



E-ISSN: 2320-7078  
P-ISSN: 2349-6800  
JEZS 2017; 5(3): 965-967  
© 2017 JEZS  
Received: 19-03-2017  
Accepted: 20-04-2017

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## Identification of Fish fauna in River Dor at Dobandi Khyber Pakhtunkhwa, Pakistan

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### Abstract

The current research was undertaken to investigate fish fauna in River Dor at Dobandi site Khyber Pakhtunkhwa, Pakistan from March, 2013 to February, 2016. Fishes were collected with the help of various fish gears like cast net, gill net and drag net, etc. The identified fish species belong to one class Actinopterygii, three 3 Orders Cypriniformes, Synbranchiformes and Suliriformes, 4 Families Cyprinidae, Siluridae, Bagridae and Mastacembelidae, 5 Genera's and 5 Species respectively. In the present study Cyprinidae was the richest Family which was represented by 2 Species while Siluridae, Bagridae and Mastacembelidae comprising only one species each. From the current survey, it can be concluded that River Dor at Dobandi site are very good habitat for fish fauna.

**Keywords:** Dor, Dobandi, Rivers, Fish, Family, identification, anthropogenic

### 1. Introduction

According to Nelson, fish diversity is more apparent than in their morphology. Fishes range in size from the very small to the very large, adult gobies may be just 8 mm, whereas the whale shark, *Rhincodon typus*, may reach 12 m. Some species lack eyes, scales or fins whereas others are heavily armoured or have adaptations for producing sound, venom, electricity or light <sup>[1]</sup>. According to Galactos *et al*, studies of spatial and temporal patterns of diversity, distribution and species composition of freshwater fishes are useful to examine factors influencing the structure of the fish community <sup>[2]</sup>. Fishes constitute economically vary important group of animals. The nutritional and medicinal value of fishes has already been recognized <sup>[3-4]</sup>. Fish is one of the major groups of vertebrates. It influences human life in a number of ways. It is a rich source of food and playing a predominant role in overcoming the nutritional difficulties including Proteins, fat and vitamins. It also provides several by products like fish meal, fish glue and fish oil etc <sup>[5]</sup>. Fish not only provide food but boost up the economy of many countries of the world as well <sup>[6]</sup>.

### 2. Materials and Methods



**Fig 1:** Map of River Dor at Dobandi Khyber Pakhtunkhwa, Pakistan.

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## 2.1 Fish Collection

Fishes were collected from the river Dor at Dobandi site with the help of a local fisherman with the help of cats net, drag net and gill net from March 2013-February, 2016. All the fishes were cleaned and kept in glass jars for further classification and identification.

## 2.2 Fish Preservation and Identification

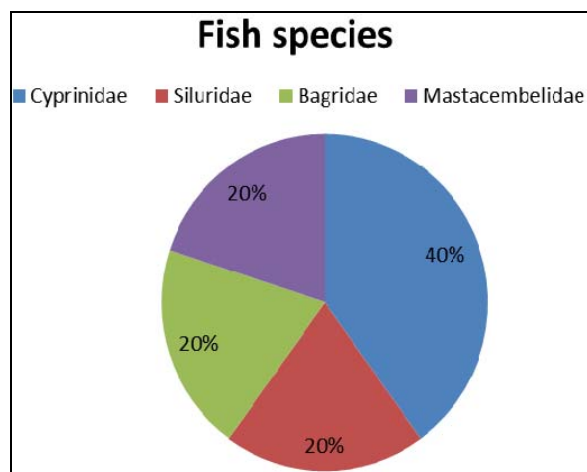
Collected fishes were preserved with 10% formalin and 70% Ethanol solution. After preservation all fishes were brought to the Research laboratory for proper identification. Fishes were properly identified in the laboratory by using keys of fish's identification Jayaram [7], Mirza and Sadhu [8] and Mirza [9]. All the fishes were preserved for longer time off period in a kettle jar by using 10% of formalin solution.

## 3. Results

A total of five fish species were recorded namely *Hypophthalmichthys molitrix*, *Schizothorax plagiostomus*, *Wallago attu*, *Rita rita* and *Mastacembelus armatus* as shown in the Table 1. All the collected fishes were identified belongs to 3 Orders, 4 Families, 5 Genera's and 5 Species. In the present study Cyprinidae was the richest Family which was represented by 2 Species i.e. *Hypophthalmichthys molitrix* and *Schizothorax plagiostomus*. The remaining 3 families Siluridae, Bagridae and Mastacembelidae consisting only one species each like *Wallago attu*, *Rita rita* and *Mastacembelus armatus* respectively (Fig. 1). From the current it can be concluded that River Dor at dobandi site provided a good habitat for the fishes existing in this area.

**Table 1:** Ichthyofauna in River Dor at point 2 Hazara region Khyber Pakhtunkhwa, Pakistan.

S. No.	Class	Order	Family	Genus	Species
1	Actinopterygii	Cypriniformes	Cyprinidae	<i>Hypophthalmichthys</i>	<i>molitrix</i>
2	Actinopterygii	Cypriniformes	Cyprinidae	<i>Schizothorax</i>	<i>plagiostomus</i>
3	Actinopterygii	Suliriformes	Siluridae	<i>Wallago</i>	<i>attu</i>
4	Actinopterygii	Suliriformes	Bagridae	<i>Rita</i>	<i>rita</i>
5	Actinopterygii	Synbranchiformes	Mastacembelidae	<i>Mastacembelus</i>	<i>Armatus</i>
	Class 01	Orders 03	Families 04	Genera 05	Species 05



**Fig 2:** Family wise distribution of fish fauna in Dobandi site (River Dor).

## 4. Discussion

During the present investigation in River Dor at Dobandi site 5 fish species were recorded and these identified fish species were properly arranged systematically as given in the Table 1 respectively. The identified 5 species *Hypophthalmichthys molitrix*, *Schizothorax plagiostomus*, *Wallago attu*, *Rita rita* and *Mastacembelus armatus* as shown in the Table 1. In a study by Khalid *et al* in 2016, 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 [10]. In the current survey only 5 species of the fishes were recorded.

In the previous study 18 species of the fishes were recorded. There was a great variation in the results of the both studies. The differences may be due to various in water chemistry of the both rivers. Khalid *et al* in 2016, A preliminary survey of Ichthyofauna in water bodies of Hazara Division was carried out from March, 2013 to February, 2016. Among the major water bodies of Hazara Division, five Rivers were selected for fish collection, i.e., Indus, Siran, Kunhar, Dor and Harro. A total of 3311 fishes were collected from these water bodies and identified by using various keys and literature. Fishes collected and identified belong to 6 Orders, 10 Families, 22 Genera and 30 Species. In the present survey Cyprinidae was the richest Family which was represented by 16 Species; Bagridae was represented by 3 species; Nemacheilidae, Siluridae and Salmonidae by only two species, each while Schilbeidae, Channidae, Mastacembelidae and Cichlidae was consisting only one species of each [11]. Khalid *et al* in 2016, conducted survey on Fishes collected and identified belong to 3Orders, 4 Families, 7 Genera's and 9 Species. In the present research Cyprinidae was the richest Family which was represented by 4 Species; Nemacheilidae and Salmonidae were represented by only two species each while Sisoridae was consisting only one species respectively. From the present research, it is concluded that River Kunhar are rich in ichthyofauna. Furthermore, the river water was badly affected by the tourism industry, anthropogenic pollution and illegal fishing.

## 5. Conclusion

From the above study it may concluded that River Dor at Dobandi Khyber Pakhtunkhwa, Pakistan is suitable for hatchery and will be helpful for fisheries, taxonomist and aquaculturist in future.

## 6. Acknowledgement

This work was supported by Higher Education Commission fellowship. I would like to thanks Hameed Ur Rehman scientific and technical support. I am also greatly thankful to my brother Dr. Wahid Raza who helps me during fish collection. This study is a Part of my Doctoral thesis.

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