**Abstract**

The present study concerns monthly variations of phytoplankton species composition, population density, species diversity during September 2012 to March 2013 in Ukkadam, Kuruchi and Singanallur Lakes Coimbatore, Tamil Nadu, India. The total of 20 (Ukkadam Lake), 34 (Kuruchi Lake) and 26 genera (Siganallur Lake) were identified under phytoplankton diversity in studied three lakes. Present study revealed maximum species composition of Chlorophyceae (15 species), Bacillariophyceae (12 species) and Euglenophyceae (6 species) were recorded at Kuruchi Lake. When compared genera wise, Euglenophyceae group were rarely found in both Ukkadam Lake and Singanallur Lake during the study period, it was indicated that these lakes were polluted by organic components. The present baseline information of the phytoplankton distribution and abundance would form a useful tool for further ecological assessment and monitoring of these lakes of Coimbatore.