

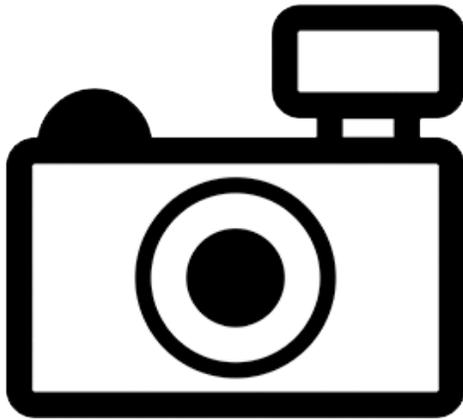
***Mayaheros troschelii* (a fish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, August 2011

Revised, November 2018

Web Version, 3/12/2020



No Photo Available

1 Native Range and Status in the United States

Native Range

From Kullander (2003):

“Distribution: North America: Probably Atlantic slope of southern Mexico.”

Status in the United States

No records of *Mayaheros troschelii* in the wild or in trade in the United States were found.

Means of Introductions in the United States

No records of *Mayaheros troschelii* in the wild in the United States were found.

Remarks

The change to the name *Mayaheros troschelii* occurred in 2016; as a result most databases still refer to this species as *Cichlasoma troschelii*. Therefore searches were conducted under *Mayaheros troschelii* and the synonym *Cichlasoma troschelii*.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2018), *Mayaheros troschelii* (Steindachner 1867) is the current valid name of this species. *Mayaheros troschelii* was originally described as *Heros troschelii* Steindachner 1867. *Mayaheros troschelii* was also known as *Cichlasoma troschelii* (Steindachner 1867).

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 *Cichlasoma*

Species *Cichlasoma troschelii* (Steindachner, 1867)

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 16.0 cm SL male/unsexed; [Kullander 2003]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2018):

“Subtropical”

Distribution Outside the United States

Native

From Kullander (2003):

“Distribution: North America: Probably Atlantic slope of southern Mexico.”

Introduced

No records of introductions of *Mayaheros troschelii* were found.

Means of Introduction Outside the United States

No records of introductions of *Mayaheros troschelii* were found.

Short Description

No information on a short description of *Mayaheros troschelii* were found.

Biology

No information on the biology of *Mayaheros troschelii* was found.

Human Uses

No information on human uses of *Mayaheros troschelii* was found.

Diseases

No records of OIE-reportable diseases (OIE 2020) were found for *M. troschelii*.

Poelen et al. (2014) lists copepods and nematodes as parasites of *Mayaheros troschelii*.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of introductions of *Mayaheros troschelii* were found.

4 Global Distribution



Figure 1. Map of Mexico. According to Kullander (2003), *Mayaheros troschelii* is probably native to the Atlantic slope of southern Mexico. Map created by: NordNordWest. Licensed under CC BY-SA 3.0. Available: https://en.wikipedia.org/wiki/Geography_of_Mexico#/media/File:Mexico_topographic_map-blank.svg. (November 2018).

No georeferenced points were given, therefore source points for climate match were chosen to match the verbal description given by Kullander (2003).

5 Distribution Within the United States

No records of *Mayaheros troschelii* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Mayaheros troschelii* was low for the majority of the contiguous United States with medium match along the southern border of the United States and a patch of high match in Florida. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.013, medium (scores greater than 0.005, but less than 0.103, are classified as medium). All States had low individual climate scores, except for Texas, which had a medium individual climate score, and Florida, which had a high individual climate score.

No georeferenced points were given, therefore source points for climate match were chosen to match the verbal description given by Kullander (2003).

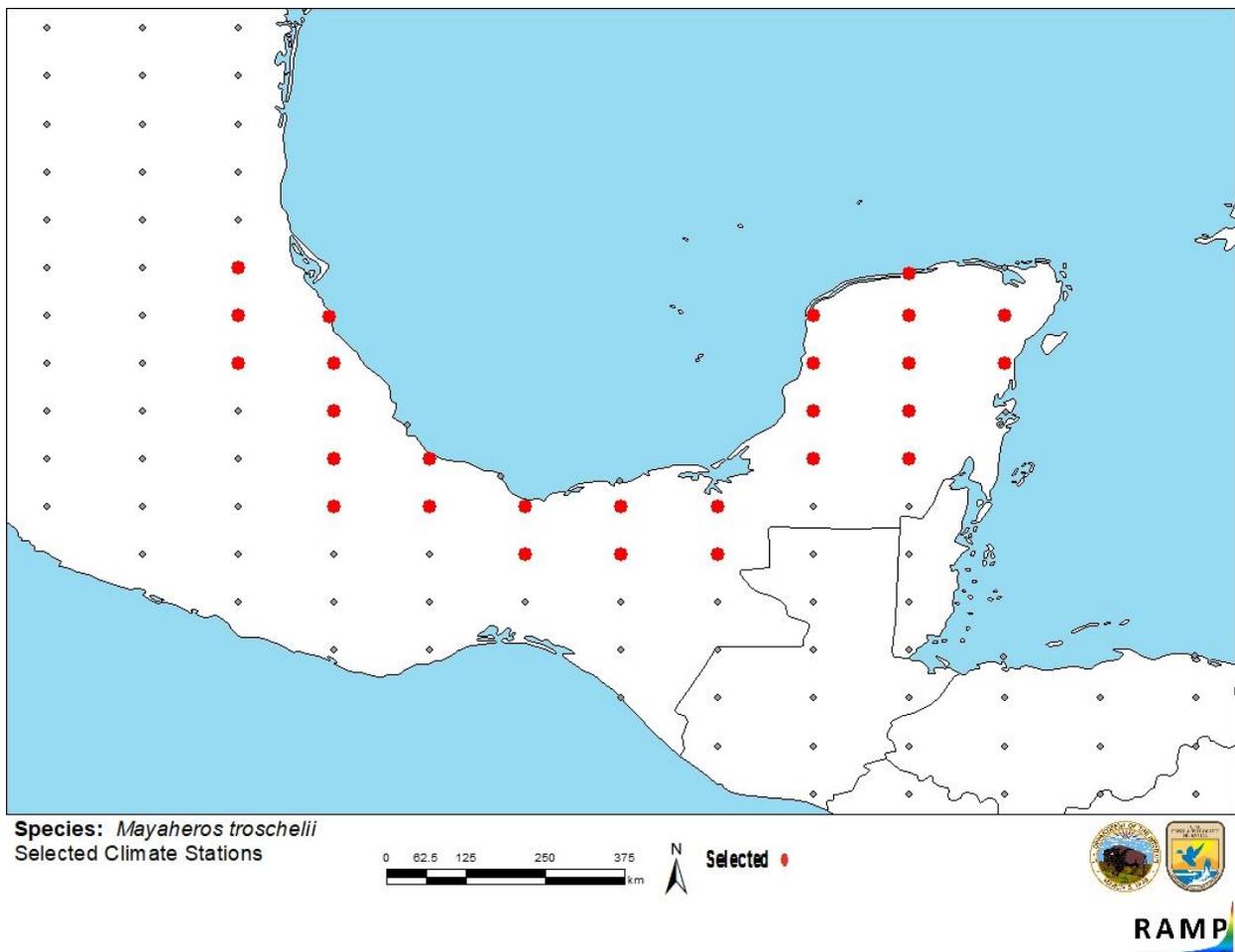


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Mexico selected as source locations (red) and non-source locations (gray) for *Mayaheros troschelii* climate matching. Source points were chosen to match the verbal description given by Kullander (2003).

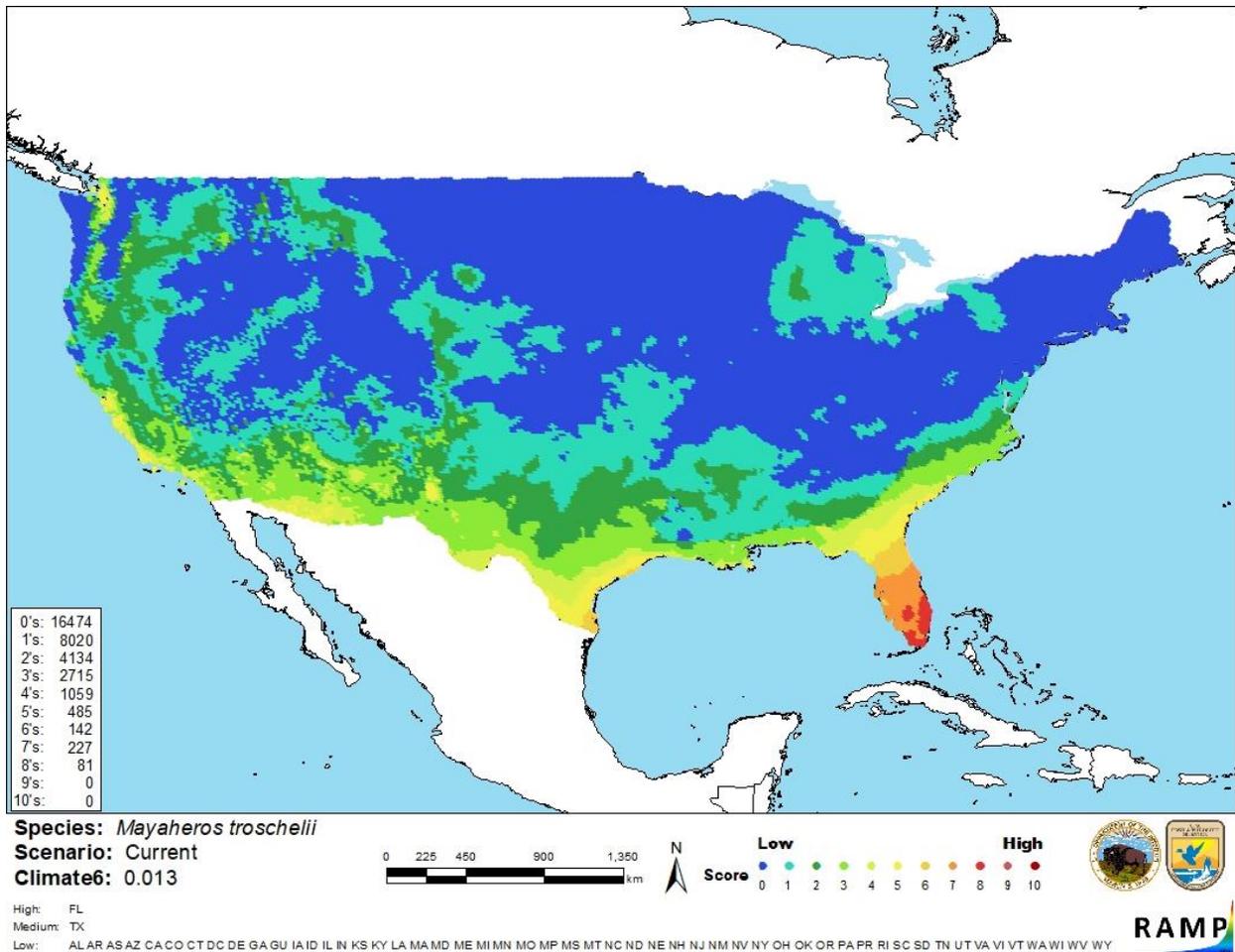


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Mayaheros troschelii* in the contiguous United States based on verbal description of locations described from Kullander (2003). Counts of climate match scores are tabulated on the left. 0 = Lowest match, 10 = Highest match.

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

7 Certainty of Assessment

The certainty of assessment for *Mayaheros troschelii* is low. There is almost no information available for this species. No georeferenced points were given, therefore source points for climate match were chosen to match the verbal description given by Kullander (2003). No information on introductions of *Mayaheros troschelii* was found.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Mayaheros troschelii is a fish assumed to be native to Mexico. The history of invasiveness is uncertain. It has not been reported as introduced or established anywhere in the world. No georeferenced observation points were found for this species, therefore, source points for climate match were chosen to match the verbal description given by Kullander (2003). The climate match for the contiguous United States was medium with the State of Florida having a high individual climate match. The certainty of assessment is low. The overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Medium**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information:** No known locations to base climate match on.
- **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.

Fricke, R., W. N. Eschmeyer, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (November 2018).

Froese, R., and D. Pauly, editors. 2018. *Mayaheros troschelii* Steindachner, 1867. FishBase. Available: <http://www.fishbase.se/summary/Mayaheros-troschelii.html>. (November 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Cichlasoma troschelii* (Steindachner, 1867). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=648381#null. (November 2018).

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.

OIE (World Organisation for Animal Health). 2020. OIE-listed diseases, infections and infestations in force in 2020. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2020/>. (March 2020).

Poelen, J. H., J. D. Simons, and C. J. Mungall. 2014. Global Biotic Interactions: an open infrastructure to share and analyze species-interaction datasets. *Ecological Informatics* 24:148–159.

Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. 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.

Steindachner, F. 1867. Ichthyologische Notizen, vierte Folge. *Anzeiger der Kaiserlichen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftlichen Classe* 4(8):63–64.