

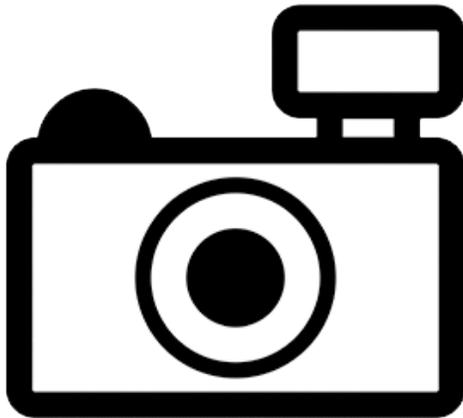
***Barbodes sirang* (a fish, no common name)**

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, February 2013

Revised, March 2019

Web Version, 8/20/2019



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2019):

“Asia: endemic to Lake Lanao (Lumbatan and Dansalan), Lanao Province, Mindanao Island, Philippines.”

Status in the United States

Barbodes sirang has not been reported in the wild or in trade in the United States.

Means of Introductions in the United States

Barbodes sirang has not been reported in the wild in the United States.

Remarks

World Conservation Monitoring Centre (1996):

“Harrison and Stiassny (1999) consider this species to be possibly extinct. The matter has been referred to the relevant Specialist Group for a decision.”

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2019):

“**Current status:** Valid as *Barbodes sirang* Herre 1932.”

From Bailly (2017):

“Biota > Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) > [...] Actinopterygii (Class) > Cypriniformes (Order) > Cyprinidae (Family) > Barbinae (Subfamily) > *Barbodes* (Genus) > *Barbodes sirang* (Species)”

Size, Weight, and Age Range

From Froese and Pauly (2019):

“Max length : 12.4 cm TL male/unsexed; [Escudero 1980]”

Environment

From Froese and Pauly (2019):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2019):

“Tropical; 8°N - 7°N”

Distribution Outside the United States

Native

From Froese and Pauly (2019):

“Asia: endemic to Lake Lanao (Lumbatan and Dansalan), Lanao Province, Mindanao Island, Philippines.”

Introduced

Barbodes sirang has not been reported as introduced anywhere outside of their native range.

Means of Introduction Outside the United States

Barbodes sirang has not been reported as introduced anywhere outside of their native range.

Short Description

From Herre (1932):

“Dorsal IV-8; anal III-5; pectoral 1-14; ventral 1-8; there are 24, rarely 25 or 26, scales in the lateral line plus 2 or 3 more on the caudal base, 4Y2 above and 3 below the lateral line; there are 8, or sometimes 9, predorsal scales and 11 on the caudal peduncle; there are 3~2 scales between the ventral origin and the lateral line; there are no elongate axillary scales.

The oblong body is only moderately elevated but the rounded belly is usually protuberant and broad; the upper profile of the head descends in a straight line to the more or less pointed snout which has a terminal hump; the depth is usually 3 times in the length, rarely 3.25; the head is about 3.25 times in the length; the eye is 3.5 to 4.5 times in the head, equal to or less than the snout which is 3.5 to 3.6 times in the head; the eye is very close to or projects above the dorsal profile of the head; the posterior margin of the eye is midway of the length of the head; the terminal mouth is of moderate size, the lower jaw included, the maxillary extending beneath the anterior margin of the eye; the small and inconspicuous barbels rarely equal the eye, usually varying from little more than half to three-fourths an eye diameter in length; in adults the free margin of the dorsal is emarginate; the dorsal origin is a little in advance of the middle point between the tip of the snout and the caudal base and is opposite the ninth scale of the lateral line; the fourth dorsal spine is of moderate size, much shorter than the head, its hind edge minutely serrate; the ventral origin is opposite the base of the second or third dorsal ray and opposite the tenth lateral line scale; the deeply forked caudal is a little shorter than the head; the least depth of the caudal peduncle is 3.4 times in its own length; the length of the ventral is twice in that of the head and extends nearly to the anus except in spawning females, in which it may fall short by more than a scale breadth; the short pectoral is about 1.7 times in the head and does not extend to the ventral origin by one or two scales; the lateral line is slightly curved downward but does not rise to the middle of the caudal peduncle until the third or fourth scale before the caudal.

In life the color is dusky to blackish bronze above, the sides silvery dusky, and gray to whitish below, or the entire fish may appear black with metallic bronze or silver sheen; the dorsal, caudal, and pectoral are dusky or blackish, the other fins colorless.”

Biology

From World Conservation Monitoring Centre (1996):

“Peak of spawning appears to occur between October and March.”

Human Uses

From Froese and Pauly (2019):

“Fisheries: minor commercial”

From World Conservation Monitoring Centre (1996):

“Exploitation: fish is the main diet for people in the area and the human population has increased. Traditional fishing methods have been superseded by the use of poison (tigaw, labo, towa) and dynamite, which kill almost everything (including the fry).”

Diseases

No information on diseases was found. **No OIE-reportable diseases (OIE 2019) were found to be associated with *Barbodes sirang*.**

Threat to Humans

From Froese and Pauly (2019):

“Harmless”

3 Impacts of Introductions

Barbodes sirang has not been reported as introduced anywhere outside of their native range.

4 Global Distribution



Figure 1. Known global distribution of *Barbodes sirang*. Locations in Mindanao, Philippines. Map from GBIF Secretariat (2019).

5 Distribution Within the United States

Barbodes sirang has not been reported anywhere within the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for the contiguous United States was consistently low across all States. There are no areas of medium or high match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low). All States received low individual Climate 6 scores.

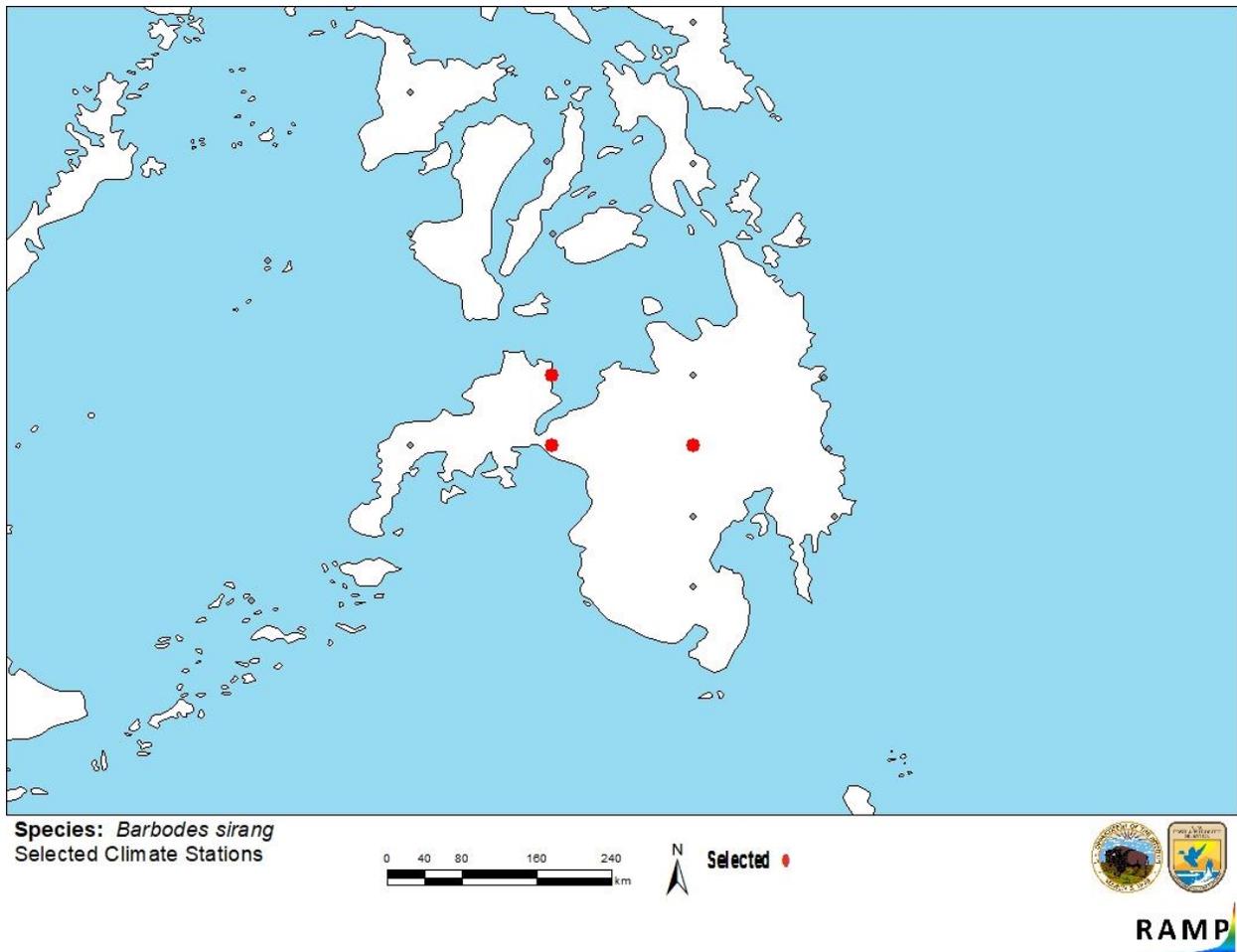


Figure 2. RAMP (Sanders et al. 2018) source map showing weather stations in Mindanao, Philippines selected as source locations (red) and non-source locations (gray) *Barbodes sirang* climate matching. Source locations from GBIF Secretariat (2019). Selected source locations are within 100 km of one or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

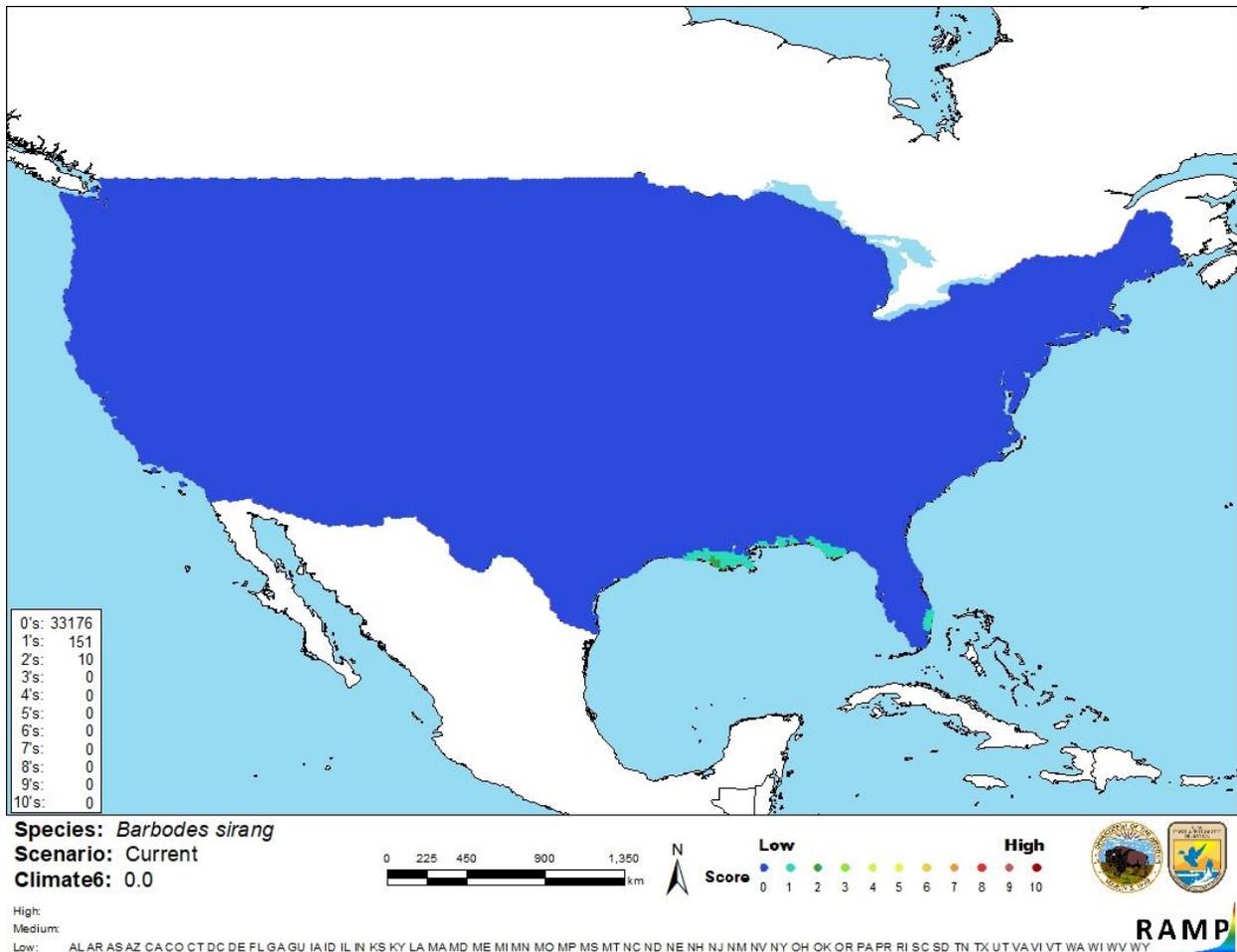


Figure 3. Map of RAMP (Sanders et al. 2018) climate matches for *Barbodes sirang* in the contiguous United States based on source locations reported by GBIF Secretariat (2019). 0 = Lowest match, 10 = Highest match.

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

Limited information is available for *Barbodes sirang* and it has not been introduced anywhere outside of its native range. The certainty of assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Barbodes sirang is a fish endemic to Lake Lanao in Mindanao, Philippines. This species is listed as critically endangered and could possibly have gone extinct. *B. sirang* has not been introduced anywhere outside of its native range nor is it found in trade. The history of invasiveness is uncertain. The climate match for the contiguous United States is low, with no areas of medium or high match and all States receiving low individual climate scores. The certainty of assessment is low. The overall risk assessment category for *Barbodes sirang* is uncertain.

Assessment Elements

- **History of Invasiveness (Sec. 3): Uncertain**
- **Climate Match (Sec. 6): Low**
- **Certainty of Assessment (Sec. 7): Low**
- **Remarks/Important additional information: No additional information.**
- **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.

- Bailly, N. 2017. *Barbodes sirang*. In World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1015697>. (March 2019).
- Fricke, R., W. N. Eschmeyer, and R. van der Laan, editors. 2019. Eschmeyer's catalog of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (March 2019).
- Froese, R., and D. Pauly, editors. 2019. *Barbodes sirang* (Herre, 1932). FishBase. Available: <https://www.fishbase.de/summary/Barbodes-sirang.html>. (March 2019).
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- OIE (World Organisation for Animal Health). 2019. OIE-listed diseases, infections and infestations in force in 2019. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2019/>. (March 2019).
- Sanders, S., C. Castiglione, and M. Hoff. 2018. Risk assessment mapping program: RAMP, version 3.1. U.S. Fish and Wildlife Service.

World Conservation Monitoring Centre. 1996. *Barbodes sirang*. The IUCN Red List of Threatened Species 2010: e.T18898A8670283. Available: <https://www.iucnredlist.org/species/18898/8670283>. (March 2019).

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.

Escudero, P. T., O. M. Gripaldo, and N. M. Sahay. 1980. Biological studies of the *Glossogobius giurus* (Hamilton & Buchanan) and the *Puntius sirang* (Herre) in Lake Lanao. *Journal of Fish Aquaculture* 1(1):154.

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.