



DIVERSITY OF FRESHWATER FISHES IN CHANDORA DAM AT TAPTI RIVER, DISTRICT BETUL (M.P)

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ABSTRACT:

The present study was conducted to assess the fish biodiversity in a stretch of Tapti River in Madhya Pradesh as this water is used for industry, fishery and local area people. For this purpose A study on The fish diversity of the Tapti River during the rainy season was done samples were taken from June 2022 to September 2022. Cast nets were used for fish sampling, and sampling was done during 9:00 AM to 5:00 PM. The results of the present investigation revealed the occurrence of 13 fish species belonging to 5 orders, 5 families and 11 genuses.

KEYWORDS:

TAPTI RIVER, BETUL DISTRICT, DIVERCITY, FRESHWATER FISH

INTRODUCTION

“Freshwater biodiversity”, at the species level, includes life which is very obviously living in freshwater but also includes life which is adapted to live in or around freshwater habitats. While covering less than 1% of the Earth’s surface, freshwater ecosystems provide humans with a wealth of goods and services, and provide a home for around 10% of the world’s described species, including a quarter of all vertebrates (Strayer and Dudgeon 2010). Asia has the largest fisheries production of all the worlds’ continents and many livelihoods are dependent upon freshwater biodiversity, which provides food security to the poorest of communities. India is endowed with vast and varied resources possessing river ecological heritage and rich biodiversity. Freshwater fishery sites are varied like 45,000 Km. of rivers, 126,334Km. of canals, ponds and tanks 2.36 million hectares and 2.05 million hectares of reservoirs (Ayappan et. al, 2004) . In India 5.5 million people are employed in inland fisheries, 72% of them women (Dugan et al. 2010) . Fish form the highest species diversity among all vertebrates and their loss is one of the world’s most pressing crises as human life and livelihood largely depend on the status of biological resources. The freshwater fish is one of the most threatened taxonomic groups due to their high sensitivity to the quantitative and qualitative alteration in aquatic habitats (Sarkar et al. 2008)

Tapti River and its origin in Multai District Betul (M.P). Multai is located at 21.77°N 78.25°E. The river is supposedly named after the goodness Tapti the daughter of Surya. The Sun God and Chhaya. Tapti is the sister of Shani, Bhadra ,Yamuna and Yama. The history of Tapti river starts with its origin in the Betul district.Tapti river

rises from Multai District Betul of Madhya Pradesh and its flow between two spurs of the Satpura hills across the plateau of Khandesh and then through the plain of Surat to the sea .it has a total length of around 724 K.M. and drainage area of 30,000 square K.M. For the last 32 km of its course at its length Multai is a small town. Tapti river has been supporting the large number of population especially the indigenous people such as Dhodia, and Bhils who are heavily dependent on it.

Material and Methods

Study area:

Fish samples were collected from the Chandora dam period from June 2022 to September 2022 with the help of local fishermen. Chandora dam is a medium irrigation project in Tapi basin. The dam is constructed on river tapi which is near village tainkheda of Betul district of Madhya Pradesh. The dam is located at a distance of 16 km from Multai town (Origin point of Tapi river) on Obedullaganj - Nagpur national Highway (NH-69)



FIG. 1 CHANDORA DAM (LATITUDE: 21°42'22"N, LONGITUDE 78°11'39"E)

COLLECTION OF FISH SPECIES

Monthly survey was conducted from June 2022 to September 2022 and fishes were collected at Chandora dam of the Tapti River with the help of local fishermen using different types of nets namely gill nets, cast nets and dragnets. Some specimens were collected from the daily market.

RESULTS AND DISCUSSION

All animals depend on each other in order to maintain the metabolic process. They need energy for growth and respiration. During the study period different fish varieties have been observed in the Tapti River at Chandora dam in betul District. The results showed that the area was rich in fish diversity. Fishes belonging to study 13 species of 5

families, 6 orders and 11 genus were collected during the course of the study period. Many collected fishes having economic importance are sold after collection in the local fish market. In the present fish diversity study 13 species of 5 families, 6 orders and 11 genus were recorded from the Tapti River at Chandora dam number of catches carried out during June 2022 to September 2022. The members of Order Cypriniformes were dominated by 8. The family Penaeidae was represented by 1 species Fenneropenaeus Indicus, the family Mastacembeleidae was represented by 1 species Mastacembelus armatus, the family Ambassidae was represented by 1 species Parambassis range, the family Bagridae was represented by 1 species and the family Ailiidae was represented by 1 species Clupisoma garua.

TABLE 1: THE FISH SPECIES PRESENTLY ENCOUNTERED FROM CHANDORA DAM AT TAPTI RIVER M.P

S.NO	ORDER	FAMILY	SCIENTIFIC NAME	COMMON NAME
1	Cypriniformes	Cyprinidae	Labeo bata	Bata
2			Labeo Rohita	Rohu (lal pari)
3			Catla-Catla	Catla
4			Hypophthalmichthys Molitrix	Silver Carp
5			hypophthalmichthys Nobilis	Bighead Carp
6			Cirrhinus Cirrhosus	Mirgal Carp
7			Cyprinus Carpio	Common Carp
8			Labeo Fimbriatus	Fringed lipped Carp
9	Decapoda	Penaeidae	Fenneropenaeus Indicus	prawn
10	Mastacembeliformes	Mastacembelidae	Mastacembelus Armatus	Lesser spiny eel(Baam)
11	Perciformes	Ambassidae	Parambassis range	Indian glass fish
12	Siluriformes	Bagridae	Sperata Seenghala	Singhara
13		Aniliidae	Clupisoma garua	Cat fish

TABLE 2: MONTHLY FISH CATCH FROM CHANDORA DAM, JUNE 2022- SEPTEMBER 2022

S.No.	Fish Species	June	July	Aug.	SEPT.
1	Labeo Bata	5	7	6	9
2	Labeo r[Rohita	7	9	8	6
3	Catla-Catla	9	10	14	12
4	Hypophthalmichthys Molitrix	6	8	7	5
5	Hypophthalmichthys nobilis	8	4	7	4
6	Cirrhinus Cirrhosus	4	3	5	5
7	Cyprinus Carpio	8	10	9	16

8	Labeo Fimbriatus	3	4	2	3
9	Fenneropenaeus Indicus	11	8	9	10
10	Mastacembelus Armatus	2	3	0	2
11	Parambassis range	5	7	4	4
12	Sperata seenghala	2	1	0	4
13	Clupisoma garua	5	4	5	7

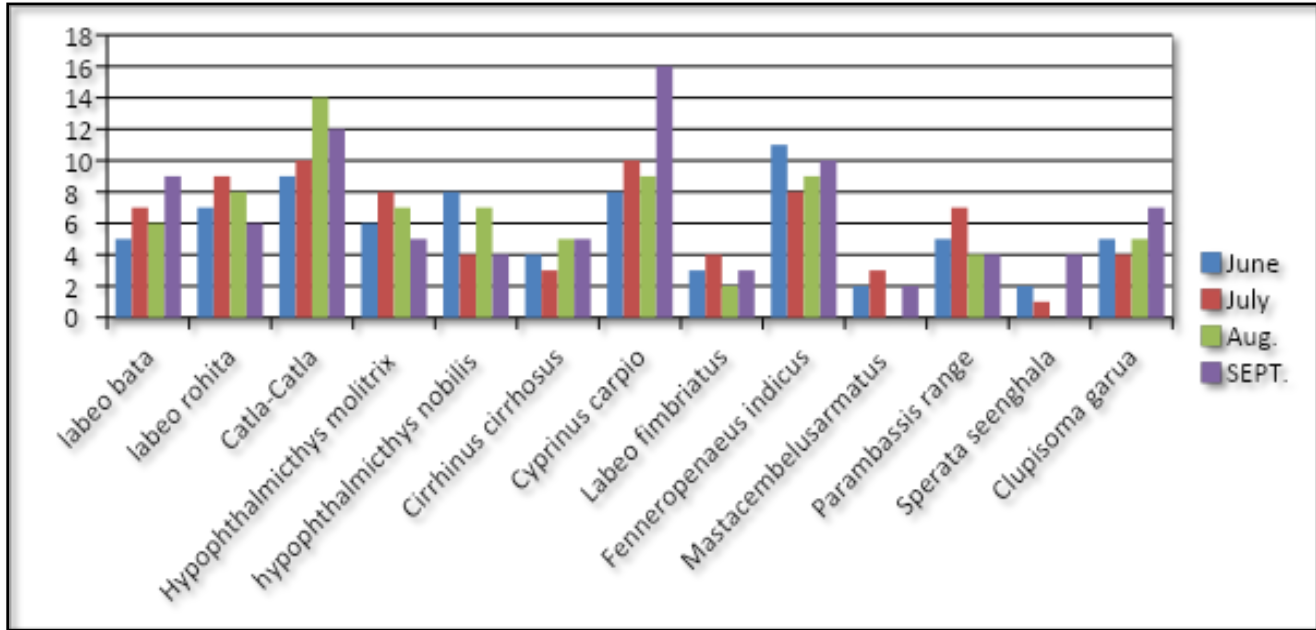






FIG. 2 MONTHLY VARIATION OF INDIVIDUALS FISH IN DIFFERENT MONTHS

The earliest studies on the aquatic biodiversity of the state were carried out by Hora and Nair along the hill stream of Satpura ranges. Dubey, and Verma. Studied the fish fauna of Madhya Pradesh with the representative of the east coast system (River Mahanadi), Gangetic system (Chambal and Betwa) and of West Coast (Narmada) system. In their study of fish fauna of Madhya Pradesh they have reported 104 species and 22 families out of which 50% belong to family Cyprinidae. Karamchandani et al. Also surveyed the fish and fisheries of Tapi River and reported 52 species belonging to 14 families.

	
1.LABEO BATA	2. LABEO ROHITA
	
3. CATLA-CATLA	4.HYPOPTHALMICHTHYS MOLITRIX










	
<p>5.HYPOPTHALMICHTHYS NOBILIS</p>	<p>6.CIRRHINUS CIRRHOSUS</p>
	
<p>7.CYPRINUS CARPIO</p>	<p>8.LABEO FIMBRIATUS</p>
	
<p>9. FENNEROPENAEUS INDICUS</p>	<p>10.MASTACEMBELUS ARMATUS</p>
	
<p>11.PARAMBASSIS RANGA</p>	<p>12.SPERATA SEENGHALA</p>
	
<p>13.CLUPISOMA GARUA</p>	

FIG. 2 THE REPRESENTATIVE FISH SPECIES ENCOUNTERED IN THE PRESENT STUDY.

CONCLUSION

The work has been concluded with future strategies for development of fish diversity of Tapti River at Chandora Dam Dist. Betul (M.P.) India. Recent data regarding Fish diversity of the Chandora Dam, aiming to contribute a better knowledge of the fish diversity 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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