

First data on the Calanoida (Copepoda) of the northern Gulf of Elat (Red Sea)

by

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Abstract

This is a first report of a survey on the planktonic Copepoda of the Gulf of Elat. Over twenty species have been identified. The dominant herbivores are nanoplanktonic grazers; the relative diversity of the omnivores is high; the only two predators are Paracandacia truncata and Euchaeta aff. concinna.

Résumé

C'est une première communication sur les Copepodes planktoniques du Golfe d'Elat. Plus de vingt espèces ont été déjà déterminées. Les herbivores dominants sont des mangeurs de nanoplankton; les espèces omnivores sont relativement nombreuses; il y a seulement deux espèces raptorales, Paracandacia truncata et Euchaeta aff. concinna.

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First data on the analysis of the pelagic Copepoda, collected by the Data Collecting Program in the Gulf of Elat (DCPE) by the H. Steinitz Marine Biology Laboratory in Elat are presented.

Previous conclusions based on the DCPE material, reached by several authors, indicate that the northern part of the Gulf of Elat is an extremely oligotrophic waterbody with a marked, but very short, subtropical type of seasonality.

The Calanoida from the northern Gulf of Elat were analysed from a water column 600 m deep. Biomasses were extremely low if compared with other seas, even of the tropical regions. Diversity of species is relatively high, even though there is some restriction if compared with what is known from the Red Sea at large.

Till now about 30 species have been found in our samples and the number might still increase. Some identifications are still incomplete and new species will probably occur in the material. Several species have not yet

been reported from the Red Sea. The samples richest in species were those from the month of March, which corresponds to the short plankton spring in the northern Gulf.

The predominant species of herbivores were Clausocalanus farrani, Paracalanus parvus, Mecynocera clausi and Ctenocalanus n.sp. These are typical nannoplankton filtrators, with maxillary filters of 1 micron (Paracalanus, Clausocalanus and Mecynocera) and 3 microns (Ctenocalanus). Acrocalanus sp. seems to characterize the impoverished surface plankton in the summer. These findings are in correspondence with the fact that the dominant primary producers in the Gulf of Elat seem to be the Coccolithophoridae and micro-flagellates.

Rhincalanus nasutus is dominant in the deeper samples; with a maxillary filter to 10 microns, this species must be considered to be omnivorous in the conditions of the northern Gulf of Elat, where diatoms and even dinoflagellates are very rare and even absent sometimes.

There is a large variety of more opportunistic, omnivorous species, such as Lucicutia flavicornis, Pleuromamma indica, Undinula vulgaris, Temeropia mayumbaensis, etc.

Acartia negligens appears to be one of the few characteristic neritic species. As a whole the calanoid association of the Gulf of Elat is a typically oceanic fauna despite the narrowness of the Gulf and the extreme proximity of the shores.

The predators are represented by only two species, namely Paracandacia truncata and Euchaeta aff. concinna.