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The Diel Vertical Distribution of Zooplankton in the Southeast Black Sea

Funda ERKAN, Ali Cemal GÜCÜ
Middle East Technical University, Institute of Marine Sciences, P. O. Box: 28 Erdemli 33731 İçel-
TURKEY

Julia ZAGORODNYAYA
Institute of Biology of the Southern Seas National Academy of the Sciences of Ukraine, Nakhimov Av. 2,
Sevastopol 335011, UKRAINE

 [Keywords](#)
[Authors](#)



zool@tubitak.gov.tr

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Abstract: The diel changes in the vertical distribution of zooplankton in the southeast Black Sea were described in this study. The zooplankton were sampled using two different sampling methods throughout one day in October 1996 and July 1997 at the same station. The zooplankton counts, the length measurements and biomass estimates showed that the zooplankton in the southeast Black Sea is dominated by small organisms, among which *Noctiluca scintillans* is the dominant species. In the vertical distribution of zooplankton, three groups were observed in different layers. *Calanus euxinus* and *Pseudocalanus elongatus* showed a clear vertical migration pattern. Conventional measurements (settling volume, displacement volume and wet weight measurements) were also carried out and the results were compared with the zooplankton counts and biomass values. Among those, abundance of zooplankton correlated well with the wet weight measurements ($r = 0.473$; $p < 0.05$) of the October 1996 samples. The length converted biomass of zooplankton also significantly correlated with the wet weight measurements ($r = 0.717$; $p < 0.05$).

Key Words: Zooplankton, vertical distribution, abundance, biomass, southeast Black Sea

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