

Acestrorhynchus britskii (a fish, no common name)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, April 2014

Revised, January 2018

Web Version, 5/29/2018



Photo: Augusto Bentinho. Licensed under Creative Commons (CC-BY-NC). Available: <http://www.fishbase.se/photos/ThumbnailsSummary.php?Genus=Acestrorhynchus&Species=britskii#> (January 2018).

1 Native Range, and Status in the United States

Native Range

From Froese and Pauly (2017):

“South America: Brazil in Rio São Francisco basin.”

Status in the United States

This species has not been reported in the United States. There is no indication that this species is in trade in the United States.

Means of Introductions in the United States

This species has not been reported as introduced 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 Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysi
Order Characiformes
Family *Acestrorhynchidae*
Genus *Acestrorhynchus*
Species *Acestrorhynchus britskii* Menezes, 1969”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2017):

“[...] Max length : 16.5 cm SL male/unsexed; (Oyakawa 1998).”

From da Rocha et al. (2011):

“A total of 899 specimens of *Acestrorhynchus britski* were analyzed, with SL between 98 and 195 mm [...].”

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 in Rio São Francisco 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 Amaral (1990):

“These [*Acestrorhynchus britskii*] are carnivorous species of predatory habit. The structures which are typical of carnivorous fishes are presents: the mouth is large, the teeth are adapted to prehension, the stomach is elongate and lightly distensible and the gut is short.”

Biology

From da Rocha et al. (2011):

“A total of 899 *A. britskii* and 476 *A. lacustris* stomachs were analyzed, 70% of which were empty. Their content indicated the species are predominantly piscivorous, with 18 prey fish species identified.”

Human Uses

No information reported for this species.

Diseases

Moravec et al. (2012) mention *A. britskii* as a host of the nematode *Rhabdochona acuminata* (Molin, 1860), citing Costa et al. (2011).

No OIE reportable diseases have been documented for this species.

Threat to Humans

From Froese and Pauly (2017):

“Harmless”

3 Impacts of Introductions

There are no reported introductions for this species. Data on the impacts of introductions are lacking.

4 Global Distribution



Figure 1. Map of known global distribution of *Acestrorhynchus britskii*, reported from Brazil. Map from GBIF Secretariat (2017).

5 Distribution Within the United States

This species has not been reported as introduced or established 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 the southernmost regions of Texas and California. Low matches occurred throughout the rest of the United States. Climate 6 match indicated that the contiguous U.S. has a low climate match overall. The range of scores for a low climate match is from 0.000 to 0.005, inclusive; Climate 6 score for *Acestrorhynchus britskii* was 0.000.

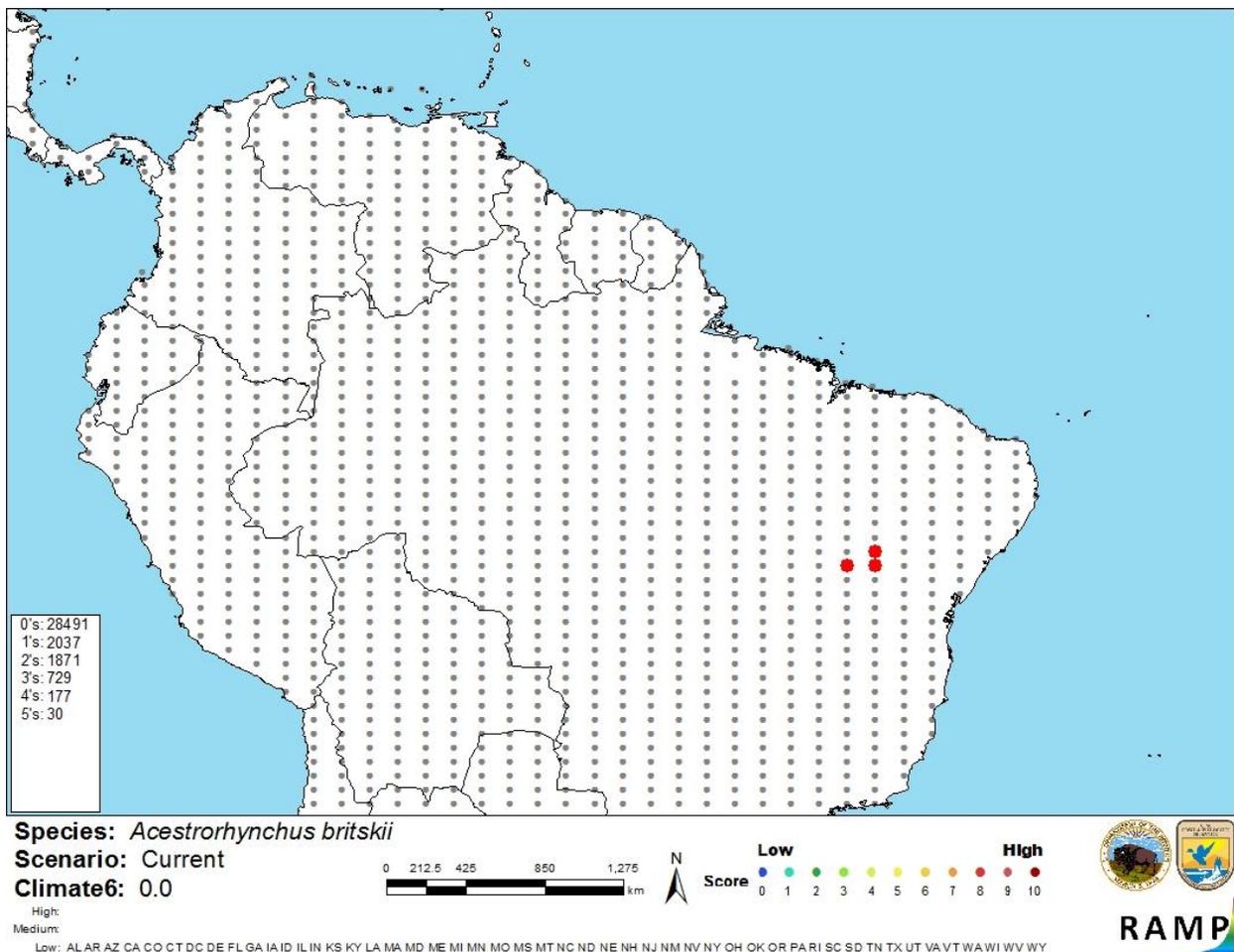


Figure 2. RAMP (Sanders et al. 2014; 16 climate variables; Euclidean distance) source map showing weather stations in northern South America selected as source locations (red; Brazil) and non-source locations (gray) for *Acestrorhynchus britskii* climate matching. Source locations from GBIF Secretariat (2017).

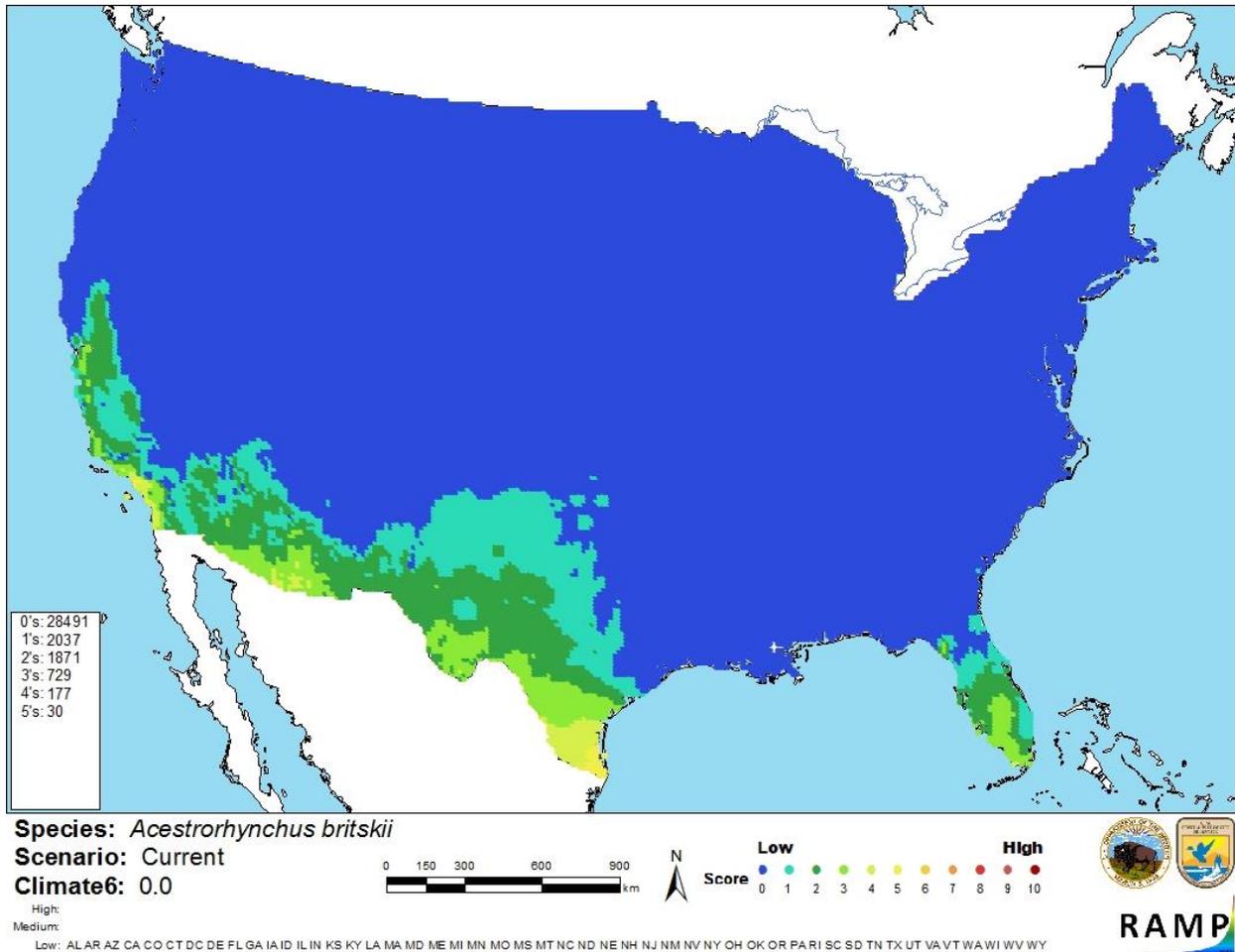


Figure 3. Map of RAMP (Sanders et al. 2014; 16 climate variables; Euclidean distance) climate matches for *Acestorhynchus britskii* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0=Lowest match, 10=Highest match.

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

Little information on the biology and distribution of this species is available. There are no reports of introductions of *A. britskii*; therefore, there is no scientific information on the impacts of introductions. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Acestrorhynchus britskii is a freshwater fish species native to the Rio São Francisco basin in Brazil. No introductions of this species have been reported. Data on impacts of introductions are lacking; absence of this information makes the certainty of this assessment low. Climate match with the contiguous United States is low. Overall risk posed by 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.

- Amaral, A. A. 1990. Anatomia comparativa do aparelho digestivo de *Acestrorhynchus britskii* Menezes, 1969 e *Acestrorhynchus lacustris* Reinhardt, 1874 (Pisces, Characidae, Acestrorhynchinae). *Revista Ceres* 37 (212): 277-288.
- da Rocha, A. A. F., N. C. L. Santos, G. A. Pinto, T. N. Medeiros, and W. Severi. 2011. Diet composition and food overlap of *Acestrorhynchus britskii* and *A. lacustris* (Characiformes: Acestrorhynchidae) from Sobradinho reservoir, Sao Francisco river, Bahia State. *Acta Scientiarum. Biological Sciences* 33:407-415.
- Froese, R. and D. Pauly, editors. 2017. *Acestrorhynchus britskii* Menezes, 1969. FishBase. Available: <http://www.fishbase.se/summary/Acestrorhynchus-britskii.html>. (January 2018).
- GBIF Secretariat. 2017. GBIF backbone taxonomy: *Acestrorhynchus britskii* Menezes, 1969. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2355564>. (January 2018).
- ITIS (Integrated Taxonomic Information System). 2018. *Acestrorhynchus britskii* Menezes, 1969. Available: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=640359. (January 2018).
- Moravec, F., G. Salgado-Maldonado, D. González-Solís, and J. M. Caspeta-Mandujano. 2012. Host-parasite relationships of *Rhabdochona kidderi* Pearse, 1936 (Nematoda: Rhabdochonidae) in fishes of the Lacantún River in the Lacandon rain forest of Chiapas

State, southern Mexico, with a key to Mexican species of *Rhabdochona* Railliet, 1916. Systematic Parasitology 82:1-12.

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.

Costa, D. P. C., M. C. de Albuquerque, and M. C. Brasil-Sato. 2011. *Rhabdochona* (*Rhabdochona*) *acuminata* (Nematoda) in fishes (Characiformes, Acestrorhynchidae) from the Três Marias reservoir, upper São Francisco River, Brazil. Neotropical Helminthology 5:16-23.

Oyakawa, O. T. 1998. Catalogo dos tipos de peixes recentes do Museu de Zoologia da USP. I. Characiformes (Teleostei: Ostariophysi). Papéis Avulsos de Zoologia 39(23):443-507.