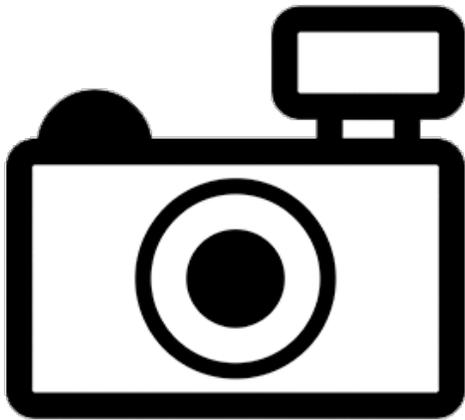


***Potamotrygon humerosa* (a stingray, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, June 2015
Revised, January 2018
Web Version, 11/2/2020

Organism Type: Fish
Overall Risk Assessment Category: Uncertain



No Photo Available

1 Native Range and Status in the United States

Native Range

From Carvalho (2016):

“*Potamotrygon humerosa* is distributed in Amazonian lowland areas [of Brazil], entering the lower portions of many affluents (Garman, 1913; Rosa, 1985; Silva & Carvalho, 2015), and was originally described from close to the mouth of rio Tapajós (Monte Alegre, its type locality, is just to the northeast of Santarém).”

Status in the United States

No records of *Potamotrygon humerosa* in the wild or in trade in the United States were found.

Means of Introductions in the United States

No records of *Potamotrygon humerosa* in the United States were found.

Remarks

Araújo et al. (2004) states that *Potamotrygon humerosa* is illegal to be exported from Brazil.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2018):

“**Current status:** Valid as *Potamotrygon humerosa* Garman 1913.”

From ITIS (2018):

Kingdom Animalia

Subkingdom Bilateria

Infrakingdom Deuterostomia

Phylum Chordata

Subphylum Vertebrata

Infraphylum Gnathostomata

Superclass Chondrichthyes

Class Chondrichthyes

Subclass Elasmobranchii

Superorder Euselachii

Order Myliobatiformes

Family Potamotrygonidae

Genus *Potamotrygon*

Species *Potamotrygon humerosa* (Garman, 1913)

Size, Weight, and Age Range

Information on size, weight, and age range of *Potamotrygon humerosa* was not found.

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

Climate

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Carvalho (2016):

“*Potamotrygon humerosa* is distributed in Amazonian lowland areas [of Brazil], entering the lower portions of many affluents (Garman, 1913; Rosa, 1985; Silva & Carvalho, 2015), and was originally described from close to the mouth of rio Tapajós (Monte Alegre, its type locality, is just to the northeast of Santarém).”

Introduced

No records of *Potamotrygon humerosa* introductions were found.

Means of Introduction Outside the United States

No records of *Potamotrygon humerosa* introductions were found.

Short Description

From Ramos (2017):

“**General remarks:** The information found about this species on magazines and books of ornamental market is scarce and always associated with potential mistakes of identification – most of the time it looks like *P. orbignyi*. Besides its small size, the color pattern presented by specimens recognized as *P. humerosa* by specialists does not seem to be attractive to the market. We do not expect to see this species in the market, except as an occasional identification mistake with *P. orbignyi*.”

Identification tips: The species has a brown dorsal disc, generally with a reticulated pattern of dark pigments, creating big circular spaces that become smaller near the borders. Similar to *P. orbignyi*, but more rugged and with more and bigger spines on disc and tail (DA SILVA; DE CARVALHO, 2015)”

From Carvalho (2016):

“Lateral tail region very prickly with numerous pointed thornlets and sharp dermal denticles; dermal denticles on disc inverted V-shaped with low number of crown ridges (usually 2)”

Biology

From Araújo et al. (2004):

“[...] low fecundity, late maturation and slow growth...diverse habitats in freshwater environments, including beach sands, flooded forest, small creeks with mud or stone bottoms and lakes. In all habitats in which they are found freshwater stingrays are predators on top of the food web. The adult forms of different species eat mainly fishes, worms and small crustaceans (Charvet-Almeida 2001, Lasso et al. 1996), and the juveniles eat small crustacean and aquatic insects.”

Human Uses

From Ramos (2017):

“Besides its small size, the color pattern presented by specimens recognized as *P. humerosa* by specialists does not seem to be attractive to the market. We do not expect to see this species in the market, except as an occasional identification mistake with *P. orbigny*.”

Diseases

Information on diseases of *Potamotrygon humerosa* were not found. **No records of OIE-reportable diseases (OIE 2020) were found for *P. humerosa*.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of *Potamotrygon humerosa* introductions were found. Therefore, there was no information on impacts of introduction.

4 History of Invasiveness

No records of introductions were found for *Potamotrygon humerosa*. Therefore, the history of invasiveness is classified as No Known Nonnative Populations.

5 Global Distribution



Figure 1. Known global distribution of *Potamotrygon humerosa*. Observations are located in Brazil. Map from GBIF Secretariat (2020).

6 Distribution Within the United States

No records of *Potamotrygon humerosa* in the United States were found.

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Potamotrygon humerosa* was low across the entire contiguous United States. There were no areas of medium or high match. The Climate 6 score (Sanders et al. 2018; 16 climate variable; 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 a low individual Climate 6 score.

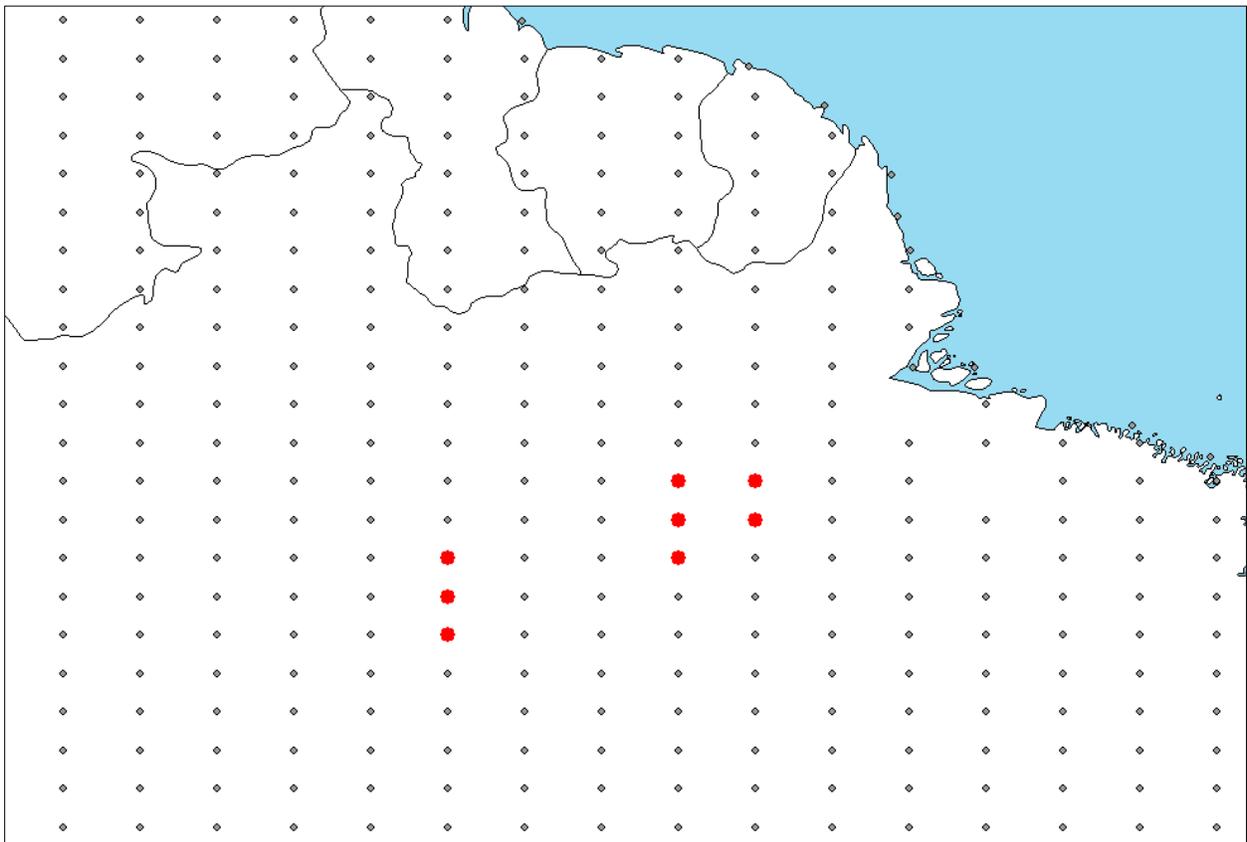


Figure 2. RAMP (Sanders et al. 2018) source map of northern Brazil and surrounding countries showing weather stations selected as source locations (red) and non-source locations (gray) for *Potamotrygon humerosa* climate matching. Source locations from GBIF Secretariat (2020). Selected source locations are within 100 km of one or more species occurrences, and do not necessarily represent the locations of occurrences themselves.

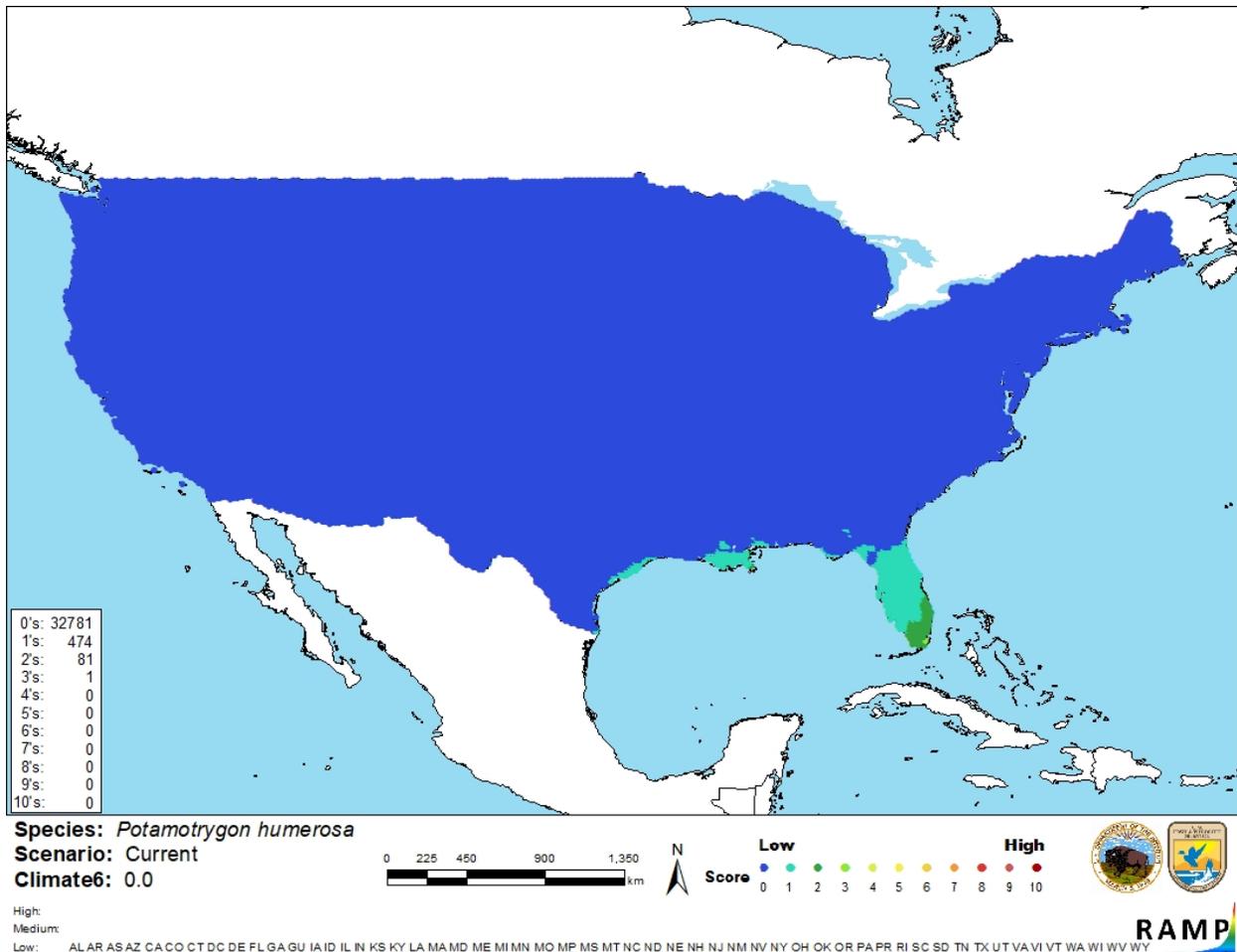


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Potamotrygon humerosa* in the contiguous United States based on source locations reported by GBIF Secretariat (2020). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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 this assessment is low. *Potamotrygon humerosa* is a little known species with only a few known specimens ever collected from the wild. The known distribution of the species is moderately well represented by the known collections. There was little information available for *Potamotrygon humerosa*. No records of introductions in the wild were found.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Potamotrygon brachyura is a freshwater stingray native to the lowland areas of the Amazon River basin in Brazil. Little is known about the species, and there are only a few fish collection records. Based on those records there is expert opinion that the species would not be desired in the ornamental trade. The history of invasiveness is classified as No Known Nonnative Population. There were no records of introductions found. The climate match to the contiguous United States is low, with no areas of medium or high match. The certainty of this assessment is low due to a 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 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.

Araújo MLG, Charvet-Almeida P, Almeida MP, Pereira H. 2004. Freshwater stingrays (Potamotrygonidae): status, conservation and management challenges. Information document AC 20:1–6.

Carvalho MR de. 2016. Description of two extraordinary new species of freshwater stingrays of the genus *Potamotrygon* endemic to the rio Tapajós basin, Brazil (Chondrichthyes: Potamotrygonidae), with notes on other Tapajós stingrays. *Zootaxa* 4167:1–63.

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. *Potamotrygon humerosa* Garman, 1913. FishBase. Available: <http://www.fishbase.org/summary/66050> (January 2018).

GBIF Secretariat. 2020. GBIF backbone taxonomy: *Potamotrygon humerosa* Garman, 1913. Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/5784867> (November 2020).

[ITIS] Integrated Taxonomic Information System. 2018. *Potamotrygon humerosa* Garman, 1913. Reston, Virginia: Integrated Taxonomic Information System. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=943763#null (January 2018).

[OIE] World Organisation for Animal Health. 2020. OIE-listed diseases, infections and infestations in force in 2020. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2020/> (November 2020).

Ramos HAC. 2017. Commercial species of freshwater stingrays in Brazil. Brazilian Institute of Environment and Renewable Resources 27–28.

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.

Charvet-Almeida P. 2001. Ocorrência, Biologia e Uso das Raias de Água Doce na Baía de Marajó (Pará, Brasil); Ênfase na Biologia de *Plesiotrygon iwamae* (Chondrichthyes: Potamotrygonidae). Masters thesis. Brazil, Belém: Museu Paraense Emílio Goeldi & Universidade Federal do Pará.

Garman S. 1913. The Plagiostomia (sharks, skates, and rays). *Memoirs of the Museum of Comparative Zoology* i-xiii:1–515.

Lasso CA, Rial AB, and [no initials] Lasso-Alcalá. 1996. Notes on the biology of the freshwater stingrays *Paratrygon aiereba* (Müller & Henle, 1841) and *Potamotrygon orbignyi* (Castelnau, 1855) (Chondrichthyes: Potamotrygonidae) in the Venezuelan llanos. *Aqua Journal of Ichthyology and Aquatic Biology* 2(3):39–52.

Rosa RS. 1985. A systematic revision of the South American freshwater stingrays (Chondrichthyes: Potamotrygonidae). Doctoral dissertation. Williamsburg, Virginia: College of William and Mary.

Silva JPCB da, de Carvalho MR. 2015. Systematics and morphology of *Potamotrygon orbignyi* (Castelnau, 1855) and allied forms (Chondrichthyes: Myliobatiformes: Potamotrygonidae). *Zootaxa* 3982:1–82.