

# First Report of Indian Glass Fish: *Parambassis ranga*, from Narmada Canal Sanchore, at Jalore District

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## Abstract

Present paper deals with studies on fresh water fish community in Narmada Canal at Sanchore region of Jalore district. Study area was surveyed for a period of one year (August 2018 to July 2019). A total of 09 fish species were recorded during the study belonging to 05 families and 05 orders. Among these, *Parambassis ranga* was first time reported from Jalor on South West region of India.

**Keywords:** Narmada Canal, *Parambassisranga*, Sanchore, Jalore, Glassy Fish.

## Introduction

*Parambassisranga*, commonly known as Indian glassy fish is ornamental fish which has appeal in the aquarium fish market. It is also one of those small indigenous fish species which has high nutritional value due to presence of minerals and moderate vitamin A content (Roos *et al.*, 2003; 2007). It is additionally well known as an aquarium fish and has high market request among the ornamental fish (Gupta and Banerjee, 2008; 2012a, b, c). The current study was carry out to report the status of ornamental fish species for refreshing the already present information in Jalore district. It is also popular as an aquarium fish and has high market demand among the ornamental fish (Gupta and Banerjee, 2008; 2012a, b, c).

## Aim of the study

The aim of the present study are as undertaken

1. To evaluate species diversity of fishes in Narmada Canal at Sanchore region.
2. To report the status of ornamental fish species for updating the previously present data in Jalore district.

## Study Area

Since Rajasthan is dry and isn't even a riparian state, deliberation were made to irrigate its lands with water from the Narmada waterway that courses through the neighboring province of Gujarat. To study the status of ornamental fishes of the Sanchoor tehsil at Jalor District, Silu Ghaat was selected that is situated 375 meters away from Narmada main canal. The crossing 486 kilometres (302 mi) in Gujarat, the Narmada canal come in Rajasthan near Shilu in the Sanchor tehsil of Jalore. The 74 kilometres (46 mi) main canal, with 9 major distributaries. Its coordinates are 24°39'19.85" North 71°39'01.83" East encompasses an area of about 1,477 square kilometers (570 sq. mi), including 124 villages Parsai Gargi (29 February 2012). In 2008 for improvement of ecotourism the Silu Ghaat / Narmadeshwar Mahadev dham was built (35 Km. from National Highway 15).

## Review of Literature

*Geographic Range Description:* The species has an enormous range, from Pakistan and Punjab. Records of the species from the Salween basin in Myanmar and Thailand probably refer to other species. Where it has also been recorded from the Pai River, Mai Hong Song Province, and Songkhla in peninsular Thailand (Vidthayanon, 2012). According to Day (1878); Talwar and Jhingran (1991) and Shrestha (1994).

*Parambassis ranga* is broadly dispersed in India, Bangladesh, Pakistan, Nepal, Myanmar, Malaysia and Thailand). Recently it has also been accounted for to be introduced in Japan and Philippines (Roberts, 1994). *Parambassis ranga* is occupant of drowsy and standing waters; is



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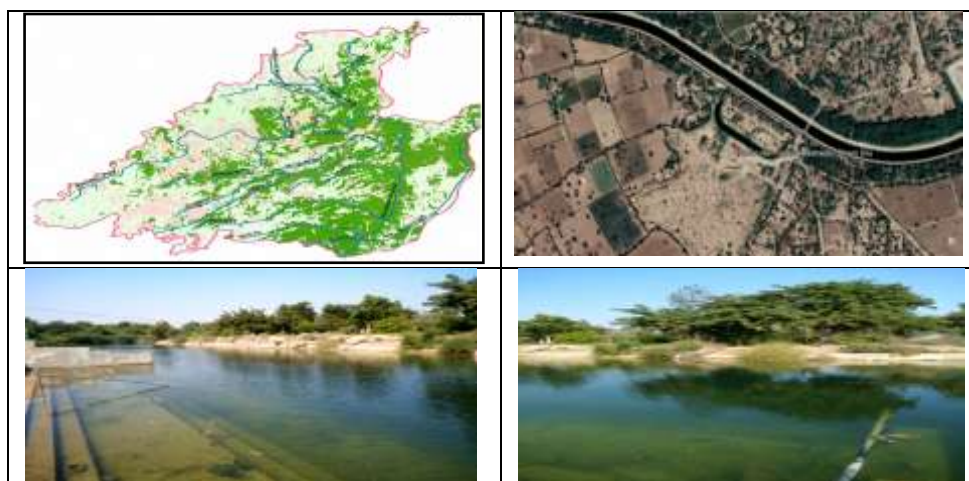
utilized to happen in waterways, streams, canals, ditches, lakes and abandoned water bodies (Talwar and Jhingran, 1991; Gupta and Banerjee, 2013). It has been reported to reside in large numbers along shallow margins of water bodies where there is thick development of lowered and minimal rising weeds (Gupta, 1984).

**Materials and Methods**

The channel was surveyed for a time of one year (August 2018 to July 2019). The fish samples

were collected from various sub sites. The specimen were preserved in 4-6% formalin and brought to lab for identification. The fishes were identified to the assistance of taxonomy keys (Datta and Shrivastava,1988; Talwar and Jhingran, 1991; Jayaram,1994 and Das *et al.*, 2010).

After identification fishes were categorized as ornamental fish, nourishment fish and ornamental just as nourishment esteem fish for understanding of this study.

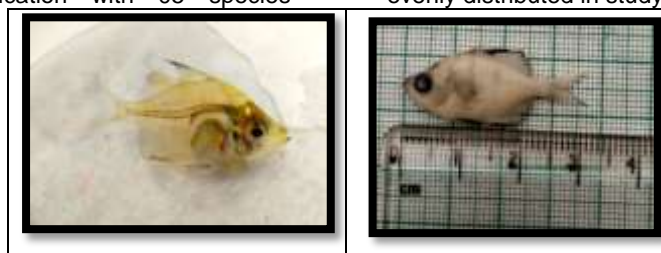


**Fig. 1. Map showing the study area Narmada Canal, Silu Ghat at Sanchore Tehsil**

**Results and Discussion**

Morphological characters: *Parambassis ranga* has elongated and compressed body, rounded abdomen, compressed head, short and pointed snout. Mouth large, gape oblique, extending to anterior border of orbit has been reported (Day, 1878 and Talwar and Jhingran, 1991). Eyes large, superior not visible from below ventral surface, Jaws straight or only slightly upturned. Lips thin. Supra-orbital ridge smooth of serrated, almost with one or two posterior spines. Pre-orbit serrated on both ridge and edge. Sub-orbit also serrated. Inter-operculum smooth. Two dorsal fins, with six or seven spines and 11 to 14 rays, fins closely placed with a notch inbetween. Anal fin with three spines and with 11 to 16 rays. Caudal fin deeply emarginate. Lateral line complete with 30 to 100 scales. Cheek with four to seven transverse scale rows (Gupta 2016). During the investigation period 09 species under 05 families and 05 orders were recorded from Silu Ghat at Narmada Canal in Jalore region. Out of 09 species recorded (table 1), 01 species was of ornamental value and 8 species were of both ornamental and food value. Family Cyprinidae dominated the gatherings in part of ornamental and nourishment fish classification with 05 species

followed by Bagridae, Channidae, Notopteridae, Ambassidae with 1 species from each group. The findings of the present study revealed that Jalor district of Rajasthan has some varieties of ornamental fishes with economic importance in local and global trade. All the fishes of the district are used for purposes without knowing their proper ornamental value. The local fisher men need to be organized and by proper training and counseling they have to be made aware of the value of the ornamental fish which will fetch more price in the domestic and international markets and help them to earn extra profit. Other than *Parambassis ranga* 08 fish species had been previously reported in nearby surrounding water bodies either canal or river as well as lakes Banya and Kumar, (2014). The fish diversity was calculated from diversity indexes. The Shannon Weaver index (1.28), species richness (09), evenness (0.8), Simpson's index (0.2778) shows valuable diversity of the habitat, Simpson's index of diversity (0.7228), Simpson's Evenness (0.72) was found (Table 2). Simpson's reciprocal index value (3.6) was shows lower fish diversity and Diversity index values were predicts the numbers of individual of all species were evenly distributed in study area.



**Fig. 2. Morph metric analysis of *Parambassis ranga***

**Conclusion**

The finding of this study that *Parambassis ranga* was first time reported from Jalor on South West region of India. All nine species is highly nutritious fish species and could be used for food besides, *Parambassis ranga* could be promoted as ornamental fish. All the fishes of the district used to be caught for the means of food purposes without knowing their legitimate decorative worth. We should be legitimate development and preparing need to mindful the estimation of the ornamental fish and for economic value.

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**Table 1: Ichthyo-faunal diversity of Sanchoor tehsil in Jalor district, and their conservation status**

Order	Family	Scientific Name	Common Name	Conservation status
Cypriniformes	Cyprinidae	<i>Pethia ticto ticto</i> (Ham.)	Fire fin Barb	LC (IUCN3.1)
		<i>Puntius sophore</i> (Ham.)	Spotfin swamp barb	LC (IUCN3.1)
		<i>Rasbora daniconius</i> (Ham.)	Black line rasbora	LC (IUCN3.1)
		<i>Labeo rohita</i> (Ham.)	Rohu	LC (IUCN3.1)
		<i>Cirrhinus mrigala</i> (Ham.)	(Ray fined fish)	LC (IUCN3.1)
Siluriformes	Bagridae	<i>Mystus gulio</i> (Ham.)	Long Whiskers Catfish	LC (IUCN3.1)
Perciformes	Channidae	<i>Notopterus notopterus</i> (Pallas)	Bronze feather back	LC (IUCN3.1)
Osteoglossiformes	Notopteridae	<i>Channa punctata</i> (Bloch)	Spotted snakehead	LC (IUCN3.1)
Perciformes	Ambassidae	<i>Parambassis ranga</i> (Ham.)	Indian glassy fish	LC (IUCN3.1)

LC: Least Concern

**Table 2: Diversity index calculated from fish abundance data**

S. No	Diversity Index Estimators	Values
1	Shannon diversity index (H)	1.28
2	Evenness	0.8
3	Simpson's index (D)	0.2778
4	Simpson's index of diversity	0.7228
5	Simpson's reciprocal index	3.6
6	Simpson's Evenness	0.72
7	Fish species richness	9