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Original Article

A Preliminary Survey of Fresh Water Fishes in Muntjibpur Pond of Allahabad (U.P.)

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Abstract

The present study is undertaken to find out the distribution of fresh water fishes naturally occurring in Muntjibpur pond of Allahabad. The survey was centralised mainly on distribution and diversity of fishes and conducted during a period of one year from Jan 2014 to Dec 2014. A total of 11 species of fishes belonging to 10 genera, 7 families and 4 orders were identified as result of preliminary 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 3 genera.

Keywords: Preliminary Survey; Fish Biodiversity; Fish Fauna; Muntjibpur Pond; Conservation.

Introduction

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). 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.

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. The study of different water parameters is very important for understanding of the metabolic events in the aquatic ecosystem. One of the most important features of ponds is the presence of standing water, which provides habitat for wetland plants and animals.

Fishes 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 tropic level of the aquatic ecosystem.

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Prakash *et al* (2015a, 2015b and 2016) and Verma *et al* (2016a, 2016b, 2016c and 2016d) conducted the limnological studies as well as studies on fish biodiversity in a fresh water body. The present study is undertaken as a preliminary survey to find out the distribution and diversity of fresh water fishes naturally occurring in Muntjibpur pond of Allahabad. This survey was conducted during a period of one year from Jan 2014 to Dec 2014.

Study Area

Muntjibpur pond is a natural pond, located on north side of village Muntjibpur. This pond is surrounded by agricultural fields and covers more than 5000 square meters. It is located in Pratappur block of Phoolpur tahsil of Allahabad district of Uttar Pradesh. This village is surrounded by Miraipur in east, Fatuhan in west, Saidpur in north and Fulahan in south.

Picture 1: A view of Muntjibpur pond

Material and Methods

The pond was surveyed for fishes once in a month for the period of one year from January 2014 to December 2014. The fishes were caught and collected for present survey from Muntjibpur 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).

Result and Discussion

The summer, monsoon and winter season show different seasonal fluctuation in various hydrobiological parameters in this pond. The water present in the said pond is useful for irrigation as well as fish culture. The water quality of the this pond is although having some pollution but is suitable for agricultural purposes also, as it is rich in organic humus, planktons and nutrients.

Table 1: Showing fishes reported from Muntjibpur pond in the year 2014

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

During the study period, a total of 11 species of freshwater fishes belonging to 4 orders, 7 families and 10 genera were recorded from the Muntjibpur 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 4 species followed by Bagaridae family representing 2 species. The families Siluridae, Clariidae, Clupeidae, Saccobranchidae and Ophiocephalidae were represented by one species each. In this way, authors recorded 11 different species.

Conclusion

A total of 11 species of freshwater fishes belonging to 4 orders, 7 families and 10 genera were recorded from the Muntjibpur pond during its preliminary survey. A detailed study of this pond is recommended to understand its fish biodiversity and conservation status.

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