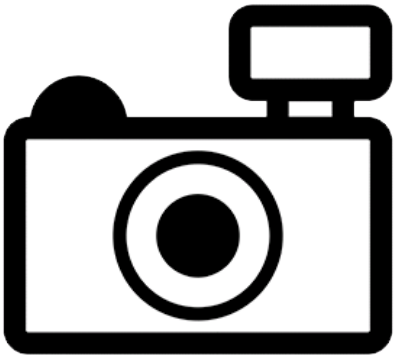
Ituglanis paraguassuensis (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2017
Revised, February 2017
Web Version, 1/31/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

"South America: Brazil. Known only from the type locality, rio Paraguaçu near Iassu, Estado da Bahia, northeastern Brazil [Campos-Paiva and Costa 2007]"

Status in the United States

This species has not been reported in the United States.

From FFWCC (2017):

"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. […]
Freshwater Aquatic Species […]
Parasitic catfishes […]
Ituglanis paraguassuensis"

Means of Introductions in the United States
This species has not been reported in the United States.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing
From GBIF (2016):

"KINGDOM Animalia
PHYLUM Chordata
CLASS Actinopterygii
ORDER Siluriformes
FAMILY Trichomycteridae
GENUS *Ituglanis*
SPECIES *Ituglanis paraguassuensis*"

"TAXONOMIC STATUS
accepted species"

Size, Weight, and Age Range
From Froese and Pauly (2016):

"Max length : 4.2 cm SL male/unsexed; [Campos-Paiva and Costa 2007]"

Environment
From Froese and Pauly (2016):

"Freshwater; benthopelagic."

Climate/Range
From Froese and Pauly (2016):

"Tropical, preferred ?"

Distribution Outside the United States
Native
From Froese and Pauly (2016):

"South America: Brazil. Known only from the type locality, rio Paraguaçu near Iassu, Estado da Bahia, northeastern Brazil [Campos-Paiva and Costa 2007]"

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

Means of Introduction Outside the United States
This species has not been reported as introduced outside of its native range.

Short Description
From Froese and Pauly (2016):

"Distinguished from all other species of the genus by the following combination of characteristics: color pale yellow on lateral and dorsal regions of head and body, whiter on ventral. Skin covered by several irregular pale brown blotches aligned along the body (vs. distinct color patterns in all other *Ituglanis*); pectoral fin-rays i,6 (vs. i,4 in *I. macuniama*, *I. cahyensis* and *I. parahybae*; i,5 in *I. amazonicus, I. eichorniarium, I. metae* and *I. nebulosus*; i,7 in *I. bambui, I. passensis, I. epikarsticus; i,8 in I. ramiroi except in I. parkoi, I. proops and I. laticeps); pelvic-fin-rays i,4 (vs. i,3 in I. eichorniarium and I. cahyensis or pelvic-fin absent in I. parahybae; i,5 in I. amazonicus, I. passensis except in I. gracilior, I. nebulosus, I. macunaima, I. bambui, I. ramiroi, I. epikasticus*, *I. parkoi*, and *I. guayaberensis*); parietal fontanel extending to posterior edge of medial parietal border (vs. parietal fontanel reduced or vestigial, restricted to middle of medial parietal border in all other *Ituglanis* except in some *I. amazonicus* and *I. proops*); the unusual reduced number of vertebrae 34–36, where vertebral counts normally range 39 or more (in *I. amazonicus, I. cahyensis, I. eichorniarium, I. parahybae, I. proops, I. gracilior, I. herberti, I. metae*, *Ituglanis* sp. A)."

Biology
From Lima et al. (2013):

"[…] *Ituglanis paraguassuensis* was only recorded in the semi-arid Caatinga […]"

"The three species of *Ituglanis* described to the northeastern Brazil were found in streams placed in distinct climate and vegetation domains: *I. paraguassuensis* in the Caatinga, *I. cahyensis* in the Atlantic Forest and *I. agreste* was collected in a transition area between these two biomes. Unlike rio Cahy basin, which is a small coastal basin fully inserted in the Atlantic forest domains, the rio Paraguaçu and Contas basins are perennial middle size rivers, with some intermittent tributaries in the upper and middle stretches in the Caatinga region, and lower stretches in the Atlantic Forest (Rosa et al., 2003)."

Human Uses
No information available.

Diseases
No information available.

Threat to Humans
From Froese and Pauly (2016):

"Harmless"

3 Impacts of Introductions

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

From FFWCC (2017):

"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. […]
Freshwater Aquatic Species […]
Parasitic catfishes […]
Ituglanis paraguassuensis"

4 Global Distribution

Figure 1. Known global established locations in Brazil of *Ituglanis paraguassuensis*. Map from GBIF (2016).

5 Distribution Within the United States

This species has not been reported within the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The Climate 6 proportion (Sanders et al. 2014; 16 climate variables; Euclidean Distance) for *Ituglanis paraguassuensis* in the contiguous U.S. indicated a low climate match. The range of proportions indicating a low climate match is 0.000-0.005; the Climate 6 proportion of *Ituglanis paraguassuensis* was 0.0. Locally, medium climate matches occurred in coastal southern California and southern Texas. The remainder of the contiguous U.S. showed low climate matches.

Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; in Brazil) and non-source locations (gray) for *Ituglanis paraguassuensis* climate matching. Source locations from GBIF (2016).

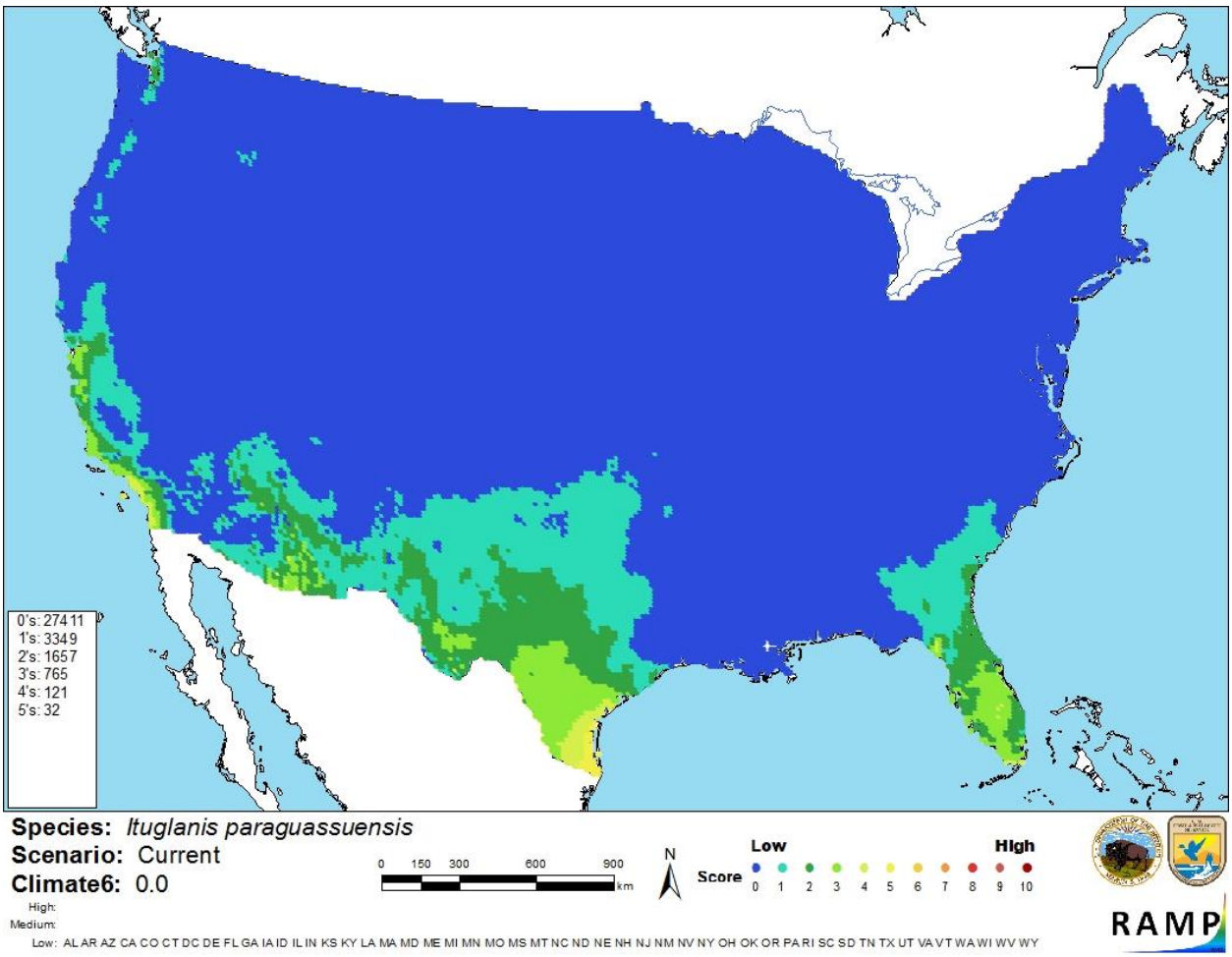


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Ituglanis paraguassuensis* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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≤X≤0.005	Low
0.005<X<0.103	Medium
≥0.103	High

7 Certainty of Assessment

There was limited information available on the biology of *Ituglanis paraguassuensis*. This species has not been reported outside of its native range so impacts of introduction are unknown. With such little information available, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Ituglanis paraguassuensis is a trichomycterid catfish found in only Rio Paraguaçu in northeastern Brazil. There have been no reports of this fish outside of its native range, so impacts of introductions are unknown. Like other trichomycterids, this species is listed as prohibited in the state of Florida. Due to its low climate match to the contiguous U.S. and absence of introduction history, the overall risk for 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.

FFWCC (Florida Fish and Wildlife Conservation Commission). 2017. Prohibited species list. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. Available: http://myfwc.com/wildlifehabitats/nonnatives/regulations/prohibited/#nogo. (January 2017).

Froese, R., and D. Pauly, editors. 2016. *Ituglanis paraguassuensis* Campos-Paiva & Costa, 2007. FishBase. Available: http://www.fishbase.org/summary/Ituglanis-paraguassuensis.html. (January 2017).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Ituglanis paraguassuensis* Campos-Paiva & Costa, 2007. Global Biodiversity Information Facility, Copenhagen. Available: http://www.gbif.org/species/2342907. (January 2017).

Lima, S. M. Q., C. P. Neves, and R. M. Campos-Paiva. 2013. *Ituglanis agreste*, a new catfish from the rio de Contas basin, northeastern Brazil (Siluriformes: Trichomycteridae). Neotropical Ichthyology 11(3):513-524.

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.

Campos-Paiva, R. M., and W. J. E. M. Costa. 2007. *Ituglanis paraguassuensis* sp. n. (Teleostei: Siluriformes: Trichomycteridae): a new catfish from the rio Paraguaçu, northeastern Brazil. Zootaxa 1471:53-59.

Rosa, R. S., N. A. Menezes, H. A. Britski, W. J. E. M. Costa, and F. Groth. 2003. Diversidade, padrões de distribuição e conservação dos peixes da Caatinga. Pages 135-180 *in* I. L. Leal, M. Tabareli, and J. M. C. da Silva, editors. Ecologia e conservação da Caatinga. EDUFPE, Recife, Brazil.