

An account of the Copepod distribution of the surface-water community in the Adriatic Sea

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Summary. The horizontal distribution of some of the more characteristic surface-water Copepods of the Adriatic have been analyzed, using the material collected during 4 cruises.

Résumé. La distribution horizontale de quelques Copépodes plus caractéristiques des eaux superficielles de la mer Adriatique a été analysée, utilisant le matériel recueilli pendant 4 expéditions.

The data of this report are based on planktonic material collected by the research vessel "A. Mohorovičić" during its 4 cruises (September-October 1974, April-May 1975, February and July 1976) throughout the entire Adriatic. The samples were collected at 35 fixed stations, along 8 transversal profiles. Vertical hauls were made of the total water column and from 100 and 30 m to the surface, depending on the depth of the station, with a Nansen net (113 cm diameter, 3.5 m length, mesh size 250 microns).

In this preliminary survey only data on the horizontal distribution of some of the more characteristic superficial species have been reported. In relation to their distribution pattern three categories of surface-water species were identified.

The first category includes those species uniformly distributed throughout the Adriatic, the most representative of which, Ctenocalanus vanus, was very abundant in all of the cruises. From data of this present survey and from many previous to this C. vanus can be considered the species of the greatest spread and quantitative importance in the Adriatic.

The second category includes the majority of other dominant surface-water species of Adriatic (Paracalanus parvus, Centropages typicus, Temora stylifera, Acartia clausi). These species have been found in considerable numbers and without apparent quantitative differences in all coastal areas of the Adriatic, excluding the south-eastern coast where they are much less common. However these species are rare in the central areas of the southern Adriatic and to a certain extent those

of the mid-Adriatic (Jabuka Pit), above all during the winter cruise.

The third and the last category of surface-water Copepods includes some typical neritic forms such as Pseudocalanus elongatus, Diaixis pygmoea, Centropages krøyeri and Temora longicornis. These species were collected regularly only in the northern Adriatic and at almost all of the stations along the Italian coast. During the summer cruise a widening of the area of distribution of these species was observed, while in the open waters of the southern Adriatic they have never been found, not even in previous studies (Fig. 1). It seems that the occurrence of these species in notable quantities is strictly tied to the Padana watershed and to its southward spread with outflowing currents. The seasonal differences in the horizontal distribution could be linked to prevailing surface outflow from the Adriatic to the Mediterranean in summer and to prevalence of the southern inflow in winter.

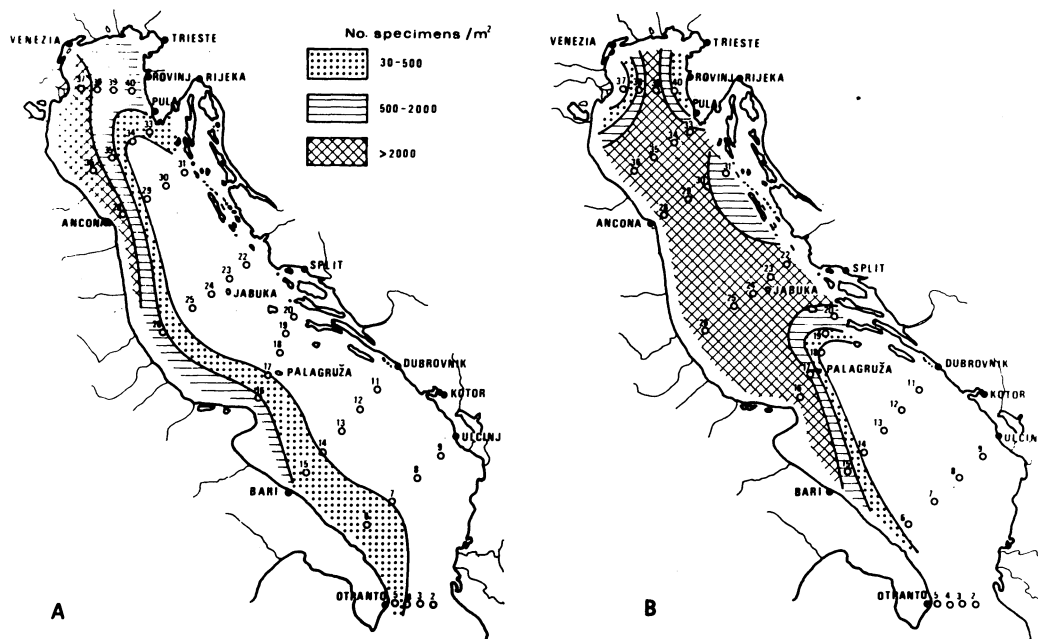


Fig. 1. Pseudocalanus elongatus. Horizontal distribution (A) winter, (B) summer.