

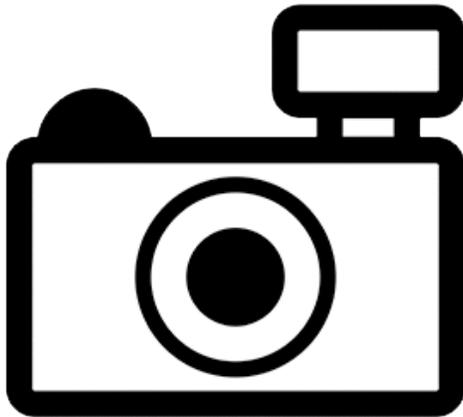
***Barbodes lanaoensis* (a fish, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2013

Revised, July 2018

Web Version, 8/3/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Asia: endemic to Lake Lanao, Philippines.”

Status in the United States

This species has not been reported as introduced or established in the United States. There is no indication that this species is in trade in the United States.

Means of Introductions in the United States

This species has not been reported as introduced or established in the United States.

Remarks

Both the accepted name *Barbodes lanaoensis* and the synonym *Puntius lanaoensis* were used when researching in preparation of this assessment.

From World Conservation Monitoring Centre (1996):

“Red List Category & Criteria: Critically Endangered”

“Harrison and Stiassny (1999) consider this species to be possibly extinct.”

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2018):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysii
Order Cypriniformes
Superfamily Cyprinoidea
Family Cyprinidae
Genus *Puntius*
Species *Puntius lanaoensis* (Herre, 1924)”

From Eschmeyer et al. (2018):

“Current status: Valid as *Barbodes lanaoensis* Herre 1924. Cyprinidae: Smiliogastrinae.”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 9.4 cm SL male/unsexed; [Herre 1924]; 11.8 cm (female)”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Asia: endemic to Lake Lanao, Philippines.”

Introduced

This species has not been reported as introduced or established outside of its native range.

Means of Introduction Outside the United States

This species has not been reported as introduced or established outside of its native range.

Short Description

From Froese and Pauly (2018):

“Dorsal spines (total): 4; Dorsal soft rays (total): 8; Anal spines: 3. Preserved color brownish yellow, dark above, paler below, belly yellowish; all fins pale; a faint dark bar may be present on shoulder. 9-10 scales between nape and dorsal. Lateral line strongly curved beneath the dorsal. Snout narrow and blunt, equals an eye diameter or exceeds it by half.”

Biology

No information available.

Human Uses

No information available.

Diseases

No information available. No OIE-reportable diseases have been documented for this species.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No information available. This species has not been reported as introduced or established outside of its native range.

4 Global Distribution



Figure 1. Known global distribution of *Barbodes lanaoensis*, reported from the Philippines. Map from GBIF Secretariat (2018).

5 Distribution Within the United States

This species has not been reported as introduced or established in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, which is a low climate match. The range for a low climate match is from 0.000 to 0.005, inclusive. The climate match was very low across almost the entire contiguous United States. There were small areas of slightly higher climate match along the Gulf Coast and in southeast Florida.

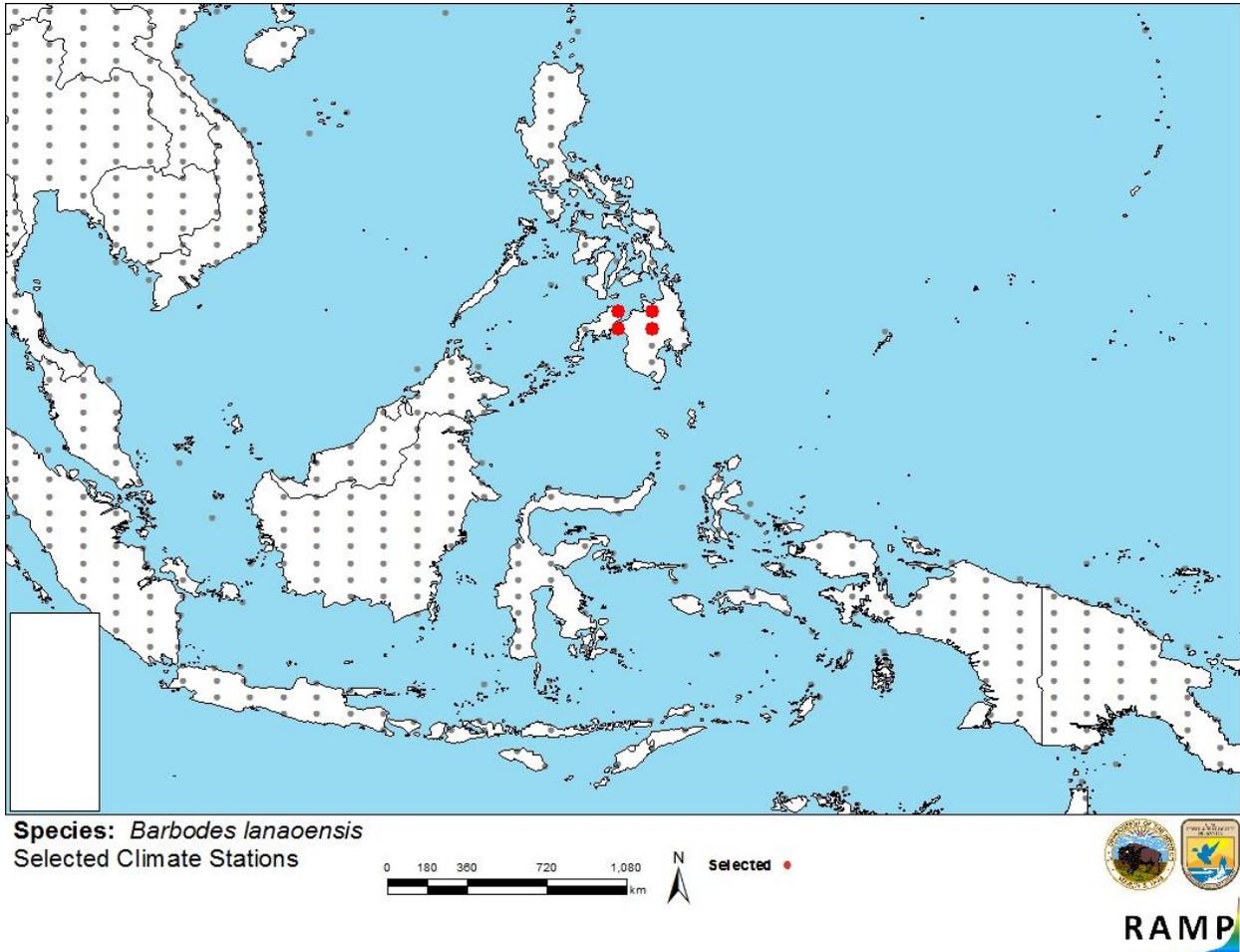


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Philippines) and non-source locations (gray) for *Barbodes lanaoensis* climate matching. Source locations from GBIF Secretariat (2018).

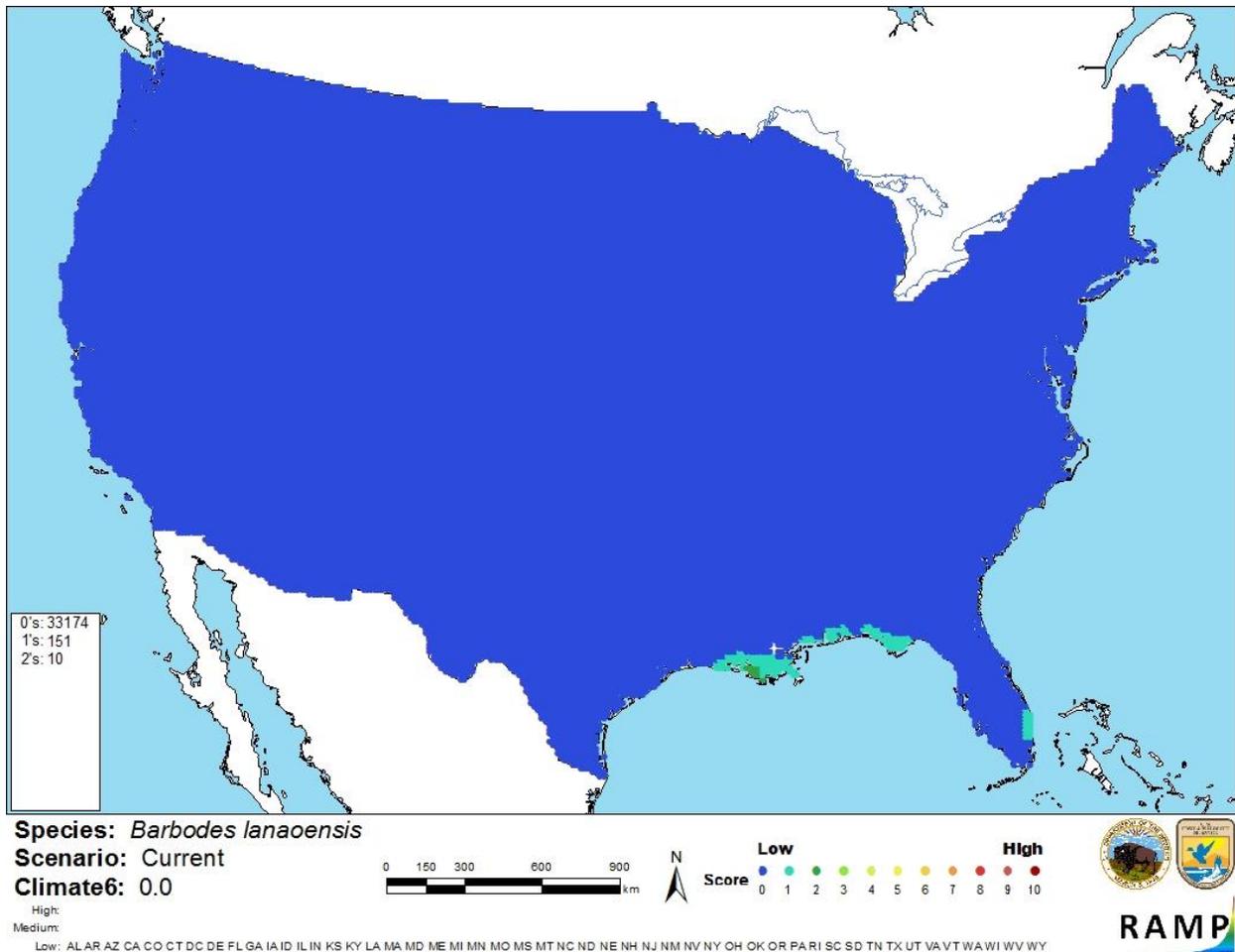


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Barbodes lanaoensis* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0=Lowest match, 10=Highest match.

The “High”, “Medium”, and “Low” climate match categories are based on the following table:

Climate 6: Proportion of (Sum of Climate Scores 6-10) / (Sum of total Climate Scores)	Climate Match Category
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

There was very limited information available about *Barbodes lanaoensis*. This species has never been reported as introduced or established outside of its native range, so no impacts of introductions of this species are available from which to base an assessment of risk. The status of this population is unknown; it may be either critically endangered or possibly extinct. Further information is necessary to adequately assess this species, so the certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Barbodes lanaoensis is a small freshwater cyprinid fish native to Lake Lanao in the Philippines. This species is listed as Critically Endangered by the IUCN, but is possibly extinct. No introductions of this species outside of its native range have been documented. *B. lanaoensis* has a low climate match with the contiguous United States. Due to a lack of information from which to base an assessment of risk, the certainty of this assessment is low, and the overall risk assessment category is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Low**
- **Overall Risk Assessment Category: Uncertain**

9 References

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.

Eschmeyer, W. N., R. Fricke, and R. van der Laan, editors. 2018. Catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (July 2018).

Froese, R., and D. Pauly, editors. 2018. *Barbodes lanaoensis* (Herre, 1924). FishBase. Available: <https://www.fishbase.de/summary/Barbodes-lanaoensis.html>. (July 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Barbodes lanaoensis*, Herre, 1924. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2364146>. (July 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Puntius lanaoensis* (Herre, 1924). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=689816#null. (July 2018).

Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.

World Conservation Monitoring Centre. 1996. *Barbodes lanaoensis*. The IUCN Red List of Threatened Species 1996: e.T18892A8662732. Available: <http://www.iucnredlist.org/details/18892/0>. (July 2018).

10 References Quoted But Not Accessed

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.

Harrison, I. J., and M. L. J. Stiassny. 1999. The quiet crisis. A preliminary listing of the freshwater fishes of the world that are extinct or “missing in action”. Pages 271-331 *in* R. D. E. MacPhee, editor. *Extinctions in near time*. Kluwer Academic/Plenum Publishers, New York.

Herre, A. W. C. T. 1924. Distribution of the true freshwater fishes in the Philippines. I. The Philippine Cyprinidae. *Philippine Journal of Science* 24(3):249-307.