Community Composition of Phytoplankton in the Bardestan Creek, Persian Gulf

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Abstract

The aim of this research was the comparison of phytoplankton community composition in winter and summer. Also, the phytoplankton composition of the Bardestan creek and its offshore waters in the Persian Gulf were investigated. Samplings were carried out in March and August 2014 by a fishing boat using a Niskin bottle. 9 stations in the creek and 9 stations in offshore waters were selected. Average of phytoplankton abundance was 837 Cell L^{-1} (±1.65) and 1272 Cell L^{-1} (±2.86) in winter and 1102 Cell L^{-1} (±1.95) and 1207 Cell L^{-1} (±2.45) in summer throughout the creek and its offshore waters respectively. Results indicated no significant difference in phytoplankton abundance between winter and summer ($P>0.05$). Also, results indicated no significant correlation between phytoplankton abundance with temperature and salinity ($P>0.05$). Bacillarophyceae, Dinophyceae, Cyanophyceae and Dictyochophyceae were classes of phytoplankton in the study. Cluster analysis revealed that there are three distinct groups of phytoplankton at 30 % similarity level in winter and summer.

Keywords: *Phytoplankton, Community composition, Cluster analysis, Bardestan creek, Persian Gulf.*