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Study of phytoplankton of Mothe River, Jagtial District, Telangana

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ABSTRACT

Phytoplankton which are present were in natural water bodies were studied. Phytoplankton such as Chlorophyceae, Cynophyceae, Basillariphyceae, Euglenaphacy were studied during year 2018-2019. In present investigation, above Phytoplankton were the indicators of water pollution.

Keywords: Phytoplankton, Chlorophyceae, Cynophyceae, Mothe River.

INTRODUCTION

Phytoplanktons were studied from Mothe River, Taq. & District Jagtial, Telangana. Because of presence of Phytoplankton, there are changes of ecological status of Mothe River. Phytoplanktons were the indicator of biological indicators of water pollution. Some phytoplanktons like, *Chlorella, Chara, Closterium, Spirogyra* which are the parts of Palmer's list of sixty more pollution tolerant genera in the world (Palmer, 1969). Most of worker studied the periodicity and the distribution of algae in Indian fresh water bodies. Important contribution are Khan (1992), Jayabhaye (2010) studied on Phytoplankton diversity and stated that, the Clorophyceae form greenish scum on the surface of quite stagnant or grow firmly attached to rock, piece of wood and other object in water. Pawar *et al*. (2011), Negi *et al*. (2011) studied on diversity of phytoplankton and stated that the species diversity was recorded in the Clorophyceae 50% than the other species at stage I. Also Baba *et al*. (2014) Ganai *et al*. (2014) studied on phytoplankton community and observed that the minimum popullation density of Cyanophyceae were found in June and maximum in May. Present study of Phytoplankton species of Mothe River were studied to find out water pollution of Mothe River.

MATERIALS AND METHODS

For Phytoplankton analysis, samples were collected a period of one year from June-20018-May 2019. Planktons were collected from water samples in two liter plastic can and some crystal of iodin after 24 hours, lo ml sedimented water samples were taken for Phytoplankton analysis by adding 4 % formalin for preservation and identification of Phytoplanktons carried out under microscope.

RESULT AND DISCUSSION

In present investigation, Phytoplanktons were study from Mothe River water because of presence of Phytoplankton changes ecological status of the Mothe River. Different group of classes *Chlorophyceae, Cynophyceae, Basillariphyceae. Euglenaphacy, Cosmarrium, Spirogyro, Ulothrix, Zygnema, Chara,* and *Nitrella* were observed throught the year. The Chlorella, Pediastrum, Scendesmus were observed during monsoon seasons. Hydrodictyon species were observed in month of June. The most important factor in controlling the population of Former (lin,1972). In present study, Bacillaropyceae species such as Diatom occurs through the year. Te occurrence of Datom is responsible of various enviormental changes (Patil, 1982).

Some species of Cynophyceae were observed that was *Anabena, Nostoc, Oscilltoria* were studied through the year. Microcystis observed in monsoon season. The presence of microcystis was the indicators of toxic substances producing algal species.

Table-1: Monthly Observations of Phytoplankton During 2018-2019 in Mothe River

Phytoplankton	A				B				C			
	June	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
A)Chlorophyceae												
Chlorella sp	+	+	+	+	-	-	-	-	-	-	-	-
Cosmarium sp.	+	+	+	+	+	+	+	+	+	-	-	-
Spirogyro sp.	+	+	+	+	+	+	+	+	+	+	+	+
Ulothrixsp.	+	+	+	+	+	+	+	+	+	+	+	+
Ziygnema sp.	+	+	+	+	+	+	+	+	+	+	+	+
Chara sp.	+	+	+	+	+	+	+	+	+	+	+	+
Nitrete sp.	+	+	+	+	+	+	+	+	+	+	+	+
B)Cyanophyceae												
Anabaena sp.	+	+	+	+	+	+	+	+	+	+	-	+
Nostoc sp.	+	+	+	+	+	+	+	+	+	+	+	+
Oscillator sp.	+	+	+	+	+	+	+	+	+	+	+	+
Microcystis sp.	+	+	+	+	-	-	-	-	-	-	-	-
C)Bacillariophyceae												
Diatom sp.	+	+	+	+	+	+	+	+	+	+	+	+
Navicula	+	+	+	+	+	-	-	+	-	+	+	-
Pinnularia	+	+	+	+	-	+	-	-	-	+	+	-
Terbellaria	+	+	+	+	+	-	+	-	-	+	+	-
Nitzchia	+	+	+	+	+	-	-	-	-	+	+	-
Gyrosigma	+	+	+	+	+	-	-	+	-	+	+	-
D) Euglenophyceae												
Euglenaphacus	+	+	+	+	+	+	+	+	+	+	+	+

CONCLUSION

From above observation, Phytoplanktos are the indicators of pollutions. So on the basis of ths study, there is need to conservation of Mothe River.

Conflict of Interest

The author declares that there is no conflict of interest.

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