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Ichthyofauna of River Dor Hazara region Khyber Pakhtunkhwa, Pakistan

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Abstract

Fish diversity was conducted on the River Dor Hazara region KP, Pakistan. Duration of the current study was 3 years, i.e. from March, 2013 to February, 2016. For collection of fish fauna five sampling sites were selected. Fishes were collected with the help of various fish gars and then were identified belongs to 3 Orders, 4 Families, 9 Genera's and 9 Species. In the present study Cyprinidae was the richest Family which was represented by 6 Species; Siluridae, Bagridae and Mastacembelidae were represented by only one species, each respectively. From the present study, it can be concluded that River Dor is rich in fish diversity. Furthermore, the river water was badly affected by anthropogenic pollution.

Keywords: Water, rivers, fish, family, identification, anthropogenic

1. Introduction

The total length of River Dor is 50 km, originates at the northern end of the Nathiagali range and enters to River Siran at Haripur. Five sites were selected for sampling due to the dominance of fishes which were Sarai Salah, Mankarai, Makkhana, Dobandi and Jama respectively as shown in the figure 1. Its coordinates are 34°5'49" North and 72°52'19" East. The upper reaches of the watershed are covered in mixed temperate coniferous forests, the middle reaches in Chir pine and the lower part with scrub forests. Grasslands are interspersed with forests and cropland to form a unique mosaic of land use patterns. Fish are members of the Animalia Kingdom (animals) and are also classified into the Phylum Chordata ^[1]. Some of the main groups of fish used by scientists are the sharks and rays; sturgeon and gars; herring-like fishes; trout and salmon; eels, minnows, suckers, and catfish; flying fish and relatives; cod-like fish; flatfish; seahorses and relatives; mullets, silversides, and barracuda; and mackerels and tunas ^[2]. Asmat *et al*, conducted studies of the diversity of fish fauna found in the Baran Dam of district Bannu and described 15 freshwater fish species of Baran Dam that were belonging to the 4 orders and 6 families and 11 genera ^[3]. Abdul *et al*, conducted survey on the fish fauna of the Tanda dam Kohat district, Khyber Pakhtunkhwa province of Pakistan. A total of eleven species was identified which were belonging to four orders, five families and eleven genera. Among them, seven species were belonging to family Cyprinidae, while the remaining four species were belonging to families Anguillidae, Belonidae, Cobitidae and Siluridae, respectively ^[4]. The aim of the research work was to find out the River Dor fish diversity KPK, Pakistan.



Fig 1: Map of River Dor KP, Pakistan

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2. Materials and Methods

2.1 Fish Collection

Fishes were collected from the various sites of river Dor with the help of a local fisherman using various types of catch-up instrument like hand nets, cast nets and hooks from March 2013-February, 2016. After collection proper photographs were taken from different angles for proper identification and then preservation with 10% formalin, since formalin decolorizes the fish color on long preservation.

2.2 Fish Preservation and Identification

Collected fishes were preserved and after the preservation these fishes were brought to the Research laboratory for proper identification. Fishes were properly identified in the laboratory by using keys of fish's identification Jayaram [4], Mirza and Sadhu [5] and Mirza [6]. All the fishes were preserved for longer time off period in a kettle jar by using

10% of formalin solution.

2. Results

The identified fishes belongs to 3 Orders, 4 Families, 9 Genera's and 9 Species as shown in detail in table 1. In the present study Cyprinidae was the richest Family which was represented by 6 Species (*Cyprinus carpio*, *Catla catla*, *Cirrhinus mrigala*, *Labeo caeruleus*, *Hypophthalmichthys molitrix* and *Schizothorax plagiostomus*); Siluridae, Bagridae and Mastacembelidae were represented by only one species each (*Wallago attu*, *Rita rita* and *Mastacembelus armatus*) respectively. From the current study it can be revealed that River Dor is rich of ichthyofauna and Cyprinidae was found the richest family. Further conservation management is required to safe the fish fauna for future record.

Table 1: Fish fauna in River Dor Hazara Division Khyber Pakhtunkhwa during March, 2013-February, 2016.

N/O	Order	Class	Family	Genus	Species
1	Cypriniformes	Actinopterygii	Cyprinidae	<i>Cyprinus</i>	<i>Carpio</i>
2	Cypriniformes	Actinopterygii	Cyprinidae	<i>Catla</i>	<i>Catla</i>
3	Cypriniformes	Actinopterygii	Cyprinidae	<i>Cirrhinus</i>	<i>mrigala</i>
4	Cypriniformes	Actinopterygii	Cyprinidae	<i>Labeo</i>	<i>caeruleus</i>
5	Cypriniformes	Actinopterygii	Cyprinidae	<i>Hypophthalmichthys</i>	<i>molitrix</i>
6	Cypriniformes	Actinopterygii	Cyprinidae	<i>Schizothorax</i>	<i>plagiostomus</i>
7	Siluriformes	Actinopterygii	Siluridae	<i>Wallago</i>	<i>attu</i>
8	Siluriformes	Actinopterygii	Bagridae	<i>Rita</i>	<i>rita</i>
9	Synbranchiformes	Actinopterygii	Mastacembelidae	<i>Mastacembelus</i>	<i>armatus</i>

3. Discussion

During the current study in River Dor, nine fish species were found up to the species level and there proper systematic classification is given in the table 1, respectively. The identified nine species were belonged to one class, three orders, four families, nine genera and nine species as shown in detail in table 1. In these nine species *Cyprinus carpio*, *Catla catla*, *Cirrhinus mrigala*, *Labeo caeruleus*, *Hypophthalmichthys molitrix*, *Schizothorax plagiostomus*, *Wallagoattu*, *Rita rita* and *Mastacembelus armatus*) belong were belong to class Actinopterygii; orders Cypriniformes, Suliriformes and Synbranchiformes; families Cyprinidae, Siluridae, Bagridae and Mastacembelidae respectively. Ahmad in (1963) conducted a study on Hazara Division Khyber Pakhtunkhwa, Pakistan and 11 species of fishes were identified. The majority of fish fauna belongs to family Cyprinidae and hence it was found the dominant family. From the obtained results it may be concluded that Hazara Division have rich fauna of Cyprinidae species [7]. Ahmad (1963) Another work was done by Kaghan Valley Mansehra Khyber Pakhtunkhwa and recorded three more species. Similarly, over here the Cyprinidae family, was found the dominant one [8]. Mirza, added 6 more species from the River Indus near Ghazi. Up till now, 35 species belonging to 23 genera, 10 families and 6 orders of the teleostean fishes have been recorded from the Hazara division [9]. Hence the current study revealed that out of nine species six belong to Cyprinidare *Cyprinus carpio*, *Catla catla*, *Cirrhinus mrigala*, *Labeo caeruleus*, *Hypophthalmichthys molitrix* and *Schizothorax plagiostomus*) respectively. Hence, the fishes of the family Cyprinidae were dominant in the River Dour KPK, Pakistan. Such wide distributions may be created to provide a favorable environmental condition for Cyprinidae family.

4. Conclusion

From the current it was concluded that an increase in the anthropogenic activities, illegal fishing and tourism industry

in River Dor is threatening the fish fauna to become declined. If the necessary fish conservation steps are not taken to save the fish fauna, it will result in the endangering of fish fauna in the river Dour Hazara region.

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