INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD
(ISSN: 2455-0620) (Scientific Journal Impact Factor: 6.719)
Monthly Peer-Reviewed, Refereed, Indexed Research Journal
Index Copernicus International - IC Value: 86.87

Special Issue of

A Two-Day International (Web) Conference On "New Vistas in Aquatic & Terrestrial Biology and Environment during Current Pandemic" (ATBE-2021)

Organized by

Department of Zoology

R. S. S. P. Mandal's Nanasaheb Y. N. Chavan Arts, Science & Commerce College, Chalisgaon, Dist. Jalgaon (M.S.) India

In Joint Collaboration with

Nepal Aquaculture Society, Nepal,

Glocal Environment and Social Association (GESA), New Delhi

March 26 & 27, 2021

Conference Special Issue - 23 March - 2021

RESEARCH CULTURE SOCIETY & PUBLICATION
Email: rcsjournals@gmail.com
Web Email: editor@ijirmf.com
WWW.IJIRMF.COM

Study Of Phytoplankton Of Lake Bhivapur, Tq.-Tiwasa, Dist. Amravati

P. M. Khadse
Asst. Prof. Dept. of Botany, Shri RLT College of Science, Akola, M.S., India
Email - pramodkhadse12@gmail.com

Abstract: *Phytoplankton which are present were in natural water bodies of Bhivapur lake were studied. Phytoplankton such as Chlorophyceae, Cynophyceae, Basillariophyceae , were studied during year 2019-20. In present investigation, above phytoplankton were the indicators of water pollution.*

Keywords: *Phytoplankton, Chlorophyceae, Cynophyceae , Bhivapur.*

1. INTRODUCTION:

Phytoplanktons were studied from Bhivapur lake ,Taq.-Tiwasa, Dist- Amravati, this is small lake and having different types of phytoplanktons . Because of presence of phytoplanktons, there are changes of ecological status of lake Bhivapur. Some phytoplanktons like, Chlorella, Nitzschia, Synedra which are the parts of Palmers list of sixty more pollution tolerant genera in the world (Palmer, 1969). Most of the worker studied the periodicity and the distribution of algae in Indian fresh water bodies. Important contribution are Khan (1992), Singh et al; (1998),Walawalkar et al (1999), Pullae (2000), More and Nandan (2000) and Angadi (2003). Present study of Phytoplankton species of Bhivapur lake were studied to find out water pollution of Bhivapur lake.

2. MATERIAL AND METHODS:

For phytoplankton analysis, samples were collected a period of one year from June- 2019 to May 2020. Planktons were collected from water samples in two liter plastic can and some crystals of iodine after 24 hours, 10 ml sedimented water samples were taken for phytoplanktons analysis by adding 4% formalin for preservatioin and identification of phytoplanktons carried out under microscope.

Table 1- Monthly observation of phytoplankton during 2019-20 in Bhivapur lake.

Phytoplankton	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
A)Chlorophyceae												
Chlorella sp.	+	+	+	+	+	-	-	-	-	-	-	-
Cosmarium sp.	+	+	+	+	+	+	+	+	+	+	-	-
Oedogonium sp.	+	+	+	+	+	+	+	+	+	+	-	-
Spirogyra sp.	+	+	+	+	+	+	+	+	+	+	+	+
Ulothrix sp.	+	+	+	+	+	+	-	-	-	+	+	+
Zygnema sp.	+	+	+	+	+	+	+	+	+	+	+	+
Chara sp.	-	-	-	+	+	+	+	+	+	+	+	+
Nitrella sp.	+	+	+	+	+	+	+	+	+	+	+	+
B)Cyanophyceae												
Anabaena sp.	+	+	+	-	+	+	+	+	+	+	+	-
Nostoc sp.	-	+	+	+	+	+	+	+	+	-	-	+
Oscillatori sp.	+	+	+	+	+	+	-	-	+	+	+	+
Microcystis sp.	+	+	+	+	+	+	+	+	-	-	-	+
C)Bacillariophyceae												
Diatom sp.	+	+	+	+	+	+	+	+	+	+	+	+

3. RESULT AND DISCUSSION:

In present investigation, phytoplanktons were study from Bhivapur lake water because of presence of Phytoplankton changes ecological status of the lake Bhivapur. Different group of classes Chlorophyceae, Cyanophyceae, Bacillariophyceae, were studied from which *Cosmarrium, Oedogonium, Spirogyra, Ulothrix, Zygnema, Chara,* and *Nitrella* were observed throught the year. The Chlorella, Oedogonium, Ulothrix and Nitrella, were observed during Monsoon season.Hydrodictyon species were observed in month of June. The most important factor in controlling the population of Former (Lin,1972).

In present study, Bacillariophyceae species such as Diatom occurs throught the year. The occurrence of Diatom is responsible ofvarious enviromental changes (Patil, 1982).

Some species of Cyanophyceae were observed that was Anabena, Nostoc, Oscillatoria were studied throught the year. Microcystis observed in monsoon season. The presence of microcystis was the indicators of toxic substances producing algal species.

4. CONCLUSION:

From the above observation, phytoplanktons are the indicators of pollutions. So on the basis of this study, there is need to conservation of Bhivapur Lake.

REFERENCES:

1. Bahura, C.K. (2001): Phytoplanktonic community of a highly eutrophicated temple tank, Bikaner, J. Aqua.Biol. 13(1&2):47-51.
2. Bettina, C, Hitzfeld S., Huger and R.D., Daniel (2000): Cyanobacterial Toxin: Removal during water treatement and human risk assessment, Env. Health Perspective 108(1): 113-112.
3. Eshwarlal S. and S.B. Agandi (2003): Physiochemical parameters of two fresh water bodies of Gulerg, India with reference to Phytoplankton, Poll, Res. 22(3): 411-422.
4. Khan, A.M. (1992): Physiochemical characteristics Vihnpuri dam water with reference to plankton, Ph.D thesis, Marathwada University, Aurangabad.
5. More, Y.S and S.N. Nandan (2003): Hydrological study of algae of Panzara dam, Eco. Env. And Cons. 9(3):367-369.
6. Palmer, C.M. (1969): A composite rating of algae tolerating organic pollution, J. phycology 5:78-82.
7. Pulle, J.S. (2000): Biomonitoring of Isapur dam water, Ph, D. thesis SRTM Uni., Nanded.
8. Walawalkar, V. and N.S. Tekale (1999): Effects of Gypsum oading on Pinnate Diatoms in Mausunda lake, Thane city, Maharashtra, India, J. Aqua. Biol. 14:3-5.