



# SECOND ARHEOINVEST SYMPOSIUM

*From the ethno-archaeology to the anthropology of salt*

## Programme and Abstracts

Editors: Marius Alexianu, Roxana-Gabriela Curcă, Vasile Cotiugă

“Alexandru Ioan Cuza” University of Iași  
ARHEOINVEST Platform

## SECOND ARHEOINVEST SYMPOSIUM

*From the ethno-archaeology to the anthropology of salt*

April 20th–21st, 2012, Iași, Romania

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Editors: Marius Alexianu, Roxana-Gabriela Curcă, Vasile Cotiugă

Symposium organised in the framework of the project  
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de la etnoarheologia la antropologia sării

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AL DOILEA SIMPOZION ARHEOINVEST

Vineri, 20 aprilie 2012

15:00 – 15:45	Ceremonia de deschidere:	Lector dr. Vasile COTIUGĂ – Cuvânt de salut din partea organizatorilor Prof.univ.dr. Dumitru LUCA – Cuvânt de salut din partea Rectoratului Prof.univ.dr. Lucrețiu BÎRLIBA – Cuvânt de salut din partea Facultății de Istorie Marius ALEXIANU, Gheorghe DUMITROAIA, Dan MONAH – <i>Etnoarheologia sării în România după 20 de ani</i>
15:45 – 16:00	Pauză de cafea	
		Moderatori: Dan MONAH, Gheorghe DUMITROAIA
16:00 – 16:20	Marius ALEXIANU, <i>Antropologia sării: o primă abordare conceptuală</i>	
16:20 – 16:40	Valeriu CAVRUC, <i>Tipologia producerii și schimbului de sare în preistoria Europei de sud-est</i>	
16:40 – 17:00	Olivier WELLER, Gheorghe DUMITROAIA, Robin BRIGAND, Daniel GARVĂN, Marius ALEXIANU, Roxana MUNTEANU, <i>Un grăunte de sare în Carpați: exploatarea trecută și actuală a izvoarelor de apă sărată din județul Neamț</i>	
17:00 – 17:20	Mugur ANDRONIC, Bogdan NICULICĂ, <i>Noi cercetări arheologice cu privire la exploatarea sării în Bucovina</i>	
17:20 – 17:40	Ion SANDU, Roxana-Gabriela CURCĂ, Viorica VASILACHE, Maria CANACHE, <i>Corelația dintre compoziția chimică și utilizările domestice ale slatinei</i>	
17:40 – 18:00	Mihaela PARASCHIV, <i>Un „festin” paroemiologic salin, latino-hispanic, la Bernardino Gomez Miedes (Commentariorum de sale libri V)</i>	
18:00 – 18:15	Pauză de cafea	
18:15 – 18:35	Nicolae URSULESCU, <i>Locul și rolul aprovizionării cu sare în alegerea locației așezărilor neolitice și eneolitice din Moldova</i>	
18:35 – 18:55	Gheorghe DUMITROAIA, <i>Poiana Slatinei–Lunca (România): punct de reper pe harta preistorică a sării</i>	
18:55 – 19:15	Oana MACARI, <i>Sarea în practicile magice</i>	
19:15 – 19:35	Dragomir Nicolae POPOVICI, Ovidiu CÎRSTINA, Ana ILIE, Gheorghe OLTEANU, Mihai NĂSTASE, Florin PETRICĂ, <i>Surse de sare în județul Dâmbovița. Date de natură geologică, etnografică, istorică și arheologică</i>	
19:35 – 19:55	Robin BRIGAND, <i>Teritorii, oameni și sare. Variabilitate arheogeografică</i>	
20:00 – 22:30	Cocktail	

- 09:00 – 09:20 Adrian PORUCIUC, *Două ipostaze paradigmatiche ale sării în folclorul românesc*
- 09:20 – 09:40 Constantin PREOTEASA, *Exploatarea sării de către comunitățile umane aparținând complexului cultural Precucuteni–Cucuteni*
- 09:40 – 10:00 Lăcrămioara OCHIUZ, *Aerosolii salini — de la speleoterapie la haloterapie*
- 10:00 – 10:20 Gheorghe LAZAROVICI, Cornelia-Magda LAZAROVICI, *Vase pentru transportul sării în cultura Starčevo-Criș?*
- 10:20 – 10:35 Pauză de cafea
- 10:35 – 10:55 Maria CANACHE, Ion SANDU, *Implicațiile sării în marcarea unor momente ale existenței omului*
- 10:55 – 11:15 Dan MONAH, *Izvoare sărate, puncte de recristalizare a sării, centre rituale de schimb cu populațiile stepice*
- 11:15 – 11:35 Gheorghe ROMANESCU, *Izvoarele de apă sărată în literatura geografică și geologică din România*
- 11:35 – 11:55 Mădălin-Cornel VĂLEANU, *Despre izvoarele de apă sărată din Podișul Moldovei. Informații inedite din arhive din secolul al XIX-lea*
- 11:55 – 12:10 Pauză de cafea
- 12:10 – 12:30 Vasile COTIUGĂ, *Despre exploatarea sării în Țările Române în scrierile călătorilor străini*
- 12:30 – 12:50 George MATEI, *Importanța fiziologică a sării*
- 12:50 – 13:10 Iulian MOGA, *Sarea și agenții asociați în formulele de blestem și de binecuvântare din Orientul Apropiat*
- 13:10 – 13:30 Marius ALEXIANU, *Izvoarele de apă sărată în toponimia românească*
- 13:30 – 16:00 Pauză de prânz
- 16:00 – 16:20 Ludmila BEJENARU, *Sarea ca metaforă*
- 16:20 – 16:40 Alexander RUBEL, *Sarea ca simbol în francmasonerie*
- 16:40 – 17:00 Vasile DIACON, *Măsuri ale administrației austriece privind izvoarele de apă sărată din Bucovina*
- 17:00 – 17:20 Alexandru BOUNEGRU, *Halotoponime și halohidronime în documente medievale din Țara Românească*
- 17:20 – 17:40 Claudia DRACEA, *Sarea ca simbol în expresii și proverbe la români și slavii de răsărit*
- 17:40 – 18:00 Alexandru BOUNEGRU, *Halotoponime și halohidronime în atlasul „Plans des Bukowiner Districts in 72 sections welche in denen Jahren 1773, 1774 und 1775 von einen Departament des Kays: Königlicher General Staabs geometrisch aufgenommen worden”*
- 18:00 – 18:20 Mihaela PARASCHIV, *Sarea în lucrarea Adagia a lui Desiderius Erasmus Roterodamus*
- Discuție de încheiere

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AL DOILEA SIMPOZION ARHEOINVEST

Friday, April 20th, 2012

- 15:00 – 15:45      Opening ceremony:    Assistant Professor Vasile COTIUGĂ, PhD – Welcoming speech from the organisers  
Professor Dumitru LUCA, PhD – Welcoming speech from the Rectorate  
Professor Lucrețiu BÎRLIBA, PhD – Welcoming speech from the Faculty of History  
Marius ALEXIANU, Gheorghe DUMITROAIA, Dan MONAH – *The ethno-archaeology of salt in Romania after 20 years*
- 15:45 – 16:00      Coffee break
- Chairmen: Dan MONAH, Gheorghe DUMITROAIA
- 16:00 – 16:20      Marius ALEXIANU, *Anthropology of salt: a first conceptual approach*
- 16:20 – 16:40      Valeriu CAVRUC, *The typology of prehistoric salt production and exchange in South-East Europe*
- 16:40 – 17:00      Olivier WELLER, Gheorghe DUMITROAIA, Robin BRIGAND, Daniel GARVĂN, Marius ALEXIANU, and Roxana MUNTEANU, *Un grain de sel dans les Carpates : regards croisés sur l'exploitation passée et actuelle des sources salées (dép. Neamț)*
- 17:00 – 17:20      Mugur ANDRONIC and Bogdan NICULICĂ, *New archaeological researches regarding the exploitation of salt in Bucovina*
- 17:20 – 17:40      Ion SANDU, Roxana-Gabriela CURCĂ, Viorica VASILACHE, and Maria CANACHE, *The correlation between the chemical composition and the domestic uses of brine*
- 17:40 – 18:00      Mihaela PARASCHIV, *A paroemiological saline "feast", Latino-Hispanic, at Bernardino Gomez Miedes (Commentariorum de sale libri V)*
- 18:00 – 18:15      Coffee break
- 18:15 – 18:35      Nicolae URSULESCU, *The place and role of salt supplying for selecting the location of the Neolithic and Aeneolithic settlements in Moldavia (Romania)*
- 18:35 – 18:55      Gheorghe DUMITROAIA, *Poiana Slatinei-Lunca (Romania): point of reference on salt's prehistoric map*
- 18:55 – 19:15      Oana MACARI, *Salt in magical procedures*
- 19:15 – 19:35      Dragomir Nicolae POPOVICI, Ovidiu CÎRSTINA, Ana ILIE, Gheorghe OLTEANU, Mihai NĂSTASE, and Florin PETRICĂ, *Salt quarries in Dâmbovița County. Geological, ethnographical, historical and archaeological data*
- 19:35 – 19:55      Robin BRIGAND, *Territoires, hommes et sel. Variations archeogéographiques*
- 20:00 – 22:30      Cocktail



Saturday, April 21st, 2012

Chairmen: Valeriu CAVRUC, Nicolae URSULESCU

- 09:00 – 09:20 Adrian PORUCIUC, *Two exemplary presentations of salt in Romanian folklore*
- 09:20 – 09:40 Constantin PREOTEASA, *Salt exploitation by the human communities belonging to the Precucuteni–Cucuteni cultural complex*
- 09:40 – 10:00 Lăcrămioara OCHIUZ, *The saline aerosols – from speleotherapy to halotherapy*
- 10:00 – 10:20 Gheorghe LAZAROVICI and Cornelia-Magda LAZAROVICI, *Pots for salt transport in Starčevo-Criș culture?*
- 10:20 – 10:35 Coffee break
- 10:35 – 10:55 Maria CANACHE and Ion SANDU, *The use of salt for marking special moments in human life*
- 10:55 – 11:15 Dan MONAH, *Sources salées, points de recristallisation du sel, centres rituels d'échanges avec les populations steppiques*
- 11:15 – 11:35 Gheorghe ROMANESCU, *The perception of salt springs in the Romanian geographic and geologic literature*
- 11:35 – 11:55 Mădălin-Cornel VĂLEANU, *About salt springs from the Moldavian plateau. Information from unpublished archival sources from the 19th century*
- 11:55 – 12:10 Coffee break
- 12:10 – 12:30 Vasile COTIUGĂ, *On salt exploitation in the Romanian principalities through the accounts of foreign travellers*
- 12:30 – 12:50 George MATEI, *The physiological importance of salt*
- 12:50 – 13:10 Iulian MOGA, *Salt and related agents in curse and benediction formulas of the Near East*
- 13:10 – 13:30 Marius ALEXIANU, *Salt springs in Romanian toponymy*
- 13:30 – 16:00 Lunch break
- 16:00 – 16:20 Ludmila BEJENARU, *Salt as a metaphor*
- 16:20 – 16:40 Alexander RUBEL, *Salt as symbol in Freemasonry*
- 16:40 – 17:00 Vasile DIACON, *The policies of the Austrian administration concerning the salt springs from Bukovina*
- 17:00 – 17:20 Alexandru BOUNEGRU, *Halotoponyms and halohydronyms as reflected in medieval documents from Wallachia*
- 17:20 – 17:40 Claudia DRACEA, *The name of "salt" - idioms and paronyms among Romanians and Eastern Slavs*
- 17:40 – 18:00 Alexandru BOUNEGRU, *Halotoponyms and halohydronyms as reflected in the atlas "Plans des Bukowiner Districts in 72 sections welche in denen Jahren 1773, 1774 und 1775 von einen Departament des Kays: Königlicher General Staabs geometrisch aufgenommen worden"*
- 18:00 – 18:20 Mihaela PARASCHIV, *Salt in the Adagia of Desiderius Erasmus Roterodamus*
- Closing remarks

Keywords: anthropology, salt, ethnoarchaeology, history, conceptual approach.

The field researches conducted in Eastern Romania within a multiannual Franco–Romanian project starting in 2003 and within two Romanian projects with French attendance (ethnosal and ethnosalro) underlined that there is an entire rural universe generated by salt. This universe is not completely included in the ethnoarchaeological endeavour, but it reflects the structural positions of the man towards the only mineral edible by the animal world. We have realized, gradually, that one should not sacrifice the various dimensions of salt in the Romanian rural world for the (otherwise) natural demands of a discipline and that, after all, the current research should save and valorise this entire universe holistically, and this is possible through cultural anthropology. In the cultural history of the world, the first who illustrated this model is the Spanish erudite Bernardino Gomez Miedes (1515–1589), the author of a magnificent Renaissance book published—in the final editorial variant—with the title *Commentariorum de sale libri quinque*, Valentiae, 1579. A recent three-volume critical edition has the remarkable merit of having offered the occasion for the contemporary public to confront a forgotten integrative paradigm (cf. Bernardino Gomez Miedes, *Comentarios sobre la sal*. Introduction, critical edition, annotated translation and indices by Sandra Ines Ramos Maldonado. Prologue by Antonio Malpica Cuello, Alcaniz–Madrid, 2003, 1444 p.). Just for a glimpse of the vision and amplitude of this work, we will mention here the titles of the five books: I. De sale physico sive philosophico; II De sale medico sive empirico; III De loco, tempore et modo salis in mensa; IV De sale geniali sive iocoso; V De sale mystico sive theologico. With the emergence of the various sciences and disciplines starting with the modern era, the approaches on salt have specialized progressively, mostly within the past century. Sectorially, the knowledge has reached unthinkable performances, but the researches have atomized and they have become so autonomous, that they tend towards insularization. Actually, there is not a strong and sufficient communication between certain scientific communities. The perception of the entire salt-generated universe has been threatened; its primordial importance for the whole evolution of humanity has been diminished progressively, especially during the industrialization, refrigeration and globalization eras. For advanced societies, salt is a trivial, insignificant element of daily life. Salt has lost completely the sacred character that Homer talked about at the beginnings of the European culture.

The study object—NaCl (common salt)—has two forms, usually: natural salt water (the water in the seas and oceans, in the salt lakes, in the salt springs) and salt rock. Nonetheless, there other presences, too, natural (naturally recrystallized salt from salt water, salt lands) or artificial (salt from the evaporation of salt water in special devices, ignigenous salt, artificially salted water) that should be given proper attention.

From the diatopic and diachronic perspective, common salt—with all its natural or artificial metamorphoses—has influenced the humanity in the most diverse aspects. This is why, within a brief enumeration, the salt-related research themes are intriguingly various: explorations (hunting for salt), exploitation techniques, techniques to obtain different products, exploitation and use tools, transport and storage containers, human and animal feeding, conservation (meat, bacon, cheese, vegetables, green goods, fruits). The themes also include manufacture-related uses (including the construction of salt houses), mythology, religion, cult, rituals, beliefs, superstitions, mentalities, secrete societies, magic, vows, curses, prohibitions, popular medicine, sexuality, economy, hide working, population, alchemical procedures, scientific and cultural representations, treatment of the deceased, barter, commerce, contraband, robbery. On the other hand, the themes also include human and animal mobility, the attraction exerted on savage beasts, symbolic uses, folk literature (stories, tales, and proverbs) and cult literature, the control of salt resources, conflicts, strategic value, geographic perceptions, professions related to salt exploitation and uses, economic, legal and administrative regulations, vocabulary, toponymy, anthroponymy and, of course, the list can go on.

All these themes already constitute a study object for an impressive number of sciences, disciplines, or sub-disciplines, such as archaeology, history, ethnography, ethnoarchaeology, economic anthropology, food sciences, statistics, sociology, geology, mineralogy, geography, hydrology, botany, chemistry, medicine, pharmacology, ethology, theology, agronomy, symbology, linguistics, folklore studies, cultural studies, literary studies, hermeneutics, legal sciences, etc. Obviously, some themes must be approached only in an interdisciplinary vision.

On principle, salt anthropology refers to all the periods in human evolution. Nonetheless, currently we believe that the focus should be on the pre-industrial or non-industrial civilizations within contemporary history, though we are aware that

even the most advanced current technologies represent a cultural act, a human endeavour. Fortunately, the last are well known.

Our innovating idea is that of putting together, under the sign of cultural anthropology, the (so) diverse approaches on this essential reference of human life. In order to get salt its lost dignity back, *principium individuationis* cannot be fully performing but within a *universa disciplina*. Only such a perspective will make any major research and any detail shows their true significations; outside this perspective, there is no sense in any approach, regardless of its technical sophistication degree.

## THE TYPOLOGY OF PREHISTORIC SALT PRODUCTION AND EXCHANGE IN SOUTH-EAST EUROPE

Valeriu CAVRUC

Keywords: salt, production, exchange, Neolithic, Bronze Age, Europe.

The paper addresses the following issues:

- The modelling of the archaic forms of salt production and exchange in the area during the Neolithic and the Bronze Age.
- The archaeological indications specific to every type of salt production and exchange.
- The classification of the available archaeological evidence for prehistoric salt production and exchange in Balkan-Carpathian area during Late Prehistory.

In traditional societies salt has two major senses: on one hand it was as a *good of daily consumption and household use*, on the other hand it was the *exotic good*. Every of these senses implied different types of production and exchange. The daily consumption and household use salt could be made both within *domestic* and *industrial* productions. Of these, only industrial one was intended for long-distance exchange of salt. Salt as the exotic good was made within *sacred* type of production. This type of industry produced *exotic* salt which was intended for long-distance exchange.

The Neolithic salt production centres from Subcarpathian Moldavia (Lunca and Țolici), as well as the Eneolithic one from the same area (Cucuietji) are assigned to the domestic production of salt for daily consumption and household use. The main goal of this type of production was the domestic use or/and short-distance transport.

The Neolithic and especially Eneolithic salt production attested at Provadia–Solnitsata (northeast Bulgaria) is assigned to industrial one. It produced common salt by evaporation of brine, and its main destination was the long-distance exchange, perhaps to east Balkans and North-Pontic area.

The Eneolithic salt production centres from Subcarpathian Moldavia (Lunca, Țolici, Cacica, Solca, etc.) produced exotic salt in the form of small cone-shaped cakes by evaporation in small briquetage. It seems to have been involved in long-distance exchange. The two Early Bronze Age salt production sites from northern Transylvania (Băile Figa and Săsarm) are classified as domestic production centres that extracted rock salt for their own use and/or for short-distance transport.

The Bronze Age evidence for salt production in the intra-Carpathian region covers western Ukraine and the northern half of Transylvania (Zakarpattia, Maramureş, and Northern Transylvania). Starting with *ca.* 1600 BC until 850 BC, salt was exploited here on an industrial scale. Most evidence for salt production in this region dates from between 1200 BC to 1000 BC. The salt production sites in this region are concentrated in the valleys of the navigable rivers (the upper reaches of the Tisza, the Someşul Mare, Someşul Mic, and Mureş rivers), which link Transylvania and Maramureş to the salt-less Middle and Lower Tisza Valley. It is suggested that during this period the salt mined within the intra-Carpathian region was meant for distribution to the salt-deficient regions from the middle and lower courses of the Tisza.

There is the hypothesis according to which the exchange of Carpathian salt with Central-European tin took place during the Bronze Age. The earliest tin bronzes appeared in the northern part of the Balkan Peninsula as early as the Eneolithic. In Transylvania, the tin bronzes spread during the 3<sup>rd</sup> millennium BC. During the 2<sup>nd</sup> millennium and the beginning of the 1<sup>st</sup> millennium BC, most of the bronze objects from within the Carpathian Basin contained tin. Up to the middle of the 2<sup>nd</sup>

millennium BC, this alloy was mainly used to produce the objects of symbolic value (parade weapons and adornments). In the context of bronze metallurgy from the second half of the 2<sup>nd</sup> millennium BC, this alloy became a common good. The peak of bronze metallurgy in the Carpathian region took place between 1250/1200 and 1050/1000 BC. The richest sources of tin in Central and Southeast Europe are located in Bohemia and the western part of the Balkan Peninsula. At the same time, tin ores seem to have been available in Slovakia, Maramureş, Transylvania, Crişana and Banat, but no evidence for tin ore exploitation during the Bronze Age in these areas is currently available. The current level of research does not warrant an answer to the question concerning salt–tin exchange during the Bronze Age.

## UN GRAIN DE SEL DANS LES CARPATES : REGARDS CROISÉS SUR L'EXPLOITATION PASSÉE ET ACTUELLE DES SOURCES SALÉES (DÉP. NEAMŢ)

Olivier WELLER, Gheorghe DUMITROAIA, Robin BRIGAND,  
Daniel GARVĂN, Marius ALEXIANU, Roxana MUNTEANU

Mots clés: sel, Néolithique-Chalcolithique, Carpates orientales, ethnographie, ethnoarchéologie.

Depuis 10 ans, les recherches franco-roumaines sur l'exploitation du sel dans les Carpates orientales (Moldavie) ont permis de multiplier les approches (archéologie, ethnologie, histoire, géographie, paléoenvironnement, chimie...) sur l'étude des ressources salifères (sources salées, sel gemme) et leur exploitation. Nous souhaitons ici illustrer notre travail d'équipe autour de deux zones clés découvertes et étudiées dans le cadre de ces recherches (sources salées de Tolici–Halabutoaia et Garcina–Slatina Cozla, dép. Neamţ). En effet, compte tenu du remarquable potentiel archéologique de ces sites archéologiques révélant une chronologie de l'exploitation du sel couvrant l'ensemble du Néolithique et Chalcolithique (6000–3500 BC), de notre bonne connaissance du peuplement alentour mais aussi des nombreuses enquêtes ethnographiques réalisées, il est d'ores et déjà possible de proposer plusieurs modèles d'exploitation et d'implantation humaine où les ressources en sel ne revêtent pas toutes la même fonction à la fois dans le temps et l'espace.

## NEW ARCHEOLOGICAL RESEARCHES REGARDING THE EXPLOITATION OF SALT IN BUKOVINA

Mugur ANDRONIC, Bogdan NICULICĂ

Keywords: Bukovina, salt exploitation, Chalcolithic, Bronze Age, Iron Age.

Field archaeological research undertaken during the last years in Bukovina, both in Suceava County (Romania) and Chernivtsi Oblast (Ukraine), resulted into new important specifications regarding the capitalisation by prehistoric communities of the salt water springs from the area.

First of all, within the county of Suceava, the locations of salted water sources were checked, some of them, mentioned in documents, were already in use in the Middle Ages. Due natural causes, most of them do not exist anymore; this is the case of the one of Putna, not far from the monastery, Gura Putnei, or Ostra. The salted water spring of Putna is connected to the presence in the neighbourhood of an Eneolithic settlement belonging to the Cucuteni culture.

Due to the information received from a Ukrainian amateur archaeologist, we are now able to introduce in the scientific circuit unpublished valuable scientific information, on salt exploitation in the current region of Chernivtsi. It refers to the archaeological site of the village Solonetz-Cereşenka (district of Vyzhnytsia), where the salted water well, which is in use even nowadays, is connected to a Early Hallstatt habitation level (Gáva-Holíhrady, the Grăniceşti cultural group), and also to the one of hamlet Slatina (Crasna village – district of Hlyboka), which produced ceramic materials belonging to the Cucuteni-Trypillia, Komariv, Noua and Gáva-Holíhrady cultures.

Finally, the location of a former salted water well of Vyzhnytsia, on the valley of the Ceremuş, known from as resulting from documents already in the period of the Austrian administration of Bucovina, well which does not exist anymore, did not provide archaeological materials, except a flake made of local rock, produced by knapping, discovered at a larger distance from the place of the former well.

All these data unpublished so far complete the repertory of prehistoric salted water sources in the north-eastern Carpathian area; the ceramic and lithic material discovered in the neighbourhoods, the occurrence in the areas neighbouring the mountain frame of the Eastern Carpathians of the human habitat must be studied though systematically in the future.

## THE CORRELATION BETWEEN THE CHEMICAL COMPOSITION AND THE DOMESTIC USES OF BRINE

Ion SANDU, Roxana-Gabriela CURCĂ,  
Viorica VASILACHE, Maria CANACHE

Keyword: salt springs, Moldavian Subcarpathians, micro-elements, ethnography, alimentation.

The paper presents the chemical composition of the salt springs from the main geographical areas of Subcarpathian Moldavia, and their known practical uses on the basis of ethnographic examples and analogies. The key role of several micro-elements in domestic therapeutic and alimentary applications are emphasized.

## A PAROEMIOLOGICAL SALINE "FEAST", LATINO-HISPANIC, AT BERNARDINO GOMEZ MIEDES (*COMMENTARIORUM DE SALE LIBRI V*)

Mihaela PARASCHIV

Keywords: salt, Bernardino Gomez Miedes, paroemiology, Renaissance, *interpretatio anagogica*.

A true revelation on the amplitude and carefulness of the European humanists' scientific concerns is disclosed to us by reading the paper of Spanish bishop Bernardino Gomez Miedes (with the Latinized name of *Bernardinus Gomesius Miedes*). This is an ample monograph on salt, drafted initially in four volumes (as it was published in *editio princeps* from 1572 in Valencia), to which a fifth volume was added (*editio secunda* from 1572, also in Valencia). The Spanish humanist's paper has recently benefited from a critical bilingual edition, in three volumes (*Madrid, Alcañiz, 2003*), thanks to classicist Sandra Inés Ramos Maldonado from the University of Cádiz, originally her PhD thesis (1995), rewarded by the Society of Latin studies from Spain. The Spanish cleric's propensity for this subject is motivated by the editor through specific circumstances related to the geographical, cultural and economical environment in which he has lived: he originated from Alcañiz, an important Hispanic saline area; the importance of salt, a true "white gold" for the European commerce at the end of the Renaissance and the beginning of the Modern Era; the interest of the theological humanism in any subject, which generated "the theolog's duty and mission" (*officium ac munus theologi*) of not leaving subjects untreated. In *Praefatio*, the author mentions that he has dedicated to salt a long and thorough effort of elaboration and polishing (*labor limae*), as in his opinion the subject had been seldom treated or neglected by the authors, despite its real importance. In the tradition of a recurrent topos in the prefaces of the ciceronian philosophical works, Gomez Miedes confesses to the reader that he has been confronted with the hostile reactions of his friends and contemporaries, who considered as useless a paper about salt, when there were so many other more important and fecund subjects. This had constituted for him a real challenge.

The first four books reveal the physical, medical, gastronomical and symbolical properties of salt, while the fifth book represents a *translatio ad allegoricam salis intelligentiam*, a metaphorical transfer in the ethical or mystical register of the previously mentioned salt properties. The author suggests in this last book, an *interpretatio anagogica* of salt, able to “uplift” (vb. gr. *anago* 'to uplift') the soul from terrestrial to celestial, from temporal to eternal, from human to divine, asking for the reader's permission to act like an ancient *epulo* (the organizer of a sacred feast), staging an authentic saline feast, in which the most copious “dishes” are the proverbs dedicated to salt from the Latin and Hispanic paroemiological stock. The typology of proverbs can be both interesting and original, depending on the symbolized ethical virtues: *prudentia, iustitia, aequitas, fortitudo, sobrietas, parcitas*.

Our essay aims to follow the paroemiological inventory of this last volume, but mostly the author's commentary, which offers in abundance the measure of the 16<sup>th</sup> century European humanists' intellectual concerns.

## THE PLACE AND ROLE OF SALT SUPPLYING FOR SELECTING THE LOCATION OF THE NEOLITHIC AND AENEOLITHIC SETTLEMENTS FROM MOLDAVIA (ROMANIA)

Nicolae URSULESCU

Keywords: salt spring, Neolithic, Aeneolithic, settlement, Moldavia.

By ethno-archaeological and experimental means, three main uses of salt in the traditional life cycle have been identified: vital ingredient of the human diet, component of the domestic animals' fodder, and ideal preservative (particularly for products of animal origin). All three of these uses also involve various methods for procuring this mineral in quantities that are sufficient for covering the vital and economic requirements. It is therefore only natural that as part of an efficient exploitation of the environment, the attention of the local communities turned mainly to the local salt resources (salt springs, brackish waters – running or still, salty soils with halophyte flora); if these did not cover the real requirements, supplementary input could have come from sources in the areas from a certain distance (sources with increased salt potential), from direct transportation of salt (in the case of small and medium distances), or through trade (in the case of long distances).

The data that we possess about the location of the Neolithic and Eneolithic settlements from the region of Moldavia reveal that a settlement's economic hinterland (0-25 km) almost invariably harboured a local salt source. This fact prompts us to also count the aspect of daily salt supplying, capable of covering at least partially the consumption requirements, among the factors that must be taken into consideration when attempting to explain why a Neolithic community from Moldavia selected a certain area for settling down. We find it very implausible that a community would have relied solely on trade for covering its salt requirements, since this implies a series of risks in terms of regularity, and a prolonged halt in the normal salt supply flux would have jeopardized the lives of the people and of their main food source (the domestic animals), forcing the community to abandon the old settlement and to migrate to a new location.

Therefore, we believe that for explaining the causes for choosing a certain habitat by the Neolithic people we must not absolutise any particular factor, but instead assess the entire ensemble of *sine qua non* factors, which only together could have satisfied the conditions for a proper unfolding of the daily life and of the activities specific to a sedentary, predominantly agrarian, economy: the vicinity of a drinkable water source; the availability of high-quality arable and pasture land; the availability of significant forest resources in the vicinity; finally, the presence of a local source for constant salt supplying (we therefore consider that this last factor must also be categorised among the vital factors, and clarified for each and every settlement, as part of the reconstruction of the paleo-environment). Naturally, there were other factors at work (such as the availability of raw materials and the proximity of major communication routes) that may have contributed to the decision of the community to select a location for a settlement, but they were not mandatory. To conclude, any unilateral exacerbation of one of the above-iterated main (vital) factors by modern research can lead to a distorted image of the actual mindset and manner of action of the prehistoric people.

## POIANA SLATINEI–LUNCA (ROMANIA): POINT OF REFERENCE ON THE MAP OF THE PREHISTORIC WORLD

Gheorghe DUMITROAIA

Keywords: Poiana Slatinei–Lunca, salt spring, salt production, interdisciplinary research.

The author presents the most important results of the archaeological investigation of the Poiana Slatinei archaeological site, which has become known in international archaeological literature as one of the earliest ignigenous salt exploitation locations in the world. The classical archaeological approach was followed by a complex interdisciplinary investigation performed by a predominantly French team lead by O. Weller. The interdisciplinary research lead, among other results, to the identification of a rare method of ignigenous salt production. The salt springs from Poiana Slatinei were exploited in various manners, during all the prehistoric, protohistoric, and historical ages. Even to this day, the inhabitants of the nearby settlements employ traditional models of salt supplying from this spring.

## SALT IN MAGICAL PROCEDURES

Oana MACARI

Keywords: salt, Romanian folklore, magic, witchcraft, ethno-mythology.

In Romanian traditional culture, salt holds an important place, and indications for procedures that used it have often survived to the present day mostly in the form of superstitions. Ordinary people knew—and still do—how to avoid the perils brought about by forbidden gestures or deeds. They grew with sets of do's and don'ts, but when any of these were broken, they had 'professionals' to resort to, because not everybody was qualified to perform such acts.

## SALT QUARRIES IN DÂMBOVIȚA COUNTY. GEOLOGICAL, ETHNOGRAPHICAL, HISTORICAL AND ARCHAEOLOGICAL DATA

Dragomir Nicolae POPOVICI, Ovidiu CÎRSTINA,  
Ana ILIE, Gheorghe OLTEANU, Mihai NĂSTASE, Florin PETRICĂ

Keywords: Curvature Carpathians, Dâmbovița County, salt sources, ethnography, archaeological repertoire.

The administrative-territorial configuration of Dâmbovița County, which includes geographically and geomorphologically a part of the high hills situated lower than Curvature Carpathians, with various natural resources, has enabled us to launch a research direction, from a diachronic point of view, aimed on the use forms of salt sources by local communities.

Although the salt exploitation is documented, for the medieval period, at least, for the saline sources near the village Ocnîța, its toponym is illustrative in this respect, salt springs were not, until now, the subject of an extensive scientific investigation. In terms of ethnography, this particular aspect of some of the hill villages of Dâmbovița County was explored scientifically uneven. Inconsistent data, so far, have motivated our approach towards this issue.

The team's research efforts were directed, as a first step, on repertoring salt springs and on recording traces of their exploitation, both in older or newer historical periods and in modern times, as well.

The new obtained data proved to be quite interesting and start to embody a different historical configuration on salt exploitation and the use of it over time in this area.

## TERRITOIRES, HOMMES ET SEL. VARIATIONS ARCHEOGÉOGRAPHIQUES

Robin BRIGAND

Mots clés: sel, archéogéographie, dynamique spatiale, préhistoire récente, Moldavie, GIS.

Cette communication souhaite présenter une recherche menée en Moldavie qui s'intéresse à trois entités interconnectées : le territoire, entendu comme un espace socialement et affectivement approprié ; l'homme, c'est-à-dire un agent de construction et de transformation du paysage ; le sel, avant tout une ressource polymorphe et structurante. A travers une lecture archéogéographique – à la géographie on emprunte les objets planimétriques et une méthodologie d'inspiration spatialiste ; à l'archéologie on emprunte la dimension temporelle et l'ancrage matériel – qui aurait pour ambition de faire une géographie des espaces du passé, nous proposons une lecture des organisations et dynamiques spatiales de la préhistoire récente.

## TWO EXEMPLARY PRESENTATIONS OF SALT IN ROMANIAN FOLKLORE

Adrian PORUCIUC

Keywords: salt, Romanian folklore, riddle, fairy tale, national spirit.

A unique Romanian riddle—recorded in the 19<sup>th</sup> century and included in Gorovei's collection—presents salt as "daughter of water." Also, in a well-known Romanian fairy tale—included in Ispirescu's collection—salt appears as a fundamental nutrient, of remarkable symbolic-metaphorical power. The two visions of salt are quite significant clues about the outstanding position of the mineral under discussion within the system of Romanian traditional values.

## SALT EXPLOITATION BY THE HUMAN COMMUNITIES BELONGING TO THE PRECUCUTENI–CUCUTENI CULTURAL COMPLEX

Constantin PREOTEASA

Keywords: Chalcolithic, Precucuteni–Cucuteni culture, Cucuteni C pottery, salt, briquetage.

The importance of salt for the human communities, including those belonging to the Precucuteni-Cucuteni cultural complex, was emphasized at numerous occasions by the specialists. In this respect we can mention the existence of several points of exploitation (like the ones from Cucuieți, Lunca, Solca, Țolici or Cacica) and seasonal settlements (like the ones from Prohozești or Valea Șoșii) placed near the sources of salted water for a better utilization.

Taking into account its nutritious and therapeutic role, the rock salt (NaCl — sodium chloride — 40% sodium and 60% chloride) represents one of the consumer goods for the human being. The salt has been used since ancient times as pickle or crystalline solid for fresh food and also as the main method of food preservation – both vegetal and animal. It also represents one of the most appreciated goods in the exchange relationships which facilitated the acquiring of other raw materials or finished products.

Following the World Health Organization data, the ideal medium necessary of salt (influenced by the person's health, their physical constitution, the effort or the climatic conditions) is approximately 2–5 g / day (the maximum recommended limits being different from one country to another) although the consumption is generally superior to these values.



In time, those who approached this problem have made a series of hypothetical evaluations regarding the salt consumption of some communities belonging to settlements or areas for which they had hypothetical demographic data.

The necessary of salt can be obtained through direct consumption (15%) or indirectly through the contribution of vegetal and animal food (85%). The excessive consumption of salt can generate or aggravate a series of diseases and in the case of an important retention (around 1 g / kg of body) death occurs.

Regarding the salt exploitation by the communities of the Precucuteni–Cucuteni cultural complex, our observations are based on the archaeological researches realized on the stations from Lunca, Cucuieți, Țolici, Solca and Căcica, located in the Moldavian Subcarpathians or near them.

Taking into account the current information, the salt exploitation is well documented for two of the Precucuteni culture phases (II and III) and other two of the Cucuteni culture phases (A and B). Although the archaeological literature mentions also a number of remains from the Precucuteni I and Cucuteni A-B phases, they lack consistency and therefore cannot form well individualized stratigraphic layers, the materials being mixed with those belonging to the other periods mentioned above. So is the case of the Precucuteni I materials that can represent in fact traditions maintained at the beginning of the Precucuteni II phase, while the remains supposed to be dated Cucuteni A-B, generally represented by ceramic fragments painted in the  $\nu$  style, could be associated to those painted in the  $\epsilon$  style (situation frequently encountered in the case of the settlements) allowing their appointment to the Cucuteni B phase.

Furthermore, when discussing about the Cucuteni remains resulted from the points of exploitation of the salted waters, the ceramics Cucuteni A, tri-chromatic painted and the ceramics Cucuteni B, those painted in the  $\epsilon$  style included can be appointed to only two chronological stages of the Cucuteni culture ( $A_3$  and  $B_1$ ). Even if the tri-chromatic painted ceramic appears in the Cucuteni A phase (Cucuteni  $A_2$  stage), the absence of the bi-chromatic painted type ceramic makes impossible the appointment of the former to the second stage of the first phase of evolution of the Cucuteni culture. Even though there is no reason to believe that salt was not exploited on the entire period of evolution of this civilization, the reliable cultural-chronological information for the other periods (Precucuteni I, Cucuteni  $A_1$  and  $A_2$ , Cucuteni A-B and Cucuteni  $B_2$ ) is missing for now.

We must pay particular attention to one type of object regarding the salt exploitation – the briquetage; these are Cucutenian artefacts specialized in the process of crystallization. Without entering any details concerning their cultural-chronologic appointment, we believe that they can be attributed only to the Cucuteni B phase, particularly Cucuteni  $B_1$  stage of the culture giving their association with materials specific for this period (such is the case of the discoveries from Lunca, Solca, Țolici and Căcica) and not for the Cucuteni A phase, particularly Cucuteni  $A_3$  stage, observation sustained by their absence from the archaeological deposits belonging to this period from Lunca, Cucuieți and Țolici. The briquetage was utilized only in the case of the salt that was the object of long distance trades, the human communities closest to the sources of raw materials using *huscă* (obtained from the usage of other Cucutenian common vessels) and especially the salted water. Their fragmentation can be easily explained through the fact that they were broken only to detach the salt mould created.

Another important discovery is represented by the great quantity of Cucuteni C pottery (with pounded shells as degreasing) located in the points arranged for salt exploitation contrasting with the situation encountered in the settlements where their presence is far more reduced. The properties of this ceramic type (porous and probably more resistant to thermal and physical shocks giving his composition) explain the above situation because they facilitate the process of salt crystallization through a better evaporation of the water.

We believe that the Cucuteni C pottery is not a local product but the result of trade relationships, in other words an imported product. Unlike the case of the settlements where this ceramic type appears since the Cucuteni  $A_3$  stage, in the case of the points arranged for salt exploitation, this type of materials come only associated with Cucuteni  $B_1$  ceramic. In this case, the Cucuteni C pottery was utilized exclusively for salt crystallization (common use) while, in the case of the settlements, the same ceramic type (or at least a part of the material) can be appointed to the category of the prestige ceramic (this status is not a direct consequence of its technical and artistic qualities that are inferior to those of the classical Cucuteni pottery but rather the result of its reduced frequency because of its foreign source). For illustrating the above observation we mention the case of the ritual deposits from Drăgușeni (Cucuteni A) where a Cucuteni C vessel deposited in a pit represents the foundation rite of a construction or a similar discovery (a series of vessel fragments of this ceramic type), in a similar context from Traian (Cucuteni A-B).

Keywords: saline aerosols, therapeutic effect, halotherapy, speleotherapy.

The saline aerosols have been used in the treatment of respiratory, digestive and dermatological diseases since ancient Greek medicine. Hippocrates noticed the positive effects of saline aerosols and recommended the inhalation of saline vapour for the treatment of the respiratory system diseases.

Although, the therapy in salt mines and caves has been practiced from the oldest times, the speleotherapy or spelotherapy was recognized officially as complementary therapy in the middle of the 20<sup>th</sup> century in Germany. The therapeutic agent of the salt mine microclimate consists in sodium chloride aerosols together with the temperature and relative humidity of the air. Even if initially the spelotherapy was hardly practiced for the treatment of chronic inflammatory diseases of airways, over the last 30 – 40 years this holistic therapy has been increasingly developed. Nowadays, in Europe, over 50 saline mines or caves are known as places where speleotherapy is practiced successfully. In Romania, in Praid, Cacica or Ocna Mureş saline mines there are genuine underground cities built of and in salt which host annually thousands of patients treated by the curative effects of saline aerosols.

Halotherapy is a modern method of therapy based on an artificially-created saline microclimate. The first halochamber was used by the space agency of the former Soviet Union, in 1980. Today, the halotherapy practice is governed by the international legislation and several types of halochambers are licensed, as medical devices.

The saline aerosols dispersed into the saline mine or halochamber atmosphere are inhaled through the airways or absorbed transcutaneously. Depending on the particle diameter, the inhaled aerosols act at different levels of the respiratory tract by accelerating the mucociliary clearance and by optimizing pulmonary surfactant. Halotherapy influences the respiratory system symptomatology by improving breathing. Moreover the patient feels a release of the airways as a result of cough productivity increase and pulmonary clearance, the decreasing of respiratory system infection bouts due the bacteriostatic effect and not least the decrease of sinusal edema. The saline aerosols have positive effects at tegumentary system. According to scientific literature, they balance skin microbiocenosa, increase skin elasticity, and have bacteriostatic, antiedema and anti-inflammatory effects.

The therapeutic potential of artificial or natural saline aerosols is researched all over the world in order to achieve new scientific supporting data for these holistic therapies.

## POTS FOR SALT TRANSPORT IN STARČEVO-CRIȘ CULTURE?

Gheorghe LAZAROVICI, Cornelia-Magda LAZAROVICI

Keywords: salt, transport, pottery, Early Neolithic, Starčevo-Criș culture.

Often we and other specialists emphasized that mainly salt, with other facts, were reasons of migrations from the southern world to the northern part of the Danube. The fact that several neolithisation stages of Romanian territory are even decisive related with salt sources determine us follow also transport possibilities, not just the use of salt. Until now in Romanian literature are quite well known drying processing and shaping as salt cakes — briquetting (the meaning is not quite correct, because the operation involves and pressing what does not happen, salt involving evaporation, however is the closest meaning.).

We have analyzed some pots types, especially related with Early Neolithic (Dudeștii Vechi, Sóvényháza, Csátalia, Ókécke, Kotocpart, Kopancs, Mađiari, Vršnik, Stence, etc.) and Developed Neolithic (Vinča, Cioka), which by their asymmetric form but especially by the handles shapes allow to be bound and carried back as a backpack. By their shape, narrow neck,

handles position are suitable for carrying back liquids on long distance; for these reasons different authors thought that they were used for carrying brine and not only.

Many such pot types have been discovered in Early Neolithic of Macedonia, at Mađari, a sanctuary of Anzabegovo culture. Given the special role that salt plays in human and animal life authors believe that these vessels could serve to brine handling. Pots with an askos body shape on the inner curve, in which the handles are fixed can be tied with strings on the back side and used for transport on long distance. Liquids (milk, water or others) transportation on the back side or on the head was used until recent times by women. Anthropomorphic pots of Gumelnița culture with pots on the head of characters suggest such sort of liquids (water, brine, oils) transportation on long distances.

## IMPLICATIONS SALT MARKING MOMENTS OF HUMAN EXISTENCE

Maria CANACHE, Ion SANDU

Keywords: salt, ritual, faith, symbolic, custom.

This paper presents some aspects regarding the use of salt essential element in setting milestones of human existence between the two extreme points of life: birth and death.

Even if the rites of passage did not remain unchanged over time, they were always enriched with new elements to highlight their importance or to impress, salt, this "good medicine for all" is used today in popular belief. In addition to practical use, this mineral is assigned a number of properties imaginary, symbolic salt was varied. Salt was considered paramount element, purifier, as a symbol of vitality, health, wealth, hospitality and brotherhood. Part of various rituals of purification, of finding the future, the holiness, the presence of fate, curses and spells of protection, the spell, and negative part of rituals, such as spells of black magic, the symbols generated a variety of events magico-religious.

## SOURCES SALÉES, CENTRES DE RECRISTALLISATION DU SEL, CENTRES RITUELS D'ÉCHANGES AVEC LES POPULATIONS STEPPIQUES

Dan MONAH

Mots clés: sources salées, recristallisation, briquetage, culture Cucuteni, populations steppiques, échanges.

Dans les Souscarpates de la Moldavie on a découvert plusieurs centres d'exploitation du sel des sources salées. Les dépôts archéologiques situés dans la proximité des sources signalent une intense exploitation du sel par recristallisation pendant le néolithique et le chalcolithique. L'exploitation du sel des sources des Souscarpates s'intensifie à partir de la phase Cucuteni A, phase à la fin de laquelle apparaissent les premiers fragments de briquettes. Les briquettes de sel de la culture Cucuteni avaient une forme conique et un poids d'environ 1,5 kg et étaient de façon évidente des biens de prestige destinés aux échanges entre les communautés.

De façon surprenante, dans les dépôts Cucuteni trouvés près des sources salées, on a découvert des quantités importantes de céramique Cucuteni C, attribuée généralement aux populations des steppes du Nord de la Mer Noire. A Solca et à Cacica, la céramique Cucuteni C représente environ 40 % de la quantité totale de céramique, à Lunca-Poiana Slatinii, 33%, tandis que dans les habitats contemporains des Souscarpates elle ne représente qu'un pourcent. Outre la céramique Cucuteni C on a remarqué aussi de nombreux fragments de vases Cucuteni de bonne, peints. L'auteur essaie d'expliquer cette situation inattendue à travers l'organisation d'expéditions d'approvisionnement en briquettes de sel par les populations steppiques. Pour appuyer cette hypothèse, l'auteur invoque certaines analogies ethnographiques avec la Nouvelle-Guinée, où le groupe linguistique Dani de l'Ouest organise de telles expéditions pour procurer le sel et la pierre.

La pratique en commun de la recristallisation et du briquetage du sel par les cucuténiens et les populations steppiques offrait probablement l'occasion d'échanges complexes de dons, connus sous le nom de *potlatch*.

## THE PERCEPTION OF SALT SPRINGS IN THE ROMANIAN GEOGRAPHIC AND GEOLOGIC LITERATURE

Gheorghe ROMANESCU

Keywords: salt spring, geography, geology, bibliography, Romania.

Romania is the richest European country and one of the most important in the world when it comes to salt. This is why salt has been used from the oldest times to the present. The most important Romanian and foreign researchers in the field have approached themes related to salt deposits: genesis, repartition, exploitation methods, use, etc.

The Romanian salt resources reach 400 million tons, and they are among the highest qualitative ones. During the Communist period, the chemical industry was based mainly on salt exploitation. In 2007, 2.6 million tons of salt were exploited: 1.6 million tons of brine-salt, used exclusively in the chemical industry; 900,000 tons of rock salt, used to remove snow during the winter; 100,000 tons of crystallized salt, for consumption. In 2007, Romania exported 30 per cent of its production. The salt springs are intimately related to the existence of salt deposits.

In Antiquity, most salt springs were considered a divine gift, reason for which churches took them over. When the Church could no longer handle the crowd ready to enjoy the divine gifts, legislation made its way. This led to most salt, mineral, and thermal springs being protected by the law. The scientific fields with a focus on salt research are dominated by geography and geology, with applicability in exploiting and using this resource. There is lapidary information on salt in the ancient and mediaeval documents, among which most prominent is Dimitrie Cantemir's *Descriptio Moldaviae* (1716) that mentions the existences of salt marshes in Bacău County.

The geographic literature studies the repartition and importance of salt within the local and regional economy, while the geologic one approaches the genesis and exploitation methods. It is important to know that the first scientific works belonged to foreign specialists, mostly German and Austrian. A special attention has been paid lately to archaeological research, revealing that the first systematic salt exploitation in the world took place in Romania, in the Moldavian Subcarpathians. This way, Romania was the first to exploit two vital raw materials for the economic development: oil and salt (both related genetically to the same areas).

## ABOUT SALT SPRINGS FROM THE MOLDAVIAN PLATEAU. INFORMATION FROM UNPUBLISHED ARCHIVAL SOURCES FROM THE 19TH CENTURY

Mădălin-Cornel VĂLEANU

Keywords: salt springs, Moldavia plateau, archival sources, Băiceni.

Starting from a piece of information about a salt spring found in the area of the Băiceni village, in a document dated August 1884, the paper raises the issue of the unpublished archival sources from the 19<sup>th</sup> century that are kept at the National Archives – Iasi County, and which contain references to records of mineral resources from Moldavia. The paper presents the question of the genesis of some types of "salt water" and mineral springs, their appearance in the Moldavian Plateau, and possibility of exploitation of these resources during prehistoric times.

## ON SALT EXPLOITATION IN THE ROMANIAN PRINCIPALITIES THROUGH THE ACCOUNTS OF FOREIGN TRAVELLERS

Vasile COTIUGĂ

Keywords: salt, Middle Age, Early Modern Period, Romanian principalities, foreign travellers, literary sources.

During the Middle Ages and the Early Modern Period, the exploitation of salt in the Romanian Principalities was a privilege of the powers-that-be, because it constituted one of the most significant income sources. We know of this from contemporary documents, from the writings of the chroniclers and, particularly, from those of the foreign travellers that passed through these lands, who supply us with valuable information.

The paper presents in a synthetic manner the information about the extraction, transport, and commerce with salt in the Romanian principalities in over 80 works of the foreign travellers that have been published in Romanian collections. We centred attention on the toponyms and hydronyms that reference saline landscape units and waters, salt mine quarrying, salt springs exploitation, land and waterborne transport, commerce, as well as the administrative functions and taxes on salt in the three Romanian principalities, in addition to the utilisations of salt.

## THE PHYSIOLOGICAL IMPORTANCE OF SALT

George MATEI

Keywords: salt, sodium, salt use, human physiology, medical condition.

During this presentation we will be debating the properties that the  $\text{Na}^+$  element has. Sodium is part of the plasmatic elements of the organism, because together with other 10 elements, it makes up 99.75 % of the living matrix, belonging to the alkaline metals group. It has a wide spread in nature (2% of all atoms from the Earth's crust). The sodium contribution produces: mainly through ingestion of  $\text{NaCl}$ ; through the consumption of food which contain  $\text{NaCl}$ , waters rich in  $\text{NaCl}$ . During pregnancy, lactation, intense physical effort, a high sodium appetite may appear. The osmolarity of plasma is a stimulus for the stimulation of thirst centres.

The value of the membrane potential is specific to each cellular type and it is the expression of a difference in the repartition of electrical charges (mainly  $\text{K}^+$ ;  $\text{Na}^+$ ;  $\text{Cl}^-$ ) on one side and the other of the membrane. The strict maintenance of this repartition is accomplished with the participation of some systems of active transport.

The predominant deficit of  $\text{Na}$  leads to the plasmatic hypotonia syndrome with extracellular dehydration and cellular hyperhydration. The absorption, just like the water transport and the enterocitary trans-membrane transport of sodium is bidirectional and it occurs at absorption dimensions which progressively diminish from duodenum to ileum. The colon can daily absorb, in conditions of high requirements, up to 460 mEq of natrium. In physiological conditions, the kidney is the main organ to eliminate the excess sodium. The daily renal loss is of 4-5 g/day, which would balance the sodium contribution. In physiological conditions, the renal excretion of the sodium excess brought through contribution is made with the help of mechanisms which depend of the expansion of extracellular space itself, for example the growth of glomerular filtrate, simultaneously achieving the growth of the filtered sodium quantity.

The disturbances in the sodium balance through deficit determine the appearance of hyponatremia. Conversely, hypernatremia is the condition marked by an increase of the seric concentration of the  $\text{Na}^+$  (150 mEq/l) ion.

Keyword: salt, literary sources, Near East, Antiquity, religion, superstition.

According to the Oriental sources of the Near East, salt was not only meant to be an essential element for human survival and a necessary intake for pickling and preservation of meal in general, but it also played an important role during the religious rituals related to benedictions and curses in almost all the known Oriental traditions belonging to the peoples of the Near East, including the Jews, the Hittites, the Egyptians, the Summerians, the Akkadians and so on. It was an important agent used in some incantations and magical or therapeutic rituals where, similarly to the religious functions, had both positive and negative connotations: it acted as a purifying device by restoring potency, preventing from the evil tongue or as a 'detergent' cleaner, and respectively as a disintegrative and irreversibly corrosive agent in cursing rituals.

## SALT SPRINGS IN ROMANIAN TOPONYMY

Marius ALEXIANU

Keyword: salt springs, Romania, toponymy, halokrenonym, toponymic fields.

The existence of hundreds of salt springs on Romanian territory presents the opportunity to conduct toponymic researches capable of elucidating, albeit partially, primary human mechanisms of self-orientation in the geographical space.

The salt springs have not particularly awaked the interest of toponymy specialists; this situation explains, very probably, the absence of a specific denomination. The author came out with the term *halokrenonym* (*hals*, *halos* = "salt"; *krene*, *-es* = "spring").

In the harbouring areas, the salt springs constitute the most important entity to which other geographical units are referenced.

Starting from the original theory developed by the eminent specialist D. Moldovanu (*The theory of toponymic fields*, Iași, 2010), we aim to reveal how the halokrenonym generated toponymic fields through toponymic polarisation and differentiation processes. Mixed toponymic fields are likewise attested. Based on idiographical situations, a model with generalising value for Romanian toponymy took shape, whose applicability must be tested for the toponymic systems in other languages.

In Romanian toponymy, the most common halokrenonyms are as follows: *slatină* (of Slavic origin), *saramură/salamură* and *murătoare* (of Latin origin). The richest toponymic field is generated by the halokrenonym *slatină*, which we will present in the following, according the current level of documentation.

### SLATINĂ

through polarisation:

- oronyms: *Dealul Slatinei*, *Măgura Slatinei*, *Vârful Slatinei*
- morphonyms: *Poiana Slatinei*, *Valea Slatinei*
- hydronyms: *Pârâul Slatinei*
- hodonyms: *Drumul Slatinei*, *Drumul Mare al Slatinei*, *Calea Slatinei*
- silvonyms: *Dumbrava Slatinei*, *Pădurea Slatina*
- limeonyms: *Hotarul Slatinei*

through differentiation:

- depending on the flow – *Slatina Mare*, *Slatina Mică*
- chronological – *Slatina Veche*
- depending on the quality – *Slatina Rea*
- depending on the altitude – *Slatina de Jos*

mixed:

- *Gura Văii Slatinei*

Keywords: salt, the Salt Road, the Salt Riot, salt metaphor, ritual, traditions.

In their *Dictionary of symbols*, Chevalier and Gheerbrant describe the symbol as the relation between an image and a set of ideas, beliefs or emotions. The symbolic communication applies (according to Jung) to ages, cultures and individuals; concepts turn into language. These issues have found their field of study in the cognitive approach of linguistics. Lakoff and Johnson, the promoters of this movement, claim that the metaphor is an essential tool in organizing our conceptual system. In other words, we can say that we think and speak in metaphors, the salt being one of them because it is the element without which man cannot live. Beyond the practical utility of this mineral, it should be pointed out that in traditional societies, both in the ones from the distant past and in the present ones, salt is assigned a number of imaginary properties, the symbolism of the most important natural curing agent being extremely varied. In terms of language, the salt metaphor lies at the very foundation of Christianity. The central symbol of Christianity is salt, and we can certainly say that the biblical references are abundant. Not incidentally, the Apostles were called "*the salt of the earth*", given their mission. The significance of the expression "*the salt of the earth*" is hard to define, since it also stood for the symbol of the covenant with God, of wisdom, and of the need to preserve the purity of the world. "*Salt and Light*" – is the metaphor used by Jesus in the Sermon on the Mount, which has parallels in the Gospel of Luke, the Gospel of Matthew, and the Gospel of Thomas.

A very valuable product, the salt gave rise in Europe to the Salt Road, a commercial road, on which they carried the salt from European salt mines to markets. The route of these roads was partly rebuilt through archaeological findings or historical documents. Places such as Salzburg, Magdeburg, Leipzig, Prague, Venice and Rome experienced a period of prosperity because they were placed on the route of such a trade road.

In Russia, on July 1, 1648 the salt riot broke out, one of the largest of the middle of the seventeenth century. The main reason was the high taxes for the main preservative product whose price had increased because of these taxes from five kopecks to 2 hryvnias for the salt pood (~16 kg). Painter Nikolay Nekrasov (1821-1878) depicted the events in the painting *Salt Riot in Kolomenskoe*, Ernst Lissner on the canvas *Salt Riot in Red Square* (1930). In literature, poet Paul Vasilev devoted to this subject matter the poem *The Salt Riot* shaping the reality in literary and artistic images. For poet Theodor Rapan, in *The Gospel of Silence* salt acquires stylistic connotations: "*the salt of the earth is a sweet wound!*".

The collective pagan rituals, which remained only in the works of the ethnographers, the traditions and the customs of many nations exploit and use the symbol of salt, which is used as a purifying element, as a symbol of the spiritual food, as an offering along with bread in Christianity. For the Greeks, the Hebrews, the Arabs, as for the Romanians, the Russians, the Bulgarians, salt is a symbol of hospitality and friendship.

The salt symbolism is implicitly ever-present in the reality of the languages of the earth. The expressiveness of the Romanian language, of the Slavic languages and of other peoples' languages abounds in phraseological units, paremiological expressions, place names, hydronyms, in which the salt is used as a symbol / metaphor.

## SALT AS SYMBOL IN FREEMASONRY

Alexander RUBEL

Keywords: salt, symbolism, Freemasonry, *Salzbund*, alchemy.

Salt symbolizes in several rituals of the Freemasons (together with sulphur and quicksilver) the fundamental essence of alchemy. From Plato (*Timaeus*), the Masons learnt that salt is a substance dear to the gods and thus to share salt and bread at a meal with others remained a strong symbol for faith and loyalty. On the other hand, there existed in 18<sup>th</sup> century Germany (in Thuringia) a very interesting branch of a Freemason Order called *Salzbund* ("the alliance/union of salt"), which focussed on the symbolism of salt.

## THE POLICIES OF THE AUSTRIAN ADMINISTRATION CONCERNING THE SALT SPRINGS FROM BUKOVINA

Vasile DIACON

Keywords: salt springs, Bukovina, salt exploitation, salt industry.

The author highlights the peculiar concern of the Austrian authorities, immediately after the annexation of Bukovina, to profit from the salt springs and to identify potential salt deposits. Emphasis is put on the fact that once the exploitation of the deposits from Cacica commenced, the Austrian authorities asserted a monopoly on the industry, and many of these salt water wells were backfilled and prohibited from being used. These measures reflect the economic importance played by the rural exploitation of the salt springs.

## HALOTOPONYMS AND HALOHYDRONYMS AS REFLECTED IN MEDIEVAL DOCUMENTS FROM WALLACHIA

Alexandru BOUNEGRU

Keywords: salt, halotoponyms, halohydronyms, medieval sources, Wallachia, terminology.

We present the situation of medieval attestation (halotoponyms and halohydronyms) of salt resources in the southern part of Carpathians area, respectively in Wallachia. Following an etymological examination of salt's terminology in Romanian, we highlight the significance of this type of study for the ethno-history and ethno-archaeology of salt in this specific area.

## THE NAME OF "SALT" IDIOMS AND PAROIMIES AMONG ROMANIANS AND EASTERN SLAVS

Claudia DRACEA

Keywords: salt, paroimies, idioms, Eastern Slavs, Romanians, folklore.

The experience acquired by the peoples who had ruled, exploited and marketed salt deposits became part of world culture. Universal culture includes a true popular philosophy on salt. The multiple meanings and symbols of salt, as a vital element, created by nature and helpful to people, are reflected in case of the various world peoples in fairy tales, phraseologisms, in proverbs and sayings.

Based on the Romanian culture and on that of the Eastern Slavs, we can list some of these meanings and symbols:

- (a) Symbol of hospitality – the welcoming of guests with "bread and salt" signifying the great honour showed to important guests.
- (b) Symbol of the measure of things by the expressions: *Sarea-i bună la fiertură, însa nu peste măsură* ("Salt makes good pottage, but not when there's too much of it"); *Cui dai pîță și sare te mănăncă mai tare* ("The one to whom you give bread and salt, the one who will sap you").
- (c) Symbol of desire, as in *Capra oricât de bătrână, vrea să lingă și ea sare* ("No matter how old, the goat still wants to lick salt").
- (d) Symbol of poverty, formulated as "not to have salt for polenta" which means being very poor.



(e) Symbol of the aversion to do something: "[...] between you and me, we didn't feel like learning as the dog didn't feel like licking salt" (Ion Creangă).

(f) Symbol for the elite of a society, as exemplified by the phrase "the salt of the earth" used by Mihail Sadoveanu in the sentence: "the people who speak are the salt of the earth".

A journey into the depths of time brings out a multitude of examples that led to these associations between ideas and words.

## HALOTOPONYMS AND HALOHYDRONYMS AS REFLECTED IN THE ATLAS "PLANS DES BUKOWINER DISTRICTS IN 72 SECTIONS WELCHE IN DENENJAHREN 1773, 1774 UND 1775 VON EINEN DEPARTAMENT DES KAYS: KÖNIGLICHER GENERAL STAABS GEOMETRISCH AUFGENOMMEN WORDEN"

Alexandru BOUNEGRU

Keywords: salt, halotoponyms, halohydronyms, atlas, Bukovina.

We present an overview of halotoponyms and halohydronyms, based on the geographical survey elaborated by Austro-Hungarian General Staff in Bukovina. A short etymological examination will be accompanied by a comparative study focused on analyzing the terminological evolution of salt related toponymy in the historical territory of Bukovina.

## SALT IN THE ADAGIA OF DESIDERIUS ERASMUS ROTERODAMUS

Mihaela PARASCHIV

Keywords: salt, proverb, Erasmus of Rotterdam, Greco-Roman Antiquity, textual analysis.

Desiderius Erasmus, called "the crowning glory of the Christian humanists" (cf. Kenneth Scott Latourette, *A History of Christianity*, New York, 1953, 661), wrote both on ecclesiastic subjects and those of general human interest. Among his works of great humanistic magnitude, the *Adagia* features prominently as a collection of proverbs, witnessing numerous re-publishings and successive additions (the *editio princeps* counted 820 adages, while the last one, the 30th that appeared during the author's lifetime, contained over 4151 entries). Because of the author's excessive admiration for the Greco-Roman Antiquity and the pagan authors, whose spirituality, encapsulated in the proverbs, he desired to make widely known among his contemporaries, the *Adagia* was included in 1559 by the Council of Trent into the *Index librorum prohibitorum*, remaining prohibited in Catholic countries until 1900. Even though it contained less mentions than another contemporary work (Bernardino Gomez Miedes' *Commentarii de sale*), salt is nonetheless cited in the proverbs found in this *florilegium Erasmicum*. The paper enlists and comments on these mentions, with the goal of pursuing the relation between the text and paratext, as configured by the author.

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