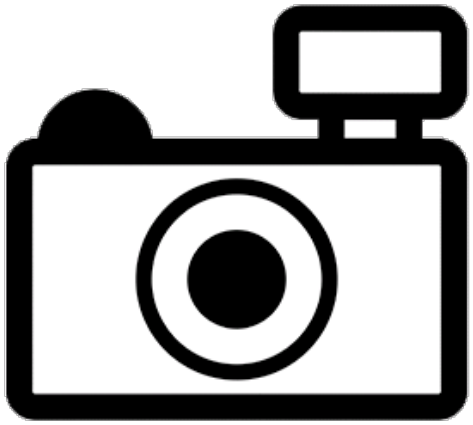
Corroncho (*Pterygoplichthys punctatus*)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, April 2012
Revised, February 2019
Web Version, 3/9/2021

Organism Type: Fish
Overall Risk Assessment Category: Uncertain



1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2019a):

"South America: Madeira, Purus, Jurua and Marañon River basins [Bolivia, Brazil, Ecuador and Peru]."

Status in the United States

No records of *Pterygoplichthys punctatus* were found in the wild in the United States. No information was found on *P. punctatus* in the aquarium trade in the United States.

Pterygoplichthys punctatus falls within Group I of New Mexico's Department of Game and Fish Director's Species Importation List (New Mexico Department of Game and Fish 2010). Group I species "are designated semi-domesticated animals and do not require an importation permit."

Means of Introductions in the United States
No introductions of *Pterygoplichthys punctatus* were found in the United States.

Remarks
The information search was conducted using all names associated with *Pterygoplichthys punctatus*, including *Loricaria punctata* and *Glyptoperichthys punctatus.*

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing
According to Fricke et al. (2019), *Pterygoplichthys punctatus* (Kner 1854) is the current and valid name of this species. The original name of this species was *Loricaria punctata* (Kner 1854). According to Froese and Pauly (2019a), a synonym for *P. punctatus* is *Glyptoperichthys punctatus* (Kner, 1854).

From Froese and Pauly (2019b):

"Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) > […] Actinopterygii (Class) > Siluriformes (Order) > Loricariidae (Family) > Hypostominae (Subfamily) > *Pterygoplichthys* (Genus) > *Pterygoplichthys punctatus* (Species)"

Size, Weight, and Age Range
From Froese and Pauly (2019a):

"Max length : 28.5 cm SL male/unsexed; [Weber 2003]"

Environment
From Froese and Pauly (2019a):

"Freshwater; demersal. […] 22°C - 26°C [Baensch and Riehl, 1985] [assumed to be recommended aquarium temperature]"

Climate
From Froese and Pauly (2019a):

"Tropical;"

Distribution Outside the United States
Native
From Froese and Pauly (2019a):

"South America: Madeira, Purus, Jurua and Marañon River basins [Bolivia, Brazil, Ecuador and Peru]."

Introduced

Pterygoplichthys punctatus has not been reported as introduced anywhere outside of their native range.

Means of Introduction Outside the United States

Pterygoplichthys punctatus has not been reported as introduced anywhere outside of their native range.

Short Description

From Armbruster and Page (2006):

"Head forming arch from tip of snout to anterior margin of supraoccipital. Supraoccipital and nuchal region forming hump. Body depth decreases from origin of dorsal fin to dorsal procurrent caudal spines, and then increases to caudal fin. Ridge from anterodorsal corner of orbit runs ventral to nares, ending slightly anteroventral of anterior nare. Crest continuing posteriorly from supraorbital ridge with portion on sphenotic and pterotic bent strongly dorsally, posterior portion on pterotic angled dorsally, continuous with keel of mid-dorsal plate series. Dorsal rim of orbit slightly higher than interorbital space.

Keels on lateral plates prominent, formed of ridges of bone and slightly hypertrophied odontodes. Keels present on all plate rows. One or two plates forming short, accessory row between dorsal and mid-dorsal plate series near head; keel on accessory plate row contiguous with but widely separated from keel on dorsal plate series beginning posteriorly to origin of dorsal fin. Keel on anterior plates of dorsal series beginning at midline just anteriorly to posterior margin of supraoccipital, angled to lateral edge of nuchal plate. Ridge on pterotic contiguous with keel on anterior three plates of mid-dorsal plate series; keel on remaining plates of mid-dorsal plate series ventral to that of keel on anterior three plates.

Nares separated by short flap of skin held erect in life. Dorsal, mid-dorsal, median and mid-ventral plate rows complete from head to caudal fin. Ventral plate row begins posteriorly to insertion of pelvic fin and continues to caudal fin. Base of caudal fin covered in elongate, roughly triangular plates. Ventral surface of body (except region dorsal to pectoral fin and ventral to mid-ventral plate row) covered in small plates. Plates on abdomen increase in number with standard length. Head covered in small plates. Frontal, nasal, sphenotic, infraorbitals, pterotic-supracleithrum, suprapreopercle, and supraoccipital supporting odontodes. Opercle with small patch of odontodes in juvenile, none in adult. Platelets covering anteroventral corner of opercle separated from opercle; platelets may be everted to approximately 90º from head. Evertible cheek plates with zero to three slightly hypertrophied odontodes (largest extending approximately to posterior end of opercle).

Dorsal fin long and low in adult, higher in juvenile, consisting of small, V-shaped spinelet, fairly strong spine, usually 11 dorsal-fin rays (three of 27 with 12); adpressed dorsal fin does not reach adipose fin. Caudal fin forked, lower lobe longer than upper. Pectoral-fin spine strong, reaches posteriorly to pelvic-fin rays when depressed ventral to pelvic fin; cleithrum with exposed process dorsal to pectoral-fin rays and strongly angled dorsally; pectoral fin inserted on same

plane as pelvic fin such that spine, when depressed parallel with body, lies on top of and in contact with pelvic fin. Pelvic-fin spine thin, flexible, reaches barely to base of anal fin. Anal fin with relatively strong, unbranched first ray supporting odontodes. Adipose fin consisting of single median preadipose plate and strong, pointed spine; adipose-fin membrane not reaching procurrent caudal-fin spines. Dorsal fin II,11, pectoral fin I,6, pelvic fin I,5, anal fin I,4, caudal fin usually I,14,I (one specimen I,13,I). Jaws weakly angled, dentaries forming angle of approximately 90º. Teeth bicuspid, median cusp short, lateral cusp about half length of median cusp, stalk moderately long; 20-36 dentary teeth, 19-38 premaxillary teeth. Median plates 26-29 (mode 28), adipose-caudal plates four to six (mode five), anal-caudal plates 11-13 (mode 12), dorsal-adipose plates five to seven (mode six). Buccal papilla lobulate and divided medially […]."

Biology
No information on biology for *Pterygoplichthys punctatus* was found.

Human Uses
From Froese and Pauly (2019):

"Fisheries: of no interest; aquarium: commercial"

Diseases
No information on diseases was found. **No OIE-reportable diseases (OIE 2021) were found to be associated with *Pterygoplichthys punctatus.***

Threat to Humans
From Froese and Pauly (2019):

"Harmless"

3 Impacts of Introductions
No introductions for *Pterygoplichthys punctatus* have been reported.

4 History of Invasiveness
No records of introductions were found for *Pterygoplichghtys punctatus*. History of invasiveness of *Pterygoplichthys punctatus* is classified as No Known Nonnative Population.

5 Global Distribution

Figure 1. Known global distribution of *Pterygoplichthys punctatus*. Locations are in Bolivia, Brazil, Columbia, Peru, and Venezuela. Map from GBIF Secretariat (2019). Locations in Columbia, Venezuela and in the Pacific Ocean do not have supporting evidence in the literature to consider them established populations of *P. punctatus* and will not be used to select source points in the climate match.

Georeferenced observations representing the species' range in Ecuador were not available.

6 Distribution Within the United States

No records were found of *P. punctatus* in the United States.

7 Climate Matching

Summary of Climate Matching Analysis

Pterygoplichthys punctatus had a generally low climate match throughout the contiguous United States. Areas of high match were found only in southern Florida. Areas of medium match were found along the Gulf Coast and throughout most of peninsular Florida. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.004, low (scores between 0.000 and 0.005, inclusive, are classified as low). All states had an individually low climate scores with the exception of Florida, which had an individually high climate score.

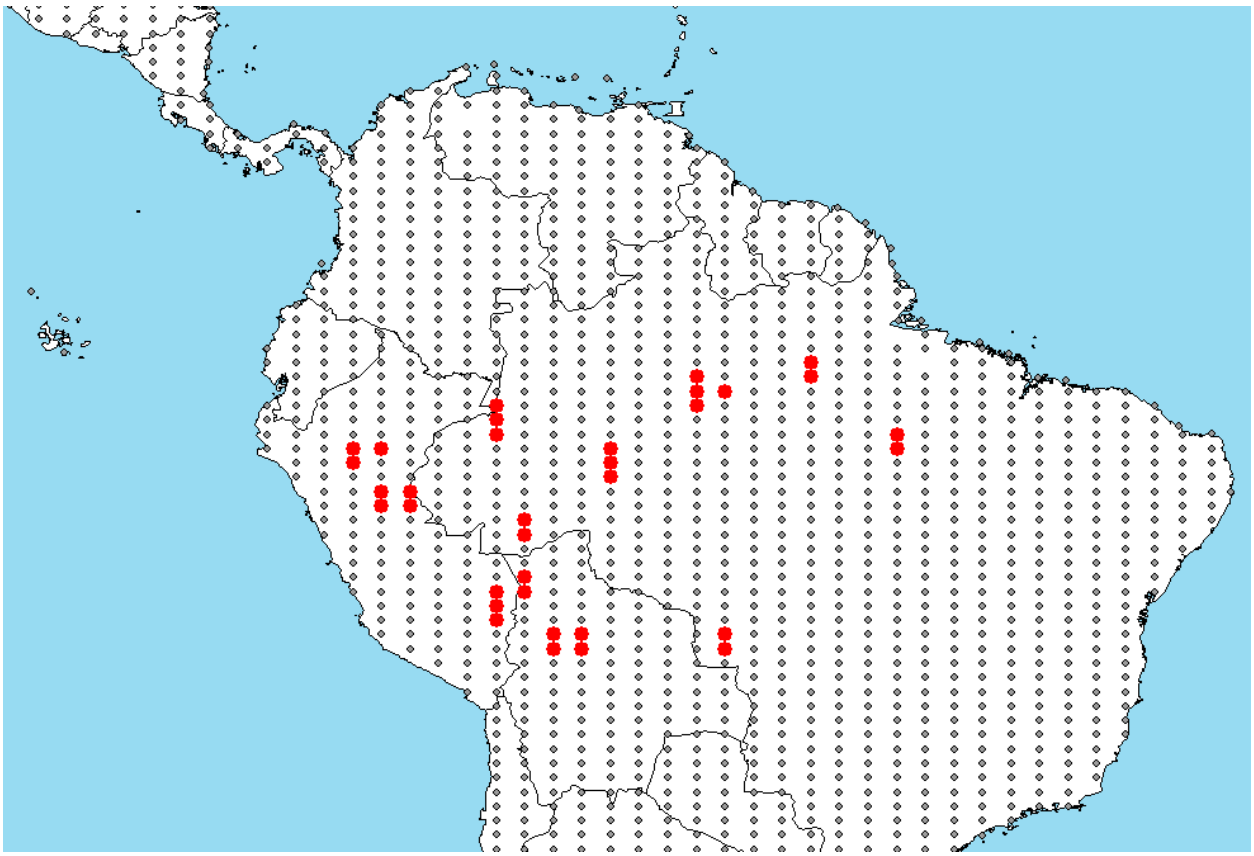


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Bolivia, Brazil and Peru selected as source locations (red) and non-source locations (gray) for *Pterygoplichthys punctatus* climate matching. Source locations from GBIF Secretariat (2019). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

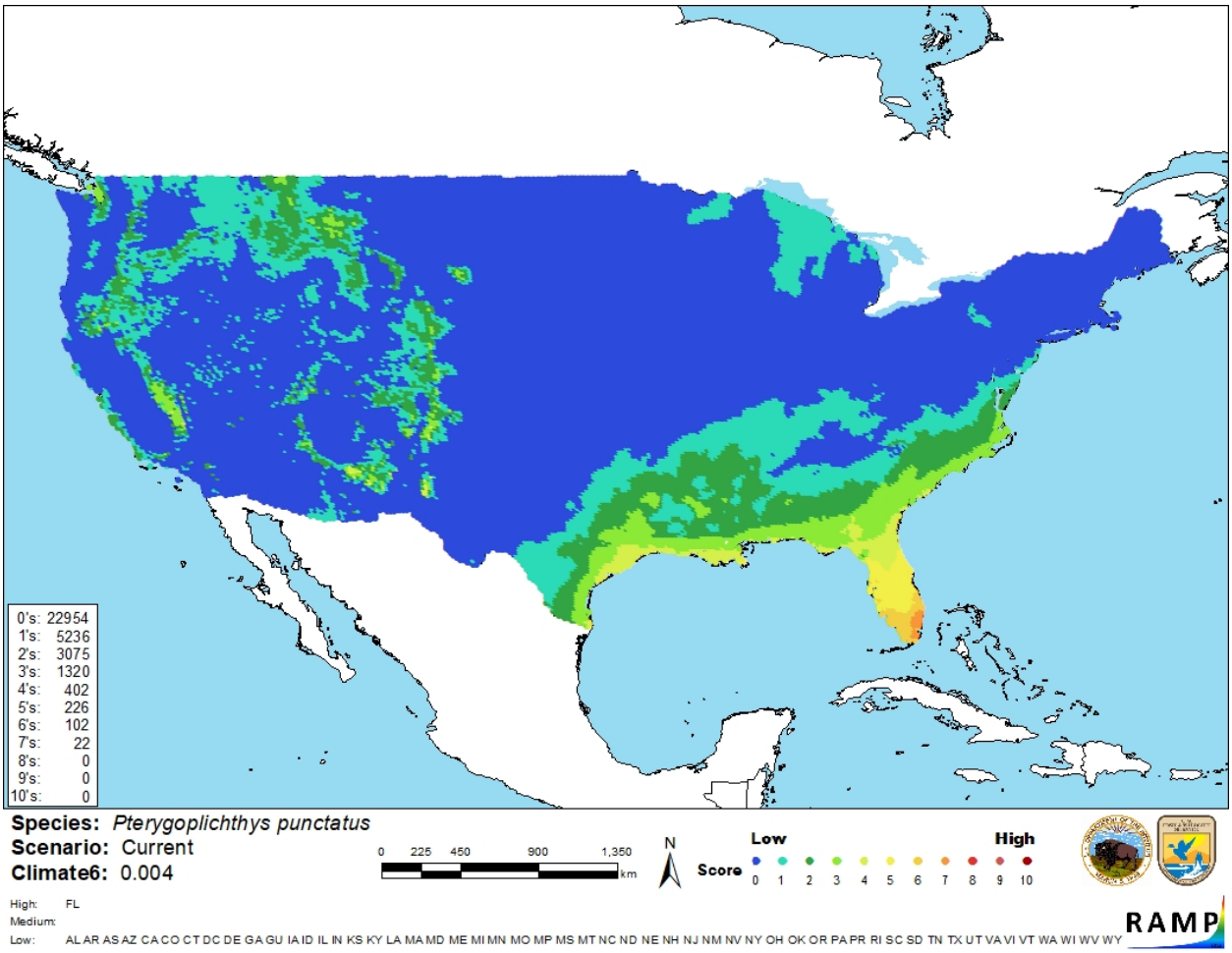


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Pterygoplichthys punctatus* in the contiguous United States based on source locations reported by GBIF Secretariat (2019). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: (Count of target points with climate scores 6-10)/ (Count of all target points)	Overall Climate Match Category
0.000≤X≤0.005	Low
0.005<X<0.103	Medium
≥0.103	High

8 Certainty of Assessment

The certainty of assessment for *Pterygoplichthys punctatus* is low. Limited information is available on this species, and no introductions have been reported anywhere outside of its native range.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Corroncho (*Pterygoplichthys punctatus*) is a freshwater armored catfish found in Bolivia, Brazil, Ecuador, and Peru. Limited information is known about this species but it is present in the aquarium trade. No introductions of *P. punctatus* have been recorded. Therefore, history of invasiveness is classified as No Known Nonnative Population. The climate match for the contiguous United States is low. Areas of medium math were found along the Gulf Coast in and Peninsular Florida; the only area of high match was found in southern Florida. The certainty of assessment is low due to a lack of information. The overall risk assessment for *Pterygoplichthys punctatus* is Uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 4): No Known Nonnative Population**
- **Overall Climate Match Category (Sec. 7): Low**
- **Certainty of Assessment (Sec. 8): Low**
- **Remarks/Important additional information: No additional information**
- **Overall Risk Assessment Category: Uncertain**

10 Literature Cited

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.

Armbruster JW, Page LM. 2006. Redescription of *Pterygoplichthys punctatus* and description of a new species of *Pterygoplichthys* (Siluriformes: Loricariidae). Neotropical Ichthyology 4:401–410.

Fricke R, Eschmeyer WN, van der Laan R, editors. 2019. Catalog of fishes: genera, species, references. California Academy of Science. Available: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp (January 2019).

Froese R, Pauly D, editors. 2019a. *Pterygoplichthys punctatus* (Kner, 1854). FishBase. Available: http://www.fishbase.org/summary/Pterygoplichthys-punctatus.html (January 2019).

Froese R, Pauly D, editors. 2019b. *Pterygoplichthys punctatus*. In World Register of Marine Species. Available: http://www.marinespecies.org/aphia.php?p=taxdetails&id=1020993 (February 2019).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Pterygoplichthys punctatus* (Kner, 1854). Copenhagen: Global Biodiversity Information Facility. Available: https://www.gbif.org/species/2339993 (January 2019).

New Mexico Department of Game and Fish. 2010. Director's species importation list. Santa Fe, New Mexico: New Mexico Department of Game and Fish. Available: http://www.wildlife.state.nm.us/download/enforcement/importation/information/Directors-Species-Importation-List-08_03_2010.pdf (November 2020).

[OIE] World Organisation for Animal Health. 2021. OIE-listed diseases, infections and infestations in force in 2021. Available: http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2021/ (March 2021).

Sanders S, Castiglione C, Hoff M. 2018. Risk Assessment Mapping Program: RAMP. Version 3.1. U.S. Fish and Wildlife Service.

11 Literature Cited in Quoted Material

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.

Weber C. 2003. Loricariidae - Hypostominae (Armored catfishes). Pages 351–372 in Reis RE, Kullander SO, Ferraris CJ Jr, editors. Checklist of the freshwater fishes of South and Central America. Porto Alegre, Brasil: EDIPUCRS.

Baensch HA, Riehl R. 1985. Aquarien atlas. Band 2. Melle, Germany: Mergus, Verlag für Natur- und Heimtierkunde GmbH.