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Check list of Fish Diversity of Rani pond, Ratanpur CG

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Abstract

The present work was carried out to study of the fish diversity in Rani pond, Ratanpur Bilaspur. In present study were observed 24 species and 14 genera has been identified which are belonging to 07 orders of 08 families namely Notopteridae, Cyprinidae, Siluridae, Bagridae, Saccobranchidae Clariidae, Channidae and Mastacembelidae. Present study revealed that Cyprinidae (carps) were the dominant fish and *Catla* was a major contributor among carps. The following species of fishes i.e. *Catla catla*, *Labeo rohita*, *Cirrhinus mrigala*, *Labeo calbasu*, *Mystus* and *Cirrhinus reba* etc. were noted as dominated fishes in Rani pond of Ratanpur, Bilaspur. It was observed that the following genera having single species *Catla*, *Chitala*, *Clarias*, *Cyprinus*, *Heteropneustes*, *Notopterus* and *Wallago*, 3 species of each genus *Channa*, *Labeo* and *Puntius* and 2 species of each genus *Cirrhinus*, *Mastacembelus*, *Mystus*, *Ompok* were reported from study sites. The aim of the present study reported on fish diversity in Rani pond, Ratanpur, Bilaspur.

Key-Words: Rani Pond, Fish diversity; Ratanpur

Introduction

Aquatic communities usually consist of a large number of species populations, each species is linked more or less directly to others in the community, and the community as a whole changes constantly through the slow processes of ecological succession. Chhattisgarh abounds in water-bodies, rivers and streams, lakes and tanks. Through systems and practices evolved over hundreds of years people have learned to conserve water and use it judiciously and equitably. A combination of wisdom, intuition and experience has enabled the people the tide over the situation of adversity. Biodiversity is the most valuable but least appreciated resource, and it can be a key to the maintenance of the world [1]. A few studies have been done on fish population dynamics, ichthyo-diversity and conservation of fishes in Lake Ecosystem in central and north east India [5]. The basic sampling or collection techniques of fresh water benthos are described by Lind [6], Welch [7] and Wetzel [8], and several keys for the identification of benthic macro invertebrates have been provided by Pennak [9]. An aquatic problem in Lentic community, biological productivity of the fresh water ecosystem was studied by [10]. The main aim of the present study reported on check list of fish diversity in Rani pond, Ratanpur, Bilaspur.

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Material and Methods

Fish samples were collected with the help of meshes of different mesh sizes ranging from 10-100 mm and also from fishermen. These fishermen use to catch fishes with the help of caste nets. After collection, preserved in 5% formalin and then identified on the basis of morphometric measurement, fin formula and the classification given by Jayaram, Jhingan, Francis Day, Shrivastava, Qureshi & Qureshi. The pond is very economical and eco-friendly management to check the ground water level depletion by storing the rain water. There are 3564 ponds spread in 5987 ha in Bilaspur in deep water level with rich flora and fauna. The pond is mainly rain-fed and receives the water of the cultivated land around it. The fishes collected from the pond were kept in 8% formalin for 48 hrs. Afterwards they were transferred to 5% formalin and preserved for detailed study. The identification of fishes was made with the help of Fauna by given [11].

N. sativa is an annual flowering plant which grows to 20-90 cm tall, with finely divided leaves, the leaf segments narrowly linear to threadlike. The flowers are delicate, and usually colored white, yellow, pink, pale blue or pale purple, with 5-10 petals. The fruit is a large and inflated capsule composed of 3-7 united follicles, each containing numerous seeds. Macroscopically, seeds are small dicotyledonous, trigonus, angular, regulose-tubercular, 2-3.5mm×1-2

mm, black externally and white inside, odor slightly aromatic and taste bitter.

Results and Discussion

Table 1: Check list of fishes collected fishes from Rani Pond of Ratanpur CG

S.N	Name of Species	Common name	Order	Family
1	<i>Catla catla</i> (Hum.)	Katla	Cypriniformes	Cyprinidae
2	<i>Channa marulius</i> (Ham.)	Sanwal	Ophiocephaliformes	Channidae
3	<i>Channa punctatus</i> (Bloch)	Khoksi	Ophiocephaliformes	Channidae
4	<i>Channa striatus</i> (Bloch)	Bhunda	Ophiocephaliformes	Channidae
5	<i>Chitala chitala</i> (Ham.)	Patola	Clupeiformes	Notopteridae
6	<i>Cirrhinus mrigala</i> (Ham.)	Mrigal	Cypriniformes	Cyprinidae
7	<i>Cirrhinus reba</i> (Ham.)	Borai	Cypriniformes	Cyprinidae
8	<i>Clarias batrachus</i> (Linn.)	Mongri	Siluriformes	Clariidae
9	<i>Cyprinus carpio</i> (Linn.)	Komal carp	Cypriniformes	Cyprinidae
10	<i>Heteropneustes fossilis</i> (Bloch)	Singhi	Siluriformes	Saccobranchidae
11	<i>Labeo bata</i> (Ham.)	Bata	Cypriniformes	Cyprinidae
12	<i>Labeo calbasu</i> (Ham.)	Kamach	Cypriniformes	Cyprinidae
13	<i>Labeo rohita</i> (Ham.)	Rohu	Cypriniformes	Cyprinidae
14	<i>Mastacembelus armatus</i> (Lacepede)	-	Synbranchiformes	Mastacembelidae
15	<i>Mastacembelus punctatus</i> (Ham.)	Bami	Synbranchiformes	Mastacembelidae
16	<i>Mystus (Aorichthys) seenghala</i> (Sykes)	-	Siluriformes	Bagridae
17	<i>Mystus cavassius</i> (Ham.)	Tengna	Siluriformes	Bagridae
18	<i>Notopterus notopterus</i> (Pallas)	Patola	Osteoglossiformes	Notopteridae
19	<i>Ompok bimaculatus</i> (Bloch)	Botia	Siluriformes	Siluridae
20	<i>Ompok pabda</i> (Ham.)	-	Siluriformes	Siluridae
21	<i>Puntius chola</i> (Ham.)	-	Osteoglossiformes	Cyprinidae
22	<i>Puntius sarana</i> (Ham-Buch)	Kotra	Osteoglossiformes	Cyprinidae
23	<i>Puntius sophore</i> (Ham.)	Jarhi kotri	Osteoglossiformes	Cyprinidae
24	<i>Wallago attu</i> (Bl. & Schn.)	Padhan	Siluriformes	Siluridae

The result shows total 24 species and 14 genera has been identified which are belonging to 07 orders of 08 families namely Notopteridae, Cyprinidae, Siluridae, Bagridae, Saccobranchidae Clariidae, Channidae and Mastacembelidae. Result reveals that the following genera having single species *Catla*, *Chitala*, *Clarias*, *Cyprinus*, *Heteropneustes*, *Notopterus* and *Wallago*, 3 species of genus *Channa*, *Labeo* and *Puntius* and 2 species of genus *Cirrhinus*, *Mastacembelus*, *Mystus*, *Ompok* were reported from study sites.

Schonborn [12] observed the same findings. *Arcella* sp. was noted throughout the period of studies, which can withstand a wide range of physical and chemical factors. *Paramaecium* sp. and *Opercularia* sp. were dominant in late spring and summer months, favored by increased transparency and a favorable range of temperature. They were found to be absent in monsoon and again appeared in post monsoon months. Sarkar and Krishnamurthy [13] reported that protozoan always preferred clear waters.

Rutner and Kolisko [14] reported that the maximum density of rotifers depends on the quantity of available nutrients and on the temperature. A range of high temperature and low concentration of nutrients, favoured a rise in rotifer density. Pillai *et al.*, [15] observed that Copepoda were at the peak in June and the lowest density was observed in the month of October. Much has been stated about declining fish biodiversity and its conservation issues in Indian River Systems [16-20] and a lot of work was done on fishes of India [21]. Zooplanktons are bio-indicators of both pollution and trophic conditions of a water system and the growth of algae and other parasitic forms by feeding on them rich diversity of zooplankton indicates that the river is not polluted and it is suitable for fish production; this was checked by [21]. Pandey *et al.*, [22] reported on species diversity in Macro-benthic & algal fauna of Limha Pond, Ghutku Bilaspur.

The study revealed that *Cyprinidae* (carps) were the dominant fish and *Catla* was a major contributor among carps. *Channa*, *Labeo* and *Puntius* genera contributing as dominant fishes and genera *Cirrhinus*,

Mastacembelus, *Mystus*, *Ompok* representing the as co-dominant genera of this study.

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