

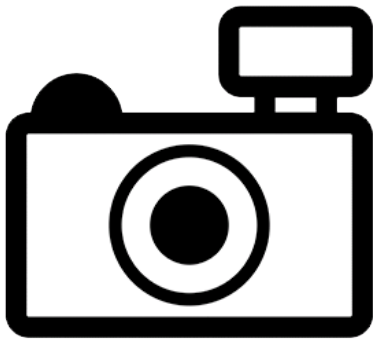
***Labeo nigripinnis* (a carp, no common name)**

Ecological Risk Screening Summary

U.S. Fish and Wildlife Service, May 2012

Revised, May 2018

Web Version, 6/15/2018



No Photo Available

1 Native Range and Status in the United States

Native Range

From Froese and Pauly (2018):

“Asia: endemic to Pakistan.”

Datta and Majumdar (1970) report *L. nigripinnis* from the states of Rajasthan and Punjab in northern India, and from western Pakistan.

From Sarma et al. (2017):

“The present survey work has described 10 species of *Labeo* sp. [including] *Labeo nigripinnis* [in Gujarat, India].”

From Jayaram and Jeyachandra Dhas (2000):

“*L. nigripinnis* are confined to the Himalayan drainage system and have not spread below the Vindya-Satpura range of mountains [central India].”

Status in the United States

This species has not been reported as introduced or established in the United States. There is no indication that this species is in trade in the United States.

Means of Introductions in the United States

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

Remarks

From Jayaram and Jeyachandra Dhas (2000):

“*L. caeruleus*, *Labeo diplostomus*, *L. microphthalmus* and *L. nigripinnis* are all derivatives of *L. dero* which is found all along the Himalaya including the Sind hills [Pakistan] and Myanmar.”

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 Ostariophysi
Order Cypriniformes
Superfamily Cyprinoidea
Family Cyprinidae
Genus *Labeo*
Species *Labeo nigripinnis* Day, 1877”

“Current Standing: valid”

Size, Weight, and Age Range

From Froese and Pauly (2018):

“Max length : 25.0 cm TL male/unsexed; [Talwar and Jhingran 1991]”

Environment

From Froese and Pauly (2018):

“Freshwater; benthopelagic.”

Climate/Range

From Froese and Pauly (2018):

“Subtropical”

Distribution Outside the United States

Native

From Froese and Pauly (2018):

“Asia: endemic to Pakistan.”

Datta and Majumdar (1970) report *L. nigripinnis* from the states of Rajasthan and Punjab in northern India, and from western Pakistan.

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“*L. nigripinnis* are confined to the Himalayan drainage system and have not spread below the Vindya-Satpura range of mountains [central India].”

Introduced

No introductions of this species have been reported.

Means of Introduction Outside the United States

No introductions of this species have been reported.

Short Description

From Sarma et al. (2017):

“The dorsal profile is somewhat elevated and abdomen is almost straight. The greatest width of the head equals its length behind the middle of the eyes. Snout is projected over the mouth which is inferior and equals to [sic] one-third of the length of the head.”

From Jayaram and Jeyachandra Dhas (2000):

“A *Labeo* with 9 branched rays; 40--42 lateral line scales. 7½-8 scales between lateral line and dorsal fin; between pelvic fin and lateral line 5-5 ½.”

“Bluish along the back, becoming dull white on flank and abdomen. In some specimens the bases of scales are dark, a dull band along the side. Fins black in the adult, not always so in the young.”

Biology

From Sarma et al. (2017):

“It was largely found inhabiting the large ponds and less in rivers.”

“This genus is a column and bottom feeder and feeds on algae, small fishes and crustaceans.”

Human Uses

From Sarma et al. (2017):

“In many regions, an increasing importance of *Labeo* as food fish is noted [Skelton et al. 1991; Milogo 1993]. Also being widely cultivated as a part of aquaculture, some of the species of this genus are reared for ornamental purpose, some as food species, some for extracting oil and some are considered to be of medicinal value also.”

From Froese and Pauly (2018):

“Fisheries: of no interest”

Diseases

Eiras et al. (2012) report *L. nigripinnis* as type-host of the myxosporozoan *Chloromyxum hoarei* that infects the gall-bladder.

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

Threat to humans

From Froese and Pauly (2018):

“Harmless”

3 Impacts of Introductions

No information available. No introductions of this species have been reported.

4 Global Distribution



Figure 1. Reported global distribution of *Labeo nigripinnis*, shown in India. Map from GBIF Secretariat (2017). No georeferenced occurrences were reported for Pakistan or for the Indian states of Gujarat, Rajasthan, or Punjab; the points shown are within the Himalayan drainage system in the states of Himachal Pradesh and Uttarakhand. GBIF Secretariat (2017) reported one occurrence in Sulawesi, Indonesia, that is not shown on this map and not included in the climate matching analysis because there is no indication that *L. nigripinnis* is established in Indonesia.

5 Distribution within the United States

This species has not been reported in the United States.

6 Climate Matching

Summary of Climate Matching Analysis

The climate match (Sanders et al. 2014; 16 climate variables, Euclidean Distance) was low throughout most of the contiguous United States. There were small patches of medium match in southwestern Florida, the western Great Lakes, northwestern Washington, and the Desert Southwest. Climate 6 score indicated that the contiguous United States had a low climate match overall. Scores of 0.005 and below are classified as low match; Climate 6 score for *L. nigripinnis* was 0.000.

This climate matching analysis does not take into account the established populations of *L. nigripinnis* reported from western Pakistan and the states of Gujarat, Rajasthan, and Punjab in India because no georeferenced occurrences were available for these areas. Representation of these parts of the native range among the source locations could increase the climate match with the contiguous United States.

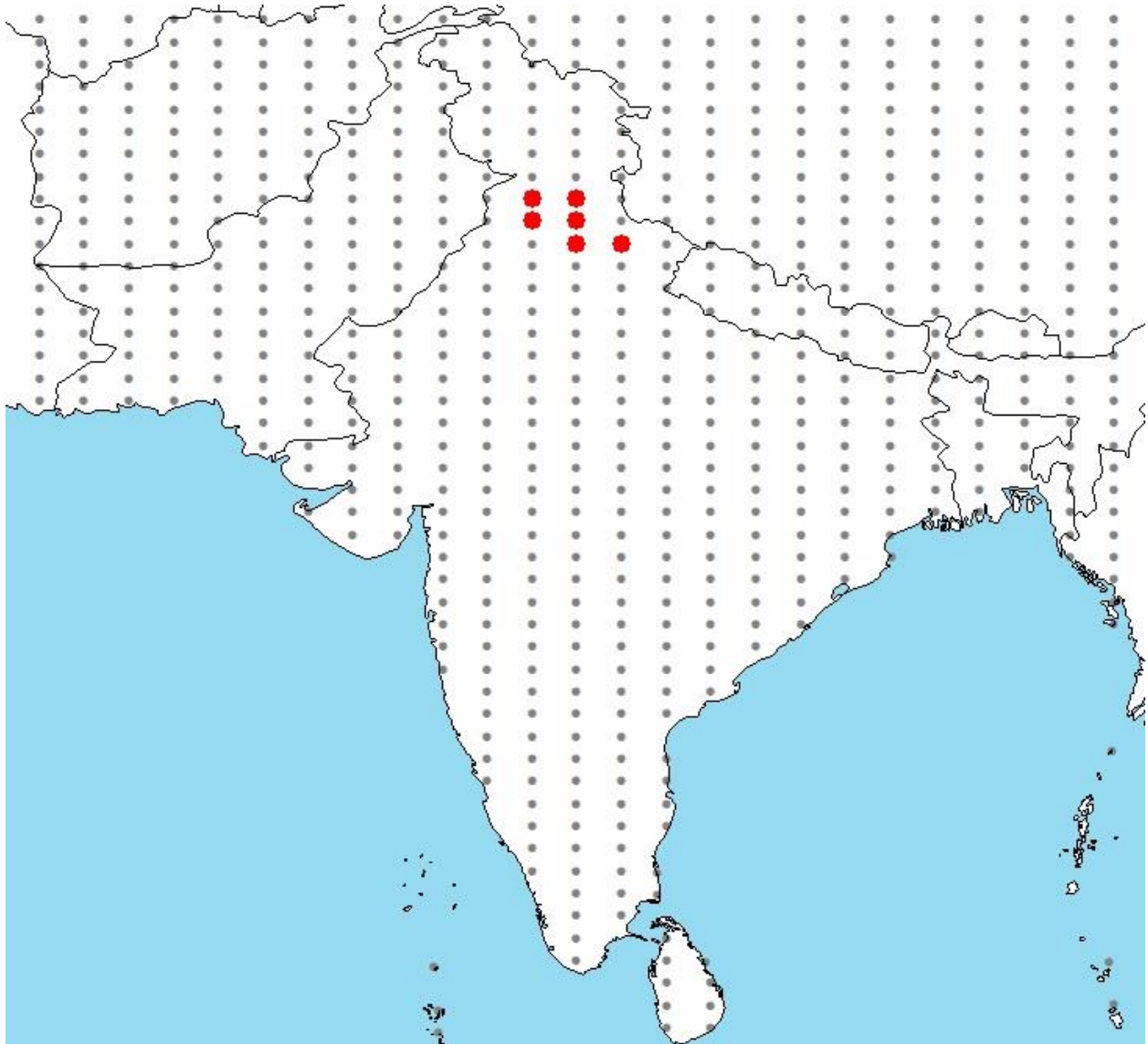


Figure 2. RAMP (Sanders et al. 2014) source map showing weather stations in South Asia selected as source locations (red; India) and non-source locations (gray) for *Labeo nigripinnis* climate matching. Source locations from GBIF Secretariat (2017).

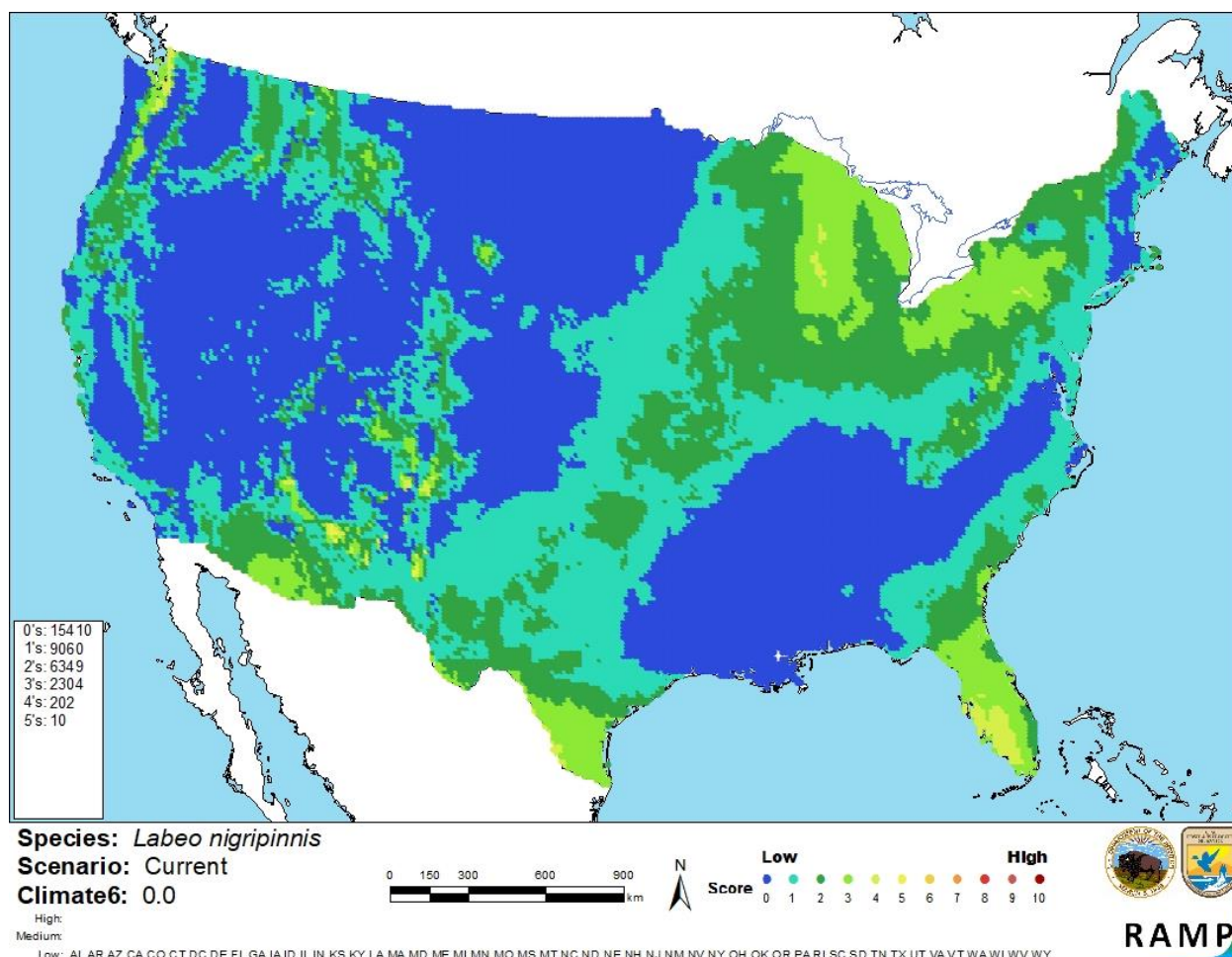


Figure 3. Map of RAMP (Sanders et al. 2014) climate matches for *Labeo nigripinnis* in the contiguous United States based on source locations reported by GBIF Secretariat (2017). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

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

Very little information is available on the biology, ecology, and distribution of *Labeo nigripinnis*. There are several different descriptions of the native distribution in the literature, and georeferenced occurrences were unavailable for most of the areas described as part of the native distribution. Since no introductions have been reported, no information is available on impacts of introductions. Because of these knowledge gaps, certainty of the assessment is low.

8 Risk Assessment

Summary of Risk to the Contiguous United States

Labeo nigripinnis is a cyprinid fish native to India and Pakistan. No impacts of introduction are known for *L. nigripinnis* because the species has no known history of introduction. Certainty of assessment is low. Overall climate match to the contiguous United States is low, with scattered medium matches in Florida, the Great Lakes, the Southwest, and the Pacific Northwest.

However, substantial parts of the native range are not represented in the source locations for the climate matching analysis, so the calculated match may be an underestimate of true match.

Overall risk posed by *L. nigripinnis* is uncertain.

Assessment Elements

- **History of Invasiveness: Uncertain**
- **Climate Match: Low**
- **Certainty of Assessment: 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.

Datta, A. K., and N. Majumdar. 1970. Fauna of Rajasthan, India, part 7. Fishes. Records of the Zoological Survey of India 62(122):63-100.

Eiras, J. C., Y. S. Lu, D. I. Gibson, I. Fiala, A. Saraiva, C. Cruz, and M. J. Santos. 2012. Synopsis of the species of *Chloromyxum* Mingazinni, 1890 (Myxozoa: Myxosporrea: Chloromyxidae). Systematic Parasitology 83:203-225.

Froese, R., and D. Pauly, editors. 2018. *Labeo nigripinnis* Day, 1877. FishBase. Available: <https://www.fishbase.de/summary/Labeo-nigripinnis.html>. (May 2018).

GBIF Secretariat. 2017. GBIF backbone taxonomy: *Labeo nigripinnis* Day, 1877. Global Biodiversity Information Facility, Copenhagen. Available: <https://www.gbif.org/species/5206036>. (May 2018).

ITIS (Integrated Taxonomic Information System). 2018. *Labeo nigripinnis* Day, 1877. Integrated Taxonomic Information System, Reston, Virginia. Available: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=689320#null. (May 2018).

Jayaram, K. C., and J. Jeyachandra Dhas. 2000. Revision of the genus *Labeo* Cuvier from the Indian region with a discussion on its phylogeny and zoogeography (Pisces :

Cypriniformes, Cyprinidae, Cyprininae). Records of the Zoological Survey of India, Occasional Paper no. 183.

Sanders, S., C. Castiglione, and M. Hoff. 2014. Risk Assessment Mapping Program: RAMP. U.S. Fish and Wildlife Service.

Sarma, K. J., M. Prajapati, and P. C. Mankodi. 2017. Morphological description and taxonomic account of *Labeo* species (Cypriniformes, Family: Cyprinidae) from Gujarat, India. Journal of Entomology and Zoology Studies 5(4):1120-1125.

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.

Milogo, A. 1993. Reproduction artificielle de *Labeo coubie* et *Labeo senegalensis* menacée par la construction du barrage de Comoé (Burkina Faso). Symposium International sur la diversité biologique des poissons d'eaux douces et saumâtres d'Afrique (PARADI), Senegal.

Skelton, P. H., D. Tweddle, and P. B. N. Jackson. 1991. Cyprinids of Africa. Pages 211-233 in I. Winfield, and J. S. Nelson, editors. Cyprinid fishes, systematics, biology and exploitation. Springer Netherlands.

Talwar, P. K., and A. G. Jhingran. 1991. Inland fishes of India and adjacent countries, volume 1. A. A. Balkema, Rotterdam, The Netherlands.