

Fringed-lipped Peninsula Carp (*Labeo fimbriatus*)

Ecological Risk Screening Summary

U.S. Fish & Wildlife Service, April 2012
Revised, May 2018, June 2018
Web Version, 7/13/2018



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1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Asia: Pakistan, India, Nepal and Myanmar [Talwar and Jhingran 1991] and Bangladesh [Menon 1999].”

“Occurs throughout India except west face of Western Ghats [Menon 1999]; West Bengal [Talwar and Jhingran 1991]; Cauvery, Peninsular rivers [Gopalakrishnan and Ponniah 2000]; Maharashtra [Archarya and Iftekar 2000]; Bhavani River, Tamil Nadu and Kerala [Arunachalam and Manimekalan 2000].”

“Occurs in Koshi, Gandaki, Karnali and Mahakali rivers [Nepal] [Shrestha 2008].”

“Known from Sindh [Pakistan] [Mirza 2002].”

Status in the United States

There were no records found of *Labeo fimbriatus* in the United States.
No information on trade of *L. fimbriatus* in the United States was found.

Means of Introductions in the United States

There were no records found of *Labeo fimbriatus* in the United States.

Remarks

No additional remarks.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

According to Eschmeyer et al. (2018), *Labeo fimbriatus* (Bloch 1795) is the current valid name for this species. *Labeo fimbriatus* was originally described as *Cyprinus fimbriatus* (Bloch 1795).

From ITIS (2018):

“Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Actinopterygii
Class Teleostei
Superorder Ostariophysi
Order Cypriniformes
Superfamily Cyprinoidea
Family Cyprinidae
Genus *Labeo*
Species *Labeo fimbriatus* (Bloch, 1795)”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 91.0 cm TL male/unsexed; [Talwar and Jhingran 1991]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic; [...]”

Climate/Range

From Froese and Pauly (2018):

“Tropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Asia: Pakistan, India, Nepal and Myanmar [Talwar and Jhingran 1991] and Bangladesh [Menon 1999].”

“Occurs throughout India except west face of Western Ghats [Menon 1999]; West Bengal [Talwar and Jhingran 1991]; Cauvery, Peninsular rivers [Gopalakrishnan and Ponniah 2000]; Maharashtra [Archarya and Iftekar 2000]; Bhavani River, Tamil Nadu and Kerala [Arunachalam and Manimekalan 2000].”

“Occurs in Koshi, Gandaki, Karnali and Mahakali rivers [Nepal] [Shrestha 2008].”

“Known from Sindh [Pakistan] [Mirza 2002].”

Introduced

No records of *Labeo fimbriatus* introductions were found.

Means of Introduction Outside the United States

No records of *Labeo fimbriatus* introductions were found.

Short Description

From Froese and Pauly (2018):

“Has ventrally placed mouth and fimbriated horny lips which is highly adapted to bottom browsing [David and Rajagopal 1975].”

Biology

From Froese and Pauly (2018):

“Found in rivers above tidal reaches and culture ponds [Menon 1999]. Mainly herbivorous, feeding on diatoms, blue-green and green algae, higher aquatic plants, insects and detritus [Talwar and Jhingran 1991]. Spawning occurs during the southwest monsoon in the Western Ghats [Basavaraja and Keshavanath 2000].”

From Dahanukar (2011):

“Fecundity of the fish ranged from 64800 to 526000, in a length range of 336-740 mm and the maturation and breeding is confined to the upper part of the river (Rao 1976).”

Human Uses

From Froese and Pauly (2018):

“Fisheries: commercial; aquaculture: commercial”

From Dahanukar (2011):

“It is one of the major carps and has a good fishery value (Talwar and Jhingran 1991). It is cultivated along with other carp species. Over harvesting is suggested as a reason for decrease in the wild population of this species in Mula-Mutha rivers [*sic*] of Pune (Kharat et al. 2003, Wagh and Ghate 2003).”

Diseases

No records of OIE reportable diseases were found for *Labeo fimbriatus*.

Poelen et al. (2014) list *Dactylogyrus citravanshii* as a parasite of *Labeo fimbriatus*.

Threat to Humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No records of *Labeo fimbriatus* introductions were found.

4 Global Distribution

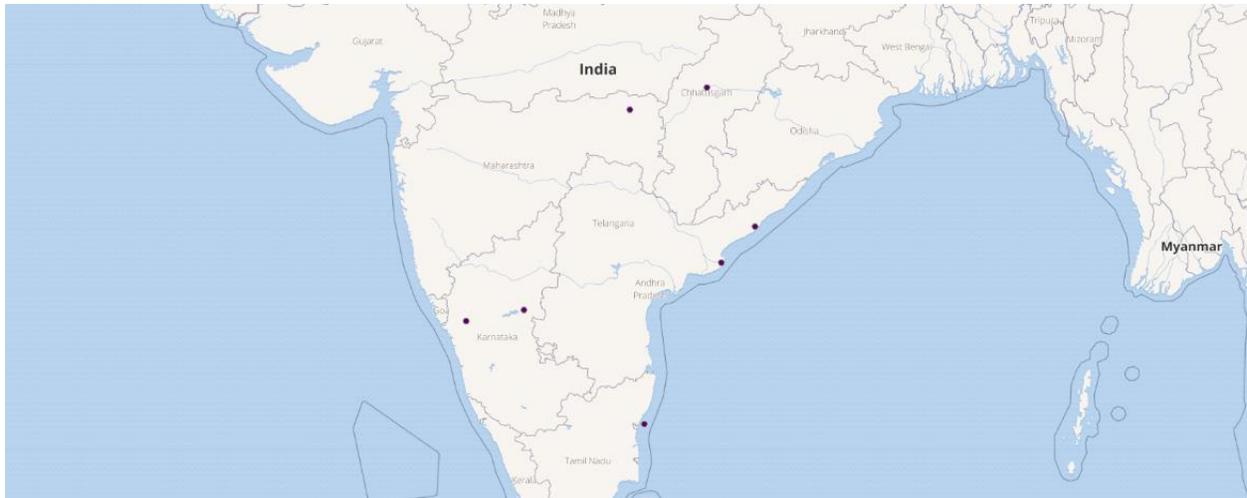


Figure 1. Known global distribution of *Labeo fimbriatus*. All locations are in India. Map from GBIF Secretariat (2018).

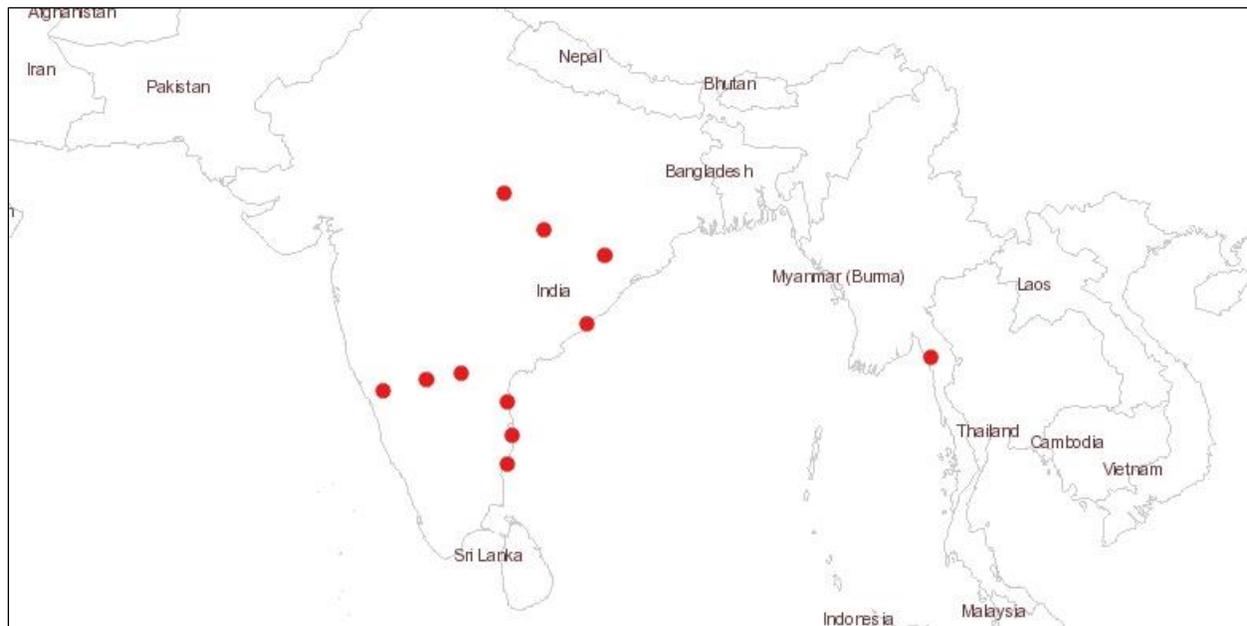


Figure 2. Additional known global distribution of *Labeo fimbriatus*. Locations are in India and Myanmar. Map from Froese and Pauly (2018). *L. fimbriatus* has also been reported from Pakistan, Nepal and Bangladesh, but no georeferenced locations are available for populations in these countries.

5 Distribution Within the United States

There were no records found of *Labeo fimbriatus* in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match for *Labeo fimbriatus* was low for most of the contiguous United States. There were small areas of medium match in southern Florida, Texas, and Arizona. The Climate 6 score (Sanders et al. 2014; 16 climate variables; Euclidean distance) for the contiguous United States was 0.000, low. All states in the contiguous United States had low individual climate matches scores. Georeferenced observation points were not available for much of the described range of *L. fimbriatus* therefore the climate match results displayed below may be an under estimate of the actual climate match for *L. fimbriatus* to the contiguous United States.

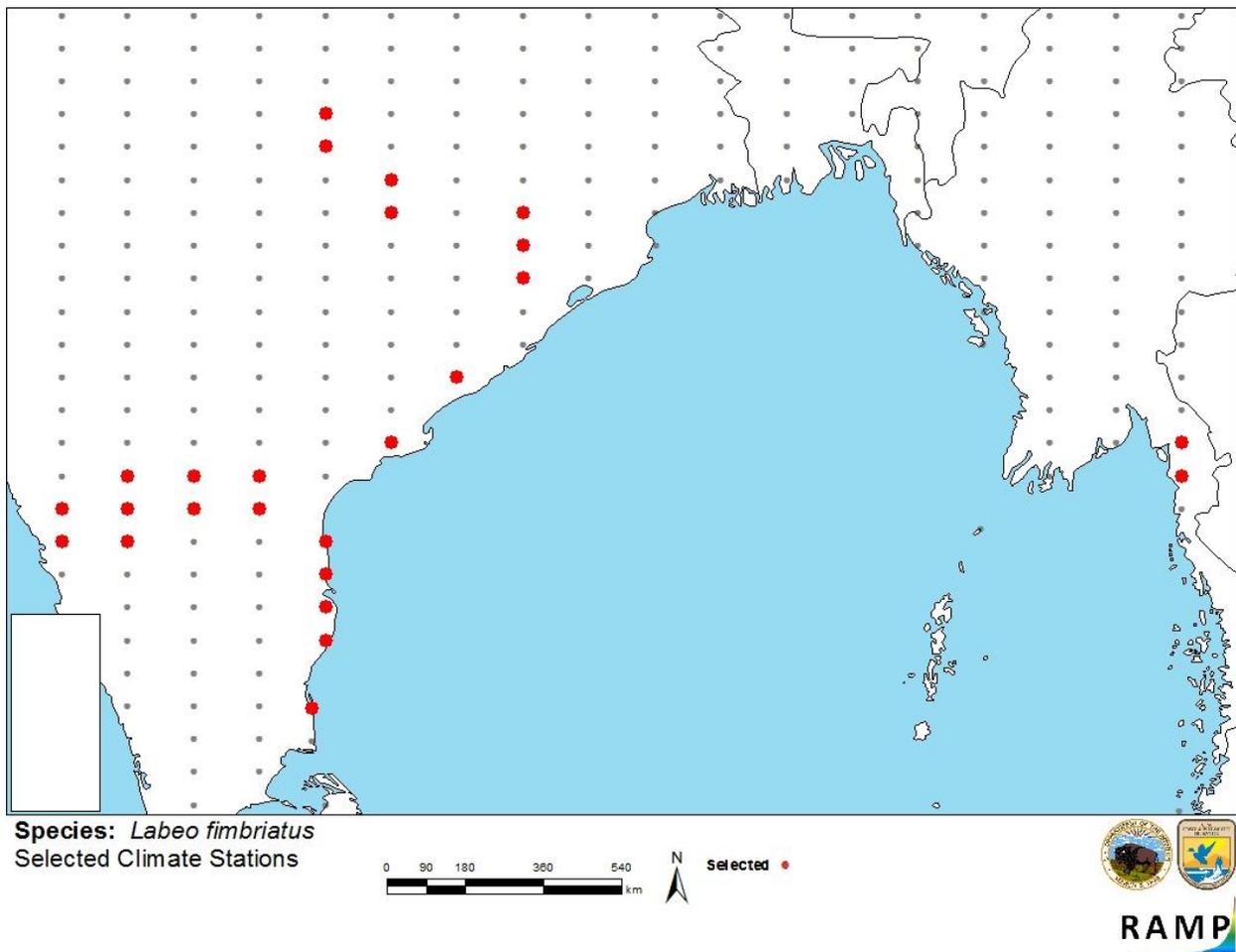


Figure 3. RAMP (Sanders et al. 2014) source map showing weather stations in India and Myanmar selected as source locations (red) and non-source locations (gray) for *Labeo fimbriatus* climate matching. Source locations from Froese and Pauly (2018) and GBIF Secretariat (2018).

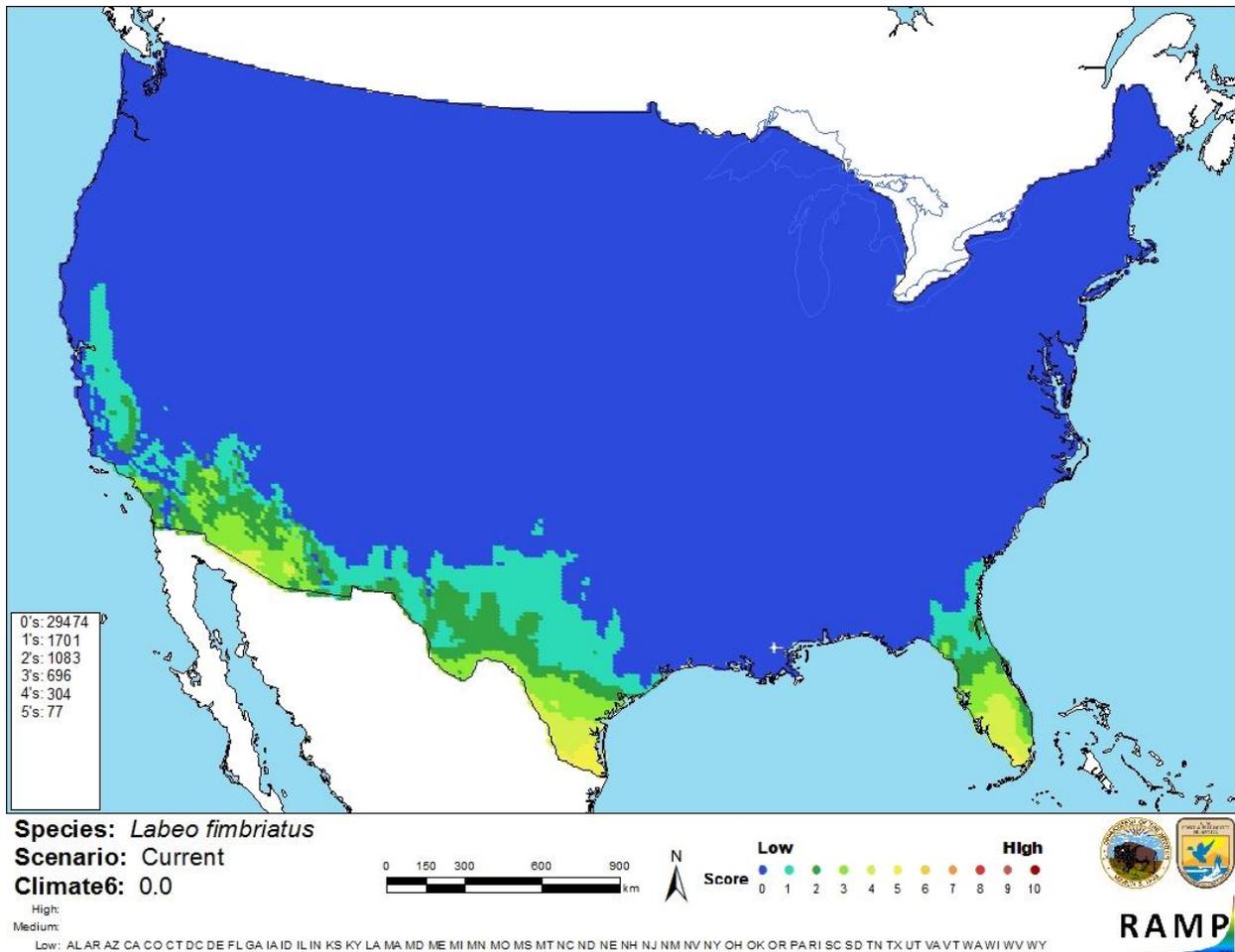


Figure 4. Map of RAMP (Sanders et al. 2014) climate matches for *Labeo fimbriatus* in the contiguous United States based on source locations reported by Froese and Pauly (2018) and GBIF Secretariat (2018). 0 = Lowest match, 10 = Highest match.

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
$0.000 \leq X \leq 0.005$	Low
$0.005 < X < 0.103$	Medium
≥ 0.103	High

7 Certainty of Assessment

The certainty of assessment is low. There was minimal information available on the biology and ecology of *Labeo fimbriatus*. There was no information found regarding any introductions.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Fringed-lipped Peninsula Carp (*Labeo fimbriatus*) is a cyprinid fish species native to five South Asian countries. It is an important species in India fisheries. The history of invasiveness is uncertain. No records of introductions were found. The climate match is low. The contiguous United States had a low match virtually everywhere with only small areas of medium match in southern portions of Florida, Texas, and Arizona. 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 information.**
- **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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