

Bandit Corydoras (*Corydoras melini*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, Web Version – 1/4/2018



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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2014):

“South America: Upper Negro and Meta River basins [Brazil and Colombia].”

From Reis and Lima (2009):

“This species is known from the Rio Uaupés (Rio Negro drainage) in Amazonas, Brazil, specifically from the Rio Uaupés itself and its tributary, the Rio Tiquié. It is also known from the Rio Caquetá basin and upper Rio Guaviare (a tributary of the Orinoco River) basins in Colombia.”

GBIF Secretariat (2014) shows *Corydoras melini* as present in Ecuador.

Status in the United States

No records of *Corydoras melini* in the United States were found.

Means of Introductions in the United States

No records of *Corydoras melini* in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2014):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Callichthyidae
Subfamily Corydoradinae
Genus *Corydoras* Lacepède, 1803
Species *Corydoras melini* Lönnberg and Rendahl, 1930

Taxonomic Status: Current Standing: valid”

From Eschmeyer et al. (2017):

“***melini*, *Corydoras*** Lönnberg [E.] & Rendahl [H.] 1930:1, Fig. 1 [Arkiv för Zoologi v. 22 A (no. 5)] Iuaretê (0°35'N, 69°13'W) at confluence of Rio Papurí and Rio Uaupés, Rio Negro system, Amazonas, Brazil. Lectotype: NRM 11091. Paralectotypes: NRM 10142 (4). Type catalog: Ferraris 2007:120. Lectotype selected by Nijssen & Isbrücker 1980:209. •Valid as *Corydoras melini* Lönnberg & Rendahl 1930 -- (Nijssen & Isbrücker 1980:209, Burgess 1989:366, Isbrücker 2001:229, Reis in Reis et al. 2003:300, Britto & Lima 2003:89, Ferraris 2007:120,

Tencatt & Ohara 2016:[13], Tencatt et al. 2016:[17]). **Current status:** Valid as *Corydoras melini* Lönnberg & Rendahl 1930. Callichthyidae: Corydoradinae.”

Size, Weight, and Age Range

From Froese and Pauly (2014):

“Max length: 5.0 cm SL male/unsexed; [Reis 2003]”

From Nijssen and Isbrücker (1983):

“In 13 specimens of *C. melini* (SL 28.0-44.4 mm, including the lectotype and paralectotypes), the body depth in SL is 2.4-2.8, [...] whereas the body width of *C. melini* is 3.4-4.5 in SL, [...]”

Environment

From Froese and Pauly (2014):

“Freshwater; demersal; pH range: 6.0 - 8.0; dH range: 2 - 25. [...]; 22°C - 26°C [assumed to be recommended aquarium water temperature] [Riehl and Baensch 1996]”

Climate/Range

From Froese and Pauly (2014):

“Tropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2014):

“South America: Upper Negro and Meta River basins [Brazil and Colombia].”

From Reis and Lima (2009):

“This species is known from the Rio Uaupés (Rio Negro drainage) in Amazonas, Brazil, specifically from the Rio Uaupés itself and its tributary, the Rio Tiquié. It is also known from the Rio Caquetá basin and upper Rio Guaviare (a tributary of the Orinoco River) basins in Colombia.”

GBIF Secretariat (2014) shows *Corydoras melini* as present in Ecuador.

Introduced

No records of *Corydoras melini* introduced outside of its native range were found.

Means of Introduction Outside the United States

No records of *Corydoras melini* introduced outside of its native range were found.

Short Description

From Nijssen and Isbrücker (1983):

“*Corydoras melini* is reminiscent of *C. metae* in morphometric and meristic characters, and in details of their colour pattern. However, *C. melini* has a whitish ground colour, [...]. *Corydoras melini* has an unpigmented area dorsal to the oblique stripe on the body, posterior to the base of the last dorsal fin ray (fig. 9 [in source material]).”

“*Corydoras melini* has 23-25/21-23 dorso-/ and ventrolateral body scutes”

Biology

From GBIF (2013):

“It feeds on worms, benthic crustaceans, insects, and plant matter. It lays eggs in dense vegetation and adults do not guard the eggs. The female holds 2-4 eggs between her pelvic fins, where the male fertilizes them for about 30 seconds. Only then does the female swim to a suitable spot, where she attaches the very sticky eggs. The pair repeats this process until about 100 eggs have been fertilized and attached.”

From Reis and Lima (2009):

“Occurs in a large and pristine area in mid sized rivers.”

Human Uses

From Froese and Pauly (2014):

“Fisheries: of no interest; aquarium: commercial”

From Reis and Lima (2009):

“The species is collected in the Rio Tiquie (upper Rio Negro) for the aquarium trade, but the effects of harvest seem to be negligible.”

Diseases

No records of OIE reportable diseases were found.

From Froese and Pauly (2014):

“Cestoda infestation, Parasitic infestations (protozoa, worms, etc.)
Metacercaria Infection (Flatworms), Parasitic infestations (protozoa, worms, etc.)
Bacterial Infections (general), Bacterial diseases”

Threat to Humans

From Froese and Pauly (2014):

“Harmless”

3 Impacts of Introductions

No records of *Corydoras melini* introduced outside of its native range were found.

4 Global Distribution



Figure 1. World map showing the known global distribution of *Corydoras melini* in Brazil, Colombia, and Ecuador. Map from GBIF Secretariat (2014).

5 Distribution Within the United States

No records of *Corydoras melini* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Corydoras melini* was low for the entire 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.

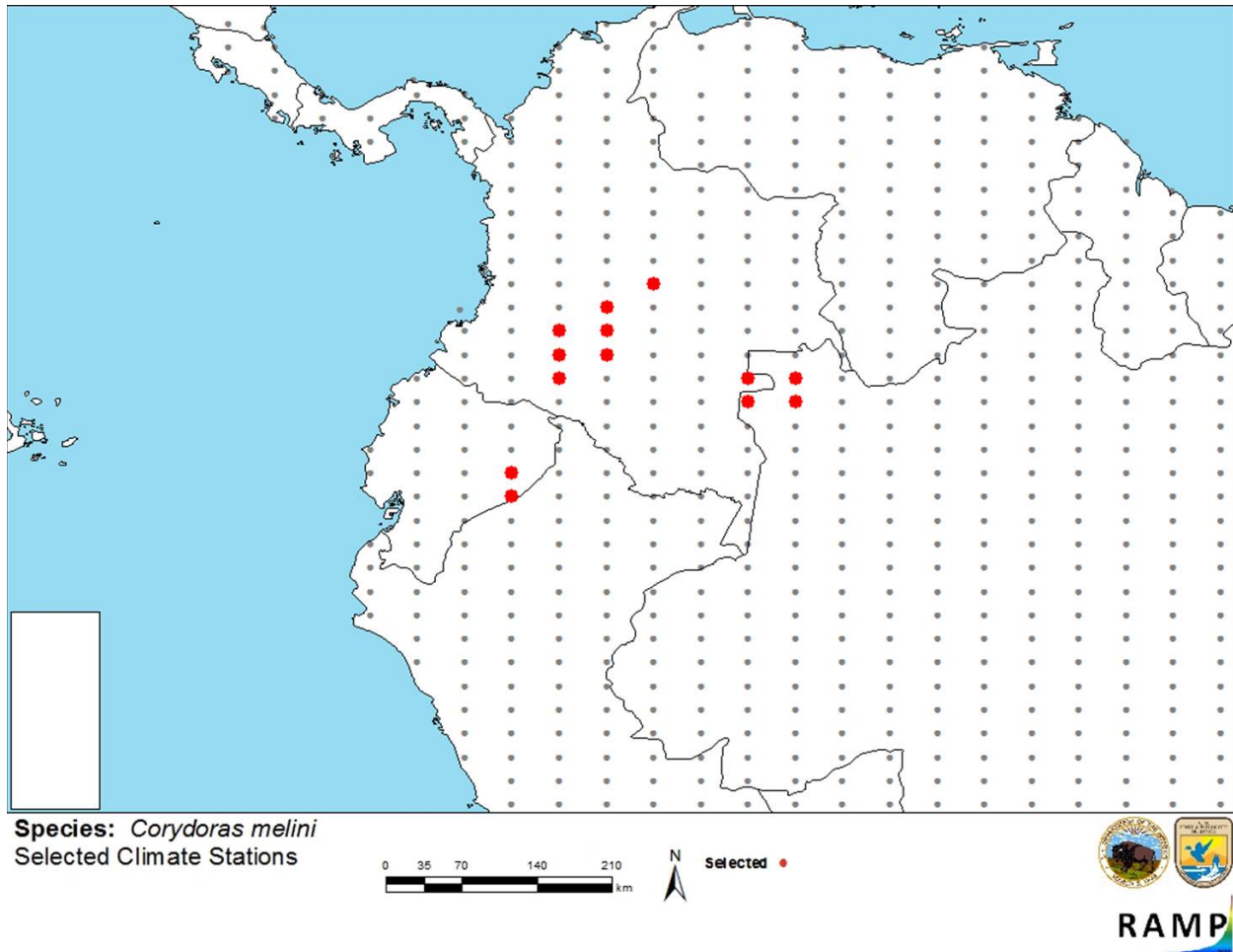


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in Brazil, Colombia, and Ecuador that were selected as source locations (red) and non-source locations (grey) for *Corydoras melini* climate matching. Source locations from GBIF Secretariat (2014).

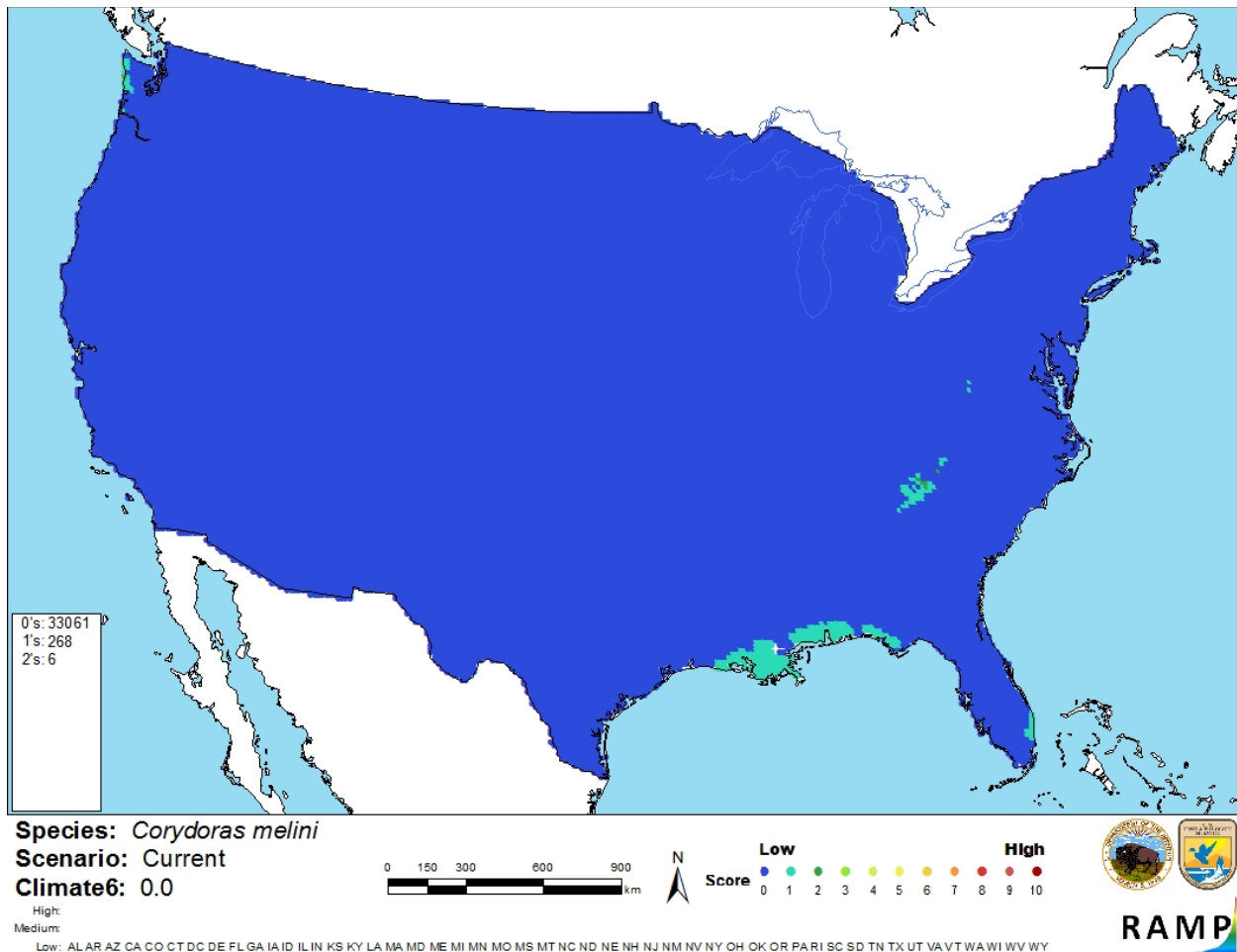


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Corydoras melini* in the contiguous United States based on source locations reported by GBIF Secretariat (2014). 0 = Lowest match, 10 = Highest match.

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

There is minimal information available for *Corydoras melini*. Although this species may be popular in the pet trade, the amount of scientific information is lacking. The certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The history of invasiveness for *Corydoras melini* is uncertain. No records of introductions were found. The climate match was very low across the United States. The certainty of assessment is low. Minimal information was available for this species. The overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Low**
- **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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Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk assessment mapping program: RAMP. 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.

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Tencatt, L. F. C., and W. M. Ohara. 2016. Two new species of *Corydoras* Lacépède, 1803 (Siluriformes: Callichthyidae) from the rio Madeira basin, Brazil. *Neotropical Ichthyology* 14(1):139–154.