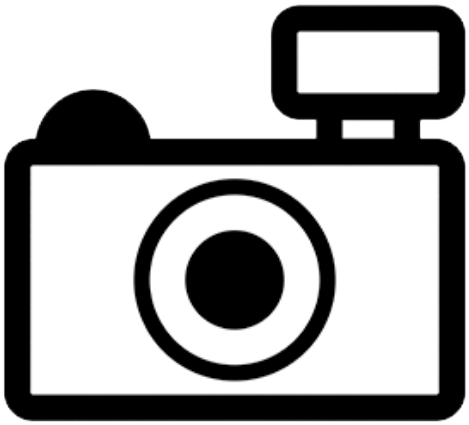
Whiptail Loricaria (*Rineloricaria parva*) (a catfish)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, Web Version – 12/11/2017



1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2014):

"South America: Paraguay River basin."

Rineloricaria parva is native to Argentina, Brazil, and Paraguay (Froese and Pauly 2014).

Status in the United States

No records of *Rineloricaria parva* in the United States were found. No information on trade of this species was found.

Means of Introductions in the United States

No records of *Rineloricaria parva* in the United States were found.

Remarks
The common name 'Whiptail loricaria' is applied to multiple species in the genus *Rineloricaria*.

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 Loricariidae
Subfamily Loricariinae
Genus *Rineloricaria* Bleeker, 1862
Species *Rineloricaria parva* (Boulenger, 1895)"

"Taxonomic Status:
Current Standing: valid"

From Eschmeyer et al. (2017):

"***parva, Loricaria*** Boulenger [G. A.] 1895:527 [Proceedings of the Zoological Society of London 1895 (pt 3) […]] Descalvados, Mato Grosso, Brazil. Lectotype: BMNH 1895.5.17.91 (85.1 mm SL). Paralectotypes: BMNH 1895.5.17.92-96. Type catalog: Ferraris 2007:246 […]. Lectotype selected by Isbrücker 1979:112 […]. •Valid as *Hemiloricaria parva* (Boulenger 1895) -- (Isbrücker et al. 2001:23 […], Isbrücker 2001:27, 29 […], Isbrücker 2002:17 […], López et al. 2003:45 […], Menni 2004:81 […], Ferraris 2007:246 […]). •Valid as *Rineloricaria parva* (Boulenger 1895) -- (Isbrücker 1980:108 […], Isbrücker 1981:88 […], Burgess 1989:442[…], Britski et al. 1999:131 […], Rodriguez 2001:169 […], Ferraris in Reis et al. 2003:343 […], Casciotta et al. 2003:125 […] as cf. *parva*, Rodríguez & Miquelarena 2005:2 […], Ghazzi 2008:102 […], Vera-Alcaraz et al. 2012:302 […], Litz & Koerber 2014:27 […], Sarmiento et al. 2014:192 […], Mirande & Koerber 2015:46 […], Bertaco et al. 2016:420 […], Koerber et al. 2017:67 […]). **Current status:** Valid as *Rineloricaria parva* (Boulenger 1895). Loricariidae: Loricariinae."

Size, Weight, and Age Range
From Froese and Pauly (2014):

"Max length : 11.0 cm SL male/unsexed; [Ferraris 2003]"

Environment
From Froese and Pauly (2014):

"Freshwater; demersal."

Climate/Range
From Froese and Pauly (2014):

"Subtropical"

Distribution Outside the United States
Native
From Froese and Pauly (2014):

"South America: Paraguay River basin."

Rineloricaria parva is native to Argentina, Brazil, and Paraguay (Froese and Pauly 2014).

Introduced
No records of *Rineloricaria parva* introductions outside of the United States were found.

Means of Introduction Outside the United States
No records of *Rineloricaria parva* introductions outside of the United States were found.

Short Description
A short description of *Rineloricaria parva* was not found.

Biology
Information about the biology of *Rineloricaria parva* was not found.

Human Uses
Information about human uses of *Rineloricaria parva* was not found.

Diseases
Information about parasites and pathogens of *Rineloricaria parva* was not found.

Threat to Humans

From Froese and Pauly (2014):

"Harmless"

3 Impacts of Introductions

No records of any *Rineloricaria parva* introductions were found.

4 Global Distribution

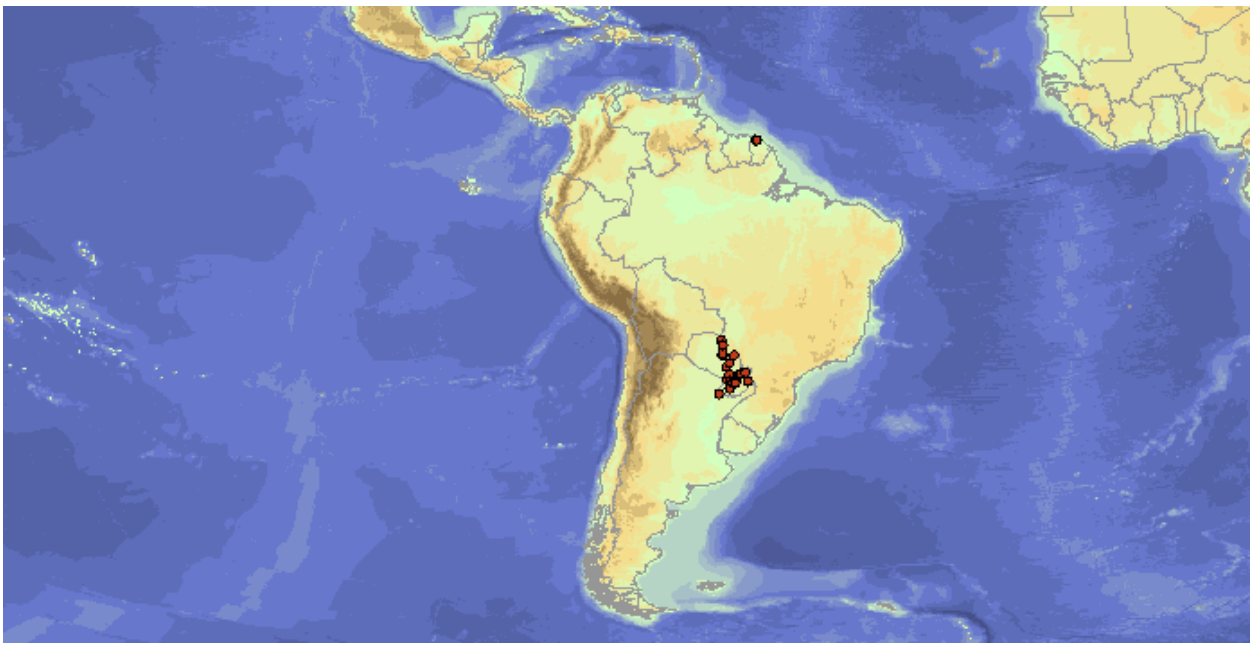


Figure 1. Known global distribution of *Rineloricaria parva*. Map from Froese and Pauly (2014).

The northernmost point is outside the documented range of this species and could not be confirmed to be the result of an actual population. It was not used as a source point for the climate match.

Figure 2. Known global distribution of *Rineloricaria parva*. Map from GBIF Secretariat (2013).

5 Distribution Within the United States

No records of *Rineloricaria parva* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Rineloricaria parva* was high for Florida and the Gulf Coast. The match was medium for the southeast and low for the rest of the United States. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous U.S. was 0.051, medium. It was individually high in Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina, and Texas.

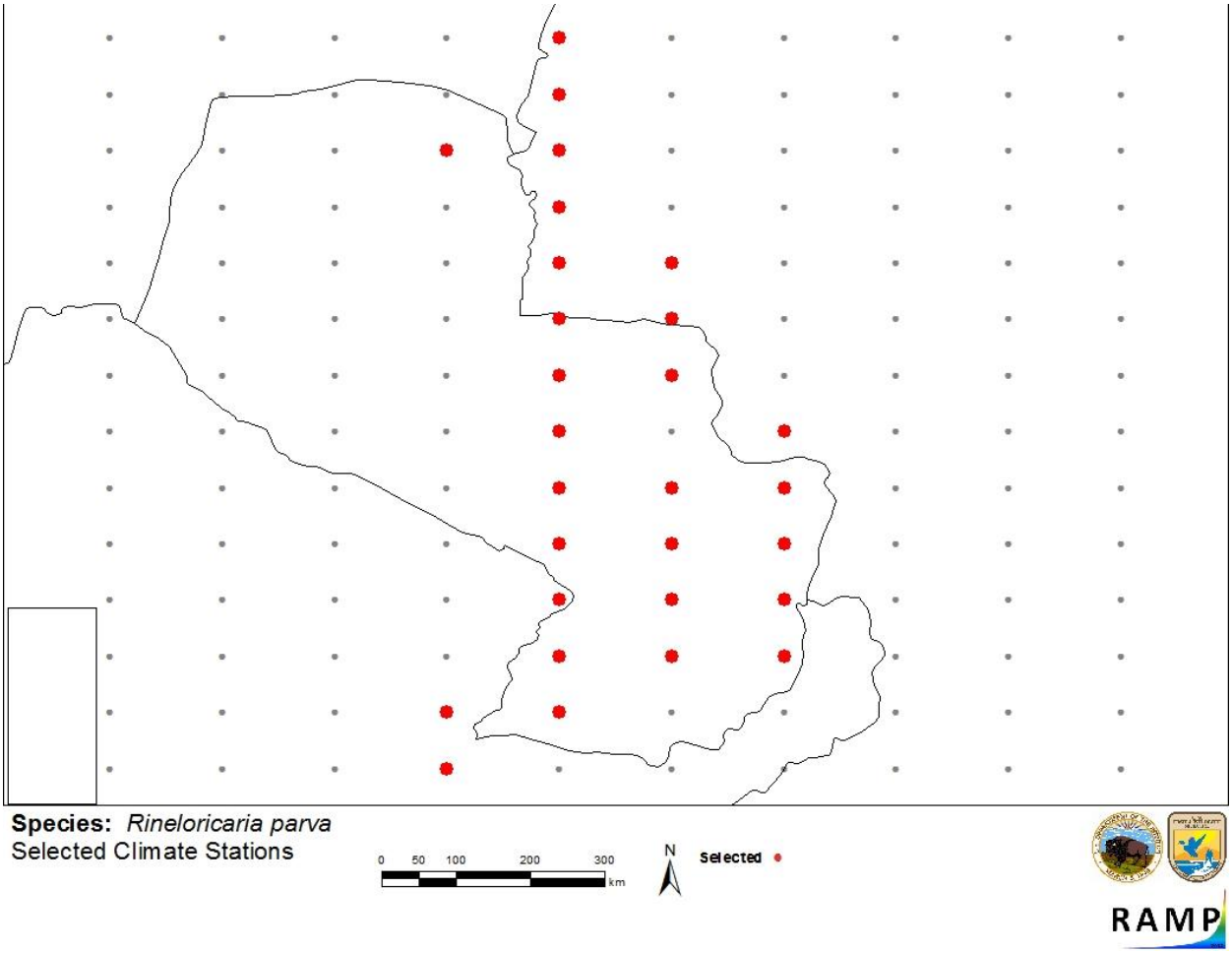


Figure 3. RAMP (Sanders et al. 2014) source map showing weather stations in Brazil and Paraguay selected as source locations (red) and non-source locations (grey) for *Rineloricaria parva* climate matching. Source locations from Froese and Pauly (2014) and GBIF Secretariat (2014).

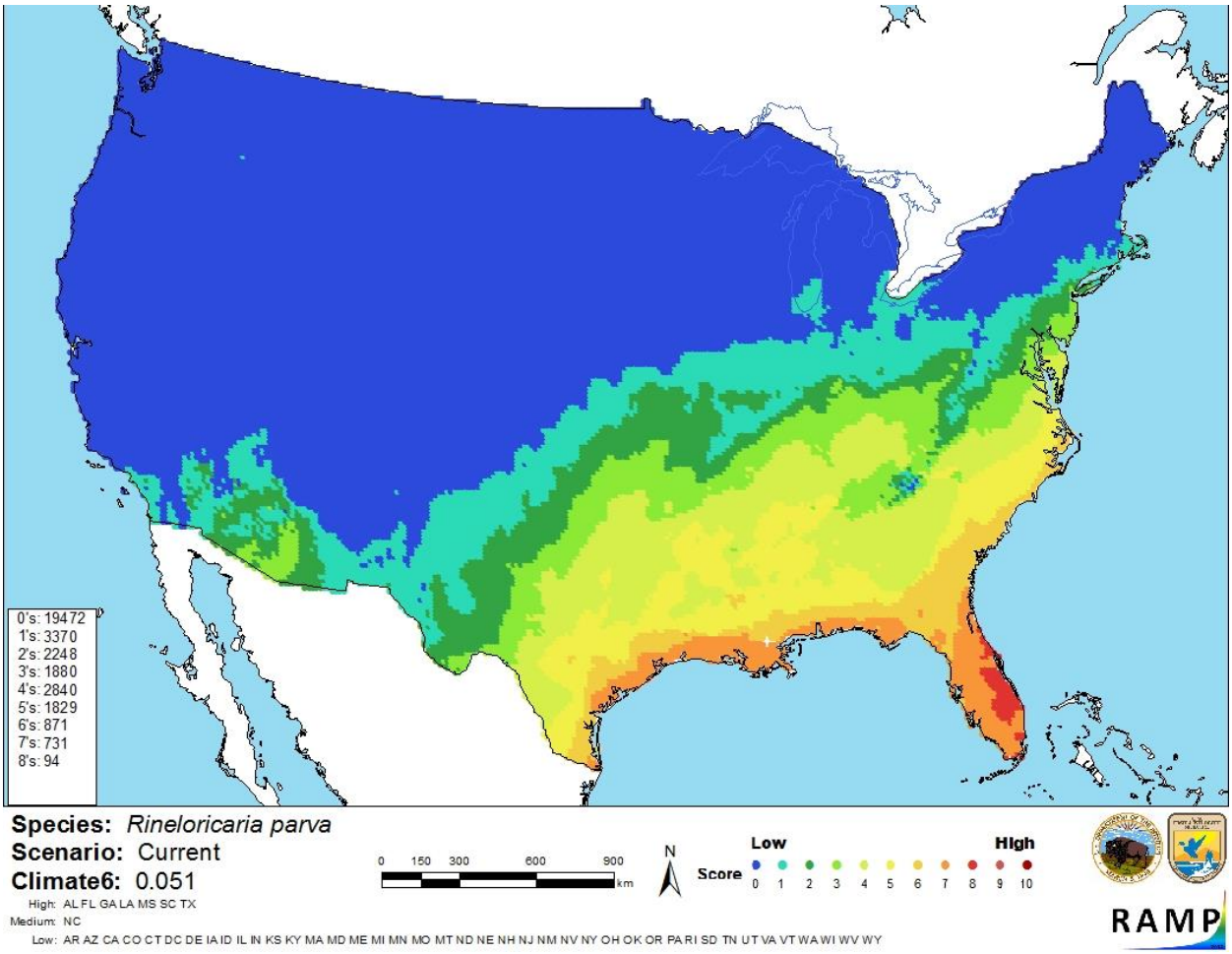


Figure 4. Map of RAMP (Sanders et al. 2014) climate matches for *Rineloricaria parva* in the contiguous United States based on source locations reported by Froese and Pauly (2014) and GBIF Secretariat (2014). 0 = Lowest match, 10 = Highest match.

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≤X≤0.005	Low
0.005<X<0.103	Medium
≥0.103	High

7 Certainty of Assessment

This assessment has low certainty. Minimal biological information was available for *Rineloricaria parva*. No records of any introductions outside of its natural range were found.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The history of invasiveness for *Rineloricaria parva* is uncertain. There were no records of *Rineloricaria parva* introductions. The climate match is 0.051, medium, with the areas of highest match in the southeast. 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 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.

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2017. Catalog of fishes: genera, species, references. Available: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp. (July 2017).

Froese, R., and D. Pauly, editors. 2014. *Rineloricaria parva* (Boulenger, 1895). FishBase. Available: http://www.fishbase.de/summary/Rineloricaria-parva.html. (August 2014).

GBIF Secretariat. 2014. GBIF backbone taxonomy: *Rineloricaria parva* (Boulenger, 1895). Global Biodiversity Information Facility, Copenhagen. Available: http://www.gbif.org/species/2339130. (August 2014).

ITIS (Integrated Taxonomic Information System). 2014. *Rineloricaria parva* (Boulenger, 1895). Integrated Taxonomic Information System, Reston, Virginia. Available: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=640023. (August 2014).

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.

Bertaco, V. A., J. Ferrer, F. R. Carvalho, and L. R. Malabarba. 2016. Inventory of the freshwater fishes from a densely collected area in South America -- a case study of the current knowledge of Neotropical fish diversity. Zootaxa 4138(3):401–440.

Boulenger, G. A. 1895. [Account of a large collection of fishes formed by Dr. C. Ternetz at various localities in Matto Grosso and Paraguay.]. Proceedings of the Zoological Society of London 1895(3):523–529.

Britski, H. A., K. Z. de Sz. de Silimon, and B. S. Lopes. 1999. Peixes do Pantanal. Manual de identificaçao. Embrapa. Serviçao de Produçal -SPI, Brasía, DF.

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.

Casciotta, J. R., A. E. Almirón, and J. A. Bechara. 2003. Los peces de la laguna Iberiá. Colección Universitaria Ciencias Naturales.

Ferraris, C. J. Jr. 2003. Loricariidae - Loricariinae (armored catfishes). Pages 330–350 *in* R. E. Reis, S. O. Kullander, and C. J. Ferraris, Jr., editors. Checklist of the freshwater fishes of South and Central America. EDIPUCRS, Porto Alegre, Brazil.

Ferraris, C. J., Jr. 2007. Checklist of catfishes, recent and fossil (Osteichthyes: Siluriformes), and catalogue of siluriform primary types. Zootaxa 1418:1–628.

Ghazzi, M. S. 2008. Nove espéces do gênero *Rineloricaria* (Siluriformes, Loricariidae) do rio Uruguai, do sul do Brasil. Iheringia, Série Zoologia (Porto Alegre) 98(1):100–122.

Isbrücker, I. J. H. 1979. Descriptions préliminaries de nouveaux taxa de la famille des Loricariidae, poissons-chats cuirassés néotropicaux, avec un catalogue critique de la sous-famille nominale (Pisces, Siluriformes). Revue française d'Aquariologie Herpétologie 5(4)(1978):86–117.

Isbrücker, I. J. H. 1980. Classification and catalogue of the mailed Loricariidae (Pisces, Siluriformes). Verslagen en Technische Gegevens, Instituut voor Taxonomische Zoöogie, Universiteit van Amsterdam 22:1–181.

Isbrücker, I. J. H. 1981. Revision of *Loricaria* Linnaeus, 1758 (Pisces, Siluriformes, Loricariidae). Beaufortia 31(3):51–96.

Isbrücker, I. J. H. 2001. Nomenklator der Gattungen und Arten der Harnischwelse, Familie Loricariidae Rafinesque, 1815 (Teleostei, Ostariophysi). DATZ-Sonderheft Harnischwelse 2:25–32.

Isbrücker, I. J. H. 2002. Nomenclator of the 108 genera with 692 species of the mailed catfishes, family Loricariidae Rafinesque, 1815 (Teleostei, Ostariophysi). Cat Chat, Journal of the catfish study group (UK) 3(1):11–30.

Isbrücker, I. J. H., I. Seidel, J. P. Michels, E. Schraml, and A. Werner. 2001. Diagnose vierzehn neuer Gattungen der Familie Loricariidae Rafinesque, 1815 (Teleostei, Ostariophysi). DATZ-Sonderheft Harnischwelse 2[Special issue 2]:17–24.

Koerber, S., H. S. Vera-Alcaraz, and R. E. Reis. 2017. Checklist of the fishes of Paraguay (CLOFPY). Ichthyological Contributions of PecesCriollos 53:1–99.

Litz, T. O., and S. Koerber. 2014. Check list of the freshwater fishes of Uruguay (CLOFF-UY). Ichthyological Contributions of PecesCriollos 28:1–40.

López, H. L., A. M. Miquelarena, and R. C. Menni. 2003. Lista comentada de los peces continentales de la Argentina. ProBiota, Serie Técnica y Didáctica 5:1–85.

Menni, R. C. 2004. Peces y ambientes en la Argentina continental. Monografías del Museo Argentina Ciencias Naturales, Buenos Aires 5:1–316.

Mirande, J. M., and S. Koerber. 2015. Checklist of the freshwater fishes of Argentina (CLOFFAR). Ichthyological Contributions of PecesCriollos 36:1–68.

Reis, R. E., S. O. Kullander, and C. J. Ferraris, Jr., editors. 2003. Check list of the freshwater fishes of South and Central America. CLOFFSCA. EDIPUCRS, Porto Alegre, Brazil.

Rodriguez, M. S. 2001. Dimorfismo sexual en *Rineloricaria parva* (Bouleger, 1895) (Pisces, Loricariinae). Notura Neotropicalis 32(2):169–172.

Rodríguez, M. S., and A. M. Miquelarena. 2005. A new species of *Rineloricaria* (Siluriformes: Loricariidae) from the Paraná and Uruguay River basins, Misiones, Argentina. Zootaxa 945:1–15.

Sarmiento, J., R. Bigorne, F. M. Carvajal-Vallejos, M. Maldonado, E. Leciak, and T. Oberdorff, editors. 2014. Peces de Bolivia/Bolivian fishes. IRD-Biofresh (EU).

Vera-Alcaraz, H. S., C. S. Pavanelli, and C. H. Zawadzki. 2012. Taxonomic revision of the *Rineloricaria* species (Siluriformes: Loricariidae) from the Paraguay River basin. Neotropical Ichthyology 10(2):285–311.