

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

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### Abstract

During benthic surveys in the N. Aegean Sea, 188 amphipod species were identified. 41 among them are reported for the first time from the Aegean Sea and 62 consist new elements for the fauna of the N. Aegean Sea. A check-list of the amphipods known up to the present from the Aegean Sea is given (239 species), along with their distribution in different Mediterranean areas. For the most interesting species found, information on their distribution and their habitat is given. Finally, the amphipod fauna of the Aegean Sea is compared with that of other Mediterranean areas on the basis of their common species.

**Key words:** amphipod, N. Aegean Sea

### Περίληψη

Κατά τη διάρκεια βενθικών ερευνών στη θάλασσα του Β. Αιγαίου, 188 είδη αμφιπόδων αναγνωρίστηκαν, ενώ 41 από αυτά αναφέρονται για πρώτη φορά στο Αιγαίο Πέλαγος και 62 αποτελούν νέα δεδομένα για την πανίδα της θάλασσας του Β. Αιγαίου. Δίνεται ο κατάλογος των αμφιπόδων (239 είδη) που είναι γνωστά μέχρι τώρα από το Αιγαίο Πέλαγος, μαζί με την κατανομή τους σε διαφορετικές Μεσογειακές περιοχές. Σχετικά με τα πιο ενδιαφέροντα είδη που βρέθηκαν δίνονται πληροφορίες σχετικά με την κατανομή τους και το ενδιαίτημά τους. Τέλος η πανίδα των αμφιπόδων της θάλασσας του Β. Αιγαίου συγκρίνεται με αυτή άλλων Μεσογειακών περιοχών με βάση τα κοινά είδη.

### Introduction

Amphipods, being one of the most important crustacean groups, are very little studied in the Greek waters. The information concerning the amphipod fauna of the Aegean Sea from systematical, ecological and zoogeographical point of view is included in a very restricted number of papers, such as those by Myers (1969a, 1969b, 1972a, 1972b), Geldiay et al. (1970), Bellan-Santini et al. (1982, 1989) etc.

Scattered information on the amphipods of this area can be also found in general faunistic or ecological papers such as those by Guérin (1832), Jacquotte (1962), Koukouras et al. (1985, 1992), Voultziadou-Koukoura et al. (1987) etc.

The present work deals with the amphipod fauna of the Aegean Sea, presenting for the first time a check list of the amphipod species known up to day from this area. It is a part of a broad research program started since 1976, aiming to study the benthic macrofauna of the North Aegean Sea.

### Materials and Methods

Our material was collected from 245 stations, in depths between 0 and 1000m from various types of substrates scattered over the whole North Aegean Sea, excluding the Turkish coasts. Samplings were made by fishing nets by dredges and grabs and free or scuba diving. Samplings were carried out both in soft and hard substrates.



## Results and Discussion

### Check-list

The examination of the collected material, revealed the presence of 188 amphipod species. 41 of these species are new records for the fauna of Aegean Sea and 62 species are reported for the first time from the North Aegean Sea.

The review of the relevant literature showed that the number of amphipod species known up to the present from the Aegean Sea was 198. Combining the existing information with the results of our study, this number came up to 239 species.

Some of the species found during our study, are reported for the second time from the whole Mediterranean Sea, consisting new records of the amphipod fauna from the Eastern Mediterranean Sea. *Ampelisca provincialis* Bellan-Santini & Kaim-Malka, 1977, has been previously recorded only once from the Mediterranean coasts of France, *Parvipalpus major* A. Carausu, 1941, reported also from the same area, *Melita bulla* G. Karaman, 1978 reported from Adriatic Sea, *Bathyporeia sunniva* Bellan-Santini & Vader, 1988, previously reported from Messina and Napoli, *Megamphopus brevidactylus* Myers, 1976 from Capri, *Megamphopus longicornis* Chevreux, 1911 from Algeria, and *Laetmatophilus ledoyeri* Ruffo, 1986 from Marseille and Adriatic Sea.

### Comparison-affinities

The number of amphipods known up to the present from the whole Mediterranean, including the Black Sea, estimated after a thorough review of the relevant literature, is approximately 440 species.

The number of species found in the Aegean Sea consists the 54.3% of the total number of the Mediterranean amphipod species. The percentages corresponding to the other Mediterranean areas and the Black Sea are given in the following figure.

From the above diagram, it is clear that the richest areas in number of species are Western Italian and French coasts, while Aegean Sea is the third after the information added by the present study. The fauna of Aegean has been enriched with 41 species corresponding to 9.4 % of the Mediterranean species.

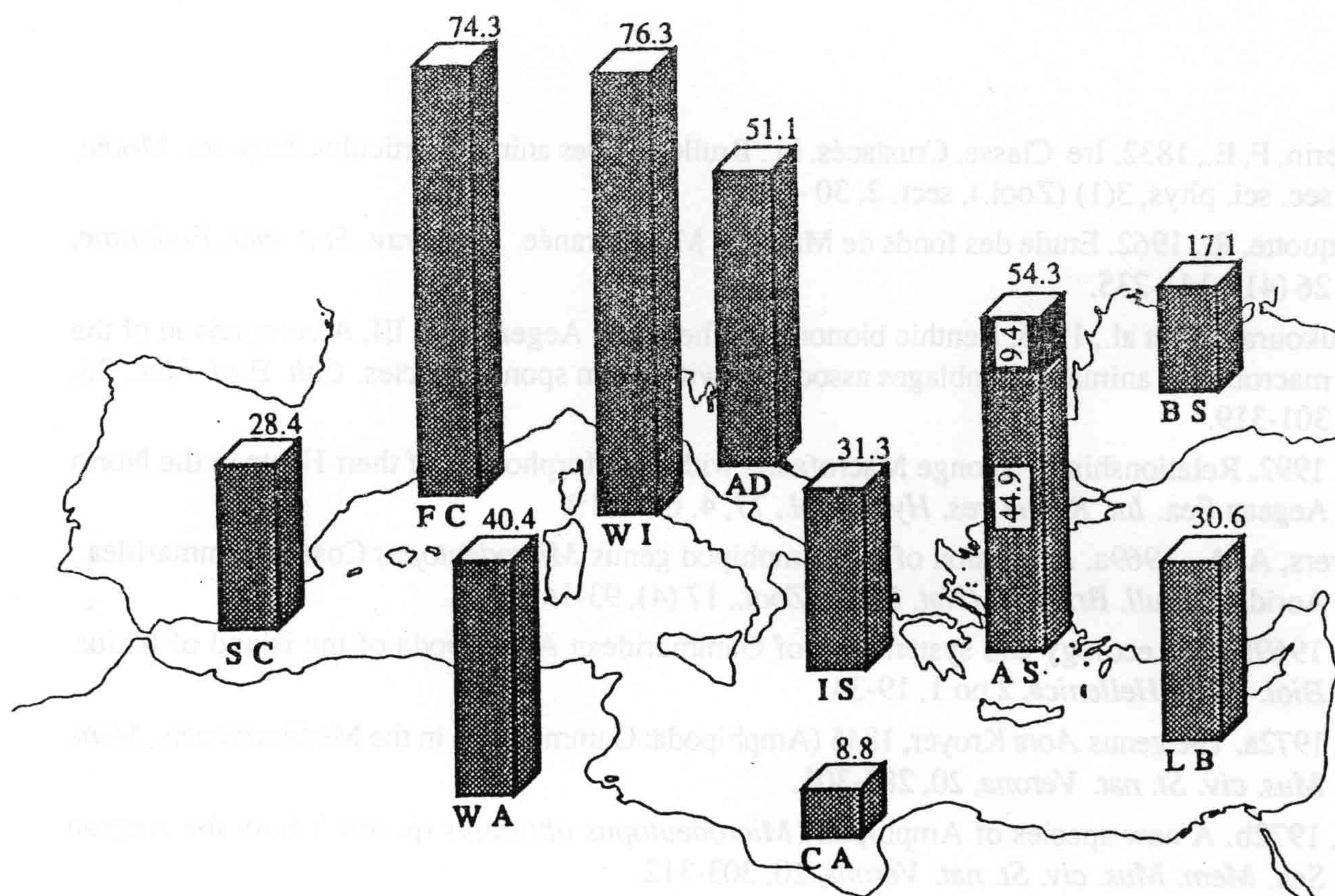
The relatively low species numbers found in areas like the coast of North Central Africa, the Ionian Sea, the Spanish coasts or the Levantine Basin in relation to other areas, like the French coast for example, should be mainly attributed to the disproportionate research carried out in them.

Another reason concerning the low amphipod percentages in the Eastern part of the Mediterranean may be the fact that some species of Atlantic origin have not yet extended their distribution to it.

Quite poor in number of species is the Black Sea, due to the special conditions prevailing there, among which the most important seems to be the reduced salinity of its waters.

Although the results of this study added an important number of amphipod species to the benthic fauna of the Aegean Sea and the Eastern Mediterranean, further research in other special habitats is expected to raise this number, given that the known amphipod species from the whole Mediterranean is much higher.





**Fig. 1** Distribution of amphipod species in the various areas of the Mediterranean and Black Sea, as percentages of the total Mediterranean species. The dark part of the column in the Aegean Sea represents the percentage added by the present study.

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