

New data on planktonic fauna from the east of the Mediterranean Sea

by

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Although zooplankton investigations in the east of the Mediterranean Sea had been started at the end of the last century, yet data up to the present time were insufficient. Therefore, one of the main tasks of planktonological investigations carried out by the Institute of Biology of South Seas, Ukr. Academy of Sciences, in the east of the Mediterranean in 1958-61, was to obtain zooplankton data from this region.

In result of these investigations the Copepod lists, the most various and abundant group of predominant significance in the plankton of all investigated seas of the east Mediterranean, were considerably supplemented.

In the Adriatic Sea — one of the best studied regions, we found 38 zooplankton forms not marked earlier in this basin. Among them 13 species, namely : *Rhincalanus nasutus* Giesb., *Paracalanus aculeatus* Giesb., *Calocalanus tenuis* Farr., *C. pseudocontractus* Bernard, *Scolecithricella ovata* Farr., *S. abyssalis* Giesb., *Arietellus pavoninus* Sars, were for the first time noted in the eastern part, and such species like *Scolecithricella orientalis* Mori, *Paroithona pulla* Farr., *Coryssa parva* Farr., *Oncaea exigua* Farr., and *O. obscura* Farr. in all the Mediterranean basin. [SHMELEVA, 1964].

In systematic respect two family of Copepods namely: Calocalanidae and Oncaidae were studied at greater length. The last group is very difficult to describe because of the small size (0.18 - 0.40 mm.) of its representatives.

9 new species of Calocalanus have been described : *C. ovalis*, *C. longisetus*, *C. neptunus*, *C. plumatus*, *C. elegans*, *C. adriaticus*, *C. elongatus*, *C. latus* and *C. cristalli*. The two latter species are widely distributed, among the above-mentioned copepods and can be met in the middle and south Adriatic, the Ionic Sea, in the Sirt, Levant, Aegean and Red Seas. The other species were found in negligible quantities and mostly in the south Adriatic [SHMELEVA, 1965]. The new species of genus Oncaea are the following 11 species : *O. vodjanitskii*, *O. ivlevi*, *O. prendeli*, *O. zernovi*, *O. ovalis*, *O. tregoubovi*, *O. bathyalis*, *O. longiseta*, *O. brodskii*, *O. longipeda* and *O. minima*. The most often met in plankton is *O. vodjanitskii*, which also occurs in the seas of Sirt and Levant. In the Adriatic Sea only a few specimens of this species were noted, while in the seas of Sirt and Levant this copepod was often noted to occur at a quantity of 2-5 specimens per m³ [SHMELEVA, DELALO, 1965; SHMELEVA 1966]. Most of the described forms have their place of habitat at considerable depths (200-700 m.). In this way we were able to enrich our knowledge on the species of genus of the deep water zooplankton complex in the east Mediterranean. At present in the Adriatic Sea 217 Copepod species are recorded.

The detected and newly described Copepod species were of interest not only from the fauna point of view. Their distribution is well correlated with the distribution of water masses which has a general oceanographic interest. Most of the new Copepod species for the Adriatic Sea had been earlier found only in the east Mediterranean basin. Thus, biological data confirms the existence of the penetrating process of waters having a Levantese origin into the Adriatic.

In result of investigations in the Ionic Sea, the list of Copepods reached 123 species, from which only 43 forms were previously noted in the Ionic Sea or in the east Mediterranean Sea [GRESE, 1963].

In the Aegean Sea according to data by E. PAVLOVA [1966] there are 120 Copepod species. One of these species *Oithona tenius* Rosendorn is new for the whole basin.

In the seas of Sirt and Levant according to data by E. DELALO [1966] were recorded 141 Copepod species, from which only about 50 species were noted earlier [STEUER, 1895, PESTA, 1911]. *Undinopsis brady* G.O. SARS and *Acartia dana* Giesb. were new for the east Mediterranean, while for the Mediterranean Sea as a whole — *Paracalanus crassirostris* Dahl, *Scolecithrix fowleri* Farr and *Pleuromamma piseki* Farr.

The discovery of *Paracalanus crassirostris* in the Levant Sea, previously noted only in the Red Sea [GURNEY, 1927; SEWELL, 1948; DELALO, 1966], is interesting from the point of fauna. The discovery of this species at a distance of 20-40 miles from the Suez Canal is evidence of a gradual Red Sea fauna penetrating through the Canal and distribution in the east Mediterranean. The typical Red Sea species *Calocalanus pavonimus* Farr might have penetrated earlier and settled all over the east Mediterranean [DELALO, 1966]. This Copepod was recently found in the Aegean, Adriatic, Ionic, Sirt and Levant Seas. Probably, this Copepod penetrating through the Suez Canal from the Red Sea, successfully settled in the whole east Mediterranean. It is interesting to note that in the western part of the Mediterranean Sea, best investigated in respect to fauna, this species has not yet been found [GRESE, 1963].

Thus, it may be assumed that the penetrating process of Indo-Red Sea fauna into the Mediterranean basin through the Suez Canal proceeds rather energetically.

In conclusion, we must say that a significant increase in the list of the Copepods in all the seas of the east Mediterranean as well as the discovery of *Oncaea* and *Calocalanus* species new to science in result of investigations by Soviet planktonologists, are again indications of insufficient knowledge of plankton in the whole Mediterranean basin.

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Cette communication a un double intérêt. Comme *Mme Shmeleva* l'a déjà fait à plusieurs reprises, elle enrichit de manière importante, la liste des Copépodes de Méditerranée, notamment dans les genres *Calocalanus* et *Oncaea*. Elle s'appuie d'autre part sur les particularités de leur peuplement pour démontrer les relations entre la mer Rouge et le bassin oriental, ainsi que la pénétration de formations levantines dans l'Adriatique.

