

## البحث الثامن

### Correlation Study On Physico-Chemical And Phytoplankton Dynamics Of River Nile At Fayoum Governorate

بحث مشترك ومستمد من رسائل علمية

المجلة المنشور بها البحث

Egyptian Journal of Phycology, 17: 51-72

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#### ABSTRACT

The diversity of phytoplankton and its relationships to the physico-chemical parameters were investigated in River Nile. The study area of the River Nile is located in Fayoum Governorate. Samples were collected monthly from October 2011 to September 2012, from the intake of seven drinking water treatment plants to a large extent cover the stream of River Nile branches in Fayoum governorate. The results of physic-chemical characteristics reveled that fluctuation in temperature between seasons was highly detected with respect to different seasons. In addition, results show no clear variation in pH values between different months or between different sites, where statistical analysis showed that no significant correlations between pH and phytoplankton count ( $r = -0.40$ ). Also, in this investigation correlation analysis showed no significant correlation between total algal count and nitrate and total phosphorus concentration ( $r = 0.30$  and  $r = 0.34$  respectively). Furthermore, results of phytoplankton community structure showed that fifty four species in five divisions of phytoplankton were found. The greatest number of species were in division Chlorophyta (40.7%), followed by Bacillariophyta (33.3%), Cyanophyta (18.5%), Euglenophyta (5.6%) and Pyrrophyta (1.9%).