

Fiveband Barb (*Desmopuntius pentazona*)

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, Web Version – 1/4/2018



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Available: https://commons.wikimedia.org/wiki/File:Desmopuntius_pentazona.jpg.

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2016):

“Asia: Malay Peninsula to Sumatra, Indonesia.”

Status in the United States

No records of *Desmopuntius pentazona* in the United States were found.

Means of Introductions in the United States

No records of *Desmopuntius pentazona* in the United States were found.

Remarks

ITIS (2016) lists *Puntius pentazona* as the valid senior synonym for this species. Froese and Pauly (2016) and Eschmeyer et al. (2017) list *Desmopuntius pentazona* as the valid senior synonym. Information searches were conducted using both names.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2016):

“Taxonomic Status: Current Standing: valid

Kingdom Animalia
 Subkingdom Bilateria
 Infrakingdom Deuterostomia
 Phylum Chordata
 Subphylum Vertebrata
 Infraphylum Gnathostomata
 Superclass Osteichthyes
 Class Actinopterygii
 Subclass Neopterygii
 Infraclass Teleostei
 Superorder Ostariophysi
 Order Cypriniformes
 Superfamily Cyprinoidea
 Family Cyprinidae
 Genus *Puntius*
 Species *Puntius pentazona* (Boulenger, 1894)”

From Froese and Pauly (2016):

Synonym	Author	CoL [Catalog of Life] Status	Valid	Synonymy	Combination
<i>Desmopuntius pentazona</i>	(Boulenger, 1894)	Accepted	Yes	Senior	New
<i>Barbus pentazona</i>	Boulenger, 1894	Synonym	No	Senior	Original
<i>Barbus pentazona pentazona</i>	Boulenger, 1894	Synonym	No	Senior	Other rank
<i>Capoeta pentazona</i>	(Boulenger, 1894)	Synonym	No	Senior	New
<i>Puntius pentazona</i>	(Boulenger, 1894)	Synonym	No	Senior	New

Synonym	Author	CoL [Catalog of Life] Status	Valid	Synonymy	Combination
<i>Systemus pentazona</i>	(Boulenger, 1894)	Synonym	No	Senior	New

From Eschmeyer et al. (2017):

“***pentazona*, *Barbus*** Boulenger [G. A.] 1894:248 [Annals and Magazine of Natural History (Series 6) v. 13 (no. 75) (art. 26[...])] Baram River, Sarawak state, Borneo, East Malaysia. Syntypes: (3) BMNH 1889.7.31.13 (1). •Valid as *Puntius pentazona* (Boulenger 1894) -- (Roberts 1989:65[...], Kottelat 1992:187[...], Kottelat et al. 1993:44[...], Kottelat & Lim 1995:233[...], Doi 1997:11[...], Kullander & Fang 2005:297[...]). •Valid as *Systemus pentazona* (Boulenger 1894) -- (Parenti & Lim 2005:186[...], Tan 2012:285[...]). •Valid as *Desmopuntius pentazona* (Boulenger 1894) -- (Kottelat 2013:97[...]). **Current status:** Valid as *Desmopuntius pentazona* (Boulenger 1894). Cyprinidae: Cyprininae.”

Size, Weight, and Age Range

From Froese and Pauly (2016):

“Max length: 8.8 cm TL male/unsexed; [Kottelat et al. 1993]”

Environment

From Froese and Pauly (2016):

“Freshwater; benthopelagic; pH range: 5.0 - 6.0; dH range: 5 - 12. [...]; 26°C - 29°C [assumed to be recommended aquarium water temperature] [Schliewen 1992]”

Climate/Range

From Froese and Pauly (2016):

“Tropical; [...]”

Distribution Outside the United States

Native

From Froese and Pauly (2016):

“Asia: Malay Peninsula to Sumatra, Indonesia.”

Introduced

No records of *Desmopuntius pentazona* introductions were found.

Means of Introduction Outside the United States

No records of *Desmopuntius pentazona* introductions were found.

Short Description

From Lim (1995):

“The banded barb, *Puntius pentazona* is distinguished from the morphologically and meristically indistinguishable *P. hexazona* on account of its having an additional (versus absence of) a dark spot at the base of the last dorsal ray (Alfred, 1963b, as subspecies *P. pentazona pentazona* and *P. pentazona johorensis* respectively; Kottelat et al., 1993: 43-44, as full species *P. pentazona* and *P. johorensis*).”

From Butler (2016):

“An elongated, high backed barb with a pair of barbels. The back is olive brown to dark orange, while the flanks are orange-brown. The gill cover is red-orange and the throat and belly are white. The body is marked with five transverse bands. The first runs through the eye, while the last runs near the caudal penuncle. The fins may have a slight orange tint, although the anal and ventral fins are red. The eye is large in comparison to the rest of the body.”

Biology

From Froese and Pauly (2016):

“Reproductive guild: nonguarders, open water/substratum egg scatterers [Riehl and Baensch 1991]”

“In calm waters in the low land [Riehl and Baensch 1996].”

Human Uses

From Froese and Pauly (2016):

“Aquarium: commercial”

Diseases

White spot disease is an OIE reportable disease.

From Froese and Pauly (2016):

“White spot Disease, Parasitic infestations (protozoa, worms, etc.)
Bacterial Infections (general), Bacterial diseases”

Threat to Humans

From Froese and Pauly (2016):

“Harmless”

3 Impacts of Introductions

No records of *Desmopuntius pentazona* introductions were found.

4 Global Distribution



Figure 1. Known global distribution of *Desmopuntius pentazona*. Map from GBIF Secretariat (2017).

5 Distribution Within the United States

No records of *Desmopuntius pentazona* in the United States were found.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Desmopuntius pentazona* was low across the contiguous United States. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous U.S. was 0.000, low, and no states had an individually high match.

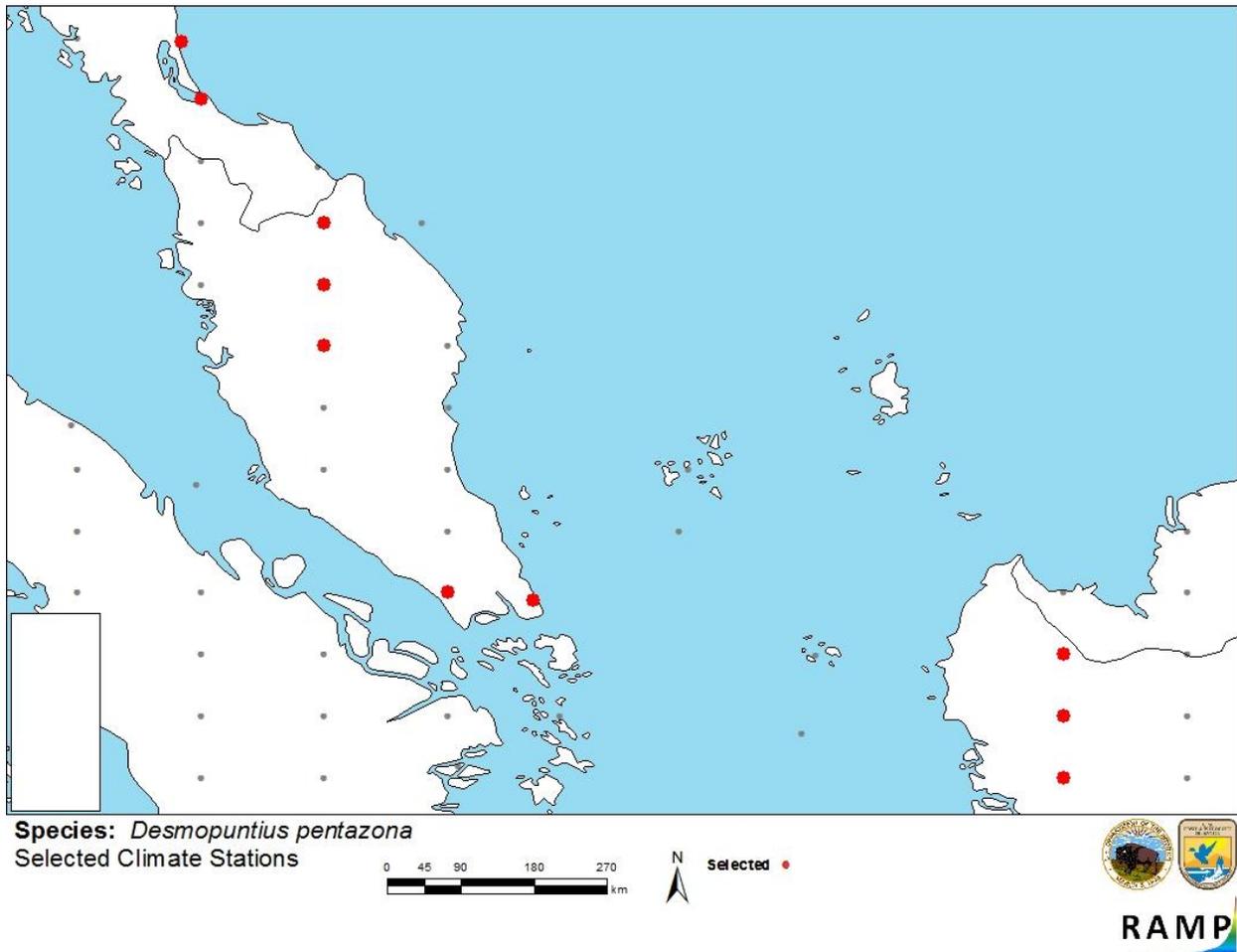


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations selected as source locations (red) and non-source locations (grey) for *Desmopuntius pentazona* climate matching. Source locations from GBIF Secretariat (2017).

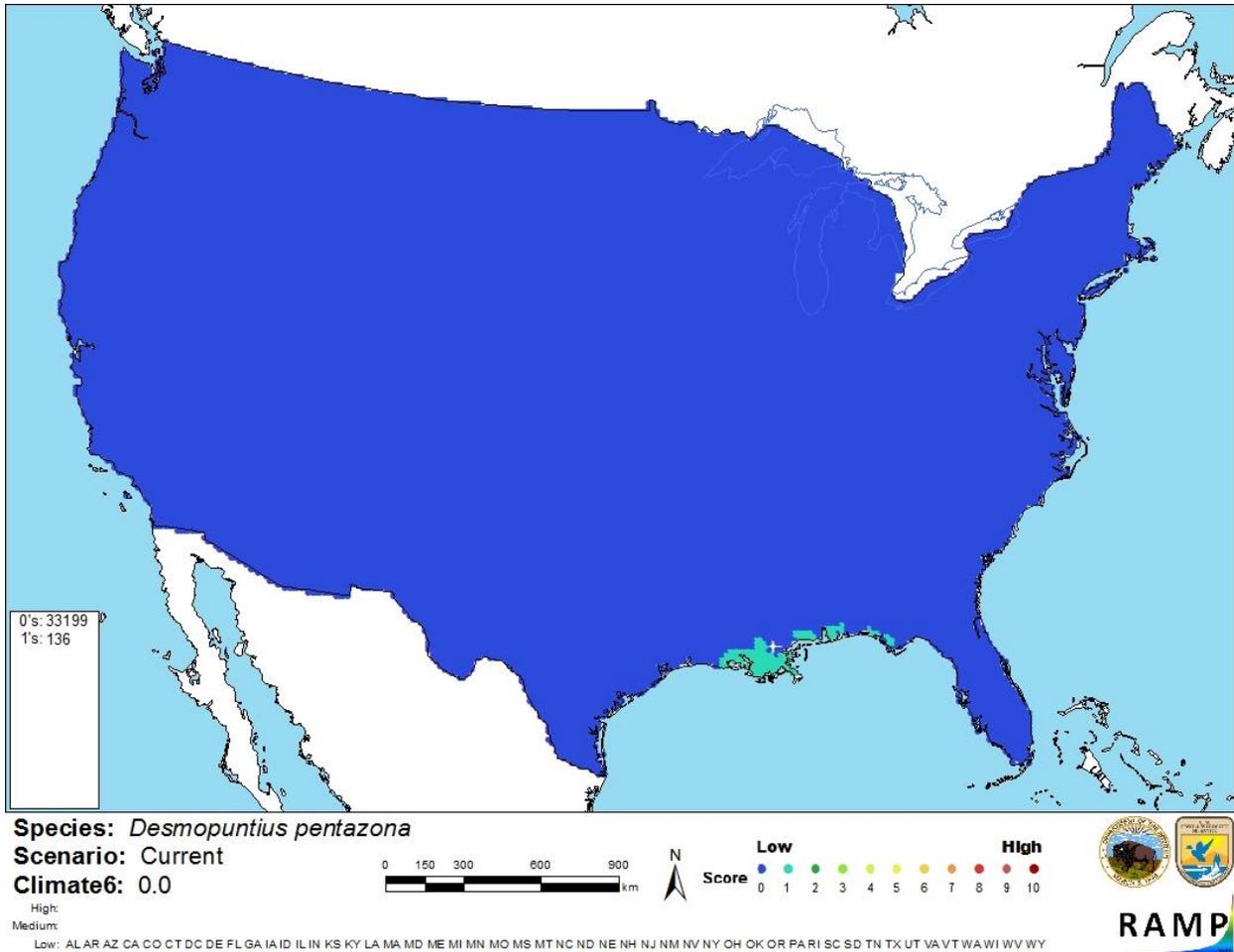


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Desmopuntius pentazona* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0 = Lowest match, 10 = Highest match.

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 assessment for *Desmopuntius pentazona* is low. There was some biological and ecological information available. A portion of that information is derived from specimens in the aquarium trade. No records of introductions were found for *Desmopuntius pentazona*.

8 Risk Assessment

Summary of Risk to the Contiguous United States

The history of invasiveness for *Desmopuntius pentazona* is uncertain. No records of introductions were found. The climate match was very low, indicating that this species requires a fully tropical climate and that it would not likely be able to establish self-sustaining populations in the United States. The certainty of 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**
- **Remarks/Important additional information** No additional comments.
- **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.

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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.

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