

Izmir Bay is located in the west part of Turkey on the coast of the Aegean sea. Topographically and hydrographically it is divided into three parts designated as inner, middle and outer part. Heavy pollution in the inner part of the Bay is gradually spreading towards the outer part.

Studies on the benthic and pelagic organisms together with physico-chemical characteristics of the Bay were concentrated in the last 20 years (ERGEN 1976, 1985, KOCATAS, *et al.*, 1988, among others).

The aim of this study is to investigate the latest status of the Polychaetes distributed in the soft substrate of the Izmir Bay, which are one of the most important groups among the benthic organisms.

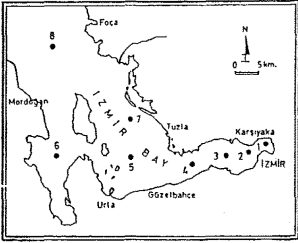


Fig. 1.- Sampling stations

For this, during the period between August 1988 and July 1989 sampling was carried out once every two months from the 8 stations selected in the Bay using Van Veen grab (Fig. 1). A 10 dm<sup>3</sup> volume of sediment was considered and Shannon-Weaver formula was used for the calculation of the diversity indices. During the investigation period, out of a total of 48 samplings, 115 Polychaeta species have been determined. Of these, 10 species (*Harmothoe lunulata*, *Kefersteina cirrata*, *Hyalinoecia bilineata*, *Hyalinoecia fauveli*, *Onuphis conchylega*, *Scoloplos armiger*, *Notomastus profundus*, *Clymene palermitana*, *Trichobranchus glacialis*, *Polycirrus aurantiacus*) are new for the Aegean and Mediterranean coasts of Turkey;

8 species (*Paralacydonia paradoxa*, *Glycera capitata*, *Onuphis quadricuspis*, *Prionospio steenstrupi*, *Prionospio pinnata*, *Chaetozone setosa*, *Brada villosa*, *Rhodine cf. loveni*) are being reported newly for all Turkish coasts.

When the stations are compared in regard to the number of species, number of individuals and diversity index (Fig. 2), it can be observed that the stations situated in inner Bay (St.1, 2, 3) exhibit less number of species and lower diversity index value. This is mainly due to the heavy pollution occurring in this region.

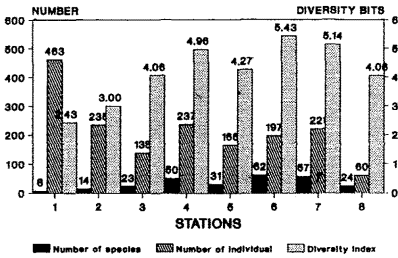


Fig. 2.- Distribution of number of species and number of individuals at the stations and diversity index values.

Some stations situated in the outer part of the Bay (St. 5 and 8) are also relatively poor in the number of species and show low diversity index values in comparison to other stations in middle and outer parts of the Bay (St. 4, 6 and 7). The nature of the bottom sediments seems to be responsible for these phenomena. In effect bottom sediment taken from the most inner part of the Bay for deepening purposes is dumped at st. 5, while at st. 8 which is the deepest station (70 m), bottom sediment is characterized by homogenous mud.

REFERENCES

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