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Fish Biodiversity of Pravara River at Pravara Sangam District Ahmednagar, (M.S.) India

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Abstract: The present study deals with fish biodiversity undertaken during period January-2008 to Decemeber-2008 to census and commercially important fishes in the Pravara River. The present paper deals with the variety and abundance of fresh water fishes in Pravara River at Pravara Sangam Dist. Ahmednagar (M.S) India. The results of present investigation reveal the occurrence of 41 fish species belonging to 7 orders, 14 families and 26 genera. Among the collected species, order Cypriniformes was most dominant constituting 50% followed by order Siluriformes constituting 19%, order Perciformes constituting 14.28%, orders steoglossiformes and Synbranchiformes constituting 4.76% and orders Mugiliformes and Beloniformes constituting 2.38% of the total fish species.

Key Words: Fish biodiversity · Economic value · Nutritive Value · Pravara River

INTRODUCTION

Fishes are one of the important elements in the economy of many nations as they have been a stable item in the diet of many people. They constitute slightly more than one-half of total number of approximately 54,711 recognized living vertebrate species; there are descriptions of an estimated 27,977 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 conserves a rich variety of fish species which support to the commercial fisheries.

In India potential of fish culture is yet to be fully exploited. Fishes being rich source of proteins and have high nutritive value. Extensive development of aquaculture needs to be given priority after green revolution to feed ever growing population. Success of fish culture depends apart from other factors, on selection of suitable species. Secondly the country is rich in diversity of such important group of animals. Further, there is a need of a survey of diversity of fishes in different types of habitats of Rivers all over the country.

The total length of rivers in India is about 29,000 km. All these rivers, their tributaries, canals and irrigation channels have an area of roughly 13,000 km. Reverine fisheries of India comprises of five major river systems.

- Ganga river system.
- Brahmaputra river system.
- Indus river system.
- East coast river system.
- West coast river system [3].

Pravara River one of the important River in the western parts of Maharashtra. It is one of the main tributaries of the Godavari River. It comes present in East coast river system. Pravara River originates from Sahyadri hills of Bhandardara village in that on the western coast of India. Bhandardara village is located situated Ahmednagar District of Maharashtra, India. Godavari and Pravara Rivers meet at Pravara Sangam that present in near Kaygaon Toka. It is located 55 kms, Latitude 19° 61' 67″ North and Longitude 75° 01' 67″ East from Aurangabad (M.S) India.

Present investigation was undertaken to study the fish biodiversity of Pravara River, Pravara Sangam Dist. Ahmednagar (M.S) India. The objective of study was to give recent data regarding Fish diversity of the East coast river system, aiming to contribute a better knowledge of the fish diversity of Pravara River and a tool for conservation planning of aquatic environments in this region. It is the first effort made in this direction, various indigenous, commercially important and economically valuable fishes were found in this area.

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MATERIALS AND METHODS

Fishes were collected from Pravara River; at Pravara Sangam Dist. Ahmednagar (M.S) India with the help of local fishermen using different type of nets namely gill nets, cast nets, dragnets and Bhor jal. Immediately 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 Pravara River Dist. Ahmednagar (M.S) India. The results showed that the area was rich in fish biodiversity. Fishes belonging to seven orders and fourteen families were collected during course of the study period. Many collected fishes having economic importance sold after collection in the local fish market. In the present fish biodiversity study 41 species of 26 different genera 14 families and 7 orders were recorded from the Pravara River number of catches carried out during January 2008-December 2008. The members of Order Cypriniformes were dominated by 21 species followed by Siluriformes 8 species, Perciformes 6 species, Osteoglossiforms and Synbranchiformes with 2 species each and Mugiliformes and Beloniformes with one species each.

14 fish families represented by 41 fish species, Family Cyprinidae was dominant group with 19 species in the assemblage composition in which *Garra lamta, Rasbora daniconius* and *Puntius ticto* were found most abundant. *Catla-caltla, Ctenopharyngodon idella, Puntius amphibious, Puntius jerdoni, Puntius sarana sarana, Puntius sophore, Lebeo rohita, cyprinus carpio*, *Hypothalmichthys molitrix, Chela bacaila*, *cirrhinus mrigala* and *Thynnichthys sandkhol* were found abundant. *Chela phulo, Cirrhinus reba, Labeo calbasu* and *Gambusia affinis* were found less abundant. Followed by Family Bagridae in which *Mystus tengara* was found abundant. *Mystus aor (Aorichthys), Mystus bleekeri*, *Mystus cavasius* and *Mystus seenghala* were found less abundant. Followed by Family Channidae in which *Channa striatus* was found most abundant.

Table 1: The fish biodiversity and Economic value of fish in Pravara River during January 2008-December 2008

Order	Family	*Scientific name*	Common name	Economic value	Status
Osteoglossiformes	Notopteridae	*Notopterus notopterus*	Notopterus	PF, MD	+
		Notopterus chitala	Moy	MD	_
		Catla catla	Catla	FD	++
		Hypothalmichthys molitrix	Silver carp	FD	++
		Ctenopharyngodon idella	Grass carp	FD	++
		Garra lamta	Garra	FD	+++
		Thynnichthys sandkhol	Sandkhol carp	FD	++
		Chela bacaila	Chela	LV	++
		Chela phulo	Chela	LV	+
Cypriniformes	Cyprinidae	*Rasbora daniconius*	Black line Rasbora	LV	+++
		Cyprinus carpio	Common carp	FD	++
		Puntius ticto	Ticto	BT, LV,WF	+++
		Puntius amphibious	Khavli	BT, LV,WF	++
		Puntius jerdoni	Parag	BT, LV,WF	++
		Puntius sarana sarana	Khavli	BT, LV,WF	++
		Puntius sophore	Sophore	BT, LV,WF	++
		Cirrhinus mrigala	Mrigala	FD	++
		Cirrhinus reba	Reba	FD	+
		Labeo rohita	Rohu	FD	++
		Labeo calbasu	Calbasu	FD	+
		Gambusia affinis	Guppy	LV	+
	Balitoridae	*Nemacheilus botio*	Botio	FD	_
	Cobitidae	*Lepidocephalus guntea*	_	PF	_

Table 1: Continued

		Mystus aor (Aorichthys)	Aor	PF	+
		Mystus bleekeri	_	PF	+
	Bagridae	*Mystus cavasius*	_	PF	+
Siluriformes		*Mystus tengara*	Tengra	PF	++
		Mystus seenghala	Mystus	PF	+
	Siluridae	*Ompok bimaculatus*	Puffta	PF	_
		Wallago attu	Fresh water shark	PF	++
	Claridae	*Claris batrachus*	Mangur	LV	++
Mugiliformes	Mugilidae	*Mugil cephalus*	Grey mullet	LV	_
Beloniformes	Belonidae	*Xenentodon cancila*	Kowa	WF	_
Synbranchiformes	Mastacembelidae	*Mastacembelus armatus*	Baam	PF	+
		Mastacembelus pancalus	Malga	PF	+
	Cichlidae	*Oreochromis mossambica*	Tilapia	FD	++
	Anabantidae	*Anabas testudineus*	Koi	LV	+
	Gobiidae	*Glassogobius giuris*	goby	PF	-
Perciformes		*Channa striatus*	Banded snake head	LV, PF	+++
	Channidae	*Channa punctatus*	Spotted snake head	LV, PF	++
		Channa gaucha	Dhok	LV, PF	++

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

1) LV-Larvivous fish. 2) BT-Bait.
3) PF-Predatory Food Fish. 4) WF-Weed Fish.
5) MD-Medicinal Value. 6) FR-Forage Fish.
7) FD- Food Fish.

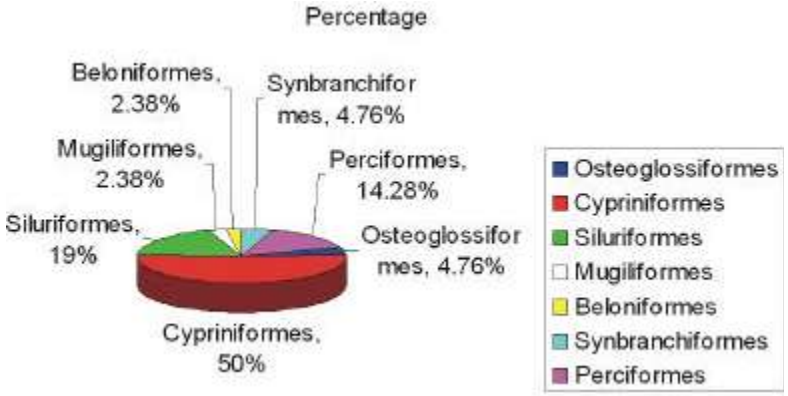

Fig. 1: Order wise fish composition at Pravara River Dist. Ahamadnagar (M.S), India

Channa punctatus and *Channa gaucha* were found abundant. Followed by Family Notopteridae in which *Notopterus Notopterus* was found abundant. *Notopterus chitala* was found rare. Family Siluridae in which *Wallago attu* was found abundant. Family *Ompok bimaculatus* was found rare. Family Mastacembelidae in which *Mastacembelus armatus* and *Mastacembelus pancalus* were found less abundant. Followed by Family Balitoridae in which *Nemacheilus botio* was found rare. Family Cobitidae in which *Lepidocephalus guntea* was found rare. Family Claridae in which *Claris batrachus* found abundant. Family Mugilidae in which *Mugil cephalus* was found rare. Family Belonidae in which *Xenentodon cancila* was found rare. Family Cichlidae in which *Oreochromis mossambica* were found abundant. Family Anabantidae in which *Anabas testudineus* were found abundant. Family Gobiidae in which *Glassogobius giuris* were found rare, common name and economic values shown in (Table 1).

Fourty two species were identified and recorded in the Pravara River. Among these order Cypriniformes was most dominant constituting 50% followed by order Siluriformes constituting 19%, order Perciformes constituting 14.28%, orders Osteoglossiformes and Synbranchiformes constituting 4.76% and orders Mugiliformes and Beloniformes constituting 2.38% of the total fish species showed in the (Fig. 1).

Fishing operations were done through out year with so many different fish species catches in monsoon compared to post monsoon and summer seasons.

DISCUSSION

[7] Recorded abundance of catfishes in Hirakund 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 Pravara River at Pravara Sangam Dist. Ahamadnagar (M.S) India. Recent data regarding Fish diversity of the East coast river system, aiming to contribute a better knowledge of the fish diversity of Pravara River 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.

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