



## The Study of Rotifer Diversity in Achler tank Dist. Osmanabad (MS) India

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**Abstract-** The present investigation to the study of Rotifer diversity in Achler tank Dist. Osmanabad(MS) in India. The study were carried out for one year June 2018 to May 2019. Achler water tank is Man made on local nala Achler in Lohara taluka. This water tank has been completed in 1979. It's having maximum height 14-20M & Area 14.71 sq.km. Capacity of storage 0.9mm<sup>3</sup> and full tank level 11.20 m. Achler tank is most important for irrigation. Domestic activity, Drinking & Fish culture purpose. The quantitative analysis of Zooplankton was carried out as a part of the limnological investigation of these Achler water tank. Rotifer were dominant among the total zooplankton population during a one year study. The population of Rotifer was maximum in October to January months. While minimum in the Feb to May months. The result of present occurrence of 15 Rotifer species belonging of to 07 families. The Branchionade was dominant 09 species followed by filiniidae 02 species, Asplanchnidae 01 species, Hexarthridae 01 species, Lecanidac 01 species, Synchronidae 01 Species and Trichocercidae 01 species in Achler tank.

**Keyword :-** Rotifer diversity, Achler water tank

### **Introduction :-**

India is one of the twelve-mega biodiversity countries of the world. Based on a survey of about two-third of the geographical area of the country the ministry of forest and environment reported 77,000 animal species, 6.5% of world. Faun respectively (GOI 2000) of the Global biodiversity. The rotifer commonly called wheel animals or wheel animalcules make up a phylum Rotifer, Rotifer any of the approximately 2000 species of microscopic aquatic invertebrate. Rotifer can be found in many fresh water environment and in moist, soil, where they inhabit the thin films of water that are formed around soil particles. The habitat of rotifer may include still water environments such as lake bottoms as well as flowing water environments, such as river or streams. Because of their very small size and mostly soft bodies. Rotifer are not commonly favored fossilization. Their only hard parts their So was might be preserved in the fossil record but their tiny size make detection a serious challenge (Orstam 1999). Most species 07 rotifer are about 200 to 500 micrometers long. However a few species such as *Rotaria neuptunia* may be longer than a millimeter (Orstam 1999). Rotifer are thus multi cellular creatures who make their living at the scale of unicellular protists. Rotifer present a high diversity in freshwater ecosystem they play an important role in the trophic dynamic

**G.T. Rathod**

and in energy transfer in the aquatic ecosystem. In the respect rotifer study so that this is the first attempt of such type of study as per our knowledge. Achler water tank located at about 48 km. away from Omarga city of Osmanabad district. There is present work to study rotifer diversity during the year June 2018 to May 2019. There is no record available so this work is investigation.

#### Material and Methods :-

Achler tank water sample collected separate plastic bottle monthly for a period a year from June 2018 to May 2019 filtered with the help of boltensilk (200 meshes/cm) conical net, sample were collected especially from comparatively undisturbed part of pollution and its eutrophic condition. Plankton sample were obtained by filtering 50 liters of water through the net for quantitative and qualitative analysis and preserved 4% formalin with a small amount of glycerine for further studies in 100ml plastic bottle. Some live sample were isolated and studied in living condition. The rotifer was observed & taxonomic identification by using key and monographs of Pennalc(1978), Battish (1992) , Kodarkar (1998), Orston (1999) Waggoners Poinar (1993).

#### Result and Discussion :-

Table No. 1 :- Monthlies population of Rotifer in Achler tank

June 2018 to May 2019

Months/ Year	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May
June 2018 to May 2019	11	08	05	08	07	12	12	09	07	11	09	10

Graph No.1

Graphical Study in Monthlies population of Rotifer in Achler tank June 2018 to May 2019

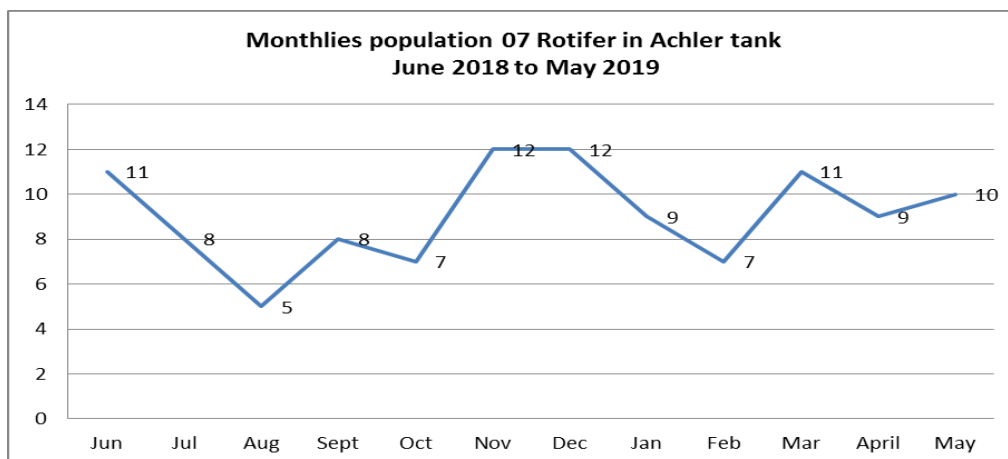


Table No. 2 :- Occurrence of freshwater Rotifer in Achler tank June 2018 to May 2019

Sr.No.	Family	Species
1	Asplanchnidae	1. Asplanchna Sp.
2	Branchionodae	1. Branchionous calyciflorus 2. Branchionous Platulus 3. Branchionous Forficula 4. Branchionous Angularis 5. Branchionous urceolaria 6. Branchionous Caudatus 7. Anuareopsis Fissa 8. Keratella Tropica 9. Keratella ticilensis
3	Filiniidae	1. Filinia longiseta 2. Filinia Apiloensis
4	Hexarthridae	1. Hexarthra Sp.
5	Lecanidae	1. Lecane papuana
6	Synchaetidae	1. Polyarthe raygularis
7	Trichocercidae	1. Tricocera Cylindrical

In the Achler tank the present Rotifer diversity study is species belonging of 07 families. The member by filinidae Branchionodac were dominant 09 species followed by filinidac 02 species, Asplanchnidae 01 species, Hexarthridae 01 species Lecanidae 01 species, synchaetidae 01 species and trichocercidae species were recorded from Achler tank Rotifer were dominant among the total Zooplankton population during a one year study .the population rotifer was maximum in winter season & while minimum in summer months. The observed total Zooplankton population the study a period diversity of Rotifer was found to be influenced by the different water quality and chemical factors Chandrashekar and Kodakar (1995). The higher population of rotifer observed in winter and summer month(Somani 2003), Vankhede and Kulkarni(1998)

#### **Acknowledgement:-**

The authors are grateful thanks to Principal Dr. Umakant Chanshetti, Jawahar Asc. College Andur for their valuable suggestion and helpful criticisms.

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