

Emerald Cichlid (*Hypselecara temporalis*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, Web Version – 1/23/2018



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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2014):

“South America: Amazon River basin, in the Ucayali and Amazon River drainages in Peru, the Amazonas River drainage in Colombia, the Solimões-Amazon River in Brazil, east to Cametá, also rivers of Amapá, Brazil, and the Oyapock River basin in Brazil.”

Status in the United States

No records of *Hypselecara temporalis* in the United States were found.

Means of Introductions in the United States

No records of *Hypselecara temporalis* in the United States were found.

Remarks

Information searches were conducted using the valid name *Hypselecara temporalis* and the junior synonym *Cichlasoma temporalis*.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Eschmeyer et al. (2017):

“*temporalis*, *Heros* Günther [A.] 1862:286 [Catalogue of the fishes in the British Museum v. 4 [...]] No locality (Brazil). Holotype (unique): BMNH 1855.12.26.638 [ex Zool. Soc.]. •Valid as *Cichlasoma temporale* (Günther 1862) -- (Ortega & Vari 1986:20[...]). •Valid as *Hypselecara temporalis* (Günther 1862) -- (Kullander 1986:233 [...], Keith et al. 2000:204 [...], Kullander in Reis et al. 2003:637 [...], Melo et al. 2016:135 [...]). **Current status:** Valid as *Hypselecara temporalis* (Günther 1862).”

Froese and Pauly (2014) list *Heros temporalis*, *Cichlasoma temporale*, *Acara crassa*, *C. crissum*, *H. goeldii*, and *C. hellabrunni* as synonyms of the valid name *Hypselecara temporalis*.

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 *Hypselecara*
Species *Hypselecara temporalis* (Günther, 1862)”

“Taxonomic Status:

Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2014):

“Max length : 15.0 cm SL male/unsexed; [Kullander 2003]; common length: 22.0 cm TL male/unsexed; [Axelrod et al. 1991]”

“Maximum length 30 cm TL [Riehl and Baensch 1996].”

Environment

From Froese and Pauly (2014):

“Freshwater; benthopelagic; pH range: 5.0 - 7.5; dH range: 0.30000001192093 - 20. [...]; 25°C - 30°C [assumed to be recommended aquarium water temperature] [Stawikowski and Werner 1998]”

Climate/Range

From Froese and Pauly (2014):

“Tropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2014):

“South America: Amazon River basin, in the Ucayali and Amazon River drainages in Peru, the Amazonas River drainage in Colombia, the Solimões-Amazon River in Brazil, east to Cametá, also rivers of Amapá, Brazil, and the Oyapock River basin in Brazil.”

Introduced

From FAO (2014):

“*Hypselecara temporalis* introduced to Philippines from ?”

“Status of introduced species in the wild: Unknown”

From Froese and Pauly (2014):

“1993 introduced from Unknown to Philippines”

Means of Introduction Outside the United States

From FAO (2014):

“Introducer: Unknown

Reasons of Introduction: 1) ornamental”

Short Description

A short description of *Hypselecara temporalis* could not be found.

Biology

From Froese and Pauly (2014):

“Found in lentic habitats with turbid, as well as clear waters [Keith et al. 2000]. Acquires deeper color in clear water. Prefers shady zones of quiet waters where it catches its preys at the surface [Keith et al. 2000]. Feeds on insects at or above the surface.”

“Eggs are deposited on verticale [*sic*] substrates and defended by both parents [Riehl and Baensch 1996].”

“In slow flowing, turbid waters [Stawikowski and Werner 1998].”

Human Uses

From Froese and Pauly (2014):

“Fisheries: minor commercial; aquarium: commercial”

Diseases

No records of OIE reportable diseases were found.

From Bittencourt et al. (2014):

“Parasite species: *Ichthyophthirius multifiliis* Host fish: *Hypselecara temporalis*”

Threat to Humans

From Froese and Pauly (2014):

“Harmless”

3 Impacts of Introductions

No records of impacts of introductions were found for *Hypselecara temporalis*.

4 Global Distribution



Figure 1. Known distribution of *Hypselecara temporalis* in Brazil and Peru. Map from Froese and Pauly (2014).



Figure 2. Known global distribution of *Hypselecara temporalis*. Map from GBIF Secretariat (2017).

5 Distribution Within the United States

No records of *Hypselecara temporalis* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypselecara temporalis* was medium for the very southern tip of Florida and low for the rest of the contiguous United States. 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.

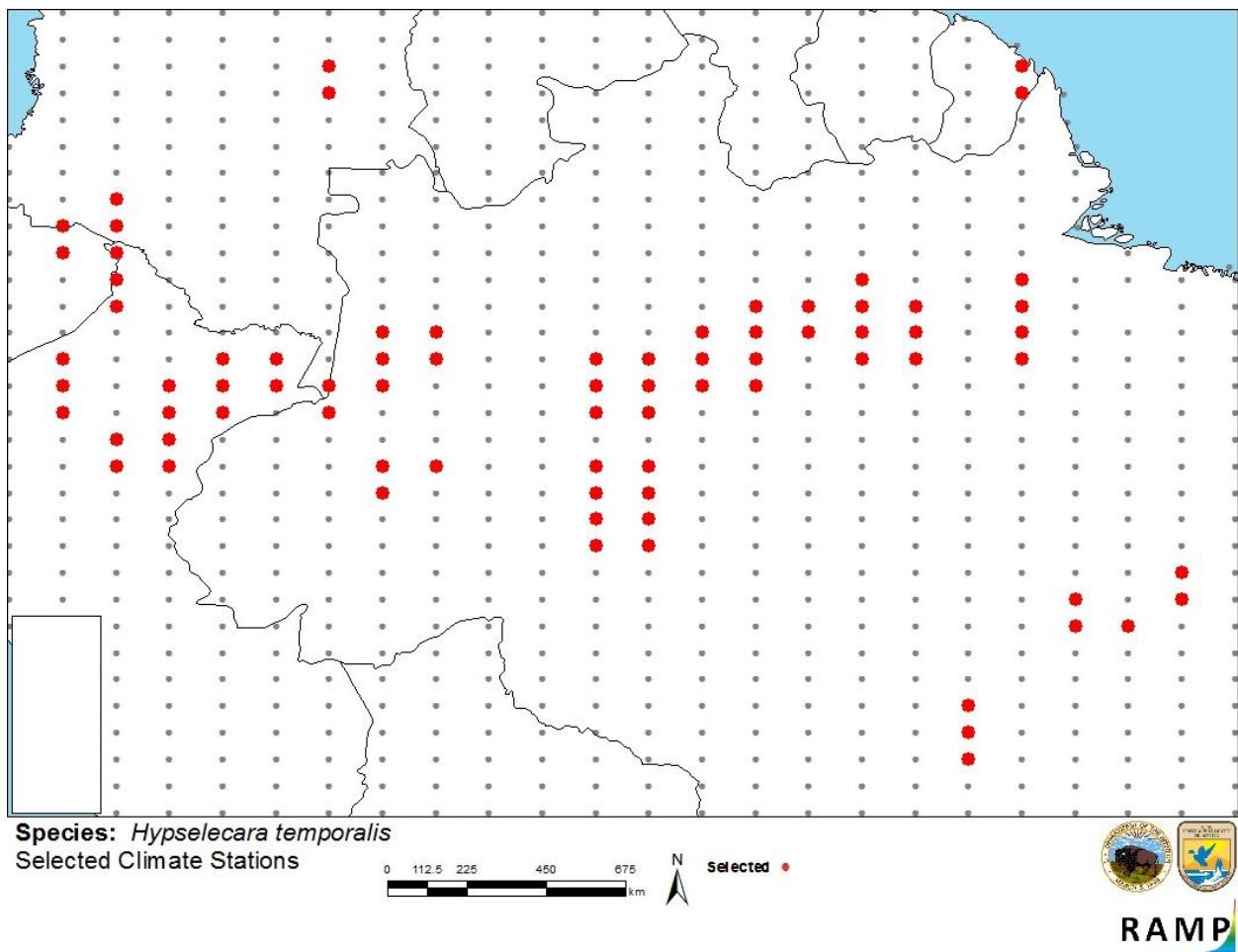


Figure 3. RAMP (Sanders et al. 2014) source map of northern South America showing weather stations selected as source locations (red) and non-source locations (grey) for *Hypselecara temporalis* climate matching. Source locations from Froese and Pauly (2014) and GBIF Secretariat (2017).

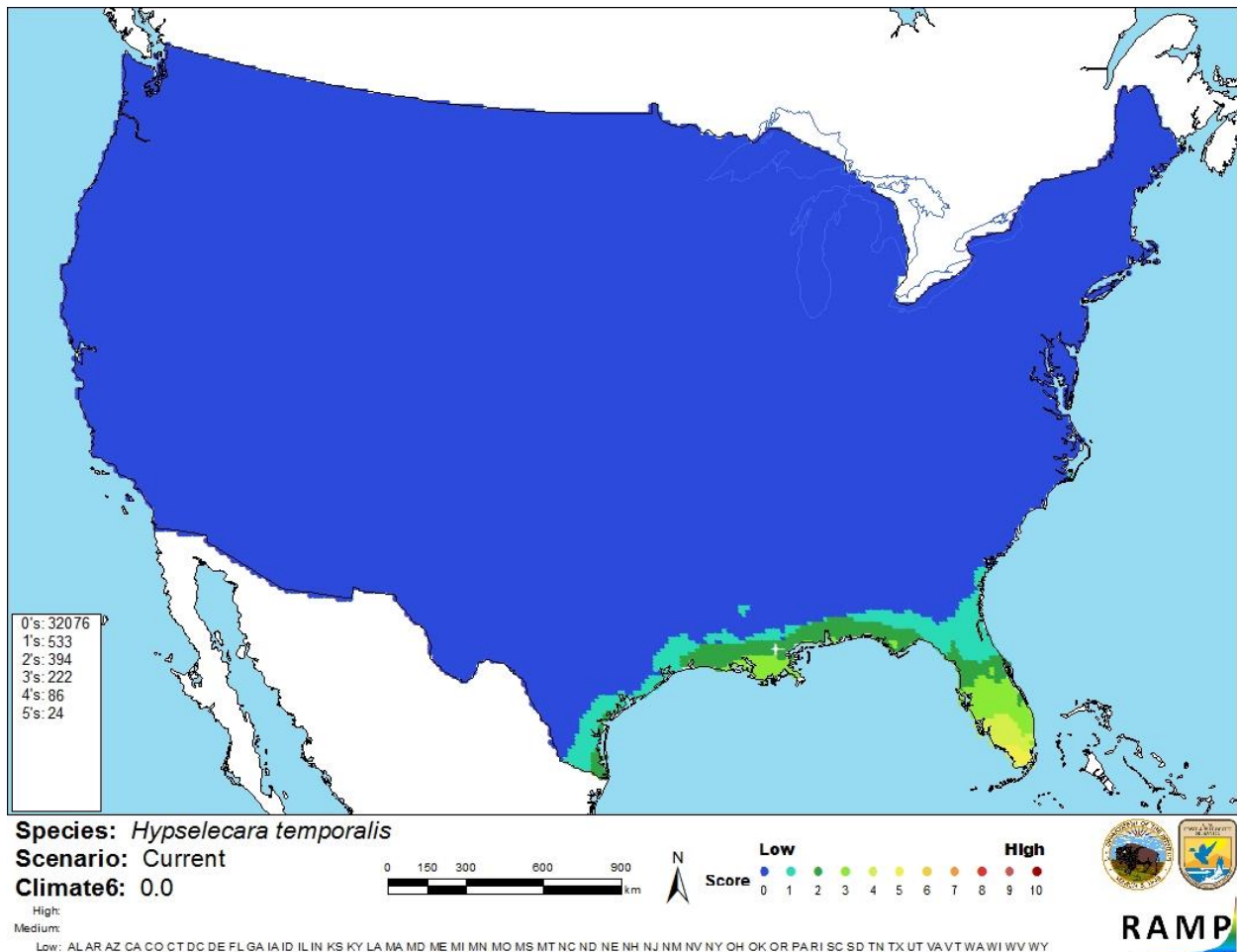


Figure 4. Map of RAMP (Sanders et al. 2014) climate matches for *Hypselecara temporalis* in the contiguous United States based on source locations reported by Froese and Pauly (2014) and GBIF Secretariat (2017). 0 = Lowest match, 10 = Highest match.

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

7 Certainty of Assessment

The certainty of this assessment is medium. There was adequate ecological information available about *Hypselecara temporalis*. One record of introduction was found, no records of any impacts from that introduction were found.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The history of invasiveness for *Hypselecara temporalis* is not documented. There is a record of introduction in the Philippines, but it is not known if that resulted in an established population or if there are any impacts if it did. The climate match is low, but there is a medium match for portions of southern Florida. The certainty of assessment is medium. The overall risk assessment category is uncertain. More information on the history of invasiveness is needed to make a more definitive determination.

Assessment Elements

- **History of Invasiveness (Sec. 3): None Documented**
- **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.

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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.

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