

***Peckoltia braueri* (a catfish, no common name)**

Ecological Risk Screening Summary

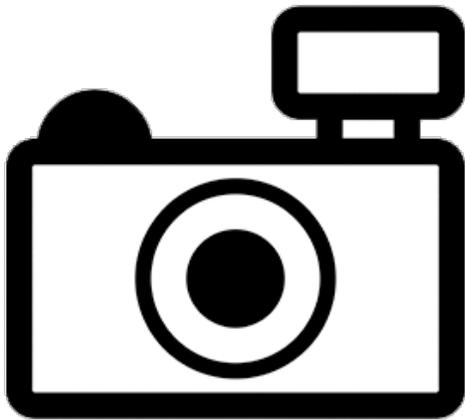
U.S. Fish & Wildlife Service, February 2013

Revised, September 2018

Web Version, 12/16/2020

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 (2018):

“South America: Negro and Branco River basins [Brazil and Guyana].”

From Armbruster and Werneke (2005):

“Collected from three localities around Lethem in the Takutu and Pirara Rivers [Guyana, Brazil] [...] Also known from the mainstem Rio Branco near Caracarai and the Rio Uraricoera drainage of Brazil.”

Status in the United States

No records of *Peckoltia braueri* in trade or in the wild in the United States were found.

Peckoltia braueri 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 *Peckoltia braueri* in the wild in the United States were found.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Peckoltia braueri* (Eigenmann 1912) is the current valid name of this species. *Peckoltia braueri* was originally described as *Hemiancistrus braueri* Eigenmann 1912.

From ITIS (2018):

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 *Peckoltia*
Species *Peckoltia braueri* (Eigenmann, 1912)

Size, Weight, and Age Range

From Armbruster and Werneke (2005):

“Medium-sized loricariids, largest specimen 103.0 mm SL.”

Environment

From Froese and Pauly (2018):

“Freshwater; demersal.”

Climate

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“South America: Negro and Branco River basins [Brazil and Guyana].”

From Armbruster and Werneke (2005):

“**Range.** Collected from three localities around Lethem in the Takutu and Pirara Rivers [Guyana, Brazil] [...] Also known from the mainstem Rio Branco near Caracarai and the Rio Uraricoera drainage of Brazil.”

Introduced

No records of introductions of *Peckoltia braueri* were found.

Means of Introduction Outside the United States

No records of introductions of *Peckoltia braueri* were found.

Short Description

From Armbruster and Werneke (2005):

“*Peckoltia braueri* can be separated from all other described *Peckoltia* except *P. cavatica* by the presence of an orange band in the dorsal fin and by having thin, wavy, black lines that tend to outline the plates and bones of the head [...]. *Peckoltia braueri* can be separated from *P. cavatica* by having the dorsal saddles better developed (vs. barely visible), by having the head plates and bones not completely outlined in black and with lines intense (vs. having all of the head plates and bones completely outlined in black and with the lines lighter), by having black vermiculations on the pterotic-supracleithrum (vs. no vermiculations), by having at least one, broken band in the caudal fin (vs. no bands in the caudal fin), and by having the marginal orange band of the dorsal and caudal fins not as thick or as intense as in *P. cavatica*. The only other described species of *Peckoltia* similar to *P. braueri* in coloration is *P. vermiculata*, which can be separated by having vermiculations on the dorsal head bones and plates other than the pterotic (vs. coloration confined to the borders between bones and plates in *P. braueri*).”

“Body stout and fairly wide. Head and nape gently sloped to insertion of dorsal fin. Supraoccipital with slight rounded crest, slightly higher than nuchal region. Dorsal profile sloped ventrally to dorsal procurrent caudal-fin spines, then rising rapidly to caudal fin. Ventral profile flat to caudal fin. Supraorbital ridge rounded, continuing to anterolateral corner of anterior nare.

Mesethmoid raised slightly above lateral surface of snout to form slight ridge. Head contours smooth. Eyes relatively large.”

“Keels absent. Inframedian plates bent at their midline above pectoral fin to form ridge. Dorsal plates bent dorsally below dorsal fin to form very slight ridges that converge at adipose fin, dorsal surface flat between ridges. Five rows of plates on caudal peduncle. Abdomen largely naked except region below pectoral girdle that is usually plated in adults, the region laterally between paired fins that is plated, and occasionally plates in anteromedial section of thorax and just anterior to anus. First anal-fin pterygiophore exposed to form a platelike structure. A pair of lateral plates converging at midline between anus and exposed first anal-fin pterygiophore. 24–26 [...] plates in the median series.”

“Frontals, infraorbitals, nasals, pterotic-supracleithra, sphenotics, and supraoccipital, supporting odontodes; opercle supporting odontodes in juveniles but not in adults, posterodorsal corner of opercle covered by one or two plates in adults. Odontodes on lateral plates not enlarged to form keels. Hypertrophied cheek odontodes 13–56, longest reaching first inframedian plate in adults. Cheek plates evertible to approximately 90° from head. Odontodes on tip of pectoral-fin spine slightly hypertrophied.”

“Dorsal fin reaching preadipose plate when adpressed; dorsal-fin spine not elongate, edge of dorsal fin straight. Dorsal-fin spinelet V-shaped, dorsal-fin spine lock functional. Dorsal fin I17 [...]. Adipose fin with one preadipose plate and moderately long spine. Caudal fin emarginate, lower lobe longer than upper, I14I with four to five [...] dorsal procurrent caudal-fin rays and three to four [...] ventral caudal-fin rays. Anal fin short with unbranched ray weak and approximately same length of first branched ray. Anal fin I4. Pectoral-fin spine reaching slightly behind posterior insertion of pelvic fin when adpressed ventral to pelvic fin. Pectoral fin I6. Pelvic fin reaching to middle of anal-fin when adpressed. Pelvic fin I5.”

“Dorsal flap of iris present. Flap between anterior and posterior nares short. Lips wide, fairly thin. Upper lip with small, round papillae. Lower lip with medium-sized papillae anteriorly and smaller ones posteriorly. Maxillary barbels short, not reaching gill opening. Buccal papilla represented only by a very small flap. Jaws narrow, dentaries forming angle just slightly greater than 90°, premaxillaries forming a very shallow arc with an overall angle just slightly less than 180°. Teeth with small, moderately narrow cusps, lateral cusp approximately half-length of medial cusp, stalks of teeth long, dentary and premaxillary teeth about equal in length; 13–29 dentary teeth [...] and 15–29 premaxillary teeth [...].”

“Color same for live and preserved specimens except that live specimens have thin, orange bands at edge of dorsal and caudal fins. Background color gray-brown. Dorsal surface with four dark saddles, saddle one below second and third dorsal-fin rays, saddle two below last two dorsal-fin rays and slightly behind dorsal fin, saddle three below adipose fin, and saddle four at end of caudal peduncle. First two saddles combine at lateral line to form dark patch that extends from second saddle almost to pterotic-supracleithrum anteriorly and to ventral margin of inframedian plate row. Head plates and bones and plates of the nuchal region outlined in black with black lines also forming vermiculations on the larger head bones; outlining of plates and bones varying in degree of completeness, but never complete. Dorsal fin spine with large, oblong spots

anteriorly, dorsal fin with slight distal orange band in life, and either entirely gray or with two wide, broken dark bands. Caudal-fin spines with oblong spots, caudal fin with one to two wide, broken bands and slightly orange edge to caudal fin in life. Ventral surface lighter than sides, saddle three contiguous with opposite side around ventral surface, but very light on ventral surface and saddle four contiguous with opposite side and dark around caudal peduncle. Pectoral fin mottled and pelvic fin with two wide, dark bands.”

“Juveniles colored similarly to adults, but dark colors more intense. There is an additional dark patch between saddles two and three in larger juveniles and saddles one and two are generally separate [...]. The pectoral fin generally has one to two bands. In the smallest individuals, saddles three and four connected ventrally making the body appear mottled.”

Biology

From Armbruster and Werneke (2005):

“Several individuals seem to be in the process of developing hypertrophied odontodes on the body as are found in most male *Peckoltia* during the breeding season.”

“Found in swift riffles among very large boulders.”

Human Uses

From Cardoso et al. (2017):

“*Peckoltia braueri* and *P. pardalis* have economic importance because, in addition to feeding riverside dwellers, they are used in aquariums (Baumgartner et al. 2012; Porto et al. 2012).”

Diseases

No records of OIE-reportable diseases (OIE 2020) were found for *Peckoltia braueri*.

From Cardoso et al. (2017):

“In *P. braueri*, 630 parasites were collected, belonging to *Unilatus unilatus*, *Nothogyrodactylus* sp., *Genarchella genarchella*, *Proteocephalus* sp., *Gorytocephalus elongorchis*, *Dolops longicauda* and Hirudinea gen. sp., with a dominance of monogenean species.”

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of introductions of *Peckoltia braueri* were found, therefore there is no information on impacts of introductions.

4 History of Invasiveness

No records of introductions of *Peckoltia braueri* were found, therefore the history of invasiveness is classified as “no known nonnative population.”

5 Global Distribution

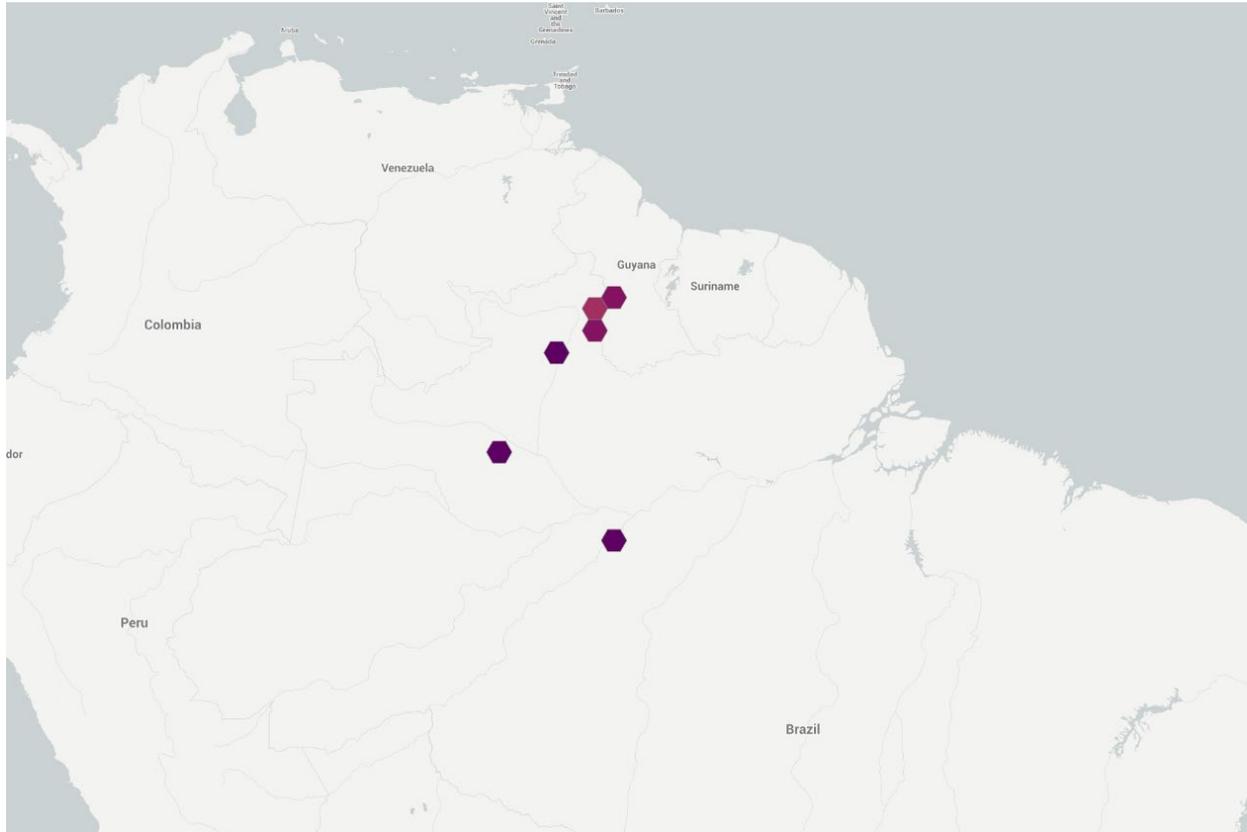


Figure 1. Known global distribution of *Peckoltia braueri*. Locations are in Guyana and Brazil. Map from GBIF Secretariat (2018).

6 Distribution Within the United States

No records of *Peckoltia braueri* in the wild in the United States were found.

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Peckoltia braueri* was low across 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 0.003, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States had a low individual Climate 6 score.

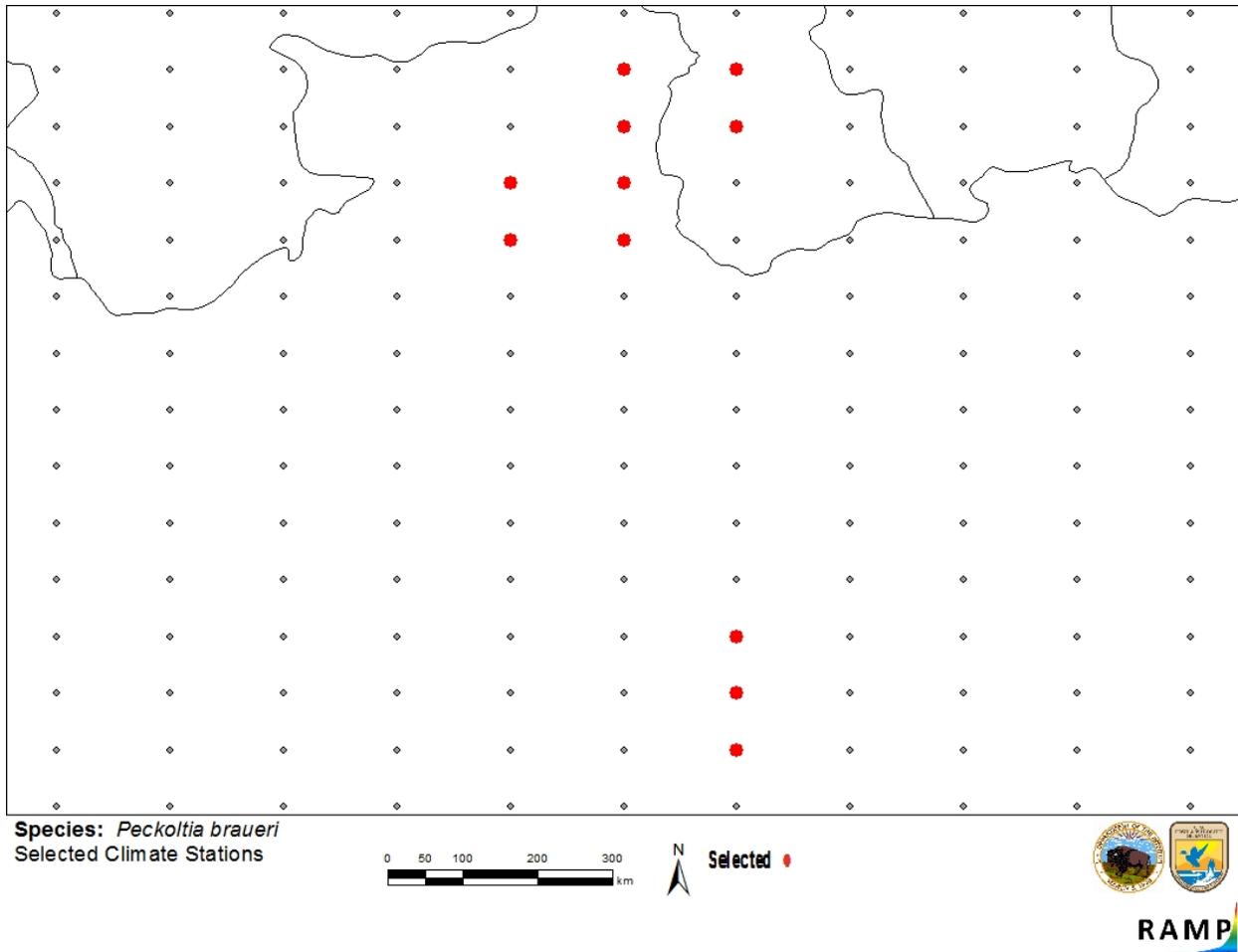


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in northern South America selected as source locations (red; Guyana, Brazil) and non-source locations (gray) for *Peckoltia braueri* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations are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

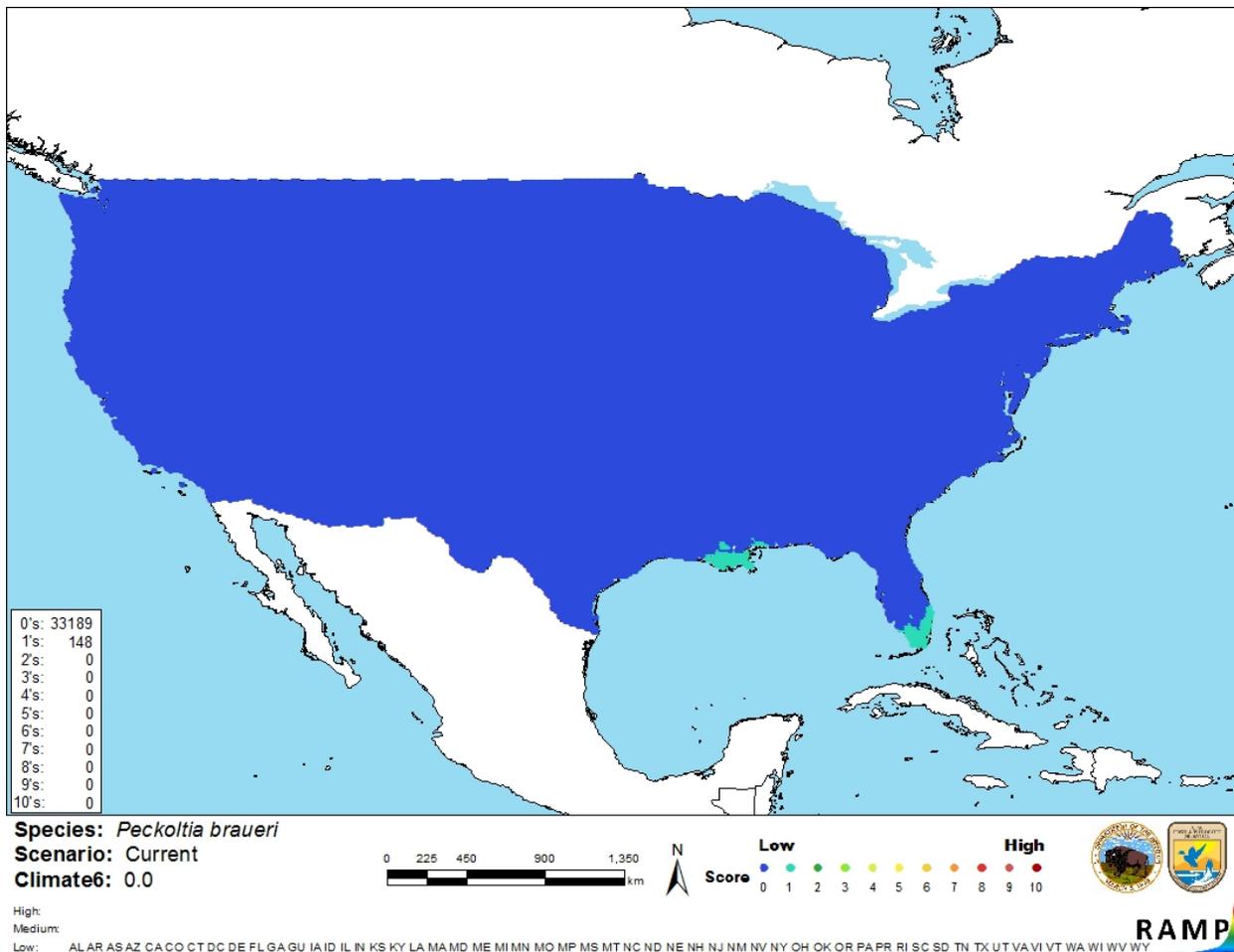


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Peckoltia braueri* in the contiguous United States based on source locations reported from GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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

8 Certainty of Assessment

The certainty of assessment is low. There was some general information about the species available from peer-reviewed sources. There were no records of introductions found and therefore there is no information on impacts available to evaluate.

9 Risk Assessment

Summary of Risk to the Contiguous United States

Peckoltia braueri is a species of armored catfish native to rivers in southern Guyana and northern Brazil. *P. braueri* is used as a food source by local communities and is present in the aquarium trade. No records of *P. braueri* in trade in the United States were found. The history of invasiveness is classified as “no known nonnative population.” There were no records of introductions found and therefore no information on impacts of introductions. The climate match was low. The certainty of assessment is low. The overall risk assessment 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, Werneke DC. 2005. *Peckoltia cavatica*, a new loricariid catfish from Guyana and a redescription of *P. braueri* (Eigenmann 1912) (Siluriformes). *Zootaxa* 882:1–14.

Cardoso ACF, Oliveira MSB, Neves LR, Tavares-Dias M. 2017. Metazoan fauna parasitizing *Peckoltia braueri* and *Pterygoplichthys pardalis* (Loricariidae) catfishes from the northeastern Brazilian Amazon. *Acta Amazonica* 47:147–154.

Eschmeyer WN, Fricke R, 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> (September 2018).

Froese R, Pauly D, editors. 2018. *Peckoltia braueri* (Eigenmann, 1912). FishBase. Available: <https://www.fishbase.de/summary/Peckoltia-braueri.html> (September 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Peckoltia braueri* (Eigenmann, 1912). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/5202092> (September 2018).

[ITIS] Integrated Taxonomic Information System. 2018. *Peckoltia braueri* (Eigenmann, 1912). Reston, Virginia: Integrated Taxonomic Information System. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680311#null (September 2018).

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[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).

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.

Baumgartner G, Pavanelli CS, Baumgartner D, Bifi AG, Debona T, Frana VA. 2012. Peixes do baixo Rio Iguaçu. Maringá, Brazil: EDUEM.

Eigenmann CH. 1912. The freshwater fishes of British Guiana, including a study of the ecological grouping of species, and the relation of the fauna of the plateau to that of the lowlands. *Memoirs of the Carnegie Museum* 5:1–578.

Porto DB, Vital JF, Santos AKS, Morais AM, Varella AMB, Malta JCO. 2012. Metazoários parasitos de *Pterygoplichthys pardalis* (Castelnau, 1855) (Siluriformes: Loricariidae) da Amazônia central, Brasil. *Revista Brasileira de Zootecias* 14:35–40.