

First evidence for the earliest salt production in Europe

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Tell Provadia-Solnitsata is situated 3 km to the south of Provadia, northeast Bulgaria. It is located on the salt mirror of a huge deposit of rock salt shaped as a frustum of a cone. The salt content of the brine springs, which erupted on the surface at different places, varies from 160 to 190 g/l.

As evidenced by the trial excavations in 2005, the accumulation of the tell levels happened in the late Neolithic, the early and the late Chalcolithic. 8 small trenches were made at the tell's periphery.

All trenches yielded late Neolithic sherds (fig. 1). This pottery perfectly matches the general features of Karanovo III-IV pottery assemblage in Thrace. It is for the first time that we find it to the north of the Eastern Stara Planina Mountains.

The only difference with Karanovo III-IV assemblage in Thrace is the presence of a big number of sherds belonging to thin-walled bowls with a very large rim diameter (ca. 40-50 cm or maybe even more), roughly smoothed outer and inner surface covered with a whitish crust (fig. 2). The walls of the vessels are 5-6 mm thick; usually have red or brick-red section, a result from secondary firing at a high temperature. All these indications allowed me to suggest that the described ware was in fact briquetage, used to evaporate brine on a low fire or live coals. Samples were taken from three sherds (the wall of the sherd and the crust were crushed and analyzed). The results from the chemical analysis showed an unusually high content of rock salt: 28-39 per cent! The crust of three other sherds from different vessels was also sampled. The results show considerable rock salt content; it varied from 12 to 34 per cent! Therefore the initial hypothesis proved to be correct.

The middle and late Chalcolithic sherds yielded by the excavations exceed in number the Neolithic pottery and refer to the Hamangia IV and Varna cultures respectively. Numerous briquetage sherds similar to the Neolithic salt pans and used to evaporate the brine were found

together with the standard middle and late Chalcolithic ware. The salt production at this place continued in the middle and late Chalcolithic as well.

There is no evidence so far for the way the early Neolithic people in Bulgaria supplied themselves with salt (late 7th to the first half of the 6th millennium BC). People started the exploitation of the brine springs at Provadia in the third quarter of the 6th millennium BC. Most probably, a Neolithic community, bearer of the Karanovo III-IV culture from Thrace crossed the Eastern Stara Planina Mountains and started the salt production by evaporating brine from the salt springs.

There is still no enough evidence for salt exploitation in the Chalcolithic (5th millennium BC) but it is worth mentioning that fine ware, apparently imported from the neighboring areas to the east and northeast, was quite common in the late Chalcolithic layers of Tell Provadia-Solnitsata. It is quite possible that the rich Chalcolithic cemetery at Varna has been related to the salt exploitation at tell Provadia-Solnitsata. Besides, the cemetery and the main late Chalcolithic layers at the tell date back to the same phase of the Varna culture, viz. its first phase. The distance between the two sites is ca. 25 km.

The rock salt deposits at Provadia are among the few in the Balkans. According to a recent publication, the salt production at Poiana Slatinei-Lunca in the Romanian part of Moldova by evaporating of brine from salt springs started in Starcevo-Kris IIIB-IVA period and for this reason is declared the oldest in the world. After a study on the pottery from the two regions, in 1998 I suggested that Starcevo-Kris IIIB-IVA period in Romanian Moldova has been contemporary with Karanovo III-IV and even with the early Karanovo IV period in Thrace. Therefore, the beginning of salt production at Provadia was contemporary with the salt production to the northeast of the Carpathians and should be also considered the oldest in the world or in Europe at least.