AN ACCOUNT OF OUR KNOWLEDGE OF THE AMPHIPOD FAUNA OF THE AEGEAN SEA

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ABSTRACT

During benthic surveys in the northern Aegean Sea, 188 amphipod species were found; 39 among these comprise new records for the amphipod fauna of the eastern Mediterranean Sea, 41 are reported for the first time from the Aegean Sea and 62 are new for the fauna of the northern Aegean Sea. A checklist of the amphipods known from the Aegean Sea up to the present is given (239 species), along with their distribution in certain Mediterranean areas. For the most interesting species found, information on their distribution and their habitat is given. The amphipod fauna of the above areas is estimated, on the basis of the relevant literature. Finally, the affinities among these areas using the coefficient of Czekanowski, along with the number of species common to each pair of areas, are estimated.

RÉSUMÉ

Pendant des recherches benthiques dans le nord de la mer Egée, 188 espèces d'amphipodes ont été trouvées, dont 39 n'avaient encore jamais été signalées en Méditerranée orientale, alors que 41 l'étaient pour la première fois de la mer Egée, et que 62 étaient nouvelles pour la faune du nord de cette mer. Une liste des amphipodes connus jusqu'à présent de la mer Egé (239 espèces) est donnée, en même temps que leur distribution dans certaines régions de la Méditerranée. Pour les espèces les plus intéressantes, des informations sont fournies à la fois sur leur distribution et sur leur habitat. La faune d'amphipodes des régions mentionnées ci-dessus est évaluée sur les bases de la littérature afférente. Enfin, les affinités entre elles, d'après le coefficient de Czekanowski, sont également évaluées, de même que le nombre des espèces communes à chaque couple de régions.

INTRODUCTION

The Aegean Sea is one of the most poorly studied areas of the Mediterranean, although its fauna is for several reasons of special interest (Pérès, 1967). Amphipods, being one of the most important crustacean groups, are very little studied in the Aegean Sea, and also in the whole of the eastern Mediterranean. The information concerning the amphipod fauna of the Aegean Sea from a systematic, ecological, and zoogeographical point of view is included in a very restricted number of papers: Vecchi (1929), Stock (1967), Myers (1969a, b, 1972a, b), Geldiay et al. (1970), Karaman (1971, 1973), Kocataş (1976a), Bellan-Santini & Kaim-Malka (1977), Bellan-Santini et al. (1982, 1989), Bellan-Santini (1985), Karakiri & Nicolaidou (1986, 1988), and Kevrekidis & Koukouras (1988).
Scattered information on the amphipods of this area can also be found in general faunistic or ecological papers such as those by Guérin (1832), Ghigi et al. (1929), Drensky (1951), Demir (1952-1954), Péres & Picard (1958), Tor-tonese (1959), Jacquotte (1962), Jones (1969), Kocataş (1976b), Geldiay et al. (1977), Koukouras et al. (1985, 1992), and Voultsiadou-Koukoura et al. (1987).

The main objectives of the present paper are (1) to provide new information on the amphipod fauna of the Aegean Sea, (2) to present for the first time a check-list of the amphipod species and (3) to compare the amphipod fauna of the Aegean with those of the other Mediterranean areas as well as with that of the Mediterranean as a whole.

MATERIALS AND METHODS

The present study is a part of a broad research program started in 1976, aiming to study the benthic macrofauna of the North Aegean Sea. During this study material was collected from 245 stations, in depths between 0 and 850 m, in various types of substrates scattered all over the northern Aegean Sea, excluding the Turkish coasts. These stations are given on the map of fig. 1.

Samplings were made either by fishing nets and Agassiz trawl (stations marked with a line and a capital letter), or by dredges (e.g., Charcot-Picard), grabs, and free or SCUBA diving (stations marked with a black point and a number). Samplings were carried out both on soft and hard substrates.

Specimens were preserved in 5% formalin and have been deposited in the Museum of the Department of Zoology, University of Thessaloniki. The systematic arrangement follows Bellan-Santini et al. (1982, 1989) as regards Gammaridea, and the catalogue of McCain & Steinberg (1970) for Caprellidea.

To estimate the affinities among the amphipod faunas of certain Mediterranean areas, the qualitative coefficient of Czekanowski was used (Bray & Curtis, 1957).

RESULTS AND DISCUSSION

Material examined and check-list

The examination of the collected material from the northern Aegean Sea revealed the presence of 188 amphipod species. Thirty-nine comprise new records for the fauna of the eastern Mediterranean Sea, 41 are new records for the Aegean Sea, and 62 species are reported for the first time from the northern Aegean Sea.

Review of the relevant literature showed that the number of amphipod species known from the Aegean Sea before this work was 198. Combining the existing information with the results of our study, this number was enlarged to 239 species. These species are presented in table I, in which their distribution in the various Mediterranean areas is also given.

In this table, 14 species are not included, even though they have been