

Spanner Barb (*Barbodes lateristriga*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, December 2013

Revised, July 2018

Web Version, 8/3/2018



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<https://www.fishbase.de/photos/UploadedBy.php?autoctr=24341&win=uploaded>. (July 2018).

1 Native Range and Status in the United States

Native Range

From Vidthayanon (2015):

“The species has a very wide distribution in southeast Asia. It is recorded in numerous river drainages from the Malay Peninsula (Peninsular Thailand river systems; presence in the MaeKlong is uncertain (C. Vidthayanon pers. comm. 2011)) to Indonesia (Java, Sumatra (Batavia, Buitenzorg, Tjampea, Sadingwetan, Tjipanas; Roberts 1989) and Kalimantan (Kapuas River)) and Sarawak.”

Status in the United States

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

From Arizona Aquatic Gardens (2018):

“Spanner T-Barb Tropical Fish [...] \$5.99”

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 lateristriga* and the synonym *Puntius lateristriga* 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 lateristriga* (Valenciennes in Cuvier and Valenciennes, 1842) – spanner barb”

From Eschmeyer et al. (2018):

“Current status: Valid as *Barbodes lateristriga* (Valenciennes 1842). Cyprinidae: Smiliogastrinae.”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 18.6 cm TL male/unsexed; [Hossain et al. 2015]; max. published weight: 77.50 g [Hossain et al. 2015]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic; pH range: 6.0 - 6.5; dH range: ? - 10. [...] 25°C - 28°C [Riehl and Baensch 1991; assumed to be recommended aquarium temperature range]”

Climate/Range

From Froese and Pauly (2018):

“Tropical;”

Distribution Outside the United States

Native

From Vidthayanon (2015):

“The species has a very wide distribution in southeast Asia. It is recorded in numerous river drainages from the Malay Peninsula (Peninsular Thailand river systems; presence in the MaeKlong is uncertain (C. Vidthayanon pers. comm. 2011)) to Indonesia (Java, Sumatra (Batavia, Buitenzorg, Tjampea, Sadingwetan, Tjipanas; Roberts 1989) and Kalimantan (Kapuas River)) and Sarawak.”

Introduced

From FAO (2018):

“*Puntius lateristriga* introduced to India from Malaysia”

“Status of the introduced species in the wild : Probably not established”

“*Puntius lateristriga* introduced to Philippines [...]”

“Status of the introduced species in the wild : Unknown”

Means of Introduction Outside the United States

From FAO (2018):

“*Puntius lateristriga* introduced to India from Malaysia”

“Introducer : Individual”

“Reasons of Introduction : 1) ornamental”

“*Puntius lateristriga* introduced to Philippines [...]”

“Introducer : Unknown”

“Reasons of Introduction : 1) ornamental”

Short Description

From Roberts (1989):

“A moderately large (to 150 mm), heavy-set or chunky, moderately deep-bodied *Puntius*: predorsal profile increasingly steep with growth; body generally with two broad vertical bars in anterior half and a broad midlateral longitudinal stripe on posterior half; on an overall background color of light lemon yellow in life. Often a roundish black spot above anal-fin origin. Lateral line complete, lateral scales 23.”

Biology

From Froese and Pauly (2018):

“Feeds on worms, crustaceans, insects and plant matter [Mills and Vevers 1989].”

From Roberts (1989):

“Usually inhabits clear mountain streams strewn with rocks and boulders; frequently found below waterfalls.”

Human Uses

From Vidthayanon (2015):

“This species is popular in the aquarium trade, and is locally consumed in households.”

From Denaro (2015):

“An old-time favorite, *Barbodes lateristriga* is still readily available from breeders in Asia, but it is not as commonly seen in American pet shops as it once was.”

This species is in trade in the U.S.

From Arizona Aquatic Gardens (2018):

“Spanner T-Barb Tropical Fish [...] \$5.99”

Diseases

Poelen et al. (2014) lists *Dactylogyrus puntii* as a parasite of *Barbodes lateristriga* (Strona et al. 2013).

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

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

From FAO (2018):

“*Puntius lateristriga* introduced to Philippines [...]”

“Ecological effects : No Data”

“Socioeconomic effects : No Data”

“*Puntius lateristriga* introduced to India from Malaysia”

“Ecological effects : Probably none”

“Socioeconomic effects : Probably none”

4 Global Distribution



Figure 1. Known global distribution of *Barbodes lateristriga*, reported from Southeast Asia. Map from GBIF Secretariat (2018). A point in Germany was excluded because it was a museum specimen. A point in India was excluded because the introduction is reported as “probably not established” (FAO 2018). Both of these occurrences were excluded from climate match analysis.

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 categorically low in every state in the contiguous United States. There was an area of slightly higher, but still low, climate match in Florida and along the Gulf and southern Atlantic Coasts.

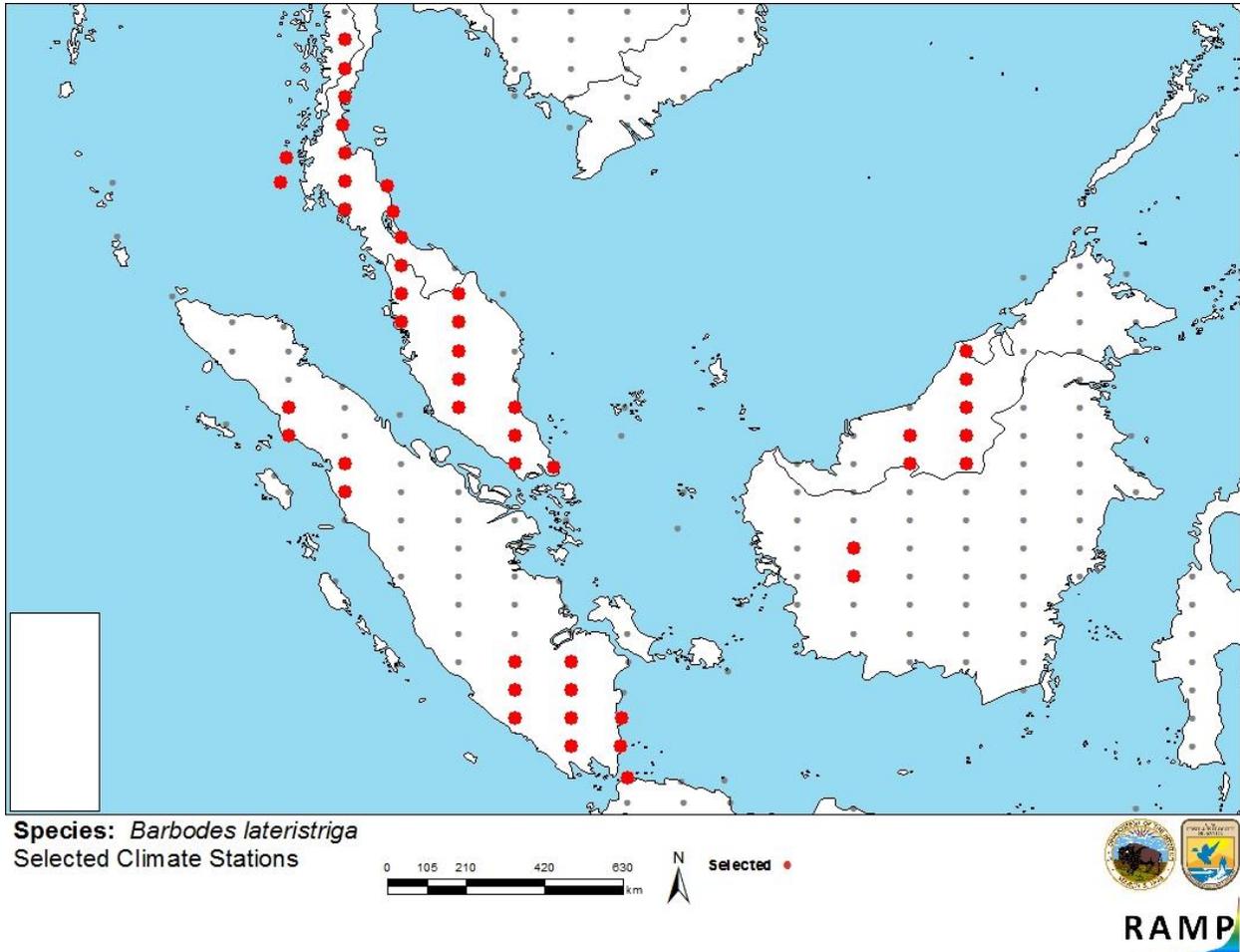


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in Southeast Asia selected as source locations (red; Malaysia, Thailand, Indonesia, and Singapore) and non-source locations (gray) for *Barbodes lateristriga* climate matching. Source locations from GBIF Secretariat (2018).

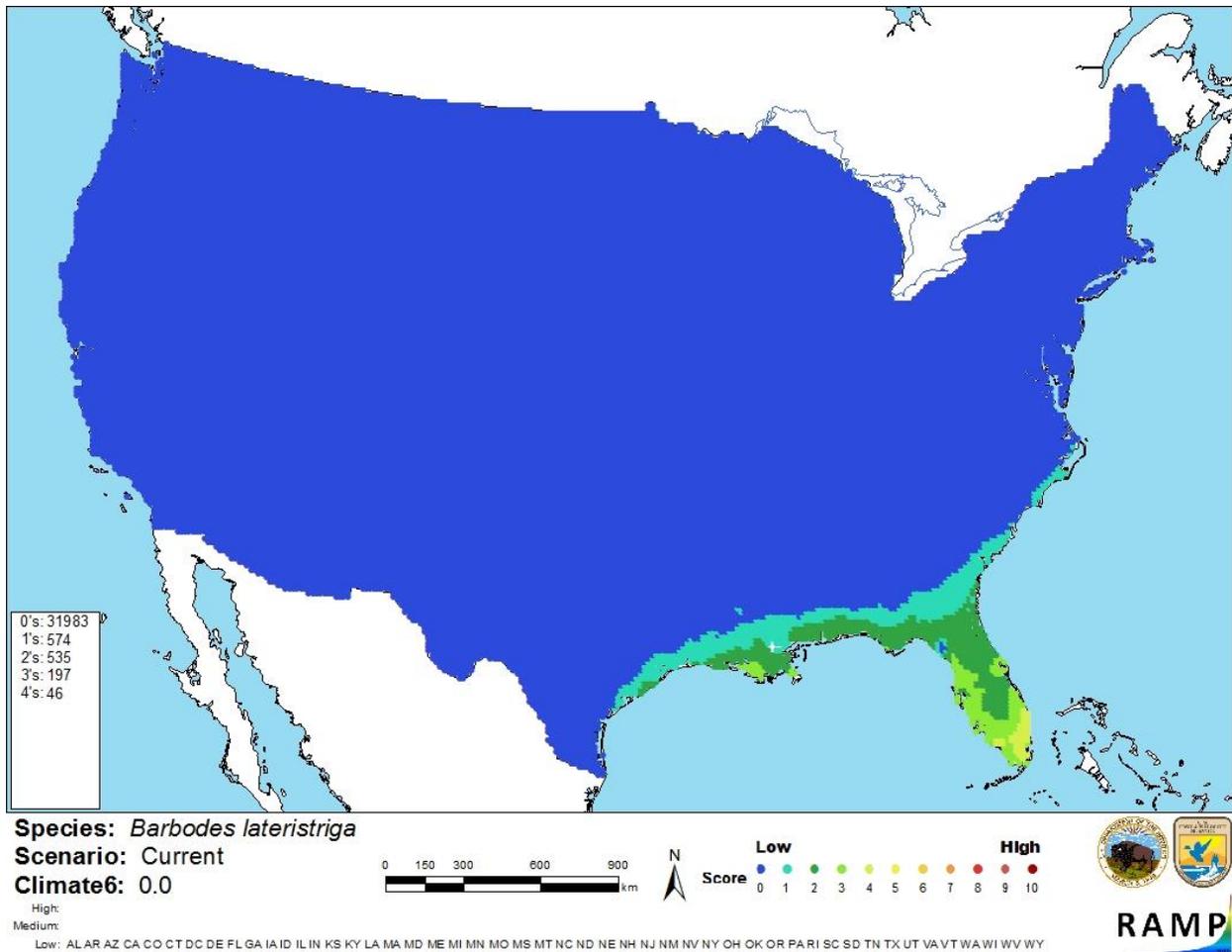


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Barbodes lateristriga* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0=Lowest match, 10=Highest match.

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 adequate information available about the biology, ecology, and distribution of *Barbodes lateristriga*. Introductions of this species outside of its native range have been documented; however, very little information is available about these introductions. No impacts of these introductions have been reported. Certainty of this assessment is therefore low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Barbodes lateristriga, the Spanner Barb, is a small cyprinid native to Southeast Asia. It is used in the aquarium hobby and as a food fish. It can be parasitized by *Dactylogyrus puntii*.

B. lateristriga has been reported as introduced outside of its native range, but it has no documented history of invasiveness. *B. lateristriga* has a low climate match with the contiguous United States. Further information on introductions of this species is needed to adequately assess the risk it 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): None Documented**
- **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.

Arizona Aquatic Gardens. 2018. Spanner T-Barb Tropical Fish. Available: <https://www.azgardens.com/product/spanner-t-barb-tropical-fish/>. (July 2018).

Denaro, M. 2015. 10 big, beautiful barbs for larger aquariums (full article). Tropical Fish Hobbyist Magazine (March). Available: <http://www.tfhmagazine.com/details/articles/10-big-beautiful-barbs-for-larger-aquariums-full-article.htm>. (July 2018).

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).

FAO (Fisheries and Agriculture Organization of the United Nations). 2018. Database on introductions of aquatic species. FAO, Rome. Available: <http://www.fao.org/fishery/introsp/search/en>. (July 2018).

Froese, R., and D. Pauly, editors. 2018. *Barbodes lateristriga* (Valenciennes, 1842). FishBase. Available: <https://www.fishbase.de/summary/Barbodes-lateristriga.html>. (July 2018).

GBIF Secretariat. 2018. GBIF backbone taxonomy: *Barbodes lateristriga*, Valenciennes, 1842. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/2364073>. (July 2018).

- ITIS (Integrated Taxonomic Information System). 2018. *Puntius lateristriga* (Valenciennes in Cuvier and Valenciennes, 1842). Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=639375#null. (July 2018).
- Poelen, J. H., J. D. Simons, and C. J. Mungall. 2014. Global Biotic Interactions: an open infrastructure to share and analyze species-interaction datasets. *Ecological Informatics* 24:148-159.
- Roberts, T. R. 1989. The freshwater fishes of western Borneo (Kalimantan barat, Indonesia). California Academy of Sciences, San Francisco.
- Sanders, S., C. Castiglione, and M. H. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.
- Vidthayanon, C. 2015. *Barbodes lateristriga*. The IUCN Red List of Threatened Species 2015: e.T180977A70034217. Available: <http://www.iucnredlist.org/details/180977/0>. (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.

- Hossain, M. Y., S. R. M. Sayed, M. M. Rahman, M. M. Ali, M. A. Hossen, A. M. Elgorban, Z. F. Ahmed and J. Ohtomi. 2015. Length-weight relationships of nine fish species from the Tetulia River, southern Bangladesh. *Journal of Applied Ichthyology* 31:967-969.
- Mills, D., and G. Vevers. 1989. The Tetra encyclopedia of freshwater tropical aquarium fishes. Tetra Press, New Jersey.
- Riehl, R., and H. A. Baensch. 1991. Aquarien atlas. Volume 1. Mergus, Verlag für Natur-und Heimtierkunde, Melle, Germany.
- Strona, G., M. Lourdes, D. Palomares, N. Bailly, P. Galli, and K. D. Lafferty. 2013. Host range, host ecology, and distribution of more than 11800 fish parasite species. *Ecology* 94:544.