

Chisel-tooth Cichlid (*Cincolichthys bocourti*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, August 2011

Revised, October 2012, August 2018

Web Version, 9/11/2018



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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Central America: Atlantic slope of Guatemala and Belize.”

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 (and see Remarks for synonyms):

From Cichlids of the Americas.com (2018):

“Herichthys Bocourti [*sic*] 1-1.25" \$10.00 Incredible colors on large growing tankbusters!
2-2.5" \$20.00
3-3.5" \$30.00
3.5-4.25" \$35.00”

From Bluegrass Aquatics (2018):

“Herichthys Bocourti [*sic*] Cichlid LARGE
\$53.04”

Means of Introductions in the United States

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

Remarks

According to Froese and Pauly (2018), the following names are synonyms for *Cinzelichthys bocourti*: *Neetroplus bocourti*, *Cichlasoma bocourti*, and *Herichthys bocourti*. All synonyms were used, along with the accepted scientific name, to search for information on this species.

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 Actinopterygii
Class Teleostei
Superorder Acanthopterygii
Order Perciformes
Suborder Labroidei
Family Cichlidae
Genus *Cichlasoma* Swainson, 1839
Species *Cichlasoma bocourti* (Vaillant and Pellegrin, 1902)”

From Fricke et al. (2018):

“Valid as *Cinzelichthys bocourti* (Vaillant & Pellegrin 1902).”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 20.0 cm SL male/unsexed; [Greenfield and Thomerson 1997]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic. [...] 26°C - 28°C [Conkel 1993; unknown whether these temperatures refer to air or water, natural setting or aquarium]”

Climate/Range

From Froese and Pauly (2018):

“Tropical [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Central America: Atlantic slope of Guatemala and Belize.”

Introduced

No known introductions.

Means of Introduction Outside the United States

No known introductions.

Short Description

From McMahan et al. (2015):

“*Cincolichthys* [genus] possess spatulate, chisel-like teeth, and species are deep-bodied and round or oval in overall body shape. Lateral markings appear along the body as wide, irregular bands dorsally to ventrally. Species possess solid black scales dispersed throughout the lateral sides of the body. White- or faint-colored spots are present on the medial and distal portions of the dorsal, caudal, and anal fins. Species possess a small mouth, with the lower jaw extending slightly beyond the upper jaw. The mouth is slightly upturned. A small black spot is present at the center and base of the caudal peduncle. The chisel-like teeth distinguish this genus from all others within the herichthyins except *Kihnichthys*, which also possesses chisel-like teeth, but exhibits a larger blotch filling the caudal peduncle, versus the small spot characteristic of *Cincolichthys*.”

Biology

No information available.

Human Uses

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

From Cichlids of the Americas.com (2018):

“Herichthys Bocourti [*sic*] 1-1.25" \$10.00 Incredible colors on large growing tankbusters!
2-2.5" \$20.00
3-3.5" \$30.00
3.5-4.25" \$35.00”

From Bluegrass Aquatics (2018):

“Herichthys Bocourti [*sic*] Cichlid LARGE
\$53.04”

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

No information available. No introductions of this species have been reported.

4 Global Distribution



Figure 1. Known global distribution of *Cincelichthys bocourti* in Guatemala and Belize. Map from GBIF Secretariat (2017).

5 Distribution Within the United States

No known introductions.

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 of scores for a low climate match is from 0.000 to 0.005, inclusive. The contiguous United States had a low match except for most of peninsular Florida. Every state recorded a low score. The highest match was 5 out of 10 which was recorded in the southern Florida. Majority of the United States recorded 0 out of 10.

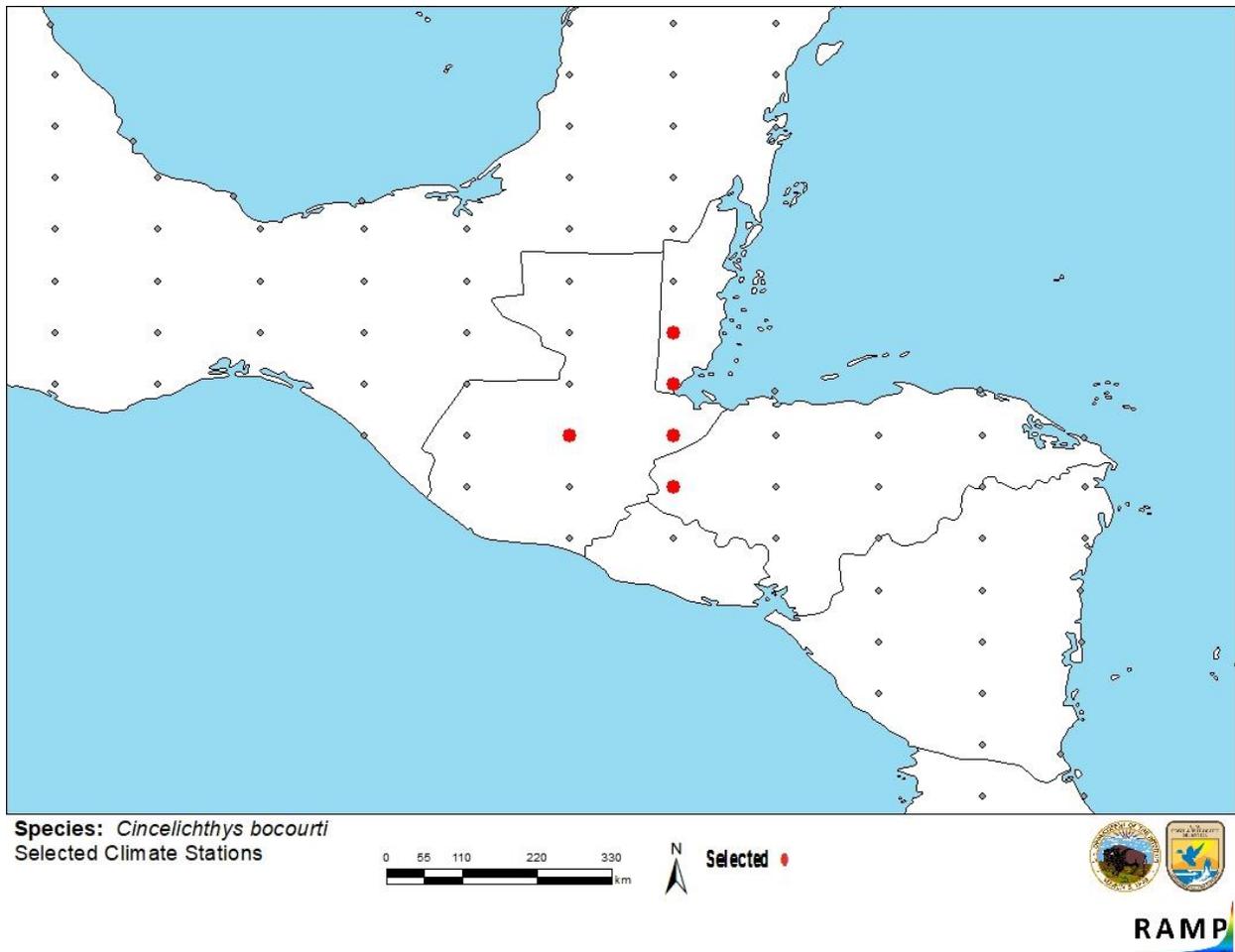


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Guatemala, Belize, Honduras) and non-source locations (gray) for *Cincelichthys bocourti* climate matching. Source locations from GBIF Secretariat (2017). Source climate stations are located within 100 km of species occurrences and do not necessarily represent the exact location of a species occurrence.

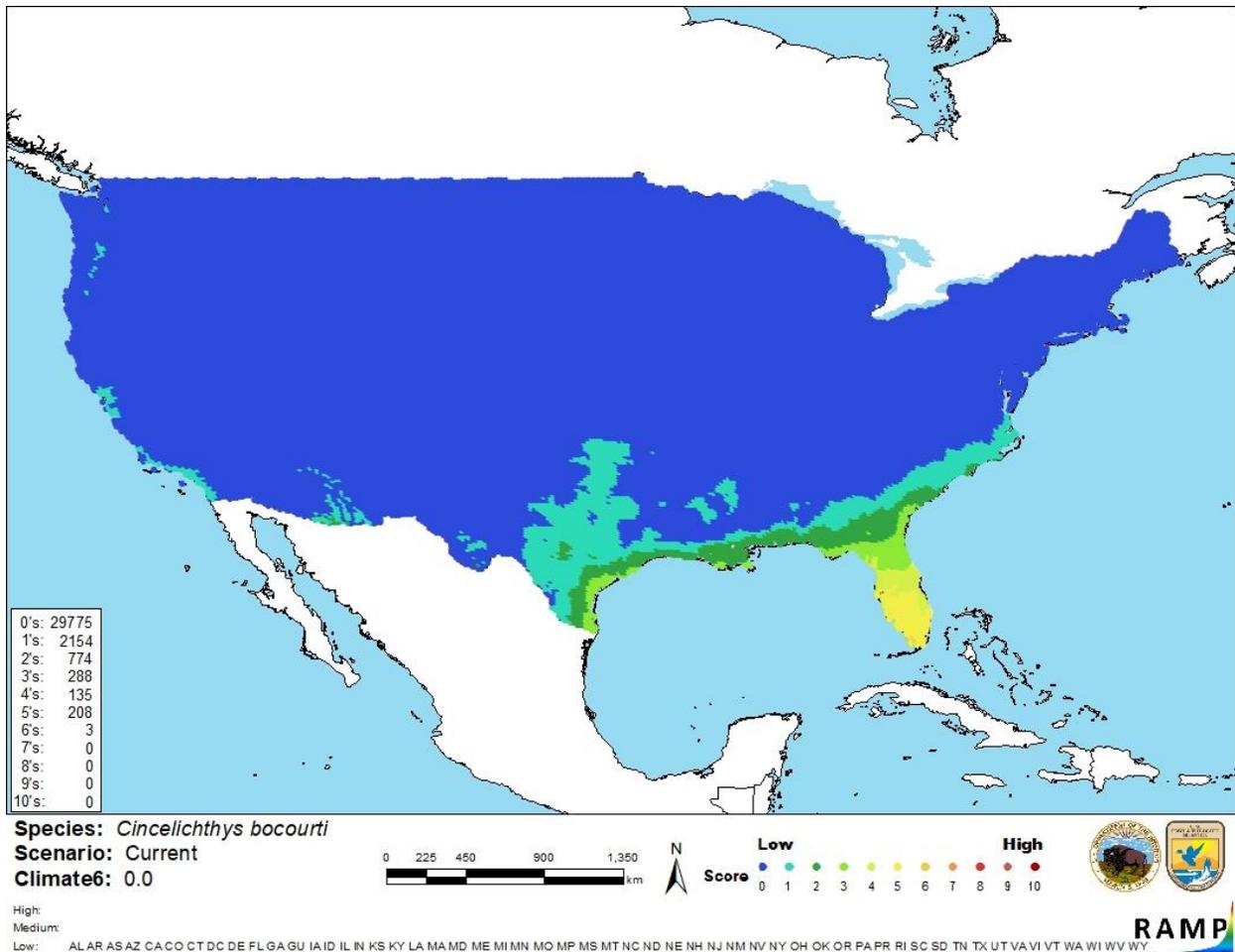


Figure 2. Map of RAMP (Sanders et al. 2018) climate matches for *Cincelichthys bocourti* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0=Lowest match, 10=Highest match.

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

7 Certainty of Assessment

Little information is available on the biology and ecology of *Cincelichthys bocourti*. This fish has not been reported as introduced beyond its native range, therefore there is no information available on impacts of introduction. Due to lack of information, the certainty of assessment is low. More information is needed to increase the assessment certainty.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Chisel-tooth cichlid (*Cincolichthys bocourti*) is a fish native to the Atlantic slope of Guatemala and Belize. There are no reports of introduction of this species outside of its native range. Therefore, there is no information about impacts of introduction of *C. bocourti*, and history of invasiveness is uncertain. *C. bocourti* is present in the aquarium trade in the United States. The climate match with the contiguous United States is low, with the highest match in southern Florida. All states recorded a low climate score. The majority of the contiguous United States recorded 0 out of 10. Due to lack of information about potential negative impacts from introduction, the assessment certainty is low and the overall risk for *C. bocourti* 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.

Bluegrass Aquatics. 2018. Herichthys Bocourti Cichlid LARGE. Available: <https://bluegrassaquatics.com/herichthys-bocourti-cichlid-large.html>. (September 2018).

Cichlids of the Americas.com. 2018. Stock list. Available: <http://www.cichlidsoftheamericas.com/id2.html>. (September 2018).

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>. (September 2018).

Froese, R., and D. Pauly, editors. 2018. *Cincolichthys bocourti* (Vaillant & Pellegrin, 1902). FishBase. Available: <https://www.fishbase.de/summary/Cincolichthys-bocourti.html>. (August 2018).

GBIF Secretariat. 2017. GBIF backbone taxonomy: *Cincolichthys bocourti* (Vaillant & Pellegrin, 1902). Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/9574362>. (August 2018)

ITIS (Integrated Taxonomic Information System). 2018. *Cichlasoma bocourti* (Vaillant and Pellegrin, 1902). Integrated Taxonomic Information System, Reston, Virginia. Available:

https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=649451#null. (September 2018).

McMahan, C. D., W. A. Matamoros, K. R. Piller, and P. Chakrabarty. 2015. Taxonomy and systematics of the herichthyins (Cichlidae: Tribe Heroini), with the description of eight new Middle American Genera. *Zootaxa*. 3999(2):211-234.

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

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.

Conkel, D. 1993. *Cichlids of North and Central America*. T. F. H. Publications, Inc., New Jersey.

Greenfield, D. W., and J. E. Thomerson. 1997. *Fishes of the continental waters of Belize*. University Press of Florida, Florida.