

***Sarcoglanis simplex* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, January 2017
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No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

“South America: upper Negro River basin.”

Status in the United States

This species has not been reported in the United States.

The parasitic catfish, *Sarcoglanis simplex*, is a prohibited nonnative species in Florida. According to the 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.”

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 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 Sarcoglanidinae
Genus *Sarcoglanis*
Species *Sarcoglanis simplex* Myers and Weitzman, 1966”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length : 2.1 cm NG male/unsexed; [de Pínna and Wosiacki 2003]”

Environment

From Froese and Pauly (2016):

“Freshwater; demersal.”

Climate/Range

From Froese and Pauly (2016):

“Tropical, preferred ?”

Distribution Outside the United States

Native

From Froese and Pauly (2016):

“South America: upper Negro River basin.”

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 Evers and Seidel (2005):

“The fish is broad and deep-bodied, has tiny eyes on a short, stout head, the dorsal fin is small and has only four rays, and a delicate, thin adipose fin extends from the back of the dorsal fin to the base of the caudal fin.”

Biology

From Claeson et al. (2008):

“*Sarcoglanis simplex* belongs to the trichomycterid subfamily Sarcoglanidinae. This is a small clade of six genera and eight species, all of which are miniature, sand-dwelling catfishes found in rapidly flowing upland streams and rivers.”

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.

The parasitic catfish, *Sarcoglanis simplex*, is a prohibited nonnative species in Florida. According to the 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.”

4 Global Distribution



Figure 1. Known global distribution of *Sarcoglanis simplex* in northern South America. Map from GBIF (2016). Points in Venezuela and Guyana were not included in climate matching because they are outside the Negro River basin and do not represent known established populations.

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 the contiguous U.S. was low. The range of proportions indicating a low climate match is 0.000-0.005; the Climate 6 proportion of *Sarcoglanis simplex* was 0.0. Medium climate match scores occurred in the far southern parts of Florida and Texas. The remainder of the contiguous U.S. had low climate match scores.

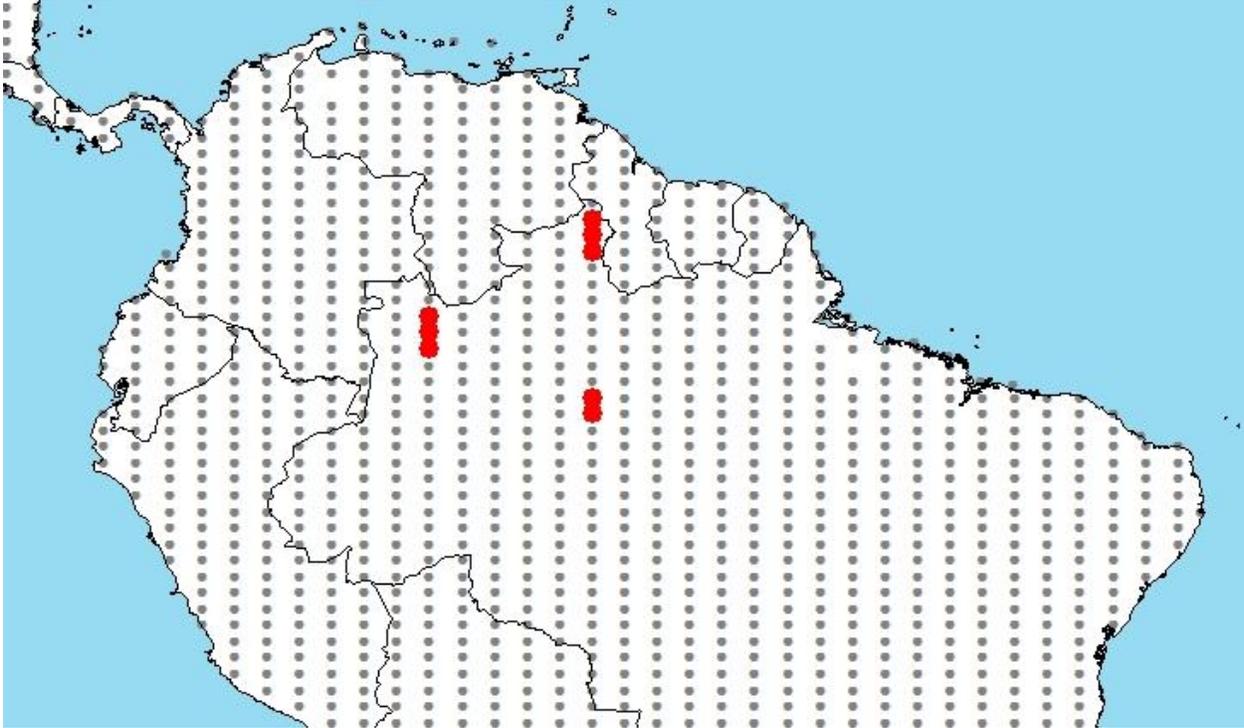


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in northern South America selected as source locations (red; Brazil) and non-source locations (gray) for *Sarcoglanis simplex* climate matching. Source locations from GBIF (2016).

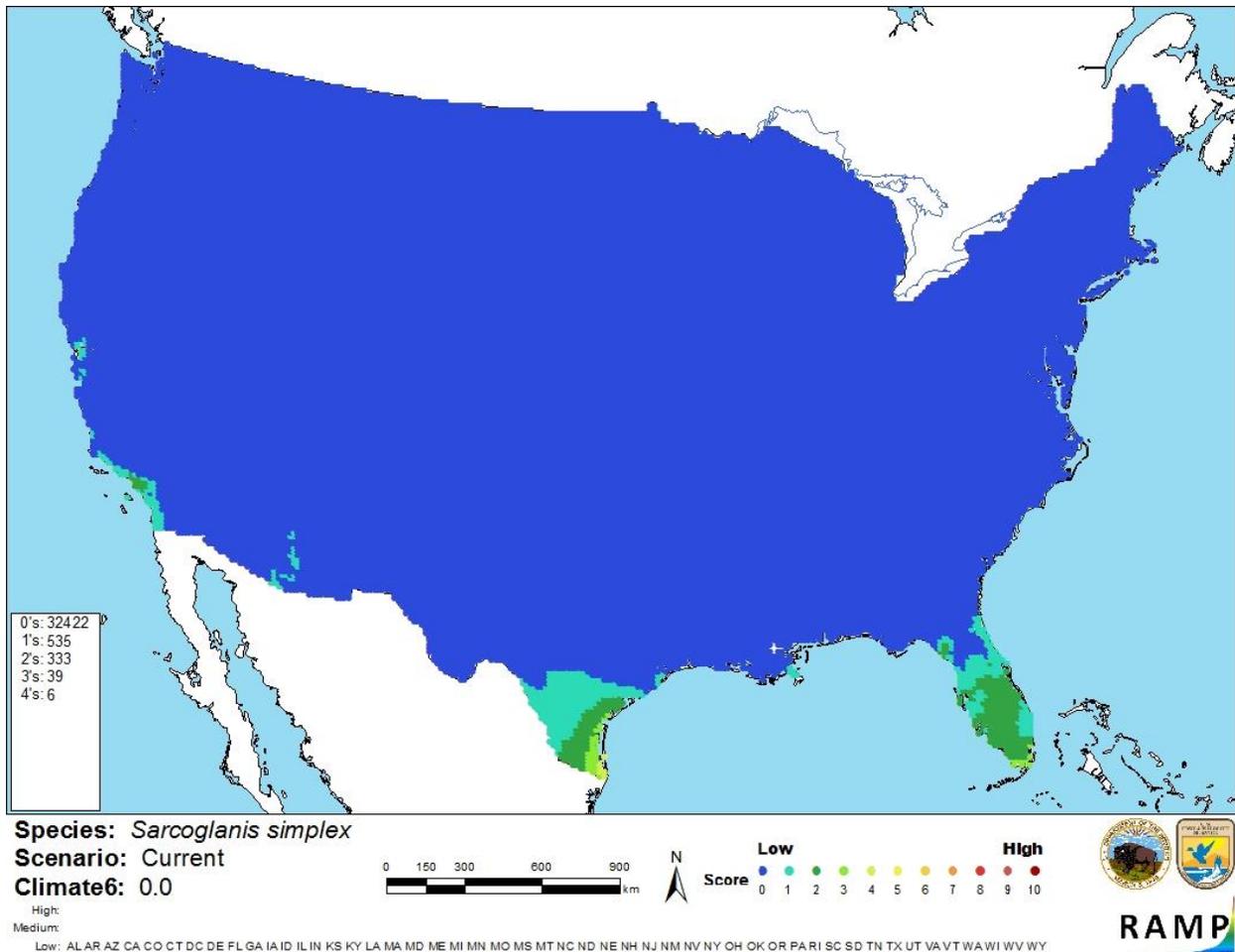


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Sarcoglanis simplex* in the contiguous United States based on source locations reported by GBIF (2016). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

7 Certainty of Assessment

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

8 Risk Assessment

Summary of Risk to the Contiguous United States

Sarcoglanis simplex is a South American catfish found in the Upper Negro River Basin. *Sarcoglanis simplex* belongs to the trichomycterid subfamily Sarcoglanidinae, the members of which are tiny psammophilic catfishes. There have been no reports of this fish outside of its native range. Possession or trade of the species is prohibited in the state of Florida. Due to its low climate match 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.

- Claeson, K. M., J. W. Hagadorn, K. Luckenbill, and J. G. Lundberg. 2008. Anatomy of the very tiny: first description of the head skeleton of the rare South American catfish *Sarcoglanis simplex* (Siluriformes: Trichomycteridae). *Palaeontologia Electronica* 11(2):1-11.
- Evers, H. G., and I. Seidel. 2005. Catfish atlas volume 1: South American catfishes of the families Loricariidae, Cetopsidae, Nematogenyidae and Trichomycteridae. Mergus Verlag GmbH, Melle, Germany.
- 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. *Sarcoglanis simplex* Myers & Weitzman, 1966. FishBase. Available: <http://www.fishbase.se/summary/Sarcoglanis-simplex.html>. (January 2017).
- GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Sarcoglanis simplex* Myers & Weitzman, 1966. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2342943>. (January 2017).
- ITIS (Integrated Taxonomic Information System). 2017. *Sarcoglanis simplex* Myers & Weitzman, 1966. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=682158#null. (January 2017).

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.

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