

***Pterygoplichthys undecimalis* (a catfish, no common name)**

Ecological Risk Screening Summary

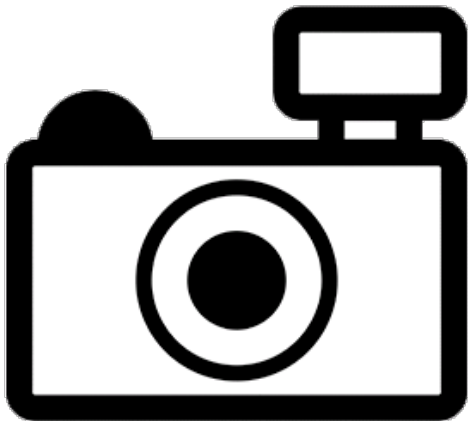
U.S. Fish & Wildlife Service, April 2012

Revised, February 2019

Web Version, 3/19/2021

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2019):

“South America: Magdalena River basin.”

From Orfinger and Goodding (2018):

“Magdalena River basin, Colombia [Weber 2003]; also Cauca and Catatumbo River Basins [Maldonado-Ocampo et al. 2005].”

Mesa-Salazar and Mojica (2016) lists *Pterygoplichthys undecimalis* as endemic to Colombia.

Status in the United States

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

P. undecimalis 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 undecimalis* in the wild or in trade in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2019), *Pterygoplichthys undecimalis* (Steindachner 1878) is the current valid name for this species.

From ITIS (2019):

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 *Pterygoplichthys*
Species *Pterygoplichthys undecimalis* (Steindachner, 1878)

Size, Weight, and Age Range

From Froese and Pauly (2019):

"Max length : 50.0 cm SL male/unsexed; [Galvis et al. 1997]"

Hernández-Serna et al. 2013 lists *Pterygoplichthys undecimalis* as ranging from 12.0 cm to 28.2 cm in standard length.

Environment

From Froese and Pauly (2019):

“Freshwater; demersal.”

From Mesa-Salazar and Mojica (2016):

“It inhabits rivers with slow currents and a substrate of accumulated plant matter.”

Climate

From Froese and Pauly (2019):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2019):

“South America: Magdalena River basin.”

From Orfinger and Goodding (2018):

“Magdalena River basin, Colombia (Weber 2003); also Cauca and Catatumbo River Basins [Maldonado-Ocampo et al. 2005].”

Mesa-Salazar and Mojica (2016) lists *Pterygoplichthys undecimalis* as endemic to Colombia.

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Mendoza Alfaro et al. (2009):

“A distinguishing characteristic of this South American fish family is their bony plate armoring that extends along three rows across their entire dorsal surface. The body is ventrally flattened, with the ventral surface of the fish wider than the height of the fish, such that in cross-section they appear somewhat triangular. All species possess a subterminal sucking mouth that is developed for sucking organic matter and algae from the substrate; [...]”

Biology

From Froese and Pauly (2019):

“May be found in rivers with strong current but prefers backwaters [...]. Feeds on detritus and periphyton on submerged trunks and aquatic macrophytes [Galvis et al. 1997].”

“Males guard the fertilized eggs [Galvis et al. 1997].”

From Mesa-Salazar and Mojica (2016):

“It feeds on detritus, algae and invertebrates. Males take care of the eggs in caves they dig in the gorges of river margins [Ortega-Lara et al. 2002; Maldonado-Ocampo et al. 2005].”

Human Uses

From Mesa-Salazar and Mojica (2016):

“This species is fished for subsistence in the Magdalena-Cauca and Sinú river basins [Lasso et al. 2011].”

Mendoza Alfaro et al. 2009 lists *Pterygoplichthys undecimalis* as a fish found in the aquarium trade. No further information could be found on this species role in the aquarium trade.

Diseases

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

Threat to Humans

From Froese and Pauly (2019):

“Harmless”

3 Impacts of Introductions

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

4 History of Invasiveness

History of invasiveness of *Pterygoplichthys undecimalis* is classified as No Known Nonnative Population. No records of introductions were found for *P. undecimalis*.

5 Global Distribution



Figure 1. Known global distribution of *Pterygoplichthys undecimalis*. Locations are in Colombia. Map from GBIF Secretariat (2019).

6 Distribution Within the United States

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

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Pterygoplichthys undecimalis* was low for almost all of the contiguous United States. The only areas with a medium climate match were Southern Florida, around Puget Sound in Washington State, and small parts of coastal California. There were no areas with a high climate match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.001, a low climate score (scores between 0.000 and 0.005, inclusive, are classified as low). All states had an individually low climate scores except for Florida, which had a medium climate score.

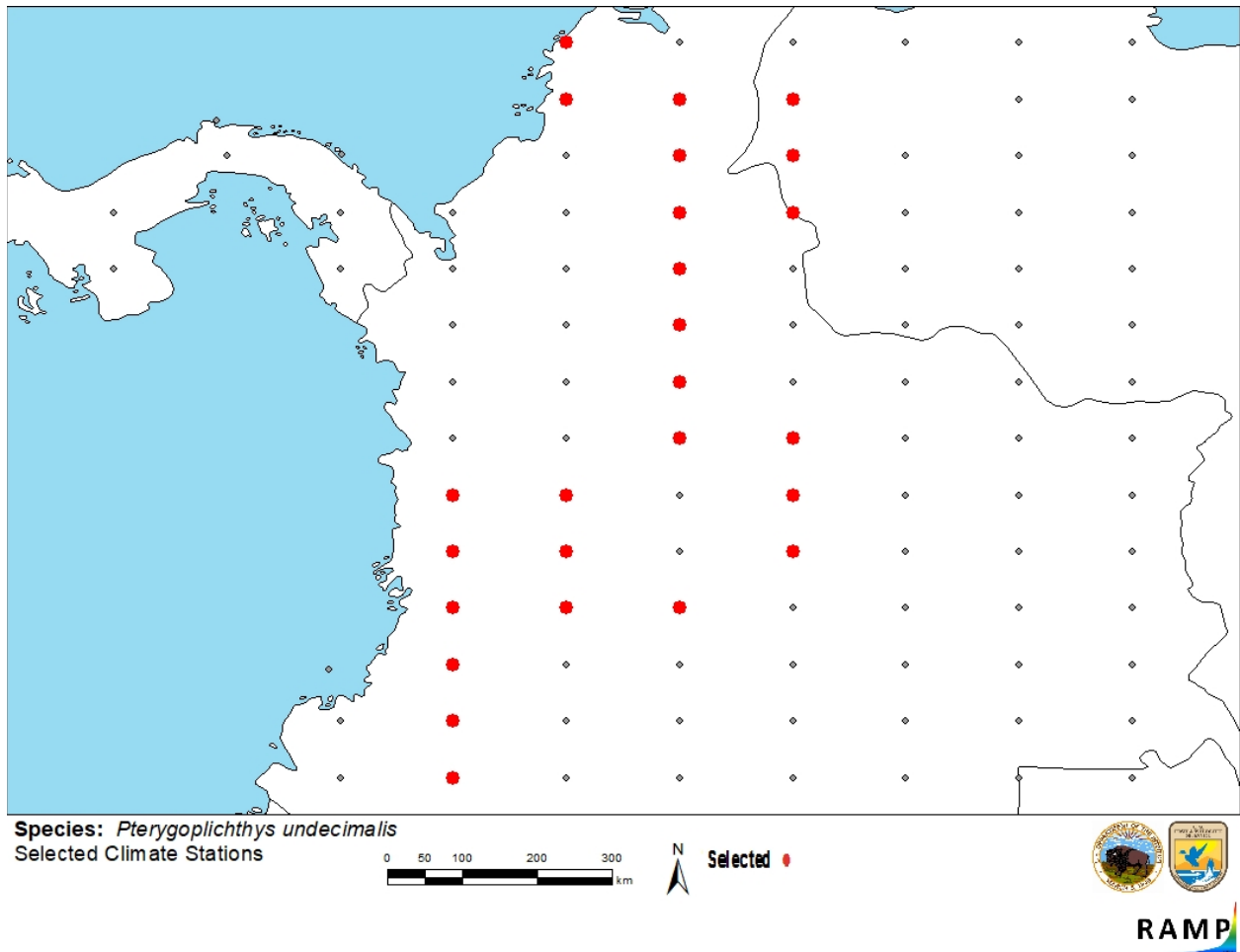


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in South America selected as source locations (red; Colombia, Venezuela) and non-source locations (gray) for *Pterygoplichthys undecimalis* climate matching. Source locations from GBIF Secretariat (2019). Selected source locations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

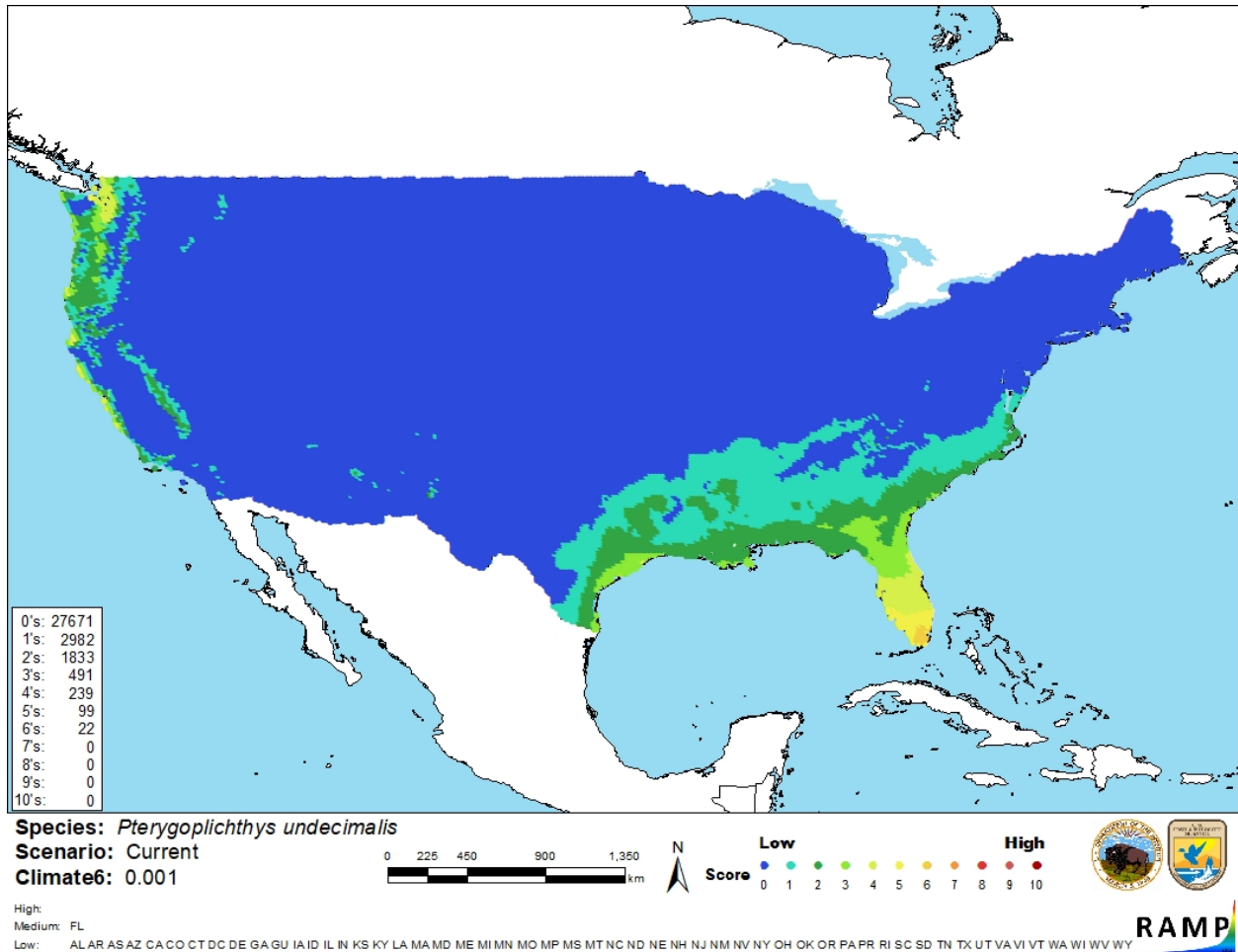


Figure 3. Map of RAMP (Sanders et al. 2018) climate match for *Pterygoplichthys undecimalis* in the contiguous United States based on source locations reported from GBIF Secretariat (2019). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

8 Certainty of Assessment

The certainty of assessment for *Pterygoplichthys undecimalis* is low. There is minimal information available for this species. There have been no reports of introductions of *Pterygoplichthys undecimalis* outside of their native range.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Pterygoplichthys undecimalis is an armored catfish endemic to Colombia. *P. undecimalis* is a bottom feeder that prefers rivers with slow currents where they can feed on algae and invertebrates. The history of invasiveness is classified as No Known Nonnative Population. *P. undecimalis* has not been reported as introduced or established anywhere in the world. This species is found in the aquarium trade, but no information was found to determine as to what extent. *P. undecimalis* is also locally fished for subsistence. The overall climate match for the contiguous United States was low. There were only a few areas of medium match in Florida, Washington, and California; there were no areas of high match. The certainty of assessment is low due to lack of information. The overall risk category for *Pterygoplichthys undecimalis* 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 remarks**
- **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.

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Froese R, Pauly D, editors. 2019. *Pterygoplichthys undecimalis* (Steindachner, 1878). FishBase. Available: <https://www.fishbase.de/summary/Pterygoplichthys-undecimalis.html> (January 2019).

GBIF Secretariat. 2019. GBIF backbone taxonomy: *Pterygoplichthys undecimalis* (Steindachner, 1878). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/2339997> (January 2019).

Hernández-Serna A, Márquez-Velásquez V, Carvajal-Quintero JD, Gulfo A, Granado-Lorencio C, Jiménez-Segura LF. 2013. Length-weight relationships of 38 fish species of the Magdalena River floodplain lakes. *Journal of Applied Ichthyology* 30:549–551.

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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).

Orfinger AB, Gooding DD. 2018. The global invasion of the suckermouth armored catfish genus *Pterygoplichthys* (Siluriformes: Loricariidae): Annotated list of species, distributional summary, and assessment of impacts. *Zoological Studies* 57(7).

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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.

Galvis G, Mojica JI, Camargo M. 1997. Peces del Catatumbo. Santafé de Bogotá, Colombia: Asociación Cravo Norte.

Lasso CA, de Paula Gutiérrez F, Morales-Betancourt MA, Aguadelo Córdoba E, Ramírez-Gil H, Ajiaco Martínez RE. 2011. II. Pesquerías continentales de Colombia: cuencas del Magdalena-Cauca, Sinú, Canalete, Atrato, Orinoco, Amazonas y vertiente del Pacífico. Bogotá, D.C., Colombia: Instituto de Investigación de los Recursos Biológicos Alexander von Humboldt.

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