

FISH DIVERSITY OF FUTERA POND, DAMOH, (M.P.)

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ABSTRACT: - Fish enjoys a very special consideration and place in human civilization from times immemorial. Its food value, gastronomic, culinary and nutritional. Its food value, gastronomic, culinary and nutritional, bring it to the fore; many species of fish rank in the category of “gourmet par excellence”. Several others are sought as Luxury food in expensive restaurants. The one common goal of these all is “the fish as food for the mankind.” Taking this into consideration the fish diversity of Futera pond Damoh is studied during present investigation. In the present investigation results reveal the occurrence of 20 species of fish belonging to six orders, seven families. The species of family cyprinidae were most dominant by ten species. Out of eighteen species having high economic value these are *Labeo rohita*, *Catla catla*, *Cirrhinus mrigala*, *Walago attu*, and *Channa marulius*, and others have moderate economic value. During this study we also found exotic species namely *Cyprinus carpio* (common carp), *Ctenopharyngodon idella* (grass carp), *Hypophthalmichthys molitrix* (silver carp). The fish species were also divided into different groups like major carps, catfishes, eels, feather back etc. Rapid deforestation, sewage discharge, mining activities, thermal activities, anthropogenic activities and irrational fishing practices over the year, this aquatic diversity is on the way of decline. It is necessary to protect biodiversity in their natural habitat.

KEYWORDS: Fish Diversity, Conservation Status, Futera Pond.

INTRODUCTION

A fish is an animal which lives and breathes in water. All fish are vertebrates (have a backbone) and most breathe through gills and have fins and scales. Fish make up about half of all known vertebrate species. Ichthyodiversity refers to variety of fish species; depending on context and scale, it could refer to alleles or genotype within piscian population, to species of life forms within a fish (Burton *et. al.* 1992). Fish constitutes almost half of total number of vertebrates in the world.

They live in almost all conceivable aquatic habitats; c, 21730 living species of fish have been recorded out of 39,900 species of vertebrates (Jayaram, 1999). About 21,730 species of fishes have been recorded in the world of which, about 11.7% are found in Indian waters. Out of the 2546 species so far listed (ICBD 1994), 73 (3.32%) belong to the cold freshwater regime, 544 (24.73%) to the warm fresh waters domain, 143 (6.50%) to the brackish waters and 1440 (65.45%) to the marine ecosystem. The Indian fish fauna is divided into two classes, viz., Chondrichthyes (cartilage fishes) and Osteichthyes (bony fishes). The endemic fish families form 2.21% of the total bony fish families of the Indian region. 223 endemic fish species are found in India, representing 8.75 % of the total fish species known from the Indian region.

Fishes are aquatic creatures, perfectly adapted for life in water. Freshwater bodies comprise variety of fishes. Fishes alone contribute about 2,546 species and the fishes of inland water bodies of Indian subcontinent have been subject of study since last century (Kalbande *et al.*, 2008). Human beings from time immemorial use fishes for various purposes. Millions of human are suffering from hunger and malnutrition while fishes form rich source of food and provide a meal to tide over a nutritional difficulties of man. Fishes have formed an important item of human diet from time immemorial and are primarily caught for this purpose (Sarwade and Khillare, 2010). In order to maintain sustainable development and stability of ecosystem, surveillance of fish faunal diversity of water bodies is needed. The workers like Kamble and Reddi (2012), Kharat *et al.* (2012), Galib *et al.* (2013), Nagabhushana and Hosetti (2013), Chandrashekhar (2014), Biswas and Panigrahi (2014) have contributed in the field of study of fish faunal diversity.

Futera pond is an anthropogenic construction of Damoh district in Madhya Pradesh in the middle of Damoh town. The topographical situation of Futera pond is

23°5' N longitude and 79°26' E latitude in central India and situated in Futera ward No.5 besides the railway line of Bina to Katni in Damoh district. The area of Futera pond is about 36.923 hectares and depth is 4.50 meter. The depth of pond is variable season to season. The water storage capacity of Futera pond is about 48 MCFT. The pond is anthropogenic and pond water is used for domestic purpose, irrigation, aquaculture etc. The surrounding area of pond is semi urban and semi agricultural and slums of the town.

MATERIALS AND METHODS

The present study of fish diversity in the Futera pond some of the economically important fresh water fishes which were collected during the course of present investigation from 2011-2012 from different sampling sites after proper identification, systematic account have been given in Table No 1. The fishes from the dam were collected with the help of local fishermen. The collected fishes were brought to laboratory, fixed in 5% formalin, cleaned with rectified spirit and preserved in 10 % formalin. The fishes were identified by standard keys of Day (1878), Jayram (1981), Talwar and Jhingaran (1991) and Jhingaran (2005).



Fig. 1. Satellite view of study site Futera Pond

RESULTS AND DISCUSSION

The present study of fish diversity in the Futera pond some of the economically important fresh water fishes which were collected during the course of present investigation from 2011-2012 from different sampling sites after proper identification, systematic account have been given in Table No 1. In the present investigation results reveal the occurrence of 20 species of fish belonging to six orders, seven families. The species of family cyprinidae were most dominant by ten species.

Out of nineteen species having high economic value these are *Labeo rohita*, *Catla catla*, *Cirrhinus mrigala*, *Walago attu*, and *Channa marulius*, and others have moderate economic value. During this study we also found exotic species namely *Cyprinus carpio* (common carp), *Ctenopharyngodon idella* (grass carp), *Hypophthalmichthys molitrix* (silver carp).

Choudhary (1977) observed 39 species of Gandhi Sagar reservoir. Singh (1993) observed 84 species from Sardar sarovar dam of Narmada River. Saxena (1997) reported 42 species from upstream region and 35 species from downstream region in river satluj. Solanki et.al, (2010) reported 29 species from Tapti river of Betul. district Rapid deforestation, sewage discharge, mining activities, thermal Activities, anthropogenic activities and irrational fishing practices over the year, this aquatic diversity is on the way of decline.

Kharat et al. (2012) had recorded 51 species of fishes belonging to the 14 families and 35 genera during their study on Krishna River at Wai (M.S.). Jayabhaye and Lahane (2013) observed the 21 species of fishes belonging to 6 families and 13 genera during their study period on Pimpaldari tank, Dist. Hingoli (M.S.). Our findings are corroborating with observations of Sakhare (2001), Sarwade and Khillare (2010), Kharat et al. (2012) and Jayabhaye and Lahane (2013). category.

Table No. 1 - Fish Diversity of Futera pond in Damoh District (M.P.)

S. No.	Order	Family	Genus	Species	Local Name
1.	Clupeiformes	Notopteridae	Notopterus	<i>notopterus</i>	Chamari
2.	Cyperiniformes	Cyprinidae	Catla	<i>catla</i>	Catla
3.			Cirrhinus	<i>mrigala</i>	Mrigal
4.			Labeo	<i>rohita</i>	Rohu
5.			Labeo	<i>bata</i>	Rohu
6.			Oxygaster	<i>bacaila</i>	Chela
7.			Puntius	<i>sarana</i>	Punti
8.			Puntius	<i>ticto</i>	Pothia
9.			Cyprinus	<i>carpio</i>	Gowri
10.			Hypthalmichthys	<i>molitrix</i>	Belli Gende
11.			Ctenopharyngodon	<i>idellus</i>	Hullgende menu
12.			Siluriformes	Siluridae	Wallago
13.	Claridae	Clarias		<i>batrachus</i>	Magur
14.		Saccobranchidae	Heteropneustes	<i>fossilis</i>	Singee
15.		Bagridae	Mystus	<i>aor</i>	Tengara
16.	Ophiocephaliformes	Ophicephalidae	Mystus	<i>vitatus</i>	Padam Saur
17.			Channa	<i>marulius</i>	
18.	Mastacabeliformes	Mastacembelidae	Mastacembelus	<i>armatus</i>	Bam
19.	Percimocuchia	Anabantidae	Anabas	<i>testudineus</i>	Kabai
20.		Nandidae	Nandus	<i>nandus</i>	

CONCLUSION

By critical analysis of results of present study following conclusion may be drawn. It is concluded from the present investigation that the quality of the Futera pond water system is continuously degrading. The prime source of water pollution in this pond, are municipal, domestic and agricultural wastes. To maintain the richness of aquatic ecosystem continuous monitoring of pond is needed.

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