



# **ICHTHYOFAUNAL DIVERSITY OF GORJA LAKE OF BHADRAWATI TAHSIL, DISTRICT CHANDRAPUR (M.S.), INDIA**

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## **Abstract :-**

The Gorja Lake is principal fresh water body located in Gorja village of Bhadrawati tahsil in Chandrapur district of Maharashtra state. Bhadrawati is a tahsil place and it is 25 km north side of Chandrapur and 125 km south east side from Nagpur. It is situated at about 211 m above the mean sea level and it is at 20°06'35.67'' N is latitude and 79°07'7.33''E longitude.

Gorja lake is 10 km South side from Bhadrawati tahsil at about 198 m above mean sea level and is at 79°05'48''E longitude and 20°05'59'' N latitude. Gorja Lake receives the water from the surrounding catchment areas during the monsoon period. The area of Gorja Lake is spread over 300 acres. The depth of water is 35 feet during the monsoon and 12 feet during the summer season. The water of this lake is primary used for washing, bathing fishing activities, agriculture and other domestic purpose but now it is at a transitional state with respect to degradation.

Present work is carried out during the period of two years, April 2014 to May 2016. In the present investigation in Gorja lake there are 24 species of fishes were recorded of 8 different orders and data is tabulated in Table No. 1.1 and figs. in photo plate 2.1 to 2.2.

**Keywords:** Fish Diversity of Gorja lake of Bhadarawati Tahsil.

## **Intorduction :-**

Ichthyofauna it is also known as piscifauna and refers to the fish of a particular region or time period is called as Ichthyofauna. Various species of fishes are live in fresh water as well as salt water and fishes are herbivorous, carnivorous, some are omnivorous and fish are top predators of the most aquatic ecosystem and some fishes are depending on lower feeding groups as food and fish play important roles in top down control of the growth and production of lower feeding groups and fishes are important in human being as food and help aquatic ecosystem functions for capture and eating of phytoplankton, zooplankton and some macro invertebrates but fish may also provide socioeconomic value in the form of fishery for people.

In country India intake of meat and milk is low, so fish as special importance as a supplement to in balanced cereal diets. Now today protein deficiency is the words most serious human malnutrition problem and perhaps 30 to 40% of the world populations

are suffering from protein deficiency. It is estimated that about 10 million tons of fish is required annually to meet the present day demand of fish protein in the country against as annually production of only 3.5 million tons.

Losses of fish species due to changes in quality of water and over fishing may result in dramatic shifts in aquatic ecosystem dynamics, as a grazing pressure on invertebrate and algae can be released, enabling rapidly growth and potential blooms of algal productions. Fishes are very important for assessing to contaminate in aquatic ecosystem. Since they generally represent the top of the food chain/web and susceptible bio accumulation and also bio-magnification of heavy metals and synthetic organic contaminants. The more detail systematic identification of fishes was done by using the standard keys of Day, (1958) and also Talwar and Jhingran, (1991).

Fresh water bodies are very essential for the existence of a dynamic ecosystem and contribute immensely in shaping and evolving the biotic and abiotic factors of the system. Today with rapid increase in population, unplanned, urbanization and over exploitation the quantity of water be it lake is deteriorating at an alarming rate ultimately resulting in depletion of aquatic biota.

#### Material and Methods :-

The study was carried out during April 2014 to May 216. Freshly fishes were collected in every month from fisherman at various sites of fish collection. Small sized fishes directly preserved in 4% formalin solution, while large fishes preserved in 10% formalin in a container by proper spreading of their fins and given an incision in their abdomen. The morphometric characters measured and the collection of fishes from different site of lakes 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).

#### Result and Discussion :-

Fishes are very important groups because of it's economically, nutritional and medicinal value for human being. Fishes are important food resources as it is rich in proteins, carbohydrates and other nutritional constituents.

In the present investigation, 24 species of fishes from 8 different orders were recorded from the three sites of lake. Ahirrao, (2000) observed 32 fish species belonging to 25 genera and 8 families from Parbhani. Telkhade, (2007) reported 39 species, belonging to 6 order and 17 families from the area of Tadoba National Park, Chandrapur. Jayabhaye and Khedkar, (2008) recorded 25 fish species belonging to 6 orders from Sawana dam in Hingoli District of Maharashtra. Ashashree, *et.al.*, (2008) noted 18 fish species belonging to 7 orders in Savalanga pond of Davangere District, Karnataka.

Tijare, *et.al.*, (2008) founded 32 fish species from the lake of Gadchiroli District (M.S.). Ramamurthy, *et.al.*, (2009) observed 30 fish species in Muthupet reservoir of Nagappattinam District, Tamilnadu. Kamble and Mudkhede, (2013) observed 15 species of fish in Loni reservoir. Pawar Ravindra, *et.al.*, (2014) reported 165 fish species belonging to 9 orders, 26 families and 82 genera and reported that the fishes belonging to order Cypriniformes was dominant in Maharashtra. Patil Alaka, (2015) observed 13 species of fishes at Bhambarde Sangli, Maharashtra. Harish Kumar, (2015) founded 13 species belonging to 11 families were noted 24 and species belonging to 19 genera in 10 families of 5 orders in Jannapura tank Bhadravati Taluka of Karnataka. Manjaramkar, *et.al.*, (2016) observed 39 fish species belonging to 6 orders, 13 families and 20 genera in river Godavari Near Nanded, Maharashtra.

During present study the 24 species of fishes of 8 different order viz, Anguilliformes, Clupeiformes, Cypriniformes, Mastacembaliformes, Ophiocephaliformes, Peraformes, Siluriformes and Syngnathiformes were recorded in Gorja lake.

**Table No. 1.1 : Ichthyofaunal Diversity of Gorja lake during 2014-16**

Sr.No.	Orders	Families	Scientific Names
1	Anguilliformes	Anguillidae	<i>Anguilla anguilla</i>
2	Clupeiformes	Clupeidae	<i>Notopterus chitala</i>
3	Clupeiformes	Clupeidae	<i>Notopterus notopterus</i>
4	Cypriniformes	Cyprinidae	<i>Catla catla</i>
5	Cypriniformes	Cyprinidae	<i>Cirrhina mrigala</i>
6	Cypriniformes	Cyprinidae	<i>Ctenopheregodon idella</i>
7	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>
8	Cypriniformes	Cyprinidae	<i>Labeo rohita</i>

9	Cypriniformes	Cyprinidae	<i>Noemachilus botic</i>
10	Cypriniformes	Cyprinidae	<i>Osteobrama cotio</i>
11	Cypriniformes	Cyprinidae	<i>Oxygaster bacaila</i>
12	Cypriniformes	Cyprinidae	<i>Punctius condrenius</i>
13	Cypriniformes	Cyprinidae	<i>Punctius sarana</i>
14	Cypriniformes	Cyprinidae	<i>Punctius ticto</i>
15	Cypriniformes	Cyprinidae	<i>Rasbora daniconius</i>
16	Cypriniformes	Cyprinidae	<i>Wallago attu</i>
17	Mastacembaliformes	Mastacembelidae	<i>Mastacembalus armatus</i>
18	Ophiocephaliformes	Channidae	<i>Channa punctatus</i>
19	Ophiocephaliformes	Channidae	<i>Channa striatus</i>
20	Peraformes	Serranidae	<i>Channa nama</i>
21	Peraformes	Serranidae	<i>Glossogobius giuris</i>
22	Siluriformes	Siluridae	<i>Clarias garipinnus</i>
23	Siluriformes	Siluridae	<i>Mystus seenghala</i>
24	Syngnathiformes	Syngnathidae	<i>Tilapia sp.</i>

Photo plate :- 2.1



## FISHES

a. *Osteobrama cotio*b. *Cyprinus carpio*c. *Ctenopherigodon idella*d. *Anguilla* (eel)e. *Cirrhina mrigala*f. *Wallago attu*g. *Noemachilus* sp.h. *Clarias garipinnus*

Photo plate :- 2.2

## FISHES

i. *Channa striatus*j. *Notopterus sp.*k. *Mystus seenghala*l. *Labeo rohita*m. *Mystus sp.*n. *Catla catla*o. *Rasbora daniconius*p. *Puntius sarana*



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