

Ichthyofaunal Diversity of Harsool Savangi Dam, District Aurangabad, (M.S.) India

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Abstract: Ichthyofaunal studies were undertaken during Jan-2008 to Dec-2008 census and commercially important fishes in the Harsool-Savangi Dam. The present paper deals with the variety and abundance of fresh water fishes in Harsool- Savangi dam of Aurangabad district (M.S) India. The results of present investigation reveal the occurrence of 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.

Key words: Ichthyology % Fish diversity % Harsool-savangi dam

INTRODUCTION

Fish constitutes half of the total number of vertebrates in the world. They live in almost all conceivable aquatic habitats; 21,723 living species of fish have been recorded out of 39,900 species of vertebrates out of these 8,411 are freshwater species and 11,650 are marine India is one of the mega biodiversity countries in the world and occupies the ninth position in terms of freshwater mega biodiversity [1] India there are 2,500 species of fishes of which 930 live in freshwater and 1,570 are marine [2].

Ichthyodiversity refers to variety of fish species; depending on context and scale, it could refer to alleles or genotypes within fish population to species of life forms within a fish community and to species or life forms across aqua regimes [3]. Biodiversity is essential for stabilization of ecosystem protection of overall environmental quality for understanding intrinsic worth of all species on the earth [4]. Positive correlations between biomass production and species abundance have been recorded by various earlier workers [5]. The species diversity of an ecosystem is often related to the amount of living, non living and organic matter present.

In the field of ichthyology there is valuable contribution by many workers [6-15].

As per economic importance and scope of fish and fisheries especially in Maharashtra, but it is natural to

study the distribution and the availability of fish from freshwater reservoirs and tanks.

Present investigation was undertaken to study the fish diversity from Harsool-Savangi dam is the first effort in this direction. Various indigenous and commercial fishes of importance were found in this area. Harsool savangi dam is a man made located 9 kms, area average rainfall 665mm of Aurangabad (MS) India. Cyprinid fishes are one of the most important groups of vertebrates for man and influencing his life in various ways. The nutritive and medicinal value of fish has been recognized from ancient time to recent era.

MATERIALS AND METHODS

Fishes were collected from Harsool-savangi dam (MS) India with the help of local fishermen using different type of nets namely gill nets, cast nets, dragnets and Bhar jal. Immediately photographs were taken with help of digital camera.

Fishes brought to laboratory were preserved in 10% formalin solution in separate specimen jar 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 were measured and fishes were identified up to the species level, with the help of standard keys and books [16-18].

RESULTS AND DISCUSSION

In the present ichthyofaunal study, 15 species of 12 different genera 4 families and 3 orders were recorded from the Harsool-savangi dam in number of catches carried out during January 2008-December 2008. The members of Order Cypriniformes were dominated by 11 species followed by Perciformes 3 species and Siluriformes with one species.

15 fish species representing by 3 orders, cypriniformes was dominant with 11 species was dominant group in the assemblage composition in which *Catla-catla*, *Lebeo rohita*, *cyprinus carpio* and *Rasbora daniconius* were found most abundant. *Hypothalmichthys molitrix* and *Puntius ticto* were found in abundant form. *Puntius stigma*, *Chela bacaila*, *cirrhinus mrigala*, *Garra lamta* and *Thynnichthys sandkhol* were found in less abundant. Followed by



Table 1: The ichthyofaunal diversity of Harsool savangi dam during January 2008 - December 2008

Order	Family	Scientific name	Common name	Groups of food fish	Status
Cypriniformes	Cyprinidae	<i>Catla-catla</i>	Catla	Carps	+++
		<i>Labeo-rohita</i>	Rohu	Carps	+++
		<i>Cyprinus carpio</i>	Common carp	Carps	+++
		<i>Rasbora daniconius</i>	Black line Rasbora	Food fish	+++
		<i>Hypothalmichthys molitrix</i>	Silver carp	Food fish	++
		<i>Puntius ticto</i>	Ticto	Miscellaneous fishes	++
		<i>Puntius stigma</i>	Stigma	Miscellaneous fishes	+
		<i>Chela bacaila</i>	Chela	Food fish	+
		<i>Cirrhinus mrigala</i>	Mrigala	Carps	+
		<i>Garra lamta</i>	Gara	Food fish	+
		<i>Thynnichthys sandkhol</i>	Sandkhol carp	Food fish	+
Perciformes	Channidae	<i>Channa striatus</i>	Banded snake head	Live fish	++
		<i>Channa punctatus</i>	Spotted snake head	Live fish	+
	Cichlidae	<i>Oreochromis mossambica</i>	Tilapia	Food fish	+
Siluriformes	Clariidae	<i>Claris batrachus</i>	mangur /cat fish	Live fish	+

++++ 6 most abundant, ++ 6 abundant, + 6 less abundant

perciformes in which *Channa striatus* was found in abundant form *Channa punctatus* and *Oreochromis mossambica* were found in less abundant form and siluriformes in which one species found that is *Clarias batrachus* which was also less abundant shown in the Table 1.

Fishing operations through out year with low catches in monsoon compared to high in post monsoon and summer seasons. It is suggested that the fishery authorities should investigate and practice the proper exploitation and management of this inland fishery resources according to ecological principals. They should recommend and determine the stocking standards and reasonable introduction according to potential of fish productivity and character of this water body. Scientific fishing standard and fishing quotas are to be worked out; this will play an important role in protection of the reservoir and its biodiversity. Thus it is necessity of every individual to play an active role to achieve the goals of sustainable fishery development and handover the resources in healthy conditions to the future generations.

The work will provide future strategies for development and fish fauna conservation Harsool-savangi Dam. To maintain Ichthyodiversity has importance as it is not always possible to identify individual species critical to sustain aquatic ecosystem.

It was concluded that further studies may be done to develop techniques for fish culturing. The use of illegal methods to catch fish should be banned in this area to prevent further depletion of freshwater fish resources. The fisherman's should make aware with about fishing, scientific training and facilities made available to the fish farmers fishing of the spawn, larval fish and immature fish should be avoided and subsidies loan facility may be provided on large scales which may help in high yield of fish production in the Harsool-savangi dam.

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