

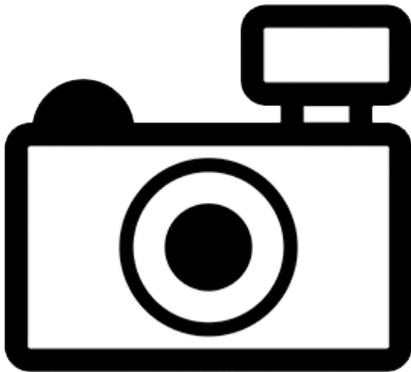
***Chichlasoma zarskei* (a fish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, January 2013

Revised, January 2018

Web Version, 7/5/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2017):

“South America: Brazil. Rio Maranhão basin, northern Brazil.”

From Heijns (2014):

“The precise locality where the type series were found is a bit of a mystery. The holotype and some paratypes supposedly were collected in a lake called “Lago Malhada Grande” in the Rio Maranhão basin. Extensive search yielded that the Rio Maranhão does not exist [*sic*] [in the Maranhão state; there is a Rio Maranhão in southern Brazil] and neither does the lake. Several other paratypes were collected at Igarapé Arari, a small municipality just south of Vitória do Mearim at the junction of the rivers Pindaré and Mearim.”

Status in the United States

No known introductions to the United States.

Means of Introductions in the United States

No known introductions to the United States.

Remarks

Cichlasoma zarskei was not recognized as a distinct species until 2011 (Ottoni 2011). There is no reported common name for this species.

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 Acanthopterygii
Order Perciformes
Suborder Labroidei
Family Cichlidae
Genus *Cichlasoma* Swainson, 1839”

From Eschmeyer et al. (2018):

“Current status: Valid as *Cichlasoma zarskei* Ottoni 2011.”

Size, Weight, and Age Range

From Froese and Pauly (2017):

“Max length : 10.0 cm SL male/unsexed”

Environment

From Froese and Pauly (2017):

“Freshwater; benthopelagic”

Climate/Range

From Froese and Pauly (2017):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2017):

“South America: Brazil. Rio Maranhão basin, northern Brazil.”

From Ottoni (2011):

“Holotype. MNRJ 37576, 76.6 mm SL; Brazil: Maranhão state: lago Malhada Grande, rio Maranhão basin; G. Nunan et al., 22 Nov. 1985. Paratypes: Brazil: Maranhão state: MNRJ 14502, 56 (3 C&S), 48.1 – 99.6 mm SL; collected with holotype. MNRJ 14504, 77 (3 C&S), 43.1 – 86.0 mm SL; Igarapé Arari, Arari Municipality; G. Nunan et al., 22 Nov. 1985. MCP 45751, 4, 51.9 – 82.7 mm SL; Igarapé Arari, Arari Municipality; G. Nunan et al., 22 Nov. 1985.”

From Heijns (2014):

“The precise locality where the type series were found is a bit of a mystery. The holotype and some paratypes supposedly were collected in a lake called “Lago Malhada Grande” in the Rio Maranhão basin. Extensive search yielded that the Rio Maranhão does not exist [*sic*] [in the Maranhão state; there is a Rio Maranhão in southern Brazil] and neither does the lake. Several other paratypes were collected at Igarapé Arari, a small municipality just south of Vitória do Mearim at the junction of the rivers Pindaré and Mearim.”

Introduced

No reports of introductions.

Means of Introduction Outside the United States

No reports of introductions.

Short Description

From Froese and Pauly (2017):

“*Cichlasoma zarskei* is distinguished from all its congeners, except *C. orientale*, by having a conspicuous posterior band of the longitudinal stripe (contiguous [*sic*] or interrupted) (vs. inconspicuous posterior band of longitudinal stripe, almost absent in some specimens; Kullander, 1983), and dorsal, anal and caudal fins faintly dotted (vs. fins intensely dotted; Kullander, 1983).”

Biology

Not available.

Human Uses

Not available.

Diseases

None reported. No OIE-reportable diseases have been documented for this species.

Threat to Humans

From Froese and Pauly (2017):

“Harmless”

3 Impacts of Introductions

None reported.

4 Global Distribution

No georeferenced occurrences were available for *Cichlasoma zarskei* (GBIF Secretariat 2017).



Figure 1. Location of Vitória do Mearim, a municipality in the state of Maranhão in northeastern Brazil, near the collection location of several paratypes of *C. zarskei* (Heijns 2014). Map by Raphael Lorenzeto de Abreu. Licensed under CC BY 2.5. Available: <https://commons.wikimedia.org/w/index.php?curid=1150936>. (July 2018).

5 Distribution Within the United States

No known introductions to the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.0 which is low; scores of 0.005 and below are classified as low. The climate match was low throughout the contiguous United States.



Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in South America selected as source locations (red; northeastern Brazil) and non-source locations (gray) for *C. zarskei* climate matching. Source locations estimated from verbal description in Ottoni (2011).

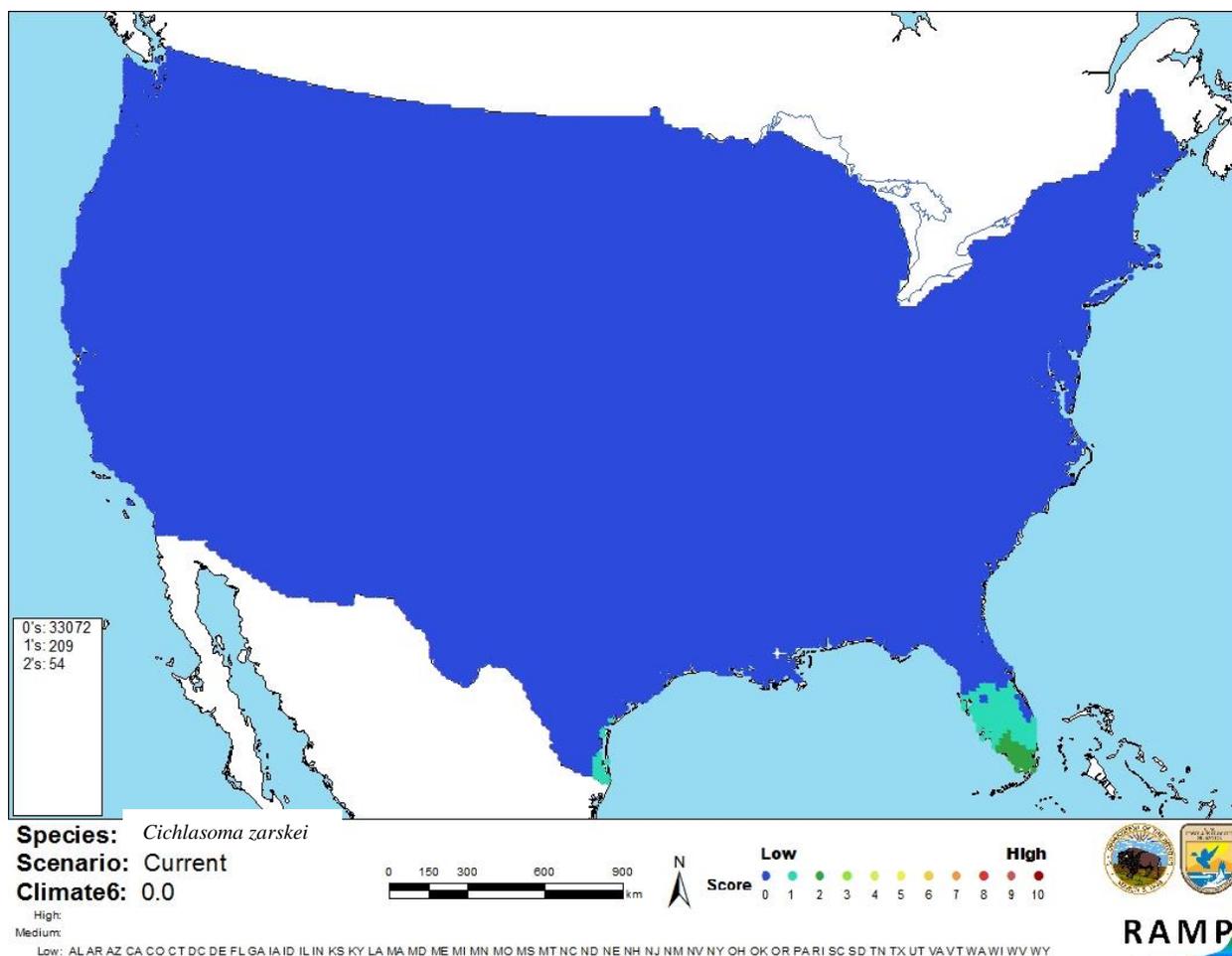


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *C. zarskei* in the contiguous United States based on source locations reported by Ottoni (2011). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

Peer-reviewed literature on the biology, ecology and distribution associated with *Cichlasoma zarskei* is very limited. Additional information and research on this species will be needed to strengthen the certainty of this assessment. Distribution data are lacking, and what is available contains contradictions, making the certainty of the climate match low. There have not been any introductions making history of invasiveness uncertain as well. Based on available data, the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Cichlasoma zarskei is a cichlid native to northern Brazil. This species was not recognized until recently (Ottoni 2011), and so there is very little information available on its biology, distribution, or potential invasiveness. Climate match with the contiguous United States is low, but confidence in the locations of the source points used for the climate match is also low. History of invasiveness is uncertain due to uncertainty about the species' distribution and no reports of this species being introduced outside of its native range. Overall risk for *C. zarskei* is Uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information: *C. zarskei* was not recognized as a distinct species until 2011 (Ottoni 2011) and information on this species is very limited.**
- **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.

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (January 2018).

Froese, R., and D. Pauly, editors. 2017. *Cichlasoma zarskei* Ottoni, 2011. FishBase. Available: <http://www.fishbase.org/summary/66368>. (January 2018).

GBIF Secretariat. 2017. GBIF backbone taxonomy: *Cichlasoma zarskei* Ottoni, 2011. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/6169265>. (July 2018).

Heijns, W. 2014. The resurrection of *Cichlasoma*. Cichlid News. Available: <http://cichlidnews.com/issues/2014apr/cichlasoma.html>. (January 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Cichlasoma*, Sawinson 1839. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=169774#null. (January 2018).

Otoni, F. P. 2011. *Cichlasoma zarskei*, a new cichlid fish from northern Brazil (Teleostei: Labroidei: Cichlidae). *Vertebrate Zoology* 61(3):335-342.

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.

Kullander, S. 1983. A revision of the South American Cichlid genus *Cichlasoma* (Teleostei: Cichlidae). *Naturhistoriska riksmuseet*.