

Peckoltia furcata (a catfish, no common name)

Ecological Risk Screening Summary

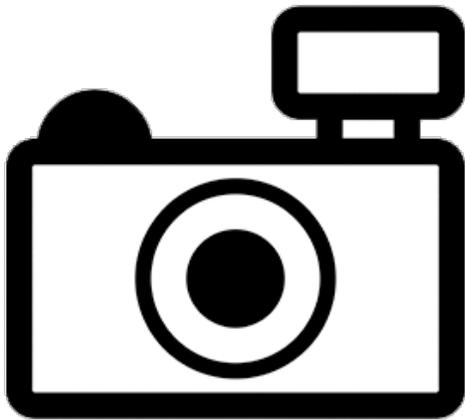
U.S. Fish & Wildlife Service, February 2013

Revised, August 2018

Web Version, 12/18/2020

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



No Photo Available

1 Native Range and Status in the United States

Native Range

From Armbruster (2005):

“Known from the upper Río Amazon, Río Marañon, and Río Ucayali of Ecuador and Peru [...].”

From Froese and Pauly (2018):

“South America: Ucayali River basin, Peru.”

Status in the United States

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

Peckoltia furcata 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 compta* 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 furcata* (Fowler 1940) is the current valid name for this species. *P. furcata* was originally described as *Chaetostomus furcatus* Fowler 1940.

From ITIS (2018):

Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Siluriformes
Family Loricariidae
Subfamily Hypostominae
Genus *Peckoltia*
Species *Peckoltia furcata* (Fowler, 1940)

Size, Weight, and Age Range

From Armbruster (2008):

“Largest specimen examined 153.5 mm SL.”

From Froese and Pauly (2018):

“Max length : 9.2 cm SL male/unsexed; [Fisch-Muller 2003]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

From Hidalgo del Aguila and Chocano (2016):

“Tropical benthic freshwater fish. It occurs in white and black water rivers, usually in areas of intermediate depth (up to 2 m) and on sand and lime grounds.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Armbruster (2005):

“Known from the upper Río Amazon, Río Marañon, and Río Ucayali of Ecuador and Peru [...]”

From Froese and Pauly (2018):

“South America: Ucayali River basin, Peru.”

Introduced

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

Means of Introduction Outside the United States

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

Short Description

From Armbruster (2008):

“*Peckoltia furcata* is unique among *Peckoltia* and perhaps hypostomines by having a strongly forked caudal fin with the upper lobe longer than the lower [...]; however, the condition of the caudal fin of most *Peckoltia* is poor with the tails either breaking in transit or eaten off by other fishes, making the utility of this character limited. *Peckoltia furcata* can be identified from all other *Peckoltia* except *P. bachi*, *P. brevis*, *P. caenosa*, *P. lineola*, and *P. oligospila* by having spots on the head; from *P. bachi* by having the spots on the head small (vs. large), the pelvic spines narrow (vs. wide), and the eye high on the head (vs. low); from *P. brevis*, *P. caenosa*, *P. lineola*, and *P. oligospila* by lacking spots on the abdomen at all ages (vs. present in large juveniles and adults); from *P. brevis* and *P. lineola* by having spots on the dorsal fin (vs. bands); from *P. caenosa* and *P. lineola* by having none of the spots on the head combining to form vermiculations; from *P. caenosa* by having dark spots in the dorsal fin (vs. light spots), and by having the dark and light bands on the caudal fin of about equal width (vs. light bands about 25% of width of dark bands); and from *P. oligospila* by having bands in the caudal fin (vs. spots).”

“Body fairly narrow and elongate. Head gently sloped to parieto-supraoccipital. Parieto-supraoccipital with tall crest. Parieto-supraoccipital crest raised well above nuchal region. Nuchal region rises slightly to nuchal plate. Dorsal profile sloped ventrally to dorsal procurent caudal-fin spines, then rising rapidly to caudal fin. Ventral profile flat to ventral procurent caudal-fin spines and then sloping ventrally to caudal fin. Supraorbital ridge rounded, contiguous, but slightly offset medially from rounded ridge proceeding from anterior margin of orbit to anterolateral corner of anterior nares. Head contours smooth except parieto-supraoccipital crest. Eye medium-sized.”

“Keels absent. Mid-ventral plates bent at their midline above pectoral fin to form ridge. Dorsal plates bent dorsally below dorsal fin to form ridges that converge at preadipose plate, dorsal surface flat between ridges. Five rows of plates on caudal peduncle. Abdomen completely covered in small plates except for small areas at bases of pectoral and pelvic fins and occasionally on throat. 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. 23–28 [...] plates in the median series.”

“Frontal, infraorbitals, nasal, compound pterotic, sphenotic, and parieto-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 20–77, longest almost reaching first mid-ventral plate in adults. Cheek plates evertible to approximately 90° from head. Odontodes on tip of pectoral-fin spine slightly hypertrophied.”

“Dorsal fin short, not reaching preadipose plate fin when adpressed; dorsal-fin spine same length as proceeding rays making edge straight. Dorsal-fin spinelet V-shaped, dorsal-fin spine lock functional. Dorsal fin II,7. Adipose fin with one preadipose plate and fairly long spine. Caudal fin forked, lower lobe longer than upper, I,14,I with four to five [...] dorsal procurent caudal-fin rays and four to five [...] ventral procurent-fin rays. Anal fin short with unbranched ray weak and about same length of first branched ray. Anal fin I,4, Pectoral-fin spine reaching beyond pelvic fin when adpressed ventral to pelvic fin. Pectoral fin I,6. Pelvic fin reaching to posterior insertion of anal-fin or further when adpressed. Pelvic fin I,5.”

“Iris operculum present. Flap between anterior and posterior nares short. Lips wide, fairly thin. Upper lip with small, round papillae. Lower lip with small papillae anteriorly and posteriorly, becoming larger medially. Maxillary barbel short, maximally reaching base of evertible cheek plates. Buccal papilla small. Jaws narrow, dentaries forming angle slightly greater than 90°, premaxillaries forming gentle arc greater than 135°. Teeth with small, moderately wide cusps, lateral cusp approximately half length of medial cusp, stalk of tooth long; 26–42 dentary teeth [...], 28–58 premaxillary teeth [...].”

“Base tan with brown markings. Head with small spots anteriorly, becoming slightly larger posteriorly and fading between head and dorsal fin or continuing to get larger and fading anywhere before caudal fin. Body with four dorsal saddles (occasionally faint), the first below the middle rays of the dorsal fin, the second below the posterior rays of the dorsal fin and slightly posterior, the third below the adipose fin and slightly anterior, and the fourth at the end of the

caudal peduncle. The first two saddles combine midbody. All fins with large spots, spots combining in all except dorsal fin to form bands (although the distal row will occasionally fuse in the dorsal fin). The light interspaces in all fins except the caudal are about half the width of the dark spots or bands. The light interspaces of the caudal fin about same width as dark bands. Dark spot between dorsal-fin spinelet and spine. Abdomen and ventral surface of caudal peduncle lighter than sides. Juveniles colored as adults, but spots significantly larger and fewer bands or spots in the fins.”

Biology

From Armbruster (2008):

“Nuptial males with hypertrophied odontodes on sides and posterior part of head; hypertrophied odontodes becoming larger posteriorly. Hypertrophied odontodes on upper caudal-fin spine and adipose spine. Upper caudal-fin spine not thickened. Odontodes on pectoral-fin spine noticeably larger.”

Human Uses

From Hidalgo del Aguila and Chocano (2016):

“The species is used as an ornamental fish.”

Diseases

No information on diseases of *Peckoltia furcata* was found. **No records of OIE-reportable diseases (OIE 2020) were found for *P. furcata*.**

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

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

4 History of Invasiveness

No records of introductions of *Peckoltia furcata* were found, therefore the history of invasiveness is classified as “no known nonnative population.” There was insufficient trade information available to determine if the species had a significant trade history.

5 Global Distribution



Figure 1. Known global distribution of *Peckoltia furcata*. Locations are in Ecuador and Peru. Map from GBIF Secretariat (2018).

6 Distribution Within the United States

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

7 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Peckoltia furcata* was low across the contiguous United States. There were no areas of medium or high 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 a low individual Climate 6 score.

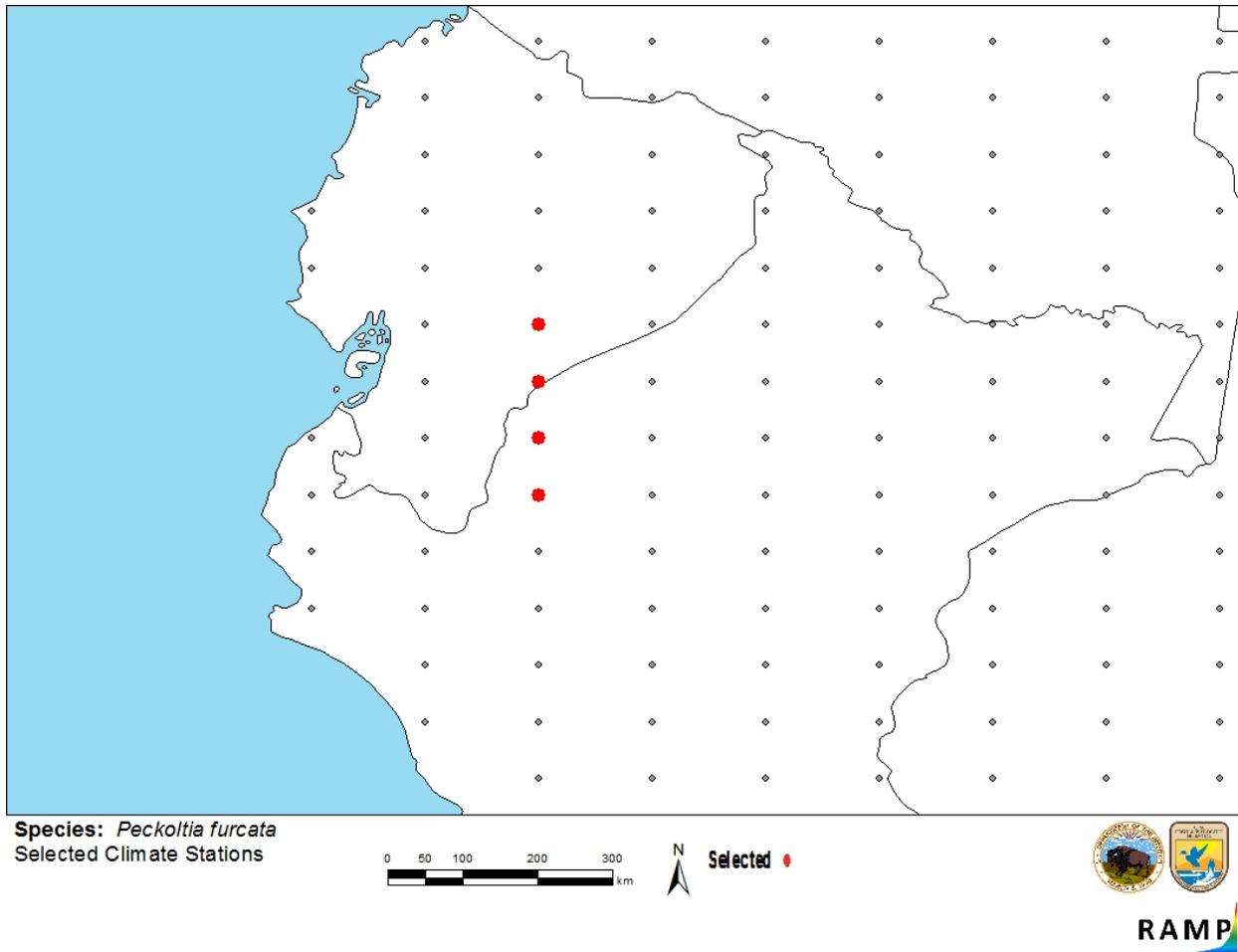


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in northwestern South America selected as source locations (red; Ecuador, Peru) and non-source locations (gray) for *Peckoltia furcata* climate matching. Source locations from GBIF Secretariat (2018). Selected source locations are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

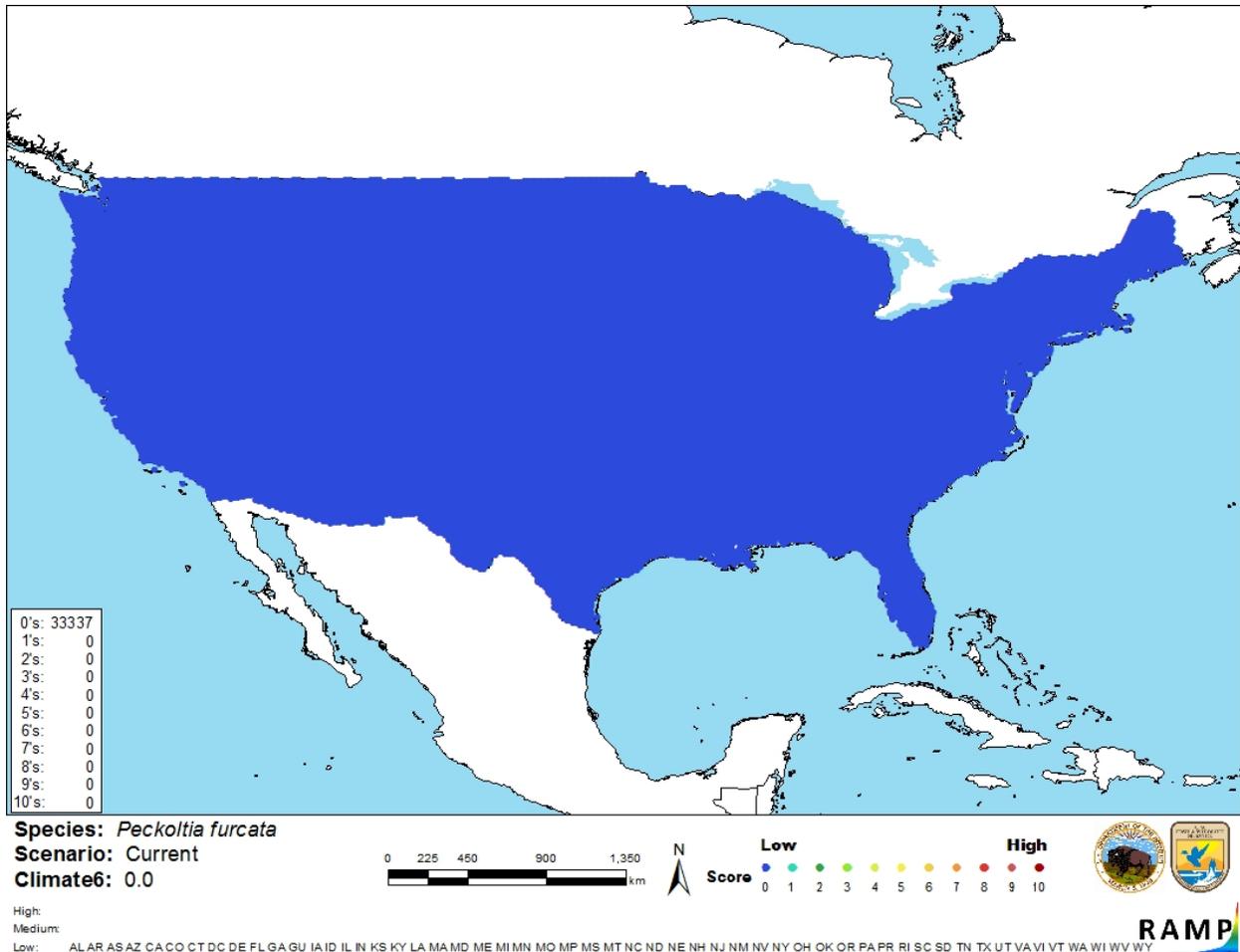


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Peckoltia furcata* in the contiguous United States based on source locations reported from GBIF Secretariat (2018). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

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 furcata is a species of catfish native to northwestern South America. This species is found in the aquarium trade. The history of invasiveness is classified as “no known nonnative population.” There were no records of introductions to the wild found. The climate match was low. There were no areas of high or medium match in the contiguous United States. 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. 2008. The genus *Peckoltia* with the description of two new species and a reanalysis of the phylogeny of the genera of the Hypostominae (Siluriformes: Loricariidae). *Zootaxa* 1822:1–76.

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> (August 2018).

Froese R, Pauly D, editors. 2018. *Peckoltia furcata* Fowler, 1940. FishBase. Available: <https://www.fishbase.de/summary/Peckoltia-furcata.html> (August 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Peckoltia furcata* (Fowler, 1940). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/5202102> (August 2018).

Hidalgo del Aguila M, Chocano L. 2016. *Peckoltia furcata*. The IUCN Red List of Threatened Species 2016: e.T49830136A53817913 Available: <http://www.iucnredlist.org/details/49830136/0> (August 2018).

[ITIS] Integrated Taxonomic Information System. 2018. *Peckoltia furcata* (Fowler, 1940). Reston, Virginia: Integrated Taxonomic Information System. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=680315#null (August 2018).

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. 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.

Fisch-Muller S. 2003. Loricariidae-Ancistrinae (Armored catfishes). Pages 373–400 in Reis RE, Kullander SO, Ferraris CJ Jr, editors. Checklist of the freshwater fishes of South and Central America. Porto Alegre, Brazil: EDIPUCRS.

Fowler HW. 1940. A collection of fishes obtained by Mr. William C. Morrow in the Ucayali River Basin, Peru. Proceedings of the Academy of Natural Sciences of Philadelphia 91:219–289.