

Fish diversity in Gawrala and Vijasan lake of Bhadrawati, district Chandrapur (M.S.), India.

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ABSTRACT

Fishes exhibit enormous diversity in shape size, biology and in the habitats they occupy. They are important elements in the economy of many countries. It is believed that out of 4000 species of vertebrate recognized world and over 22000 are the fish species of which 8411 are fresh water fishes[1]. Diversity of Fishes in the Gawrala and Vijasan Lake of Bhadrawati was studied from October 2013 to September 2015. A total of 21 species of Fishes from six different orders were recorded from both lakes.

Keywords: Fish, Diversity, Gawrala lake, Vijasan lake.

INTRODUCTION

India is one of the mega biodiversity countries in the world and occupies the ninth position in terms of freshwater mega biodiversity (Mittermeier *et.al.*, 1997)[2]. Fishes are rich source of food and nutrition. Fish have a range of physiological tolerances those are dependent upon species where they belong to. They have different lethal temperatures, spawning needs that are based on their activity levels, and dissolved oxygen requirements, and behaviors. Fish communities can be used to indicate longer term or wider ranging effects of changes in the aquatic environment because many fish species are relatively long-lived and mobile. They tend to integrate effects of lower trophic levels, thereby providing a measure of integrated environmental health.

Fish are important for assessing contaminants in ecosystems as they are susceptible to bioaccumulation as well as bio-magnification of heavy metals and also synthetic organic contaminants, since they generally represent the top of the food chain[2].

The Gawralalake and Vijasan lake are fresh water bodies located within Bhadrawati town in Chandrapur district of Maharashtra state. Bhadrawati is a tahsil place near about 25 Km North of Chandrapur and 125 Km South East from Nagpur. Both lakes are situated at about 211m and 196 m above the mean sea level respectively and is at 20°06'35.67" N latitude and 79°07'7.33" E longitude.

METHODOLOGY

The fish fauna is an important aspect of fishery potential of a water body. It is observed that the distribution of fish species is quite variable because of geographical and conditions.

The collection of fishes from different ponds was made with the help of local fishermen. The systemic identification of fishes was done by using the standard keys of Day (1958) and Talwar and Jhingran (1991)[3-4].

RESULTS AND DISCUSSION

Fish are important for assessing contaminants in ecosystems as they are susceptible to bioaccumulation as well as bio-magnification of heavy metals and also synthetic organic contaminants, since they generally represent the top of the food chain.

In the present investigation, 21 species of fishes from six different Orders were recorded from Gawrala and Vinjanalake. Yazdani and Singh (2002)[5] have given an account of fish resources of Bhimariver at Indapur, Ujani and found 54 species belonging to 15 families. Wagh and Ghate (2003)[6] noticed 62 species from Mula and Mutha River in Pune.

Table: Fish species in Gawrala and Vinjanalake

Sr. No.	Order	Scientific Name
1	Cypriniformes	<i>Catlacatla</i>
2	Cypriniformes	<i>Punctiusticto</i>
3	Cypriniformes	<i>Punctiussarana</i>
4	Cypriniformes	<i>Ctenopharingodonidella</i>
5	Cypriniformes	<i>Labeorohita</i>
6	Cypriniformes	<i>Cyprinuscarpio</i>
7	Cypriniformes	<i>Rasboradanconius</i>
8	Cypriniformes	<i>Oxygasterbacaila</i>
9	Cypriniformes	<i>Nemacheilusbotic</i>
10	Cypriniformes	<i>Punctiuscondrenius</i>
11	Cypriniformes	<i>Cirrbnamrigala</i>
12	Cypriniformes	<i>Osteobramacotio</i>
13	Siluriformes	<i>Clariusgaripinnus</i>
14	Siluriformes	<i>Mystusseenghala</i>
15	Clupeiformes	<i>Notopterusnutopterus</i>
16	Clupeiformes	<i>NotopterusChitala</i>
17	Ophiocephaliformes	<i>Channastriatius</i>
18	Ophiocephaliformes	<i>Channapunctatus</i>
19	Peraformes	<i>Channanama</i>
20	Peraformes	<i>Glossogobiusgiuris</i>
21	Mastacembaliformes	<i>Mastacembalusarmatus</i>

Photo Plate-16

FISHES



a. *Labeo rohita* (Rohu)



b. *Channa striatus*



c. *Notopterus*



d. *Cirrhana mrigala*



e. *Eel* (*Anguilla*)



f. *Mystus seenghala*



g. *Catla catla*



h. *Cyprinus carpio*

Pawaret.al.,(2003)[7] noticed 11 fish species belonging to 5 orders from Sirur dam of Nanded District. Khedkar (2005)[8] observed 67 fish species belonging to 7 orders and 19 families from Nathsagar reservoir from Paithan, Dist. Aurangabad. Ramamurthy et.al.,(2009)[9] recorded 30 fish species in Muthupet reservoir, Nagappattinam district, Tamil Nadu. Solanki et.al.,(2011)[10] observed sixteen species in Sanjay Sagar reservoir of District Guna (MP).Patilet.al.,(2011)[11] observed twenty four fish species in Dhom dam. R.G. Patil and M.P. Gujar (2015)[12] observe 73 fish species were belonging to seven orders and seventeen families.

CONCLUSION

Among the two lakes, Gawralalake showed high species diversity with 15 species; however Vinjasan lake had only 6 species.

21 species of Fishes from six different orders were recorded in both lakes. Gawralalake showed high species diversity with 21 species, Vinjasan lake with 13 species

Conflicts of interest: The authors stated that no conflicts of interest.

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