

A PRELIMINARY SURVEY ON ICHTHYOFAUNA OF CHICKALINGDALLI TANK (FRESH WATER BODIES), CHINCHOLI TALUK, KALABURAGI DISTRICT

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ABSTRACT

A preliminary survey of ichthyofauna of Chickalingdalli tank, Chincholi taluk, Kalaburagi district, Karnataka was undertaken from January 2018 to March-2019. During the study occurrence of twelve fish (12) species belonging to 3 orders were identified. Order Cypriniformes was dominant with 7 species, *Labeo rohita*, *Catla Catla*, *Puntius sophore*, *Puntius sarana*, *Tor Mussullah*, *Cirrhinus mrigal*, *Ctenopharyngodon idella* followed by Siluriformes order with 4 species *Mystus seenghala*, *Ompak bimaculatus*, *Wallago attu*, *Channa striatus* and Osteoglossiformes with one species *Notopterus notopterus*

KEYWORDS: Fish, Fauna, Chicka Lingdalli Tank

INTRODUCTION

India is having a rich source of inland water bodies in the form of rivers, lake, and reservoir. The reservoir is constructed by impounding the river system. The reservoirs are constructed effective utilization of water for irrigation, drinking, power generation, and flood control. Reservoir fishery in India is also imported from the socioeconomic viewpoint, as it has the potential of providing employment about two million peoples (Khan, 1992). The total area under the reservoir in India is 3.1 million hectares. This includes 19000 small reservoirs with the total water surface area of 14, 85,557 hectares and about 180 medium and 56 large reservoirs of 5, 57,541 and 11, 40, 268-hectare area respectively (Atul Humble *et al.*, 2014)

Karnataka, the eighth largest State in India, is situated on the western edge of the Deccan plateau. The climate and physiography of the region make the state one of the most important in the country with regard to water resources. Total 74 reservoirs in Karnataka state cover an area of 2, 28,657 ha among them, 46 belong to the category of small reservoirs, (< 1000 ha) with a water spread area of 15, 253 ha, 16 medium reservoirs have water spread area of 29, 078 ha and the large reservoirs (> 5000 ha) over 1, 79, 556 ha. Among the small reservoirs, those less than 500 ha outnumber the rest. Thus, Karnataka has 4, 37,292 ha of water spread area under different categories of man-made impoundments. Large reservoirs constitute 80% of the total area, followed by the medium (13%) and small (7%) ones. A large number of studies covering a wide variety of ecosystems and organisms suggest that species richness tends to vary strongly with ecosystem production and habitat heterogeneity (Rosenzweig M.L, 1995) (Kumar Naik A. S *et al.*, 2013). Biodiversity is manifested at all levels

of bio-organization from cell to ecosystem and refers to enumerable kinds of living organisms inhabiting terrestrial, marine and freshwater ecosystems (Ambast R. S *et al.*, 1994) (Kumar Naik A. S *et al.*, 2013).

The present study was an attempt to high light the fish fauna of Chicka lingdalli tank. The objective of the study is to make a database of Ichthyofauna of the tank for researcher, financial agencies and fisherman.

MATERIALS AND METHODS

The Karnataka State Forest Department notified the forest on November 28, marking another step by Karnataka to conserve prime wolf and hyena habitat of Chincholi forest spread across Gulbarga (Kalaburagi) and Yadgir districts. It will be named as the 'Chincholi Wildlife sanctuary'.

The Forest department has issued a notification exercising its power under Section 26 A (b) of Wildlife Protection Act 1972. The forest, adjoining Andhra Pradesh according to the notification, is necessary to be protected as a wildlife sanctuary, due to its unique features. It deserves to be defined as an ecologically sensitive area (Deccan Herald. 2011).

Chickalingdalli Tanda comes under Shadipur Panchayath. Shadipur forest block comprises of 169.04 ha. The total area of the Chickalingdalli tank is approximately 106 Acres (Figure 1). The main source of water is rainwater and from surrounding dams. Average annual rainfall observed is about 750 mm and the mean daily temperatures for the same period ranges from 19 °C in winter (November-December) to over 40°C in summer (March-June) (Manjunath *et al.*, 2014).

Fishes collected from different selected localities with the help of local fisherman using variety types of nets (Figure 2) from January 2018 to March 2019. On the field, the photography has been done before preservation, since formaldehyde decolorizes the fish color on long preservation. The fishes collected and fixed were labeled giving serial numbers exact locality from where collected, date of the collection spots where ever possible. Identification was done based on keys for fishes of the Indian subcontinent (Day 1958; Jayaram; 1981; Jayaram 1999; Talwar and Jhingram 1991). The classification was carried on outlines of (Day1889), (Jayaram 1961), (Jayaram 1981).



Figure 1: Study Area



Figure 2: Field Photography

Table 1: Fish Species Recorded in the Study Area

SI No	Order	Cypriniformes
1	Family:	Cyprinidae
	Species:	<i>Catla catla</i>
		<i>Labeo rohita</i>
		<i>Ctenopharyngodon idella,</i> <i>Cirrhinus mrigala</i>
		<i>Puntius sophore</i>
		<i>Puntius sarana sarana</i>
		<i>Tor mussullah,</i>
2	Order	Siluroforms
	Family:	Bagridae
	Species:	<i>Mystus seenghala</i>
	Family:	Schilbeidea
	Species:	<i>Ompak bimaculatus</i> <i>Wallago attu</i>
	Family:	Channidea
	Species:	<i>Channa striatus</i>
3	Order	Osrtioglossiformes
	Family:	<i>Notopteridea</i>
	Species:	<i>Notopterus notopterus</i>

RESULTS AND DISCUSSIONS

The results of the present investigation confirmed the occurrence of (12) twelve fish species in the study area. The distribution of fish species is quite variable because of geographical and geological conditions.

The fish species found in Chickalingdalli tank are in Order Cypriniformes with 7 species, *Labeo rohita*, *Catla*

Catla, *Puntius sophore*, *Puntus sarana*, *Tor Mussullah*, *Cirrhinus mrigal*, *Ctenopharyngodon idella* followed by Siluriformes order with 4 species *Mystus seenghala*, *Ompak bimaculatus*, *Wallago attu*, *Channa striatus* and Osteoglossiformes with one species *Notopterus notopterus* (Table: 1).

The results of the present investigation confirmed the occurrences 12 species belong to 3 order Cypriniformes order was dominated with 7 species, followed by siluriformes with 4 species, followed by order osteoglossiformes with 1 species.

Some economically important Indian major carp of *Labeo rohita*, *Catla catla* and *Cirrhinus mrigala* were found in much abundance. From several decades, fishing has become a major economical industry, due to several uses of fisheries resources. Anthropogenic activities are disturbing the eco-physiology of the aquatic ecosystem.

Since the fish fauna in this region also supports the livelihood of several economic classes there is an urgent need to understand the conservation priorities and to design and implement conservation action plans.

CONCLUSIONS

Being one of the important reservoirs of Chincholi taluk, it supports a variety of fish fauna. The fish fauna is under threat as a result of several anthropogenic activities. Sand mining is one of the stretches of the tank, which is the determining factor for habitat destruction leading to the loss of habitat and breeding grounds of several fish species. Deforestation, overfishing and washing the containers, etc, causes mortalities and health hazards to fish fauna.

Therefore, it is a need to impose laws and bring awareness among the people towards the conservation of fish biodiversity.

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