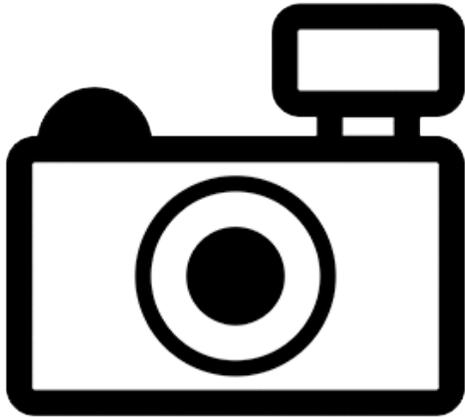


# ***Mesoheros atromaculatus* (a cichlid, no common name)**

## **Ecological Risk Screening Summary**

U.S. Fish and Wildlife Service, August 2011  
Revised, October 2012, August 2018  
Web Version, 9/12/2018



No Photo Available

## **1 Native Range and Status in the United States**

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### **Native Range**

From Froese and Pauly (2018):

“South America: Atrato, San Juan, and Baudó River basins in Colombia.”

### **Status in the United States**

This species has not been reported as introduced or established in the United States. This species is present in the aquarium trade in the United States. For example:

From Bluegrass Aquatics (2018):

“Atromaculatus Cichlid REGULAR  
\$19.98”

### **Means of Introductions in the United States**

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

## Remarks

From Froese and Pauly (2018):

“The generic allocation of this species is still uncertain. It belongs to the tribe Heroini, but is maintained as an incertae sedis species of *Cichlasoma* pending a revision of heroin cichlids traditionally assigned to the cichlasomatine genus *Cich[lasoma.]*”

From Eschmeyer et al. (2018):

“*atromaculatum*, *Cichlasoma (Parapetenia)* [...] Current status: Valid as *Mesoheros atromaculatus*”

The names *Cichlasoma atromaculatum*, *Cichlasoma atromaculatus*, and *Mesoheros atromaculatus* were used to search for information for this ERSS.

## 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 Actinopterygii  
Class Teleostei  
Superorder Acanthopterygii  
Order Perciformes  
Suborder Labroidei  
Family Cichlidae  
Genus *Cichlasoma* Swainson, 1839  
Species *Cichlasoma atromaculatus* Regan, 1912”

From Eschmeyer et al. (2018):

“Current status: Valid as *Mesoheros atromaculatus*”

### Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 25.0 cm TL male/unsexed; [Axelrod 1993]”

## **Environment**

From Froese and Pauly (2018):

“Freshwater; brackish; benthopelagic; pH range: 5.5 - 7.5; dH range: ? - 3. [...] 23°C - 29°C [Stawikowski and Werner 1998; unknown whether this temperature range refers to air or water, aquarium or natural settings]”

## **Climate/Range**

From Froese and Pauly (2018):

“Tropical; [...]”

## **Distribution Outside the United States**

Native

From Froese and Pauly (2018):

“South America: Atrato, San Juan, and Baudó River basins in Colombia.”

Introduced

No known introductions.

## **Means of Introduction Outside the United States**

No known introductions.

## **Short Description**

From McMahan et al. (2015):

“The genus *Mesoheros* is diagnosed by an elongate body with a moderately small mouth that does not reach the anterior margin of the orbit. Seven (rarely six) dark spots [...] are present along the lateral sides of body. All other genera of herichthyin cichlids with a small mouth possess a deeper body with angular heads, and lack this number of spots and bar-type markings along the body. The caudal fin is relatively truncate to rounded, and a well-defined, round, black spot is present on the dorsal portion of the caudal peduncle sitting directly above (often resting upon) the lower lateral line. Scale rows continue onto the base of the dorsal and anal fins. Spots are present on the dorsal, caudal, and anal fins.”

## **Biology**

From Froese and Pauly (2018):

“Up to 3000 eggs are deposited on open substratum, such as a flat stone. Mainly the female guards eggs and young.”

## Human Uses

This species is present in the aquarium trade in the United States. For example:

From Bluegrass Aquatics (2018):

“Atromaculatus Cichlid REGULAR  
\$19.98”

## Diseases

No information available. No OIE reportable diseases have been documented for this species.

## Threat to Humans

From Froese and Pauly (2018):

“Harmless”

## 3 Impacts of Introductions

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No introductions have been reported. There is no information available on impacts.

## 4 Global Distribution

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**Figure 1.** Known global distribution of *Mesoheros atromaculatus* reported from Colombia. Map from GBIF Secretariat (2017). Occurrences reported in Panama were excluded from the climate matching analysis because the species is not known to be established outside of Colombia.

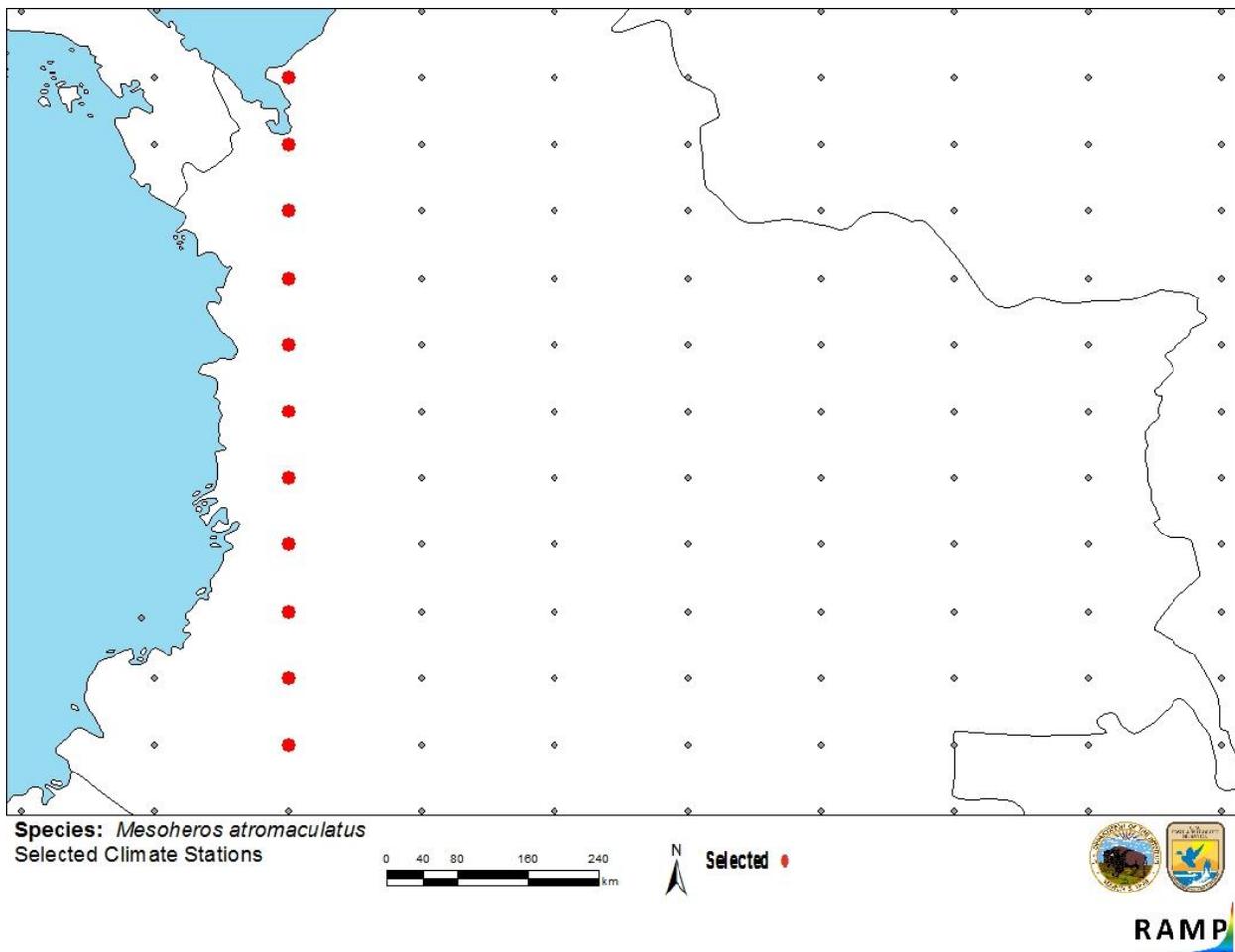
## 5 Distribution Within the United States

No known occurrences.

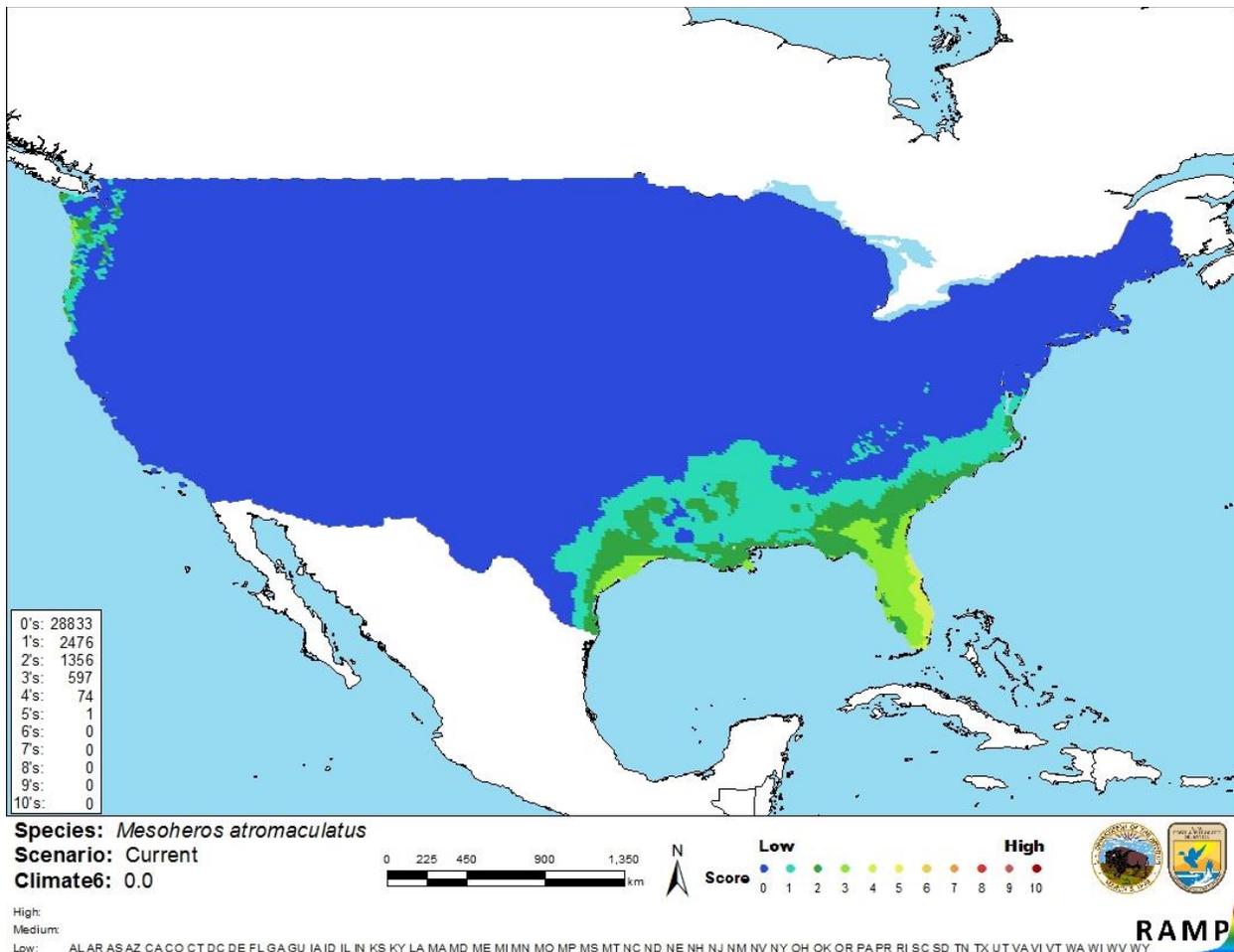
## 6 Climate Matching

### Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.0, which is a low score. The range for a low climate match is from 0.000 to 0.005, inclusive. The entire contiguous United States was a low match except the east coast of peninsular Florida. Every state recorded a low score. The highest match was 5 out of 10, which was recorded in the southern Florida. The majority of the contiguous United States recorded 0 out of 10.



**Figure 2.** RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Colombia) and non-source locations (gray) for *Mesoheros atromaculatus* climate matching. Source locations from GBIF Secretariat (2017).



**Figure 3.** Map of RAMP (Sanders et al. 2018) climate matches for *Mesoheros atromaculatus* 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
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
$\geq 0.103$	High

## 7 Certainty of Assessment

Little information is known about the biology and ecology of *Mesoheros atromaculatus*. This species has not been reported as introduced and no information is available on impacts of introduction. Due to lack of information, the certainty of assessment is low. More information is needed to increase assessment certainty.

## 8 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Mesoheros atromaculatus* is a cichlid native to the Atrato, San Juan and Baudó River basins of Colombia. It has not been reported as introduced outside its native range. No information is available on potential impacts of an introduction of this species. History of invasiveness is uncertain. *M. atromaculatus* is present in the aquarium trade in the United States. The climate match with the contiguous United States was low. The east coast of peninsular Florida had a medium match; the remainder of the contiguous United States had a low match. Due to lack of information about potential negative impacts from introduction, the certainty of assessment is low and the overall risk for *M. atromaculatus* 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.**

Bluegrass Aquatics. 2018. *Atromaculatus* cichlid REGULAR. Available:

<https://bluegrassaquatics.com/atromaculatus-cichlid-regular.html>. (September 2018).

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available:

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Sanders, S., C. Castiglione, and M. H. Hoff. 2018. Risk Assessment Mapping Program: RAMP, version 3.1. 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.**

Axelrod, H. R. 1993. The most complete colored lexicon of cichlids. T. F. H. Publications, Neptune City, New Jersey.

Stawikowski, R., and U. Werner. 1998. Die Buntbarsche Amerikas, volume 1. Verlag Eugen Ulmer, Stuttgart, Germany.