

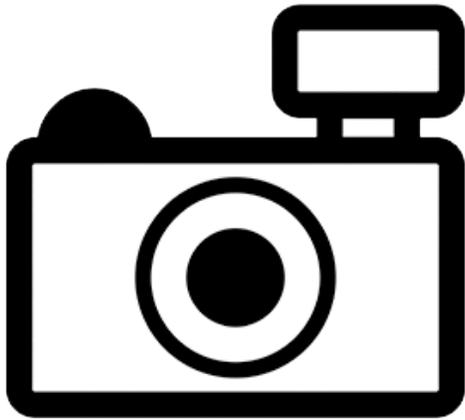
***Hypostomus cordovae* (a catfish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, March 2013

Revised, August 2018

Web Version, 8/31/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018; *H. cordovae* synonymized with *H. paranensis*):

“South America [Argentina, questionable in Paraguay]: Bermejo, Dulce, Uno, Secundo, and middle Paraná River basins.”

“[In Argentina:] Known from Río Paraná basin and río Paraguay basin [Zawadzki et al. 2014]. Recorded from lakes along Río Paraná near Santa Fe [Burgess 1989]; Bermejo, Dulce, Uno, Secundo, and middle Paraná River basins [Weber 2003].”

From Ramallo (2009):

“[...] *H. cordovae* is endemic in Argentina (López & Miquelarena, 1991).”

Miquelarena et al. (1990) report *Hypostomus cordovae* as present in the Calera River, El Cadillal dam, La Aguadita dam, and El Tala Creek in the Sali River basin, Argentina.

Status in the United States

No records of *Hypostomus cordovae* in the wild or in trade in the United States were found.

Means of Introductions in the United States

No records of *Hypostomus cordovae* in the wild in the United States were found.

Remarks

Hypostomus cordovae is a valid species according to Eschmeyer et al. (2018). Within the last decade it has also been considered by some to be a synonym of *H. paranensis* (Ferraris 2007, Martins et al. 2014 in Eschmeyer et al. 2018). Eschmeyer et al. (2018), considers *H. paranensis* to be a separate (and also valid) species from *H. cordovae*. Some databases still follow the synonymy (i.e. Froese and Pauly 2018) so some information provided in this ERSS may apply to *H. paranensis* and not to *H. cordovae*. Information clearly about *H. paranensis* only was not included. Where it is not possible to determine which species the information applies to, it is indicated throughout the ERSS.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Hyposotmus cordovae* (Günther 1880) is the current valid name for this species. It was originally described as *Plecostomus cordovae* Günther 1880 and was at one time considered a synonym of *Hypostomus paranensis*.

From ITIS (2018):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysii
Order Siluriformes
Family Loricariidae
Subfamily Hypostominae
Genus *Hypostomus*
Species *Hypostomus cordovae* (Günther, 1880)”

Size, Weight, and Age Range

From Froese and Pauly (2018; *H. cordovae* synonymized with *H. paranensis*):

“Max length : 18.1 cm SL male/unsexed; [Weber 2003]”

Environment

From Froese and Pauly (2018; *H. cordovae* synonymized with *H. paranensis*):

“Freshwater; demersal.”

From Hued and Bistoni (2005):

“A fish species could be considered as intolerant if its abundance or distribution has been drastically reduced or if it is retracted [*sic*] to high water quality sites. According to the performed analyses, *O. jenynsi*, *A. eigenmanniorum*, *B. iheringi*, *Ch. interruptus*, *P. laticeps*, *R. catamarcensis*, and *H. cordovae* were considered as intolerant species; [...]”

Climate/Range

From Froese and Pauly (2018; *H. cordovae* synonymized with *H. paranensis*):

“Subtropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018; *H. cordovae* synonymized with *H. paranensis*):

“South America [Argentina, questionable in Paraguay]: Bermejo, Dulce, Uno, Secundo, and middle Paraná River basins.”

“[In Argentina:] Known from Río Paraná basin and río Paraguay basin [Zawadzki et al. 2014]. Recorded from lakes along Río Paraná near Santa Fe [Burgess 1989]; Bermejo, Dulce, Uno, Secundo, and middle Paraná River basins [Weber 2003].”

From Ramallo (2009):

“[...] *H. cordovae* is endemic in Argentina (López & Miquelarena, 1991).”

Miquelarena et al. (1990) report *Hypostomus cordovae* as present in the Calera River, El Cadillal dam, La Aguadita dam, and El Tala Creek in the Sali River basin, Argentina.

Introduced

No records of *Hypostomus cordovae* introductions were found.

Means of Introduction Outside the United States

No records of *Hypostomus cordovae* introductions were found.

Short Description

A short description of *Hypostomus cordovae* was not found.

Biology

From Hued and Bistoni (2005):

“[...] *H. cordovae* are recognized as ‘limnivore species’ [eating algae, microorganisms, and bio-films] [...]

Human Uses

No information on human uses of *Hypostomus cordovae* was found.

Diseases

No records of OIE-reportable diseases were found for *Hypostomus cordovae*.

Ramallo (2009) list *H. cordovae* as a host for *Raphidascaris marano*,

Threat to Humans

From Froese and Pauly (2018; *H. cordovae* synonymized with *H. paranensis*):

“Harmless”

3 Impacts of Introductions

No records of *Hypostomus cordovae* introductions were found, therefore there is no information on impacts of introductions.

4 Global Distribution



Figure 1. Known distribution of *Hypostomus cordovae*. Location is in Argentina. Map from GBIF Secretariat (2018). The specimen that this record pertains to was identified as *H. cordovae* and not *H. paranensis*.

Additional observations for *Hypostomus cordovae* in Argentina are given in Miquelarena et al. (1990), Hued and Bistoni (2005), Ramallo (2009), Fernández and Bechara (2010), and Maggioni et al. (2012).

5 Distribution Within the United States

No records of *Hypostomus cordovae* in the wild in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Hypostomus cordovae* was high in western Texas and southern Arizona and New Mexico. The climate match was medium in southern Florida, the southern central United States, and small parts of the upper Great Plains and California's Pacific Coast. Everywhere else in the contiguous United States was low. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.057, medium. The range for a medium climate score is between 0.005 and 0.103. The following states had high individual climate scores: Arizona, New Mexico, and Texas; Florida has a medium climate score.

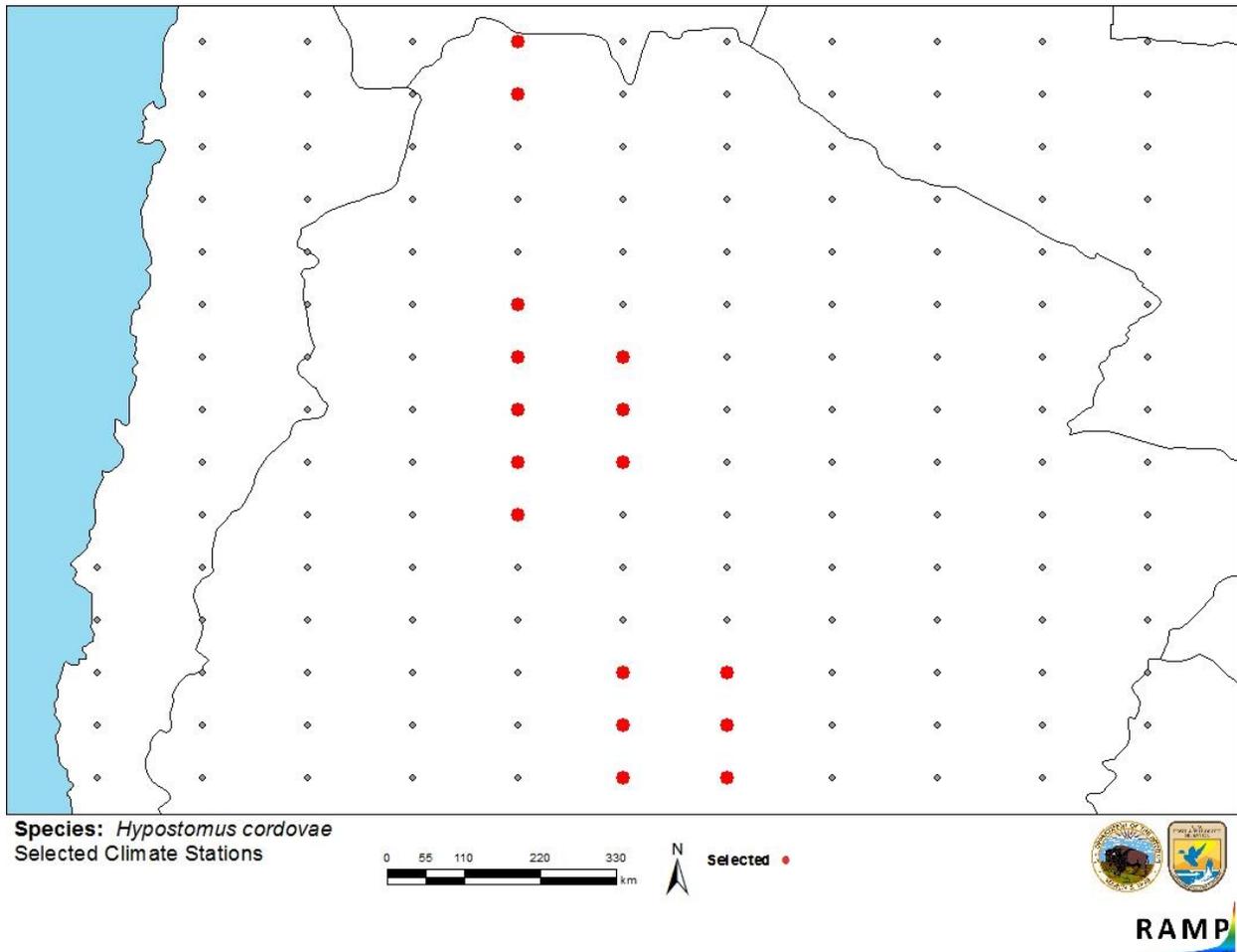


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations selected as source locations (red; Argentina) and non-source locations (gray) for *Hypostomus cordovae* climate matching. Source locations from Miquelarena et al. (1990), Hued and Bistoni (2005), Ramallo (2009), Fernández and Bechara (2010), Maggioni et al. (2012), and GBIF Secretariat (2018).

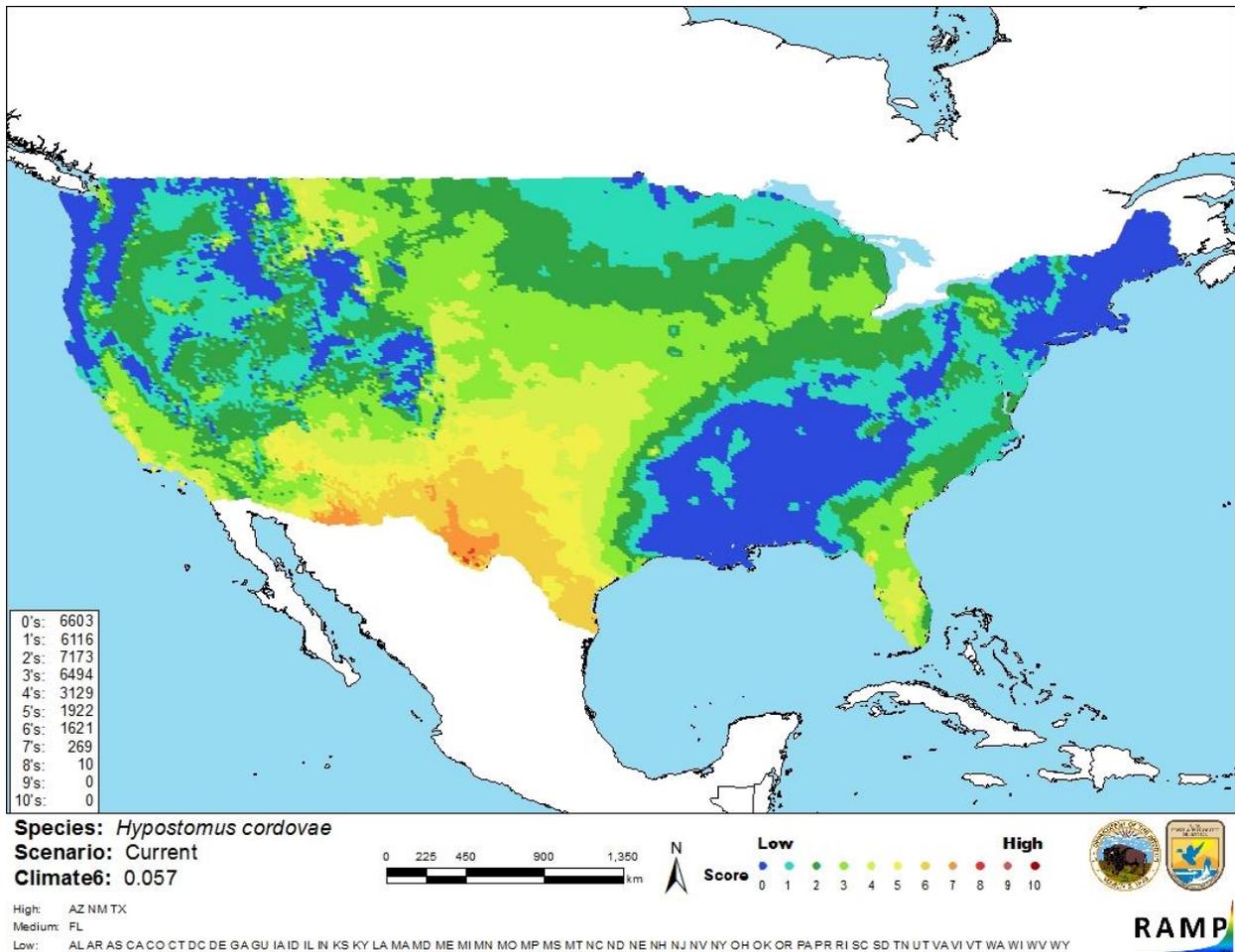


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Hypostomus cordovae* in the contiguous United States based on source locations reported by Miquelarena et al. (1990), Hued and Bistoni (2005), Ramallo (2009), Fernández and Bechara (2010), Maggioni et al. (2012), and GBIF Secretariat (2018). 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 *Hypostomus cordovae* is low. There is a minimal information available for this species. There is some taxonomic confusion in the literature and databases between this species and the cogener *H. paranensis*, with some authors treating them as one species. Further, it is uncertain if this species is present in Paraguay. The taxonomic confusion

and uncertainty about distribution contribute to uncertainty in results of the assessment. There were no records of introductions found, so impacts of introduction are unknown.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Hypostomus cordovae is an armored catfish native to northern Argentina. *H. cordovae* eats algae and other microorganisms and is intolerant to degraded environmental conditions. The history of invasiveness is uncertain. No records of introduction were found therefore there is no information on impacts of introduction. The climate match was medium. However, Arizona, New Mexico, and Texas had high individual climate scores. The certainty of assessment is low. Uncertainty in the range and the taxonomic confusion between this species and *H. paranensis* lowers the certainty of the assessment. 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 additional information.
- **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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Fernández, L., and J. A. Bechara. 2010. An assessment of fish communities along a piedmont river receiving organic pollution (Aconquija Mountains, Argentina). *Acta Biológica Colombiana* 15(2):79–100.

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- Miquelarena, A. M., R. C. Menni, H. L. Lopez, and J. R. Casciotta. 1990. Ichthyological and limnological observations on the Sali river basin (Tucuman, Argentina). *Ichthyological Explorations of Freshwaters* 1(3):269–276.
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- 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.

- Burgess, W. E. 1989. An atlas of freshwater and marine catfishes. A preliminary survey of the Siluriformes. T. F. H. Publications, Neptune City, New Jersey.
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