

Investigation on Ichthyofaunal diversity of River Penganga, Near Korpana, District- Chandrapur, Maharashtra.

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ABSTRACT

The present paper is based on the qualitative survey in relation to fish identification and diversity in Penganga River at Kodsi near Korpana. It is the richest source of water for Domestic, Agriculture Irrigation and fishing purpose in Korpana taluka area. Ichthyofaunal composition in water is one of the important parameter for any aquatic ecosystem and which maintain the river water quality. The present survey have been studied for about 1 year of duration from **January 2015 to December 2015** at selected Sampling site at Kodsi near Korpana. Present survey indicates that fish faunal composition among which different species belongs to 07 major orders including 14 families and total 36 species are found in which maximum population were observed at sampling station S₁ and minimum at sampling site S₂.

Keywords: Penganga, Ichthyofaunal, korpana, diversity, qualitative and survey.

INTRODUCTION

Aquatic ecosystem shows close interaction between Biotic and Abiotic components. Physico-chemical status have great influence on the well being of aquatic species.[1] Fish being a part of an aquatic ecosystem it performs an active role in aquatic nutrient cycle. They act as consumers in food chain and also consumable food for the different animals including humans. It store major proportion of total nutrients in their body, ultimately it transfer to the another trophic level of food chain,

Due to which fishes are considered as mobile link between different ecosystems for limited distance. it also behave like a biological indicator of water quality by showing changes in factor like fish density, growth, and distribution which are dependent on good water quality.

Maharashtra is enriched in freshwater sources like rivers, dams, and ponds etc. and its fish diversity. Therefore, it is one of the important states in the country contributed majorly in fish productivity, natural water resources are abundant in the state so there is great scope for fisheries. Recently in India, the fish faunal diversity was studied by many researchers to a great extent. Jhingaran [2] published a book on Fish and fisheries of India. Shinde *et al.*, [3] studied on fish diversity of Pravara river at Pravara, Ahemadnagar. Rankhamb [4] reported 26 species from Godavari River at Mudgal Dist, Parbhani. Jadhav, *et. al.* [5] reported 58 species of fishes from River Koyna. Gedekar and Tijare [6] worked on the studies of fish fauna of Wainganga river, Chamorshi, Bose *et al.*, [7] studied on fishes of the middle stretch of river Tawa, M.P. Sheikh [8] studied the fish faunal diversity in Pranhita river at Sironcha, Gadchiroli. Shelke [9] surveyed on fresh water fish fauna of Girna river, Jalgaon.

All these studies reveals that the unlimited anthropogenic activities continuously effect on water quality which ultimately affect fish productivity of river which in turn disturbed the aquatic nutrient cycle. Thus there is an urgent need for proper investigation of fish diversity in order to develop a fresh water fishery.

METHODOLOGY

Fishes were collected from Penganga River near Korpana by using different types of Fish collection methods. Fishes were collected from local fishermen from the river Penganga at three sampling stations, during 2014- 2016 and the fishes were observed and identified with the help of standard identification key literature. Site wise abundance of the fishes represented in Table. After sampling, fishes were brought to laboratory were preserved 10% formalin

solution in separate specimen jar according to size of the fish. Species were identified and confirmed with the help of standard keys and books.[10-12]

RESULTS AND DISCUSSION

In present investigation total 37 fish species were observed and identified among the 07 order and 14 families. Similarly, Snehal and Akshay [13] stated that The fish diversity at Vaitarna river from Wada was studied from 2nd January 2018 to 16th January 2018. The present study has revealed that there are about 4 fish species were observed during the span of two weeks of study. These 4 species were belonging to major class. Actinopterygii and only one species belong to Malacostraca. Kumaran *et al.*, [14] reported that the total 47 fish species were observed and identified among the 09 order and 15 families of Ichthyo- faunal Diversity in Giriampeta Estuary, Yanam (U.T. of Puducherry).

The results of the present study shows family : cyprinidae as the dominant group in the assemblage composition contributing 50% to total fish diversity in which *Labeo rohita*, *Catla catla*, *Cirrhinus mrigala*, *Cyprinus carpio*, *Labeo boggut*, *Garra mullya*, *Puntius sophore* *Cirrhinus reba* *Salmostoma sp.*, *Rasbora daniconius* and *Crossocheilus latius* were found most abundant. Family: Ophicephalidae with three species i.e. *Channa striatus*, *Channa marulius*, *Channa punctatus*. it is followed by Family: Bagridae with three species *Bagarius bagarius* *Mistus vittatus* *Mystus bleekeri*. Family: Mastocembelidae with three species *Mastocembalus armatus* *Mastocembalus punctatus* *Macrognathus acculeatus*, Family: Claridae with two species *Clarias gariepinus*, *Clarias batrachus*. Family : Anguillidae with two species *Anguilla species*, *Ambasis nama* Family : Siluridae with two species *Rita rita*, *Ompok pabda* Family : Notopteridae with two species *Notopterus notopterus*, *Notopterus chitala* Family : Percoidae with one species *Tilapia mossambicus* Family : Gobidae with one species *Glossogobius giurius* Family : Heteropneustidae with one species *Heteropneustes fossilis* Family : Ambassidae with one species *Ambasis ranga* Family : Centropomidae with one species *Nandus nandus* Family : Bellonidae with one species *Xenentodon cancella*.

Table 1: Diversity of Ichthyofauna in river Penganga during year 2015

Sl. No.	Name of Fishes	S1	S2	S3	Sl. No.	Name of Fishes	S1	S2	S3
I	Order : Cypriniformes				C	Family : Heteropneustidae			
A	Family : Cyprinidae				21	<i>Heteropneustes fossilis</i>	++	++	++
1	<i>Catla catla</i>	++	--	++	D	Family : Siluridae			
2	<i>Labeo rohita</i>	++	++	++	22	<i>Rita rita</i>	++	++	++
3	<i>Labeo fimbriatus</i>	--	--	++	23	<i>Ompok pabda</i>	++	++	++
4	<i>Hypophthalmichthys molitrix</i>	++	--	++	E	Family : Bagridae			
5	<i>Cirrhinus migrala</i>	--	--	++	24	<i>Bagarius bagarius</i>	++	--	++
6	<i>Puctius sophor</i>	--	--	++	25	<i>Mistus vittatus</i>	++	--	++
7	<i>Punctius punctius</i>	++	--	++	26	<i>Mystus bleekeri</i>	++	--	++
8	<i>Punctius ticto</i>	++	--	++	F	Family : Ambassidae			
9	<i>Rasbora daniconius</i>	++	--	++	27	<i>Ambasis ranga</i>	++	--	++
10	<i>Rasbora rasbora</i>	++	++	++	G	Family : Centropomidae			
11	<i>Garra mullya</i>	++	--	--	28	<i>Nandus nandus</i>	++	--	++
12	<i>Garra gotyala</i>	++	--	--	IV	Order : Mastocembeliformes			
13	<i>Oxigaster oxigaster</i>	++	--	++	A	Family : Mastocembelidae			
B	Family : Claridae				29	<i>Mastocembalus armatus</i>	++	--	++
14	<i>Clarias gariepinus</i>	++	++	++	30	<i>Mastocembalus puncalus</i>	--	--	++
15	<i>Clarias batrachus</i>	++	++	++	31	<i>Macrognathus acculeatus</i>	++	--	--
II	Order : Perciformes				V	Order : Anguilliformes			
A	Family : Percoidae				A	Family : Anguillidae			
16	<i>Tilapia mossambicus</i>	++	++	++	32	<i>Anguilla species</i>	++	++	++
					33	<i>Ambasis nama</i>	++	--	++
III	Order : Ophiocephaliformes				VI	Order : Clupeiformes			
A	Family : Ophicephalidae				A	Family : Notopteridae			
17	<i>Channa punctatus</i>	++	--	++	34	<i>Notopterus notopterus</i>	++	++	++
18	<i>Channa marulius</i>	++	++	++	35	<i>Notopterus chitala</i>	++	--	++
19	<i>Channa striatus</i>	++	++	++	VII	Order : Beloniformes			
B	Family : Gobidae				A	Family : Bellonidae			
20	<i>Glassogobius giurius</i>	--	--	++	36	<i>Xenentodon cancilla</i>	--	--	++

Sakhare [15] investigated the occurrence of 23 fish species belonging to 7 orders in Jawalgaon reservoir in Solapur district of Maharashtra. The fishes belonging to order Cypriniformes were dominant with 11 species followed by order Siluriformes with 4 species, while orders like Osteoglossiformes, Perciformes and Channiformes were represented by 2 species and the rest of the orders by single species.

India is one of the fish mega diversity countries more than 650 species were recorded with respect to freshwater. India is eighth in the world in freshwater fish diversity and in Asia it is third. There are plenty species for farming. The illegal method are use to capture fish, it should be banned in this area to prevent for the depletion of fresh water fish resources. The fisherman's should make aware about fishing, scientific training and facilities should be made available to the fish farmers.

Conflicts of interest: The authors stated that no conflicts of interest.

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