

## *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

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## 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

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## 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

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

## 4 Global Distribution

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

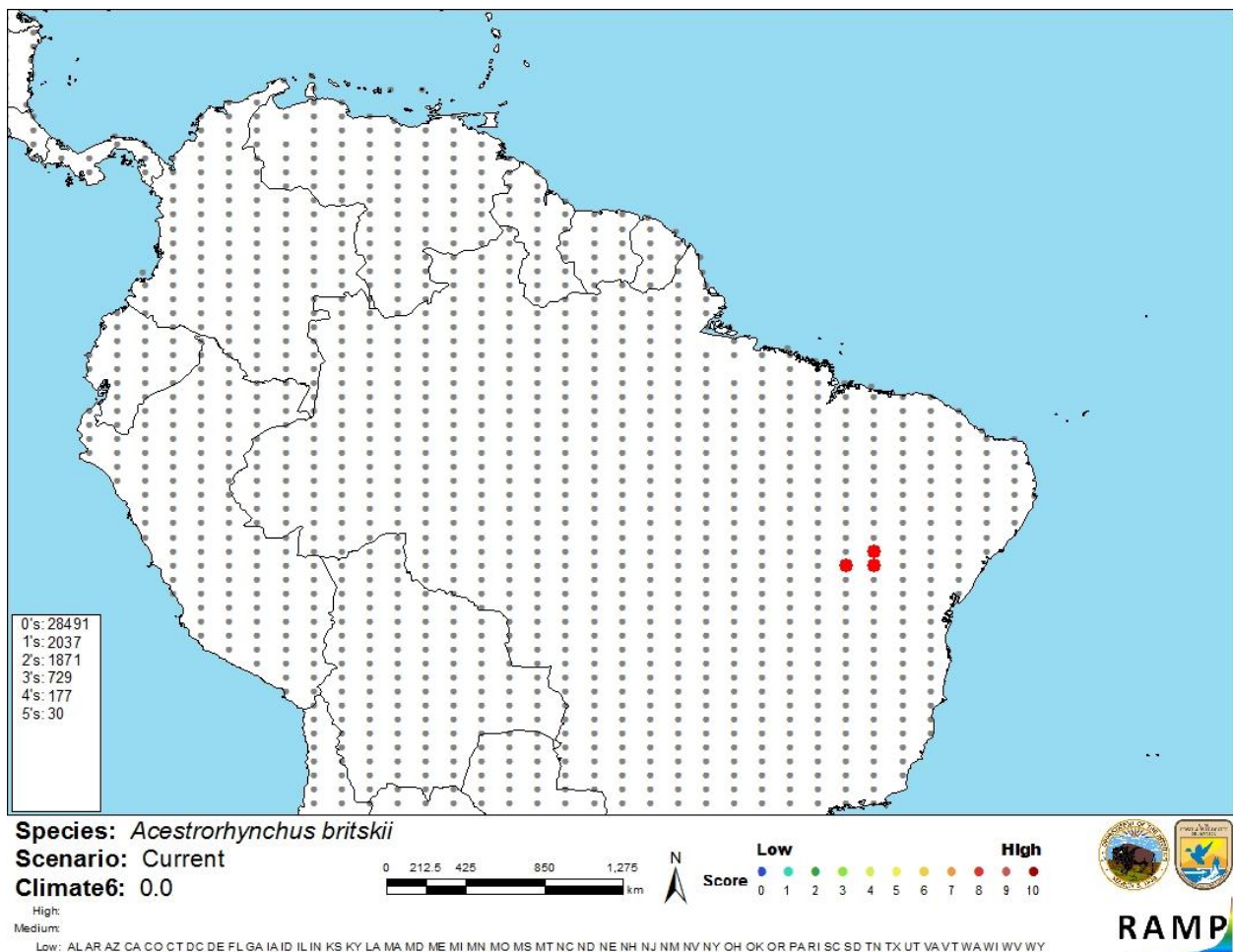
## 5 Distribution Within the United States

This species has not been reported as introduced or established in the United States.

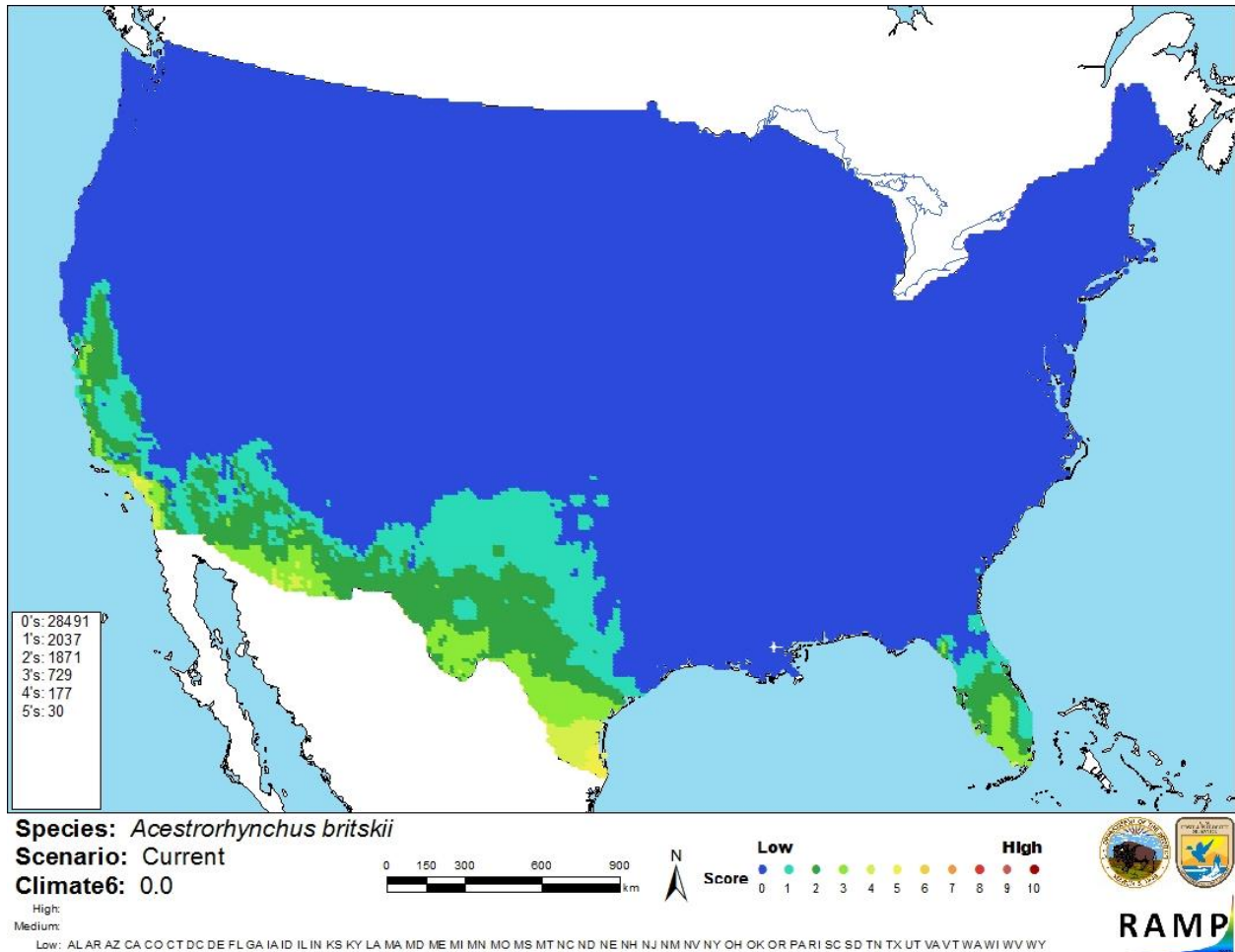
## 6 Climate Matching

### 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
$0.000 < X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
$\geq 0.103$	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

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### 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

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**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](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**

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**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.