

TRANSGRESSIVE AND REGRESSIVE PHASES IN THE BLACK SEA HISTORY

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This paper deals with some questions about the biostratigraphy of the Black Sea based upon the ostracods and mollusks communities. The history of the Black Sea starts during the Upper Pontian and means the times of isolation, the endemic fauna, the ecological changes, the alternation between marine, almost freshwater and brackish water environments. The low salinity fossil fauna suggests a lowering of the water level within the Black Sea, and implicitly an isolation of the basin. The marine fossil fauna suggests an opening of the Bosphorus strait and the possibility of correlation with Mediterranean sedimentation and its fauna. All the Black Sea events are correlated with those in the Dacian basin and the Caspian basin.

The Upper Pliocene and the Quaternary from the Black Sea area divided into nine biostratigraphical units. All of them are brackish water sequences and none completely fresh water or completely marine. This brackish water ecosystem was especially prolific in ostracod and mollusk species and distinct from recent species (few exceptions). Their potential for dispersal is today as good as in the past, interdicted by the salinity barrier. Some ostracod species are extremely euryhaline while others have very restricted salinity ranges.

CARAION (1967) and SORNIKOV (1968) described almost 130 ostracod species from the entire Pontic area including the Dnipr and the Dniester limans, the Razelm-Sinoe limans and the Azov Sea. Each of them is more or less a restricted and distinct biotope with different qualitative and quantitative ostracod communities structure. Only nine of them are relic species from early epoch and old times.

Generally, the benthic specific diversity varies along the depth gradient increasing from the coastal shallow bottoms to 100 m bottoms, where it reaches the highest values, then decreasing towards the shelf break. The maximum density of benthic organisms (crustaceans) is more 300,000 sps / m², in front of the mouths of the Dniester and the Dnipr. In the ostracods case, the maximum of densities is in front of the Danube mouths and in some littoral oligohaline lakes (other species, of course).

The fossil ostracods species are extremely abundant, many of them, with short longevity and large diversity in contradiction with the common aphorism "*speciation is rare and difficult event*" (ELDRIDGE and GOULD, 1972).

The Black Sea area had a complicate and not well known history, it being the last descent of the old Paratethys.