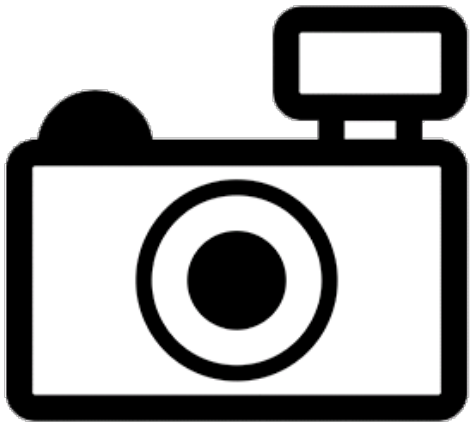
Pterygoplichthys weberi (a catfish, no common name)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, April 2012
Revised, October 2018
Web Version, 3/19/2021

Organism Type: Fish
Overall Risk Assessment Category: Uncertain



1 Native Range and Status in the United States

Native Range

From Armbruster and Page (2006):

"Known from the Río Marañon, Río Ucayali, Río Caquetá, and upper Río Amazonas drainages of Colombia, Ecuador, and Peru […]."

Status in the United States

No records of *Pterygoplichthys weberi* in the wild or in trade in the United States were found.

P. weberi 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 records of *Pterygoplichthys weberi* in the wild in the United States were found.

Remarks
No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing
According to Fricke et al. (2018), *Pterygoplichthys weberi* Armbruster and Page 2006 is the current valid and original name of this species.

From Bailly (2017):

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

Size, Weight, and Age Range
From Armbruster and Page (2006):

"Largest specimen 196.9 mm SL."

Environment
From Froese and Pauly (2018):

"Freshwater; demersal."

Climate
From Froese and Pauly (2018):

"Tropical"

Distribution Outside the United States
Native
From Armbruster and Page (2006):

"Known from the Río Marañon, Río Ucayali, Río Caquetá, and upper Río Amazonas drainages of Colombia, Ecuador, and Peru […]."

Introduced
No records of introductions of *Pterygoplichthys weberi* were found.

Means of Introduction Outside the United States

No records of introductions of *Pterygoplichthys weberi* were found.

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 hypertrophied, thick, very sharp 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 middorsal 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, opercle, pterotic-supracleithrum, suprapreopercle, and supraoccipital supporting odontodes. Platelets covering anteroventral corner of opercle separated from opercle; platelets may be everted to approximately 90° from head. Evertible cheek plates with zero to four 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, and 11-12 rays; 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 median unpaired preadipose plate and strong, pointed spine; adipose-fin membrane not reaching procurrent caudal-fin spines. Pectoral fin I,6, pelvic fin I,5, anal fin I,4, caudal fin I,14,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; 26-31 dentary teeth, 23-30 premaxillary teeth. Median plates 27-28 […], adipose-caudal plates three to five […], anal-caudal plates 11-12 […]), dorsal-adipose

plates six to seven […]. Buccal papilla lobulate and divided medially in juvenile, but only slightly bifurcated in adult […]."

Biology
Information on the biology of *Pterygoplichthys weberi* was not found.

Human Uses
Information on human uses of *Pterygoplichthys weberi* was not found.

Diseases
No information on diseases of *Pterygoplichthys weberi* was found. **No records of OIE-reportable diseases (OIE 2021) were found for *P. weberi.***

Threat to Humans
From Froese and Pauly (2018):

"Harmless"

3 Impacts of Introductions
No records of introductions of *Pterygoplichthys weberi* were found.

4 History of Invasiveness
The history of invasiveness of *Pterygoplichthys weberi* is classified as No Known Nonnative Population. No records of introduction were found for *P. weberi*.

5 Global Distribution

Figure 1. Map of northern South America showing locations where *Pterygoplichthys weberi* has been reported. Locations are in Ecuador, Colombia, and Brazil. The locations in Ecuador and Colombia are close to those countries' borders with Peru. Map from GBIF Secretariat (2018). The southernmost location in Brazil was not used to select source points for the climate match, no evidence was found to support the existence of an established population at that location.

6 Distribution Within the United States

No records of *Pterygoplichthys weberi* in the wild in the United States were found.

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Pterygoplichthys weberi* was low for the entire contiguous United States. There were no areas of high or medium match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had low individual climate 6 scores.

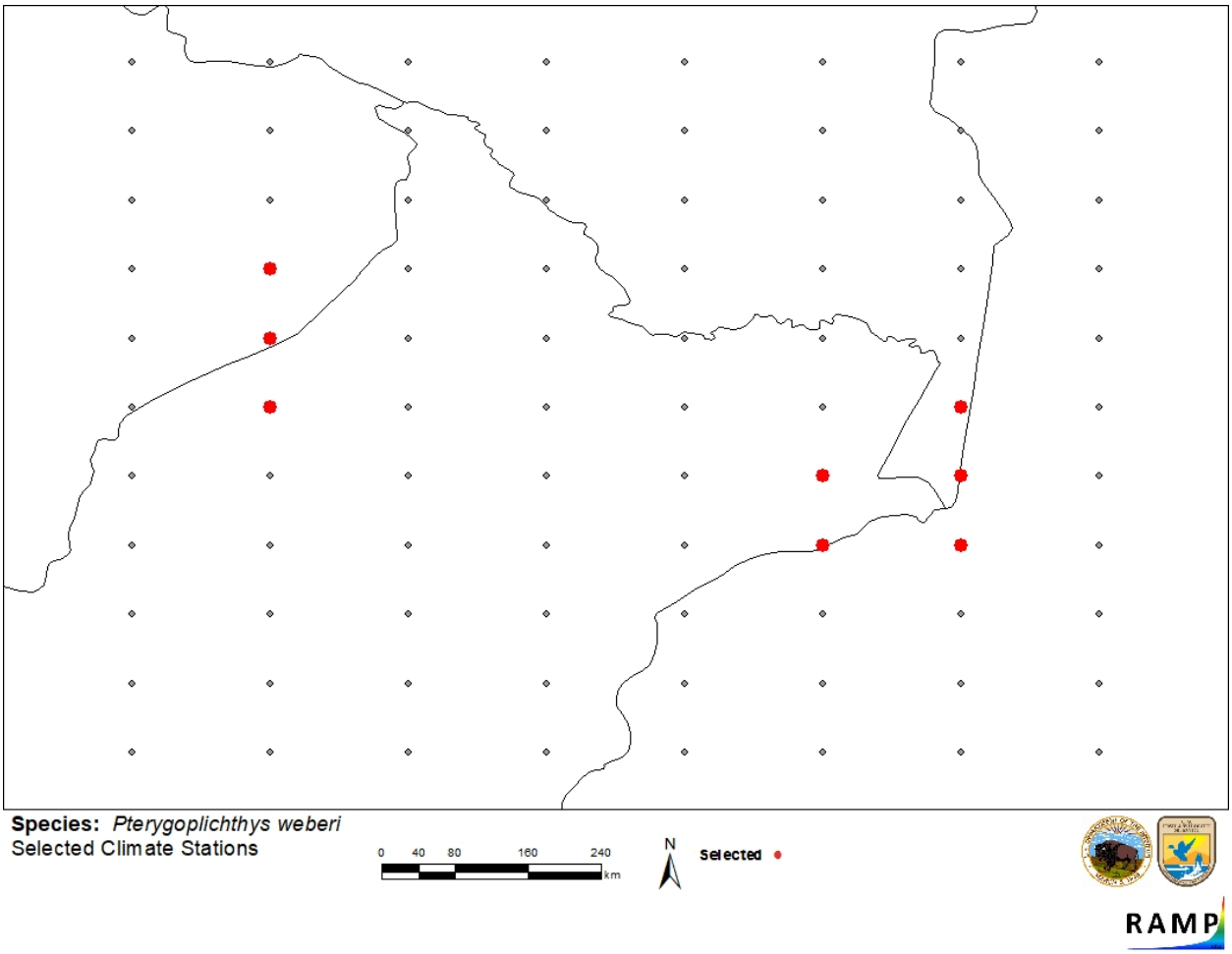


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in northern South America selected as source locations (red; Brazil, Colombia, Ecuador, Peru) and non-source locations (gray) for *Pterygoplichthys weberi* climate matching. Source locations from GBIF Secretariat (2018). Selected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

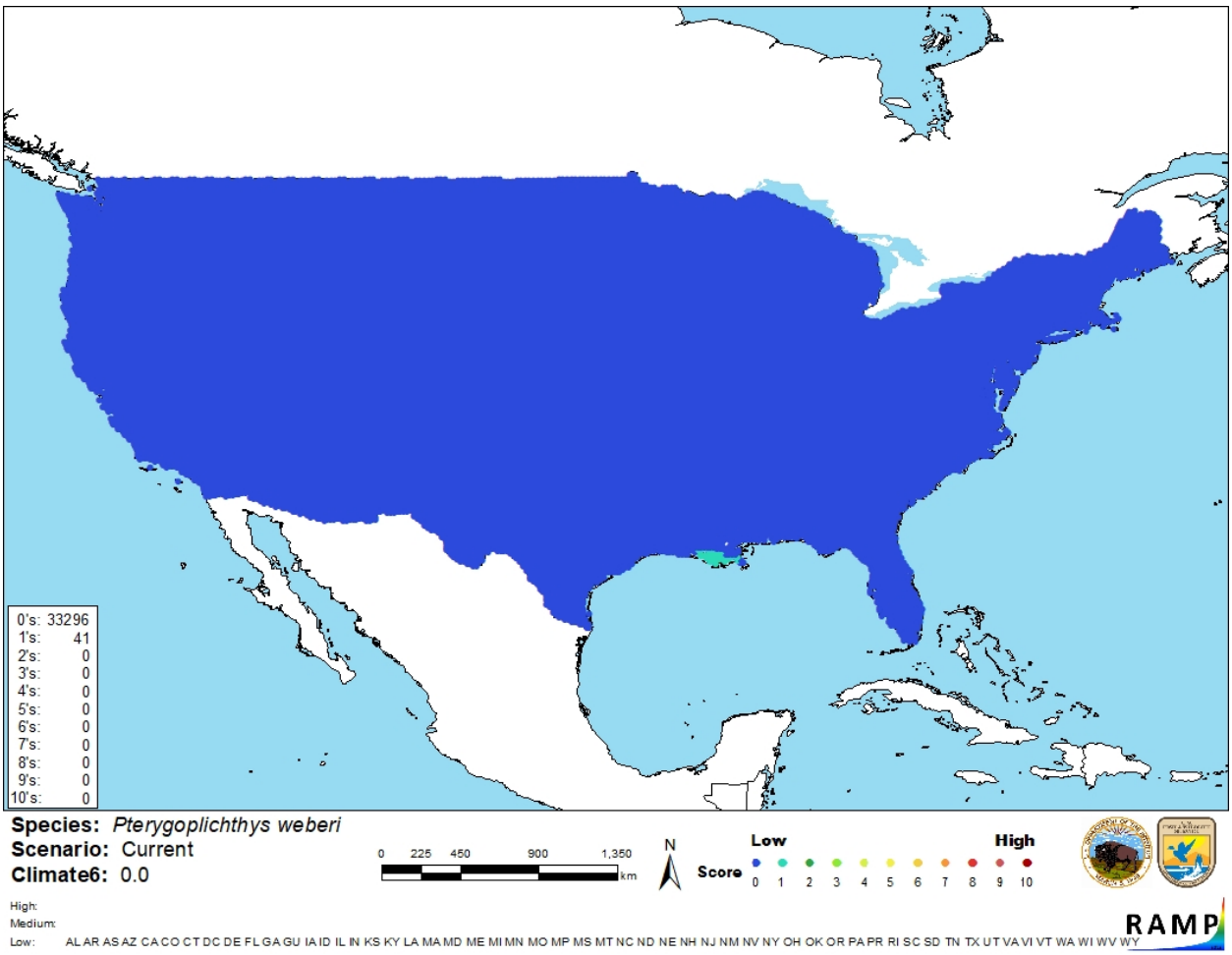


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Pterygoplichthys weberi* in the contiguous United States based on source locations reported from Froese and Pauly (2018) and GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = 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 weberi* is low. There is minimal information available for this species. No information on introductions of *Ptergoplichthys weberi* was found.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Pterygoplichthys weberi is a South American freshwater armored catfish native to rivers in the upper Amazon River basin in Peru, Ecuador, and Colombia. Very little information is available about this species. The history of invasiveness of *P. weberi* is classified as No Known Nonnative Population. It has not been reported as introduced or established anywhere in the world. The overall climate match for the contiguous United States was low. There were no areas of high or medium match. The certainty of assessment is low due to lack of information. The overall risk assessment category 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 4:401–409.

Bailly N. 2017. *Pterygoplichthys weberi*. In World Register of Marine Species. Available: http://www.marinespecies.org/aphia.php?p=taxdetails&id=1008859 (October 2018).

Fricke R, Eschmeyer WN, van der Laan R, editors. 2018. Catalog of fishes: genera, species, references. California Academy of Science. Available: http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp (October 2018).

Froese R, Pauly D, editors. 2018. *Pterygoplichthys weberi* Armbruster and Page, 2006. FishBase. Available http://www.fishbase.org/summary/Pterygoplichthys-weberi.html (October 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Pterygoplichthys weberi* Armbruster and Page, 2006. Copenhagen: Global Biodiversity Information Facility. Available: https://www.gbif.org/species/2339986 (October 2018).

New Mexico Department of Game and Fish. 2010. Director's species importation list. Santa Fe: 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.

No references in this section.