

ICHTHYOFAUNAL DIVERSITY OF THE PAKHANJORE DAM DIST KANKER, CG, INDIA

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ABSTRACT

The survey was under taken for Ichthyofaunal diversity study in the Pakhanjore Reservoir of Canker District. The survey was mainly focused on Ichthyofaunal diversity. 25 Species of fishes belonging to 5 orders 11 family and 20 genera was recorded during the study. Cyprinidae were most dominant group represent by 12 species, Siluridae with 2 species, Ophiocephalidae with 2 species, Bagridae 1 species, Mestacembellidae with 2 species, Saccobranchidae 1 species, Claridae 1 species, Centropomidae 1 species, Notopteridae 1 species, Gobiidae 1 species and Cichlidae 1 species. This is first ever study on the fish diversity of this reservoir and would help in explore the fish fauna of Pakhanjore Dam.

Key words: Abundance, Ichthyofaunal Diversity, Pakhanjore

INTRODUCTION

Fish are important palatable proteinous food for mankind. Fish constitutes half of the total number of vertebrates in the world. Pakhanjore Dam is situated in Pakhanjore Tehsil of Kanker district. The district has rich fish fauna and there is need to contemplate measures to protect the genetic resources. The main threat for the decline of various fish fauna may be due to indiscriminate fishing of juvenile and destruction of natural environment further deteriorating the situation and water pollution. Study hence forth has been contemplated to verify the fish resources in the fresh water bodies in Pakhanjore Dam of Kanker district.

Studies have been made on Ichthyofaunal diversity of various fresh water bodies in India during the last few decades (Jayaram 1981,

Jhingran 1983, Dutta et al., 2001, Mishra et al., 2003) However, scanty information is available from this region of India. Day (1875), Muddana (1971), Rajgopal et al., (1978), Mathew et al., (1979), Jayaram, (1981, 1999), Menon (1999) Jhingran (1983), Talwar et al., (1991), Harmar (1999), Kumar⁷ (2001) (Murthy 2002), Goswami (2006), Park and Shin (2007), Muley et al., (2007). Pawar et al., (2006) studied fish fauna of Pethwadaj dam, Nanded. Kulkarni et al. (2008) studied fish and fisheries of Derala tank, dist. Nanded, Maharashtra. Rohankar (2009) studied biodiversity of fishes in Aheri Lake of Maharashtra. Ravindar (2010) studied biodiversity of fishes in Dharmasagar reservoir, Warangal District, Andhra Pradesh. In the present study it is aimed to evaluate the freshwater fish fauna in the Pakhanjore Dam of Kanker District, Chhattisgarh.

MATERIALS AND METHOD

Study Area:

The Pakhanjore fresh water reservoir situated about 130 km west of Kanker city. Pakhanjore Dam is situated between 20.02° 32.15' N. latitude and 80.38° 08.88' E longitudes. The reservoir was surrounded by agricultural land from all sides. Pakhanjore Dam is used for irrigation and aquaculture practices. Present work has been conducted on 2 sampling sites of Pakhanjore Dam for the estimation of its fish diversity. Site 1 was fixed at near the p.v No 55 village, site 2 near the village Pakhanjore side.

Fishes were collected from Pakhanjore Dam catchment area. Fish were collected for a period of one year from Jan 2010 - Dec 2010. The fish were collected by hand-net, cast nets with the help of local fisherman and local market. Collected fish sample were preserved in 4 percents formalin and identified (Fishes of India by Day, F. 1958 and Talwar and Jhingran [12], Jayaram [13]).

RESULT AND DISCUSSION

During the study a total of 25 species of primary freshwater fishes belonging to 11 Families and 19 genera were recorded from the study sites. Number of species, and their relative abundance is given in Table, 1. In the assemblage structure, cyprinidae constituted the dominant group and the cyprinid *Labeo rohita*, *Catla catla*, *Cirrhinus mrigala* are represent in all study sites. The family Cyprinidae dominated with 14 species followed Channidae with 2 species and Bagaridae with 1 species, beside other family as Siluridae, Cobitidae, Mastacembelidae, Clariidae, Saccobranchidae, Centropomidae, Cichlidae and Gobiidae (Table-1).

In these reported fishes, Cyprinidae family was more dominant. Many researchers have reported the strong dominance of Cyprinidae family in their investigation on ichthyofaunal diversity.

Sakhare (2001) reported 23 species belonging to 7 orders where cyprinidae family was dominant with 11 species from Jawalgaon reservoir

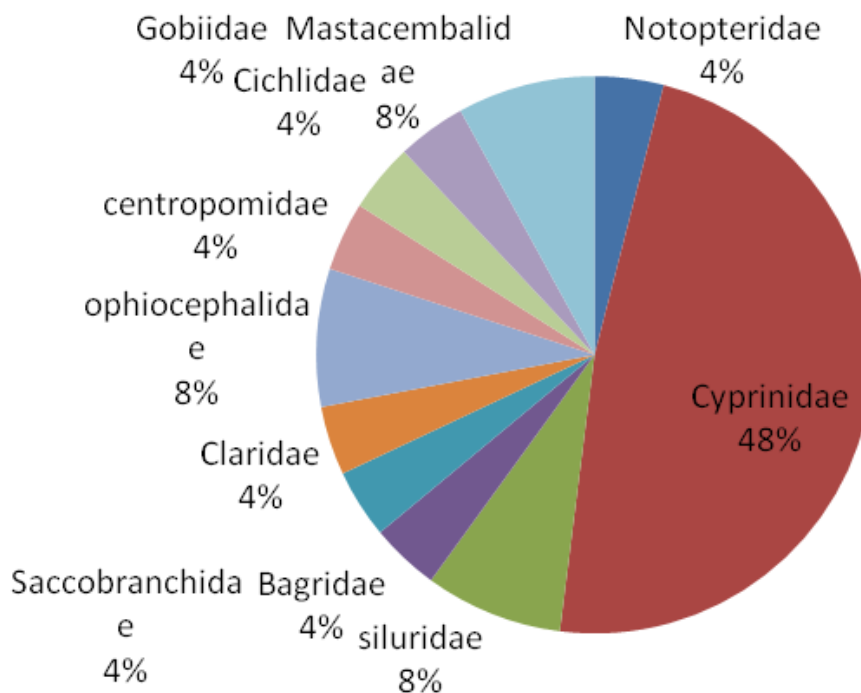
Figure-1. Satellite image of Pkhanjore Dam



Table. 1:- Family wise species composition of fishes in Pakhanjore Dam

S.No	Order	Family	No. of Fish Species	Species Composition %
1	Clupeiformes	Notopeteridae	1	4%
		Cyprinidae	12	48%
		Siluridae	2	8%
2	Cypriniformes	Bagridae	1	4%
		Saccobranchidae	1	4%
		Clariidae	1	4%
		Ophiocephalidae	2	8%
3	Ophiocephaliformes	Centropomidae	1	4%
		Gobiidae	1	4%
4	Perciformes	Cichlidae	1	4%
		Mastacembelidae	2	8%

Fig: 2 Family wise species composition of fish fauna in pakhanjore Dam



Solapur district Maharashtra. Battul et al; (2000) reported 18 species from Ekrukh lake Solapur district where Cyprinidae family was dominant with 8 species. Khedkar and Gynanath (2005) reported 37 species from Issapur dam in district Yavatmal where Cyprinidae family was dominant with 20 species. Sharma (2008) reported 87 species under 36 genera belonging to Cyprinidae family from freshwater of Nepal. Ubharane et al. (2011) observed 27 species

belonging to 11 families where Cyprinade Family was dominant with 13 species from Ambadi dam in the district of Aurangabad, Maharashtra.

Choube et al., (2013) reported 45 species in Rajnandgaon town of CG, India where Cyprinadae was the largest dominant family contributing 20, species and Bagridae formed the sub dominant family. This study also support the present study.

Table. 2:- Showing the Diversity of fishes in Pakhanjore Dam during Jan 2013- Dec.2013

S.No	Family	Genus and Species	Local Name	Relative abundance
1	Notopteridae	Notopterus notopeterus	Patola	C
Order – Cypriniformes				
2	Cyprinidae	Catla catla	Katla	A
3	Cyprinidae	Cirrhinus mrigala	Mrigal	C
4	Cyprinidae	Garra gotyla	Butuwa	C
5	Cyprinidae	Labeo bata	Bata	C
6	Cyprinidae	Labeo calbasu	Kamach	C
7	Cyprinidae	Labeo rohita	Rohu	A
8	Cyprinidae	Oxygaster bacaila	Sirangi	C
9	Cyprinidae	Puntius sarana	Kotra	A
10	Cyprinidae	Puntius sophore	Jarhi kotri	A
11	Cyprinidae	Puntius ticto	Jarhi kotri	A
12	Cyprinidae	Rasbora daniconius	Dadhai	C
13	Cyprinidae	Cyprinus carpio	Komal carp	M
14	Siluridae	Ompok bimaculatus	Botia	A
15	Siluridae	Wallago attu	Padhan	A
16	Bagridae	Mystus vittatus	Tengna	C
17	Saccobranchidae	Heteropneustes fossilis	Singhi	R
18	Clariidae	Clarias batrachus	Mongri	R
Order – Ophiocephaliformes				
19	Ophiocephalidae	Channa gachua	Bijalwa/Bijru	C
20	Ophiocephalidae	Channa punctatus	Khoksi	C
Order – Perciformes				
21	Centropomidae	Chanda nama	Chandeni	A
22	Gobioidae	Glossogobius giuris	Khasadda	M
23	Cichlidae	Oreochromis mossambicus	Tilapia	R
Order – Mastacembeleformes				
24	Mastacembelidae	Macrognathu aculeatus	Jat bami	R
25	Mastacembelidae	Mastacembelus pancalus	Bami	R

Abbreviation: A: Abundant; C: Common; M: Moderate; R: Rare.

Narsimha et al.,(2013) reported 30 species in Nagaram Tank of Warangal, Andhrapradesh where order Cypriniformes were dominant by contributing 13 species. Nagma et al (2013) study fresh water fish fauna of district Bijnour in Uttar Pradesh where order Cypriniformes was dominating with 18 species. Dongre et al., (2012) reported 68 species of fishes in Tribal Distric Satpura valley, Betul of Madhya Pradesh in India where order cypriniformes was dominated.

CONCLUSION

The recent study resulted in recording of some important fish species threatened like Clarius bratacus and Macrognathu aculeatus .The present study is the first is first ever documentation of Ichthyofauna in the Pakhanjore Dam in Kanker District, C.G. This study should open a new ways for incoming Ichthyofaunal research.

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