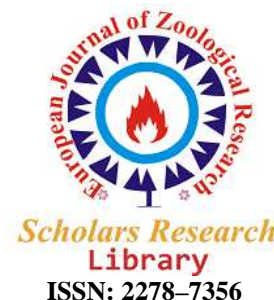




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Ichthyofaunal Diversity of Wainganga River, Dist: Bhandara, Maharashtra, India

Gunwant P. Gadekar

Department of Zoology, Dhote Bandhu Science College, Gondia

ABSTRACT

Ichthyofaunal diversity of Wainganga river in District Bhandara of Maharashtra, India was conducted to assess the fish fauna. The ichthyofaunal of a reservoir basically represents the fish faunal diversity. The present investigation deals with the ichthyofaunal diversity in Wainganga river, Bhandara during the year January 2012 to December 2013. The results of present study reveal the occurrence of total 51 species were identified among those, 22 were of order Cypriniformes, 10 of Siluriformes, 06 of Ophiocephaliformes, 05 of Synbranchiformes, 03 of Perciformes, 02 each of Cyprinodontiformes and Clupeiformes and 01 of Anguilliformes.

Key Words: Wainganga river, Ichthyofaunal diversity, Bhandara district

INTRODUCTION

Fishes form the most diverse and protean group of vertebrates. Fishes are a precious source both as food and as material for scientific study [1]. Around the world approximately 22,000 species of fishes have been recorded out of which nearly 2,420 are found in India, of which, 930 live in freshwater and 1,570 are marine [2,3]. Fishes have formed an important item of human diet from time immemorial and are primarily caught for this purpose. Fish diet provides proteins, fat and vitamins A and D. Economic importance and scope of fish and fisheries especially in Maharashtra, it is essential to study the distribution and the availability of fish from river, freshwater reservoirs and tanks [4]. Thus there is need to survey fish fauna associated with different fresh water habitats, which will help in planning methods for their production and effective exploitation. The freshwater ichthyofaunal diversity is changing and getting depleted fast as a result of the water pollution, destruction or degradation of habitat and invasion of exotic species [5].

The present investigation was undertaken to study the ichthyofaunal diversity of Wainganga river. The objective of study was to give recent data regarding ichthyofaunal diversity of the Wainganga river, aiming to contribute a better knowledge of the ichthyofaunal diversity and a tool for conservation planning of aquatic environments in this region. It is the first effort made in this direction, various indigenous, commercially important and economically valuable fishes were found in the river Wainganga.

Study Area

The Wainganga is a river of India, which originates about 12 km from Mundara village of Seoni district in the southern slopes of the Satpura range of Madhya Pradesh, and flows south through Madhya Pradesh and Maharashtra in a very winding course of approximately 360 miles. The river has high banks 10 to 15 m on either side. The Wainganga river receives numerous tributaries on either bank and drains the western, central and eastern regions of the Balaghat district of Madhya Pradesh, Chandrapur, Gadchiroli, Bhandara, Gondia and Nagpur districts of Maharashtra.

MATERIALS AND METHODS

Fishes were collected from Wainganga river Dist. Bhandara (M.S) India with the help of local fishermen using different type of nets namely gill nets, cast nets, drag nets and bhor jal. Fishes were brought to laboratory and preserved in 10% formalin solution in separate specimen jars according to the size of species. Small fishes were directly placed in the 10% formalin solution. While large fishes were giving an incision in their abdomen and preserved. Species identification and confirmation were carrying out with the help of standard keys and books [6-8].

RESULTS AND DISCUSSION

During the study period different fish varieties can be observed in the Wainganga river Dist. Bhandara (M.S) India. The results can be seen that the area is rich in fish biodiversity. Fishes belonging to eight orders and fifteen families were collected during the study period from January 2012 to December 2013. Many collected fishes are having economic importance and sold after collection in the local fish market. In the present ichthyofaunal biodiversity study 51 species of 31 different genera 15 families and 8 orders were recorded from the Wainganga river during January 2012-December 2013. The members of order Cypriniformes were dominated by with 22 species followed by Siluriformes with 10 species, Ophiocephaliformes with 6 species, Synbranchiformes with 5 species, Perciformes with 3 species, Cyprinodontiformes and Clupeiformes with 2 species and Anguilliformes with 1 species. 8 orders representing by 51 fish species, order Cypriniformes was dominant group with 22 species in which *Labeo rohita*, *Catla catla*, *Cirrhinus mrigala*, *Cyprinus carpio*, *Puntius ticto*, *Rasbora daniconius* and *Garra lamta* were found most abundant. *Cirrhinus reba*, *Ctenopharyngodon idella*, *Labeo boggut*, *Puntius chola*, *Puntius sarana*, *Puntius sophore* and *Nemacheilus botia* were found abundant form. *Chela phulo*, *Chela sladoni*, *Puntius amphibious*, *Osteobrama cotio*, *Oxygaster bacalia*, *Lepidocephalus guntea*, *Danio devario* and *Thynnichthys sandkhol* were found less abundant.

Followed by order Siluriformes were 10 species in which family Bagridae had 4 species in which *Mystus cavasius* and *Rita rita* were found abundant. *Mystus seenghala* and *Mystus vittatus* were found less abundant. Among family Siluridae had 3 species of which *Ompok pabda* and *Wallago attu* were found abundant while *Ompok bimaculatus* was found rare. Family Clariidae had 2 species of which *Clarias gariepinus* was found more abundant and *Clarias batrachus* was found rare. Family Heteropneustidae had 1 species i.e *Heteropneustes fossilis* was found more abundant. Followed by order Cyprinodontiformes had 2 species in which *Xenotodon cancila* and *Gudusia chapra* of family Belonidae were found rare abundant. Followed by order Perciformes were 3 species in the assemblage composition in which *Nandus nandus* was found abundant while *Chanda nama* and *Parambassis ranga* were found rare abundant. Followed by order Clupeiformes were 2 species in the assemblage composition in which *Notopterus notopterus* were found less abundant. *Notopterus chitala* were found rare abundant. Among order Ophiocephaliformes were 6 species in the assemblage composition in which *Ophiocephalus marulius* and *Ophiocephalus orientalis* were found abundant form. *Ophiocephalus punctatus* and *Ophiocephalus striatus* were found rare abundant while *Glossogobius giuris* and *Gobiopsis macrostoma* were found less abundant.

Followed by order Synbranchiformes were 5 species in the assemblage composition in which *Oreochromis mossambica* was found most abundant form. *Anabus testudineus* are found abundant. *Mastacembelus armatus* and *Mastacembelus pancalus* were found less abundant while *Mastacembelus aculeatus* was found rare abundant. Among order Anguilliformes had 1 species *Anguilla bengalensis* which was rare abundant (Table 1).

51 species were recorded and identified on the Wainganga river. Among the order Cypriniformes was most dominant constituting 46.66 % followed by order Siluriformes constituting 10.6 % Ophiocephaliformes constituting 7.4% Synbranchiformes constituting 5.3 % , Perciformes constituting 3.1 % , Cyprinodontiformes and Clupeiformes constituting 2.1% and Anguilliformes constituting 1 % of the total fish species.

Researchers [9] recorded abundance of catfishes in Hirakund reservoir. Total 43 species were present in which 18 were commercially important. D.K. Mahaptra [10] reported 34 species of fishes in reservoirs of Parbhani Dist. of Maharashtra. V.B. Sakhare [11] reported the ichthyofauna diversity of Pravara river, Pravara Sangam Dist. Ahmednagar (M.S.) India. S. E. Shinde [12] reported 51 ichthyofauna of 4 Families in Govindsagar reservoir, Himachal Pradesh, out of which 12 fishes were commercially important.

Table 1: Ichthyofaunal biodiversity of Wainganga River during January 2012- December 2013

Sr. No	Order	Family	Scientific Name	Common name
1	Cypriniformes	Cyprinidae	<i>Catla catla</i>	Catla
			<i>Chela phulo</i>	Minnnow carp
			<i>Chela sladoni</i>	Katari sladonuv
			<i>Cirrhinu mrigala</i>	Mrigal
			<i>Cirrhinus reba</i>	Reba carp
			<i>Ctenopharyngodon idella</i>	Grass carp
			<i>Cyprinus carpio</i>	Common carp
			<i>Danio devario</i>	Sind danio
			<i>Garra lamta</i>	Garra
			<i>Labeo boggut</i>	Boggut labeo
			<i>Labeo rohita</i>	Rohu
			<i>Lepidocephalus guntea</i>	Gutum
			<i>Nemacheilus botia</i>	Zipper loach
			<i>Osteobrama cotio</i>	Cotio
			<i>Oxygaster bacalia</i>	Indian glass barb
			<i>Puntius amphibious</i>	Khavlia
			<i>Puntius chola</i>	Swamp barb
			<i>Puntius sarana</i>	Olive barb
			<i>Puntius sophore</i>	Sophore
			<i>Puntius ticto</i>	Ticto
<i>Rasbora daniconius</i>	Black line rasbor			
<i>Thynnichthys sandkhol</i>	Sandkhol carp			
2	Siluriformes	Bagridae	<i>Mystus cavasius</i>	Gangetic mystus
			<i>Mystus seenghala</i>	Seenghala
			<i>Mystus vittatus</i>	Striped dwarf cat fish
			<i>Rita rita</i>	Rita
		Siluridae	<i>Ompok bimaculatus</i>	Butter catfish
			<i>Ompok pabda</i>	Two stripe gulper catfish
			<i>Wallago attu</i>	Fresh water shark
		Clariidae	<i>Clarias batrachus</i>	Magur
			<i>Clarias gariepinus</i>	African mushi
		Heteropneustidae	<i>Heteropneustes fossilis</i>	Stinging catfish
3	Ophiocephaliformes	Ophiocephalidae	<i>Ophiocephalus marulius</i>	Bullseye snake headed
			<i>Ophiocephalus orientalis</i>	Walking snake headed
			<i>Ophiocephalu spunctatus</i>	Spotted snake headed
			<i>Ophiocephalus striatus</i>	Striped snakehead
		Gobiidae	<i>Glossogobius giuris</i>	Tank goby
			<i>Gobiopsis macrostoma</i>	Long jaw goby
4	Synbranchiformes	Mastacembelidae	<i>Mastacembelus aculeatus</i>	Spiny eel
			<i>Mastacembelus armatus</i>	Tire track eel
			<i>Mastacembelus pancalus</i>	Striped spiny eel
		Cichlidae	<i>Oreochromis mossambica</i>	Tilapia
		Anabantidae	<i>Anabus testudineus</i>	Climbing perch
5	Perciformes	Nandidae	<i>Nandus nandus</i>	Mud perch
		Ambassidae	<i>Chanda nama</i>	Elongate glass-perchlet
			<i>Parambassis ranga</i>	Indian glassy fish
6	Clupeiformes	Notopteridae	<i>Notopterus chitala</i>	Clown knife fish
			<i>Notopterus notopterus</i>	Bronze feather back
7	Cyprinodontiformes	Belonidae	<i>Gudusia chapra</i>	Indian river shad
			<i>Xenentodon cancila</i>	Asian needlefish
8	Anguilliformes	Anguillidae	<i>Anguilla bengalensis</i>	Indian mottled eel

CONCLUSION

Fishing operations throughout year with so many different fish species catches in monsoon compared to post-monsoon and summer seasons. It is suggested that the fishery authorities should investigate and practice the proper management of fishery resources according to the ecological principle. It was concluded that further studies may be done to develop techniques for fish culturing. The use of illegal method to catch fishes should be banned in this area to prevent for the depletion of varieties of fishes. The fisherman's should make aware about fishing and scientific training methods which may help in high yield of fish production in the Wainganga river.

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