Remarks on some deep-water Ostracode species in the Levantine Basin

Romana MELIS

Institute of Geology and Paleontolgy, University, TRIESTE **(Italy)**

Deep-water ostracode faunae are normally characterized by a low specific diversity. In addition, deep water eastern Mediterranean fauna greatly differs from that of the western Basin, since it is characterized by a still more reduced number of species (BONADUCE *et al.*, 1983; VAN HARTEN, 1987; VAN HARTEN & DROSTE, 1988). This can be explained with particular physical-oceanographic conditions, which were responsible of extended anoxic phases in the eastern Mediterranean sea during Plio-Quaternary. Such conditions originated deposits with very high organic matter content (sapropels and sapropelitic layers). Ostracodes, which are particularly sensitive to environmental changes, result widely affected by these conditions (VAN HARTEN, 1987; VAN HARTEN & DROSTE, 1988).

The Geological and Paleontological Institute of the Trieste University organized two oceanographic cruises (1986 and 1987) on Cyprus Basin (coordinator prof. A. Brambati). In these occasions three cores have been recovered (fig. 1).

The sequences studied chiefly indicate pelitic sediments with irregularly interbedded coarser ones. Moreover sapropel layers (organic carbon > 2%, *sensu* KIDD *et al.*, 1978), sapropelitic layers (organic carbon 0.5 - 2 %, *sensu* KIDD *et al.*, 1978) together with one tephra layer have been identified. They are interbedded to from beige to light-dark grey pelitic sediments. These layers are particularly useful to date the studied core-sequences and to correlate the corresponding environmental events in the basin.

The micropaleontological analyses mainly highlight the ostracode faunae which occur in these cores. The composition of the ostracode association seems to be linked to a core-interval which is included between two sapropel layers. This short article focuses on the composition of the ostracodes within such core-interval. Fig. 2 summarizes the data of the core Medo 4 and highlights partially those derived by the analyses between S2 and Sl sapropels (from bottom to top) :

- sapropel S2 : no ostracode fauna;
- above sapropel S2 : occurrence of *Argilloecia acuminata*, *Bythocypris bosquetiana* and *Polycope* sp. pl.;
- between S2 and S1 : increasing specific diversity; other species appear (*Argilloecia* sp. pl., *Bathycythere vanstraateni*, *Bythocypris bosquetiana*, *Cytheropteron* sp. pl., *Krithe* aff. *Praetexta*, *Paracytherois* sp. pl., *Pedicythere Phryne*, *Polycope* sp. pl., *Pontocypris acuminata*, *Pseudocythere* sp. pl. and *Tuberculocythere tetrapteron*);
- before sapropel S1 : reduced specific diversity (*Polycope* sp. pl.);
- sapropel S1 : no ostracode fauna.

This trend of the ostracode fauna composition also occurs on the other cores-interval (sapropel-pelite-sapropel) of all the cores. In conclusion it is possible to recognise the following trend within the dynamics of the ostracode fauna:

a) no ostracode fauna during anoxic phases;

b) colonization due to specimens of *Argilloecia acuminata*, *Bythocypris bosquetiana* and *Polycope* sp.pl.) immediately after the anoxic phases;

c) following high specificy diversity corresponding to the diversification and stabilisation phases;

c) reduction of the specific diversity (*Argilloecia acuminata*, *Bythocypris bosquetiana* and *Polycope* sp. pl.) immediately before following anoxic phase, which is devoid of benthic fauna. Moreover, in the actual layers is also present rare specimens of *Bathycyhtere vanstrateeni*, generally not found in the actual sediments.

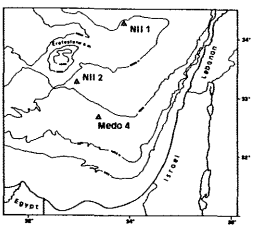

Fig. 1.- Core location in the Cyprus Basin

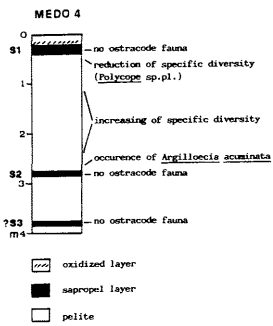

Fig. 2.- Core Medo 4: trend of ostracode association

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