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**DIVERSITY OF PHYTOPLANKTON IN BHAVTHANA  
RESERVOIR IN AMBAJOGAI DIST. BEED, MAHARASHTRA**

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**ABSTRACT:** *Phytoplankton are also called as microalgae are similar to terrestrial plants in that they contain chlorophyll and require sunlight in order to live and grow . Phytoplankton also require inorganic nutrients such as nitrates, phosphates and sulfur which they convert into proteins, fats and carbohydrates. Phytoplankton is the base of several aquatic food web.*

*The present paper deals with the study of diversity of phytoplankton in Bhavthana reservoir. The present work was carried out during the year June 2014- May2015. The present study showed that there are 15 species of phytoplankton were found , which are belong to Chlorophyceae 7, Cyanophyceae 4, Bacillariophyceae 3, Euglenophyceae 1.*

**Keyword :** *Phytoplankton, Diversity, Bhavthana reservoir.*

**INTRODUCTION**

Phytoplankton are photosynthesizing microscopic organisms that inhabit the upper sunlit layer of almost all oceans and bodies of fresh water on the earth. They are agents for “Primary Production” . They obtain energy through the process of photosynthesis. Phytoplankton are a key food item in both aquaculture and mariculture. Both utilize phytoplankton as food for the animals.

Bhavthana reservoir is located near village Bhavthana, in Ambajogai, Dist. Beed . Its situation is longitude 7617’29” and latitude 1848’ 33” . The total water stock of the reservoir is 5.653 milion cubic meter.

The phytoplankton are richest source of the aquatic animals. In Indian standing water bodies many authors studied phytoplanktons, nutrient supply and productivity as Singh [1999], Sreenivasan [1974], Pandey et al [1990]. The productivity largely dependent on the nutritional status of the aquatic body, workers like Sreenivasan [1970]. Verma [1995]. S. and SahuB.K. [1993], Meshram [1996].

**Material & Method**

During the present study the water samples were collected from the Bhavthana reservoir, Ambajogai , Dist. Beed. Plankton samples were collected with standard plankton net of silk bolting cloth number 25. The amount of water filtered was about 200 liters. The samples collected were concentrated to 950 ml volume and preserved in 4% formaline. Each species of phytoplankton sample were identified under research microscope using suitable keys, standard texts given by APHA [1985] and Tonapi [1980].

**RESULT AND DISCUSSION**

The 15 species of phytoplankton were observed in the Bhavthana reservoir. The phytoplankton assemblage was represented by four classes i.e. Chlorophyceae, Cyanophyceae, Bacillariophyceae, Euglenophyceae. The class Chlorophyceae was represented by maximum genera. It was reported by 7 species, these are Chlorella Sp. Spirogyra Sp. Pediastrum Sp. Cladophora Sp. , Odogonium Sp. , Chlamydomonas Sp. Scenedesmus Sp. The class Cynophyceae was represented by 4 species, these are Nostoc Sp. , Anabaena Sp. , Oscillatoria Sp. , Merismopedia Sp. . The class Bacillariophyceae was represented by 3 species, these are Fragillria Sp. Diatom Sp. , Navicula Sp. . The class Euglenophyceae was represented by 1 species , these are Euglena.

Out of these four classes Chlorophyceae was dominant followed by Cynophyceae followed by Bacillariophyceae and Euglenophyceae [Nandan and Patel 1992, Verma 1995, Singh 1999, Meshram 2005]. Mahadik and Jadhav 2014 worked on algal biodiversity of Ujani reservoir Maharashtra. Giripunde et al 2013 reviewed phytoplankton ecology of freshwater Indian lakes for the better understanding of the phytoplankton distribution. Cyanophyceae growth was recorded during winter season by Gopal et al 1981.

**Table No.1 Diversity of phytoplankton in Bhavthana reservoir in Ambajogai during year June 2014- May 2015.**

Sr. No.	Class	Water Bodies	NO.Species	Name of Species
1	Chlorophyceae	Bhavthana Reservoir	7	Chlorella sp. Spirogyra Sp. Pediastrum Sp. Cladophora Sp. Oedogonium Sp. Chlamydomonas Sp. Scenedesmus Sp.
2	Cyanophyceae	„	4	Nostoc Sp. Anabaena Sp. Oscillatoria Sp. Merismopedia Sp.
3	Bacillariophyceae	„	3	Fragillaria Sp. Diatom Sp. Navicula Sp
4	Euglenophyceae	„	1	Euglena Sp.

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