Phytoplankton diversity of Tirur River, Malappuram District, Kerala

P. Tessy Paul[1,*] **and K.S. Sreenisha**[2]

[1]Department of Botany, Christ College (Autonomous), Irinjalakuda, Thrissur, Kerala, India – 680125
(Affiliated to University of Calicut)
[2]Department of Geology and Environmental Science, Christ College (Autonomous), Irinjalakuda,
Thrissur, Kerala, India – 680125 (Affiliated to University of Calicut)
*Corresponding Author – tessyjohnt@gmail.com

Abstract

The present report was the systematic assessment of the phytoplankton in Tirur River, Malappuram District, Kerala, India. The survey was conducted at the three sites namely Tirur, Thazhepalam and Parapadi, of Tirur River and the species diversity of phytoplankton was analyzed from January to June 2015. From Tirur River, 57 taxa of phytoplankton were identified during the period of study, which come under 30 genera belonging to four taxonomic classes. The Bacillariophyceae (diatoms) was the diverse group comprised of 39 taxa belonging to 21 genera followed by the Cyanophyceae (blue green algae) represented by 14 taxa belonging to 7 genera. The Chlorophyceae (green algae) and the Euglenophyceae were represented by 2 species each belonging to one genus each. The algal taxa found in the marine environments included *Podosira montagnei* Kuetzing, *Stephanopyxis palmeriana* (Greville) Grunow, *Chaetoceros affine* Lauder, *Chaetoceros breve* Schutt, *Chaetoceros gracile* Schutt, *Chaetoceros lorenzianum* Grunow, *Pleurosigma angulatum* (Quekett) W. Smith, *Pleurosigma elongatum* W. Smith, *Pleurosigma normanii* Ralfs, *Pleurosigma salinarum* Grun. and *Gyrosigma balticum* (Ehr.) Rabh. were noticed in Tirur River, which indicates the brackish nature of water during the period of study.

Key words: Tirur River; Algal diversity; Phytoplankton; Malappuram District; Kerala.

Introduction

The phytoplankton are the major primary producers in the food web of riverine ecosystems, which serve as food for heterotrophic animals and finally the energy made available to the fish. The knowledge of the spatial and temporal distribution of plankton and the effect of environmental variables on them, will give a proper understanding of the ecosystem for the scientific utilization of the natural waters for fishery exploitation.

The phytoplankton respond rapidly to a wide range of pollutants and thus, provide potentially useful early warning signals of deteriorating conditions and the possible causes. A study on the diversity of phytoplankton in Kavery River, Tamil Nadu, showed higher quantity of