

Problems in the vertical distribution of the phytoplankton in the Mediterranean Sea

143609

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During a joint American-Israel Expedition to the eastern Mediterranean in September, 1965, large numbers of phytoplankters were jointly found by Prof. F. Wood and the author, well below the photic zone in a depression situated to the east of Rhodes Island. These organisms belong to the Heterokontae (*Halosphaera viridis*) and the Peridineae (*Ceratium vultur* and *C. carriense* var. *volans*) and were found to be viable, when Prof. Wood's method of fluorescent illumination was used on board ship. The numerous chromatophores present in *Halosphaera* gave the characteristic red glow of chlorophyll, and the same reaction was obtained in the examination of the *Ceratia* which even occurred frequently in fission stages.

The existence of these algal communities at depths of thousands of metres in addition to the nanoplankton organisms such as the coccolithophorids which have been recorded by ourselves as well as by other authors, down to depths of several hundred metres, suggests that primary production in the seas is not limited only to the photic zone.

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Qualitative and quantitative changes in the composition and distribution of the phytoplankton in Lake Tiberias during the years 1964-1965

143610

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The examination at close time-intervals of phytoplankton samples from Lake Tiberias showed the existence of some basic differences in the composition and seasonal distribution of the algal communities between the years 1964 and 1965.

Whereas during 1964 the late-winter and spring phytoplankton blooms consisted of blue-green algae, mainly *Microcystis*, during the same period in 1965 the phytoplankton blooms consisted almost entirely of dinoflagellates, chiefly *Peridinium*. The total phytoplankton biomass was found to be higher during 1965 as compared to the year before, and also more homogeneous in distribution.

The results of the phytoplankton fluctuations during 1965 at the 6 stations sampled regularly during this year, are now checked in conjunction with the chemical and the physical characteristics of the lake-water. This is done with a view to determining the environmental requirements of the main components of the phytoplankton of this lake.