



## Book Reviews

### **PROVIDIA-SOLINSTATA PREHISTORIC SALT-PRODUCTION CENTER. THE 2005-2007 EXCAVATION SEASONS, EDITED BY VASSIL NIKOLOV**

Bulgarian Academy of Sciences. National Institute of Archaeology and Museum. 2008. 351 pages, 71 plates & figures, 72 photographs, 2 maps. ISBN 978-954-92181-3-8 (11 €)

There are at least two types of site-oriented studies in archaeology – those that contribute to our generic knowledge of global events, trends and ideas in our understanding of the past; and those dealing with local, yet important archaeological heritage issues. This new book probably had the ambition to be the first type of study but only just managed to fulfill the second. It concerns the site of Provadia (formerly Mirovo) in North East Bulgaria and the authors' claim for the site to be a salt production centre.

The study consists of 11 chapters accompanied by a short English summary. The scene is set by an introduction to the local environment and the modern use of the Provadia salt resources (Chapter 1) and a summary of the archaeological evidence for the prehistory of Northeast Bulgaria (Chapter 2). An overview of the archaeological investigations, stratigraphy and periodisation of the site is provided in Chapter 3, complemented by the results of geophysical survey (Chapter 4). The next six chapters are organised in chronological order (Chapters 5-6 – two consecutive Late Neolithic layers, Chapters 7-9 – three consecutive Middle Chalcolithic layers, and Chapter 10 - the settlement fortification system) and follow a similar pattern – a detailed description of excavated features, detailed discussion of vessels and other artifacts, complemented by archaeo-botanical studies (Elena Marinova) and archaeozoological investigations (Lazar Ninov). Chapters 5 and 6 have special sections on vessels for salt production and a reconstruction of the technological process. In the last chapter, Kathleen McSweeney presents a fairly complete account of the human remains found on the tell.

The limited number of archaeologists who speak Bulgarian outside the country and the importance of salt production in prehistoric Europe justify a short summary of the major claims about the technology of salt production made in the study, despite the technical details that may seem out of place in a book review.

The method of salt production at Provadia tell is discussed only for the Late Neolithic period – the earliest known occupation at the tell. This is identified as brine evaporation in ceramic bowls, performed in a kiln that looks like any domestic oven, if slightly larger, known from the Balkan Neolithic and Copper Age. A reconstruction of the arrangement of vessels in the kiln is proposed, as well as estimates concerning the entire process of salt production, from firing the kiln through to obtaining the salt. It is claimed that 26 kg of salt were produced in 8-10 hours. The estimated number of vessels for salt production coming from one building is at least 74, while the reconstruction points to 7 or 8 vessels in use at any one time for brine evaporation in the kiln. In addition to the suggested stock for future use, one way of solving the discrepancy in vessel numbers is to assume that the vessels were broken to extract the salt - hence the need for new vessels. However, the extraction method is not discussed. Moreover, claims are made for repair and re-use of the vessels. The latter are deep dishes said to be made in moulds because of their thin walls (3 – 6 mm in thickness) and to increase the quantity produced. Their rim diameter varies between 320 and 560 mm, while the basal diameter is between 110 and 180 mm. The vessels were coated with clay from inside for an as yet unidentified purpose - perhaps to strengthen the thin vessel walls?

Six sherds from the alleged salt-boiling vessels were subjected to chemical analysis, showing that the inside of the vessels was covered by a thick, white deposit identified as mainly potassium chloride and magnesium chloride. This material is claimed to be a waste product from brine evaporation by boiling, which has remained after the removal of the sodium chloride.

As with many publications coming from the Balkans, there are advances that this book makes and challenges that it does not meet. The useful information that can be found there is beyond any doubt: a major contribution is the so far poorly documented means of Neolithic salt production; the detailed account of a possible technological process; the employment, albeit limited, of archaeological chemistry and geophysics; the postulated relations between salt production and a specific type of architecture (two-storied buildings), as well as between salt production and the Middle Copper Age tell fortification, in the form of a double ditch and a stone wall combined with a palisade.

However, there are issues which the reader would anticipate in a book with such a title that are not addressed. The study is site-oriented and the attempt to put it into wider context is in the old tradition of descriptive juxtaposition of sites, with no real reconstruction of living prehistoric society. The potential social implications of such a huge scale of production and its subsequent distribution and consumption are briefly mentioned in scattered sections, leaving unexplored the importance of salt on Neolithic and Copper Age Bulgaria, and Provadia in particular.

Even straightforward and well-attested links like the potential use of salt in the diet of the people of Provadia and its importance to their animals are not fully exploited; the floral and faunal remains from the site are not utilised to build such links. And while the activities of the modern salt company – Provadsol - may have hindered the identification of potential salt water sources, a review of previous research may have helped in this direction. Even more seriously, the authors do not clarify the existence, scale and potential development of salt production during the Middle Copper Age, nor what happened to salt production in the Early Copper Age – a period not represented in the recent excavations. Salt production is simply assumed during the Middle Copper Age but no evidence has been provided. Even if the investigations are in a preliminary stage, some general conclusions linking all the chapters should have been made rather than the present two pages of summary. There are also some small matters, such as the absence of a Harris matrix to present the complicated stratigraphy or the organisation of the faunal and botanical data into tables with commonly recognisable Latin names – important decisions over presentation that help all readers but especially non-Bulgarian speakers.

Some claims are on an anecdotal level, such as the location of the earliest salt-boiling production in Europe at Provadia on the basis of relative chronology, by disregarding the absolute dates of between 6060 and 5500 BC at Lunca, Moldavia (Weller and Dumitroia 2005); until the Provadia occupations are well-dated by 14C determinations, such a claim can hardly be accepted. There are also more serious issues that are on the verge of professional misconduct, such as the selective referencing of earlier research, with major omissions (eg, Raduncheva 1986, Chapman 2003, etc.).

The book is a good site report with contributions to the present knowledge of architecture, settlement fortification and pottery of the Balkan Neolithic and Copper Age. It is very good for anyone interested in comparative pottery studies but it is disappointing for anyone eager to learn more about the role, economic significance and symbolic value of salt in Balkan and European prehistory.

#### *References*

- Chapman, J. 2003 The provision of salt to Tripolye mega-sites. In A. Korvin-Piotrovsky, V. Kruts & S.M. Rizhov (eds), *Tripolye settlements-giants*, 203-211. Kiev: Institute of Archaeology
- Raduncheva, A. 1986. Obshtestveno-ikonomicheskiat jivot na Dobrudza i Zapadnoto Chernomorie prez eneolita. *Vekove* 1, 16-20
- Weller, O. & Dumitroia, G. 2005. The earliest salt production in the world: an early Neolithic exploitation in Poiana Slatinei-Lunca, Romania. *Antiquity* 79 (306), <http://www.antiquity.ac.uk.ezphost.dur.ac.uk/projgall/weller/index.html>

*Bisserka Gaydarska*

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