

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

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, November 2013

Revised, July 2018

Web Version, 8/2/2018

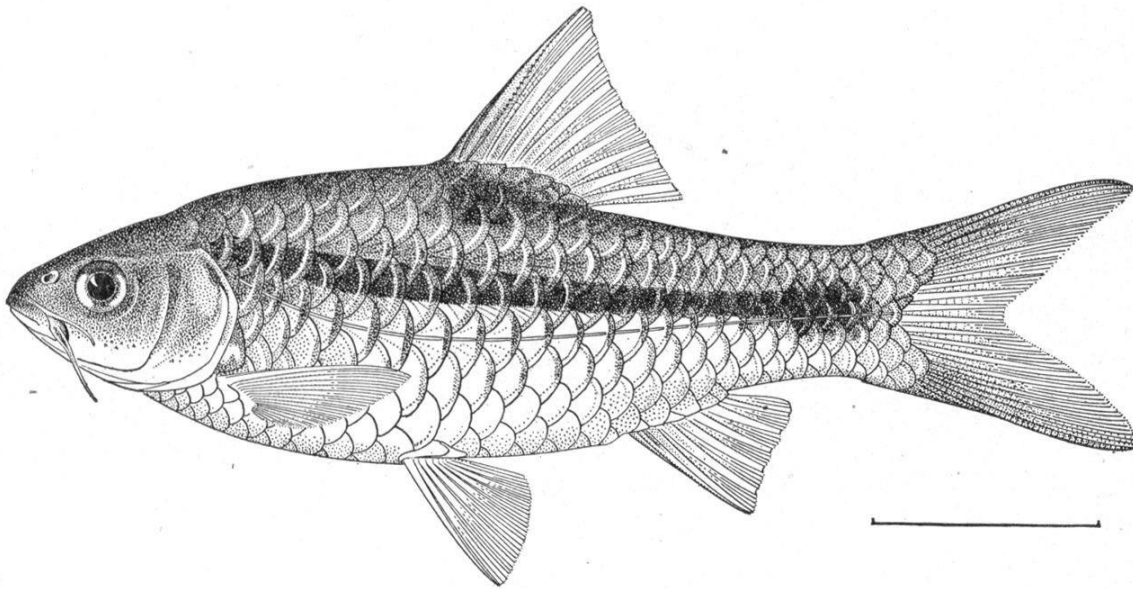


FIG. 5.—*Barbodes hemictenus*, new species. Type.

Image: D. S. Jordan and R. E. Richardson. Public domain. Available:
<https://www.gbif.org/occurrence/607770502>. (July 2018).

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Asia: endemic to Lake Naujan, Mindoro and from Sabaan, Mamboc and Baco rivers in the 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 hemictenus* and the synonym *Puntius hemictenus* were used when researching in preparation of this assessment.

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 hemictenus* (Jordan and Richardson, 1908)”

From Eschmeyer et al. (2018):

“Current status: Valid as *Barbodes hemictenus* Jordan & Richardson 1908. Cyprinidae: Smiliogastrinae.”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 10.0 cm TL male/unsexed; [Herre 1924]”

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 Naujan, Mindoro and from Sabaan, Mamboc and Baco rivers in the 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): 3; Dorsal soft rays (total): 8; Anal spines: 3; Anal soft rays: 5. Preserved color blackish on top of head and dorsal region merging to dark olive brown on sides; paler or yellowish ventrally; minute spots forms a dark margin to scales on sides; fin rays more or less dusky. Eyes with a narrow circular gelatinous lid. 8 (rarely 9) scales from nape to dorsal. 2.5 scales between origin of ventral and lateral line. Ventral axillary scale pointed, 1.5-1.75X in head. Minute pores usually cover the top of head. Short snout rounded equals eye or a seventh longer.”

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

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 hemictenus*. 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 0.0, which is a low climate match. The range for a low climate match is from 0.0 to 0.005, inclusive. The climate match was very low across the entire contiguous United States except for Florida, which had an area of slightly higher climate match.

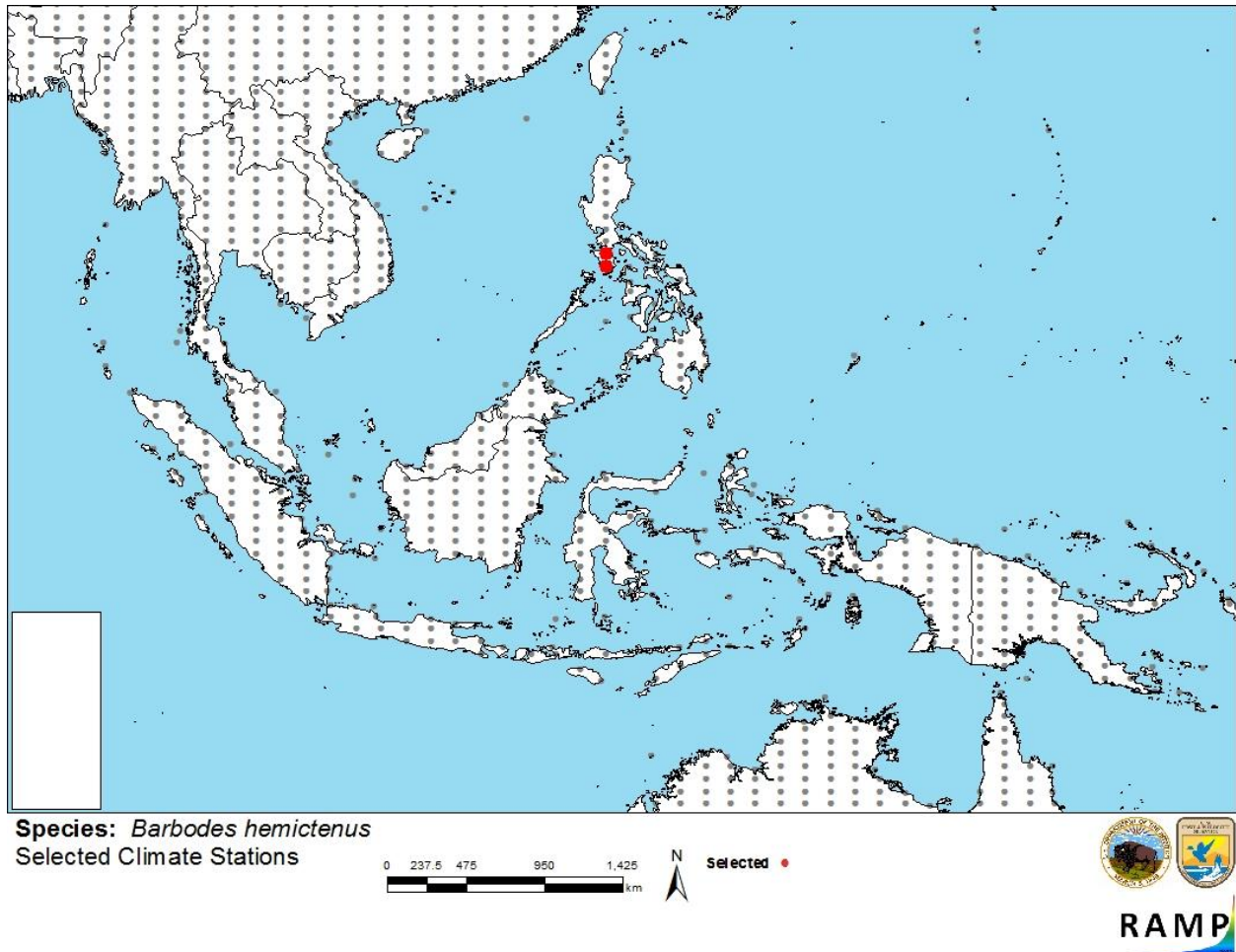


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red; Philippines) and non-source locations (gray) for *Barbodes hemictenus* climate matching. Source locations from GBIF Secretariat (2018).

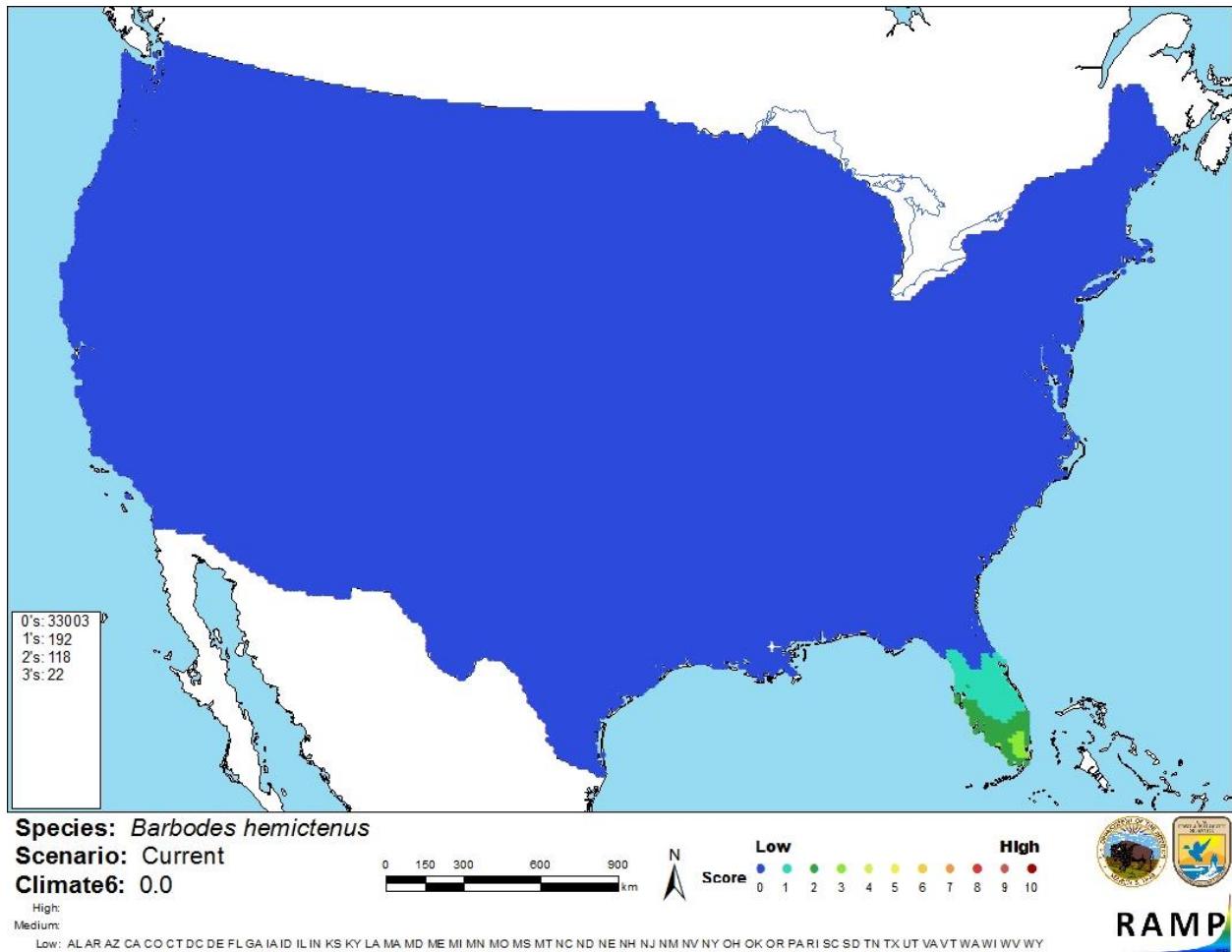


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Barbodes hemictenus* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0=Lowest match, 10=Highest match.

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

7 Certainty of Assessment

There is very little information available on the biology and ecology of *Barbodes hemictenus*. This species has never been reported as introduced outside of its native range, so no information is available on the potential risks this species may pose to the contiguous United States if introduced. Further information about *B. hemictenus* is needed to adequately assess the risk this species poses. Certainty of this assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Barbodes hemictenus is a small cyprinid fish native to the Philippines. It has a low climate match with the contiguous United States. Very little is known about its biology. *B. hemictenus* has not been reported as introduced outside its native range, so impacts of introduction are unknown. Further information is needed to adequately assess the risk this species poses to the contiguous United States, so the certainty of this assessment is low. 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 hemictenus* (Jordan & Richardson, 1908). FishBase. Available: <https://www.fishbase.de/summary/Barbodes-hemictenus.html>. (July 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Barbodes hemictenus*, Jordan & Richardson, 1908. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2364060>. (July 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Puntius hemictenus* (Jordan and Richardson, 1908). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=689808#null. (July 2018).

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

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.

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.