Think India Journal
ISSN: 0971-1260 Vol-22, Special Issue-31
National Conference ETDAB-2019
Held on 23th & 24th December 2019
Organized by: Deptt. of Botany, Deogiri College, Aurangabad, M.S

Seasonal Variations Of Phytoplankton In Ambalwadi Reservoir At Parli – V.

Munde V.R.
Late, Laxmibai Deshmukh Mahila College, Parli- V.
Dr.varshamunde@gmail.com

ABSTRACT

The present investigation deals with the qualitative information on seasonal variations of phytoplankton in Ambalwadi reservoir for period of one year from June 2018 to may 2019. The samples are collected from the surface water by filtering 100 liters of water through plankton net having a mesh size of 30 m. during investigation 15 species of Phytoplankton's belonged to four classes were identified. This samples are collected from the surface water by filtering 100 liter of water through plankton net having mesh size of 30 m.

INTRODUCTION:-

Phytoplankton plays an important role in the biosynthesis of organic matter in an aquatic ecosystem. It serves for all living organism of water body as food of fishes. Phytoplankton also plays key role in the ecosystem of the environment.

The healthy aquatic ecosystem depends on the abiotic properties of water and the biological diversity of the ecosystem (Harikrishananet.al. 1999). The Phytoplankton and Zooplankton are always inversely proportional in an aquatic environment because the Zooplankton feed on the Phytoplankton.

Keywords: -Phytoplankton, Water quality, Seasonal variations, Ambalwadi reservoir.

MATERIALS AND METHODS:-

Monthly water samples were collected from the Ambalwadi reservoir. The water samples were collected for physicochemical analysis at monthly interval between 8:00 to 10:00am in two liter capacity plastic bottles. This water collection filter by a net made up ofblotting silk net no. 25,sedimentation of Phytoplankton was made in 5% formaldehyde solution, to which little amount of glycerin was also added.

The taxonomic identification of algae was done qualitatively and quantitatively with the help of standard literature and monographs. In present days people are facing many domestic problems and water is one of them. Algae are specific in growing, therefore distributional pattern, ecology, periodicity, qualitative and quantitative occurrence differs widely. Algal monographs of Hustedt (1976), Prescott (1982) and Tripathi and Pandey (1990) were followed to

identify the phytoplankton. Drop count method of Trivedy and Goel was followed for enumeration of phytoplankton and expressed as organism per liter.

RESULT AND DISCUSSION:--

The study of the phytoplankton sampled in Ambalwadi reservoir showed 15 species. Species composition of Phytoplankton's (units/liter) observed in Ambalwadi reservoir during 2015-2016. Algal productivity in the month of March, April was the highest resulting from sufficient nutrient enrichment of water and adequate solar radiations. Water transparency was high during summer season was characterized by absence of flow velocity, flood, surface run-off suspended particles which gives rise to high transparency, increased food abundance and high photosynthetic activity. In the present investigation 15 species of Plank tonic algae were reported from the samples collected during the period of study from Ambalwadi reservoir in the table.

It was observed that Cyanophyceae was represented by 05 genera. Among Cyanophyceae Oscillatoria and Nostoc were recorded out the investigation period, in excess number in the month of November and December. Member of Cyanophyceae were recorded during winter season by Gopal et.al. (1981), Pandey and Tripathi (1984), Barhate (1985) and Zafar (1967) considered that high percentage of dissolved oxygen is favorable for more growth and development of Cyanophyceae.

In present investigation, the maximum numbers of Cyanophyceae were recorded during winter and minimum during winter and minimum during monsoon. Cyanophyceae was most abundant group in the Ambalwadi reservoir.

In Chlorophyceae there are 05 species with Clostridium, Cosmarium, Oedogonium and Spirogyra is maximum in the month of July, August, November and December 2018 . The high rate productivity during summer month was due to increase in temperature and high transparency such parameters speed up the photosynthetic activity of phytoplankton. Ambalwadi reservoir phytoplankton also shows a high density of chlophyceae members dominated by spirogyra species.

Table:--

Sr. no.	**PHYTOPLANKTONS**
A)	**CYANOPHYCEAE**
1	Anabaena
2	Chroococcus
3	Nostoc
4	Oscillatoria
5	Rivularia
B)	**CHLOROPHYCEAE**
1	Chlamydomonas
2	Chlorella

3	Cladophora
4	Oedogonium
5	Spirogyra
C)	**BASCILLARIOPHYCEAE**
1	Fragilaria
2	Diatom
3	Navicula
4	Synedra
5	Pinnularia

REFERRENCES:-

1) Adoni, A. D. (1985):-
Work book on Limnology, Indian map committee department of environment of India.

2) Bairagi, S. P. and Goswami, M.M. (1994):-
Ecology of water bloom in some ponds of N.E. India. Environ. And Ecol. 12(3): 568-571.

3) Gopal B., Goel R.K., Sharma K.P. and Trivedy R.K. (1981):-
Limnological study of fresh water reservoir Jamwa Ramgarth. (Jaipur). Hydrobiology. 83:283-294.

4) Lokhande M.V. and Shembekar V.S. (2009):-
Studies on Phytoplankton diversity of Dhanegaon reservoir Dhanegaon, Dist. Osmanabad. Maharashtra. J.S.S. AUR.M.Vol.II (7): 35-39.

5) Mahadik B.B. and Jadhav, M.J, M.J. (2014):-
A Preliminary study on algal biodiversity of Ujjain reservoir (M.S) India. Bioscience discovery 5(1):123-125.

6) Pawar S.K, Pulle J.S. and Shendge K.M. (2006):-
The study on Phytoplankton of Pethwadaj dam. Taluka Kandahar, Dist. Nanded; Maharashtra J. Aqua. Biol, 21(1):1-6.

7) Pandey; S.N. and Tripathi, A.K. (1984):-
Algal pollutants of Unnao Ponds- II. Qualitative, quantitative and Periodical occurrence of Cyanophyceae. J. P I. Nature 1(1):83-86

8) Sakhare V.B. (2002):- Studies on some aspect of fisheries management of Yeldari reservoir Ph. D. Thesis S.R.T.M. University Nanded.

9) Trivedy R.K. and Goel P.K.(1986):-
Chemical and Biological method for water Pollution studies. Environmental Publication, Karad (India).

10) Venkateshwarlu V. (1969):-
An Ecological study of the River Moosi, Hyderabad with special reference to water Pollution factors including distribution of algae, Hydrobiology, 33 (3-4): 352-363.x