

Barbonymus balleroides

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, web version – 4/2/2018



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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2015):

“Asia: Viet Nam to Indonesia.”

From Kottelat (1989):

“*Barbodes balleroides* (Valenciennes, in Cuvier & Valenciennes, 1842) ME [Mekong River], CP [Chao Phraya River], MA [Malay Peninsula]”

Status in the United States

No records of *Barbonymus balleroides* in the United States were found.

Means of Introductions in the United States

No records of *Barbonymus balleroides* in the United States were found.

Remarks

Barbonymus balleroides is the valid name for the species (Eschmeyer et al. 2017). *Barbodes balleroides* is a synonym. Information searches were conducted using both names.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From Roskov et al. (2015):

“Kingdom Animalia
Phylum Chordata
Class Actinopterygii
Order Cypriniformes
Family Cyprinidae
Genus *Barbonymus*
Species *Barbonymus balleroides* (Valenciennes, 1842)”

According to Froese and Pauly (2015), the following are synonyms of *Barbonymus balleroides*: *Barbus balleroides* Valenciennes, 1842, *Barbodes balleroides* (Valenciennes, 1842), *Barbus bramoides* (non Valenciennes, 1842), and *Puntius bramoides* (non Valenciennes, 1842).

Size, Weight, and Age Range

From Froese and Pauly (2015):

“Max length: 30.0 cm TL male/unsexed; [Kottelat et al. 1993]”

From Martin-Smith and Tan (1998):

“SL to 250 mm.”

Environment

From Froese and Pauly (2015):

“Freshwater [...]”

Climate/Range

From Froese and Pauly (2015):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2015):

“Asia: Viet Nam to Indonesia.”

From Kottelat (1989):

“*Barbodes balleroides* [*Barbonymus balleroides*] (Valenciennes, in Cuvier & Valenciennes, 1842) ME [Mekong River], CP [Chao Phraya River], MA [Malay Peninsula]”

Introduced

No records of *Barbonymus balleroides* introductions were found.

Means of Introduction Outside the United States

No records of *Barbonymus balleroides* introductions were found.

Short Description

From Martin-Smith and Tan (1998):

“The major distinguishing feature is the depth of the caudal penduncle which is 1.3-1.5 times in head length in *B. balleroides* and 1.7-2.0 in *B. collingwoodii*.”

Biology

Information on the biology of *Barbonymus balleroides* was not found.

Human Uses

Information on human uses of *Barbonymus balleroides* was not found.

Diseases

No records of OIE reportable diseases found.

From Jong-Yil et al. (2012):

“In the present study, 7 more fish species (*Acheilognathus barbatulus*, *Albulichthys albuloides*, *Barbodes balleroides*, *Coilia lindmani*, *Parabramis pekinensis*, *Rasbora aurotaenia*, and *Trichogaster trichopterus*) have been newly added as the host for *H[aplorchis]. pumilio*.”

“*C[entrocestus]. formosanus* metacercariae were detected in 8 fish species (*A. barbatulus*, *A. testudineus*, *B. balleroides*, *C. auratus*, *C. molitorella*, *C. idella*, *P. pekinensis*, and *P. semifasciolatus*) in the present Study”

Threat to Humans

From Froese and Pauly (2015):

“Harmless”

3 Impacts of Introductions

No records of introductions of *Barbonymus balleroides* were found.

4 Global Distribution



Figure 1. Known global distribution of *Barbonymus balleroides*. Locations are in Indonesia. Map from GBIF Secretariat (2015).

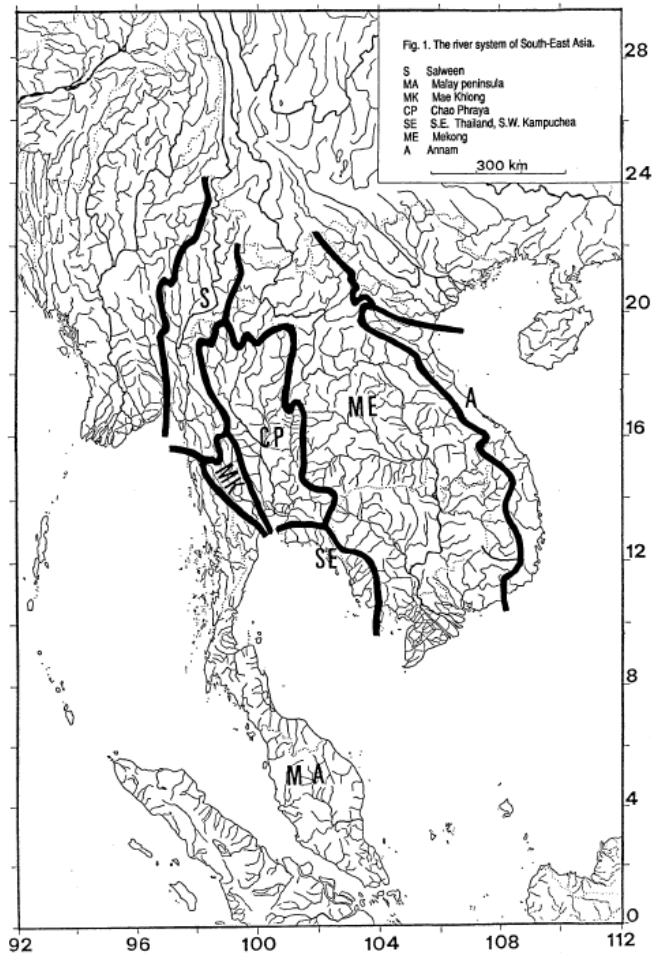


Figure 2. Map of river drainages and geographic areas in Southeast Asia. Map from Kottelat (1989).

According to Kottelat (1989) *Barbonymus balleroides* is also found on the Malay Peninsula (MA in Figure 2), and in the Chao Phraya (CP in Figure 2) and Mekong River (ME in Figure 2) drainages in addition to what is shown in Figure 1.

5 Distribution Within the United States

No records of *Barbonymus balleroides* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Barbonymus balleroides* was medium for southern Florida and Texas and low everywhere else. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous U.S. was 0.002, low, and no states had an individually high climate match.

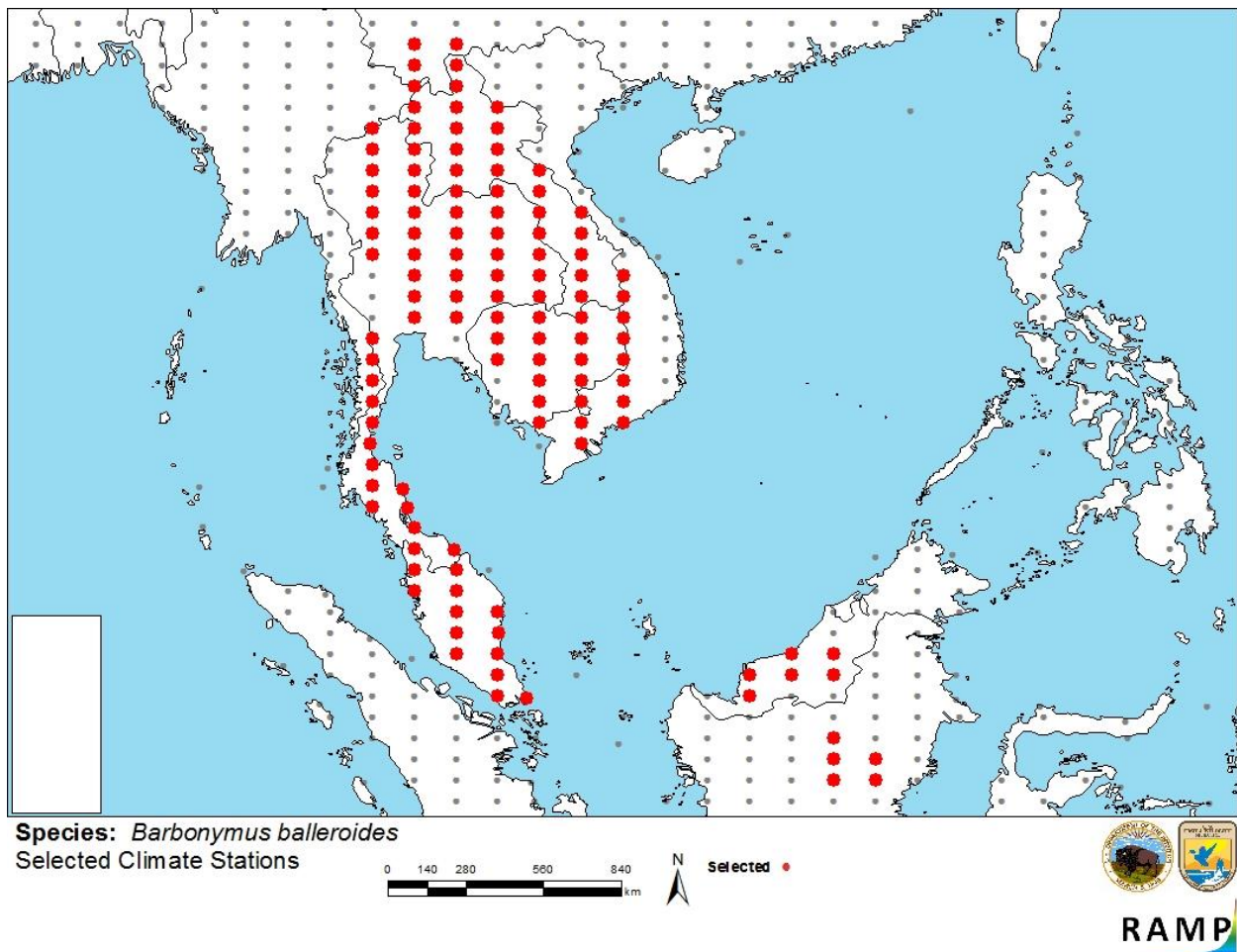


Figure 3. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (grey) for *Barbonymus balleroides* climate matching. Source locations from Kottelat (1989) and GBIF Secretariat (2015).

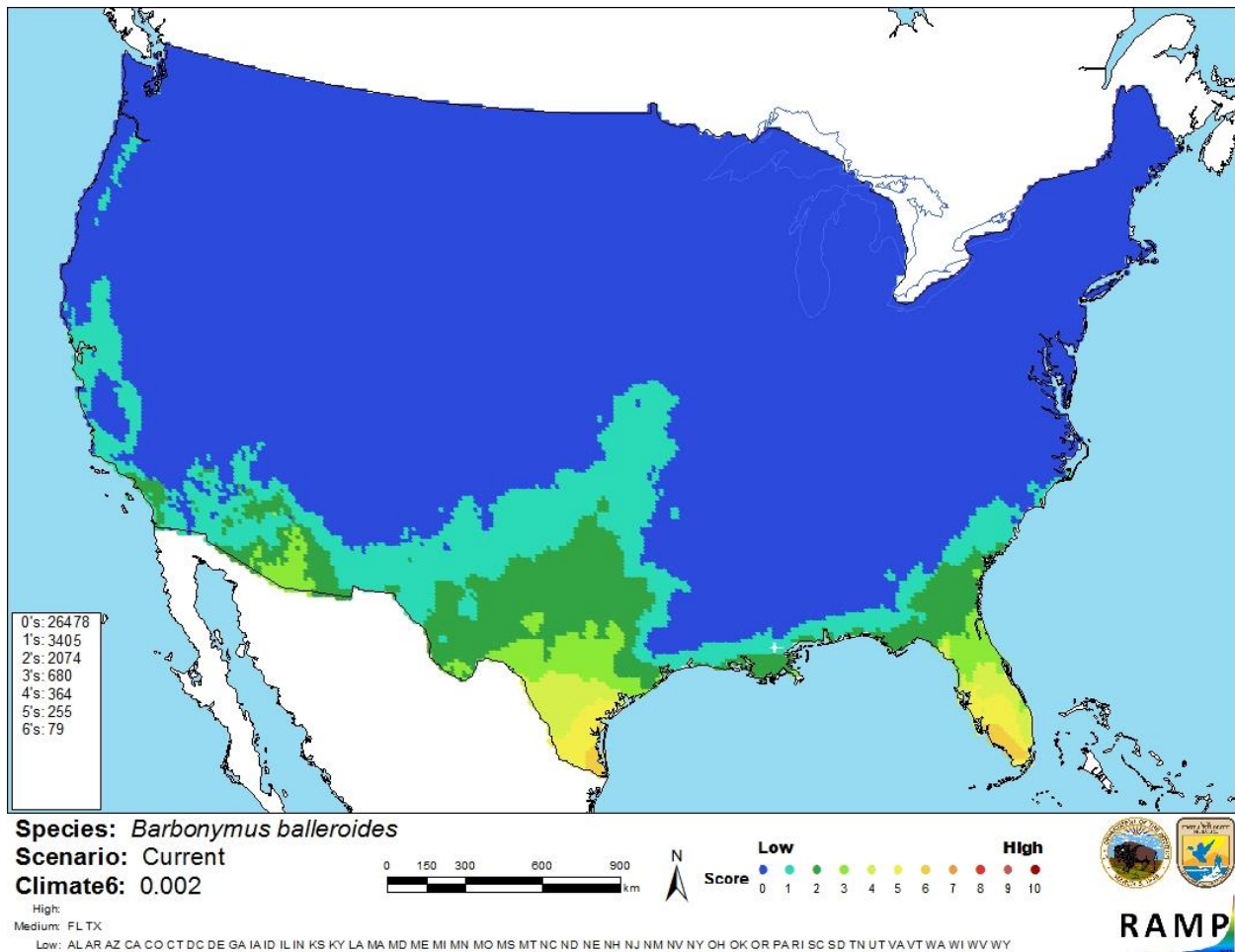


Figure 4. Map from RAMP (Sanders et al. 2014) of a current climate match for *Barbonymus balleroides* in the contiguous United States based on source locations reported by Kottelat (1989) and GBIF Secretariat (2015). 0 = Lowest match, 10 = Highest match.

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

The certainty of this assessment is low. There was little information available for this species. No records of introductions were found. The geo-referenced distributional data for this species is incomplete.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The history of invasiveness is uncertain. No records of introductions of *Barbonymus balleroides* were found. The climate match is very low. Some of the source points for the climate match were estimated from literature but the species' climate requirements are wholly tropical. A refinement of source points would most likely drop the climate score even lower than the current 0.002. 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**
- **Remarks/Important additional information** No additional remarks.
- **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. 2017. Catalogue of fishes: genera, species, references. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (February 2017).
- Froese, R., and D. Pauly, editors. 2015. *Barbonymus balleroides* (Valenciennes, 1842). FishBase. Available: <http://www.fishbase.org/summary/Barbonymus-balleroides.html>. (March 2015).
- GBIF Secretariat. 2015. GBIF backbone taxonomy: *Barbonymus balleroides* (Valenciennes, 1842). Global Biodiversity Information Facility, Copenhagen. Available: <http://www.gbif.org/species/2365894>. (March 2015).
- Jong-Yil, C., V. D. Nguyen, and S. Woon-Mok. 2012. Foodborne trematode metacercariae in fish from northern Vietnam and their adults recovered from experimental hamsters. *Korean Journal of Parasitology* 50(4):317–325.
- Kottelat, M. 1989. Zoogeography of the fishes from Indochinese inland waters with an annotated check-list. University van Amsterdam, Bulletin Zoölogisch Museum, volume 12.
- Martin-Smith, K. M., and H. H. Tan. 1998. Diversity of freshwater fishes from eastern Sabah: annotated checklist for Danum Valley and a consideration of the inter- and intra-catchment variability. *The Raffles Bulletin of Zoology* 46(2):573–604.

Roskov, Y., T. Kunze, T. Orrell, L. Abucay, L. Paglinawan, A. Culham, N. Bailly, P. Kirk, T. Bourgoïn, G. Baillargeon, W. Decock, A. De Wever, and V. Didžiulis, editors. 2015. Species 2000 and IT IS Catalogue of Life, 2015 Annual Checklist. Species 2000: Naturalis, Leiden, the Netherlands. Available: <http://www.catalogueoflife.org/col/details/species/id/21171256>. (March 2015).

Sanders, S., C. Castiglione, and M. 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.

Kottelat, M., A. J. Whitten, S. N. Kartikasari, and S. Wirjoatmodjo. 1993. Freshwater fishes of Western Indonesia and Sulawesi. Periplus Editions, Hong Kong.