

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

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ABSTRACT:- Fish fauna of a pond basically represent the diversity and their abundance. Fishes play a very significant role in the human economy by providing nutritious food. India has got vast potential for development of inland fisheries. Present study was carried out to know fish fauna of Futera pond during Jan 2020- Dec 2020, where twenty fish species of six orders and ten families were observed.

KEYWORDS: - Physico-chemical status, Futera Pond, Fish fauna.

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 very rich in protein, carbohydrates, Vitamins (A, D & E), and other minerals. They are preserved by Salting, smoked or other ways. In one pound of fish the food value comes to be 300-600 calories, which is much higher in comparison to other food materials for human consumption. Fresh and preserved fishes are used as food; also protein, fat and other useful content in the body of fish are processed into a number of valuable products and by-product (B.N.Yadav) (1993). Fishes of the inland water bodies have been studied since last century, Day (1994) , Jayram (1991) , Talwar and Jhingram (1991), Rao et al (1999), Sakhare and Joshi (2002), Pawar et al (2006), Kamble(2007).

The present study has been carried out on Futera pond of Damoh district in Madhya Pradesh. 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 from 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 from 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. The need to define quality of water has development with the increasing demand of water, which is suitable for specific uses and confirms to desired quality. The most fundamental need is for water suitable for drinking, personal hygiene and food preparation and that pose no risk to human health.

MATERIAL AND METHODS: - The fishes were collected from the Futera Pond every month by repeated netting for the period of one year from Jan 2020- Dec 2020 and are preserved in 4% formalin. Fishes were

identified with the help of Day (1889), Qureshi and Qureshi (1983), Talwar and Jhingram (1991), Jayram (1999).



Fig.1- Satellite view of study site Futera Pond



Fig. 2- Fish catch by local Fisherman

RESULT 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 2020 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).

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.	Cypriniformes	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>	Hullugende
12.	Siluriformes	Siluridae	Wallago	<i>attu</i>	Padhin
13.		Claridae	Clarias	<i>batrachus</i>	Magur
14.		Saccobranchidae	Heteropneustes	<i>fossilis</i>	Singee
15.		Bagridae	Mystus	<i>aor</i>	Tengara
16.			Mystus	<i>vitatus</i>	
17.	Ophiocephaliformes	Ophicephalidae	Channa	<i>marulius</i>	Padam Saur
18.	Mastacabeliformes	Mastacembelidae	Mastacembelus	<i>armatus</i>	Bam
19.	Percimocuchia	Anabantidae	Anabas	<i>testudineus</i>	Kabai
20.		Nandidae	Nandus	<i>nandus</i>	

Due to more fecundity of major carps and suitable environmental conditions, relatively higher population density of cypriniformes was evident in the dam similar observations were earlier made by Talwar and Jhingran (1991), Das and Chand (2003), Pathak and Mudgal (2005) Sharma (2003). In a study on similar lines, Valsangar (1993) recorded 17 indigenous and 5 introduced fish species from Shivaji Sagar reservoir a cross koyana river in Maharashtra. Sakhare and Joshi (2002) observed 28 fish species including a species of craps, 5 of cat fishes, 2 of Feather bace, 5 of Live Fishes in Hirakud reservoir. Hiware and Pawar (2006) recorded 43 fish species from Nath sagar dam paithan in Aurangabad district Krishna and Piska (2006) reported 31 Ichthyofauna in secret lake, Durgamcheru, Rangareddy District. Jayabhaye. Khedkar (2008) recorded 25 fish species belonging to 14 genera, 8 families and 6 orders from Sawana dam.

CONCLUSION:-

There is a rich diversity of fish in Madhya Pradesh which suggests that a major part of this is threatened by human activities. Fish fauna and distribution is useful for designing and implementing conservation strategies, to make fishermen aware of fishing, to give scientific training, to provide facilities to the fish farmers and to avoid immature fishing as well as providing subsidies on loan may help in high yield as well as there is an urgent need to adopt legislative and other measures for conservation by Fishery and Department of Environment for minimizing anthropogenic activities.

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