

## ***Pethia meingangbii* (a fish, no common name)**

### **Ecological Risk Screening Summary**

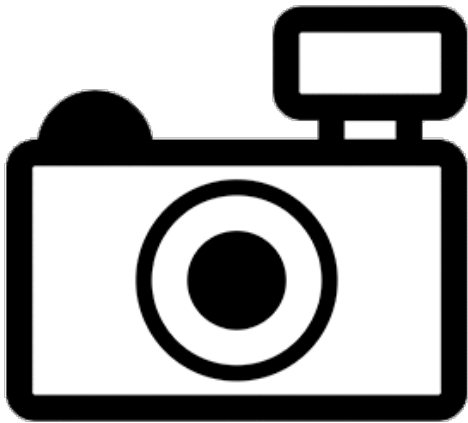
U.S. Fish & Wildlife Service, August 2013

Revised, February 2019

Web Version, 6/30/2020

Organism Type: Fish

Overall Risk Assessment Category: Uncertain



No Photo Available

## **1 Native Range and Status in the United States**

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### **Native Range**

From Froese and Pauly (2019a):

“Asia: Yu River drainage in Manipur, India.”

From Singh (2015):

“This species is known from Manipur (Chindwin-Irrawaddy drainage), in northeastern India and Myanmar.”

### **Status in the United States**

No records of *Pethia meingangbii* in the wild or in trade in the United States were found.

## Means of Introductions in the United States

No records of *Pethia meingangbii* in the United States were found.

## Remarks

Both the current valid name of this species, *Pethia meingangbii*, and the original name, *Puntius meingangbii*, were used to search for information.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

According to Fricke et al. (2019), *Pethia meingangbii* (Arunkumar and Tombi Singh 2003) is the current and valid name of this species. This species was originally referred to as *Puntius meingangbii* Arunkumar and Tombi Singh 2003.

From Froese and Pauly (2019b):

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

### Size, Weight, and Age Range

No information on size, weight or age range was found for *Pethia meingangbii*.

### Environment

From Froese and Pauly (2019a):

“Freshwater; benthopelagic.”

From Singh (2015):

“This species is found in permanent rivers, streams, lakes and pools.”

### Climate/Range

From Froese and Pauly (2019a):

“Tropical”

### Distribution Outside the United States

Native

From Froese and Pauly (2019a):

“Asia: Yu River drainage in Manipur, India.”

From Singh (2015):

“This species is known from Manipur (Chindwin-Irrawaddy drainage), in northeastern India and Myanmar.”

### Introduced

*Pethia meingangbii* has not been reported as introduced or established outside of their native range.

### Means of Introduction Outside the United States

*Pethia meingangbii* has not been reported as introduced or established outside of their native range.

### Short Description

From Kullander and Britz (2008):

“The colour pattern [of *Puntius padamya*] in preservative is similar to that of *P. meingangbii*, [...] which all share a principal colour pattern with an enlarged, vertically extended humeral blotch in addition to the caudal peduncle blotch.”

“[...] the sides and the caudal fin are red [Arunkumar and Tombi Singh 2003].”

“In *P. meingangbii* barbels are said to be absent [Arunkumar and Tombi Singh 2003; Vishwanath and Laisram 2004]. The original descriptions and photographs of specimens deposited in the Manipur University fish collection suggest that the caudal peduncle blotch is large and strongly pigmented. According to the original description of *P. meingangbii* the pelvic and anal fins are blackish-red to red, [...]”

### Biology

No information on biology for *Pethia meingangbii* was found.

### Human Uses

From Singh (2015):

“In Manipur (India) it is consumed by the local people as food. The fish is sold in the Moreh Market, Manipur, India in very small scale.”

### Diseases

No information on diseases was found. **No OIE-reportable diseases (OIE 2020) were found to be associated with *Pethia meingangbii*.**

## Threat to Humans

From Froese and Pauly (2019a):

“Harmless”

## 3 Impacts of Introductions

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No introductions have been reported for *Pethia meingangbii*.

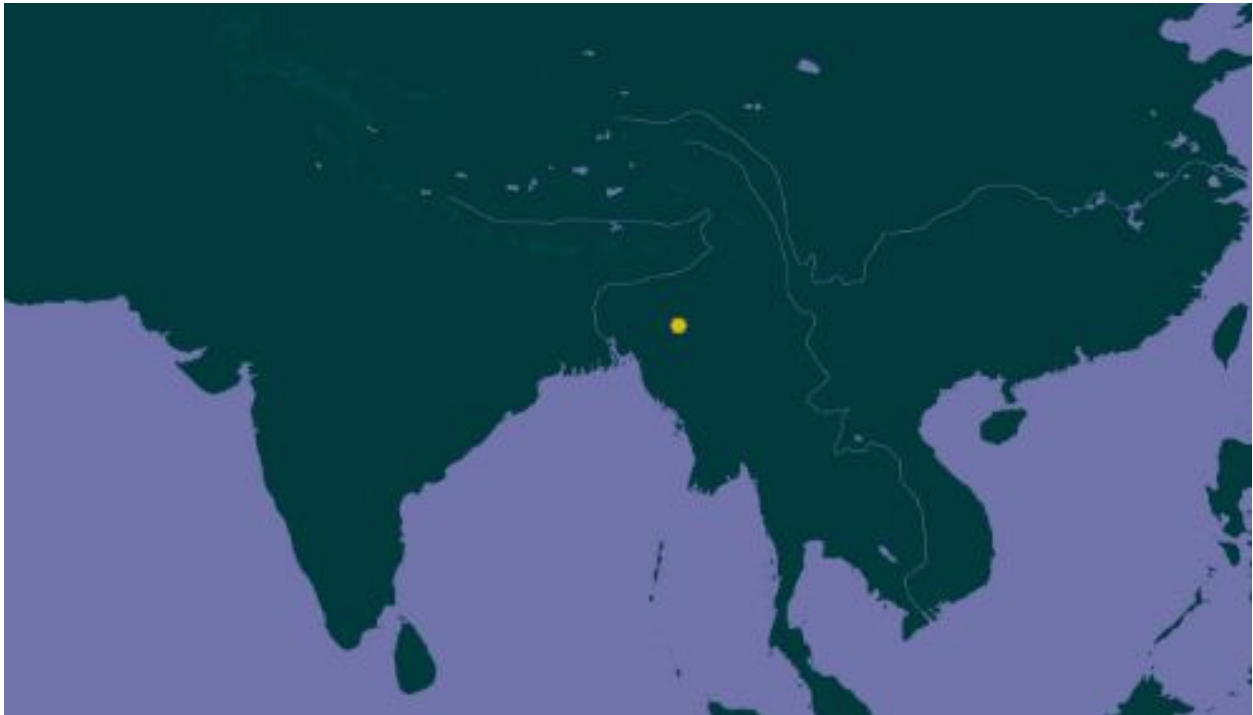
## 4 History of Invasiveness

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No introductions have been reported for *Pethia meingangbii* so the history of invasiveness is classified as No Known Nonnative Population.

## 5 Global Distribution

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**Figure 1.** Known global distribution of *Pethia meingangbii*. Location is in Myanmar. Map from GBIF Secretariat (2019).

No georeferenced observations were available to represent the species' range in India.

## 6 Distribution Within the United States

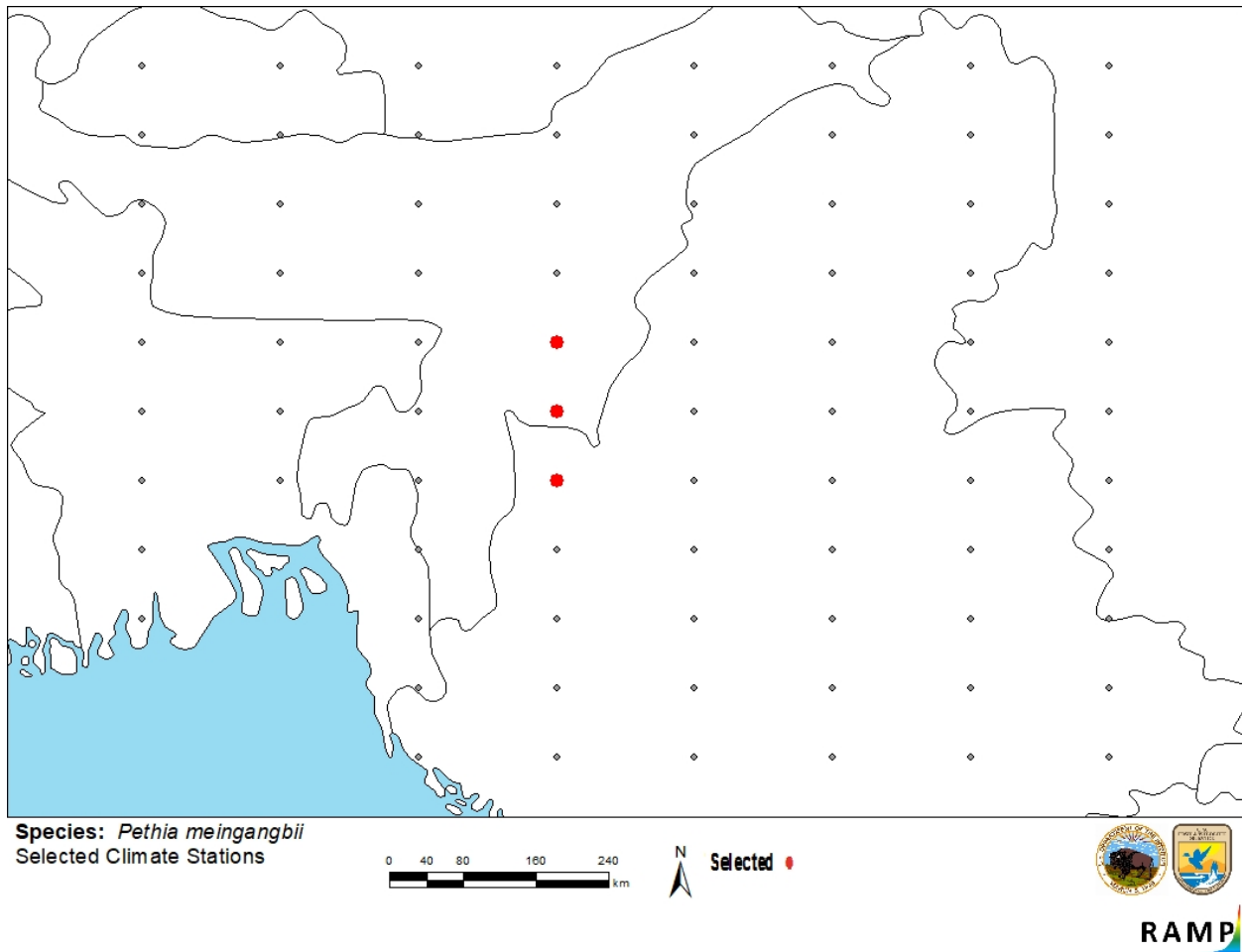
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*Pethia meingangbii* has not been reported in the United States.

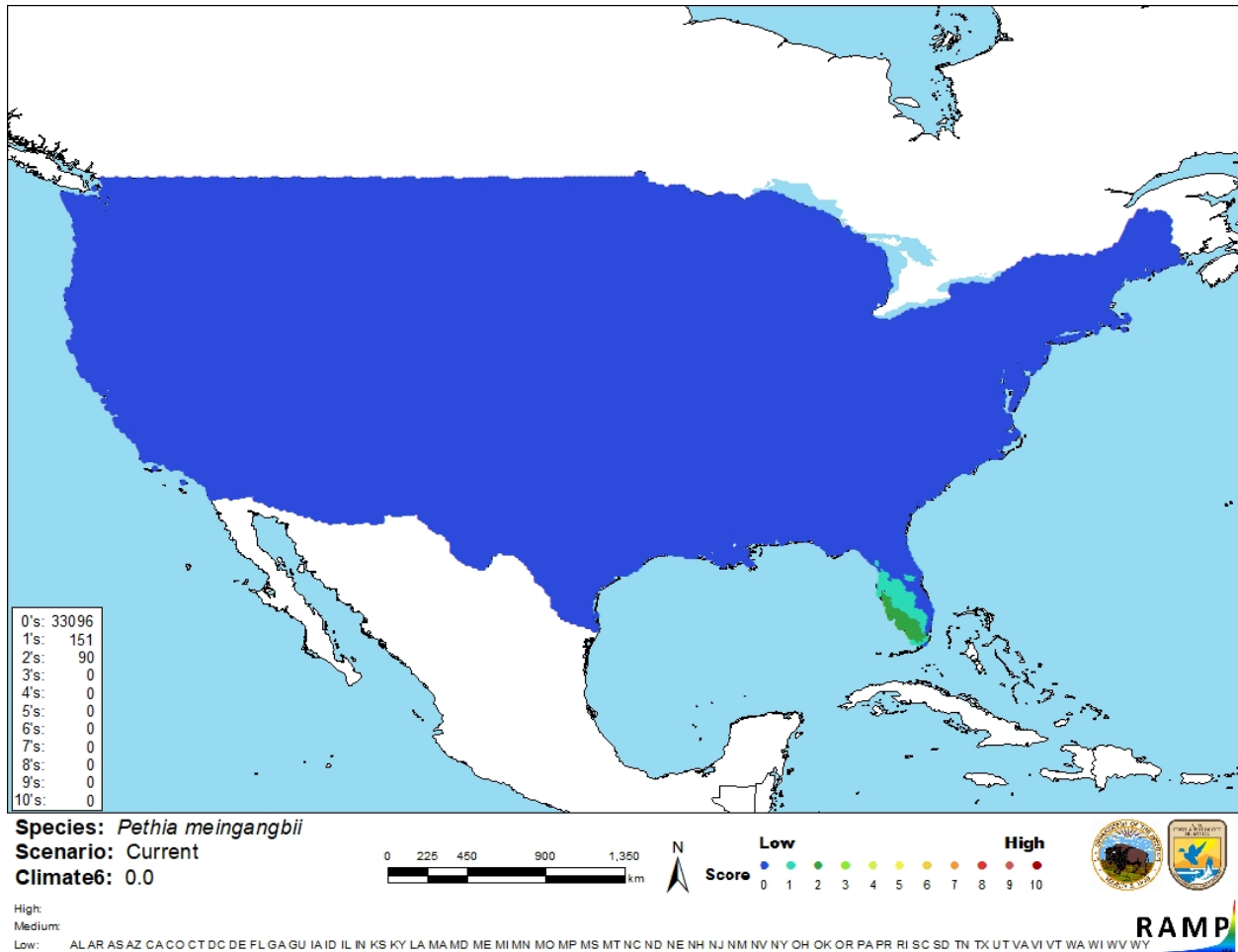
## 7 Climate Matching

### Summary of Climate Matching Analysis

The climate match for the contiguous United States is uniformly low. There were no areas of high or medium match. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for contiguous United States was 0.000, a low climate score (scores between 0.000 and 0.005, inclusive, are considered low). All individual states received low climate scores.



**Figure 2.** RAMP (Sanders et al. 2018) source map showing weather stations in India and Myanmar selected as source locations (red) and non-source locations (gray) for *Pethia meingangbii* 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 *Pethia meingangbii* in the contiguous United States based on source locations reported by GBIF Secretariat (2019). Counts of climate match scores are tabulated on the left. 0/Blue = Lowest match, 10/Red = Highest match.

The High, Medium, and Low Climate match Categories are based on the following table:

Climate 6: (Count of target points with climate scores 6-10)/ (Count of all target points)	Overall Climate Match Category
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
$\geq 0.103$	High

## 8 Certainty of Assessment

Certainty of assessment is low. Minimal information is available on *Pethia meingangbii*. No introductions have been reported outside of their native range. The climate match is based on a single georeferenced observation which may reduce the certainty in the results.

## 9 Risk Assessment

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### Summary of Risk to the Contiguous United States

*Pethia meingangbii* is a freshwater cyprinid fish found only in the Chindwin-Irrawaddy drainage, in northeastern India and Myanmar. No introductions outside of the native range have been reported. History of invasiveness is classified as No Known Nonnative Population. The climate match for the contiguous United States is low, with all individual states receiving low climate scores. The certainty of assessment is low due to minimal available information and only one georeferenced point for the climate match. The overall risk assessment for *Pethia meingangbii* is uncertain.

### Assessment Elements

- **History of Invasiveness (Sec. 4): No Known Nonnative Population**
- **Overall Climate Match Category (Sec. 7): Low**
- **Certainty of Assessment (Sec. 8): Low**
- **Remarks/Important additional information: No additional remarks**
- **Overall Risk Assessment Category: Uncertain**

## 10 Literature Cited

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**Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 11.**

- Fricke R, Eschmeyer WN, van der Laan R, editors. 2019. Eschmeyer's catalog of fishes: genera, species, references. California Academy of Science. Available: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp> (January 2019).
- Froese R, Pauly D, editors. 2019a. *Pethia meingangbii* (Arunkumar and Tombi Singh, 2003). FishBase. Available: <http://www.fishbase.org/summary/Pethia-meingangbii.html> (January 2019).
- Froese R, Pauly D, editors. 2019b. *Pethia meingangbii*. In World Register of Marine Species. Available: <http://www.marinespecies.org/aphia.php?p=taxdetails&id=1026905> (February 2019)
- GBIF Secretariat. 2018. GBIF backbone taxonomy: *Pethia meingangbii* (Arunkumar and Tombi Singh, 2003). Copenhagen: Global Biodiversity Information Facility. Available: <https://www.gbif.org/species/7872108> (January 2019).
- Kullander SO, Britz R. 2008. *Puntius padamyia*, a new species of cyprinid fish from Myanmar (Teleostei: Cyprinidae). *Electronic Journal of Ichthyology* 2:5–66.

[OIE] World Organisation for Animal Health. 2020. OIE-listed diseases, infections and infestations in force in 2020. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2020/> (June 2020).

Sanders S, Castiglione C, Hoff M. 2018. Risk Assessment Mapping Program: RAMP. Version 3.1. U.S. Fish and Wildlife Service.

Singh L. 2015. *Pethia meingangbii*. The IUCN Red List of Threatened Species 2015: e.T168547A6512154. Available: <http://dx.doi.org/10.2305/IUCN.UK.2015-1.RLTS.T168547A6512154.en> (January 2019).

## 11 Literature Cited in Quoted Material

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**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.**

Arunkumar L, Tombi Singh H. 2003. Two new species of puntiid fish from the Yu River system of Manipur. *Journal of the Bombay Natural History Society* 99:481–487.

Vishwanath W, Laisram J. 2004. Two new species of *Puntius* Hamilton Buchanan (Cypriniformes: Cyprinidae) from Manipur, India, with an account of *Puntius* species from the state. *Journal of the Bombay Natural History Society* 101:130–137.