurring only in extreme southern Texas and extreme southern Florida. Because of the lack of introduction history, certainty of assessment is low. Overall risk posed by *I. passensis* to the contiguous United States is uncertain.

Assessment Elements

- **History of Invasiveness: Uncertain**
- **Climate Match: Low**
- **Certainty of Assessment: 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.

Fernández, L., and M. Bichuette. 2002. A new cave dwelling species of *Ituglanis* from the São Domingos karst, central Brazil (Siluriformes: Trichomycteridae). *Ichthyological Exploration of Freshwaters* 13(3):273-278.

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

Fricke, R., W. N. Eschmeyer, and R. Van der Laan, editors. 2019. Eschmeyer's Catalog of Fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (July 2019).

Froese, R., and D. Pauly, editors. 2018. *Ituglanis passensis* Fernández and Bichuette, 2002. FishBase. Available: <https://www.fishbase.de/summary/Ituglanis-passensis.html>. (September 2018).

GBIF Secretariat. 2017. GBIF backbone taxonomy: *Ituglanis passensis* Fernández and Bichuette, 2002. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2342925>. (September 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Ituglanis passensis* Fernández and Bichuette, 2002. Integrated Taxonomic Information System, Reston, Virginia. Available:

https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682128#null. (September 2018).

OIE (World Organisation for Animal Health). 2019. OIE-listed diseases, infections and infestations in force in 2019. World Organisation for Animal Health, Paris. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2019/>. (July 2019).

Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk Assessment Mapping Program: RAMP, version 3.1. 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.

de Pinna, M. and W. Wosiacki. 2003. Trichomycteridae (pencil or parasitic catfishes). Pages 270-290 *in* R. Reis, S. Kullander, and C. Ferraris, Jr., editors. Checklist of the freshwater fishes of South and Central America. EDIPUCRS, Porto Alegre, Brazil.