

DISTRIBUTION OF ICHTHYOFAUNAL BIODIVERSITY FORM MULA DAM RESERVOIR DIST AHMEDNAGAR (MS) .INDIA

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ABSTRACT

The present work was done Form 1st April 2020 to 31st March 2021 .It deals with study of Distribution and Ichthyofaunal Biodiversity in Mula Dam Reservoir Tal-Rahuri Dist -Ahmednagar Ms,India.the current work deals with the fresh water fish recorded and confirmed by various other 15 species Belong to 6 Order and 7 Families were present in the reservoir .This reservoir is rich in fish diversity inhabited by economically important. These collected Fishes are provides human diet in large scale.

KEYWORDS

Biodiversity , Freshwater ,Pollution, Aquatic

INTRODUCTION

Water covers about 71% of the earth's surface of which only 2.7% of the total water is freshwater. Out of the freshwater 1% is ice and the rest of the freshwater is in rivers, lakes, atmosphere and biological water. It has been estimated that only 0.00192% of the total water on the earth is available for human consumption assessment generally involves analysis of physico -chemical, biological and microbial parameters and reflects abiotic and biotic status of the ecosystem. (IAAB, 1998;).The freshwater ecosystem consists mainly of two types such as the Lotic water ecosystem and Lentic water ecosystem River ecosystems are influenced by a variety of anthropogenic factors. Their structure and function respond to both abiotic and biotic factors. Abiotic components such as hydrology (Palmer et. al, Cavaille et.al, Brown et.al.2005) geomorphology (Jocaben L.E.2015,CarreaC.and Anderson L. V. 2014), groundwater– surface-water interactions (Jolly et.al.2008 and Capderrey et.al.2018.) , nutrient availability (Hille et. Al.2014, Cha et.al.2009, Kujawa et.al.2016), light (Bradford et.al.2013), dissolved gases (Ormerod S.J.2003), and water chemistry (Law, A.; McLean, F.;Willby, N.J.2016), play an important role in the development of biological communities in streams and rivers. These external determinants may be regarded as bottom-up controls of the trophic chain (Kiffney et.al.2014). The water quality can be visualized in terms of the physical, chemical & biological properties within which several elements of water quality can be identified. Now in recent days water pollution is due to the alteration in physical, chemical & biological characteristics which may lead to harmful effect on human beings, also shows effect on other organisms and aquatic biota. Water quality existing in the wider area/bio-geographical region, what are the seasonal changes and when is the most susceptible or sensitive period for these species/habitats etc.

Hydrobiology is the study of life and life processes in water .It consists of several aspects like ecology, limnology, taxonomy, economic biology, physiology of an organism. It means that, the study of the animals which inhabit the water.The water body is one of the most important ecosystems which inhabits great biodiversity. The river Mula is the largest of the peninsular rivers of Maharashtra . The Mula river holds

immense spiritual and cultural significance. Several places at its origin are said to be the abode of Rama during the exile. These places are worshipped even today. The Mula river has total catchment area about 2552 hectares. The river is the study area situated between $19^{\circ}23' N$ $74^{\circ}39' E$ located in Rahuri Taluka District Ahmednagar with the elevation of 531 M Maharashtra, India.

Materials and Methods

The research work is carried out in Mula riverine flow from the Ahmednagar District. The flowing route of Mula river is 26 TMC. It is an average rain fall is 58 cm. Maximum depth is 67.97. The dam water is has been used for drinking and irrigation by the people of Ahmednagar city and district. For collection, preservation and analysis of water samples for some physico-chemical parameters will be followed as per guidelines of Trivedy & Goel, (1984), APHA, AWWA. & WPCF. (1985). The water samples are collected from various sampling stations regularly at every month, between 8.00 to 10.00 am. Samples of water are collected in clean plastic vessels or bottles. The samples collected from sites are fixed by using 4% formalin solution for identification of Fishes. Fishes can be identified by using keys and monographs given by Edmonson. The analysis of Physico chemical parameters done by using standard methods of (APHA, 1998). The data analysis by using various statistical methods.

Collection and Analysis of Fishes - The Fishes samples were collected from four sampling sites in The period of 14/2020 To 31/3/2021 in between 7.00 am to 9.00 am. 50 liters of water will be filtered transversely through Fishes net No. 25 of bolting silk with mesh size 64 micron. The collected samples were taken in separate labeled 200 ml of plastic bottles and preserved to 4% formalin and 1ml of Lugols Iodine solution. These samples will be brought to laboratory. Then the Fishes The collected samples is observed under compound microscope and photography is made with the help of Nikon L- 20 camera. For quantitative analysis of plankton 1 ml of mixed sample will place on edgwick Raft cell find out density of plankton the average 5 to 10 counts will made for every sample. The results are expressed as number of organisms per liters of collected water sample. Qualitative analysis of is zooplankton done up to genus or species level by using standard keys, monograph, Books and Journals given by Edmondson, (1959), Tonapi, (1980), Battish, (1992), Murugan, (1998), Dhanpati, (2000) and A.P.H.A., A.W.W.A. and W.E.F., (2012). The Fishes diversity, composition, abundance and body size variations are the indicators of environmental disturbances and pollution too. Present work is on the Mula river and Rahuri so it has importance as it having 2 different water qualities are come together. The present study reveals detailed physico-chemical characteristics and quality of water in Mula river. The summer, Monsoon and winter seasons show different seasonal fluctuations in various physico-chemical parameters indicating whether the reservoir is useful for drinking purposes, Irrigation, Aquatic biota and biodiversity around the reservoir. As Fishes are bioindicators for urbanization, industrialization and pollution etc. this study will help state and central government authorities to take some steps towards conservation of the natural ecosystem.

Results & Discussion

The order Cypriniformes was dominant followed by order Perciformes; order Beloniformes and order Siluriformes; order Synbranchiformes and order Osteoglossiformes. This reservoir is rich in fish diversity; inhabited by economically important and cultivable fishes as well as the ornamental fishes.

No	Common Name	Class	Division	Order	Family	Genus	Species
1	Indian Major Crap	Actinopterygii	Teleostei	Cypriniformes	Cyprinidae	Catla	catala
2	Labeo	Actinopterygii	Teleostei	Cypriniformes	Cyprinidae	Labeo	ariza
3	Indian Major Crap	Actinopterygii	Teleostei	Cypriniformes	Cyprinidae	Cirrihius	mrigala
4	Common crap	Actinopterygii	Teleostei	Cypriniformes	Cyprinidae	Cyprinus	carpia
5	Ray finned fish	Actinopterygii	Teleostei	Cypriniformes	Cyprinidae	Garra	mullya
6	Red half beak	Actinopterygii	Teleostei	Beloniformes	Hemiramphid	Hyporhamphus	xanthopterus
7	Indian Major Crap	Actinopterygii	Teleostei	Cypriniformes	Cyprinidae	Labeo	rohita
8	Olive Bard	Actinopterygii	Teleostei	Cypriniformes	Cyprinidae	Mystus	gulio
9	Slender bard	Actinopterygii	Teleostei	Cypriniformes	Cyprinidae	Rasbora	daniconius
10	Large razorbelly minnow	Actinopterygii	Teleostei	Cypriniformes	Cyprinidae	Salmostoma	bacaila
11	Garfish	Actinopterygii	Teleostei	Beloniformes	Belonidae	xenentodon	cancila
12	Wallago	Actinopterygii	Teleostei	Siluriformes	Siluridae	Wallago	attu
13	Red tilapia	Actinopterygii	Teleostei	Perciformes	cichidae	Tilapia	
14	Tilapia	Actinopterygii	Teleostei	Perciformes	cichidae	Oreochromis	Mossambicus
15	Ghost Kniefish	Actinopterygii	Teleostei	Osteoglossiformes	Notopteridae	Notopterus	notopterus



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1.Catala



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2. ariza



3.mrigala



4.carpia



5.mullya



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6.xanthoptorus



7.rohita

8.gulio



9.daniconius

10.bacaila



11.cancila

12.attu

**13.tilapia****14.mossambicus****15.notopterus**

Conclusion

There are near about 15 species are found in Mula dam. Fish fauna and distribution is useful for designining and implementing conservation strategies to make fisherman aware of fishing to give scientific traning to provide Facilities to the fish farmers

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