

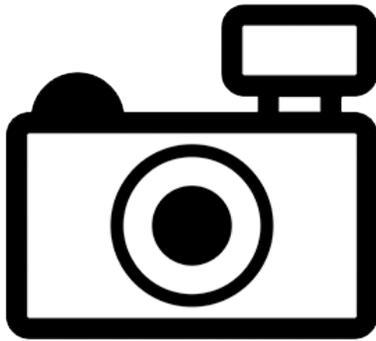
Ituglanis herberti (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, January 2012

Revised, February 2017

Web Version, 1/27/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

“South America: Bodoquena River in Paraguay River basin [Brazil].”

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. Very limited exceptions may be made by permit from the Executive Director [...]
Freshwater Aquatic Species [...]
Parasitic catfishes [...]
Ituglanis herberti”

Means of Introductions in the United States

This species has not been reported in the United States.

Remarks

From GBIF (2016):

“BASIONYM

Trichomycterus herberti Miranda Ribeiro, 1940”

From de Pinna and Keith (2003):

“*Ituglanis herberti* may be a synonym of *I. eichorniarum*. The two come from the Paraguay basin. The original description of *I. herberti* by P. de Miranda Ribeiro (1940) considered the species as “evidently allied to *Trichomycterus proops*” [= *I. proops*], but fails to mention *I. eichorniarum*, from the same basin as *I. herberti*. The original description reports the color pattern of *I. herberti* as a series of vertical stripes along the sides of the trunk. This characteristic is unique in *Ituglanis* and, if confirmed, would provide evidence of specific distinctiveness. However, the original description also notes that the vertical striped pattern was not evident in the live fish. It seems likely that the dark vertical stripes were artifactual, resulting from folds of integument following preservation and shrinkage. This is common in large trichomycterids with thick integument, where deep ridges of the folds forming after preservation may be mistaken for darkly-pigmented stripes. We have seen this effect clearly in one specimen referable to *I. herberti* (MZUSP 2209), which is an old specimen where dark pigment is entirely faded. No additional taxonomically relevant data were found to justify separation of *I. herberti* and *I. eichorniarum*.”

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2017):

“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 *Ituglanis*
Species *Ituglanis herberti* (Miranda Ribeiro, 1940)”

“Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 16.0 cm SL male/unsexed; [Ferrer et al. 2015]”

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: Bodoquena River in Paraguay River basin.”

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 Datovo and Landim (2005):

“[...] faint light brown spots over yellowish background [...]”

“[...] *I. herberti* posses [sic] i,6 rays on pectoral fin and 42-43 vertebrae.”

Biology

No information available.

Human Uses

No information available.

Diseases

No information available.

Threat to Humans

From Froese and Pauly (2016):

“Harmless”

3 Impacts of Introductions

No introductions of this species have been reported.

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. Very limited exceptions may be made by permit from the

Executive Director [...]

Freshwater Aquatic Species [...]

Parasitic catfishes [...]

Ituglanis herberti”

4 Global Distribution



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

5 Distribution within the United States

This species has not been reported in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was medium in peninsular Florida and low elsewhere in the contiguous United States. Climate 6 proportion indicated a low match for the contiguous U.S. overall. The range of proportions indicating a low climate match is 0.000-0.005; the Climate 6 proportion of *Ituglanis herberti* was 0.002.

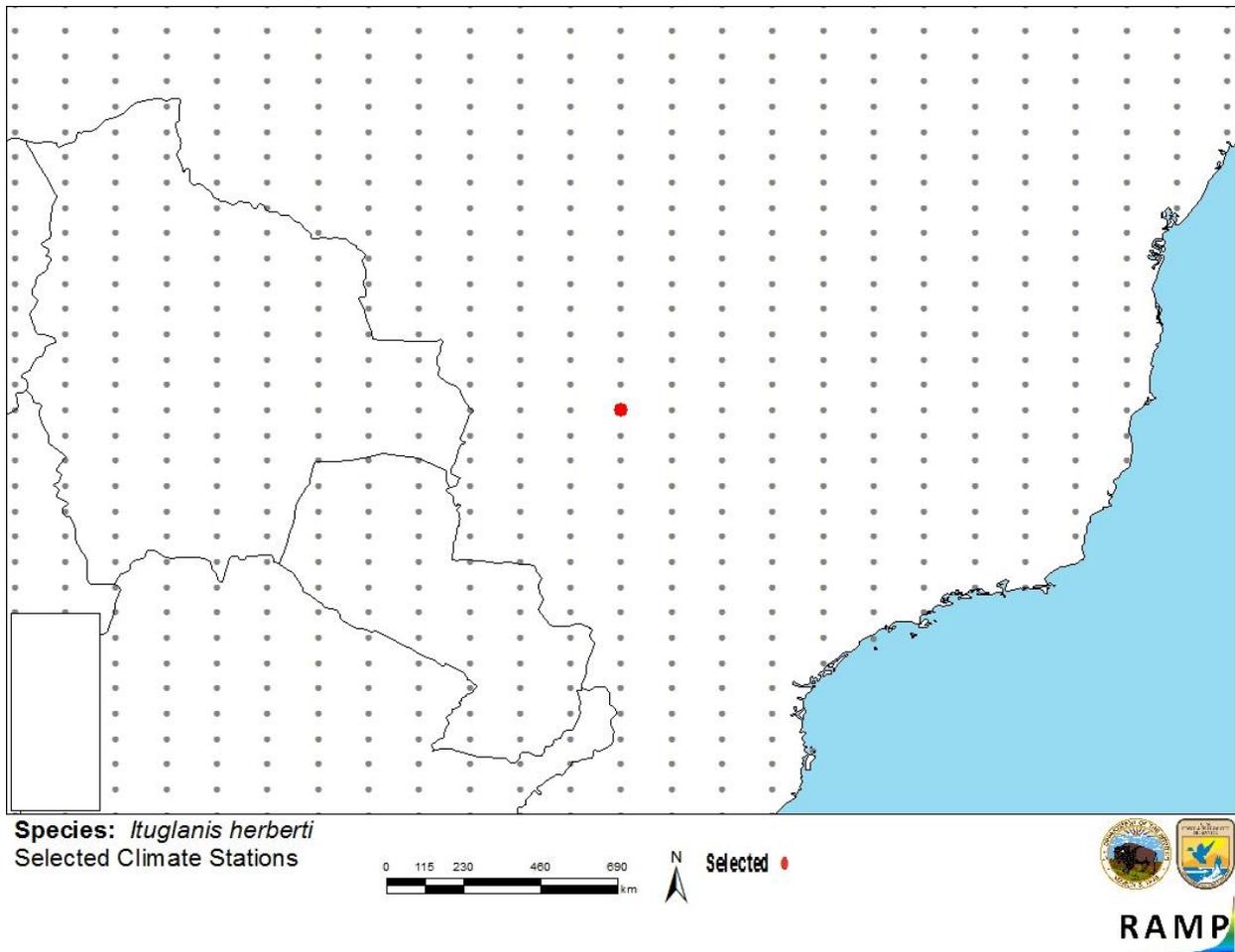


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; in Brazil) and non-source locations (gray) for *Ituglanis herberti* climate matching. Source location from GBIF (2016).

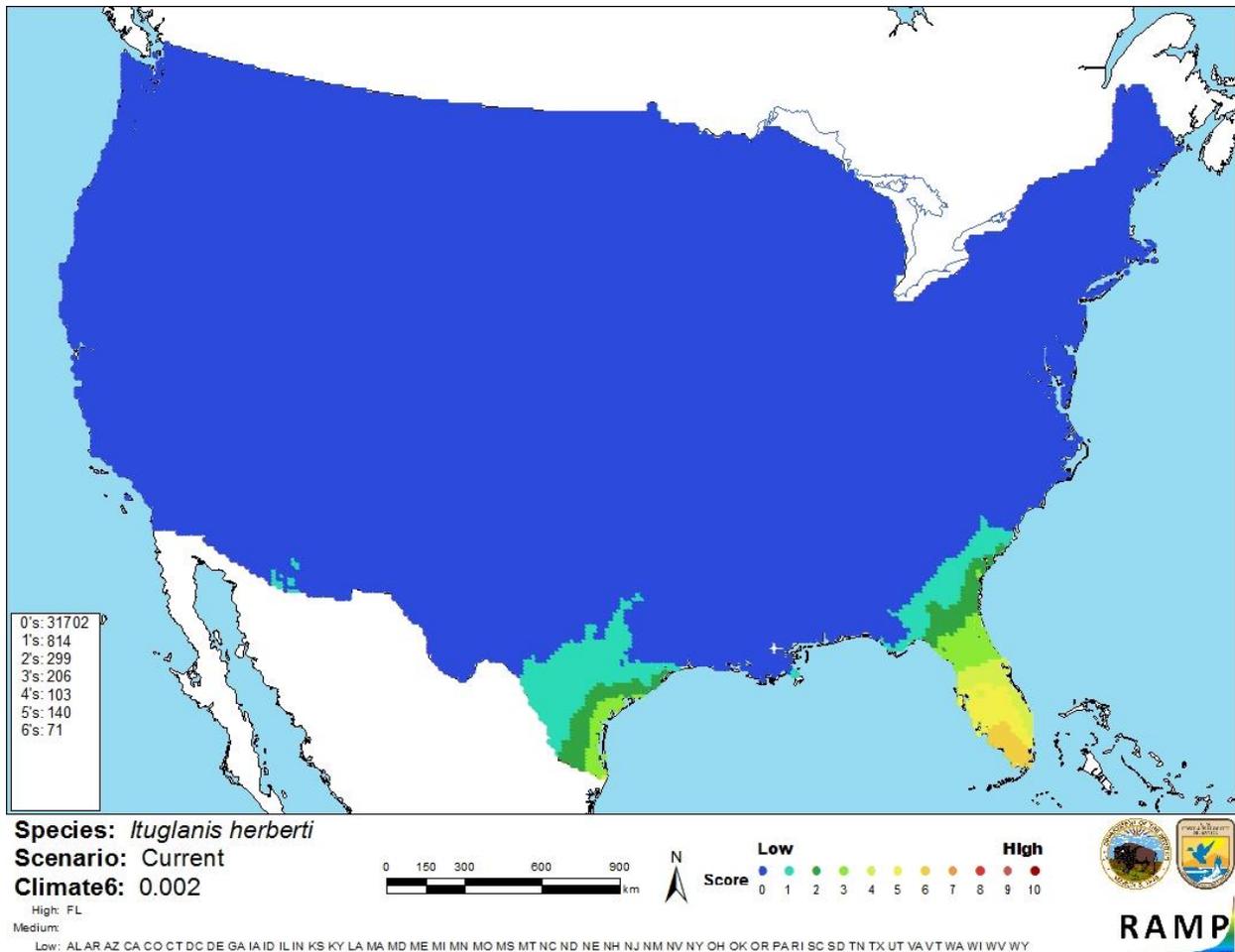


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Ituglanis herberti* in the contiguous United States based on source location reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

Little information is available on the biology, ecology, or distribution of *Ituglanis herberti*. No introductions of the species have been reported, so impacts of introduction are unknown. Additionally, although *I. herberti* is currently considered a valid species, its taxonomic distinctiveness from *I. eichorniarum* has been questioned. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Ituglanis herberti is a trichomycterid catfish native to the Bodoquena River in the Paraguay River basin in Brazil. No introductions of this species have been reported, so impacts of introduction are unknown. Like other trichomycterids, *I. herberti* is classified as a prohibited species by the state of Florida. Climate match to the contiguous U.S. is low. Overall risk posed by *I. herberti* 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.

Datovo, A., and M. I. Landim. 2005. *Ituglanis macunaima*, a new catfish from the rio Araguaia basin, Brazil (Siluriformes: Trichomycteridae). *Neotropical Ichthyology* 3(4):455-464.

de Pinna, M., and P. Keith. 2003. A new species of the catfish genus *Ituglanis* from French Guyana (Osteichthyes: Siluriformes: Trichomycteridae). *Proceedings of the Biological Society of Washington* 116:873-882.

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/>. (February 2017).

Froese, R., and D. Pauly, editors. 2016. *Ituglanis herberti* (Miranda Ribeiro, 1940). FishBase. Available: <http://www.fishbase.us/summary/SpeciesSummary.php?ID=48693&genusname=Ituglanis&speciesname=herberti&AT=ituglanis+herberti&lang=English>. (February 2017).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Ituglanis herberti* (Miranda Ribeiro, 1940). Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2342908>. (February 2017).

ITIS (Integrated Taxonomic Information System). 2017. *Ituglanis herberti* (Miranda Ribeiro, 1940). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682122#null. (February 2017).

Sanders, S., C. Castiglione, and M. 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.

Ferrer, J., L. M. Donin, and L. R. Malabarba. 2015. A new species of *Ituglanis* Costa & Bockmann, 1993 (Siluriformes: Trichomycteridae) endemic to the Tramandá-Mampituba ecoregion, southern Brazil. *Zootaxa* 4020(2):375-389.