

Yellow Acara (*Aequidens metae*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, web version – 03/29/2018



Photo: Peter Hebbinckuys. Licensed under Creative Commons BY. Available: <http://www.fishbase.se/photos/UploadedBy.php?autoctr=14571&win=uploaded>. (August 2017)

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2015):

“South America: Meta River in the Orinoco River basin, Colombia.”

Status in the United States

No records of *Aequidens metae* in the United States were found.

Means of Introductions in the United States

No records of *Aequidens metae* in the United States were found.

Remarks

No additional remarks at this time.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2014):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Acanthopterygii
Order Perciformes
Suborder Labroidei
Family Cichlidae
Genus *Aequidens*
Species *Aequidens metae* Eigenmann, 1922”

From Eschmeyer et al. (2017):

“*metae*, *Aequidens* Eigenmann [C. H.] 1922:241 [...], Pl. 30 (fig. 2) [Memoirs of the Carnegie Museum v. 9 (no. 1)] Barrigón, Río Meta, Orinoco System, Colombia. Holotype: CAS 66884 [ex IU 13967]. Paratypes: CAS 66983 [ex IU 13967]. Additional original material: CAS 67005 [ex IU 15017] (8), 67007 [ex IU 13797] (2), 67008 [ex IU 13779] (1). •Valid as *Aequidens metae* Eigenmann 1922 -- (Lasso & Machado-Allison 2000:36 [...], Kullander in Reis et al. 2003:608 [...], Hernández-Acevedo et al. 2015:104 [...]). **Current status:** Valid as *Aequidens metae* Eigenmann 1922. Cichlidae: Cichlinae.”

Size, Weight, and Age Range

From Froese and Pauly (2015):

“Max length: 12.5 cm SL male/unsexed; [Kullander 2003]”

Environment

From Froese and Pauly (2015):

“Freshwater; benthopelagic; pH range: 4.8 - 6.0. [...]; 24°C - 30°C [assumed to be recommended aquarium temperature range] [Stawikowski and Werner 1998]”

Climate/Range

From Froese and Pauly (2015):

“Tropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2015):

“South America: Meta River in the Orinoco River basin, Colombia.”

Introduced

No records of *Aequidens metae* introductions were found.

Means of Introduction Outside the United States

No records of *Aequidens metae* introductions were found.

Short Description

A short description of *Aequidens metae* was not found.

Biology

From Froese and Pauly (2015):

“In creeks and small streams [Stawikowski and Werner 1998].”

Human Uses

From Froese and Pauly (2015):

“Fisheries: of no interest; aquarium: commercial”

Diseases

No information on diseases of *Aequidens metae* was not found.

Threat to Humans

From Froese and Pauly (2015):

“Harmless”

3 Impacts of Introductions

No records of *Aequidens metae* introductions were found.

4 Global Distribution

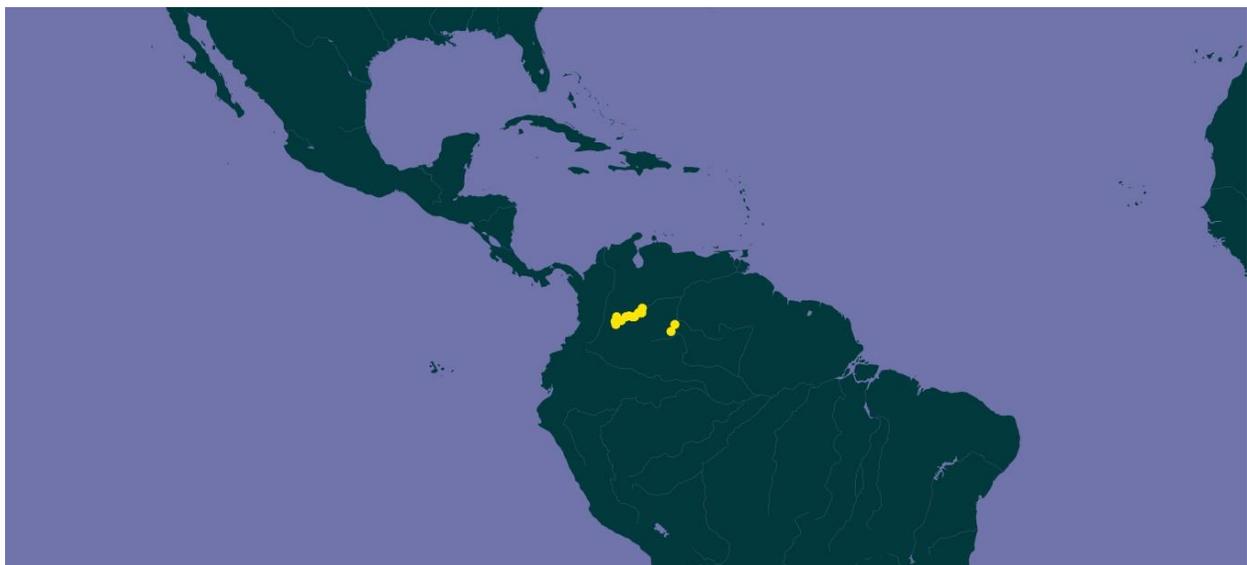


Figure 1. Known global distribution of *Aequidens metae*. Locations shown are in Colombia and Venezuela. Map from GBIF Secretariat (2017). 5



Figure 2. Additional known global distribution of *Aequidens metae*. Locations shown are in Colombia and Venezuela. Map from VertNet (2017).

5 Distribution Within the United States

No records of *Aequidens metae* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Aequidens metae* was low across the contiguous United States with small, isolated pockets of medium match along the West Coast. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous U.S. was 0.000, low, and no states had an individually high climate match.

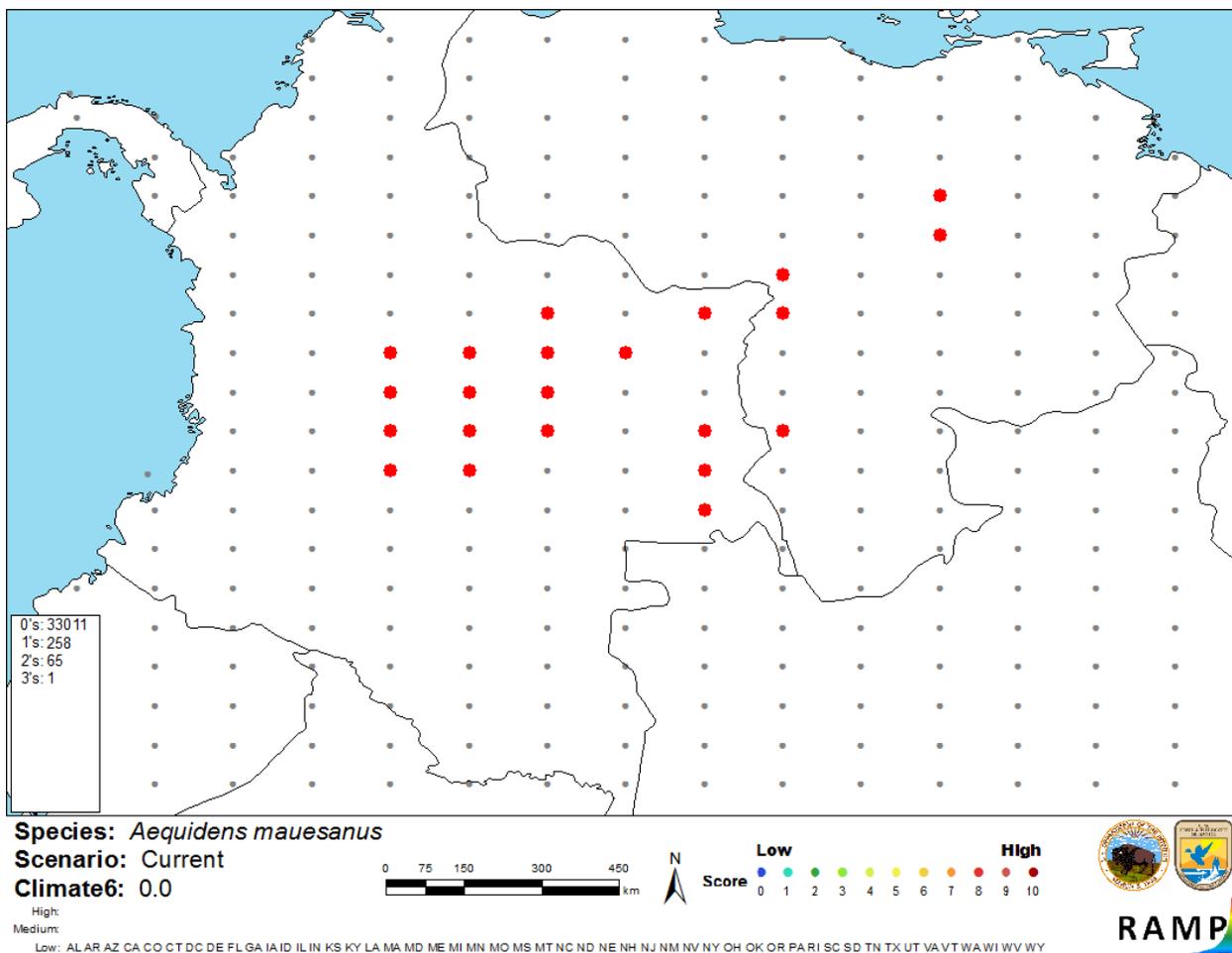


Figure 3. RAMP (Sanders et al. 2014) source map showing weather stations in Colombia and Venezuela selected as source locations (red) and non-source locations (gray) for *Aequidens metae* climate matching. Source locations from GBIF Secretariat (2015) and VertNet (2017).

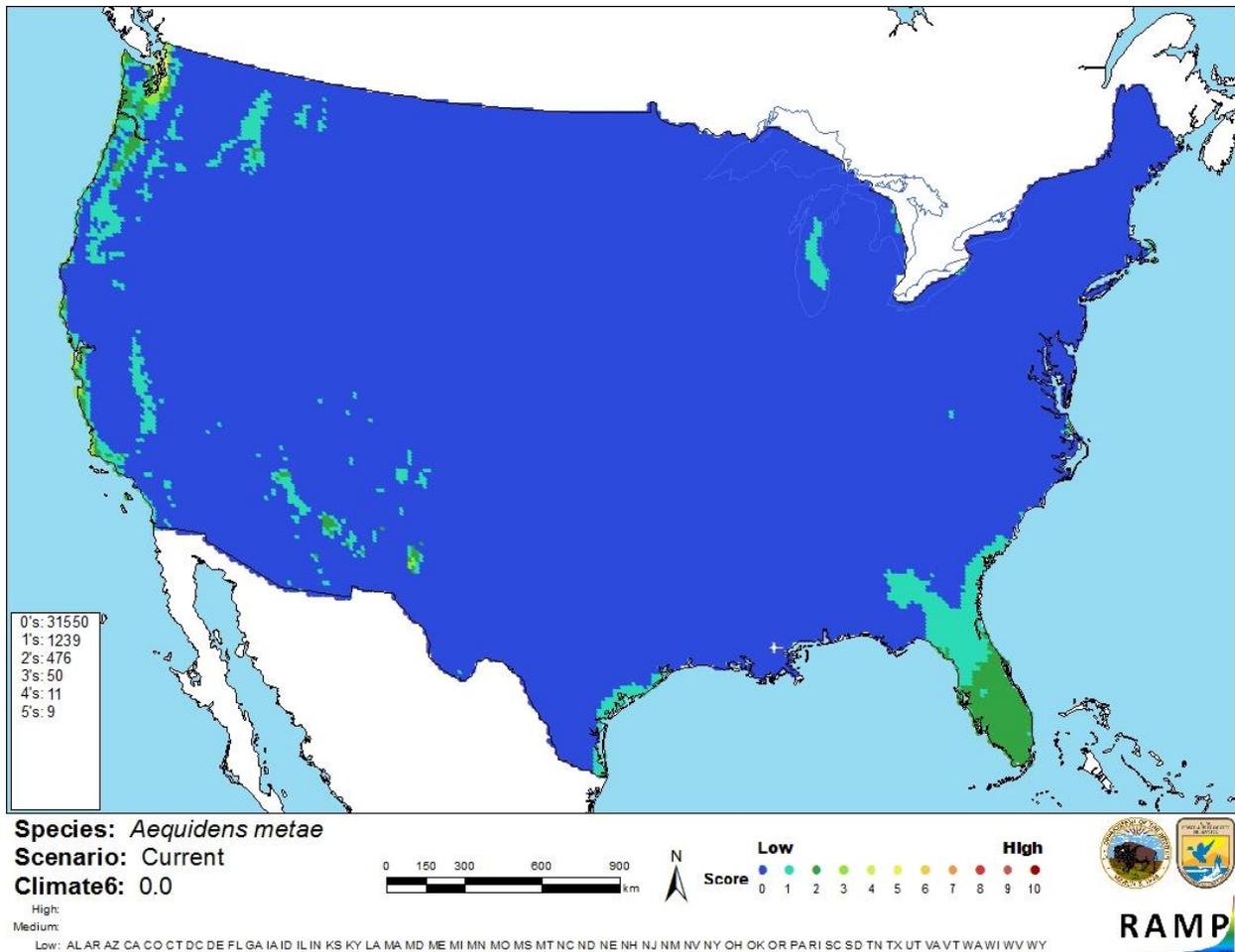


Figure 4. Map of RAMP (Sanders et al. 2014) climate matches for *Aequidens metae* in the contiguous United States based on source locations reported by GBIF Secretariat (2015) and VertNet (2017). 0 = Lowest match, 10 = Highest match. Counts of climate match scores are tabulated on the left.

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
$0.000 \leq X < 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

The certainty of this assessment is medium. General information about *Aequidens metae* was not readily available. The distribution of this species has been reliably documented. No records of introductions were found.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The history of invasiveness is uncertain. There were no records of *Aequidens metae* introductions. The climate match was 0.000, low. There were small pockets of medium climate match along the West Coast. The certainty of assessment is medium. The overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Medium**
- **Remarks/Important additional information** No additional remarks.
- **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. 2017. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (August 2017).

Froese, R., and D. Pauly, editors. 2015. *Aequidens metae* Eigenmann, 1922. FishBase. Available: <http://www.fishbase.org/summary/Aequidens-metae.html>. (January 2015).

GBIF Secretariat. 2015. GBIF backbone taxonomy: *Aequidens metae* Eigenmann, 1922. Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/5208319>. (January 2015).

ITIS (Integrated Taxonomic Information System). 2014. *Aequidens metae* Eigenmann, 1922. Integrated Taxonomic Information System, Reston, Virginia. Available: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=648239. (October 2014).

Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk assessment mapping program: RAMP. U.S. Fish and Wildlife Service.

VertNet. 2017. VertNet. Available: <http://www.vertnet.org/index.html>. (August 2017).

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.

- Eigenmann, C. H. 1922. The fishes of western South America, Part I. The fresh-water fishes of northwestern South America, including Colombia, Panama, and the Pacific slopes of Ecuador and Peru, together with an appendix upon the fishes of the Rio Meta in Colombia. *Memoirs of the Carnegie Museum* 9(1):1–346.
- Hernández-Acevedo, J. H., A. Machado-Allison, and C. A. Lasso. 2015. *Aequidens superomaculatum* (Teleostei: Cichlidae) una nueva especie del alto Orinoco y Río Negro, Venezuela. *Biota Colombiana* 16(2):96–106. (In Spanish, English abstract.)
- Kullander, S. O. 2003. Cichlidae (Cichlids). Pages 605–654 in R. E. Reis, S. O. Kullander, and C. J. Ferraris, Jr., editors. *Checklist of the freshwater fishes of South and Central America*. EDIPUCRS, Porto Alegre, Brazil.
- Lasso, C. A., and A. Machado-Allison. 2000. Sinopsis de las especies de peces de la familia Cichlidae presentes en la cuenca del Rio Orinoco. Claves, diagnosis, aspectos biológicos e ilustraciones. Serie Peces de Venezuela. Universidad Central de Venezuela.
- Reis, R. E., S. O. Kullander, and C. J. Ferraris, Jr., editors. 2003. *Check list of the freshwater fishes of South and Central America*. CLOFFSCA. EDIPUCRS, Porto Alegre, Brazil.
- Stawikowski, R., and U. Werner. 1998. *Die Buntbarsche Amerikas, Band 1*. Verlag Eugen Ulmer, Stuttgart, Germany.