

Palynological Research in the Black Sea basin (Comperative analysis)"

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Investigation of Holocene sediments in the Black Sea (BS) have a valuable history. Research on the topic, has been carried out within EU funded project ‘SESAME”, as well. The palynological data base of BS was created, including the data from Georgia (26 profiles), together with the results from various parts of the Black Sea, covering the data of palynological studies of marine, lagoon, alluvial and bog sediments. Compilation of existing palynological data, their comparison, analysis and synthesis allows further clearing up of local, regional and trans-regional processes in the development of climate and level of the Black Sea in the Holocene that are necessary for prognostication of the processes under discussion. Study reveals, that during the Holocene, transgression phases with warm climatic conditions lasted longer than the regressive phases. The most significant warming and, accordingly, the sea transgression took place in the Atlantic period when during nearly three millennia (8000 - 5500 BP), the climatic trend was directed towards the increase both in precipitation and temperatures. This process reached its peak 6000 - 5500 years ago and the sea in Colchis for the first time for the whole post-glacial period exceeded by several meters the present-day level. The second significant transgration of the Black Sea waters took place at the end of the Subboreal period (3800 - 2400 years ago), which was also due to climate warming. The sea level again was higher than nowadays. However, the presented material indicates that in development of main paleoecological events and, especially in fluctuations of the Black Sea level, climatic changes were of primary importance. They were of global character and, hence in different parts of the Black Sea transgressions and regressions were synchronous.