Muhammad Zaryab, Muhammad Amjad Yousaf, Shafiullah Gul, Hameed Ur Rehman and Haleema Sadia

Abstract
The present study was conducted to observe the fish biodiversity in Dandi Idhar Khel Lake of district Karak, Khyber Pakhtunkhwa province of Pakistan. The collection was made from August 2016 to September 2016. A total of seven fish species were collected, which belongs to three orders, three families and seven genera. Among seven fish species, five species belongs to family Cyprinidae, while the remaining two species belongs to families Anguillidae and Siluridae. Therefore, from the results of our recent study, it has been concluded that the Dandi Idhar Khel Lake of district Karak contains a suitable condition to support more diversity of the fish fauna. Hence, our present study will provide a lot of information about the diversity of fish fauna of Dandi Idhar Khel Lake that could be later valuable in systematic, fisheries management and conservation.

Keywords: Dandi Idhar Khel Lake, Biodiversity, cyprinidae

1. Introduction
Dandi Idhar Khel Lake is situated about 14km away from Sabirabad which is located in district Karak. It is on the eastern side of Sabirabad. This lake is surrounded from all sides by green and high mountains. It is a very old lake which has a catchment area of about 150 canals. The water and soil of this lake are suitable for fish survival [1]. Study of the biodiversity of a particular area is very important because it provides a wide range of information and making innovative ideas about a whole ecosystem. In the aquatic mode of life, study of fish diversity is very important to get an insight of the basic health and development of that specified ecosystem. Therefore, most other organisms just like insects and crustaceans are also considered as life indicator, but the homosepians are more related because they use fish as a source of food or direct use of energy and it also increase their economic level because of the high market demand and their aesthetic values. Another major importance of studying fish diversity is that, it can produce ideas to recognize new productive species for their aesthetic values and human usage. Therefore, many managers of fish diversity in different regions of the world are actively busy in describing the fish diversity of different countries [2]. Fishes also play an important role in the maintenance of health as it flesh contain a lot of proteins and useful minerals such as iodine, phosphorus and potassium, etc. The classification and composition of fishes in every aquatic ecosystem is closely related to many factors such as, the presence of food, breeding areas, water current, the geography of their living places and both the physical and chemical properties of water in where they live [3]. Many researchers conducted research on fish biodiversity in Pakistan. Abdul Haseeb et al in 2015, conducted study an investigation on the freshwater fish fauna of Tanda Dam in Kohat district, Khyber Pakhtunkhwa province of Pakistan and reported 11 species [4]. Asim et al in 2016, conducted Ichthyofaunal diversity on Muzaffargarh and Taunsa Punjab (TP) link canals, Punjab, Pakistan and reported 7 species [5]. Asmat et al in 2014, studied the diversity of fish fauna in the Baran dam of district Bannu, Khyber Pakhtunkhwa province (KPK), Pakistan and documented 10 species [6]. Hameed et al 2016, conducted studies on Dargai dam and reported 5 species [7]. Hameed et al 2016 study the current status of fish diversity of Barganat dam and documented 10 species [8]. Hameed et al 2015, conducted survey on the biodiversity of Ghandiali dam fishes and reported 6 species [9].
Hameed et al in 2015 reported 7 species from Darwazai dam as well as reported 13 species from Gomal zam dam, 7 species reported from Talai dam 7 and 5 from Darmalak dam and Shnebaye stream respectively [10-15]. Haseeb et al reported 13 species from Tanda dam with new recorded and Zubia et al documented 5 species from Damai stream [16-17]. The present study was conducted to determine the current status of freshwater fish biodiversity of Dandi Idhar Khel Lake of district Karak.

2. Materials and Methods

2.1 Fish sampling

Fish samples were taken from different regions of the Dandi Idhar Khel lake with the help of local fisherman using different types of nets such as hand nets, cast nets and hooks during the period from August 2016 to September 2016. Photographs were also taken prior to preservation with 5% formalin, since formalin decolorizes the fish color on long preservation.

2.2 Identification and preservation of fish

After collection these samples were preserved and after preservation samples were taken to the laboratory for proper identification. Fishes were recognized in the Laboratory by using keys of fish identification [4-11]. All the fish samples were preserved for the long time preservation separate plastic jar by taking 5% of formalin solution.

3. Results

In these seven species shown in Table 1 were Aspidopariamarar, Cirrhinusmrigala, Ctenopharyngodonidell a, Labeorohita, and Catla catla belongs to class Actinopterygii, Order Cypriniformes, Family Cyprinidae, Genus Aspidoparia, Cirrhinus, Ctenopharyngodon, Labeo and Catla and species Aspidoparia morar, Cirrhinus mirgala, Ctenopharyngodon idella, Labeorohita and Catla catla. The other two species that are Anguilla anguilla and Ompok pabda both have different taxonomy. The specie Anguilla anguilla belongs to order Anguilliformes, family Anguillidae and genus Anguilla. The other specie Ompok pabda belongs to order Siluriformes, family Siluridae and genus Ompok.

<table>
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<td>Catla</td>
<td>Catla catla</td>
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4. Discussion

During the present study in Dandi Idhar Khel Lake tehsil and district Karak 7 different fish species were found up to the species level. These seven species were identified and their systematic representation was given in table 1. In these seven species Aspidoparia morar, Cirrhinus mrigala, Ctenopharyngodon idella, Labeorohita, and Catla catla belongs to class Actinopterygii, Order Cypriniformes, Family Cyprinidae, Genus Aspidoparia, Cirrhinus, Ctenopharyngodon, Labeo and Catla and species Aspidoparia morar, Cirrhinus mirgala, Ctenopharyngodon idella, Labeorohita and Catla catla. The other two species that are Anguilla anguilla and Ompok pabda both have different taxonomy. Another attempt was done by Tahir et al in 2016, conducting a survey of Ghol dam where they found 6 species, 5 species were belonging to the same family Cyprinidae and also same Order Cypriniformes. The names of these species were Labeorohita, Hypophthalmichthys molitrix, Catla catla, Cirrhinus mirgala, Tor tor and their Genus were Labeo, Hypophthalmichthys, Catla, Cirrhinus and Tor respectively. Only a single specie Oreochromis niloticus which have Genus Oreochromis family Cirliidae and order Perciformes was not from family Cyprinidae [18]. These species were also previously studied by Hameed et al who conducted a survey in 2015 at Sarki Dam and they found four species i.e 1. Specie Labeorohita Hypophthalmichthys molitrix, Cirrhinus mirgala Family Cyprinidae. [19]. Some species were also studied by Zubia et al in 2015 conducted study at Zebi dam. During their survey they found a total of six species, All of the six species
found in Zebi dam were belonging from a same family Cyprinidae, same order Cypriniformes and that of same class Actinopterygii and the names of the species were *Cirrhinus mrigala*, *Hypophthalmichthys molitrix*, *Labeorohita*, *Carassius auratus*, *Catla catla*, *Ctenopharyngodon idella* and their Genus were *Cirrhinus*, *Hypophthalmichthys*, *Labeo*, *Carassius*, *Catla*, *Ctenopharyngodon* respectively [20].

5. Conclusion
From the present study, it may be concluded that Dandi Idhar Khel Lake has huge fauna of Cyprinidae family and the environmental conditions of Dandi Idhar Khel Lake may be more favorable for Cyprinidae family. It also supports the species of other families such as Anguilliformes and Siluriformes.

6. References