

Coarse sediments in the Eastern Mediterranean

E.E. KARNYUSHINA, B.T. YANIN

Geological Faculty of Moscow State University, MOSCOW (Russia)

Coarse edaphogene material within the deposits of slopes and foots of large positive structures of the Mediterranean Sea bottom was studied by cores up to 350 cm long located along seismic profiles, which run through the West Tartus Ridge and Anaximander Mountains (Training through research cruise, R/V "Gelendzhik", 1991). Under the recent oxidated mud cover large fragments are encountered in the deposits of Early Holocene and Wurme age practically pervasively in the form of single inclusions, admixtures up to 25% and individual accumulations containing varying quantity of carbonaceous-clay matrix.

With regard to roundness clasts and size grus and gravel (0,1-1 cm), scree debris and pebble (1-10 cm) are encountered within fragmental components. Depending on the proportion of these components, gravel-grus deposits, breccia, conglomerates and breccia-conglomerate are described. The most widely developed are coarse clastics composed of the material subsynchronous to Holocene and Wurme deposits. Usually, such accumulations are represented by clay breccia-conglomerate of landslides from the slopes. Scree debris of carbonaceous micritic crusts which have been likely broken on the bottom surface due to the movement of underlying sedimentary masses constitute a considerable part of the clastics. The more rarely encountered are fragments of redeposited sapropel.

In the deposits of several cores coarse material was found, which was more ancient than that of Quaternary age. So, breccia occurs at the depth of 2326 m in the deposits of the trench South-Westwards of the crest Anaximander Mountains within the interval of 27-45 cm from the bottom surface. Alongside micritic-carbonaceous and clay fragments, subsynchronous to Late Wurme time, the breccia contains flattened acute angular fragments of terrigene and carbonaceous bedrock. Among greenish terrigene fragments aleuritic-micaceous compacted clay and graywacke sandstones have been identified. The graywackes are composed of quartz-chlorite-carbonate altered rock, the products of dezintegration. One of the carbonaceous rock fragments is represented by intrabiosparite of shelf-facies genesis, where Y.Y. ZAKREVSKAYA has identified *Nummulites* ex gr. *globulus* Leym. and *Discocyclus* ex gr. *nummulitica* Gimbel of Eocene age. Another fragment of limestone is referred to biosparite and composed of Foraminiferas, where V.G. KOURENKOVA has identified *Orbulina suturalis* d'Orb., *Globigerina bulloides* d'Orb., *Globigerinoides* sp., *Globorotalia* sp. of middle Miocene and Pliocene age. The fragments of dark-coloured carbonaceous-argillaceous-carbonate rock of the same age are found in the deposits of the lower part of the South-Eastern slope of the West Tartus Ridge (the depth is 1515 m) within the interval of 160-168 cm from the bottom surface.

It is characteristic that the breccia with fragments of Tertiary bedrock occurs above accumulations of coarse clastics, subsynchronous to Wurme deposits. This evidences that relief-forming processes took place even till Late Holocene period, due to progressive development of tectonic movemenets, causing first relict silt sliding and redeposition and then the dezintegration of the bedrock of upheavals and trench slopes.