

# Indian Glassy Fish (*Parambassis ranga*)

## Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, May 2011  
Revised, April 2019  
Web Version, 2/16/2021

Organism Type: Fish  
Overall Risk Assessment Category: Uncertain



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Available: [https://commons.wikimedia.org/wiki/File:Parambassis\\_ranga\\_2.jpg](https://commons.wikimedia.org/wiki/File:Parambassis_ranga_2.jpg). (March 2019).

## 1 Native Range and Status in the United States

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### Native Range

From Froese and Pauly (2019a):

“Asia: Pakistan, India, Bangladesh, Myanmar, Thailand, Malaysia [Talwar and Jhingran 1991] and Nepal [Shrestha 1994].”

From Vidthayanon (2012):

“The species has an enormous range, from Pakistan (North West Frontier Province, Punjab, Sinh and Azad Kashmir; Mirza 2002), the Nepalese terai, India (most of India, including the Ganges drainage, the Western Ghats rivers, and Chilka Lake in Orissa; (Talwar and Jhingran 1991) to the Ayeyarwaddy and Sittaung drainages in Myanmar.”

## Status in the United States

There are no records of *Parambassis ranga* in the wild or in trade in the United States were found.

*Parambassis ranga* (under the synonym *Chanda ranga*) is on the Conditional Animal list of Hawaii (Hawaii Department of Agriculture 2019).

## Means of Introductions in the United States

There are no records of introduction of *Parambassis ranga* in the United States.

## Remarks

No additional remarks.

## 2 Biology and Ecology

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### Taxonomic Hierarchy and Taxonomic Standing

From Fricke et al. (2019):

“**Current status:** Valid as *Parambassis ranga* (Hamilton 1822).”

Fricke et al. (2019) lists *Chanda ranga* Hamilton 1822 as the original name of this species.

From Froese and Pauly (2019b):

“Animalia (Kingdom) > Chordata (Phylum) > Vertebrata (Subphylum) > Gnathostomata (Superclass) > [...] Actinopterygii (Class) > Perciformes (Order) > Percoidei (Suborder) > Ambassidae (Family) > *Parambassis* (Genus) > *Parambassis ranga* (Species)”

### Size, Weight, and Age Range

From Froese and Pauly (2019a):

“Max length : 8.0 cm TL male/unsexed; [Rahman 1989]”

## Environment

From Froese and Pauly (2019a):

“Freshwater; brackish; demersal; pH range: 7.0 - 8.0; dH range: 9 - 19; potamodromous [Riede 2004]. [...] 20°C - 30°C [Riehl and Baensch 1991; assumed to be the recommended aquarium temperature]”

## Climate

From Froese and Pauly (2019a):

“Tropical; [...] 38°N - 1°N”

## Distribution Outside the United States

### Native

From Froese and Pauly (2019a):

“Asia: Pakistan, India, Bangladesh, Myanmar, Thailand, Malaysia [Talwar and Jhingran 1991] and Nepal [Shrestha 1994].”

From Vidthayanon (2012):

“The species has an enormous range, from Pakistan (North West Frontier Province, Punjab, Sinh and Azad Kashmir; Mirza 2002), the Nepalese terai, India (most of India, including the Ganges drainage, the Western Ghats rivers, and Chilka Lake in Orissa; (Talwar and Jhingran 1991) to the Ayeyarwaddy and Sittaung drainages in Myanmar.”

### Introduced

According to Froese and Pauly (2019a) *Parambassis ranga* was introduced into the Philippines in the 1970's and has been recognized as established in the wild in Japan.

## Means of Introduction Outside the United States

From Froese and Pauly (2019a):

“ornamental”

## Short Description

From Ishikawa and Tachihara (2012):

“[...] the Indian glassy fish *Parambassis ranga* (Hamilton, 1822) [...], a small ambassid fish with a striking, transparent body, [...]”

## **Biology**

From Froese and Pauly (2019a):

“Found in sluggish and standing water. A common species proliferating in impoundments. Most abundant during the rainy season. Feeds on invertebrates [Rainboth 1996], worms and crustaceans [Mills and Vevers 1989]. Breeds everywhere during the rains. Builds a nest and guards its young.”

“Produces up to 500 eggs.”

From Vidthayanon (2012):

“Inhabit lowland rivers and tributaries to inner estuaries.”

## **Human Uses**

From Froese and Pauly (2019a):

“Fisheries: subsistence fisheries; aquarium: commercial”

“Rare in markets and often found in the aquarium trade [Rainboth 1996].”

## **Diseases**

**No records of OIE-reportable diseases (OIE 2021) were found for *Parambassis ranga*.**

According to Froese and Pauly (2019a) *Parambassis ranga* can have Dactylogyrus Gill Flukes disease, Velvet disease, and turbidity of the skin.

## **Threat to Humans**

From Froese and Pauly (2019a):

“Harmless”

## **3 Impacts of Introductions**

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Although *Parambassis ranga* has been recorded as established in Japan, there was no record of impacts found.

## **4 History of Invasiveness**

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*Parambassis ranga* has been recorded outside of its native range and as established in Japan. No information on impacts of introduction were found. The history of invasiveness is Data Deficient.

## 5 Global Distribution

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**Figure 1.** Known global distribution of *Parambassis ranga*. Map from GBIF Secretariat (2019). The points located in Hong Kong, in the ocean near India, and the point located on the Sinai Peninsula in Egypt were not used in to select source points in the climate match because there was no evidence found to support *P. ranga* being found in these areas or being found in a marine environment.

No georeferenced observations were found in Japan where *Parambassis ranga* has been reported as established in the wild (Froese and Pauly 2019a).

## 6 Distribution Within the United States

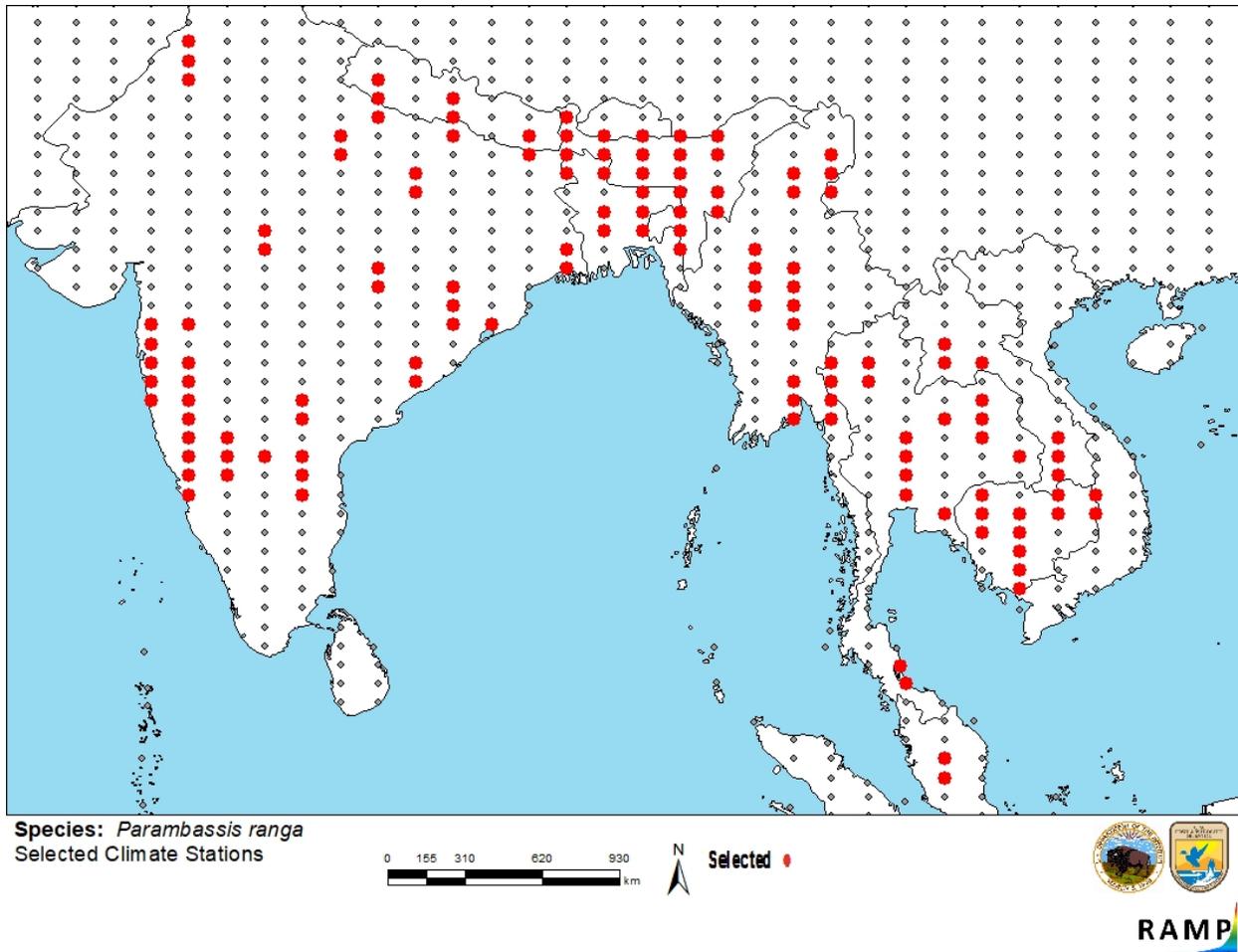
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There are no records of introduction of *Parambassis ranga* in the United States.

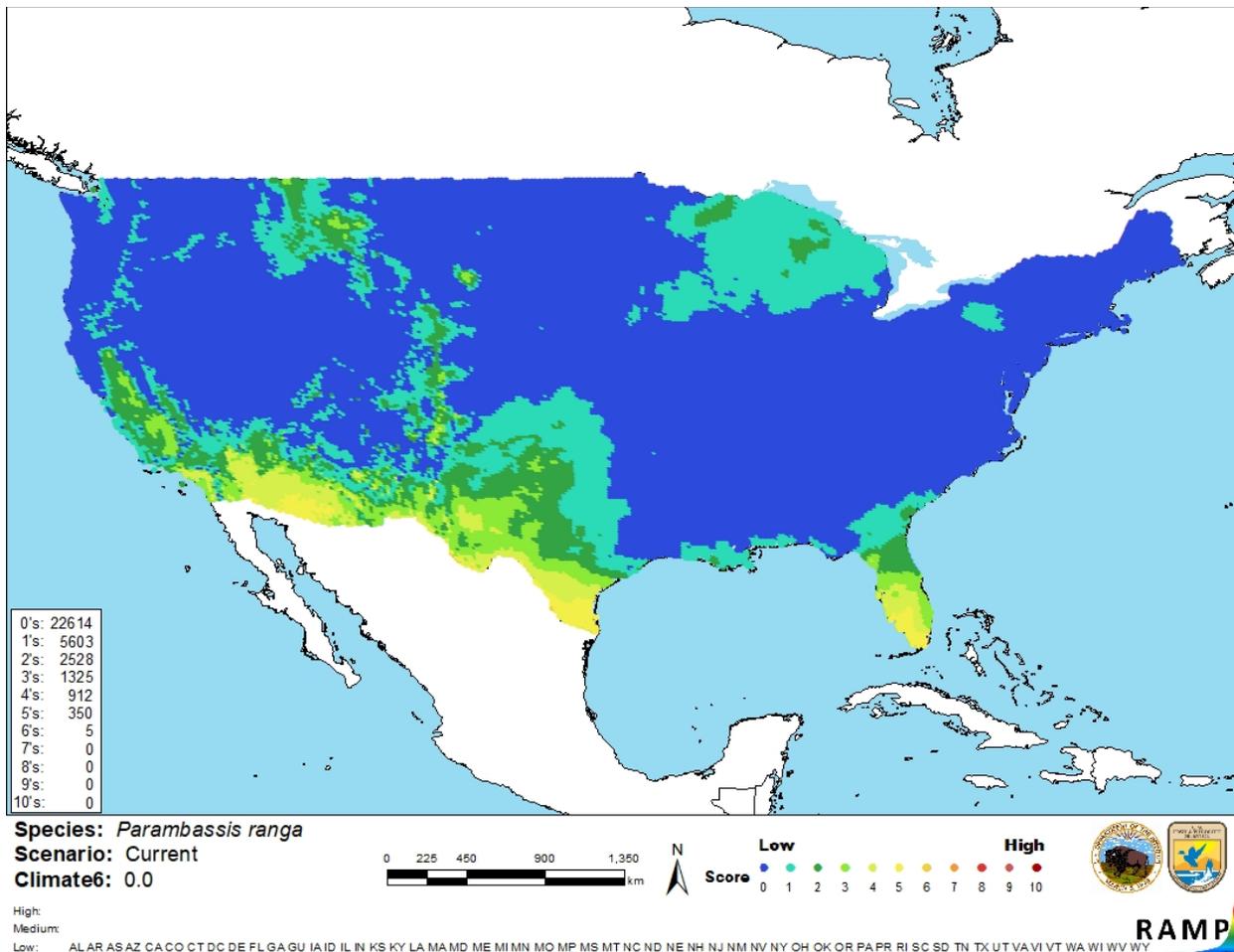
# 7 Climate Matching

## Summary of Climate Matching Analysis

The climate match for *Parambassis ranga* was low for the majority of contiguous United States with small patches of medium match along the southern border and Gulf Coast from California to Florida. The Climate 6 score (Sanders et al. 2018; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low (scores between 0.000 and 0.005, inclusive, are classified as low), with all States having low individual climate scores.



**Figure 2.** RAMP (Sanders et al. 2018) source map showing weather stations in southern Asia selected as source locations (red; India, Nepal, Bangladesh, Myanmar, Malaysia, Thailand, Cambodia, Laos) and non-source locations (gray) for *Parambassis ranga* 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 *Parambassis ranga* 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

The certainty of assessment for *Parambassis ranga* is low. There is minimal information available for this species. *Parambassis ranga* has been introduced outside of its native range, but the information on its trade history and any impacts it has had is limited.

## 9 Risk Assessment

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### Summary of Risk to the Contiguous United States

Indian Glassy Fish (*Parambassis ranga*) is a fish native to Pakistan, India, Bangladesh, Myanmar, Thailand, Malaysia, and Nepal. This fish is popular in the aquarium trade. The history of invasiveness is Data Deficient. *P. ranga* has been recorded outside of its native range in the Philippines and Japan, where it is reported as established, but there are no recorded impacts associated with those introductions. The overall climate match for the contiguous United States is low. There were small patches of medium match along the southern border and Gulf Coast from California to Florida. All States received low individual climate scores. The certainty of assessment is low. The overall risk assessment category for *Parambassis ranga* is uncertain.

### Assessment Elements

- **History of Invasiveness (Sec. 4): Data Deficient**
- **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> (March 2019).

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Hawaii Department of Agriculture. 2019. Amendment and compilation of chapter 4-71, Hawaii Administrative Rules. Honolulu, Hawaii: Hawaii Department of Agriculture, Plant Industry Division. Available: <http://hdoa.hawaii.gov/pi/pq/import-program/pq-non-domestic-animal-and-microorganism-lists/> (February 2021).

Ishikawa T, Tachihara K. 2012. Reproductive biology, growth, and age composition of non-native Indian glassy fish *Parambassis ranga* (Hamilton, 1822) in Haebaru Reservoir, Okinawa-jima Island, southern Japan. *Journal of Applied Ichthyology* 28:231–237.

[OIE] World Organisation for Animal Health. 2021. OIE-listed diseases, infections and infestations in force in 2021. Available: <http://www.oie.int/animal-health-in-the-world/oie-listed-diseases-2021/> (February 2021).

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

Vidthayanon C. 2012. *Parambassis ranga*. The IUCN Red List of Threatened Species 2012: e.T180994A1686402. Available: <https://www.iucnredlist.org/species/180994/1686402> (March 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.**

Mills D, Vevers G. 1989. The Tetra encyclopedia of freshwater tropical aquarium fishes. New Jersey: Tetra Press.

Mirza MR. 2002. Checklist of freshwater fishes of Pakistan. Government College University: Department of Zoology.

Rahman AKA. 1989. Freshwater fishes of Bangladesh. Zoological Society of Bangladesh, University of Dhaka, Department of Zoology.

Rainboth WJ. 1996. Fishes of the Cambodian Mekong. FAO species identification field guide for fishery purposes. Rome: FAO.

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Shrestha J. 1994. Fishes, fishing implements and methods of Nepal. Lalitpur Colony, Lashkar (Gwalior), India: Smt. M.D. Gupta.

Talwar PK, Jhingran AG. 1991. Inland fishes of India and adjacent countries. Volume 2. Rotterdam, Netherlands: A. A. Balkema.