

INVESTIGATION ON THE MACROZOOBENTHIC INVERTEBRATE FAUNA IN THE NORTH AEGEAN SEA

Bülent Topaloğlu

Istanbul University, Fisheries Faculty, Ordu Cad. No.200 Laleli-Istanbul & Turkish Marine Research Foundation. P Box:10
Beykoz-Istanbul - topalbl@istanbul.edu.tr

Abstract

Macrozoobenthic invertebrates were collected by bottom trawl at 13 stations in Thirteen locations off the Turkish coasts of the North Aegean Sea. A total of 9561 specimens were identified to 61 taxa. *Stichopus regalis* was present in 11 of the stations, *Penaeus kerathurus* and *Parapenaeus longirostris* were both common and abundant.

Keywords : Aegean Sea, Biodiversity, Zoobenthos.

Introduction

At the North Aegean Sea the thermophilic fauna of the Mediterranean Sea meets psychrophilic fauna of Black Sea origin [1]. Knowledge of the Aegean Sea is comparatively scarce [2]. Some of the earliest studies of the Mediterranean marine biota were carried off the Turkish Aegean coast by Forbes (1848), Colombo (1885) and Ostroumoff (1896) [3]. However, most studies in the Aegean Sea were limited to particular taxa, Gastropoda [4], teuthofauna [5] and sponges [6][7]. The aim of this study was to understand the vertical and geographical distribution of the macrozoobenthic invertebrate fauna off the Turkish Aegean coast.

Materials and Method

Thirteen stations spread between Edremit Bay and Saros Bay, at depths between 40 and 480 m, were sampled by bottom trawl between 1-19 August 2001. Stations 1, 3, 6, 9, 12 and 13 were deeper than 300 m; stations 4, 5 and 12 between 100 - 300 m and 2, 7, 8 and 10 less than 100 m deep (see Fig 2). Each sample was counted and weighed after the identification. The abundance, presence and dominance were calculated. The abundance (A) is the mean number of the individuals from the total number of samples; presence (P) the number of observations of a species from the total number of samples, e.g. a "P" value of 11 indicates 11 stations. Dominance (D) is the proportion of the total number of one species to the total number of all organisms.

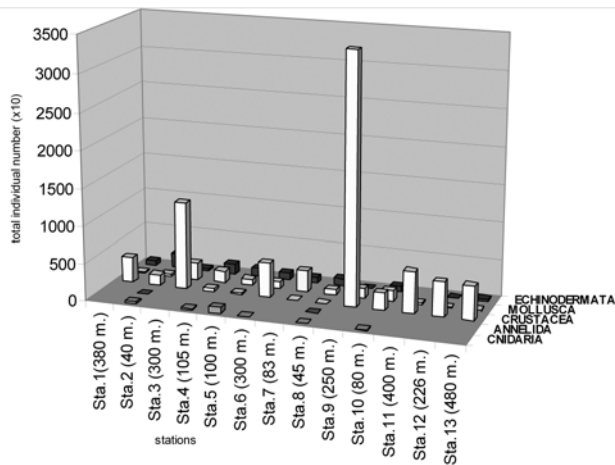


Fig. 1. The number of specimens in the various groups sampled from the stations in the North Aegean Sea.

Result and Discussion

A total of 9561 specimens were identified to 61 taxa. *Stichopus regalis* (Cuvier, 1817) was present in 11 of the 13 stations. *Penaeus kerathurus* (Forskål, 1775) has the highest dominance (55.726 %) and abundance (409.85) with 5328 specimens. *Parapenaeus longirostris* (Lucas, 1846) was present in 8 stations; abundance 87.15 and dominance 11,850 %. Crustaceans were the most presence and abundant group. Similar result was given by [1]. The specimens were mostly from stations 3 and 10 which were around 250-300 m deep. The highest values of species diversity were found in the deep water (250 m to 400 m) stations 3, 6, 9, 11 and 13. All groups were sampled at stations 2 and 8, 40-45 m deep. According to our data, the most abundant groups, crustaceans and mollusks, were sampled from deep water with the most abundant specimens (*P. kerathurus* and *P. longirostris*), but all groups were present in shallow waters (see

Fig.1). As a result, the species diversity was higher in shallow water than deep water and the species abundances were higher in the bottom water than the upper layer in the North Aegean Sea.

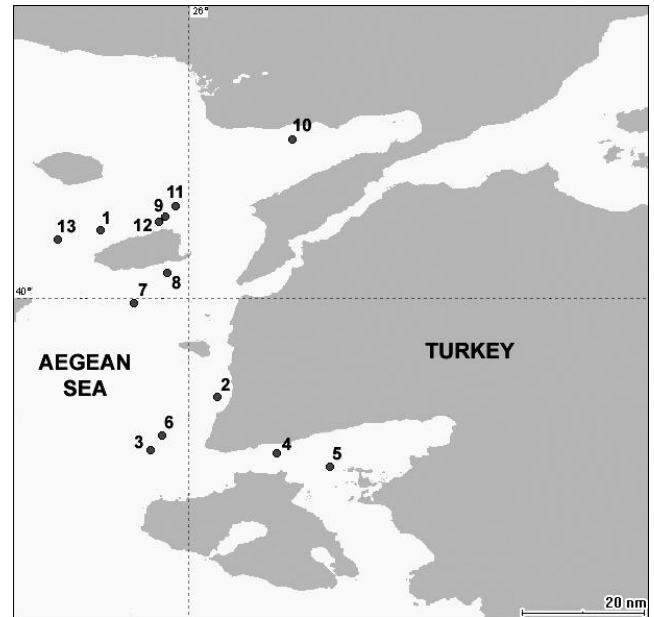


Fig. 2. The sampling stations.

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