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STUDY OF FISH FAUNAL DIVERSITY OF CHINCHOLI TANK, TAL. SANGOLA DIST. SOLAPUR (M.S.)

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ABSTRACT
Fishes are the important factors of any aquatic ecosystem which represents various levels of ecosystem. Fishes are herbivores, primary carnivores and secondary carnivores playing different roles in the ecological niche. Fishes maintain economics of tank by their controlled productivity. Taking this into consideration fish faunal diversity of Chincholi tank, Sangola, District Solapur (M.S.), India, is studied during present investigation. Chincholi tank is the medium sized water reservoir with good varied ecosystem. During present investigation 19 species of fishes are identified. Among all the fishes, fishes belonging to order Cypriniformes are predominantly found in the Chincholi tank. Results are discussed with recent literature.

KEYWORDS: Cypriniformes, Chincholi Tank, Fish Diversity.

INTRODUCTION

Fishes are used by human being in different forms from time immemorial. Millions of human beings suffer due to hunger and malnutrition, and fishes form rich source of food and provide good staple food to tide over the nutritional need of man. Fish is rightly considered as the "poor man's diet". It costs much less in comparison to its food value. It is an almost zero carbohydrate food, good for diabetes and other such patients. Fish is a rich source of protein, vitamins and minerals. A special feature of fish flesh food is content of vitamin B12, which is almost absent in plant food and also a good source of calcium and vitamin A. Fish flesh also contains measurable amount fat. Fishes have formed an important item of the human diet from time immemorial and primarily caught for this purpose (Sarwade and Khillare, 2010).

Reservoirs management strategy takes into account the prevailing environmental varieties and it comprises both capture and culture fisheries norms, Indian reservoir are spread over various geoclimatic regions and their drainages represent different types of catchments area. Besides, the varying design and purpose of dams make the reservoir different in their hydrographic and morphoedaphic characteristics (Kharat *et al*., 2012). All these diversities frustrate the efforts of evolve a common management strategy that can be universally applied to Indian reservoirs. Various workers have carried out research on diversity of fishes across the globe. Some of the prominent workers are Kumarat and Jawale (2004), Mahajan (1961), Menon (1988), Mohanta and Subramanian (2001) and Padmavati and Durgaprasad (1997).

MATERIALS AND METHODS

Present investigation of piscine studies is carried out on Chincholi tank, Sangola, District Solapur (M.S.), India during January 2015 to December 2016. The Chincholi tank is situated in District Solapur (M.S.) north east of Sangola city. It is located along Sangola Mahud roadway, 4 km away from Sangola. Chincholi tank is located at 17^0 15" 4' to 17^0 24"5' along North latitude and 74^0 49" 5' to 75^0 15" 9' along East longitude. The Chincholi Tank is constructed in 1966 for irrigation purpose. The Chincholi tank on the local nala coming from Ekthpur Village. It is an Earthen Dam maximum height of dam 15.24 Mts. The tank is surrounded by agriculture fields and town Sangola. The average rainfall at the Chincholi tank is 570 mm. Temperature ranges from 22.0 C to 39.50 C climate is hot and dry in summer, cold in winter. The fishes were collected with the help of local fisherman, brought in the laboratory and preserved in the 10% formaline. The fishes were identified with the help of standard keys of Talwar and Jhingran (1991) and Jhingran (2005).

RESULTS AND DISCUSSION

During present investigation 14 species of fishes were identified from the Chincholi tank (Table-A). Freshwater carps are found in abundance in the Chincholi tank. Order cypriniformes is found to be dominant among the fish species. Members of this family are found in abundant in freshwater habitat. Order cypriniformes is represented by 5 species of fishes. Cat fishes are observed in abundant next to freshwater carps. Cat fishes are identified by pair(s) of barbels. They are included in the order siluriformes. There are 4 species of fishes found in Chincholi tank belonging to order siluriformes.

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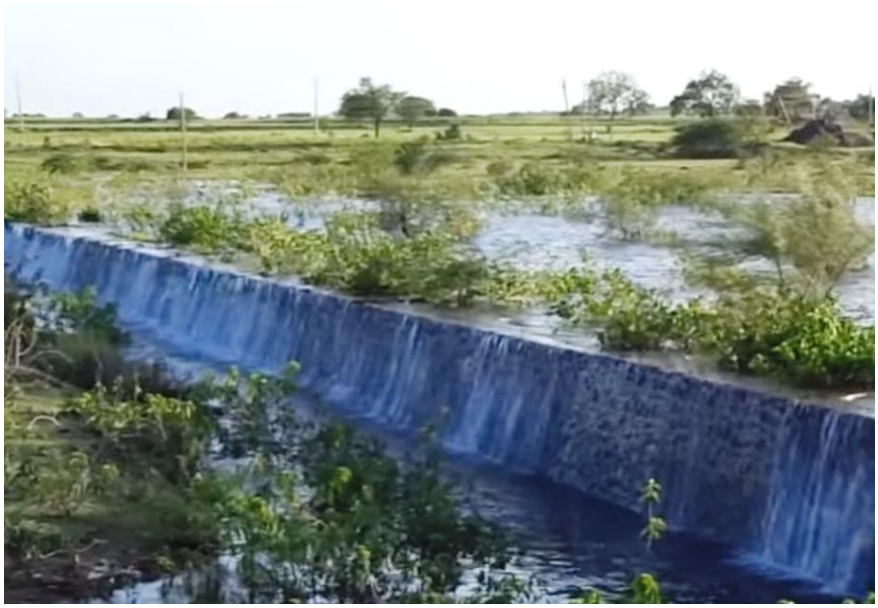

Figure 1. Chincholi tank, Sangola, District Solapur (M.S.), India

Figure 2. Satellite image of Chincholi tank, Sangola, District Solapur (M.S.), India.

Economically important fishes like *Labeo rohita*, *Catla catla*, *Tilapia mossambica* are found numerically abundant. Economics of Chincholi tank is maintained through fishing activities. For this purpose seedlings and fingerlings of economically important species of fishes are released each year before the monsoon in the tank. From present investigation it is clear that ecological conditions of Chincholi tank favours the growth and reproducing abilities of fishes.

Similar observations of fish diversity is observed by Nikam *et al.* (2014), Kharat *et al.* (2012), Hiware and Jadhav (2001) and Sakhare (2001). Results of present investigation are in good agreement with results of these workers.

Table A: Fishes observed at Chincholi tank during January 2015 to December 2016

Order	Zoological Name	Fin formula
Cypriniformes	*Catla catla* (Hamilton 1822)	D. 18; P1. 20; P2. 9; A. 8
	Labeo rohita (Hamilton, 1822)	D. 1516; P1. 16
	Puntius sarana (Hamilton, 1822)	D iii iv 8; A iii 5; P i 14
	Ctenopharyngodon idella (Howes, 1981)	D. 3/7, P1. 1/17, P2. 1/8, A. 3/7
	Tor khudree (Hamilton, 1822)	D. 12(3/9); P. 19; V. 9; A.7-8(2-3/5), C. 19; L. 1.
Siluriformes	*Mystus seenghala* (Sykes, 1839)	D. I/7; P1.I/9; P2.I/5; A.11-12.
	Clarias batrachus (Linnaeus, 1758)	D 70-76; A 45-58; P I 8-11; V 5
	Ompok bimaculatus (Jayaram, 1977)	D 4; A ii-iii 57-58; P I 12-14; V 7
	Wallago attu (Day, 1878)	D 5; A iii 74-93; P I 13-15; V i 79
Ophiocephali formes	*Channa marulius* (Hamilton, 1822)	D 45-55; A 28-36; P 16-18; V 6
	Channa striatus (Bloch, 1794)	D. 42-46; P1. 15-17; P2. 6; A. 24
Osteoglossi formes	*Notopterus notopterus* (Pallas, 1769)	D. 7-8; P1. 15-17; P2. 5-6; A. 99-104.
Perciformes	*Glossogobius giuris* (Koumans, 1953)	D. VI 8-9, P1. i 16-21, A. I 7-8
	Tilapia mossambicus (Jones & sarojini,1952)	D. XV-XVI 10-12, P1. 14-15, P2. I 5 A. III 10-11

D- Dorsal, A-Anal, P1- Pectoral, P2- Pelvic and V- Ventral.

CONCLUSION

During present investigation 14 species of fishes are identified from the Chincholi tank. Observed fishes belong to 5 orders and 13 genera. The tank exhibit good biodiversity of fishes this reveals that there is sustained enrichment of aquatic ecosystem which favours growth and reproduction of fishes.

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