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ICHTHYOFAUNAL DIVERSITY OF LANJUD RESERVIOR NEAR KHAMGON IN BULDANA DISTRICT

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Abstract: Present research work was carried out to assess the fish diversity and status of Lanjud dam situated on Lendi River near Khamgaon**.** This fresh water body especially used for drinking, domestic purpose, agriculture and fisheries purposes. Fish samples were collected from Nov 2020 to Dec 2021. The Ichthyofaunal diversity spans through 13 families and 08 orders. Present study is important and helpful for present and future management, conservation and restoration of water bodies, revival of ichthyofaunal diversity and also improves livelihood of fisherman in the rural region.

Index Terms **- Ichthyofaunal diversity, Lanjud Dam, Fishery status.**

I. INTRODUCTION

India has prosperous variety of fauna and flora due to the presence of rich fresh water habitat and it ranks as one of the world's huge diversity nations. Extremely diverse animals are found in water represent nearly all phyla and documentation of this wide variety of fauna not yet complete in some inaccessible and unexplored ecosystem. Studies on the ichthyofaunal diversity and their conservation in an aquatic ecosystem have always drawn the attention of various fishery researchers (Kar, *et al.*, 2006). Fish diversity is also a good bioindicator of water quality (Madhusudan *et al*., 2011). Fish play an important role in the economies of many countries as they have been a stabilizing element in many people's diets.It has been notably found that out of the then recorded 27,800 numbers of total valid fish species of the world, 13,000 species are freshwater dwellers particularly inhabiting in lakes and rivers that cover only 1 percent of the earth's surface, while there maiming species, 14,800 numbers live in marine habitats, which cover 70 percent of the total earth's surface (Leveque *et al.*, 2008).

The lack of information on the Ichthyo-fauna is a big handicap for popularizing little known fish variety in a particular ecosystem. Thus, there is need to survey fish fauna associated with habitats, which will help in planning methods for their production and effective exploitation (Renjith kumar *et al*., 2011).The objectives of the present study are to provide latest data on Ichthyofaunal diversity, in order to increase better knowledge about the diversity of fish and status of Lanjud Reservoir and tools for water conservation in Buldana District. The study is also helpful for creation of wage jobs in rural areas with particular emphasis on fishing communities'

II. STUDY AREA

Lanjud dam is a Medium Irrigation Project constructed on Lendi River, 10kms on Khamgaon-Nandura National Highway No. 6, North-West near Khamgaon, Dist. Buldana (M.S.). It was sanctioned during 1984 and has catchment area of about 66.96sq km. Gross storage capacity of the Dam is1.9892mcm. It coordinates 76^{O}–36'-00"longitudinally and 20-00'-45" latitudinal. The dam has a total length of 1215m with height of about 12.55m. It was mainly constructed to supply water to MIDC Khamgaon, nearby agriculture and for drinking water to the surrounding villages.

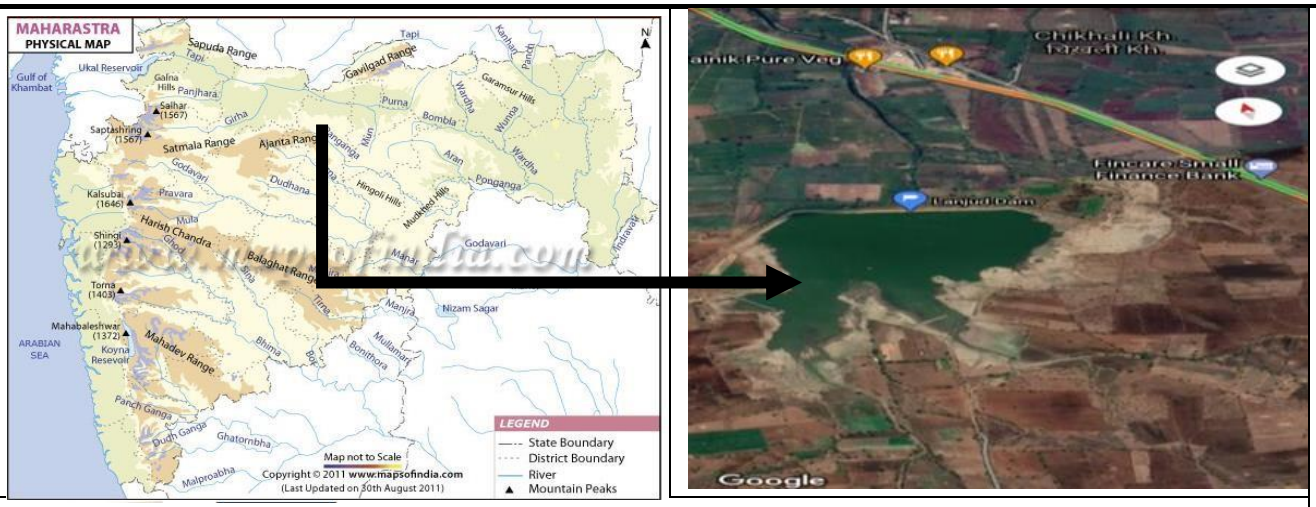

Fig. 1. Geographical location of the research site- The Lanjud dam. (Source-Google maps)

III. MATERIAL AND METHODS

3.1 Collection of Fish samples: Fish samples were collected from Nov 2020 to Dec 2021 and other valuable information were collected from the local fisherman, resident adjacent to the selected sites and Fishing was carried out with the help of local fishers using gill net, cast net, drag net, scoop net including hooks and lines (Bose *et al*., 2013). The samples were photographed, immediately.

3.2 Preservation: Fishes were collected and directly placed in a wide mouth jar having 2 liter capacity with 8% formalin solution (Bagra, 2010). Separated jar was used for preserving individual species and brought to the laboratory for identification.

3.3 Identification: The samples were identified based on keys for fishes of the Indian subcontinent (Day, 1996; Talwar and Jhingran, 1991) classification were carried out on lines of (Jayaram, 1999). In addition, various morphological characters, shape, colors etc were recorded. The IUCN red list of threatened species was followed to assign the conservation status. The species richness was simply estimated by variety of fish species in 3 different sampling stations.

3.4 Data Collection: To acquire accurate data, questionnaires, group discussion, observation and interview methods were used. Fishing data were collected from fisherman society. Harvesting was statistically analyzed and the annual fishing status of the reservoir was examined.The secondary data were obtained from office document.

IV. RESULT AND DISCUSSION

During the study period it was observed that there were total 31 species. These species were placed in 08 orders and 13 families of class Actinopterygii. Order Cypriniformes was dominant by 17 species, followed by Siluriformes and Perciformes with 04 and 03 species of each. Synbranchiformes and Osteoglossiformes having 02 species of each, while Beloniformes, Cyprinodontiformes, Mugiliformes contribute 01 species each (table 1 and fig 2). The order Cypriniformes showing 55% of total species while Siluriformes and Perciformes having 13% and 10% contribution respectively in total species richness.

Table 4.1: species richness of Lanjud dam reservoir

Sr.No.	Class	Order	Family	Species	Local Name
1.	Actinopterygii	Cypriniformes	Cyprinida	*Labeoninae rohita*	Rohu
2.				*Gibelion catla*	Catla
3.				*Cirrhinus mrigala*	Mrigala
4.				*Ctenopharyngodon idella*	Grass carp
5.				*Hypophthalmichthys nobilis*	Bighead
6.				*Hypothalmichthysmolitrix*	
7.				*Puntius stigma*	
8.				*Puntius ticto*	
9.				*Salmostoma phulo*	
10.				*Rasbora daniconius*	Kajalimasa
11.				*Cyprinus carpio communis*	
12.				*Osteobrama cotio cotio*	
13.				*Garralamta*	
14.				*Catla Catla*	
15.				*Thynnichthys sandkhol*	
16.			Balitoridae	*Nemacheilus botia botia*	
17.				*Nemacheilusbeavani*	
18.		Siluriformes	Siluridae	*Ompok bimaculatus*	Papada
19.			Bagridae	*Mystus bleekeri*	
20.			Schilbeidae	*Eutropiichthys goongwaree*	
21.			Clariidae	*Clarias batrachus*	
22.		Synbranchiformes	Mastacembelidae	*Mastacembelus armatus (Lacepede)*	Bam
23.				*Macrognathus pancalus (Hamilton)*	Bam
24.		Perciformes	Channidae	*Channa marulius(Hamilton)*	Marai / Dok
25.				*Channa orientalis*	
26.			Cichlidae	*Oreochromis mossambica*	
27.		Mugiliformes	Mugilidae	*Rhinomugil Corsula*	
28.		Osteoglossiformes	Notopteridae	*Notopterus notopterus*	Patola
29.				*Chitala chitala*	
30.		Beloniformes	Belonidae	*Xenento doncancila*	
31.		Cyprinodontiformes	Poecilidae	*Poecilia reticulate*	

Fig 2: Fish fauna from study area – Lanjud dam

Fig 3: Fish fauna from study area – Lanjud dam

Fig 4: Fish fauna from study area – Lanjud dam

V. CONCLUSION

During the period of investigation 31 fish species belonging to 08 families and 13 orders were recorded. Present study provides a comprehensive data on biodiversity, conservation status of ichthyofauna of this region for the first time. It will be helpful to fisherman society, research students and others too.

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