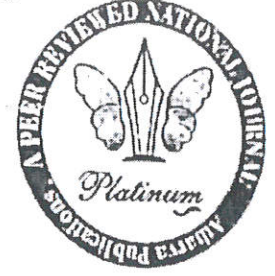




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प्लॅटिनम या त्रैमासिकात प्रसिद्ध झालेली मते संपादक, सहसंपादक, कार्यकारी संपादक, आणि सल्लागार मंडळ यांना मान्य असतीलच असे नाही. या नियतकालिकात प्रसिद्ध करण्यात आलेल्या लेखातील लेखकांची मते ही त्यांची वैयक्तिक मते आहेत. तसेच शोधनिबंधाची जबाबदारी ज्या-त्या लेखकांवर राहिल.

BIO-DIVERSITY OF FISH IN DHANEGAON RESERVOIR AT DEHANEGAON DISTRICT OSMANABAD, (M.S.) INDIA



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Abstract:

The present study with fish biodiversity undertaken during period December-2015 to November 2016 to census and commercially important fishes in the Dhanegaon Reservoir. The present paper deals with the variety and abundance of fresh water fishes in Dhanegaon Reservoir at Dhanegaon Dist. Osmanabad (M.S.) India. The results of present investigation reveal the occurrence of 33 fish species belonging to 7 Orders, 12 families. Among the collected species, order cypriniformes was most dominant constituting and Synbranchiformes constituting orders constituting of the total fish species.

Key Words : Fish biodiversity Economic value Nutritive value Dhanegaon Reservoir

INTRODUCTION

The Dhanegaon Reservoir are constructed to meet the requirement of human being, irrigation, Hydroelectric powers, flood control, storage of water for drinking purpose of suitable development of fisheries for the purpose of human food. Water is one of the most important compound required for very existence of life. Without water them, can survive to safeguard the long term sustainability of water resources, the quality of the water needs to be continually monitored. Water is used in day to day activities for drinking, bathing, washing, recreation, irrigation and reliable industrial purpose. The availability of safe and source water is thus an essential pre-requisite for the establishment of a stable community. The increasing industrialization, organization and development which have caused pollution of water have brought variable water crises.

Fishes are one of the important elements in the economy of many nations as they have been a staple item in the diet of many people. They constitute slightly more than one-half of total number of approximately 53,710 ± 1000 recognized living vertebrate species; there are descriptions of an estimated 26,977 ± 1000 valid species of fishes [1]

Biodiversity is essential for stabilization of ecosystem, protection of overall environmental quality for understanding intrinsic worth of all species on the earth [2]. Fish biodiversity of river essentially represents the

fish faunal diversity and their abundance. River conserve a rich variety of fish species which support to commercial fisheries.

Present investigation was undertaken to study fish biodiversity of Dhanegaon Reservoir District Osmanabad (M.S.) India. The objective of study was to give recent data regarding fish diversity of the Reservoir aiming to contribute a better knowledge of the fish diversity of Dhanegaon Reservoir and a tool for conservation planning of aquatic environments.

MATERIALS AND METHODS

Fishes were collected from Dhanegaon Reservoir at Dhanegaon dist. Osmanabad (M.S.) India with the help of local fisherman using different types of nets namely gill nets, cast net, dragnets and Bhor jal. Immediate photographs were taken with help of digital camera.

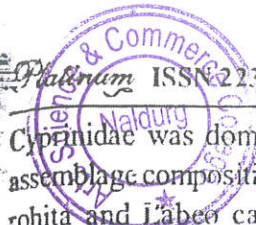
Fishes were brought to laboratory and preserved in 10% formalin solution in separate specimen jars according to the size of species. Small fishes were directly placed in the 10% formalin solution. While large fishes were given an incision in their abdomen and preserved.

The meristic and morphometric characters collected fishes were measured and identified up to the species level, with the help of standard keys and books [4-6].

RESULTS

During the study period different fish varieties have been observed in the Dhanegaon Reservoir District Osmanabad (M.S.) India. The results showed that the area was rich in fish biodiversity. Fishes belonging to several orders and 12 families were collected during the study period. Many collected fishes having economic importance sold after collection in the local fish market. In the present fish biodiversity study 33 species of 12 families and 7 orders were recorded from the Dhanegaon Reservoir. Number of catches carried out during December 2015 to November 2016. The members of order Cypriniformes were dominated by 11 species followed by Siluriformes 5 species, Perciformes 3 species, Osteoglossiformes 6 species and Synbranchiformes 1 species with 2 Order each and Mugiliformes and Belontiiformes with one species each.

12 fish families represented by 33 fish species, Family



Cyprinidae was dominant group with 11 species in the assemblage composition in which cirhinus merigala, Lebeo rohita and Lebeo calbasu were found most abundant. Catla catla Garra Lamta, Rasbora daniconius Chela bacaila, cyprinus carpio and Puntius jerdoni were found abundant. Chela phulo puntius saranasarana, Cirrhinus reba, Mystusaor (Aorichthys .) Mystus bleekeri a d cirrhinus mrigala was found less abundant. Gambusia affinis Mystus cavasius was Rare found. Followed by family Bagridae in which Mystus tangara, and Mystus seenghala were found less abundant. Followed by family channidae in which Channa Striatus was found most Abudant

Fig. -1: Order-wise fish composition at Dhanegaon Reservoir Dist: Osmanabad (M.S.), India

Channa punctatus were found less abundant, and Channa gaucha were found abundant. Followed by Family Notopteridae in Which Notopterus Notopterus was found less abundant. Notopterus chitala was found rare. Family Siluridae in which . Family Ompok bimaculatus was found less abundant. Family Mastacembelidae in which mastacembelus armatus and Mastacembelus pancalus were found Rare . Family Mugilidae in which Mugil cephalus was found rare. Family Belontiidae in which Xenentodon cancila was found rare. Family Chichlidae in which Oreochromis mossambica were found abundant. Family Anabantidae in which Anabas testudineus were found less abundant. Family Gobiidae in which Glassogobius giurinus were found rare, common name and economic values shown in (Table 1).

33 Species were identified and recorded in the Dhanegaon Reservoir. Among these order Cypriniformes was most dominant constituting 49.62% followed by order Siluriformes Constituting 20%, Order Perciformes Constituting 14.28, orders Osteoglossiformes and Synbranchiformes constituting 6 % and orders Mugiliformes and Belontiiformes constituting 2 % of the total fish species showed in the . Fishing operations were done throughout year with so many different fish species catches in monsoon compared to post monsoon and summer seasons.

DISCUSSION

[7] Recorded abundance of catfishes in Herakund reservoir. Total 43 Species were present in which 18 were commercially important. [8] Reported 34 species of fishes in reservoirs of Parbhani Dist. Of Maharashtra. [9] Reported the Ichthyofauna of Harsool-Savangi Dam Aurangabad (M.S.) India. Total 15 fish species belonging to 3 orders, 4 families and 12 genera. The order Cypriniformes found dominant with 11 species, followed by perciformes 3 species and siluriformes with 1 species.

The work has been concluded with future strategies for development of fish fauna conservation of Dhanegaon at Dhanegaon Dist. Osmanabad (M.S.) India. Recent data regarding fish diversity of the system aiming to contribute a better knowledge of the fish diversity of Dhanegaon Reservoir and a tool for conservation planning of aquatic environments in this region. To maintain fish biodiversity has an immense importance as it is not always possible to identify individual species critically to sustain aquatic ecosystem.

Table 1: The fish biodiversity and Economic value of fish in Dhanegaon Reservoir during

Order	Family	Species name	Common name	Economic value	Status		
Osteoglossiformes	Notopteridae	Notopterus Notopterus	Notopterus	FF, MD	++		
		Notopterus chitala	Moy	MD	+		
		Catla catla	Garra	FD	+++		
		Garra Lamta	Garra	FD	+++		
		Chela bacaila	Chela	LV	+++		
		Chela phulo	Chela	LV	+++		
Cypriniformes	Cyprinidae	Rasbora daniconius	Rasbora daniconius	LD	+++		
		Cyprinus carpio	Cyprinus carpio	FD	+++		
		Puntius jerdoni	Puntius jerdoni	BT, LV, WF	++		
		Mystus bleekeri	Mystus bleekeri	BT, LV, WF	++		
		Cirrhinus mrigala	Mirgala	FD	+++		
		Cirrhinus reba	Reba	FD	++		
		Lebeo rohita	Lebeo	FD	+++		
		Lebeo calbasu	Calbasu	FD	+++		
		Gambusia affinis	Guppy	LV	+		
		Mystus cavasius	Mystus	FF	++		
		Mystus tangara	Mystus	FF	+		
		Bagridae	Mystus	Mystus tangara	Tangara	FF	+++
				Mystus bleekeri	Mystus	FF	++
				Mystus seenghala	Mystus	FF	+
		Siluridae	Ompok	Ompok bimaculatus	Pullu	LV	++
Ompok pabda	Margu			LV	++		
Mugiliformes	Mugilidae	Mugil cephalus	Grey mullet	LV	+		
Belontiiformes	Belontiidae	Xenentodon cancila	Kora	WF	+		
Synbranchiformes	Mastacembelidae	Mastacembelus armatus	Baum	FF	+		
		Mastacembelus pancalus	Marga	FF	++		
		Oreochromis mossambica	Tilapia	FD	+++		
		Anabas testudineus	Koi	LV	++		
Perciformes	Gobiidae	Glassogobius giurinus	Goby	FF	+		
		Channa striata	Banana shad	LV, FF	+++		
		Channa punctata	Spotted shad	LV, FF	++		
		Channa gaucha	Dikh	LV, FF	+++		

++++ Most abundant, +++ Abundant, ++ Less Abundant, + Rare.

- 1) .LV – Larvivorous fish.
- 2) .BT – Bait.
- 3) .FF – Predatory Food Fish.
- 4) .WF – Weed Fish.
- 5) .MD – Medicinal Value.
- 6) .Forage Fish.

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