



Fresh water fish fauna of Katepurna reservoir, district Akola, Maharashtra, India

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ABSTRACT

Katepurna reservoir is situated in Barshi Takli taluka of Akola district of Maharashtra. Purpose of the project is for irrigation, drinking and water supply. The main purpose of the present study to investigate ichthyofaunal diversity of Katepurna reservoir that is carried out. During study the ichthyofauna of the reservoir were collected and identified. Fish fauna belonging to 5 orders, 7 families and 9 genera and 10 species were recorded.

Keywords: Fish species, Katepurna reservoir, Barshi Takali.

INTRODUCTION

Biodiversity is the essential aspect of the environment, it may related with the terrestrial as well as aquatic ecosystem to maintain the stabilization and also for the protection of overall quality of the environment. In case of aquatic ecosystem, fishes are the animals uniquely inhabiting the aquatic environment and in the river fish biodiversity exhibits the fish faunal diversity. Fishes are the representatives of the distribution and the abundance of other organisms such as zooplankton, phytoplankton, and zoo benthos in the aquatic ecosystem. Abundance of the fishes in the aquatic environment is the good indication of water quality of that aquatic ecosystem. Nearly 20% of the worlds of the freshwater fish fauna is already extinct or is on the verge of extinction (Moyle and Leidy, 1992). The aquatic biodiversity of the of the world is changing and getting depleted alarmingly fast as a result of extinctions caused by habitat loss, pollution, introduction of exotic species, over exploitation and other anthropogenic activities (Moyle, 1995). River possess most important source water that conserves rich verities of species of the fish and is the major source commercial fishery hence fishes acts the keystone for aquatic ecosystem.

Now a day's loss of fish species has been noted which is due to declining the flow rates of the river and also further get reduced by global warming. The agricultural runoff, washing, bathing, industrial effluent and the use of water for activities by human being are the major sources to cause the water pollution which directly affects ichthyo diversity. Fishes are the indicators o

the pollution of aquatic ecosystem. Ichthyo diversity in freshwater observed for the determination of the factors those are involved in influencing the fish community structure. The abundance of fish species in every aquatic source is depends upon topography, water current, depth, breeding sites, physico-chemical parameters of water and availability of food.

Freshwater systems harbor a unique and diverse set of organisms. About 15% of all animal species that have been described until today live-in freshwater ecosystems. More than 70 thousand freshwater species from 570 families and 16 phyla have been describing so far (Strayer, 2001).

MATERIALS AND METHODS

The Katepurna reservoir is the construction on the Katepurna river which is originated from Kata village located near Washim city. Coordinates of reservoir are 20.4801831°N and 77.1568107°E. The area under study is a part of Purna river basin, of which Katepurna river is one of the major tributaries, covering part of Washim and Akola district. The Purna river is a major, perennial river. It is joined by Katepurna, Vidrupa, Morna, Man and Nirguna in Akola district. The study area covers the local hills in Southern parts attaining highest altitude is 400 meters above mean sea level and lowest elevation covered during the traverse is 270 meters at alluvial tract near the village Bhatari in Murtizapur (Khadri and Deshmukh, 2013). The main aim of the construction of Katepurna reservoir is to supply sufficient water for some purposes such as fishing, drinking, washing and activities in relation to maintain the economical

employment to the fisherman, protection is also a main and important aim behind the construction of this reservoir that can avoid condition of the flood due to the rainy water which enter in to the Akola city.

Objectives:

1. Report the freshwater fish diversity from Katepurna Reservoir, district Akola, Maharashtra.
2. To analysis the present status, categories of freshwater fish from, Katepurna reservoir, District Akola. Maharashtra.
3. To generate gainful rural employment with special reference to fishing communities (Shelke, 2016).

Collection of Fish Species:

Fishes were collected from Katepurna reservoir, district Akola, with the help of fisherman fishes were collected monthly with help of various types of nets i.e. traps, Cast net, gill net, hooks and hand picking and were transferred to laboratory and immediately study of morphological characteristics has been done.

Preservation of Fish Species:

These collected fishes were preserved in 10% formalin.

Identification of species:

Fishes were identified with help of using standard literature of Talware and Jhingran, volume 1 and 2, (1991).

RESULT AND DISCUSSION

The study of Katepurna reservoir for fish diversity is carried out during January 2017 to December 2017.

Table 1: Showing classification of fishes and their abundance

Sr,No	Family	Order	Species
01	Cyprinidae	Cypriniformes	<i>Lebeo rohita</i>
02	Cyprinidae	Cypriniformes	<i>Cirrhinus mrigala</i>
03	Cyprinidae	Cypriniformes	<i>Catla-catla</i>
04	Heteropneustidae	Siluriformes	<i>Heteropneustes fossilis</i>
05	Clariidae	Siluriformes	<i>Clarias batrachus</i>
06	Siluridae	Siluriformes	<i>Wallago attu</i>
07	Bagridae	Siluriformes	<i>Mystus seenghala</i>
08	Channidae	Anabantiformes	<i>Channa striatus</i>
09	Channidae	Anabantiformes	<i>Channa punctatus</i>
10	Mastacembelidae	Synbranchiformes	<i>Mastocembalus armatus</i>

During study period the ichthyofauna of the reservoir was recorded as belonging to 5 orders, 7 families and 9 genera and 10 species which are *Lebeo rohita*, *Cirrhinus mrigala*, *Catla-caltla*, *Heteropneustes fossilis*, *Clarias batrachus*, *Wallago attu*, *Mystus seenghala*, *Channa striatus*, *Channa punctatus*, *Mastocembalus armatus*. species belonging to 4 orders, 7 families and 13 genera were observed by Supugade *et al.* (2009). Khedkar (2005) reported observed 67 fish species belonging to 7 orders and 19 families from Nathsagar reservoir of Paithan of district Aurangabad. Shrotriy (2015) recorded 51 species belonging to 33 genera, 16 families and 7 orders from Harsi reservoir Madhya Pradesh. Jawale *et al.*, (2017) reported 26 species of fish fauna belonging to 12 families and 6 orders in riverine and reservoir of Osmanabad. Shillewar and Totawar (2017) recorded 21 species belonging to 12 Genus, 4 Order, and 6 Family from Vishnupuri Dam, Nanded.

In present study Among 4 orders siluriformes was found dominant each with 4 species followed by order Cypriniformes with 3 species, Perciformes with 2 species and rest of order i.e. Synbranchiformes with single species.

Among 7 families of collected species family siluriformes was observed most dominant followed by Cyprinidae, Channidae, Clariidae, Siluridae, Bagaridae, Channidae, Mastocmbalidae. Joshi *et al.* (2012) also recorded 7 families with 20 species from Purna river of Buldhana district.

CONCLUSION

As the fish is an important source of food for most of the people, maintenance of healthy fish diversity is essential in order to increase the sufficient availability of fishes. To increase the abundance of the healthy fishes some suggestions are given by us for the conservation of freshwater reservoirs i.e. Villages surrounding the reservoir releasing effluents and the discharges into the reservoir should be controlled, waste water mixing into the Dam water should be pretreated by introducing some specific methods diverted away from the dam to overflow.

Arrangement of the waste bins at the specific locations is helpful to maintain then good quality of the reservoir, up gradation of the reservoir is essential to maintain appropriate quality. Harvesting of the fishes should be

stopped during the period of spawning and provide proper knowledge about the life cycle of fishes.

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