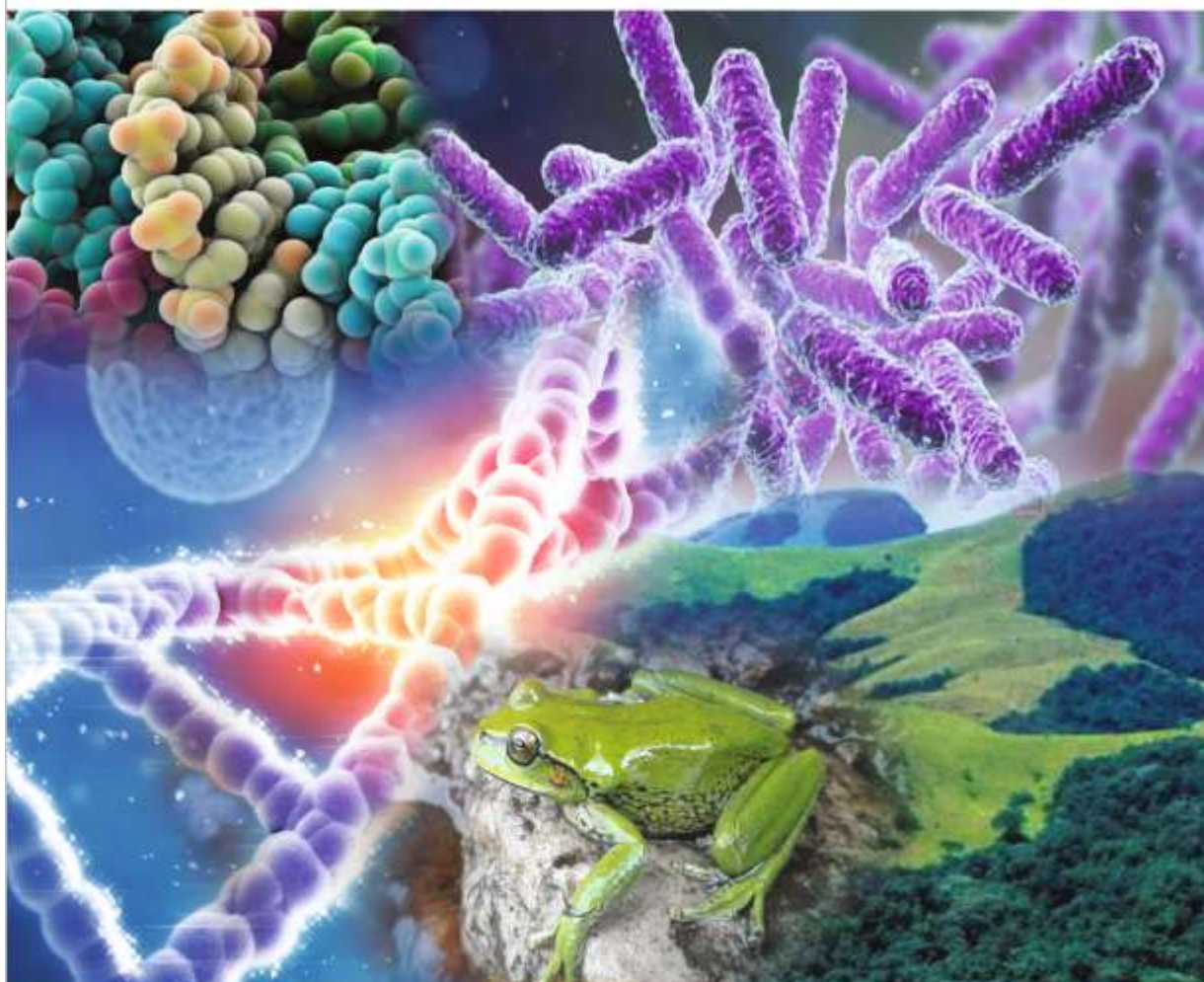


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Phytoplankton diversity of Vairamkonamchira, a freshwater body of Anchal Panchayat

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Abstract

Phytoplankton, the primary producers of an aquatic ecosystem form the basis of the nutritional cycle. Ecological changes are known to affect the composition of phytoplankton. The knowledge of phytoplankton biomass and community composition is essential for understanding ecosystem structure and dynamics. Short life span, quick response to changes in the habitat, standing crop and species composition of plankton make them effective indicators of the quality of the aquatic ecosystem. The present study portrays the phytoplankton diversity of Vairamkonamchira a freshwater body of Anchal Panchayat. Phytoplankton belonging to genus *Closterium*, *Ankistrodesmus*, *Zygnema*, *Navicula*, *Euglena*, *Cladophora*, *Ulothrix*, *Desmidium*, *Tetraspora*, *Batrachospermum*, *Chromulina*, *Oedogonium*, *Bulbochaete*, *Synedra*, *Gomphonema*, *Cyclotella*, *Melosira* and *Micractinum* were identified. A high concentration of algae like *Closterium* and *Euglena* is an indication of pollution. Diatoms like *Synedra*, *Gomphonema*, *Cyclotella* and *Melosira* are pollution tolerant species, they are generally found in organically rich water.

Keywords: Phytoplankton diversity, community composition, pollution tolerant species and pollution indicators

1. Introduction

Phytoplankton, the primary producers of an aquatic ecosystem, comprise mainly diatoms, dinoflagellates and representatives from other divisions of the plant kingdom. In an aquatic ecosystem, they form the basis of the nutritional cycle. Phytoplankton form a bulk of food for aquatic organisms, especially for zooplankton, fishes and benthic invertebrates. Ecological changes are known to affect the composition of phytoplankton. The knowledge of phytoplankton biomass and community composition is essential for understanding ecosystem structure and dynamics (Roy *et al.*, 2006).

Primary producer phytoplankton form the basis for life and are the source of energy in the aquatic environment. Hence primary production influences production at higher trophic levels