



## Biodiversity of Ichthyofauna of Barul Reservoir, Nanded District, Maharashtra

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### ABSTRACT

The fish population of aquatic systems plays a significant role in the economy, and India has vast potential for development of Inland fisheries. Barul earthen dam is a freshwater reservoir having catchment area of 1560 hectares has been constructed on Manar river for drinking, irrigation and pisciculture purposes. Literally there is no report on the fish fauna of Barul reservoir, hence to fill the gap, present work was undertaken. The reservoir was found to have a fauna of 24 fish species belonging to 11 Families and 4 different Orders.

Barul reservoir is located in Warawant village at a distance of 10 miles from Kandhar town in Nanded district. Dam is located at latitude 18°50' north and longitude 77°19' east. Ichthyology is more popular branch of natural history. Any study on aquatic systems cannot be visualized as complete without the study of fishes as they often lie at end of a complex food chains. Besides, forming the staple diet for human beings, fishes are also a useful parameter of the purity of water (Peter 1987). Seth et al. (1967) suggested that the fishes can be utilized in monitoring water quality for the toxic constituents that may enter the water through the discharge of wastewaters.

Fishes from four sampling stations were collected every month throughout the study period with the help of fishermen. The colour pattern of fishes was recorded at the time of collection. The fishes were preserved in 5% formalin and identified following the key (Fin formula) of Jhingran (1991), Day (1994) and Jayaram (1998). The knowledge of the occurrence of fish in India dates back to 3 million B.C. (Hora 1956). As regards the total number of different species of fishes, the entire world has about 21,000 species of fishes. In India more than 1600 species of fishes have been found, although Day (1994) has recorded 1300.

Barul reservoir has a very rich fish fauna. During the study period fish fauna was represented by 24 fish species belonging to 11 Families and 4 different Orders as given in Table 1. The 4 major species of the carps were Catla, Rohu, Mrigal and Cyprinus. The carnivorous or predatory fishes include Cat fishes, herbivores include Rohu, Grass carp, and Omnivores include Mrigala and Clarias. A variety of carps belong to the Order Cypriniformes including the species of

*Punctius, Cirrhinus, Cyprinus, Katia, Labeo, Barbus* and *Rasbora*. Eel fishes belonging to the Order Acanthopterygii included the species of *Channa* and *Mastacembelus*. Cat-fishes from the reservoir were of the Order Siluriformes including species of *Wallago, Mystus* and *Clarias*. Total 24 species of fishes were found in the reservoir. The reservoir is highly exploited for harvesting and marketing the fishes on daily basis. The percentage of fishes in number by catch showed a great variation and the study confirms fishes from the order Cypriniformes dominated in the dam. Deep zone is dominated by major carps and Cat fishes, which might be due to the population dynamics of zooplanktons including Rotifers. Job et al. (1955) recorded 86 species from Hirakund dam, Lohar et al. (2003) reported 24 species from River Tapi belonging to 7 Families and 16 Genera. The fishes of Yeldari reservoir have been studied by Sakhare (1999). Suresh (2003) reported 54 fish species in Loktak lake, Manipur and 15 species were commercially important. About 43 species were present in which 18 were commercially important. Sakhre & Joshi (2003) reported the Ichthyofauna of Bori reservoir in Maharashtra with a total of 20 species of fishes belonging to 14 Genera falling under 4 Orders (Cypriniformes, Perciformes, Siluriformes, Osteoglossiformes). Cypriniformes Order dominated with 7 species with Genus *Puntius* as abundant.

From the study, it can be concluded that the reservoir supports fairly rich fish fauna. Extension of Barul dam killed brood fishes and juveniles, deteriorating ecological conditions of spawning and rearing grounds. Local people have to be educated on the issues of fish conservation. Finally, it can be concluded that the Ichthyofauna is very rich in the Barul reservoir, and it can be used to increase the production of fishes and the economic condition of local fisherman.

Table 1: Fish fauna of Barul reservoir.

Order	Family	Scientific Name	Vernacular Name	Economic value		
Cypriniformes	Cyprinidae	<i>Catla catla</i>	catla	FF, CO		
		<i>Cirrhinus cirrosa</i>	grass carp	FF, CO		
		<i>Cirrhinus mrigala</i>	mrigal	FF, CO		
		<i>cirrhinus reba</i>	carp	FF, CO		
		<i>Cyprinus carpio</i>	comman carp	FF, CO		
		<i>Labeo rohita</i>	rohu	FF, CO		
		<i>Labeo fimbriatus</i>		FF, CO		
		<i>Labeo calbasu</i>	karvvate	FF, CO		
		<i>Labeo gonius</i>	silver carp	FF, CO		
		<i>Barbus curmuca</i>		FF, CO		
		<i>Rasbora daniconius</i>	dendua	FF, CO		
		Osteoglossiformes	Notopteridae	<i>Notopterus chitala</i>	chambari	FF, CO
				<i>Notopterus notopterus</i>		FF, CO
Siluriformes	Siluridae	<i>Callichorous papda</i>	papda	FF, CO		
		<i>Wallago attu</i>	goneadi	FF, CF		
Perci formes	Bagridae	<i>Mystus bleekeri</i>		FF, CO		
		<i>Mystus seenghala</i>	seenghal	FF, CO		
	Clariidae	<i>Clarias magur</i>	magur	FF, CO		
	Percidae	<i>Ambassis nama</i>	trash fish	FF, CO		
	Ophiocephalidae		<i>Ophiocephalus striatus</i>	ma rail	FF, CO	
			<i>Ophiocephalus guchwa</i>	dhokda	FF, CO	
		<i>Ophiocephalus punctatus</i>	pathar chain	FF, CO		
Mugiloidei	Mugilidae	<i>Mugil parsia</i>		FF, CO		
		<i>Mugil cephalus</i>		FF, CO		
Channoidei	Channidae	<i>Channa guchwa</i>	dheridhok	FF, CO		
	Mastacembelidae	<i>Channa marulius</i>	murrel	FF, CO		
Mastacembeloidei	Mastacembelidae	<i>Mastacembelus armatus</i>	bam	FF, CO		

FF - Fine Food, CO - Commercial Food, CF - Coarse Food

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