

Fresh Water Fish Species Diversity in Matatila Reservoir Bundelkhand Region, District Jhansi UP, India

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ABSTRACT

The present study was aimed to investigate fish species diversity of Matatila Reservoir Bundelkhand region district Jhansi. Ichthyological study was conducted for twelve months (Feb.2013-Mar.2014). It was found to contain a total 27 species of fish fauna besides planktons, benthos and avian fauna. Various major carps, minor carps, cat fishes and weed fishes were identified. Endangered species like *Notopterus chitala*, *Notopterus notopterus*, *Ompok bimaculatus* and *Eutropiichthys vacha* were also observed.

Key words: Bundelkhand Region, Fish fauna and Fresh water.

INTRODUCTION

Bundelkhand region is considered lobe a premier region of the country, because it has a number of small and large water bodies, reservoirs and two rivers which provided better fisheries and aquaculture prospects. All these water bodies, reservoirs and rivers are rich in fish fauna. Fish farming and fish industry are one of the biggest and fastest growing industries in India. These are large number of fishes which are economically important and useful for millions of human beings who depend on their rich proteinous food, oil and medicines.

The constitution of Matatila reservoir on Betwa river started in the year 1952 and completed 1n 1958. The Matatila reservoir is a shallow man-made reservoir located 69 km away from Jhansi. The earthen reservoir is 45.72 M high. The catchement area is around 20 km² a maximum storage capacity of 1132 million cubic meters. The Matatila Reservoir in district, Jhansi Bundelkhand region has been extensively used for drinking, irrigation, fish culture and generating electric light.

Matatila reservoir lies between latitude 25°5'53.7" (25.0982°) North and longitude 78°22'22.9" (78.373°) East. The climate of Matatila reservoir is very hot in summer season and some time temperature rises up to 50° during summer season and very cold during winter season. There is monsoon rains in summer season only. The average rainfall in Jhansi is recorded at 35-40 cm. The climate is dry in rest of the year.

MATERIAL AND METHODS

The fishes for the present investigation has been collected from the Matatila reservoir by operating cast nets and drag nets every week of the each month and also collected with the help of fisher man during the study. The specimens were brought to laboratory for preservation with 5% formalin solution. They were then identified with the help of standered keys and books according to Srivastava (1980), Mishra (1956) and Day (1875-78), (1958).

Table 1: The observation of fish diversity in Matatila Reservoir.

Type	Order	Division/ Family	Species name	Localname	Status
	Cypriniformes	Cyprini /Cyprinidae			
Majorcarp			<i>Catla catla</i> (Ham.)	Bhukur	Not threatened
Weedfish			<i>Cirrhinus mrigala</i> (Ham.)	Nain	Not threatened
Weedfish			<i>Cirrhinus reba</i> (Ham.)	Raia	Not threatened
Weed fish			<i>Cyprinus carpio</i> (L.in.)	Common carp	
Minor carp			<i>Exomus danricus</i> (Ham.)	Dendua	Not threatened
Majorcarp			<i>Labeo bata</i> (Ham.)	Bota	Not threatened
Majorcarp			<i>Labeo calbasu</i> (Ham.)	karaunch	Not threatened
Minorcarp			<i>Labeo gonius</i> (Ham.)	kursi	Not threatened
Minorcarp			<i>Labeo rohita</i> (Ham.)	Rohu	Not threatened
Weed fish			<i>Oxygaster bacaila</i> (Ham.)	Chal	Not threatened
Minorcarp			<i>Puntius sarana</i> (Ham.)	Darahea	
Minorcarp			<i>Puntius sophore</i> (Ham.)	Sidhari	
	Siluriformes	Siluri/ Siluridae			
Cat fish			<i>Ompok bimaculatus</i> (Bloch. & Schn.)	Jalkapoor	Endangered
Cat fish			<i>Wallago attu</i> (Bl. & Schn)	Padhani	Not threatened
		Siluri/ Bagridae			
Cat fish			<i>Mystus aor</i> (Ham.)	Tengan	Not threatened
Cat fish			<i>Mystus seenghala</i> (Sykes.)	Dariai tengan	Not threatened
Cat fish			<i>Rita rita</i> (Ham.)	Gigra	
		Siluri /Schilbeidae			
Weedfish			<i>Eutropiichthys vacha</i> (Ham.)	Banjhoo	Threatened
Weedfish			<i>Silonia silondia</i> (Ham.)	Silund	Threatened
		Siluri /Heteropheustidae			

Table 1 Continues..

	<i>Heteropheustus fossilis</i> (Bl.)		Singhi	Vulnerable
Cat fish	Mastacembelliformes	Siluri /Mastacembellidae		
	Ophiocephaliformes	Siluri /Ophiocephalidae	Baam	
Cat fish				Not threatened
Cat fish			Saur	Not threatened
Cat fish			Giari kabra	Not threatened
	Perciformes	Siluri / Centropomidae		
Weedfish			Chanda	
	Notopterideformes	Notopteridae		
Cat fish				Eudangered
Cat fish			Moya Patra	Eudangered

RESULT AND DISCUSSION

The nutritional and medicinal value of fishes has already been recognized by Hora and Pilay, 1962; Mishra, 1996. The fish diversity of Yashwant Sager Reservoir, Indore (MP) has been reported by Sharma et al, 2004 and Jhingran, 1982. The fish fauna of Sanjay Sager Reservoir of district Guna (MP) has recognized by Solanki et al, 2011. Diversity of fish fauna from Thodaga Reservoir was studied by Munde et al, 2006. The diversity of Ichthyofauna, taxonomy and fisheries from water of Parbhan, district studied by Ahirro et al, 2000. The fish fauna of Mod Sager Reservoir of Jhabua district has been reported by Dhakad et al, 2008. Fish species diversity in Yashwant Sager studied by Razia et al, 2010. Fish diversity of Gobind Sager Dam of district Lalitpur studied by Vijay Kumar et al, 2014. The author agreed with previous worker, who worked on this topic.

A total of 27 species were identifies which belonged to 6 orders 9 families and 2 divisions viz. Cypriniformes, Siluriformes, Mastacembelliformes, Ophiocephaliformes, Perciformes and Notopterideformes. Fishes of order Cypriniformes dominated species type of both Major and Minor group with 12 species under one family cyprinidae of genus *Labeo* is abundant with 4 species along with genus *Cirrhinus* with 2 species *Puntius* also with 2 species. *Catla*, *Cyprinus*, *Exomus* and *Oxygaster* genus were also identified. It was followed by Ophiocephaliformes with 3 species of genus *Channa*. Four families of order Siluriformes were identified of which 2 species of Siluridae family belonging to genus *Ompok* and *Wallago*, 3 species of Bagridae family belonging to genus *Mystus* and *Rita*. Heteropheustidae family of same order with 1 species and 2 species of Schilbeidae family were also identified. Family Mastacembelliformes and Perciformes were also identified, of which 1 species of Mastacembellidae family belonging to genus *Mastacembellus* and 1 species of Centopomidae family belonging to Genus *Chanda*. Besides Notopeteridae family of order Notopterideformes was observed with 2 species of genus *Notopterus*. Thus overall Major carps dominated the reservoir followed by cat fishes and minor carps.

Due to the greater fecundity of major carps and suitable environmental condition there exists relatively higher number of Cypriniformes. The biodiversity status of some of the species was identified.

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REFERENCES

1. Ahirro S. D and Mane, A. S: The diversity of Ichthyofauna, taxonomy and Fishes from some Fresh water of Parbhani district (M.S.) *J. Aqua. Biol.* **15**: 40-43 (2000).
2. Day, F: Fishes of India; being a natural history of the fishes known to inhabit the seas and freshwaters of India, Burma, and Ceylon. Text and atlas in 4 parts. London. 778-195 (1875-78).
3. Day, F: The fishes of India. Willion and Sons Ltd (1978).
4. Dhakad N. K, Shinde D and Choudhary P: Fish fauna of Mod Sager reservoir of Jhabua District M.P., *Nature Environ. Poll. Tech.* **7**: 159-161(2008).
5. Horra S. L and Pillay T. V. R: In: Hand book on Fish culture in India Pacific Region. *FAO. Fish. Bio. Tech. Paper* **14**: 204 (1962).
6. Jhingran V. G: Fish Fisheries of India. *Hindustan Pub. Corporation India* (1982).
7. Mishra K. F: An aid to be the identification of the fishes of India, Burma and Ceylon. (1956).
8. Munde A. V. and Hiwara C. J: Diversity of fish fauna from Thodaga reservoir, Ahemedpur Taluka of Marathwada Region, Maharashtra State. *Flora & Fauna.* **12**: 54-56 (2006).
9. Razia S, Mudgal L.K and Keshre V: *Narendra Publishing House "Biodiversity and Human Welfare"*. 137-39 (2010).
10. Solanki P, Singh S, Sharma V. I and Mathur R: Fish fauna of Sanjay Sager Reservoir of District Guna (MP). *Biologica. Forum.* **3**: 44-45 (2011).
11. Sharma A, Mudgal L. K, Sharma A. and Sharma S: Fish diversity of Yaswant Sager Reservoir, Indore (M.P). *Him. Enviorn. Zool.* **18**: 117-119 (2004).
12. Yadav V. K, Hemant Kumar, Mukesh and Singh S (2014): Fish diversity of Govind Sager Dam of District Lalitpur (UP). *J. Exp. Zool. India.* **17**(1): 83-86.