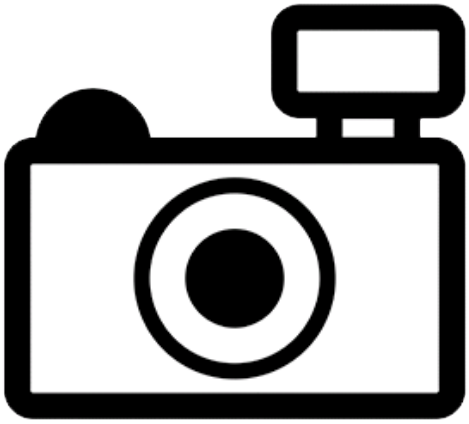
Royal Peacock Bass (*Cichla intermedia*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, August 2011
Revised, May 2018
Web Version, 9/7/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

"South America: Orinoco River basin, tributaries of the Orinoco River, and the Casiquiare River in Venezuela. Probably occurs in Colombia."

Status in the United States

This species has not been reported as introduced or established in the United States. This species is present in the aquarium trade in the United States, for example:

From Bluegrass Aquatics (2018):

"Intermedia Peacock Bass Cichlid REGULAR
$232.48"

"Intermedia Peacock Bass Cichlid REGULAR Cichla Intermedia Known as the "Royal" peacock by American anglers."

Means of Introductions in 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 Acanthopterygii
Order Perciformes
Suborder Labroidei
Family Cichlidae
Genus *Cichla*
Species *Cichla intermedia* Machado-Allison, 1971"

"Taxonomic Status:
Current Standing: valid"

Size, Weight, and Age Range

From Froese and Pauly (2018):

"[…] range 28 - ? cm
Max length: 55.0 cm TL male/unsexed; [IGFA 2001]; max. published weight: 3,000 g [IGFA 2001]."

Environment

From Froese and Pauly (2018):

"Freshwater; benthopelagic."

Climate/Range

From Froese and Pauly (2018):

"Tropical"

Distribution Outside the United States

Native

From Froese and Pauly (2018):

"South America: Orinoco River basin, tributaries of the Orinoco River, and the Casiquiare River in Venezuela. Probably occurs in Colombia."

Introduced

No known introductions.

Means of Introduction Outside the United States

No known introductions.

Short Description

From Froese and Pauly (2018):

"Diagnosis: Juveniles have an uninterrupted dark band along middle of side, young and adults are uniquely distinguished among species of *Cichla* by the color pattern with lateral band transformed to row of irregular dark blotches and six or seven narrow dark vertical bars across side below dorsal fin (corresponding in position to bars 1, 1a, 2, 2a, 3, additional bar below end of soft dorsal in base, and occasionally one anteriorly on caudal peduncle). The adults with several small black blotches posterior to the orbit and on gill cover. All sizes with no light spots on the side (vs. present in most other species of *Cichla*). Lateral line almost always continuous; scales in E1 row 96-108 [Kullander and Ferreira 2006]."

Biology

From Froese and Pauly (2018):

"Often captured near submerged rocks or woody structure in the primary river channel within or near swift current. Diurnal piscivore. Feeds mainly on fish [Winemiller et al. 1997]."

Human Uses

From Hoeinghaus et al. (2003):

"Like many other South American rivers, the Cinaruco River supports an important sport fishery focused primarily on *Cichla*. […] Commercial netters harvest large-bodied fishes from some lagoons of the Cinaruco River. *Cichla* are particularly valued by this fishery which is unregulated and illegal within the national park."

This species is present in the aquarium trade in the United States, for example:

From Bluegrass Aquatics (2018):

"Intermedia Peacock Bass Cichlid REGULAR

$232.48”

“Intermedia Peacock Bass Cichlid REGULAR Cichla Intermedia Known as the "Royal" peacock by American anglers.”

Diseases

No information available. No OIE reportable diseases have been documented for this species.

Threat to Humans

From Froese and Pauly (2018):

“Harmless.”

3 Impacts of Introductions

Moore et al. (2010) state that *Cichla intermedia* may have biological or ecological traits that lead to high risk of negative impact if introduced. However, no scientific studies are cited to support this risk characterization.

4 Global Distribution

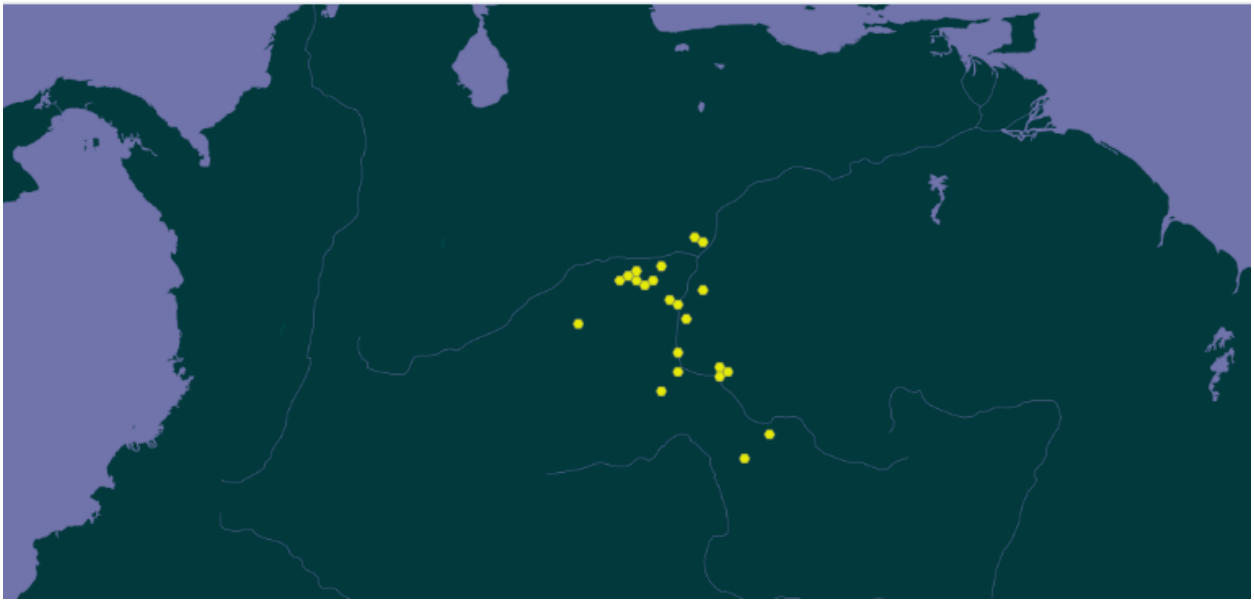


Figure 1. Known global distribution of *Cichla intermedia* in Colombia, Venezuela and Brazil. Map from GBIF Sectretariat (2017).

5 Distribution Within the United States

No know records of introductions.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables; Euclidean Distance) was low throughout the contiguous U.S., reflected in a Climate 6 proportion of 0.000. The range for Climate 6 proportions indicating a low climate match is 0.000 to 0.005. The entire United States recorded 0 out of ten. Not one score above 0 was recorded.

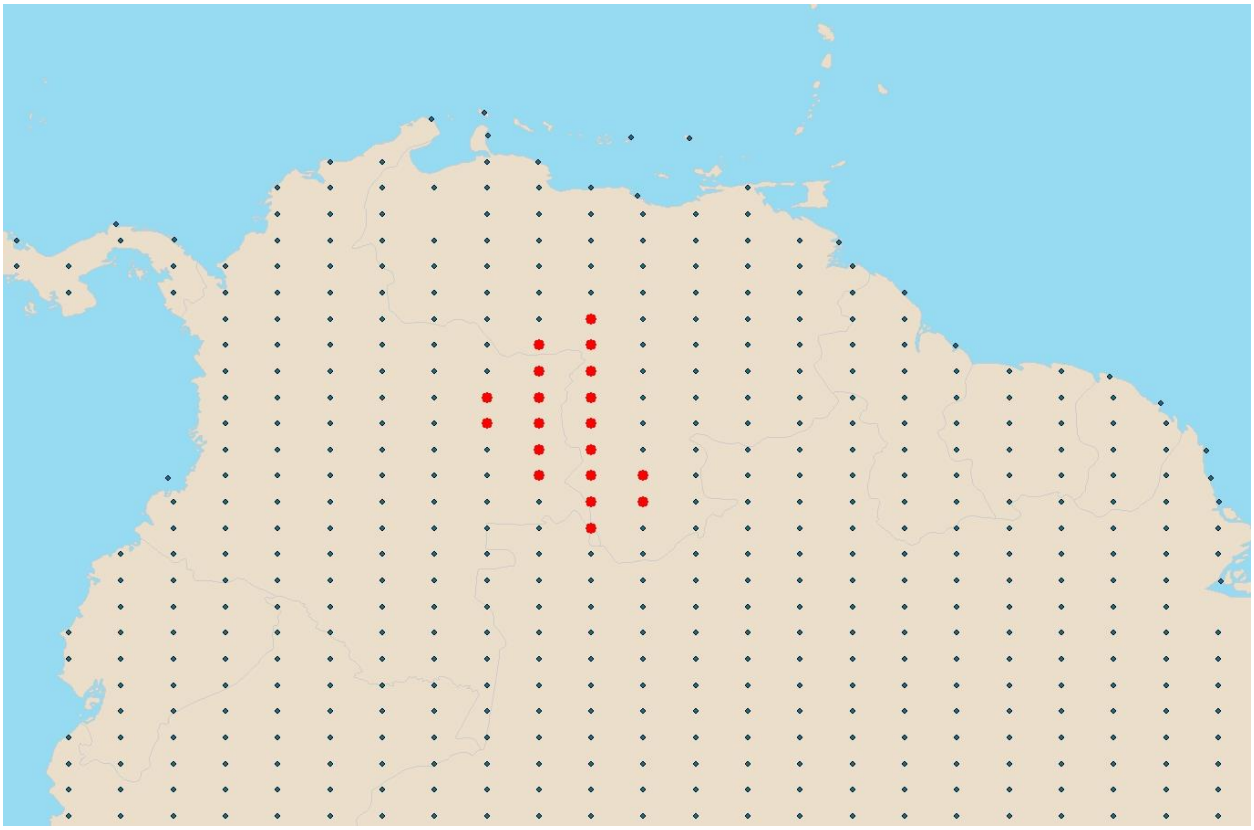


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Colombia, Venezuela and Brazil) and non-source locations (gray) for *Cichla intermedia* climate matching. Source locations from GBIF (2017).

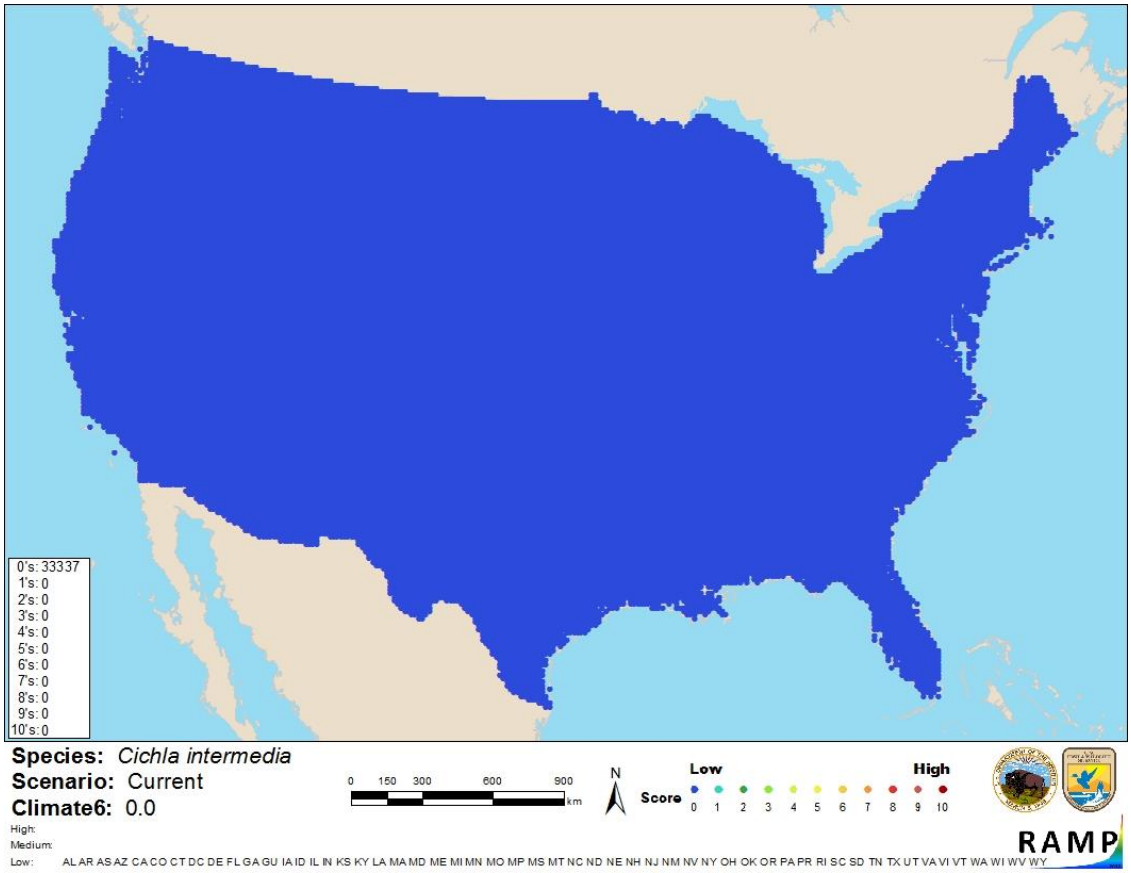


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Cichla intermedia* in the contiguous United States based on source locations reported by GBIF (2017). 0= Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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 is little knowledge on the biology and ecology of *Cichla intermedia*. There are no records showing introductions of this species outside of its native range. Little information is known to conclude what kind of effect it could have if it were introduced. Due to lack of information, the certainty of assessment is low. More information is needed to elevate the assessment to medium of high certainty.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Cichla intermedia is a freshwater bass from South America. It has not been reported outside of its native range of the Orinoco River basin. This species has a low climate match in the continental United States. There was no match other than 0 out of 10. Due to the lack of information about potential introductions and a low climate match with the United States, the overall risk of 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.

Bluegrass Aquatics. 2018. Intermedia Peacock Bass Cichlid REGULAR. Bluegrass Aquatics, Riverview, Florida. Available: https://bluegrassaquatics.com/intermedia-peacock-bass-cichlid-regular.html. (September 2018).

Froese, R., and D. Pauly, editors. 2018. *Cichla intermedia* Machado-Allison, 1971. FishBase. Available: https://www.fishbase.de/summary/Cichla-intermedia.html. (May 2018).

GBIF (Global Biodiversity Information Facility). 2016. GBIF backbone taxonomy: *Cichla intermedia* Machado-Allison, 1971. Global Biodiversity Information Facility, Copenhagen. Available: https://www.gbif.org/species/5208144. (May 2018).

Hoeinghaus, D., C. A. Layman, D. A. Arrington, and K. O. Winemiller. 2003. Movement of *Cichla* species (Cichlidae) in a Venezuelan floodplain river. Neotropical Ichthyology 1:121-126.

ITIS (Integrated Taxonomic Information System). 2018. *Cichla intermedia* Machado-Allison, 1971. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=648357#null. (May 2018).

Moore, A., N. Marton, and A. McNee. 2010. A strategic approach to the management of ornamental fish in Australia. Communication strategy and grey list review – a report to OFMIG. Bureau of Rural Sciences, Canberra, Australia. Available: http://143.188.17.20/data/warehouse/pe_brs90000004189/OrnamentalFishManagementReport2010_ap14.pdf. (August 2011).

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.

IGFA (International Game Fishing Association). 2001. Database of IGFA angling records until 2001. IGFA, Fort Lauderdale, Florida.

Kullander, S. O., and E. J. G. Ferreira. 2006. A review of the South American cichlid genus *Cichla*, with descriptions of nine new species. Ichthyological Exploration of Freshwaters 17:289-398.

Winemiller, K. O., D. C. Taphorn, and A. Barbarino-Duque. 1997. Ecology of *Cichla* (Cichlidae) in two blackwater rivers of Southern Venezuela. Copeia 4:690-696.