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SIMILARITIES AND DIFFERENCES OF TWO INTERCONNECTED BASINS

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PHYTOPLANKTON (>55µM) COMPOSITION OF THE METU-IMS HARBOUR
(MEDITERRANEAN COAST OF TURKEY) FROM JULY 1995 TO JUNE 1997
WITH AN ASSESSMENT OF THE CONTRIBUTION OF SMALL (<55µM) PHYTOPLANKTERS

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ABSTRACT

Weekly variations in the phytoplankton composition (>55 µm, filtered samples) of the METU-IMS (Middle East Technical University- Institute of Marine Sciences) harbour were observed from July 1995 to June 1997. Additional weekly samples were processed between February 15 and May 25 for the assessment of the contribution of smaller (<55µm) phytoplankters using the sedimentation method. From both sampling methods, a total of 198 phytoplankton species have been identified. In the filtered samples, the total abundance of diatoms was about 60 times higher than that of dinoflagellates. The highest abundances of diatoms were detected in February 1996 (11,763 cells/l) and June 1997 (11,106 cells/l) represented mainly by the species *Asterionella japonica* and *Rhizosolenia alata*, respectively. The highest dinoflagellate abundance (737 cells/l) in the filtered samples occurred in April 1996. However in the same month the dinoflagellate *Prorocentrum micans* was observed in enormous numbers (90,9000,000 cells/l) in the sedimented samples. In this study, two techniques of phytoplankton analysis (sedimentation and filtration of samples using a 55 µm mesh) were compared, advantages and disadvantages of both methods were assessed and it was concluded that both techniques should be applied during the process of phytoplankton enumeration. The contribution of nanophytoplankton (3-15 µm) to the total phytoplankton abundance was found to be 8%.