

The role of the liman-baymouth complexes in human settlement in the Eneolithic to Bronze Age

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Introduction

The northwestern part of the Black Sea is interesting for scientists not only because it is considered to be a “connecting-link” or a “contact area” between the two worlds—the Balkan farmers and the steppe cattle-farmers, or because it was the place where impulses from several centers of cultural genesis came together. It is also unique because of its geological structure: there are salt limans in the littoral area, in which, due to climatic factors, a natural process of salt crystallization occurs. And salt had an exchange value in many regions of the world.

Results

Analysis of the dynamics of archaeological cultures in the northwestern Black Sea in the context of sea-level and humidity fluctuations has been done before (e.g., Dergachev, 2005; Ivanova, 2005). However, the latest geological studies of the Black Sea shelf, limans, and baymouth barriers provide exact dates of transgressions and regressions (Konikov et al., 2007). Regarding these studies, the dating of eustatic fluctuations and salinity in Black Sea water is important, because these parameters influence the salinity of limans in the Black Sea. The Novochernomorian transgression of the Black Sea, with two peaks in it: the Lower Novochernomorian transgression (the maximum at 5000 uncal BP, or ca. 3950–3710 BC) and the Upper Novochernomorian transgression (3200 uncal BP, or ca. 1500–1440 BC) corresponds with the Copper and the Bronze Ages. These transgressions are separated from each other by the Khadzhibeian regression (3500/3350–2290/2150 BC), which reached a peak at approximately 4000 uncal BP, or 2570–2475 BC. The latest research corroborates the paleogeographical scheme devised by P.V. Fedorov (1982). According to this scheme, the salinity of the Black Sea basin was higher during the Novochernomorian stage, than it is at present (Voskoboinikov et al., 1984; Konikov, 1993). Observations conducted during the last 150 years show that the salinity of the limans in the Black Sea changed intensively, but salinity level was the highest in the Kuyalnik (29.5–27.4‰), Khadzhibey (9–63.5‰), Sasyk (15–29.5‰), Alibey, and Burnas (20–140‰) limans. The salinity of the pore water of bottom sediments in the limans also changed depending on the depth, and there were 2 to 4 almost simultaneous peaks of maximal salinity. These peaks mostly correspond to the regressive sequences of the sediments (Konikov, 1993). Thus, we can say that it is highly probable that the limans of the Black Sea could supply salt during the Eneolithic and the Bronze Ages.

Archaeological context

The Usatovo Culture first appeared during the transitional period between the Atlantic and Subboreal, and it disappeared at the beginning of the middle Subboreal SB-2, which is characterized by considerable aridification (4760–4150 uncal BP, or 3640–2880 BC). The Yamna Culture existed during the period between the early and the middle Subboreal SB-1 and SB-2, and it corresponds perfectly to the Khadzhibeian regression (4600–4000 uncal BP, or 3300–2100 BC). The Catacomb Culture corresponds partly to the middle Subboreal SB-2, i.e., it appeared during the peak of the Khadzhibeian regression and existed until the end of the regression (4000–3950 uncal BP, or 2580–2040 BC).

Radiocarbon dates demonstrate an absence of any negative trends (lacunae) in the development of the cultures in the region in question in spite of the climatic and eustatic fluctuations. On the contrary, the peak of these fluctuations corresponded to the majority of the radiocarbon dated sites of the early Bronze Age in the northwestern Black Sea.

Conclusions

The areas near the limans yield the most prestigious finds from the early Bronze Age burials (with silver and copper items). It was probably the salt produced on the limans in the Black Sea that was the source of the material well-being of prehistoric communities. Such a role for salt is recorded in ethnographic sources in many regions of the world. The early Bronze Age inhabitants can be considered as the first salt workers of the northwestern Black Sea, whose activity is reflected in the archaeological artifacts. The region itself should be recognized as a unique natural object, a convenient place for salt-mining. The development of this region was conducive to the processes of cultural genesis during the different historical periods.

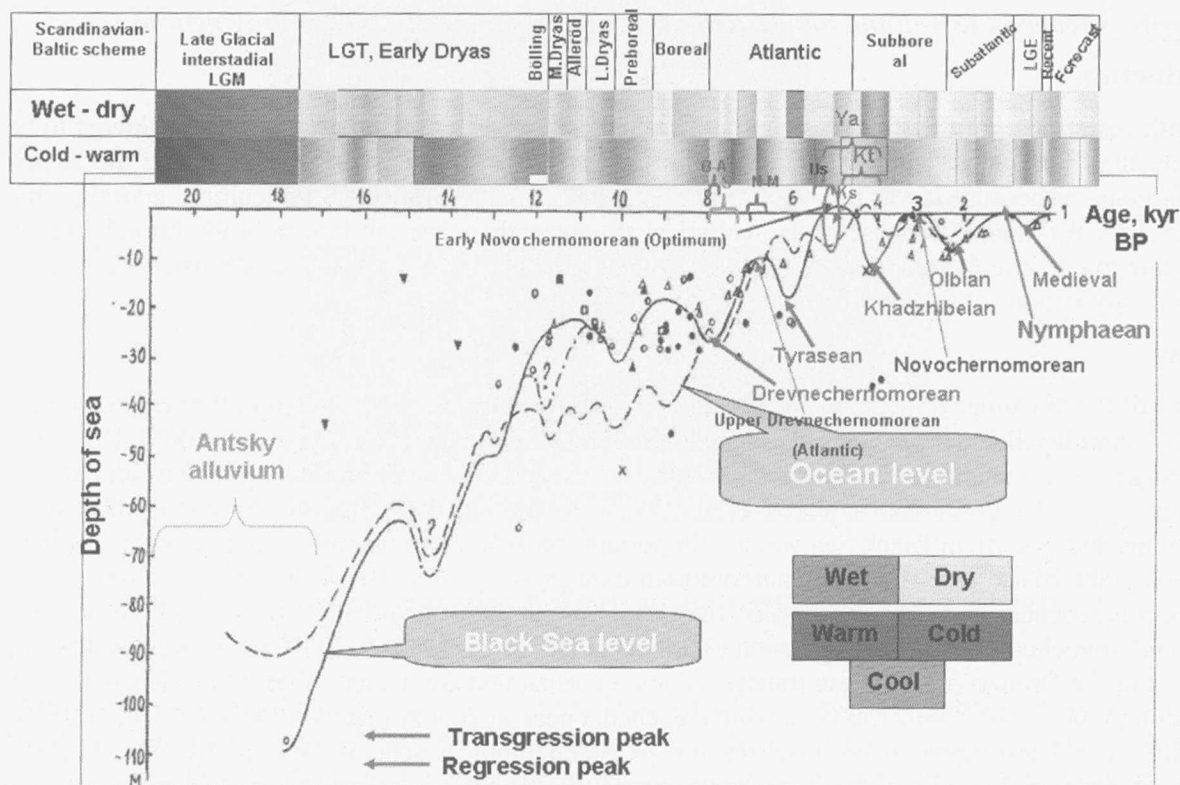


Figure 1. The results of reconstruction of paleoclimate and sea-level fluctuations in the Ocean (Mörner, 1971) and the Black Sea (Konikov) in the late Pleistocene and Holocene. The main archaeological cultures, of which the sites are situated in the littoral area of the Dniester-Berezan interfluvium, are shown in the graphic. The archaeological cultures: B-A = Bolgrad-Alden, S = Suvorovska, N-M = Nizhniemichailovska, Us = Usatovo, Ya = Yamna, Kt = Catacomb, Ks = the archaeological site of Koshary.

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