

Biodiversity of Fish Fauna of Ghandiali Dam, District Kohat, Khyber Pakhtunkhwa, Pakistan

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Abstract: Dams conserve a variety of fish fauna which is the most important ones directly or indirectly influence human health and wealth. The aim of the research work was to find out the fish fauna of Ghandiali dam district kohat, khyberpakhtunkhwa, Pakistan. During the survey of dam about six species were collected and identified properly, which were belonging to two orders, two families, five genus and six species. Among them five species were belong to family cyprinidae and only one specie belong from Hypophthalmidae. From the obtained study it may be concluded that Ghandiali dam is best for cyprinidae species.

Key words: Ghandiali Dam • Fish Fauna • Kohat

INTRODUCTION

Fishes are one of the most important aquatic fauna which is directly related with human health and wealth. Hence, it is necessary to maintain their live-stock property. The biodiversity shows different variety in their morphology, in the habitats they occupy and in their mode of life. Unlike the other frequently documented vertebrates, fishes are a diverse group [1]. Fish occupied an extra-ordinary array of habitats. They can be found thriving in vernal pools, intermittent streams, tiny desert springs, the vast reaches of open oceans, deep oceanic trenches, cold mountain streams, saline coastal embayment, different dams and so on through or nearly endless list of aquatic environments [2]. Significant decline in distribution of some fish species might be as a result of pollution, habitat loss, water abstraction, saltation, illegal fishing, changes in environmental conditions and invasion of exotic species, exploitation and overharvesting. A rapid decline of the population of fish species is expected due to hybridization of closely related and rapidly spreading of new introducing species [3, 4]. Kohat is the capital of Kohat District, located in

Khyber Pakhtunkhwa province of Pakistan. The district is bordered by a chain of mountains, has an area of 2973 m², consists mostly of bare and complex mountain regions located in east of the Indus. Kohat city is facilitated with two dams, i.e., Tanda and Ghandiali dams, which are good for fishing spot, hunting enthusiasts in Asia pacific because these dams contain great diversity of many fish species. Gandialibala is a town in kohat district, Khyber Pakhtunkhwa province of Pakistan. It is located to the north of Kohat city; the Ghandiali dam is located in this town (Fig. 1) [5]. The present study was carried out to determine the current status of fresh water fish biodiversity of Ghandiali Dam of district kohat.

MATERIALS AND METHODS

Sample Collection: Fish samples were collected from the different regions of Ghandiali Dam, i.e., middle, southern, eastern and western sides of the dam by using small meshed cast nets, hooks and scoop nets. Samples were collected during the month of august 2015.

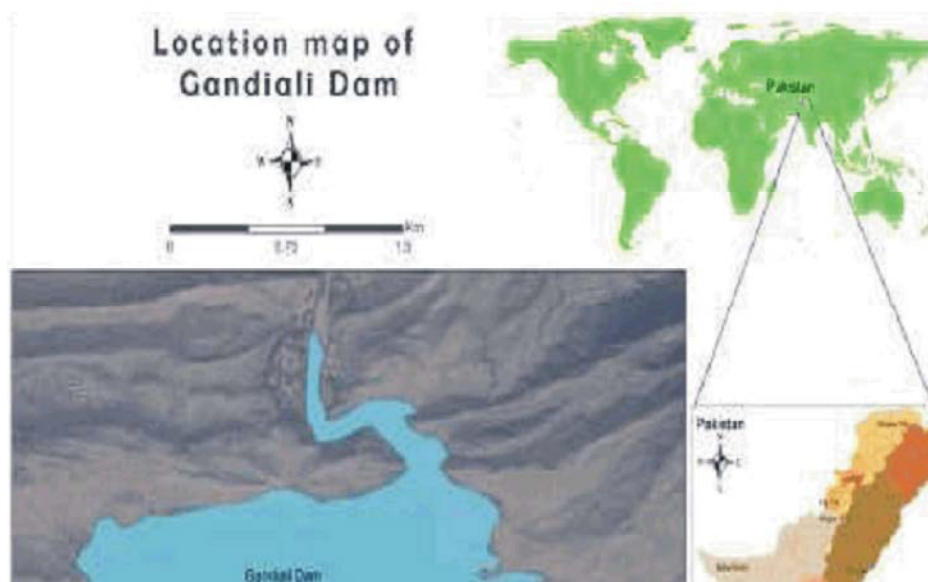


Fig. 1: Map showing Ghandiali dam

Fish Identification and Preservation: After collection, samples were preserved and then transfer to the laboratory for proper identification. Fishes were properly identified in laboratory by using keys of fish identification Mirza (1990), Mirza and sadhu (2007) Jayaram (1999). All the samples were preserved for long term preservation in separate plastic jar while using 10% formalin solution [6-10].

RESULTS AND DISCUSSION

During the survey of Ghandiali dam about six species were collected and identified properly, which were belong

to two orders, two families, five genus and six species. Among them five species were belong to family cyprinidae and only one specie belong to other family hypophthalmidae. (Tables 1 and 2). These five species of family cyprinidae includes, i.e., *Labeo rohita*, *Hypophthalmichthys molitrix*, *Hypophthalmichthys nobilis*, *Cyprinus carpio*, *Ctenopharyngodon idella* while one specie siluriformes belong to family hypophthalmidae. The result of the present study revealed that the large number of species in Ghandiali dam were belong to a single family cyprinidae, while fish composition belong to other species was very least.

Table 1: Fish species of Ghandiali dam along with their local names

S.no.	Scientific name	Local name	English name
1	<i>Labeo rohita</i>	Rohu	Rohu
2	<i>Hypophthalmichthys Molitrix</i>	Silver carp	Silver carp
3	<i>Hypophthalmichthys nobilis</i>	Big head	Big head carp
4	<i>Cyprinus carpio</i>	Gulfam	Common carp
5	Siluriformes	Catfish	Catfish
6	<i>Ctenopharyngodon idella</i>	Grass carp	Grass carp

Table 2: Systematic position of Ghandiali dam fishes

Fish name	Kingdom	Phylum	Class	Order	Family	Genus	Specie
Rohu	Animalia	chordata	Actinopterygii	Cypriniformes	Cyprinidae	Labeo	<i>L. rohita</i>
Silver carp	Animalia	chordata	Actinopterygii	Cypriniformes	Cyprinidae	Hypophthalmichthys	<i>H.molitrix</i>
Grass carp	Animalia	chordata	Actinopterygii	Cypriniformes	Cyprinidae	Ctenopharyngodon	<i>C. idella</i>
China carp	Animalia	chordata	Actinopterygii	Cypriniformes	Cyprinidae	Cyprinus	<i>C. carpio</i>
Catfish	Animalia	chordata	Osteichthyes	Siluriformes	Hypophthalmidae		
Big head	Animalia	Chordata	Actinopterygii	Cypriniformes	Cyprinidae	Hypophthalmichthys	<i>H.noblis</i>

Thus the abundance of cyprinid species throughout the study period was indicating that the habitats and environmental conditions of Ghandiali dam were more suitable for the growth of these cyprinids species. This study also showed that cyprinid species have more ability to adopt themselves with the change of different environmental conditions.

CONCLUSION

From the obtained study it could be concluded that Ghandiali dam is favorable for cyprinidae species, because cyprinidae species have the ability to adopt themselves with the change of different environmental conditions.

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