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Studies of Ichthyofaunal Diversity of Godavari River at Dhangar Takli Tq Purna Dist., Parbhani, Maharashtra, India

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Abstract

The present study deals with the Ichthyofaunal diversity of Godavari river at Dhangar Takli Tq. Purna Dist. Parbhani, Maharashtra. Ichthyofaunal studies were undertaken during January 2014 to January 2015. The results of present investigation reveal the occurrence of 18 fish species belonging to 5 orders, 8 families and 14 genera and one species of freshwater prawn belonging to decapoda order. The order Cypriniformes was dominant with 08 fish species (44%) followed by Perciformes 05 (28%), Osteoglossiformes 02 (11%), Siluriformes 02 (11%) and Synbranchiformes with one fish species (6%).

Keywords

Godavari, Ichthyofauna, Purna

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1. Introduction

Biodiversity is essential for balancing ecosystem and facing varied problems to environment. In the field of Ichthyology there is valuable contribution by many workers. As far as economic importance is concerned, the scope of fish and fisheries in Maharashtra is of prime interest. The aquatic ecosystem is important and it has large number of economically important animals especially fish which is an important source of food. Cyprinid fish is one of the most important groups of vertebrates for man and influencing his life. The nutritive and medicinal value of fish has been recognized from ancient time to recent era. Maharashtra is rich in freshwater (rivers, irrigation canals, dams, and lakes) reservoirs and its fish diversity. Therefore, Maharashtra is one of the important states for fish production and natural water resources and there is great scope for developing fisheries in this state. (Pawara *et al*, 2014). The fishes are one of the most important organisms in aquatic ecosystems as those occupy primary and secondary consumer levels. Though the freshwater bodies contribute only 0.1% of the total water of the planet, it harbours 40% of fish species (Nelson, J.S., 1994). Fishes have high nutritive value, especially omega 3 fatty acids because of which they are heart-friendly and improve reproductive and nervous system development.

The fishes form a rich source of food and provide a meal to tide over the nutritional difficulties of man. Fish is an important item of human food as well as the source of income of a segment of the population. Fish diet provides protein, fats and vitamins A and D. A large amount of phosphorous and other elements are also present in it. They have a good taste and are easily digestible (Humbe *et al*, 2014). Fishes are an important ecological link in the food chain. Fishes are widely used to evaluate the health of aquatic ecosystems because pollutants build up in the food chain and are responsible for adverse effects and death in the aquatic systems.

Fisheries play an instrumental role in the socio-economic

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development of the country, as it is a valuable source of livelihood for a huge section of economically backward population. It also generates gainful employment, alternate income and stimulates growth of new subsidiary industries.

2. Materials and Methods

Study Area: Dhangar Takli

Godavari River is largest river in Maharashtra and flows through Marathwada region. The back water of this project at DhangarTakli19°7'12"N77°3'28"E was selected as a study area. Fish were collected from local fishermen from the river Godavari at Dhangar Takli from January 2014 to January 2015. The fishes were immediately photographed and were identified to species level using standard taxonomic viz. Fishes of India, FAO identification sheets, ITIS (Integrated Taxonomic Information System) standard report (http://www.itis.gov), Fish Base (http://fishbase.org) and other reference books such as (Day 1986, Jayaram 2010; Menon 1987, 1992; Talwar &Jhingran 1991).

3. Results and Discussion

During the study a total of 18 species of primary freshwater fishes belonging to 05 orders, 08 families and 14 genera were recorded from the study sites. A fresh water prawn *Macrobrachium rosenbergii* was also recorded during the study. Number of species and their relative abundance is given in Table 1.

Table 1. Ichthyofaunal diversity of Godavari river during January 2014 to January 2015 at Dhangar Takli Tq. Purna Dist. Parbhani.

Sr. No.	Order	Family	Scientific Name	Common Name	Status
1	Cypriniformes	Cyprinidae	*Catla catla (Hamilton,1822)*	Catla	++++
2			*Labeo rohita (Hamilton,1822)*	Rohu	++++
3			*Labeo calbasu* (Hamilton,1822)	Kaloshi	++
4			*Cirrhina mrigala (Hamilton,1822)*	Mrigal	+++
5			*Cyprinus carpio (Linnaeus, 1758)*	Supernus	+++
6			*Puntius ticto (Hamilton,1822)*	Dhebari	+++
7			*Puntius sarana (Hamilton,1822)*	Darai	+++
8			*Ctenopharyngodon idella (Valenciennes,1844)*	Gavtya	+++
9	Osteoglossiformes	Notopteridae	*Notopterus notopterus (Pallas,1769)*	Patola	++
10			*Notopterus chitala (Hamilton-Buchanan, 1822)*	Chitala	++
11	Siluriformes	Bagridae	*Mystus seenghala (Sykes, 1839)*	Catarna	++++
12		Siluridae	*Wallago attu (Bloach&Schneider,1801)*	Balu	++++
13	Perciformes	Cichlidae	*Oreochromis mossambicus (Peters 1852)*	Tilapi	+
14			*Etroplu ssuratensis (Bloch ,1795)*	Paplet	++
15		Channidae	*Channa striatus (Bloch,1793)*	Murrel	+++
16			*Channa punctatus (Bloch,1793)*	Dhokla	++
17		Ambassidae	*Chanda nama (Hamilton, 1822)*	Kachki	++
18	Synbranchiformes	Mastacembelidae	*Mastacembelus armatus (Lacepede,1800)*	Vam	+
19	Decapoda	Palaemonidae	*Macrobrachium rosenbergii*	God Zhinga	+++

++++Most abundant, +++ abundant, ++ less abundant, + rare.

The order Cypriniformes was dominant with 08 fish species (44%) followed by Perciformes 05 (28%), Osteoglossiformes 02 (11%), Siluriformes 02 (11%) and Synbranchiformes with one fish species (6%) (figure.1).Among the recorded fish species, the high abundance of fish species with maximum availability in number was among Cypriniformes, the Cyprinidae contribute (44%) represented with *Catla catla*, *Labeo rohita, Labeo calbasu, Cirrhina mrigala, Cyprinus carpio, Puntius ticto, Puntius sarana and Ctenopharyngodon idella.*

Mystus seenghala and *Wallago attu* theses two species found abundant and throughout the year in Godavari river at Dhangar Takli. Along with these species *Macrobrachium rosenbergii* a freshwater prawn which come order Decapoda found in the month of winter. *Oreochromis mossambicus* and *Mastacembelus armatus* were found rare during the study period. *Chanda nama* found abundant during rainy season.

In our study Cyprinidae family was more dominant. Many researchers reported the strong dominance of Cyprinidae family in their investigations. Kalyankar *et. al.,* (2012) recorded 43 fish species from Lower Dudhana Project at Parbhani District, India. Kadam *et. al*, (2007) observed 23 fish species from Masoli reservoir district Parbhani. Ahirrao and Mane (2000) recorded 32 fish species belonging to 25 genera and 8 families from Parbhani district of Maharashtra. Sakhare (2001) reported 23 species belonging to 07order where Cyprinidae family is dominant with 11 species from Jawalgaon reservoir Solapur district Maharashtra. Mahapatra, D.K., (2003) recorded abundance of cat fish in Hirakud Prakalp, total 43 species were present in which 18 were

commercially important. Rankhamb S.V, (2011) recorded 26 species belonging to 5 order, 7 families and 15 genera from Godavari river at Tq. Mudgal Dist. Parbhani.

The present study is the first ever documentation of Ichthyofauna in Godavari River at Dhangar Takli Tq. Purna Dist. Parbhani**,** Maharashtra state. This study should open a new ways for incoming Ichthyofaunal research. Sustainable fish production by taking appropriate steps for sustaining fish diversity is necessary to conserve these resources.

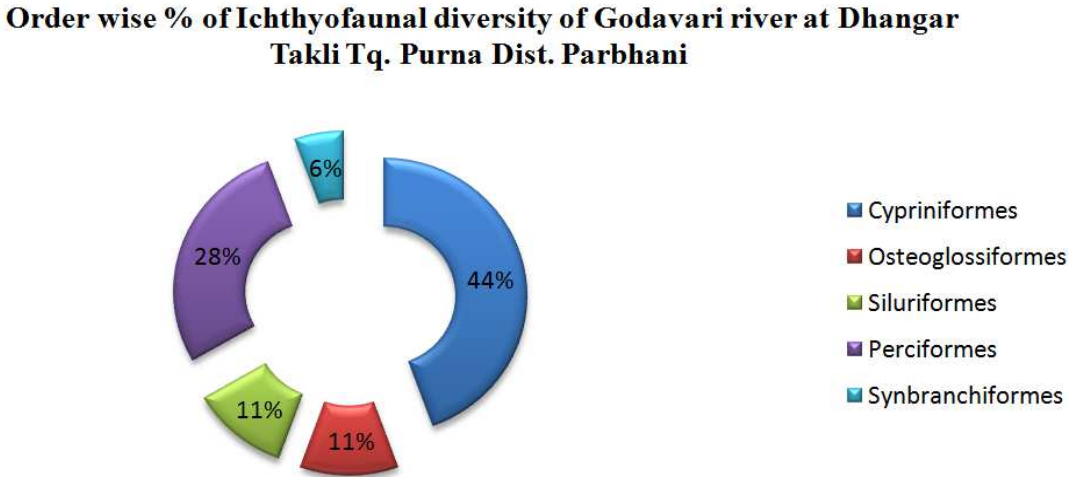

Fig. 1. Diagrammatic representations of the % number contribution of each Order.

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