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# NEW RECORD OF FISH DIVERSITY IN THE LUNI RIVER AT SANCHORE REGION OF RAJASTHAN STATE

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**Present paper deals with studies on fish diversity of Luni River at Sanchore region of Jalore district of Rajasthan state. Luni is a seasonal river of Western Rajasthan and due to intermittent release of surplus water from Narmada Canal into the Luni River, many perennial water pools are formed in its bed. The river was surveyed in the year 2013 & eight species of fish were recorded for the first time from the study area. Cypriniformes was the dominant order with five species followed by Siluriformes, Perciformes and Osteoglossiformes each represented by one species.**

The Luni is a river of western Rajasthan. It originates in the Pushkar valley of the Aravalli Range near Ajmer and flows for 37,363 km² before it ends in the marshy lands of Rann of Kachchh in Gujarat. Its basin lies between 23°41' and 27°05' E and 71°04' and 74°42'N. It is bounded by the arid western districts in the west, by Banas Basin in the east, Shekhawati Basin in the north, Sukli and West Banas Basins in the south. Its major tributaries are the Sukri, Mithri, Bandi, Khari, Jawai, Guhiya and Sagi from the left and the Jojari River from the right. In spite of the high salinity, it is a major river in the region and serves as a primary source of irrigation. Luni river is seasonal river and flows only during the rainy season from North-East to South-West. This river tends to increase its width rather than deepening the bed because the banks are of loose soils, which are easily erodible whereas beds are of sand. During last one decade due to intermittent release of surplus water from Narmada Canal into the Luni River at Sanchore Region of Jalore district, overall ecology of the riverbed and its banks is fast changing. Numerous water pools are formed in the River bed. Details, regarding fish faunal diversity of these water bodies are lacking. Hence, present studies were undertaken to explore fish diversity in Luni River at Sanchore Region of Jalore district.

## MATERIALS AND METHODS

Fishes were collected mainly by using cast nets. Hand, scoop and drag net were also used. The fishes were preserved in 10% formalin for further studies and were identified following standard references[1-2].

## RESULTS AND DISCUSSION

Fish diversity of the Thar Desert is an admixture of the four components Western, Himalaya, Aravallis, Peninsular India and Middle East Yazdani[3]. Yazdani[3] has compiled information on 112 fish species present in the Thar Desert whereas Mohan and Singh[4] has described 80 fish species from the Thar Desert. Not much information regarding consolidated diversity of the fish fauna of river Luni (Fig. 1) is available; Banyal[5] has recorded 3 fish species from the Luni River near to Jodhpur.

Since, the introduction of Narmada Canal water in the Luni River at Sanchore region of Jalore district, the river was surveyed for the first time extensively from the fish species diversity point of view. The river was surveyed at Siwada, Chitalwana Keria & Khasarvi localities of Sanchore region of Jalore District, almost up to the end point of the river where it finally disappears in Rann of Kachchh (Figs.1& 2). It was observed that overall ecology is changing in the riverbed & banks because; water from Narmada canal is being intermittently released into the river. Eight fish species were recorded for the first time from the area of study. Cypriniformes was the dominant order with five species followed by Perciformes, Siluriformes and Osteoglossiformes each represented with one species. Due to shallow water in majority of the area of study, minnows including hardy and air-breathing fishes like *Channa punctatus* (Bloch)

were dominant in total fish catch. From saline water at Khasarvi region of the river *Mystus gulio* (Ham.) and *Channa punctatus* (Bloch) were recorded, due to their ability to withstand salinity. It was noticed that most of the afore mentioned fishes are introduced by Narmada Canal, whereas, the riverbed used to remain dry most part of the year except rainy season before the introduction of water from Narmada canal water in to the river bed. Further, it was observed that most of the fishes are well established and reproduce in the waters of Luni River in that area. Though the total number of species diversity was maximum from Siwada (Table 1), composite fish culture is recommended in Keria reservoir, keeping in view availability of large amount of the water in the reservoir throughout the year along with presence of diverse habitats for fishes in the reservoir.

It is further recommended that if critical water level is maintained properly in the area of study, it can be developed into a fruitful wetland from fisheries point of view. List of the fishes with classification is given below:

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

1) *Pethia ticto ticto* (Hamilton, 1822)

2) *Puntius sophore* (Hamilton, 1822)

3) *Rasbora daniconius* (Hamilton, 1822)

4) *Labeo rohita* (Hamilton, 1822)

5) *Cirrhinus mrigala* (Hamilton, 1822)

Order: Siluriformes

Family: Bagridae

6) *Mystus gulio* (Hamilton, 1822)

Order: Perciformes

Family: Channidae

7) *Channa punctata* (Bloch, 1793)

Order: Osteoglossiformes

Family: Notopteridae

8) *Notopterus notopterus* (Pallas,1769)

**Table** 1. **Distribution of the fishes in the area of study**

| Name of the fish | Name of the reservoir/ Study point | | | |
|---|---|---|---|---|
| | Siwada | Chitalwana | Keria | Khasarvi |
| | Sanchore (Jalore) | | | |
| *Pethia ticto ticto* (Ham.) | + | - | + | - |
| *Puntius sophore* (Ham.) | + | + | - | - |
| *Rasbora daniconius* (Ham.) | + | - | - | - |
| *Labeo rohita* (Ham.) | - | - | + | - |
| *Cirrhinus mrigala* (Ham.) | + | - | + | - |
| *Mystus gulio*(Ham.) | - | - | - | + |
| *Notopterus notopterus* (Pallas) | + | - | + | - |
| *Channa punctata* (Bloch) | - | - | - | + |

+ Means= Present; - Means= Absent

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