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Recent Trends in Applied Zoology

Dr.D.S.Rathod
Editor

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Chapter-17

Morphological diversity of freshwater fishes in Manjarariver, Bori, Latur, Maharashtra, India

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Abstract

The study was carried out to analyze the morphological diversity of freshwater fishes At Manjra river Bori, Latur which is located in Maharashtra, India we studied the freshwater fishes on the basis of morphological diversity. During October 2022 to March 2023 During this study period a total of 10 species under 5 Order and 6 Familywere recorded. The most dominant order and family that were recorded was order Cypriniformes and family cyprinidae which occupies 30 % population of total recorded fishes and we have also got the rarest fish that was Murrel which is about 7 % of total fishes. Maximum fish species we have observed in the month of November there are many fisherman who catches the fish for their daily purpose we have collected this information from the local fisherman and of our own observation they use various types of equipments to catch these fishes like nets, traps, tyres, boats etc.

Introduction

The Indian subcontinent has a large number of rivers. In peninsular India, there are large rivers like Godavari, Krishna, Cauvery, Bhima, etc. These principal rivers including their main tributaries have a total length of about 27,359 km. These along with the canals and irrigation channels having a length of 112,654 km, form a network throughout the country and add considerably to the country's capture fisheries resources (Jain, 1986). This area offers a wide variety of suitable habitats to fishes. There are several hundreds of species in the above mentioned area (Jones and Sarojini, 1955). Fishes constitute almost half the total number of vertebrates. Of the 39,900 vertebrate species recognized the world over, 21,723 are living species of fish of which 8411 are freshwater and 11,650 marine species. In the Indian region alone, of the 2500 species, 930 are freshwater inhabitants and 1570 are marine. In terms of habitat diversity, fishes live in almost every conceivable aquatic habitat. It is roughly estimated that India alone harbours 120,000 known and perhaps another 400,000 as yet undescribed species of fauna and flora distributed over the country's 320 million hectares of land (Sugunan, 1995). Considerable studies on fish diversity in different freshwater bodies of India have been carried out during the last few decades.

The Latur District's Manjara River in Bori, which has water throughout the year, was chosen for the fish survey. One of the tributaries of the Godawari River is the Manjara River.. This river originates in the eastern hilly regions of BalaGhat. The Gavalwadi Village of the Beed district is close to the river's mouth. The river flows from the northern Osmanabad district limits and flows through the Latur district before crossing into the Bidar district of Karnataka State and Telangana. Together with Terna, Tawarja, and Gharni, it flows on the Balaghat

plateau. The three other Manjara tributaries that travel across the northern plains are Manyad, Teru, and Lendi.

Study Area

Present study was carried out at Bori located in latur district in between 18°22'25.2"N 76°40'55.4"E **(Fig.1).** This lake was semi-closed perennial irregular shaped water body connected with the branch of the Manjara River with an average depth about 5 to 6 meter in rainy season.

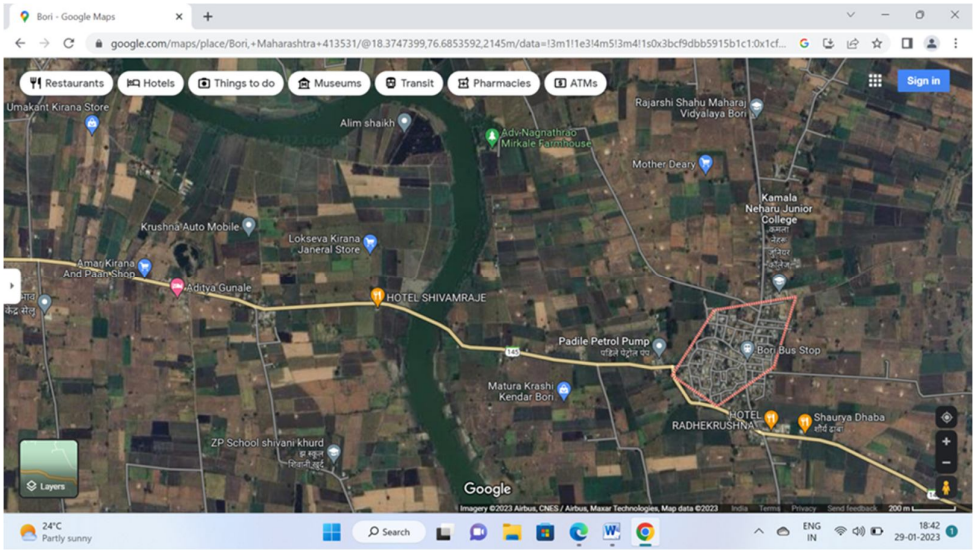

Fig 1: Map of Bori (Manjara river) showing the study area

Material and Methods

Monthly collections of fish were made from the site with the help of local fishermen by fishing nets, during the October 2022 to March 2023. The collected fishes were preserved in 4% formalin and brought to the laboratory for identification. The collected fishes were identified and measurements like total length, snout length and head length were taken, and identified following Day (1981), Yadav (1997), Jayaram (1999), and DattaMunshi and Srivastava (2002).Photography of habitats and fish species is performed by using mobile camera.

Results and Discussion

The fish fauna is an important aspect of fishery potential of a water body. It was observed that the distribution of fish species is quite variable because of geographical and geological conditions.

Table 1:Species source and diversity:

Sr. No	Order	Family	Species	Local Name
1	Cypriniformes	Cyprinidae	LabeoCalbasu	Rohu
2			Catlacatla	Katla
3			Cyprinuscarpio	Bhadga

4			Cyprinuscarpiocommunis	Super
5	Siluriformes	Siluridae	Wallagoattu	GavranBalu
6		Pangasiidae	Pangasiuspangasius	Pankaj
7	Anabantiformes	Channidae	Channastriata	Murrel
8			Channapunctata	China Dokda
9	Cichliformes	Cichlidae	Oreochromismossambicus	Tilapia
10	Anguilliformes	Anguillidae	Anguilla anguilla	Wambat

Diversity of family

A total of 6 families were recorded during the study period. Recorded families and their respective species number and percentage are presented in **Fig 3.** Maximum 40% (4 species) of species belonged to cyprinidae family and 20% species belongs to famiychannnidae, and 40% species belongs to family siluridae, pangasiidae, cichlidae, anguillidae (10% of each).

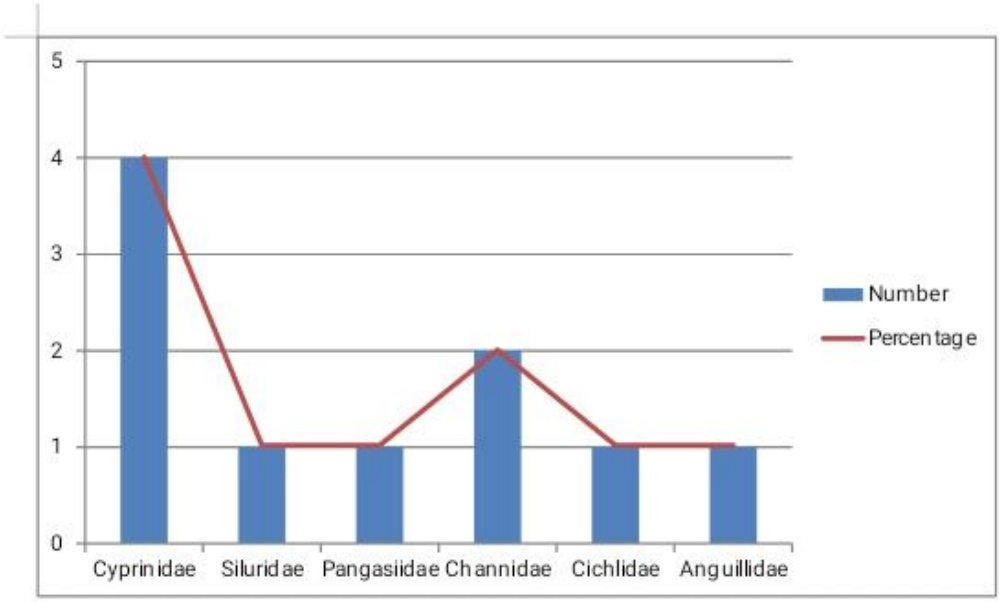

Fig 2: Recorded family and their relative number and percentage in bori, (Manjara river).

Sr.No	Family	Diversity (%)

1	**Cyprinidae**	**40%**
2	**Siluridae**	**10%**
3	**Pangasiidae**	**10%**
4	**Channidae**	**20%**
5	**Cichlidae**	**10%**
6	**Anguillidae**	**10%**

Table 02:- Recorded family and their relative percentage(%) in bori, (Manjara river).

Conclusion:

In the present investigation, 10 fish species belonging to 06 families in eight orders were reported from Manjara River (Table 1). The order Cypriniformes was dominant with four species. Among the 06 families, the family Cyprinidae was dominant with four species followed by Anabantiformes with two species and Siluriformes ,Anabantiforms , Cichliforms with one species each.

The dominance of fish species belonging to the family Cyprinidae was also reported by Ahirrao and Mane (2000), Meshram and Meshram (2005), and Khedkar (2005) from other freshwater bodies. Ramanujan (1994) recorded 16 fish species belonging to five families (Cyprinidae, Cobitidae, Siluridae, Bagridae and Homalopteridae) in Kallar River (Kerala). Jadhav and Bhosale (1996) recorded 13 fish species belonging to two orders (Physostomi and Perciformes) in Bhima River at Pedgaon in Ahmednagar District (Maharashtra). Sakhare (2001) recorded 23 fish species belonging to seven orders in J awalgaon reservoir in Solapur district (Maharashtra). Sakhare and Joshi (2002) identified 28 fish species in PalasNilegaon reservoir in Osmanabad district (Maharashtra). Jayabhaye et al. (2006) recorded 11 species of fishes belonging to five orders in Parola dam, near Hingoli (Maharashtra). Kadam and Gayakwad (2006) recorded 23 fish species belonging to six orders in Masooli reservoir, District Parbhani (Maharashtra).

The present study suggests that Manjara River at Bori region has a rich fish fauna. The availability of a good number of fish species and their production in Manjara River may be related to the suitable ecology of the water body, which provides proper breeding ground for fish. This also suggests that the water parameters of the river are within the favourable limits for fish and fisheries practices. The species diversity reported in the present study shows marked similarity with the earlier studies on fish diversity from the same geo-climatic region of the state.

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