



SEASONAL VARIATION OF THE PHYTOPLANKTON COMPOSITION IN THE NORTHERN LEVANTINE SEA

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Seasonal and spatial distribution of phytoplankton pigment composition in July & Sep 2012 and Mar & May 2013 was studied at five stations in different parts of the northern Levantine Sea from Mersin Bay to Rhodes Gyre. Total chlorophyll a concentrations varied 0.001 – 0.578 mg m⁻³ during the study. The highest value was measured in cyclonic Rhodes Gyre at 70 meters in Deep Chlorophyll Maximum (DCM). But, concentrations were found less than 0.1 mg m⁻³ in offshore waters and Rhodes Gyre. Seven phytoplankton groups (diatoms, dinoflagellates, prymnesiophytes, chlorophytes, chrysophytes, cyanophytes and prochlorophytes) were detected in the study area during the study period. While diatom were found dominant group in coastal waters in July 2012 and March 2013, cyanophytes dominated coastal phytoplankton composition in September 2012 and May 2013. Competition in between two major group namely prokaryotic picoplankton (cyanophytes and prochlorophytes) and eukaryotic nanoflagellates (prymnesiophytes-coccolithophorids, chlorophytes and chrysophytes) was observed in offshore waters and Rhodes Gyre. Although mean contribution of both groups to composition were calculated about 42-43%, their contribution was highly variable according to season, region and depth in offshore waters and Rhodes Gyre.

Keywords: Phytoplankton, Diatoms, Cyanobacteria, Rhodes Gyre, Northern Levantine Sea