

Yellow-tail Barracuda (*Acestrorhynchus falcirostris*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, March 2014

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Available: http://eol.org/data_objects/27764627 (January 2018).

1 Native Range, and Status in the United States

Native Range

From Froese and Pauly (2017):

“South America: Amazon [Brazil, Bolivia, Peru, Ecuador, Colombia] and Orinoco [Venezuela] River basins and rivers of Guyana.”

Status in the United States

This species has not been reported in the United States. This species is in trade in the United States.

From That Fish Blog (2013):

“The Yellow-tail Barracuda (*Acestrorhynchus falcistrotris*) is another common import.”

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 falcistrotris* (Cuvier, 1819)”

“Taxonomic Status: valid”

Size, Weight, and Age Range

From Froese and Pauly (2017):

“[...] Max length : 40.0 cm TL male/unsexed; [Baensch and Riehl 1985].”

Environment

From Froese and Pauly (2017):

“Freshwater; benthopelagic; pH range: 5.2 - 7.2; dH range: 5 - 18.”

“[...] 24°C - 28°C [Baensch and Riehl 1985; assumed to represent recommended aquarium water temperature]”

Climate/Range

From Froese and Pauly (2017):

“Tropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2017):

“South America: Amazon [Brazil, Bolivia, Peru, Ecuador, Colombia] and Orinoco [Venezuela] River basins and rivers of Guyana.”

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 Froese and Pauly (2017):

“Presence of black fringe on the posterior edge of the operculum, especially on the dorsal half, that creates the appearance of a dark "collar"; scales on lateral line 140-175; and presence of single branched lateral line canals [López-Fernández and Winemiller 2003].”

Biology

From Froese and Pauly (2017):

“Found in clear and black waters [López-Fernández and Winemiller 2003]. Voracious predator.”

From Santos et al. (2010):

“*Acestrorhynchus falcistrostris* (Cuvier, 1819) (Acestrorhynchidae, Characiformes), is a piscivorous species (Santos *et al.*, 2008) [...]”

Human Uses

From Froese and Pauly (2017):

“Fisheries: commercial; aquarium: public aquariums”

Diseases

According to Hoshino et al. (2016), *A. falcistrotris* is host for the following parasites: *Ichthyophthirius multifiliis* Fouquet, 1876, *Piscinoodinium pillulare* Lom, 1981, *Diaphorocleidus* sp., Dactylogyridae gen. sp., *Clinostomum marginatum* Rudolphi, 1819, Digenea gen. sp. (metacercariae), *Contracaecum* sp. (larvae), *Philometra* sp. (larvae), *Procamallanus* (*Spirocamallanus*) *inopinatus* Travassos, Artigas and Pereira, 1928 (larvae and adults), *Neochinorhynchus pterodoridis* Thatcher, 1981 (adults), *Ergasilus turucuyus* Malta and Varella, 1996.

From Vasconcelos and Tavares-Dias (2016):

“[...] 30.6% of the 62 specimens of *A. falcistrotris* examined were parasitized by *Excorallana berbicensis* and *Ergasilus turucuyus* [...]”

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 falcirostris*, reported from South America. The most southern and most eastern points are not known to represent established populations and therefore were excluded from the climate matching analysis. 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 most of peninsular Florida and southeastern Texas. The remainder of the United States matched low. Climate 6 match indicated that the contiguous U.S. has a low climate match. The range for a low climate match is from 0.000 to 0.005, inclusive; climate match of *Acestrorhynchus falcirostris* is 0.003.

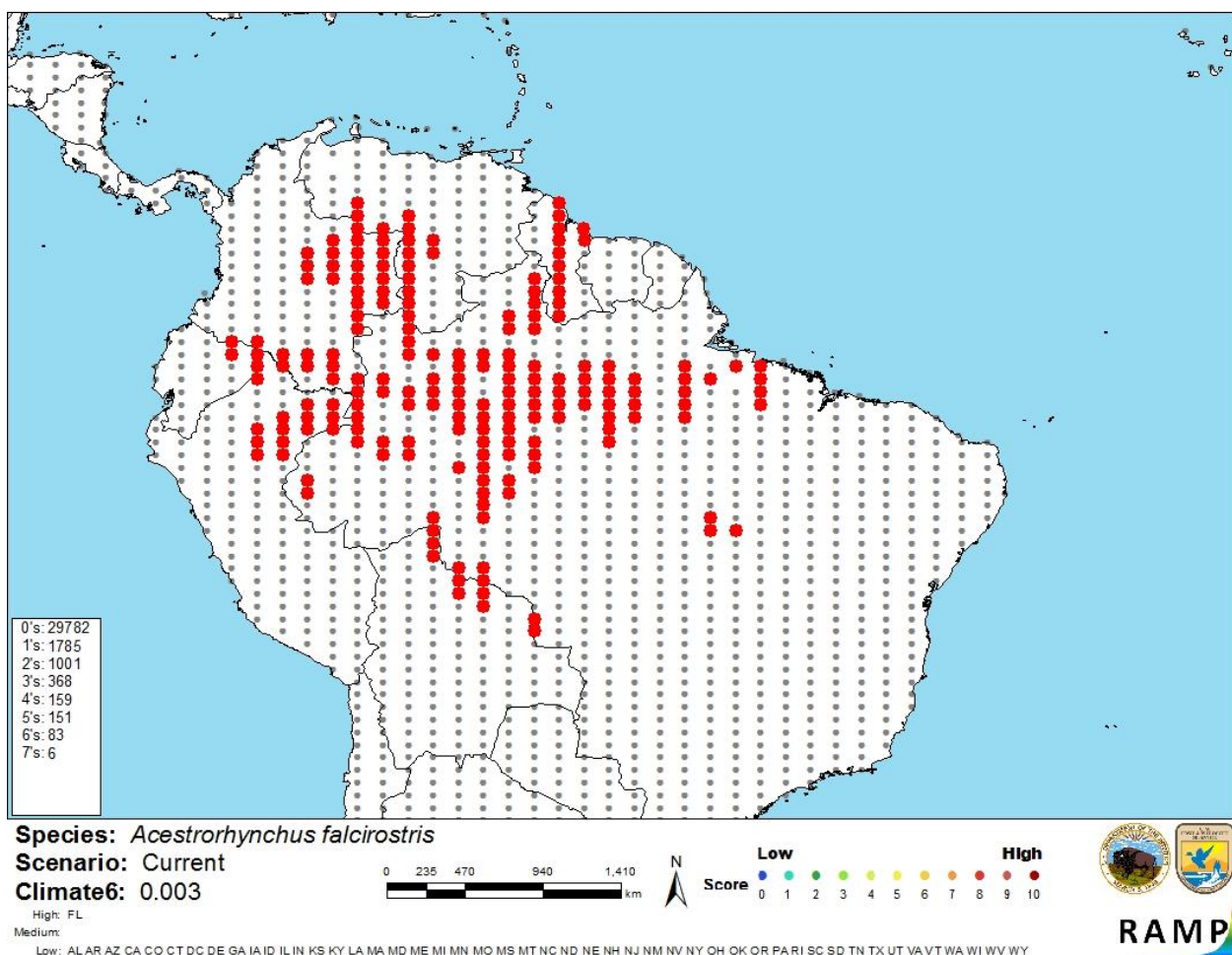


Figure 2. RAMP (Sanders et al. 2014; 16 climate variables; Euclidean Distance) source map showing weather stations in South America selected as source locations (red) and non-source locations (gray) for *Acestrorhynchus falcirostris* climate matching. Source locations from GBIF Secretariat (2017).

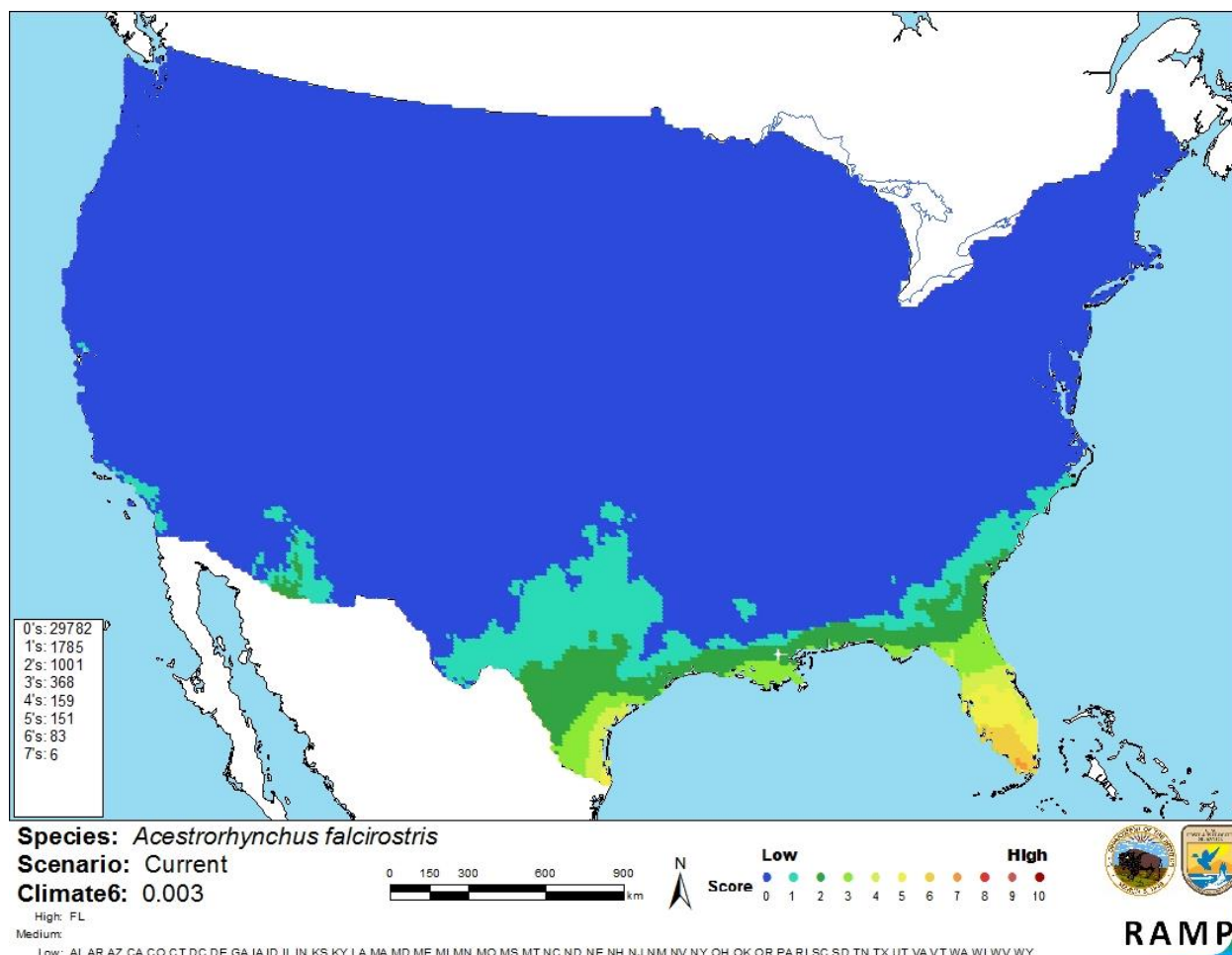


Figure 3. Map of RAMP (Sanders et al. 2014; 16 climate variables; Euclidean Distance) climate matches for *Acestrorhynchus falcirostris* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0= Lowest match, 10=Highest match.

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

Information on the biology and distribution of *A. falcirostris* is available. However, scientific information on impacts from introductions is lacking because this species has not been reported as introduced outside of its native range. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Yellow-tail Barracuda (*Acestrorhynchus falcistrostris*) is a freshwater fish species native to South America. *A. falcistrostris* is found in public aquariums and in the aquarium trade in the United States. Climate match with the contiguous United States is low. No introductions of this species have been reported. More information is needed to understand the impacts from introductions of this species; absence of this information makes the certainty of this assessment 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.

Froese, R., and D. Pauly, editors. 2017. *Acestrorhynchus falcistrostris* (Cuvier, 1819). FishBase. Available: <http://www.fishbase.se/summary/Acestrorhynchus-falcistrostris.html>. (January 2018).

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Hoshino, M. D. F. G., L. R. Neves, and M. Tavares-Dias. 2016. Parasite communities of the predatory fish, *Acestrorhynchus falcatus* and *Acestrorhynchus falcistrostris*, living in sympatry in Brazilian Amazon. *Brazilian Journal of Veterinary Parasitology* 25(2):207-216.

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Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.

Santos, R. N., S. Amadio, and E. J. G. Ferreira. 2010. Patterns of energy allocation to reproduction in three Amazonian fish species. *Neotropical Ichthyology* 8(1):155-162.

That Fish Blog. 2013. Freshwater barracudas – predators with a need for speed. Available: <http://blogs.thatpetplace.com/thatfishblog/2010/10/01/freshwater-barracudas-predators-with-a-need-for-speed/#.Wxrzop9KiUl>. (June 2018).

Vasconcelos, H. C. G., and M. Tavares-Dias. 2016. Host-parasite interaction between crustaceans of six fish species from the Brazilian Amazon. *Acta Scientiarum* 38(1):113-123.

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.

Baensch, H. A., and R. Riehl. 1985. *Aquarien atlas*, volume 2. Mergus, Verlag für Natur-und Heimtierkunde GmbH, Melle, Germany.

López-Fernández, H., and K. O. Winemiller. 2003. Morphological variation in *Acestrorhynchus microlepis* and *A. falcatus* (Characiformes: Acestrorhynchidae), reassessment of *A. apurensis* and distribution of *Acestrorhynchus* in Venezuela. *Ichthyological Exploration of Freshwaters* 14(3):193-208.

Santos, R. N., E. J. G. Ferreira, and S. A. Amadio. 2008. Effect of seasonality and trophic group on energy acquisition in Amazonian fish species. *Ecology of Freshwater Fish* 17: 340-348