

COMPLEXUL MUZEAL JUDEȚEAN NEAMȚ
CENTRUL INTERNAȚIONAL DE CERCETARE A CULTURII CUCUTENI

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**IMPACTUL ANTROPIC
ASUPRA MEDIULUI NATURAL ÎN
NEO-ENEOLITICUL SUD-EST EUROPEAN**

MUZEUL DE ARTĂ ENEOLITICĂ CUCUTENI
Piatra-Neamț, 24-26 octombrie 2012

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Rezumate / Abstracts / Résumées

Colocviu Internațional / International Colloquium / Colloque International

**IMPACTUL ANTROPIC ASUPRA MEDIULUI NATURAL
ÎN NEO-ENEOLITICUL SUD-EST EUROPEAN**

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**HUMAN IMPACT ON NATURAL ENVIRONMENT
IN THE NEO-ENEOLITHIC OF SOUTH-EASTERN EUROPE**

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**L'IMPACT ANTHROPIQUE SUR L'ENVIRONNEMENT
DANS LE NÉO-ÉNÉOLITHIQUE DU SUD-EST DE L'EUROPE**

Editori:

**Constantin Preoteasa
Gheorghe Dumitroaia**

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**RESEARCH IN SPATIAL ETHNOARCHAEOLOGY ON THE SUPPLYING
WITH BRINE FROM SALT SPRINGS IN MOLDAVIA (ROMANIA)**

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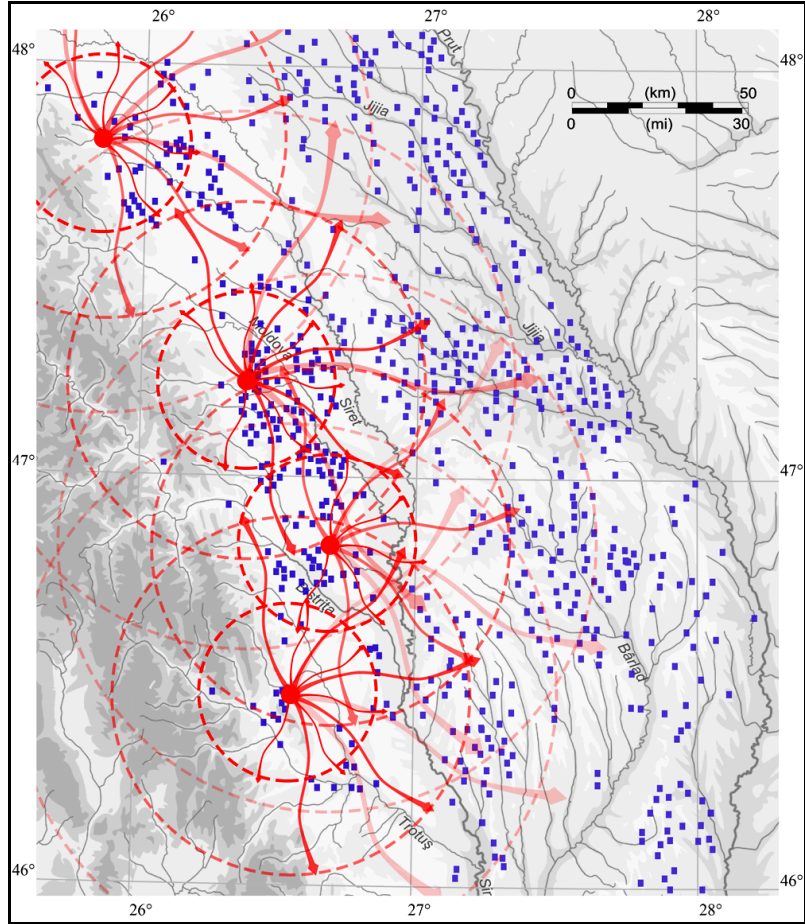
Spatial archaeology and spatial ethnography illustrate research directions that are recent yet already consolidated. But up to the present moment, the connection between these two was only sporadically made. For this reason, in the first part of the paper, one of us (M.A.) advances a theoretical foundation for the concept of spatial ethnoarchaeology.

The research performed as part of two Romanian research projects with French participation – *The salt water springs of Moldavia. The ethnoarchaeology of a polyvalent natural resource* (PN-II-IDEI, code 414/2007, no 167/2007, web: <http://www.ethnosal.uaic.ro/>) and *The ethno-archaeology of the salt springs and salt mountains from the extra-Carpathian areas of Romania* (PN-II-IDEI, code 0825/2011, no 219/5.10.2011, <http://www.ethnosalro.uaic.ro/>) – have produced, among other results, ethnographic models for brine supplying from salt springs in the area of Subcarpathian Moldavia. The main conclusion is that salt springs, invariants of the natural environment, become genuine attractors for human communities in every historical period. We believe that episodes when brine supplying from salt springs unfolded during exceptional circumstances (war, drought, the dissolution of the established commercial networks etc.), ethnographically attested in the historical present (*i.e.* the last century), are most adequate for assessing subsistence patterns related to fulfilling the salt requirements during various archaeological sequences. Obviously, the brine quantities necessary depend on the demographic density in the areas of its distribution. In the current stage of research, the models suggested have a high degree of generality. An in-depth investigation of the relationship between brine resources and demographic density should take into account only the number of synchronous settlements (for

example, a 50-years time span), correlated with an estimated number of inhabitants, and obviously only to a level backed by archaeological evidence. No matter how audacious these attempts might seem, only by taking into consideration these methodological caveats, the approximations of real phenomena could reach a credible level of accuracy.

The ethnographic models that reveal a spatial distribution of brine from salts springs at a local (a 20-30 km radius) and regional (*ca.* 100 km) level were applied to the main archaeological sequences of the most representative areas with salt springs, and which have been archaeologically investigated.

The employment of spatial ethnography for solving the question of salt requirements and direct supplying of brine from salt springs reveal, including from a chronological point of view, significant differences between different areas that harbor liquid salt attractors. Thus, the Solca-Cacica area manifested, rather surprisingly, a gravitational pull for human communities as early as the Palaeolithic, unlike other areas with salt springs that have been thoroughly studied. On the other hand, as revealed by the models developed for the Bronze Age, the human communities favoured a quasi-concentric settling pattern around some salt springs, at relatively short distances from them that eased provisioning. Another important conclusion is that the salt springs from the Moldavian piedmont can cover the salt requirements of the communities of the archaeological time from the entire area between the Carpathians and the Prut River. We can state even at this stage that the existence of over 200 salt springs in the Subcarpathian area of Moldavia would have easily covered the salt requirements on a local level, while the same requirements would have entailed long-distance transport of larger quantities of brine. It follows then that settling of human communities, particular of the Eneolithic ones, followed different parameters, as the question of long-distance brine supplying was resolved. This conclusion entails, in its turn, the complex question of human mobility during pre- and proto-historical times. At the stage of research, we observe complex relationships between the quantity of brine collected from a salt spring, the frequency of travel to the salt spring in order to procure brine, and the distance to which human communities are located around a certain salt spring. Similar substantive results have been obtained from investigating the diachronic variability of site density around the areas that confine a liquid salt attractor. But it is clear that this variability depends on other essential parameters of demographic evolution or involution than satisfying the requirements of salt.



General model (without chronological and cultural indicators) of brine supplying of the Eneolithic communities from the area between the Carpathians and the Prut River.