ICES/PICES 6ZPS 2016/ S6/W2

Mesozooplankton distribution in epipelagic waters of Cilician Basin (Northeastern Mediterranean Sea)

Tuba TERBIYIK KURT[1], Sevim POLAT[1] , Zahit UYSAL[2], Yeşim AK ÖREK[2]

[1]Çukurova University, Faculty of Fisheries, Department of Marine Biology,01330, Sarıçam ADANA, Turkey

[2]Middle East Technical University, Institute of Marine Science, P.O.Box 28, 337331, Erdemli, Mersin, Turkey

Abstract

Mesozooplankton abundance, biomass, group composition and depth distribution were investigated in the Cilician Basin (Northeastern Mediterraneran Sea). A total of 20 stations were visited in March and September 2008 in framework of SESAME Project. Mesozooplankton samples were collected vertically from standard (0–50, 50–100, 100–200 m) depth layers with WP-2 zooplankton net (200µm). A total of 28 taxonomic groups were identified during the study periods. Mesozooplankton dominated by Copepoda in overall Cilician Basin (except, for station G15Q59, 0-35m), followed by Appendicularia and Cladocera in both sampling months. All together, they were consist of 81% (March) and 89.1% (September) of total mesozooplankton abundance. Mesozooplankton abundance varied from 160 n m^{-3} to 5250 n m^{-3} in March and from 147 n m^3 to 1896 n m^{-3} in September. On the other hand, biomass ~~were~~ fluctuated from 2 mgm^{-3} to 29 mgm^{-3} in March and from 2 mgm^{-3} to 12 mgm^{-3} in September. Mesozooplankton were denser in coastal areas of the Basin and concentrated upper 100m. Surface mesozooplankton (0-50m) were significantly correlated with salinity in March, on the other hand, they correlated with temperature and DO in September. Spatial distribution of mesozooplankton in surface layer (0-50m) had a almost similar trend with distribution of surface chlorophyll-a derived from

satellite observations. As a conclusion, heterogenity was observed in terms of mesozooplankton distribution. Food availability and hydrographic conditions could be lead to this heterogenity of mesozooplankton in the Basin.

Key words: Mesozooplankton, abundance, biomass, Cilician Basin, Eastern Mediterranean, Distribution

Contact author: Tuba TERBIYIK KURT, Çukurova University, Faculty of Fisheries, Department of Marine Biology,01330, Sarıçam ADANA, Turkey, tterbiyik@cu.edu.tr