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Preliminary survey of fish fauna of Malhaniya dam, Pendra Road Bilaspur (CG)

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Abstract
Malhaniya dam was constructed in the year 2002 on local nala of Dewargaon of Pendra road district Bilaspur. It is situated 22°-45'-20" latitude and 81°-96'-36" longitude. The height of the dam is 21.8 mt. and length 2700 mts. Mainly the water of this dam is used for irrigation and fish culturing. Hence, it has been thought worthwhile to investigate the Hydrobiological Characteristic of Malhaniya Dam with Special Reference to Fish Fauna. The purpose of the dam is irrigation. The survey was conducted from June 2015 to June 2016 during which about seven species were identified as *Ctenopharyngodon idella, Labeo rohita, Hypophthalmichthys molitrix, Hypophthalmichthys nobilis, Oreochromis niloticus, Cyprinus carpio, and Tor tor* which belongs with order *Cypriniformes, perciformes family Cyprinidae and Cichilidae* which shows abundance of Cyprinidae species. From the obtained study it may be concluded that Malhaniya dam environment are more favorable for cyprinidae species as compared to other species.

Keywords: Fishes, Malhaniya dam, Pendra road Bilaspur

1. Introduction
Fish are cold-blooded vertebrates, gills for breathing underwater, and paired fins for swimming. They live underwater and are dependent on water for dissolved oxygen, support, food, reproduction and shelter. Fish 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. (Shaikh, *et al.* 2011) [10]. Fish not only provide food but boost up the economy of many countries of the world as well (Khan and Hasan, 2011) [5]. Fisheries sector is providing employment opportunities to a number of people (Nagabhushan and Hosetti, 2010) [9]. Moreover it plays a major role in second trophic level of aquatic systems (Ullah, *et al.* 2014) [12]. Fishes are the keystone species which determine the distribution and abundance of other organisms in the ecosystem they represent and are good indicators of water quality and aquatic ecosystem. Nearly 20% of the world's freshwater fish fauna is already extinct or is on the verge of extinction (Moyle, 1992) [7]. The main factor that threatens marine fish biodiversity globally is fishing (Dulvy, *et al.* 2003) [2]. The aquatic biodiversity of world is changing and getting depleted alarmingly fast as a result of extinctions caused by habitat loss, pollution, introduction of exotic species, over exploitation and other anthropogenic activities (Moyle, 1995) [8]. A number of reviews have shown that habitat loss and degradation, water withdrawal, overexploitation and pollution, and the introduction of non-native species are the leading causes of freshwater species decline and ecosystem degradation (Abramovitz, 1996) [1]. According to Jayaram (1999) [4], of the total 40,000 species of vertebrates, 21, 723 are fishes. Of these, about 58 percent are marine, 41 percent are freshwater species, and 1 percent move back and forth between salt and fresh water. The aim of the research work was to find out the diversity fish fauna of Malhaniya dam.

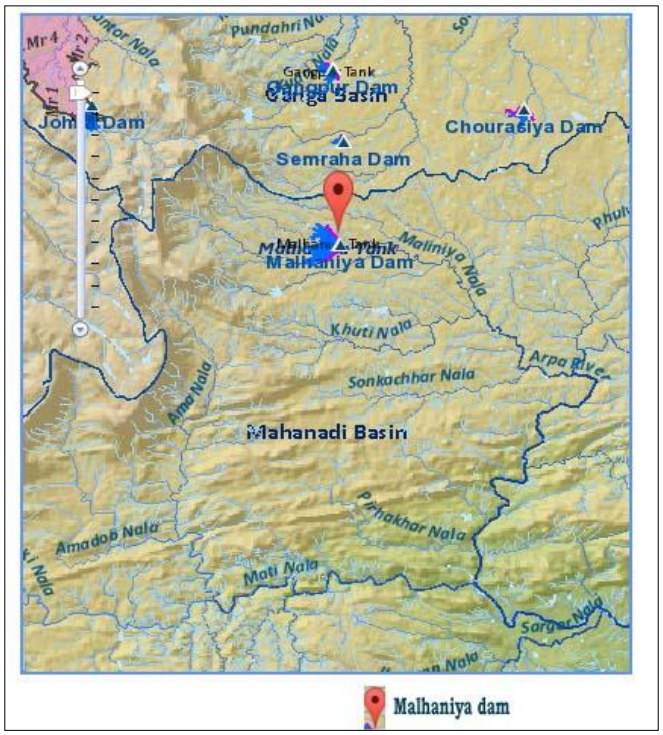

Fig 1

2. Material and methods
The fish collection was done thrice a month, on every 10th and 30th of the month from June 2015 to June 2016 with the help of hand nets, and simple hooks. The samples were fixed in 10 percent buffered commercial grade formalin directly or after Diversity of Edible Fishes at Malhaniya dam, Pendra Road Bilaspur (CG). Intraperitoneal injection of 10 percent formalin (in case of specimens larger than 15 cm) and were then transferred into 70 percent alcohol. All possible efforts were

made in order to collect maximum number of species. Identification was made after consulting several standard keys and literature such as Fishes of the Punjab (Mirza and Sandhu, 2007) [6], Freshwater fishes of the Indian Region (Jayaram, 1999) [4], Inland fishes of India and adjacent countries (Talwar and Jhingran, 1991) [11].

Fig 2

3. Results and discussion

The study was performed on Malhaniya dam, situated in Pendra Road Bilaspur. The survey was conducted from June 2015 to June 2016 during the survey of Malhaniya dam about 25 species were identified upto species level which were *Notopterus notopterus, Notoptera chitala, Oxygaster bacaila, Oxygaster gora, Rasbora daniconius, Rasbora elonga, Puntius chola, Puntius sarana, Puntius sophore, Ambylopharyngodon mola, Catla catla, Cirrhinus mrigala, Cirrhinus reba, Labeo calbasu, Labeo rohita, Labeo gonius, Labeo boga, Labeo pungusia, Wallago attu, Heteropneustes fossilis, Clarius batrachus, Mystus bleekeri, Channa marulius, Channa punctatus,* and *Channa striatus.* In the present study cyprinidae species may be found in rich in Malhaniya dam. The highest species are Cyprinidae were noted. These are represented in table no. 1.

Table 1: Taxonomic positions of Malhaniya dam fishes.

S. No.	Kindom	Phylum	Class	Order	Family	Genus	Species
1.	Animalia	Chordata	Teleostomi	Clupeiformes	Notopteridae	*Notopterus*	*notopterus*
2.	Animalia	Chordata	Teleostomi	Clupeiformes	Notopteridae	*Notoptera*	*chitala*
3.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Oxygaster*	*bacaila*
4.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Oxygaster*	*gora*
5.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Rasbora*	*daniconius*
6.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Rasbora*	*elonga*
7.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Puntius*	*chola*
8.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Puntius*	*sarana*
9.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Puntius*	*sophore*
10.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Ambylopharyngodon*	*mola*
11.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Catla*	*catla*
12.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Cirrhinus*	*mrigala*
13.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Cirrhinus*	*reba*
14.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Labeo*	*calbasu*
15.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Labeo*	*rohita*
16.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Labeo*	*gonius*
17.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Labeo*	*boga*
18.	Animalia	Chordata	Teleostomi	Cypriniformes	Cyprinidae	*Labeo*	*pungusia*
19.	Animalia	Chordata	Teleostomi	Cypriniformes	Siluridae	*Wallago*	*attu*
20.	Animalia	Chordata	Teleostomi	Cypriniformes	Saccobranchlidae	*Heteropneustes*	*fossilis*
21.	Animalia	Chordata	Teleostomi	Cypriniformes	Clariidae	*Clarius*	*batrachus*
22.	Animalia	Chordata	Teleostomi	Cypriniformes	Bagridae	*Mystus*	*bleekeri*
23.	Animalia	Chordata	Teleostomi	Cypriniformes	Ophiocephalidae	*Channa*	*marulius*
24.	Animalia	Chordata	Teleostomi	Cypriniformes	Ophiocephalidae	*Channa*	*punctatus*
25.	Animalia	Chordata	Teleostomi	Cypriniformes	Ophiocephalidae	*Channa*	*striatus*

4. Conclusion

From the current survey it may be concluded that Malhaniya dam of Pdenra Road, Bilaspur are suitable for Cyprinidae species.

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