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### 3. BIO-DIVERSITY II. PLANKTERS OF BELIWAL WATER TANK AT BABHALGAON DISTRICT OSMANABAD, (M.S.) INDIA

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#### **ABSTRACT**

Plankton, according to their quality may be classified as phytoplankton. The study was carried out during period of January 2016 to December 2016. The phytoplankton reported were 5 species of cyanophyceae, 5 species of chlorophyceae or Myxophyceae and 5 species of bacillariophyceae. The more present in summer season.

Key Words : Plankton, Babhalgaon water tank.

#### **INTRODUCTION .**

The Plankton or plankton are these organisms that, because of their size or immobility or both are at the mercy of water movement. The limnologists generally consider these to be tiny forms of life. Plankton includes forms of aquatic bacteria and ultra algae only a few microns in diameter and macroscopic forms of crustacean several millimeters long. Plankton are important components of aquatic systems. They lack both motility attachment devices. They are not commonly found in river. The plankton often serves as indicators of water quality.

The study of Phytoplankton from water has got applied significance as it reflects the potential of aquaculture. The phytoplankton mark of lowest trophic level and estimation of trophic status is essential to evaluate the feasibility of pisciculture in any fresh water body.

Zooplankton are those organisms within the aquatic ecosystem they are intermediators in the food chain. The zooplankton community is a major link in the energy transfer at secondary level of food. The study of zooplankton in view of their composition abundance and seasonal variations help in planning and successful fishery management. Keeping in view above the present study was carried out during winter season 2016.

#### **MATERIAL AND METHOD**

Current study of beliwala water tank Babhalgaon, at 18° 58' N, 76° 02' E. The water samples were collected in small plastic bottles during morning 8.0 O'clock by using plankton net of bolting silk of mesh size 125 micron. The collection samples were fixed in 4% formalin on the spot and then observed and studied under microscope in the laboratory for qualitative purpose. The plankton were identified by using standard literature of Fritsch 1965, Adoni et al. 1985, Biswas 1980, Tonapic 1980, Sarode and Kamat 1984, Cox 1996, Ward and Whipple 1959 and Sreenivas and Duthie 1973 and other standard published literature.

#### **RESULT AND DISCUSSION**

The identified three groups of algae.



The phytoplankton species occurred in the reservoir during year January 2016 to December 2016 is listed in Table No. 1.

During the two year study period phytoplankton occur in three groups (class) in different identify the 5 species 1) Myxophyceae in five species 2) Chlorophyceae in five species and Bacillariophyceae in also five species and observed in one sampling at station .

From myxophyceae, *oscillatoria princeps*, *Scytonema simplex* and *Nostoc Muscumum* dominated the reservoir. The maximum population of myxophyceae was recorded in month of March, April and May 2016 at station . The phytoplankton (-) is absent (++) present and this like (++++ more present. The minimum population in myxophyceae species in *Rivularia-mahria* and *Gloeotrichia indica*. In month of July, September, November and December 2016.

Chlorophyceae was represented by 5 species with dominance of *chlamydomonas eugametos*, *volvox globater*, and *Ulothrix zonata*. This species higher percentage in summer month of February, March, April and May 2016.. The minimum population of chlorophyceae group in two species *pediastrum duplex* and *odogonium nodulosum* during the month of August, September, October and November 2016.

Bacillariophyceae was also more among the phytoplankton assemblage among the reservoir. Their population was maximum in March, April and May 2007 and 2008. It was mainly represented by *pinnularia viridis*, *cyclolella operculata* and *Navicula mutica* species. The minimum population was *cymbella turgid* and *synedra ulna* species during the month of April and May 2016.

The distribution data of various groups of algae reveals that in at stations Chlorophyceae were dominant followed by Maxyphyceae and Bacillariophyceae.

## DISCUSSION

In present study the increased phytoplankton density in summer season (April and May) A total of 15 phytoplankton species were recorded during first and second year of the study. Mishra and Tripathi (2000) reported algae belonging to different group such as chlorophyceae, bacillariophyceae and cynophyceae at different sampling stations of river Ganga at Varanasi. The summer months should higher phytoplankton density followed by winter and rainy season. The lower density during rainy season months may be due to high turbidity, low light intensity, cloudy weather and were water coverage with rains.

Identification of Phytoplankton in Following three Group (class) at Beliwala water tank babhalgaon in January 2016 to December 2016.

- A) Myxophyceae or cynophyceae,
- B) Chlorophyceae,
- C) Bacillariophyceae

TABLE No. 1

Monthly variation of three groups of phytoplankton components at sampling station January 2016 to December 2016 is Beliwala water tank Babhalgaon Dist Osmanabad.



Sr. No.	Class	Species	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	Myxophyceae	1. Oscillatoria princes	++	++	+++ +	+++ +	+++ +	-	-	-	++	-	-	++
		2. Nostoc Musconum	-	++	+++ +	+++ +	+++ +	++	-	-	-	-	++	-
		3. Scytonema simplx	++	++	+++ +	+++ +	+++ +	-	-	-	++	-	-	-
		4. Rivularia mehrai	++	-	++	+++ +	+++ +	-	-	-	-	++	-	-
		5. Gloeotrichia indica	++	++	+++ +	+++ +	+++ +	++	-	-	-	-	-	-
2	Chlorophyceae	1. Chlamydomonas Eugametos	++	++	+++ +	+++ +	+++ +	++	-	-	-	++	-	-
		2. Volvox globater	++	++	++	+++ +	+++ +	++	++	-	++	-	-	-
		3. Pediastrum duplex	-	-	+++ +	+++ +	+++ +	-	-	-	-	++	-	-
		4. Oedogonium Nodulosum	-	++	++	+++ +	+++ +	++	-	-	-	-	++	++
		5. Ulothrix zonata	++	++	+++ +	+++ +	+++ +	++	-	-	++	-	-	-
3	Bacillariophyceae	1. Pinnularia viridis	++	++	+++ +	+++ +	+++ +	-	-	++	-	-	++	-
		2. Cymbell turgid	++	++	++	+++ +	+++ +	++	-	-	++	-	-	-
		3. Cyclotella Operacultra	++	++	+++ +	+++ +	+++ +	++	-	-	-	++	-	-
		4. Navicula metica	-	++	+++ +	+++ +	+++ +	-	-	++	-	-	-	++
		5. Synedra ulna	-	-	-	+++ +	+++ +	++	-	-	++	-	-	-

(-) Absent, (++) Present, (++++) More Present.


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