

## 5. Biodiversity of Zooplankton in Jewali Water Tank of Lohara Taluka Dist. Osmanabad (MS) India

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### Abstract

Jewali Water tank situated in the Norath Jewali Lohara taluka of Osmanabad District. About 15k.m. away from Lohara Taluka. The qualitative analysis of zooplankton are free swimming microscopic animals. They play Important role as a food for aquatic fauna. The water is used for agricultural land, domestic activities, drinking, washing, fish culture purpose. The study of Biodiversity of zooplankton period during a year June 2017 to May 2018. A total 17 species have been found on which 09 species of Rotifer, 05 species of cladocera, 03 species of copepoda have been found in Jewali water tank.

**Keyword :-** Biodiversity, Zooplankton, Jewali water tank.

### Introduction

The productivity of the water body generally maintained by the plankton of free swimming microscopic animal. They play important role as a food for aquatic fauna we may even consider them as the most numerous animal on plant, the fresh water communities that is zooplankton macrophytes and macro invertebrate are sensitive to environment factors. Biodiversity is the variety of organisms considered at all level and includes. Genetic & Ecosystem variations. Which comprise arrays of species, genera and families as well as communities of organism within Particular habitats and the physical condition under which they live because of intensive exchange of nutrients between their water columns and sediments. Shallow lakes are sensitive to eutrophication. Biological studies have been increasingly employed in monitoring water quality in lake or water tank phytoplankton, Zooplankton, Macrophytic plant & fishes were used considerable in biomonitoring of lake ecosystem. These studies reveal different group of zooplankton have their own peak period of density. Which is also affected by local environmental conditions prevailing at the time. The zooplankton play on Important role in the earth deflection and monitoring the pollution of water. Zooplankton

  
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diversity and there ecology greatly contribute to as understanding of the basic nature & several economy of aqua's habits (Singh & Mahajan 1987) Zooplankton are consumed by a variety of secondary consumers including commercially important group of crustaceans and fishers. There by playing an ecological integral role in energy flow. The biodiversity of Zooplankton, study was carried out during the period of a year June 2017 to May 2018 in a Jewali Water Tank.

#### Material and Method

The Jewali water tank is situated in the North Jewali earth quick village of Osmanabad district this water tank constructed by Man Made on a local Nala. The Zooplankton water sampling a monthly basis was carried out for a period from June 2017 to May 2018. The water sample were collected using plankton net made by bolting nylon cloth (Mesh size 25 um) by sieving a known volume of water sample the zooplankton were collected between 9.00 to 11.00 am. Zooplankton were preserved in 4% Formalin which as best from continuous structure in 100ml bottles the sample were studied from the diversity of zooplankton under key and Literature. Tonapi (1980), Koderkar et, al(1988), 2006, as a basic reference battish (1992), and identification of zooplankton done both the help of key of pennak (1978), Apha (1991)

#### Result & Discussions

Table. 1 Biodiversity of Zooplankton in Jewali water tank, Lohara Taluka.(MS) india June 2017 to May 2018

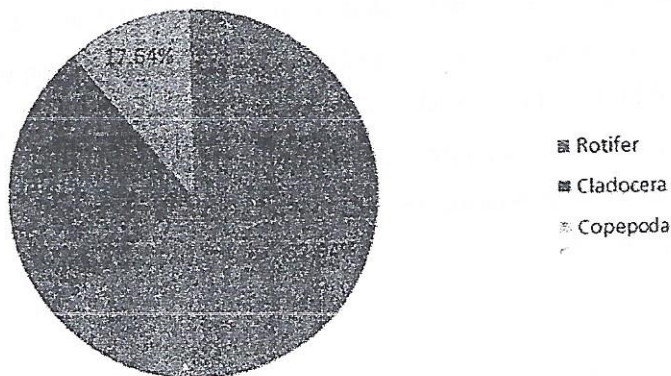
| Sr. No | Group     | Name of species  |
|--------|-----------|--|
| 1      | Rotifer   | 1.Branchionus Calyciflorus<br>2. Branchionus forficula<br>3. Branchionus Falcatus.<br>4. Colourella obtuse<br>5. Filinia Longiseta<br>6. Hexarthramira<br>7. Keratella procura<br>8. filina Sps<br>9. Notholea acuminate |
| 2.     | Cladocera | 1. Moniodaphniamacleayli<br>2. Daphnia Cannata<br>3. Moin abbranchita<br>4. Diphrosoma Sps<br>5. Chlydonus sphaericus  |
| 3.     | Copepoda  | 1. Cyclops Sps<br>2. Mesocyclopus Sps  |

  
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3. Nauplius Larva

Graph 1 : Graphical Study of Biodiversity of Zooplankton in Jewali water tank, Lohara Taluka. (MS) India June 2017 to May 2018



During the study period of investigation total zooplankton having 3 group. 17 species occurrence of zooplankton in Jewali Water tanks of Lohara Taluka. The productivity of the water body generally maintained by the plankton. After investigation the water body contain zooplankton belonging to the 09 species of Rotifers, 05 species of cladocera and 03 species of copepoda, The zooplankton are maximum in summer season and minimum in rainy season in Jewali water tank. Similar pattern of distribution was also reported by Datta and Sharma(1993), Chandrashekhar and Kondekar (1994). Each group of Zooplankton showed their own maximal and minimal peak. The Rotifers were dominant over than cladoceran and copepoda. Such result are also been reported by various workers in water bodies. Peannk (1944), Alikunhi (1957), Michael (1968), Singh & Sahil (1978)

Zooplankton comprising of Rotifer, Cladoceran & Copepoda are considered to be most important in term of population density, biomass producing grazing and nutrient regeneration in any aquatic ecosystem and the high phytoplankton population and primary production support higher biodiversity of zooplankton in Jewali water tank.


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