



ADDITION TO THE INFORMATION ON RECORD OF FISH FAUNAL DIVERSITY OF SOME SELECTED RESERVOIRS OF DISTRICT SIROHI, RAJASTHAN

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Received: 25.10.13

Accepted: 13.11.13

This research paper deals with studies on the fish diversity of selected reservoirs of district Sirohi, (24° 20' and 25° 17' North Latitude and 72° 16' and 73° 10' East Longitude) Rajasthan during 2013. Eleven species of fishes were reported from West Banas dam followed by Tokra (7 species), Chandela (4 species) and Girwar dam (5 species). Cypriniformes was the dominant order of fishes represented by 7 species.

Rajasthan State has many aquatic resources in the form of lakes, rivers, reservoirs and extensive network of irrigation canals in its north-western part. Fishes are integral part of these water bodies but, details regarding the fish faunal diversity of most of these water bodies are still unknown. Understanding of fish fauna of Rajasthan is mainly based on the work of earlier workers¹⁻⁹. Sirohi district is situated at the south-west part of Rajasthan between parallel of 24° 20' and 25° 17' North Latitude and 72° 16' and 73° 10' East Longitude in the foothills of Aravalli ranges. It has an area of 5139 km's (2009 sq. miles) and is the third smallest district of Rajasthan. Sirohi is bounded by district Pali in the north-east; district Udaipur in east, Jalore in west and Banaskantha district of Gujarat in the south. The total geographical area of the district is 5139 sq. kms. It covers about 1.52 percent of the total area of Rajasthan. The main rivers are Jawai, Sukri, Khari, Badi, Krishnawati, Kapalganga, and Banas. In Sirohi district there are about 33 dams with irrigation capacity of 42,255 acres of land. The main dams of the district are West Banas (N 24° 41.688' E 072° 56.187'), Chandela (N 24° 31.843' E 072° 40.964'), Girwar (N 24° 31.46' E 072° 38.289') and Tokra (N 24° 41.363' E 072° 42.573'). These dams are constructed in the basin of West flowing rivers of Kachchh and Saurashtra including Luni. West Banas, Girwar and Chandela dam were constructed in 1962, 1977 and 1980 respectively on West Banas River. Former dam is present near to Pindwara town whereas remaining two are present near to Abu Road. Besides, Tokra dam was constructed on Tokra River near to Sirohi city in 1959.

Most of these dams fulfil the demands of drinking water as

well as irrigation and are thus very crucial for the people residing in this area. Fish diversity of these reservoirs which came into existence after the construction of aforementioned dams is yet not known. Hence, present studies were undertaken to explore fish diversity of these four important reservoirs of Sirohi district, of Rajasthan (Figs.1 and 2).

MATERIAL AND METHODS

Fishes were collected mainly by using cast nets, hand net, scoop net and drag net were also used. The fishes were preserved in 10% formalin for further studies. The Fishes were identified following standard references¹⁰⁻¹².

RESULTS AND DISCUSSTION

Fish diversity of Rajasthan has rich aquatic resources to become a leading fish producer in the country, the prime fishery resource of the state being reservoirs (1.53 lakh ha) and ponds and tanks of (1.8 lakh ha). The annual fish production of the state is 14,300 tonnes. Productivity from reservoir is above the national average, while productivity of small water bodies is far less than the national average. The present knowledge of fish faunal diversity of most of the reservoirs under report is very meagre and this is the first report of the fish diversity from the three out of four reservoirs under report i.e. Girwar, Candela and Tokra. In total 11 species of fishes were reported from these water bodies whereas, Mohan, et al.⁹ has described 20 spp. from the Sirohi district particularly from West Banas dam. Maximum fish diversity was reported from the West Banas reservoir (11 species) followed by Girwar (5 species) Tokra (7 species), and Chandela (4 species). Carps were dominant in

Table 1. Distribution of fishes recorded from different study areas.

Sr. No.	Name of the fish species	Importance of the fish in the reservoir	Name of the reservoir			
			West Banas	Girwar	Tokra	Chandela
1	<i>Salmophasia bacaila</i> (Hamilton, 1822)	It is a minnow and is least important from commercial fisheries point of view.	+	-	+	-
2	<i>Puntius ticto ticto</i> (Hamilton, 1822)	Do	+	+	+	+
3	<i>Labeo boggut</i> (Sykes, 1838)	Minor carp and is little important from commercial fisheries point of view.	+	-	-	-
4	<i>Rasbora daniconius</i> (Hamilton, 1822)	It is a minnow and is least important from commercial fisheries point of view.	+	+	+	+
5	<i>Cyprinus carpio</i> (Linnaeus, 1758)	Exotic fish and is important from commercial fisheries point of view.	+	+	-	-
6	<i>Catla catla</i> (Hamilton, 1822)	It is an important fish from commercial fisheries point of view.	+	+	+	+
7	<i>Labeo rohita</i> (Hamilton, 1822)	Do	+	+	+	+
8	<i>Sperata seenghala</i> (Sykes, 1841)	Do	+	-	-	-
9	<i>Mastacembelus armatus</i> (Lacepede, 1800)	This fish is little important from commercial fisheries point of view.	+	-	+	-
10	<i>Channa punctatus</i> (Bloch, 1793)	Do	+	-	+	-
11	<i>Gambusia affinis</i> (Baird & Girard, 1853)	It is an invasive fish and is introduced from mosquito control point of view.	+	-	-	-

+ = Present - = Absent

total catch followed by other minor fishes. Cypriniformes was the dominant orders of the fishes. Less number of fish species in the reservoirs under report can be attributed to the fact that reservoirs under report nearly or completely dry out every year due to increased stress for irrigation and drinking water making them suitable for practising culture-based fisheries. *Catla catla* and *Labeo rohita* are primarily stocked in these water bodies from commercial fisheries point of view. Moreover, presence of few or nearly negligible vegetation in the water bodies makes them less productive. Hence, by maintaining proper water level following a proper stocking, and recapture regime, these reservoirs can yield better fish production. Systematic account of fishes is as follows and details are given in Table 1.

Class: Actinopterygii

Order: Cypriniformes

Family: Cyprinidae

1. *Salmophasia bacaila* (Hamilton, 1822)
2. *Rasbora daniconius* (Hamilton, 1822)
3. *Puntius ticto ticto* (Hamilton, 1822)
4. *Catla catla* (Hamilton, 1822)
5. *Labeo boggut* (Sykes, 1838)
6. *Labeo rohita* (Hamilton, 1822)
7. *Cyprinus carpio* (Linnaeus)

Order: Siluriformes

Family: Bagridae

Genus: *Sperata* holly

8. *Sperata seenghala* (Sykes, 1841)

Order: Synbranchiformes

Family: Mastacembelidae

9. *Mastacembelus armatus* (Lacepede, 1800)

Order: Perciformes

Family: Channidae

10. *Channa punctatus* (Bloch, 1793)

Order: Cyprinodontiformes

Family: Poeciliid

11. *Gambusia affinis* (Baird & Girard, 1853)

ACKNOWLEDGMENTS

Authors are thankful to Dr. K. Venkataraman, Director, Z.S.I., Kolkata for providing necessary facilities to undertake present work.

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