



A STUDY OF FISH DISTRIBUTION IN BALAPUR POND OF PRAYAGRAJ (U.P.)

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ABSTRACT

The present survey is conducted to study the distribution of fishes naturally occurring in Balapur pond of Prayagraj. The survey was conducted during a period of one year from Jan 2018 to Dec 2018 and focussed mainly on distribution and diversity of fishes. A total of 12 species of fishes belonging to 11 genera, 7 families and 4 orders were identified as result of this survey. This was the first ever systematic survey on the fish diversity of this pond. Siluriformes were found most dominant order represented by 5 genera followed by Cypriniformes with 4 genera.

Keywords: Fish distribution, Systematic survey, Fish fauna, Conservation, Balapur pond.

INTRODUCTION

The term 'pond' refers to a relatively shallow body of water usually smaller than a lake, contained in an earthen basin retaining sewage or organic wastes. Hydrobiology is the study of life in water while limnology is the study of the physical, chemical, geological and biological aspects of all naturally occurring fresh water. Freshwater habitats such as lakes, ponds, dams, reservoirs are known as lentic (still) while running water such as rivers, mountain streams are known as lotic (flowing).

A large number of ponds and lakes are naturally occurring all over the globe. In India, a number of ponds, lakes and reservoirs are naturally found but they are not being utilized properly due to lack of insufficient study of their hydrobiology. One of the most important features of ponds is the presence of standing water, which naturally provides habitat for wetland biota including both plants as well as

animals. A large number of micro-organisms and invertebrates feed on the decaying plants occur naturally.

Ichthyology is the study of fishes. These are cold-blooded, gill-bearing aquatic craniate vertebrates that include both the bony and the cartilaginous fishes but sometimes jawless fishes too. They belong to phylum: Chordata, subphylum: Vertebrata and super class: Pisces. The fishes are not only used as good source of food for mankind, having economic importance from medicinal point of view but also play a crucial role in the second trophic level of an aquatic ecosystem.

Prakash *et al* (2015a) performed the limnological Studies of Alwara Lake of Kaushambi (U.P.). Singh *et al* (2016) studied the hydrobiological conditions of Ganga River. Prakash *et al* (2015a and 2015b) and Verma (2016a) conducted the hydrobiological studies of Muntjibpur pond of Allahabad. Verma (2016b, 2016c, 2016d, 2017a, 2017b,

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2018, 2019a and 2019b) and Verma et al (2016a and 2016b) conducted the study of fish biodiversity and physico-chemical factors in a fresh water body. The Balapur pond studied has rich biodiversity.

The present survey is undertaken as first systematic study to find out the distribution and diversity of fishes naturally occurring in Balapur pond of Prayagraj. This survey was conducted during a period of one year from Jan 2018 to Dec 2018.

STUDY AREA

Balapur pond is a natural pond, located on south side of the village. It is located in Koraon block and tahsil of Prayagraj district of Uttar Pradesh (image 1). The pond studied is approximately 62 KM away from District head quarter Prayagraj and 272 KM from State capital Lucknow. This village is surrounded by Janakpur in east, Paitiha in south west, Banshipur in north east and Murlipur in south. The month of March marks the beginning of summer and it lasts till June. Monsoon generally starts in the month of July and lasts till September. December to February is the winter season in and around this village. This pond (photo 1) is extended in more than two hectares and is surrounded by agricultural fields from three sides.



Image 1: Location of study area in Prayagraj.

MATERIALS AND METHODS

The pond was surveyed for fishes once in a month for the period of one year from January 2018 to December 2018. The fishes were caught and collected for present survey from Balapur pond by hand-nets, gill nets, cast nets, hooks, drag nets with the help of local people and fisherman.

Fishes were identified using the standard keys of Mishra (1959), Day (1989), Jhingran (1991), Jayaram (1999) and Srivastava (1998).



Photo 1: A view of Balapur pond in Prayagraj.

RESULTS AND DISCUSSION

All the three seasons namely summer, monsoon and winter show different seasonal fluctuation in various hydrobiological parameters in this pond studied. The water present in the said pond is useful for irrigation as well as fish culture. The water of this pond is although having some pollutants but is suitable for agricultural purposes also, as it is rich in organic humus, plankton and nutrients.

During the study period, a total of 12 species of fishes belonging to 4 orders, 7 families and 11 genera were recorded from the Balapur pond. The collected fish species including their zoological names, family and order are shown in the table given.

Fish fauna of the pond studied belong to 4 orders namely Siluriformes, Cypriniformes, Ophiocephaliformes and Clupeiformes. In present investigation Cyprinidae family was the most dominant group representing 5 species followed by Bagridae family representing 2 species. The families Siluridae, Clariidae, Clupeidae, Saccobranchidae and Ophiocephalidae were represented by one species each. In this way, authors recorded 12 different species of fishes.

Table : Showing fishes reported from Balapur pond in the year 2018.

S.No.	Zoological name	Family	Order
1.	<i>Catla catla</i>	Cyprinidae	Cypriniformes
2.	<i>Labeo rohita</i>	Cyprinidae	Cypriniformes
3.	<i>Labeo calbasu</i>	Cyprinidae	Cypriniformes
4.	<i>Cyprinus carpio</i>	Cyprinidae	Cypriniformes
5.	<i>Cirrhinus mrigala</i>	Cyprinidae	Cypriniformes
6.	<i>Mystus seenghala</i>	Bagridae	Siluriformes
7.	<i>Rita rita</i>	Bagridae	Siluriformes
8.	<i>Wallago attu</i>	Siluridae	Siluriformes
9.	<i>Clarias batrachus</i>	Clariidae	Siluriformes
10.	<i>Heteropneustes fossilis</i>	Saccobranchidae	Siluriformes
11.	<i>Channa punctatus</i>	Ophiocephalidae	Ophiocephaliformes
12.	<i>Gudusia chapra</i>	Clupeidae	Clupeiformes

CONCLUSION

A total of 12 species of fishes belonging to 4 orders, 7 families and 11 genera were recorded from the Balapur pond during its first systematic survey conducted by author. Author strongly recommends a detailed study of this pond to understand its biodiversity and conservation status.

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