

ICHTHYOFAUNAL DIVERSITY OF DALSAGAR LAKE, SEONI (M.P.)

Sushma Tiwari
Guest Lect. Department of Zoology
Govt. P.G. College Seoni (M.P.)

ABSTRACT: The ichthyofaunal diversity is a good indicator of health of aquatic ecosystem. A good piscine diversity represents the balanced ecosystem. Taking this into consideration the ichthyofaunal diversity of Dalsagar Lake Seoni is studied during present investigation. Total 23 species of fishes belonging to 21 genera, 12 families and 5 orders were identified from the lake. The order Cypriniformes was found to be dominant among fishes. The results were discussed with recent literature.

KEYWORDS: Ichthyofaunal Diversity, Dalsagar Lake, Seoni.

INTRODUCTION

The Dalsagar Lake in district Seoni. It is situated 22.08°N 79.53°E. It has an average elevation of 611 metres (2004 feet). The city is 2,043 ft. above sea-level, half-way between Nagpur and Jabalpur. It is bordered by Jabalpur, Narsinghpur and Mandla districts to the north, Balaghat to the east and Chhindwara to the west and the shares its southern boundary with Nagpur (Maharashtra). National Highway No. 7 connects the Kanyakumari-Banaras passes through the district from north to south. Fair weather roads connect the major towns in the district. The narrow-gauge Chhindwara- Nainpur Central Railway passes through Seoni connecting Jabalpur, Nagpur, Chhindwara, Balaghat, Katangi, Keolari and Nainpur. Prateet. Dalsagar Lake is polluted near many anthropogenic activity on its bank. The problems of pollution at many other place, is due to sewage inflow, animal carcasses, plastic bags etc. Lake has always been the most important fresh water resources along the banks of which our ancient civilizations have flourished and most developmental activities are still dependent upon them. Lake water has multiple uses in every field of development like agriculture, aquaculture etc.

Fishes are aquatic creatures, perfectly adapted for life in water. Freshwater bodies comprise variety of fishes. Fishes alone contribute about 2,546 species and the fishes of inland water bodies of Indian subcontinent have

been subject of study since last century (Kalbande et al., 2008). Human beings from time immemorial use fishes for various purposes. Millions of human are suffering from hunger and malnutrition while fishes form rich source of food and provide a meal to tide over a nutritional difficulties of man. Fishes have formed an important item of human diet from time immemorial and are primarily caught for this purpose (Sarwade and Khillare, 2010). In order to maintain sustainable development and stability of ecosystem, surveillance of fish faunal diversity of water bodies is needed. The workers like Kamble and Reddi (2012), Kharat et al. (2012), Galib et al. (2013), Nagabhushana and Hosetti (2013), Chandrashekhar (2014), Biswas and Panigrahi (2014) have contributed in the field of study of fish faunal diversity. Present study is an attempt to study the ichthyofaunal diversity of Dalsagar Lake.

MATERIALS AND METHODS

The present investigation on ichthyofauna is carried out on the Dalsagar Lake Seoni from May 2014 to April 2015. The precipitation occurs in the months of July, August, and September. The Dalsagar lake is very big water lake. The fishes from the Lake were collected with the help of local fishermen. The collected fishes were brought to laboratory, fixed in 5% formalin, cleaned with rectified spirit and preserved in 10 % formalin. The fishes were identified by standard keys of Day (1878), Jayram (1981), Talwar and Jhingaran (1991) and Jhingaran (2005).



Dalsagar Lake Seoni (M.P.)

Table 1. Ichthyofaunal Diversity of Dalsagar Lake Seoni (M.P.)

<u>S.N</u> <u>o.</u>	<u>Order</u>	<u>Family</u>	<u>Genus</u>	<u>Species</u>	<u>Local Name</u>
1	Clupeiformes	Notopteridae	<i>Notopterus</i>	<i>notopterus</i>	Moh
2	Cyperiniformes	Cyprinidae	<i>Catla</i>	<i>catla</i>	Katla
3			<i>Cirrhinus</i>	<i>mrigala</i>	Mrigal
4			<i>Labeo</i>	<i>rohita</i>	Rohu
5			<i>Labeo</i>	<i>calbasu</i>	Kalabense
6			<i>Puntius</i>	<i>sarana</i>	Punti
7			<i>Puntius</i>	<i>ticto</i>	Pothia
8			<i>Cyprinus</i>	<i>carpio</i>	Common carp
9			<i>Hyphalmichthys</i>	<i>molitrix</i>	Silver carp
10			<i>Ctenopharyngodon</i>	<i>idellus</i>	Grass carp
11		Siluridae	<i>Wallago</i>	<i>attu</i>	Padhin
12		Claridae	<i>Clarias</i>	<i>batrachus</i>	Magur
13		Saccobranchidae	<i>Heteropneustes</i>	<i>fossilis</i>	Singee
14		Bagridae	<i>Mystus</i>	<i>aor</i>	Daryai
15			<i>Mystus</i>	<i>seenngala</i>	Tengara
16			<i>Mystus</i>	<i>vitatus</i>	Katuwa
17			<i>Mystus</i>	<i>cavasius</i>	Singti
18	Ophiocephaliformes	Ophicephalidae	<i>Channa</i>	<i>marulius</i>	Padam Saur
19			<i>Channa</i>	<i>punctatus</i>	Sauri
20			<i>Channa</i>	<i>striatus</i>	Saur/Kuddha
21	Mastcabeliformes	Mastacembelidae	<i>Mastacembelus</i>	<i>armatus</i>	Bam
22	Perciformes	Nandidae	<i>Nandus</i>	<i>nandus</i>	
23	Percimocuchia	Anabantidae	<i>Anabas</i>	<i>testudineus</i>	Kabai

RESULTS AND DISCUSSION

In the present investigation various species observed. Total 23 species were identified initially under ten families in six orders at Dalsagar lake Seoni. Family Cyprinidae is most dominant species in Dalsagar lake Results are summarized in Table (1). The members of this family Cyprinidae are distributed in freshwater habitat all over the world. Freshwater carps are included in this order. The economically important species of fishes like *Labeo rohita*, *Catla catla*, *Channa punctatus*, and *Channa marulius* were found numerically more in Dalsagar Lake during the study period. This was due to the release of seedlings and fingerlings of these economically important fishes in lake for commercial fishery practices. During present study period the globally threatened species of fishes like *Mastacembelus* and near threatened species like *Ompok bimaculatus* were observed (IUCN, 2011). The diversity and abundance in fishes of Dalsagar Lake is attributed to the availability of plenty of food material and healthy ecosystem developed over long period of time. It is also may be the result of controlled fishing practices at

Dalsagar Lake. The fishes prefer the optimum ecological factors for their existence and proliferation.

Kong Kab Wai and Ali (2006) have reported fish composition through gill and cast netting with row and column in tropical reservoir in Malaysia. Similar pattern has been followed by Balogun (2005) in a case study of Kangimi Reservoir in Nigeria. In the present study netting used 10 mm to 50 mm mesh size of gill net. Hora and Nair (1941) reported 40 species of fish at Satpura rang, Hosangabad. Karamchandani et al (1967) have reported 77 species in River of Narmada, Rao et al (1991) reported 84 species of Narmada basin in the context of Indian Sagar Maheshwar, Omkareshwar and Sardar Sarover Reservoirs. Vyas et al (2007), Desai (1992), Singh (1995) Dubey (1994), Anon (1971), and Bakawale and Kanhere (2006) have also studied the fish fauna. Shrivastava et al (1970) had given an account about fish fauna of Ken River. National Bureau of Fish Genetic Resources, Lucknow prepares a list of 637 Fish species from different River Basin of the country.

Sakhare (2001) reported the occurrence of 23 species of fishes belonging to 7 orders at Jawalgaon reservoir, Dist. Solapur (M.S.). The order Cypriniformes was reported to be the dominant in terms of number of species. Sarwade and Khillare (2010) reported the 60 species of fishes belonging to 15 families and 36 genera during their study on Ujani wetland (M.S.). Kamble and Reddi (2012) reported the occurrence of 10 species of fishes belonging to 5 orders and 6 families.

Kharat *et al.* (2012) had recorded 51 species of fishes belonging to the 14 families and 35 genera during their study on Krishna River at Wai (M.S.). Jayabhaye and Lahane (2013) observed the 21 species of fishes belonging to 6 families and 13 genera during their study period on Pimpaldari tank, Dist. Hingoli (M.S.). Our findings are corroborating with observations of Sakhare (2001), Sarwade and Khillare (2010), Kharat *et al.* (2012) and Jayabhaye and Lahane (2013).

CONCLUSION

It is concluded that the Dalsagar Lake have high ichthyic diversity with good economic potential. To conserve and maintain the ichthyic diversity, further need to assess water quality, and anthropogenic activities to this Lake should be controlled. To maintain the richness of aquatic ecosystem continuous monitoring of Lake is needed.

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