

## Weekly variation of phytoplankton community structure in the Strait of Hormoz

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### Abstract

Phytoplankton community structure and environmental parameter of water were carried out at weekly intervals for a period of one year from April 2004 to March 2005 at two stations in the Strait of Hormoz. 92 species of phytoplankton belonging to 42 Genus from Bascillariophyceae (29 genus), Dinophyceae (12 genus) and Cyanophyceae (1 genus) were identified. The result shows that Bascillariophyceae (95%) is the major group of phytoplankton and Dinophyceae (3%), Cyanophyceae (2%) were the groups which followed.

The maximum density of Bascillariophyceae community was  $1415200 \pm 348182$  cell/l in October, Dinophyceae;  $20433 \pm 1790$  cell/l and Cyanophyceae;  $96367 \pm 19140$  cell/l in July and also the higher population of phytoplankton were found in warm season. In this study there were positive significant ( $P < 0.05$ ) correlation coefficient between phytoplankton density and two environment parameter (Temperature & pH). Dinophyceae and Cyanophyceae showed negative significant ( $P < 0.05$ ) correlation with dissolve oxygen and only Cyanophyceae showed positive significant ( $P < 0.05$ ) correlation with salinity. The maximum significant ( $P < 0.05$ ) correlation coefficient determined between pH and Cyanophyceae ( $r = 0.65$ ).

The maximum value of Shannon Index was 3.978 in winter and the minimum 0.502 in summer.

Keywords: *Phytoplankton, Population density, Environmental parameters, Diversity, Strait of Hormoz, Persian Gulf*

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