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Fish Biodiversity of the Katepurna River in Vidharbha, (M.S.) India

Kharat M. M .,
Department of Zoology,
Shri. Shivaji College of Arts, Commerce & Science,
Akola (M.S.)

Ade P. P.,
&
Kalyankar V.B.,
Department of Zoology,
Toshniwal Arts, Commerce & Science College,
Sengaon

Suryawanshi R. M.,
&
Korhale G. A.
Department of Zoology,
Dr. BabasahebAmbedkarMarathawada
University, Aurangabad. (M.S.)

Abstract:

The present study deals with fish biodiversity undertaken during period January-2015 to Decemeber-2017 to census and commercially important fishes in the Katepurna River. The present paper deals with the variety and abundance of fresh water fishes in the Katepurna River at Vidarbha (M.S) India. The results of present investigation reveal the occurrence of 124 fish species belonging to 10 orders, 20 families and 35 genera. Among the collected species, order Anabantiformes have 7%, Anguilliformes 3%, Beloniformes 2%, Cichliformes 2%, Cypriniformes 50%, Cyprinodontiformes 2%, Gobiiformes 2%, Osteoglossiformes 2%, Ovalentaria 2%, Siluriformes 21%, and Synbranchiformes 7% respectively.

Key Words: Fish biodiversity, Economic value , Nutritive Value, the Katepurna river

Introduction

Fishes are one of the important elements in the economy of many nations as they have been a stable item in the diet of many people. They constitute slightly more than one-half of total number of approximately 54,711 recognized living vertebrate species; there are descriptions of an estimated 27,977 valid species of fishes (Nelson 2006).

Biodiversity is essential for stabilization of ecosystem, protection of overall environmental quality for understanding intrinsic worth of all species on the earth (John Wiley and Sons 2011). Fish biodiversity of river essentially represents the fish faunal diversity and their abundance. River conserves a rich variety of fish species which support to the commercial fisheries. In India potential of fish culture is yet to be fully exploited. Fishes being rich source of proteins and have high nutritive value. Extensive development of aquaculture needs to be given priority after green revolution to feed ever growing population. Success of fish culture depends apart from other factors, on selection of suitable species. Secondly the country is rich in diversity of such important group of animals. Further, there is a need of a survey of diversity of fishes in different types of habitats of Rivers all over the country. The total length of rivers in India is about 29,000 km. All these rivers, their tributaries, canals and irrigation channels have an area of roughly 13,000 km. Reverine fisheries of India comprises of five major river systems.

- Ganga river system.
- Brahmaputra river system.
- Indus river system.
- East coast river system.
- West coast river system (Ehrlich, and Wilson, 1991)

The Katepurnariver, which flows through Akola and Washim district of Maharashtra. It rises from Ajintharenges near Kata village of Washim Tehsil. It is tributary of Purnariver, which flows through central parts of Akla district. Its

approximate length is 97km and its drainage basin has area of 1160sq.km. Further it flows through Mangrul, AkolaandMurtijapur Tehsils and merges with withPurnariver near Bhatori village. Coordinates: 20°46'50"N 77°19'12"E Present investigation was undertaken to study the fish biodiversity of Katepurna river District Akola (M.S) India. The objective of study was to give recent data regarding Fish diversity of the West coast river system, aiming to contribute a better knowledge of the fish diversity of Katepurna River 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 this area.

Materials And Methods

Fishes were collected from Katepurna River from the different sampling station with the help of local fishermen using different type of nets namely gill nets, cast nets, dragnets and Bhorjal. Immediately photographs were taken with help of digital camera.

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 given an incision in their abdomen and preserved.

The Meristic and morphometric characters collected fishes were measured and identified up to the species level, with the help of standard keys and books (Jayaram, K.C.et. Al 1999)(Pandey, K. and J.P. Shukla, 2007).

Table 1:

The fish diversity and Economic value of fish in Katepurnariver during January 2015-December 2017

+++ Most Abundant, ++ Abundant, + less Abundant, - Rare

1) LV- Larvivorous fish
2) PF- Predatory Food fish
3) MD- Medicinal Value
4) FD- Food fish
5) BT- Bait
6) WF- Weed fish
7) FR- Forage fish

Order	Family	Scientific Name	Common Name	Economic Value	Status
Anabantiformes	Channidae	[illegible]	[illegible]	[illegible]	+++
		[illegible]	[illegible]	[illegible]	++
		[illegible]	[illegible]	[illegible]	++
	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	Eel	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+
Cypriniformes	[illegible]	[illegible]	[illegible]	[illegible]	+
	[illegible]	[illegible]	[illegible]	[illegible]	
	Cyprinidae	[illegible]	[illegible]	[illegible]	+++
		Catla catla	Catla	[illegible]	++
		[illegible]	Mrigal	[illegible]	++
		[illegible]	[illegible]	[illegible]	+
		Cyprinus carpio	Common carp	[illegible]	++
		[illegible]	[illegible]	[illegible]	
		[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	
		[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	
		[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	
		[illegible]	[illegible]	[illegible]	+++
		[illegible]	[illegible]	[illegible]	
		[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	++
	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	++
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	++
		[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	+++
	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	++
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	+
		[illegible]	[illegible]	[illegible]	++
		[illegible]	[illegible]	[illegible]	++

Results

During the study period different fish varieties have been observed in the Katepurnariver. The results showed that the area was rich in fish biodiversity. Fishes belonging to ten orders and twenty families were collected during course of the study period. Many collected fishes having economic importance sold after collection in the local fish market.

35 different genera 20 families and 10 orders were recorded from the Katepurna River number of catches carried out during January 2015-December 2017. The members of Order Anabantiformes have [12 individuals][4 species], Anguilliformes [1 individual][1 species], Beloniformes [3 individuals][1 species], Cichliformes [2 individuals][1 species], Cypriniformes [63 individuals][22 species], Cyprinodontiformes [1 individual][1 species],

Gobiiformes [2 individuals][1 species], Osteoglossiformes [2 individuals][1 species], Ovalentaria [3 individuals] [1 species], Siluriformes [17 individuals] [9 species], Synt

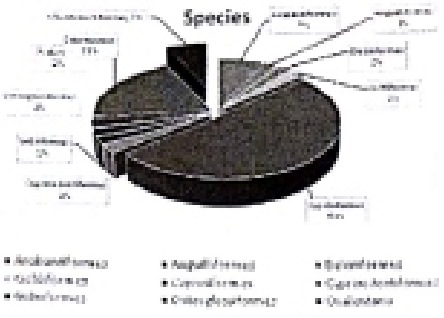

Figure 1: Order wise fish composition of Katepurna river dis. Akola

As mention above order Anabantiformes have Channamarulius, Channapunctate, Channagaucha are in abundant form and Colisalalia species is in rare form, in Order Anguilliformes have Muraenesoxbagio is also rare species, in order Beloniformes have Xenentodoncancila which is less abundant. order Cichliformes have Oreochromismossambicus species it also rare, order Cypriniformes have large no of verity of fishes Amblypharyngodonmola, Catlacatla, Cirrhinusmrigala, Cirrhinusreba, Cyprinuscarpio, Devariomalabaricus, Garramullya, Labeobata, Labeoboggut, Labeocalbasu, Labeorohita, Puntiuschola, Puntiusmahecola, Puntiussophore, Rasboradaniconius, Rohteeogilbii, Salmophasiabacaila, Systomussarana, Acanthocobitisbotia. Order Cyprinodontiformes have Poeciliareticulate species. Order Gobiiformes have Glossogobiusgiuris species which is abundant. Order Osteoglossiformes have Notopterusnotopterus which is less abundant species. Order Ovalentariahaverare Chandanama species. Order Siluriformes have Amblyceps mangois, Nemapteryxcaelata, Mystusbleekeri, Mystuscavasius, Sperataseenghala, Clariasgariepinus, Heteropneustesfossilis, Ompokbimaculatus, Wallagoattuspecies. Order Synbranchiformes have Macrognathuspancalus, Mastacembelusarmatus species.

Discussion Recorded abundance of catfishes in Katepurna reservoir (Talwar, and Jhingran, 1991). Total 41 species were present in which 20 were commercially important. Reported 34 species of fishes in reservoirs of Parbhani Dist.Of Maharashtra (Sakhare, and Joshi 2003).Reported the Ichthyofaona of Harsool-Saving Dam Aurangabad (M.S.) India (Shinde, et al. 2009). Total 15 fish species belonging to 3orders, 4 family and 12 genera. The order cypriniformes found dominant with 11 species, followed by perciformes 3 species and siluriformes with 1 species.

Conclusion The work has been conclude with further strategies for development of fish fauna conservation of Katepurna River at VIdarbha Dist. Akola (M.S.)India. Resent data regarding Fish diversity of the East cost river system, aiming to contribute a better knowledge of the fish diversity of Katepurna River and a tool for conserving planning of aquatic environments in this region. To maintain Fish biodiversity has an immense important as it is not always possible to identify individual species critically to sustain aquatic ecosystem.

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