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# Food and feeding of *catla catla* (Hamilton) from waterbodies around Ambajogai City, M.S., India

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**ABSTRACT**

The food and feeding habits of Catla (*Catla catla*) were examined between June 2012 and May 2013. Rotifers formed the main item of gut contents forming 25.7 per cent.Cladocerans were next in the order of dominance forming 21.2% per cent in the gut contents of *Catla catla*. Bacillarophyceae formed 18.7 per cent of the gut contents. Myxophyceae formed 14.3 per cent of the gut contents of *Catla catla*. Aquatic insects formed 8.4 per cent and were represented by Gryllus and mosquito larvae. Miscellaneous items and mud contents formed 4.2 and 4.5% respectively

***Key words :*** *Food and feeding, Catla Catla, Freshwater carp.*

## Introduction

Food is the most important and vital factor for the growth and survival of all animals. The food and feeding habits of different fishes vary from season to season even within a day (Keast and Webb, 1966). Different fishes consume different types of food items. It plays an important role in the growth, migration and spawning behaviour of the fish. As the nature of food depends to a great extent upon the nature of environment, the problem is interesting from specific, as well as ecological point of view (Bhuiyan *et al.*, 2006). The study of the food and feeding habits of freshwater fish species is a subject of continuous research because it constitutes the basis for the development of successful fisheries management programme on fish capture and culture (Oronsaye and Nakpodia, 2005).

Studies on the food and feeding habits of different Indian freshwater fishes have been made by different workers. Bhatt (1971) studied specimens of Mystus vittatus collected from Aligarh fish market and observed insect larvae, copepods, daphnids, rotifers etc in their gut. The study on the biology of *Pseudeutropius taakree* from Nagarjunasagar reservoir of Andhra Pradesh shows the fish is carnivorous (Ramakrishniah, 1983). Serajuddin *et al.* (1998) recorded the food and feeding habits of *Mastacembelus armatus*. Reddy (1980); Rao *et al.*, (1998); Dutta (1994) and Bais *et al.* (1994) conducted the study on food and feeding habits of *Channa spp.* Kumar *et al.* (2007) studied the food and feeding habits of *Catla catla* from Daya reservoir of Rajasthan. Padmakumar *et al.* (2009) reported the food and feeding behaviour of the golden catfish, *Horabagrus brachysoma*. Sakhare (2010) studied food and feeding habits of common carp,*Cyprinus carpio* from water bodies around Ambajogai. Arthi *et al.* (2011) conducted the study on the food and feeding habits of *Ompak bimaculatus* and *Ompak malabaricus* from river Amaravathy, Tamil Nadu. Basudha and Vishwanath (1999) have given a report on the food and feeding habits *of Osteobrama belangeri* from Manipur. Mondal and Kaviraj (2010) studied the feeding and reproductive biology of *Gudusia chapra* in two floodplain lakes of West Bengal. Kanwal and

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Pathani (2012) described the food and feeding habits of hill stream fish, *Garra lamta* from some tributaries of Suyal river of Uttarakhand. This paper deals with the food and feeding habits of *Catla catla*. No such type of work has been done in this region.

*Catla catla* (Fig.1) is one of the Indian major carps. It is a fast growing species among the Indian major carps. Catla grows to a length up to 45 cm, weighing more than a kilogram in one year and attains 2.2 kg and 6.5 kg weight at the end of second and third years respectively. It is grown in polyculture, most commonly with mrigal (*Cirrhina mrigala*), and rohu (*Labeo rohita*). It matures in the second year. It breeds naturally in rivers during the rainy season, though artificial propagation by hypophysation is possible.It is distributed throughout India, Pakistan, Nepal, Bangladesh and Thailand.

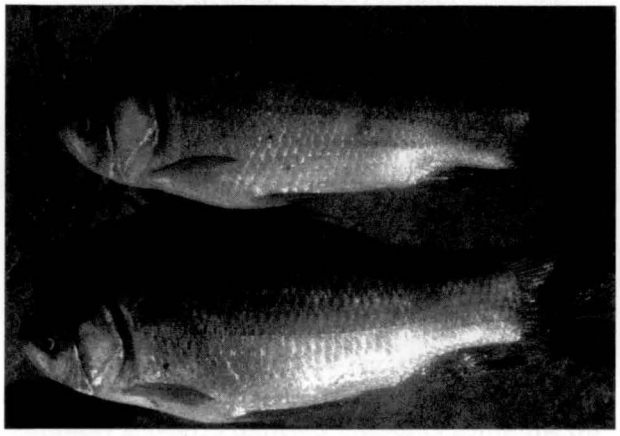

**Fig. 1.** *Catla catla*

## Materials and Methods

For the present study, a total of 100 live specimens of *Catla catla* were collected from June 2012 to May 2013. The samples were collected from tanks and reservoirs around Ambajogai town by using gill net once in every month. Just after collection, 10% formalin solution was injected into the guts of all fishes. The specimens were finally preserved in 10% formalin. Individual food items were separated in petridishes. The food items were identified under the microscope. Gravimetric method (Hynes, 1950) was followed for estimation of the percentage composition of different food items.

## Results and Discussion

Various food items and their percentage composition found in the gut of *Catla catla* are depicted in Table 1. Rotifers formed the main item of gut contents forming 25.7 per cent. The major genera of rotifers in the diet of the species *were Brachionus spp, Filinia logiseta, Keratella tropica, Lecane bulla, Trichocera orecelus.* Cladocerans were next in the order of dominance froming 21.2% per cent in the gut contents of *Catla catla*. This group was mainly represented by *Ceriodaphnia cornuta, Moina micrura, Alona rectangular* and *Indialona ganapati.* Bacillarophyceae formed 18.7 per cent of the gut contents. This group was represented by *Cymbella turgid, Fragilaria sp, Melosira sp, Navicula mutica, Synedra ulna* and *Nitzchia sp.* Myxophyceae formed 14.3 per cent of the gut contents of *Catla catla*. Among the myxophyceae, the abundant genera were *Microcystis areuginosa, Nostoc spp, Oscillatoria chlorine, Phormidium sp* and *Anabaena spp.* Aquatic insects formed 8.4 per cent and were represented by Gryllus and mosquito larvae. Miscel-

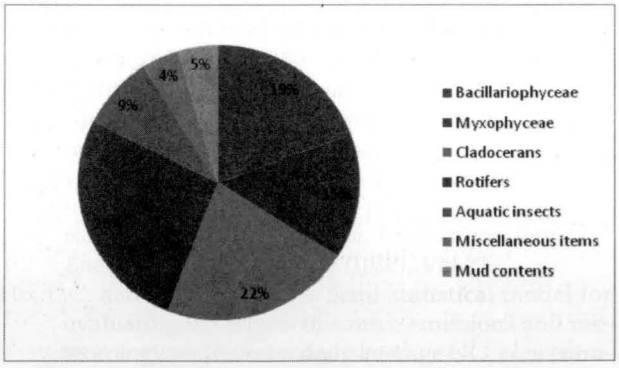


**Fig. 2.** The percentage of food composition in the stomach of *Catla catla*

**Table 1.** The list food items of *Catla catla*

**Bacillariophyceae :** *Cymbella turgid, Fragilaria sp, Melosira sp, Navicula mutica, Synedra ulna, Nitzchia sp.*
**Myxophyceae :** *Microcystis areuginosa, Nostoc spp, Oscillatoria chlorine,c Phormidium spp, Anabaena sp.*
**Rotifers :** *Brchinous spp, Filinia longiseta, Keratella tropica, Lecane bulla, Trichocera orcelus*
**Cladocerans :** *Ceriodaphnia cornuta, Moina micrura, Alona rectagula, Indialona ganapati*
**Aquatic insects** : Gryllus, Mosquito larvae
Miscellaneous items and mud

laneous items and mud contents formed 4.2 and 4.5% respectively.

Hora and Pillay (1962) reported *Catla catla* plankton and detritus feeder. Kumar *et al.* (2007) catggorised the fish as planktivorous. The finding of the present study are in confirmation to the observations of Hora and Pillay (1962) and Kumar *et al.* (2007).

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