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Ethnoarchaeology of salt-water springs and of salt deposits in the Romanian extra-Carpathian area **(EthnosalRo)**

2015

This report outlines the extent to which the activities associated to the project objectives for 2015 were accomplished, as well as the previewed and additional research directions. The report also includes the highlights of research outcomes in various types of publications and within diverse high-impact international scientific events, including within *The First International Congress on the Anthropology of Salt* organized in Iași (August 20-24, 2015) by EthnosalRo. An extended section reflects the efforts made by the project members to increase international visibility and the signs of EU and extra-EU international acknowledgement of the activities conducted within the EthnosalRo project. Taking into account the outstanding outcomes obtained this year, we considered it necessary to add a special section dedicated to the project members concerning the attainment of objectives set for 2015. The report is accompanied by three annexes.

The general appraisal is that the activities conducted within the project – especially the valorisation of research outcomes and the increase of international visibility – have surpassed by far the initial predictions.

ATTAINMENT OF OBJECTIVES

The first objective set for 2015 – **elaborating databases on salt-water springs and salt mountains/ deposits in Vâlcea (100%) and Gorj (20%) counties** – was fully attained. The activities associated to this objective are numerous (toponymic research, field trips, ethnographic surveys, samplings and analyses for salt water and salt block samples, surface archaeological research around the salt

springs, GPS localization, etc.). It is worth highlighting the situation of the Ocnele Mari (Vâlcea County) area, where a difference must be made between natural salt water sources and sources resulted from human interventions (as a result of exploitation works or of the exploration of salt resources in the area). In addition, greater efforts must be made to identify certain ethnographic survey subjects, who know very well the local situations of the past; this is necessary because the local demographic structure was strongly affected by the industrialization process. In exchange, the archaeological data specific to our ethnoarchaeological endeavour are clearly outlined on all chronological segments of interest for the EthnosalRo project. Nonetheless, in what concerns the previous researches on the toponymy and localization of certain salt springs, certain inadvertencies with the situations on the field have been highlighted.

The second objective – modelling the salt water distribution network (spatializing the relevant information regarding the distribution of salt from salt-water springs and from salt outcrops, 100% for Vâlcea County and 20% for Gorj County) – was also fully attained. As for the doubts pointed out regarding the existence of older layers of information, we believe that the models resulted from researches conducted in the other counties within the entire Romanian Subcarpathian area can be justly applied to the Vâlcea County, too. Therefore, it has been determined that salt-water springs and salt deposits played – in this county, too – an important role in the increase of habitat density diachronically, at least on a distance of 10-15 km, thus acting like genuine *salt attractors*.

✓ RESEARCH DIRECTIONS

- **Integrating the ethnoarchaeological, experimental and archaeometric data to adapt and increase the quality of archaeological interpretation**

This research direction has a long history in the western cultural anthropology, but it has only recently penetrated the Romanian research world. The main research method of archaeology – as a discipline that studies the past of humankind – is the recovery and analysis of various material culture elements preserved over time. Therefore, archaeological interpretation is an attempt to understand the technologies, human behaviours, religious systems and ideas, and the interaction with the environment in the past, all based on archaeological discoveries. In this context, the intelligence, knowledge, experience and imagination of an archaeologist are simply not enough to

consolidate this hypothetical and deductive process. At such a point, it may become highly relevant to add “ingredients” from other disciplines to this “recipe”. If archaeological interpretation is considered a type of inferential process, then one can add to the basic premise represented by archaeological discovery other solid premises to validate the entire process. These premises can come from an ethnoarchaeological experience, from an experimental testing or from archaeometric data. These research strategies within the field of archaeology have represented – for a long time – productive methods to explain the far past.

Ethnoarchaeology – as the study of material culture variation and of its relationship with human behaviours – has the power to invigorate archaeological thinking, thus furnishing the data necessary for possible transcultural correlations. Often, it can bring simple but very useful references for interpreting an item, a technology or behaviour from the past.

Archaeological experiments – as procedures applied to assess hypotheses at almost all levels of archaeological research – can provide significant observations on the processes involved in the production, use, removal and deterioration of material culture elements.

Archaeometric analyses applied to ancient artefacts may contribute to the reconstruction of their life cycle, from their production to their distribution and use, thus helping to interpret the *chaîne opératoire*, even in terms of human behaviour involved.

Though many years have passed since the two aforementioned disciplines were considered the key ingredients of one of behavioural archaeology strategies (1975) or since they were characterized as making a “perfect marriage” (1992), we believe that adding archaeometry to this formula can lead to a perfect *ménage à trois*. The integration of this research strategy is perfectly visible in the outcomes of our project.

- **Characteristics of areas with salt fields in northeastern Romania:**

The current landforms of this region overlap clays, sandy loams and oolitic limestone. In the past (5-7 million years ago, starting with the Miocene), the area was covered by the Sarmatian Sea, which withdrew gradually toward the southeast. A consequence of this withdrawal was the formation of massive salt deposits, preserved as sedimentary rocks. The geologic and hydrogeologic conditions of the area are the main underlying factors for the emergence of salt and sulphur springs,

which were used by prehistoric communities. Because of climatic changes, especially during the summer, when evapotranspiration is high and the level of water table is situated at small depths (< 3m), the ground salt content comes to the surface through capillarity, thus forming salt zones (*chelituri*). In the basin of Valea Oii, after analyzing the geologic map, we noted a concentration of prehistoric settlements around salt reservoirs (that comprise 1% of the total basin surface, of 98 km²). This fact demonstrates that they were used by prehistoric populations. A point of interest worthy of thorough investigations in this basin is the one of Balș (*Arcaci* point), where an ancient salt-water spring was located on the left side of the valley.

- **Salt exploitation and the Neolithic territories in the east of Romania**

We continued and then detailed the spatial analyses focused on the dynamic of salt exploitation. The spatial and statistic measurements were used in order to investigate the relationships between the distribution of salt resources and the habitat models of the Neo-Eneolithic (cca 6000 – 3500 BC). This research direction combines methodologies used in *landscape archaeology* and *GIS*, in order to highlight the archaeological artefacts at a deeper level and with more thematic purposes. The general target of these researches is to appraise the way in which salt resources constituted an active factor for the groups of farmers within the studied area.

- **Archaeometric analyses of briquetage in Japan**

The practical outcome of the research visit conducted in 2015 at the Yamaguchi University in Japan and of the first *Romania-Japan International Seminar on Salt Studies* (<http://ethnosalro.uaic.ro/category/news-and-events/>) unfolded on the same occasion was the beginning of a collaboration between the Romanian and the Japanese specialists regarding the complex investigation of briquetage artefacts in some areas of Japan. The purpose is to **establish a comparative framework as detailed as possible**. In this sense, eight briquetage fragments from the Minogahama site (discovered during the archaeological excavations of 1993) were sent for analysis to the Laboratory of scientific Investigations and Conservation of Cultural Heritage belonging to the ARHEOINVEST interdisciplinary Platform of “Alexandru Ioan Cuza” in Iași. Systematic excavations have been conducted as early as 1960 in Minogahama, which proved that salt production activities unfolded there during the Kofun period and at the beginning of the subsequent period (around the

6th–7th centuries AD). For the physical and chemical characterization of pottery samples, analytical techniques such as optical microscopy and SEM-EDX were used. The surface microstructures of pottery shards were studied using a Zeiss A1m Imager optical microscope, with an AXIOCAM camera attached, and analyzed using specialized software that enhances 50x. In order to determine the composing elements and the disposition of microstructures for these samples, a SEM (VEGA II LSH model) equipment was used, along an EDX detector (QUANTAX QX2 model). Their enhancing capacity varies between 100 and 1000x; the image is created by secondary electrons (SE) and BSE. In the basic structure of samples, the following chemical elements were identified: Si, Al, Fe, Ca, Mg, K, Na, Ti and O. Some of the shards also comprised various proportions of P, C and S. The inclusion compounds (degreasers) have a complex composition, where aluminosilicates dominate. Among the inclusions of a shard (no. 6) along Al, Si, Ca, Mg, Na, K, high amounts of Fe (59 wt%), Cr (7,7 wt%) and C (3,11 wt%) were also pinpointed, possibly due to contamination with a foreign object.

- **New interpretations of ancient texts on the uses of salt**

Two texts were studied – one by Herodotus and the other one by Strabo – that mention the existence of dwellings made of salt in northern Africa and in the Gerrha area (Arabia). A thorough analysis of the meaning of both texts shows that the use of salt for building houses is not motivated by an absence of common building materials in those areas. Taking into account all the parameters of the two ancient texts, a new theory emerged, stating that these salt dwellings may have represented precursors of modern halochambers, thus having been used for halotherapy.

- **Revaluating the intangible heritage on salt within pioneering ethnographic works of the Romanian culture**

Thorough studies on the symbolism of salt can be found in the work of Elena Niculiță-Voronca, *Datinile și credințele poporului român adunate și așezate în ordine mitologică* [*Customs and Beliefs of the Romanian People Gathered and Presented in Mythological Order* – in Romanian] (1903). The importance of salt in the daily life of the Romanian rural space is underscored by the fact that an entire chapter of the book is dedicated to this topic. It was highlighted that salt – seen as a gift for God –

accomplishes multiple and diverse functions (e.g. purification, reward or protection, but also destructive force). The analysis of texts on salt has also revealed beyond doubt that salt is ascribed imaginary properties in the rural areas studied.

- **Toponymy of salt in the space between the Carpathians and the Pruth**

This toponymic research paid special attention to “spontaneous” micro-toponymy. A quasi-exhaustive inventory of salt related toponymy was elaborated, by researching various categories of sources (documents, geographic and toponymic dictionaries, maps from various periods and scientific works). Halo-toponyms were analyzed from the perspective of the original theory of toponymic fields, elaborated by the distinguished researcher Dragoş Moldovanu (“A. Philippide” Institute of Romanian Philology, Iaşi). The conclusion with the highest generalizing value is that salt springs and salt deposits generated complex toponymic fields by polarization, by differentiation, and by both methods.

- **Study of the genesis and repartition of salt deposits in the Romanian Subcarpathian area**

The Subcarpathians represent the transition unit between the mountainous and the plain area, and they are rich in salt deposits. Romanian Subcarpathians are situated between the Moldavian Valley to the north and the Motru River to the west. Salt deposits were created in the lagoon areas situated at the margin of mountains. Local climate favoured water evaporation and salt deposition; such depositions were covered by erosion materials from the Eastern and the Southern Carpathians. The high degree of salinity was determined by heat and the dry climate. Local factors entailed a chemical differentiation between Subcarpathian deposits and the deposits within the Transylvanian Depression. The finality of this analysis was represented by two updated maps on the repartition of salt deposits in the Moldavian Subcarpathian and the Wallachian Subcarpathians. The study of the geologic history of the Romanian sub-Carpathian area represents a special interest for the archaeological approach, because it is a way to analyze thoroughly the relation between the environment and the human communities from a diachronic perspective.

- **Scientific grounds for including salt springs with the oldest salt exploitation traces in the world within the World Heritage**

This project started from the need to underscore the importance of the first forms of brine exploitation from salt springs (in order to obtain recrystallized salt) in the development of prehistoric communities within the continental mainland of Europe. Though they cannot be compared with the specific monumental character of most objectives included within World Heritage, the exploitation vestiges of the five salt springs in the east of Romania (Solca, Cacica, Lunca, Țolici and Cucuieți) are around eight millennia old, as indicated by ¹⁴C datings. It is also very important to highlight that in the area of these springs, natural brine is still exploited traditionally, an aspect which has generated a complex spiritual universe of salt. In its turn, this universe represents a unique reference point of the Intangible World Heritage. We believe that precisely the association (in variable proportions) between tangible elements (lacking monumentality) and intangible elements makes the salt springs with the oldest salt exploitation traces in the world worthy of being included within the World Heritage. Currently, an increasing number of personalities within the field of archaeology, anthropology and history consider that salt represents a major reference of humankind. Obviously, the success of this idea – formulated for the first time internationally within the EthnosolRo project – involves considerable efforts, from both local communities and the national and international scientific and cultural establishments concerned with World Heritage. In this context, it is worth noting that within the past two or three decades, research on salt has developed to an unprecedented level, to become one of the major topics of European archaeology and ethnoarchaeology. Nationally, we must highlight the initiative of the museums in the area – History Museum of Piatra Neamț and History Museum of Târgu Neamț–, which organized distinct sections that feature (using well-planned museographic means) both archaeological vestiges and contemporary items or traditional practices of salt springs exploitation. Naturally, the aim for the future is to extend this initiative to the museums of Suceava and Bacău counties, too.

- **Valorisation of salt-water springs on economic and heritage level**

Ethnoarchaeological researches within the Romanian Subcarpathian area have pinpointed a veritable rural universe generated by salt springs and rock salt deposits,

whose sides (gastronomy, popular medicine, ethnosciences, ethnomanagement) feature a heritage value with universal potential. Unfortunately, this heritage is in an extinction crisis, caused by modern economy and by cultural globalization. This research direction focused on finding solutions to include this heritage within a national brand, to find a way for auxiliary goods to contribute to increased living standard for local communities, and to encourage the communities in this direction.

- **Archaeological excavations concerning the oldest traces of natural brine exploitation**

In the period May 18–30 2015, preventive archaeological excavations were conducted in the locality of Cacica, commune of Cacica, Suceava County, in the point we called *Basin*, situated near the entry to the Cacica salt mine (code RAN 147544.01, code LMI SV-I-s-B-05405) by a team comprised of Gheorghe Dumitroaia, PhD, manager (archaeology expert, County Museum Complex of Neamț), of Emil Ursu, PhD (archaeology specialist, Bukovina Museum Suceava), of Felix-Adrian Tencariu, PhD (archaeology specialist, “Alexandru Ioan Cuza” University Iași) and of Mugur Andronic, PhD (archaeology expert, Bukovina Museum Suceava). The archaeological research was conducted after receiving a request from the Cacica city hall. They wished to build, on this very spot, a Medical Tourism Facility Based on Natural Resources.

The area under investigation is situated near natural salt-water springs (*slatini*), and it is well-known to the archaeological literature because it includes a prehistoric exploitation point (Cucuteni culture, phase B) of spring brine using the briquetage technique (evaporating salt by boiling, in quasi-conical clay containers with widened base, to obtain standardized salt blocks, probably to be traded for other goods). It may have been a seasonal habitation, which was initially pointed out through surface investigations, followed by two small-scale archaeological surveys. Hence, the previous researches showed the existence of a consistent Neolithic level (up to 50 cm), comprising mainly vestiges of briquetage containers, but also a possible oval-shaped Cucuteni dwelling. In the four archaeological sections investigated, from the surface to a depth of around -0.50 m, an impressive amount of briquetage fragments was discovered. However, both the consistency of the earth and the association of prehistoric fragments with numerous modern fragments (hand thrown enamelled pottery, porcelain, glass, brick, metallic items) indicate clearly that

this deposition is of a recent date (probably from the end of the 19th or the beginning of the 20th century, when the outer facility of the salt mine was constructed). Thus, archaeological excavations have shown that this area, like the one around the salt mine, was strongly affected by modern and contemporary human interventions (levelling, buildings), which occurred within the outer facility of the salt mine was constructed, which almost completely destroyed the prehistoric habitation level. By having recovered numerous briquetage fragments, we have contributed to enriching the Romanian collections of such artefacts, of great value for the researches on prehistoric techniques of obtaining recrystallized salt from spring brine.

- **Interpretation of symbolical value of salt identified in the current Christian holidays and rites of passage in Romania**

We have studied the presence of this vital substance in various traditions, such as those developed within rites of passage (birth, marriage, death), as well as customs related to various seasons, developed in relation to the most important Christian holidays.

- **Identification of a new research direction in ethnoarchaeology**

Usually, ethnoarchaeological researches are conducted in “exotic” areas or in areas with a pre-industrial, level of development, where one may still find the so-called “living societies”. However, the rural areas investigated within the Ethnosal and EthnosalRo projects feature relatively high levels of civilization, such as buildings and constructions made by western standards, modern road network, high motorization level, electricity, radio, television, mobile phones, etc. Nonetheless, the difference between this Romanian rural world and the similar western societies is made by the direct exploitation of natural resources in the proximity by a considerable number of rural community members. In this sense, it is relevant to mention that animal breeders (mainly of sheep) – members of the communities in the Romanian Subcarpathian area – who are familiar with all facilities of modern life currently actually use traditional supply methods from salt springs and primitive forms of salt deposits exploitation to cover the salt intakes for their livestock and for themselves. They take into account mostly the special qualities of natural brines and salt rocks within surface deposits. These ethnological models – unique in Europe – increase

the role of ethnographic analogy in the archaeological research, taking into consideration the spatial unity and the temporal continuity, attested in documents for many centuries. We believe that the Romanian researches conducted under such circumstances can represent an alternative model for classic ethnoarchaeological researches. Hence, the variety of this model can be tested in other areas from different countries with emerging economies.

- **Intensification of ethnological researches in the area of salt deposits in Alghianu**

Because the ethnological surveys conducted previously in the area of salt deposits in Alghianu were not designed to consider the whole phenomenon of local and distance pasturing, the ethnological researches in the area of Vrâncioaia and Năruja communes were reprised in 2015. The surveys conducted this year obtained all parameters necessary to elaborate a complete image on the exploitations of salt banks and on the transport of salt boulders for the needs of local and seasonal pasturing. We mention that the area studied here presents a unique European potential of configuring complex spatial models concerning the interrelations between salt resources and pastoral mobility. We also highlight that the field investigations conducted this year in the two aforementioned communes will be integrated in the paper to be published within a collection of studies that will be edited next year, following the EAA session of Glasgow in 2015 on Historical Transhumance in Europe.

- **Classification of salt springs in the Romanian extra-Carpathian space**

From a methodological perspective, ethnoarchaeological researches conducted within the EthnosalRo project is at the opposite extreme of **site catchment area** researches, because the objective of our investigations is represented by natural resources (in our case, salt resources) and not by sites exploiting various natural resources. The over 300 investigations made thus far have reported that salt springs can be classified by their degree of importance for covering the salt needs of human communities, reflected in the number of localities getting their supply from one spring or another. The current research is meant to complete previous studies that managed to determine a typology of habitations in relation to salt springs. These two typologies represent a key point in our fundamental research.

✓ INCREASED INTERNATIONAL VISIBILITY

- There is no doubt that the event contributing the most to the increase of international visibility of the EthnosalRo project was the publication of the study signed by F.A. Tencariu *et al.* in the prestigious **Journal of Archaeological Science**. This journal is the second archaeology journal in the world, classified in descending order on subdomains by their impact factor, indexed in Social Sciences Citation Index, as the one posted on the UEFISCDI website (http://uefiscdi.gov.ro/userfiles/file/PREMIERE_ARTICOLE/ARTICOLE%202015/ClasamentIF2015bun.pdf).
- An essential activity conducted this year for attaining the objective of Increased International Visibility was the organization of **The First International Congress on the Anthropology of Salt**. We received abstracts from specialists from 25 countries (Argentina, Australia, Austria, Bulgaria, Cameroon, Canada, China, Ivory Coast, France, Germany, India, Ireland, Israel, Italy, Japan, Mexico, Mongolia, Nigeria, Romania, Spain, Republic of Moldova, Russia, Ukraine, Great Britain, the USA) and 4 continents (to which we add another 20 requests from foreign and Romanian participants who found out too late about the Congress because of transmission problems through Academia.edu). This success can be interpreted as an implicit acknowledgement of the new discipline founded the manager of the EthnosalRo project. The proceedings of the congress represented “a great success”, considering its echoes in the **Mexican** (<http://ethnosalro.uaic.ro/download/Ethnosal-Ro-Tribuna.pdf>; <http://ethnosalro.uaic.ro/download/EI%20Sudcaliforniano%20-%20Congreso%20Internacional%20de%20Antropologia%20de%20la%20Sal.pdf>), **Spanish** (http://ethnosalro.uaic.ro/download/E-%20Alfoli-17-2015_extract_EthnosalRo.pdf), **Irish** (<https://saltarch.wordpress.com/2015/08/31/anthropology-of-salt-congress-romania/>) and **Ukrainian press** (<http://ri-urbanhistory.org.ua/en/museum/12-news-en/308-first-international-congress-on-the-anthropology-of-salt-ia-i-romania>). However, the most relevant sign of international recognition of salt anthropology discipline was a proposal made by Mexican delegation to organize the next international congress on the anthropology of salt in the famous Los Cabos resort in Mexico in four years. The papers published in the Mexican press state that the manager of the EthnosalRo project was appointed Honorary President of the next congress, while R.-G. Curcă

was included in the International Organizational Committee of the *Second International Congress on the Anthropology of Salt*. These two members of the EthnosolRo project were invited by the Mexican team (on their expense) to attend the first preparatory meeting of the Organizational Committee in Mexico, in the second part of February 2016.

- The presentation made by Archaeopress for the volume **SALT EFFECT** ends with a highly favourable final assessment: “**This volume presents a fascinating and unique range of approaches for studying a ubiquitous and vitally important resource in past and present societies**”. The success of this volume is also suggested by the unusual procedure used to ensure a wide dissemination through the Worldcat system for this volume, published on September 23, 2015. Hence, 25 of the 29 studies and papers are featured separately in none less than 135 famous libraries in the entire world, including North America, Europe, Australia and Africa.
- The volume **Archaeology of Salt: Approaching an Invisible Past** (Sidestone Press, Leiden, 2015, editors Robin Brigand and Olivier Weller, which also mentions the EthnosolRo project in the *Acknowledgement*) was present on December 2, 2015 in 85 libraries included in the Worldcat system. This volume makes 3 references to the EthnosolRo project and 37 references to authors who are members of the EthnosolRo project.

This volume has already been reviewed in *ANTIQUITY*, vol. 89, issue 348, pp. 1511-1512, by Anthony Harding, member of the British Academy. The contribution of EthnosolRo members is appraised as follows: “The chapter on the ethnography of salt in Moldavia, by Marius Alexianu and colleagues, provides fascinating information on the modern, “traditional”, uses and practices of salt in peasant communities. This Iasi team, also including Weller and Brigand, has worked on the topic in various parts of Moldavia for many years; its results provide a window into the many possibilities that could also apply to the ancient exploitation of salt in such social and natural environments.” The conclusion of this review published in the 4th archaeology journal in the world by Impact Factor criterion is clear: “...the volume, taken as a whole, is a valuable and welcome addition to the literature on salt archaeology.”

- The paper presented by F.A. Tencariu *et al.* during the **Current Ethnoarchaeology Conference**, Rome, Nov. 25-27, 2015 had an impact even during the conference – a very unusual situation – when Anne Mayor, PhD (University of Geneva) made several verbal references and commented on the

Power-Point slides presented by Tencariu, thus making suggestions on his strategy of integrating ethnoarchaeological, experimental and archaeometric approaches in order to increase the quality of archaeological interpretation (see Annex III).

- In a vast synthesis on world ethnoarchaeology, titled **Reflections on Contemporary Ethnoarchaeology** (Pyrenae, *Journal of Western Mediterranean Prehistory and Antiquity*, Barcelona, vol. I, 2015, 41-83), the famous Argentinean ethnoarchaeologist Gustavo G. Politis mentions twice the investigations conducted within the Ethnosal and Ethnosalro projects.
- Considering the interest stirred by the EthnosalRo project, on May 29, 2015, the Faculty of Humanities, Yamaguchi University, Japan, organized **The First Romania-Japan International Seminar on Salt Studies** (<http://ethnosalro.uaic.ro/category/news-and-events/>). On this occasion, in front of a numerous audience comprising students, researchers and professors who participated actively to the debates, papers were presented by Takamune Kawashima, Marius Alexianu, Roxana-Gabriela Curcă and Shinsaku Tanaka. The concrete outcome of this reunion was the initiation of a collaboration between Japanese and Romanian specialists within the EthnosalRo project regarding the complex study of briquetage artefacts discovered in the Yamaguchi area. The first outcomes of these studies were presented during *The First International Congress on the Anthropology of Salt*, Iași, August 20-24, 2015.
- Following the outcomes obtained by the EthnosalRo project during *The First International Congress on the Anthropology of Salt*, Iași, two project members – Marius Alexianu and Roxana-Gabriela Curcă – were included in the **Scientific Committee of International Encyclopaedia of Salt**. This complex work will be prepared in honour of the *Second International Congress on the Anthropology of Salt*, whose proceedings will be conducted in 2018 in Los Cabos (Mexico). The initiative of this reference work belongs to Ramon Ojeda Mestre, PhD, President of *Centro de Estudios Integrales de Innovacion y el Territorio* (Mexico) (<http://ethnosalro.uaic.ro/about/objectives/international-encyclopedia-of-salt/>).
- Four members of the EthnosalRo project (M. Alexianu, F.A. Tencariu, O. Weller and R. Brigand), in collaboration with Takamune Kawashima, PhD, with the University of Yamaguchi (Japan), proposed the organization – within the Eighth World Archaeological Congress of Kyoto, to be conducted in the fall of 2016 – of a session called **Archaeology of Salt: From Local to Global**. If approved, this

session will represent the third such presence of the EthnosolRo project, after those of the Dead Sea (Jordan) within WAC (2012) and of Plsen (Czech Republic) within the EAA (2014), thus intensifying the international visibility of this Romanian project.

- After presenting – during *The First International Congress on the Anthropology of Salt*, Iași – the outcomes of analyses conducted within the EthnosolRo project on the Japanese briquetage, the project manager received a collaboration proposal from Prof. Thomas Saile, PhD, (**University of Regensburg**), who is one of the greatest specialists on the archaeology of salt in Germany. This collaboration concerned an elemental analysis on certain briquetage fragments. Viorica Vasilache, PhD, included in the Arheoinvest Platform, in collaboration with Felix Tencariu, PhD, is currently conducting the requested analysis.

- In the book of the French specialists Bernard Moinier and Olivier Weller, *Le sel dans l'Antiquité ou Les Cristaux d'Aphrodite*, published at the prestigious publishing house **Belles Lettres**, Paris, 2015, the studies and papers signed by the *EthnosolRo* project (Marius Alexianu, Roxana-Gabriela Curcă and Robin Brigand) are cited at pages 39, 102, 329, 330, 335, 339 and 341. We also mention the acknowledgments addressed to Roxana-Gabriela Curcă, PhD, and to Marius Alexianu, PhD: “à ceux sans l'implication desquels il n'atteindrait pas un double objectif :

- donner toute leur valeur aux témoignages relevés dans la littérature

- inciter ceux auxquels sa lecture n'est plus familière à découvrir le sel comme un marqueur de la culture antique. **Cet hommage s'adresse notamment à Roxana Gabriela Curca qui a recensé toutes les occurrences significatives à propos du sel chez les Anciens..... et à Marius Tibérius Alexianu pour une capacité d'écoute, de conseil et d'enthousiasme très appréciée”.**

✓ **INCREASED NATIONAL VISIBILITY**

- *The First International Congress on the Anthropology of Salt* organized within the EthnosolRo project represented an event that also stirred the attention of national media. In this sense, we mention – besides the news published in various newspapers – a group of four articles featured in the **Bună Ziua Iași** newspaper, which had more than 5,500 views overall (<http://www.bzi.ro/tag/marius+alexianu>). We also mention the show hosted by **Radio Iași**, titled “*Aurul alb*” *presărat în istorie. Despre antropologia sării [White gold spread over the history. On the anthropology of*

salt], part of *Ora de istorie* [History Class] with Radu Lipovan on September 15, 2015 (<http://ethnosalro.uaic.ro/about/results/#coverage>).

- The participation to the **Caransebeş Symposium** and to the **Session of the National Museum of Eastern Carpathians** also contributed to the national dissemination of the outcomes obtained within the EthnosalRo project among science and culture specialists.

✓ **INVOLVEMENT OF THE PROJECT MEMBERS**

The degree of cohesion and interrelation between the project members of EthnosalRo marked a new phase this year, too, as entailed from the attainment of all objectives set for 2015, from the organization of *The First International Congress on the Anthropology of Salt*, from participations to international scientific events, from the involvement in designing and conducting interdisciplinary studies involving various professional competences, and from the involvement in various editorial and publishing activities. It is worth highlighting the efforts made by the entire team coordinated by Roxana-Gabriela Curcă, PhD. They managed complex situations successfully, for which they received international praise. Hence, R.-G. Curcă, PhD, was included in the International Organizational Committee of the *Second International Congress on the Anthropology of Salt* in Mexico (2018) and in the Scientific Committee of International Encyclopaedia of Salt. The inclusion of Adrian-Felix Tencariu, PhD, and of the PhD candidate Mihaela Asăndulesei in the EthnosalRo team proved to be fully justified. Hence, A.-F. Tencariu initiated an interdisciplinary research that led to the publication of a study in one of the most archaeological journals in the world: *Journal of Archaeological Science*. The papers he presented at various international scientific events have always stirred great interest. PhD candidate Mihaela Asăndulesei conducted several studies, which involved many hours of work and a clear view of the salt anthropology field; some of her studies have already been published abroad. Furthermore, the works edited within EthnosalRo benefitted from her substantial contribution.

✓ **AWARDS**

- The study *Briquetage and salt cakes: an experimental approach of a prehistoric technique* by F.A. Tencariu *et al.* received the **UEFISCDI** award for having been published in a journal with great Impact Factor (the red area): *Journal of*

Archaeological Science (second most important archaeological journal in the world) (see Annex I/A.II.1.3).

- The volume edited by Robin Brigand and Olivier Weller –*Archaeology of Salt. Approaching an Invisible Past* (see Annex I/C.2) – received the **Grand Prize Euroinvent** award during the National Salon of Technical and Scientific Books organized within the European Exhibition of Creativity and Innovation, Euroinvent 2015, May 14-16, Iași (see Annex I/A.I.2).

SYNTHETIC ASSESSMENT OF PUBLICATIONS AND PARTICIPATIONS OF ETHNOSALRO MEMBERS TO NATIONAL AND INTERNATIONAL SCIENTIFIC EVENTS

- 2 volumes of studies published abroad (see Annex I/A I.1., I.2.);
- 1 volume of abstracts published in Romania (see Annex I/A I.3.);
- 3 papers published in ISI journals, one of which in the red area (see Annex I/A.II.1.1-3);
- 1 paper accepted for publication in an ERIH + journal (see Annex I/A II.2);
- 1 study published in ISI Proceedings (see Annex I/A III.1);
- 1 accepted for publication in NON-ISI Proceedings (see Annex I/A III.2);
- 12 book chapters published abroad (see Annex I/A IV.1-12);
- 26 participations to international scientific events (see Annex I/B.I.1-26);
- 2 participations to national scientific events (see Annex I/B.II.1-2);

ANNEX I

A. PUBLICATIONS

I. VOLUMES

I.1. Marius Alexianu, Roxana-Gabriela Curcă, Vasile Cotiuță (eds.), *Salt Effect. Proceedings of the Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania*, BAR International Series S2760, British Archaeological Reports Oxford, 2015, ISBN 9781407314228.

I.2. Robin Brigand, Olivier Weller (eds.), *Archaeology of salt: approaching an invisible past*, Leiden, Sidestone, 2015, ISBN 9789088903038.

I.3. Ștefan Caliniuc, Mihaela Asăndulesei, Roxana-Gabriela Curcă, Marius-Tiberiu Alexianu (eds.), *First International Congress on the Anthropology of Salt. Book of Abstracts. "Alexandru Ioan Cuza" University of Iași, Romania, 20–24 August 2015*, Iași, 2015, ISBN 978-606-714-221-1.

II. ARTICLES

II.1. ISI JOURNALS

II.1.1. Gheorghe Romanescu, Roxana-Gabriela Curcă, Ioan Gabriel Sandu, *Salt deposits in the Romanian Subcarpathians – genesis, repartition and ethnomangement*, *International Journal of Conservation Science*, 6(3), 2015, 261-269.

II.1.2. Ion Sandu, Maria Canache, Traian Mihăescu, Marin Chirazi, Andrei-Victor Sandu, Laura-Monica Trandafir, Alina-Costina Luca, Laura Checherita, *Influence of NaCl aerosols on the functional characteristics of children*, *Revista de Chimie*, 66(1), 2015, 60-65.

II.1.3. Felix-Adrian Tencariu, Marius Alexianu, Vasile Cotiuță, Viorica Vasilache, Ion Sandu, *Briquetage and salt cakes: an experimental approach of a prehistoric technique*, *Journal of Archaeological Science* 59, 2015, 118–131, DOI: 10.1016/j.jas.2015.04.016.

II.2.ERIH AND IDB JOURNALS

II.2.1. Roxana-Gabriela Curcă, *Terminology of salt in Ancient Greek*, *Studia Antiqua et Archaeologica*, 21(1) (sub tipar).

III. PROCEEDINGS ISI AND NON-ISI

III.1. Gheorghe Romanescu, Ionuț Jora, Emilian Panaitescu, Marius Alexianu, *Calcium and Magnesium in the groundwaters of the Moldavian Plateau (Romania) – Distribution and managerial and medical significance*. In: *15th International Multidisciplinary Scientific GeoConference SGEM 2015*, www.sgem.org, *SGEM2015 Conference Proceedings*, ISBN 978-619-7105-36-0 / ISSN 1314-2704, 2015, Book3 Vol. 1, 103-112, DOI: 10.5593/SGEM2015/B31/S12.014.

III.2. Marius Alexianu, Roxana-Gabriela Curcă, Ștefan Caliniuc, *Salt springs from Romania exploited during early archaeological times: a new candidate for world heritage*. In: Alicia Castillo Mena (Ed.), *Second International Conference on Best Practices in World Heritage: People and Communities*. Menorca, 29-30 April, 1-2 May 2015, 2015, 250-264.

IV.BOOK CHAPTERS

IV.1. Marius Alexianu, *Anthropology of Salt: a First Conceptual Approach*, in M. Alexianu, R.-G. Curcă, V. Cotiugă, *Salt Effect. Proceedings of the Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania*, BAR International Series S2760, Oxford, 2015, 1-2.

IV.2. Gheorghe Romanescu, *The Perception of Salt Springs in the Romanian Geographic and Geologic Literature*, in M. Alexianu, R.-G. Curcă, V. Cotiugă, *Salt Effect. Proceedings of the Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania*, BAR International Series S2760, Oxford, 2015, pp. 99-109.

IV.3. Olivier Weller, Robin Brigand, Gheorghe Dumitroaia, Daniel Garvăn, Roxana Munteanu, *A Pinch of Salt in the Prehistoric Eastern Carpathian Mountains (Romania)*, in M. Alexianu, R.-G. Curcă, V. Cotiugă, *Salt Effect. Proceedings of the*

Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania, BAR International Series S2760, Oxford, 2015, 125-133.

IV.4. Robin Brigand, Olivier Weller, Marius Alexianu, *A New Technique for Salt Block Preparation at Coza (Tulnici, Vrancea County, Romania)*, in M. Alexianu, R.-G. Curcă, V. Cotiugă, *Salt Effect. Proceedings of the Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania*, BAR International Series S2760, Oxford, 2015, 223-227.

IV.5. Marius Alexianu, *The Radial Model of Salt Supplying. Preliminary Remarks*, in M. Alexianu, R.-G. Curcă, V. Cotiugă, *Salt Effect. Proceedings of the Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania*, BAR International Series S2760, Oxford, 2015, 229-235.

IV.6. Mihaela Asăndulesei, *The Symbolism of Salt in Holidays as Expressed in the Pioneering Works of Romanian Ethnographers Simion Florea Marian and Tudor Pamfile*, in M. Alexianu, R.-G. Curcă, V. Cotiugă, *Salt Effect. Proceedings of the Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania*, BAR International Series S2760, Oxford, 2015, 241-250.

IV.7. Marius Alexianu, *The Potential Toponymic Field of Salt Springs in Romanian Microtoponymy*, in M. Alexianu, R.-G. Curcă, V. Cotiugă, *Salt Effect. Proceedings of the Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania*, BAR International Series S2760, Oxford, 2015, 261-264.

IV.8. Mihaela Asăndulesei, *The Toponymy of Salt in Zamfir Arbore's Geographical Dictionary of Bessarabia*, in M. Alexianu, R.-G. Curcă, V. Cotiugă, *Salt Effect. Proceedings of the Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania*, BAR International Series S2760, Oxford, 2015, 265-273.

IV.9. Ion Sandu, Maria Canache, Andrei-Victor Sandu, Viorica Vasilache, Ioan Gabriel Sandu, *Use of Saline Aerosol Devices in School Gymnasiums: a Romanian Experiment*, in M. Alexianu, R.-G. Curcă, V. Cotiugă, *Salt Effect. Proceedings of the Second Arheoinvest Symposium, 20-21 April 2012, Iași, Romania*, BAR International Series S2760, Oxford, 2015, 275-278.

IV.10. Marius Alexianu, Felix Tencariu, Andrei Asăndulesei, Olivier Weller, Robin Brigand, Ion Sandu, Gheorghe Romanescu, Roxana-Gabriela Curcă, Ștefan Caliniuc, Mihaela Asăndulesei, *The Salt from the Alghianu Beck (Vrancea County,*

Romania): *A Multifaceted Ethnoarchaeological Approach*, in R. Brigand and O. Weller (eds.), *Archaeology of salt: approaching an invisible past*, Leiden, Sidestone, 2015, 47-63.

IV.11. Olivier Weller, *First salt making in Europe: a global overview from Neolithic times*, in R. Brigand and O. Weller (eds.), *Archaeology of salt: approaching an invisible past*, Leiden, Sidestone, 2015, 67-82.

IV.12. Robin Brigand, Olivier Weller, *Spatial analyses for salt archaeology. A case study from Moldavian Neolithic (Romania)*, in R. Brigand and O. Weller (eds.), *Archaeology of salt: approaching an invisible past*, Leiden, Sidestone, 2015, 157-179.

B. PARTICIPATIONS TO SCIENTIFIC EVENTS

I. INTERNATIONAL

I.1. Marius Alexianu — *Same people, same places, intersected lifeways: another research field for ethnoarchaeology* — Current Ethnoarchaeology, Associazione Italiana di Etnoarcheologia, 25-27 November 2015, Rome (poster).

I.2. Mihaela Asăndulesei — *The cultural anthropology of salt in the rural world of Eastern Romania. Interpreting symbolic valences identified in Christian holydays and rituals of passage* — Current Ethnoarchaeology, Associazione Italiana di Etnoarcheologia, 25-27 November 2015, Rome (poster).

I.3. Felix-Adrian Tencariu, Marius Alexianu, Viorica Vasilache — *Integrating ethnoarchaeology, experimental archaeology and archaeometry towards understanding past behaviours and technologies. Case study: the briquetage technique in the Eastern Romanian Chalcolithic* — Current Ethnoarchaeology, Associazione Italiana di Etnoarcheologia, 25-27 November 2015, Rome.

I.4. Ștefan Caliniuc, Roxana-Gabriela Curcă, Gheorghe Romanescu, Andrei Asăndulesei — *Romania's salt springs: local economic uplifting through heritage branding* — Current Ethnoarchaeology, Associazione Italiana di Etnoarcheologia, 25-27 November 2015, Rome (poster).

I.5. Marius Alexianu, Felix-Adrian Tencariu, Andrei Asăndulesei, Olivier Weller — *The salt outcrops from the Romanian Carpathians and pastoral mobility. An ethnoarchaeological approach* — European Association of Archaeologists 21th Annual Meeting (EAA 2015), University of Glasgow, Glasgow, 02-05 September 2015.

I.6. Marius Alexianu, Felix-Adrian Tencariu, Vasile Cotiuga — *Briquetages and salt cakes: interpreting some ceramic assemblages from the Romanian Chalcolithic by experiment and ethnographic analogy* — European Association of Archaeologists 21th Annual Meeting (EAA 2015), University of Glasgow, Glasgow, 02-05 September 2015.

I.7. Mihaela Asăndulesei — *A new way of perceiving salt: ceremonial substance in Romanian holidays and rituals of passage* — European Association of Archaeologists 21th Annual Meeting (EAA 2015), University of Glasgow, Glasgow, 02-05 September 2015.

I.8. Marius-Tiberiu Alexianu — *Anthropology of Salt: Challenges of a New Discipline* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.9. Marius-Tiberiu Alexianu, Olivier Weller, Ion Sandu, Gheorghe Romanescu, Robin Brigand, Roxana-Gabriela Curcă, Vasile Cotiugă, Felix Tencariu, Andrei Asăndulesei, Ștefan Caliniuc, Radu-Ștefan Balaur, Mihaela Asăndulesei — *EthnosolRo Project. Work in Progress* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.10. Olivier Weller — *First Salt Making in Europe: an Overview from Neolithic Times* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.11. Felix Tencariu, Marius-Tiberiu Alexianu, Vasile Cotiugă, Viorica Vasilache, Ion Sandu — *Clay, Fire and Salt. Experimental Approaches on the Prehistoric Briquetage Technique* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.12. Alfons Fíguls, Olivier Weller, Thomas Xaver Schuhmacher, Mireia Martínez, Raül Segarra, Ainhoa Pancorbo, Rosa M. Lanaspá, Marc Cots, Aitor Henestrosa — *The Vall Salina: More than 6500 Years of Halite Exploitation. Cardona, the Salt of*

History — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.13. Alfons Fíguls, Olivier Weller, Fidel Grandia — *The “Vall Salina” of Cardona and the Role of Salt in the Exchange Network during the Middle Neolithic (4500–3500 BC) in Catalonia* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.14. Ionuț Cristi Nicu, Andrei Asăndulesei, Gheorghe Romanescu, Alin Mișu-Pintilie, Vasile Cotiugă — *Archaeological Approaches of Salted Areas from Northeastern Romania* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.15. Robin Brigand, Olivier Weller — *Neolithic Territories and Salt Exploitation in Moldavia (Romania)* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.16. Roxana-Gabriela Curcă — *Halotherapy in Graeco-Roman Antiquity* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.17. Marius-Tiberiu Alexianu — *Houses Constructed of Salt in Herodotus and Strabo: the First Halo-Chambers?* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.18. Maria Canache, Ion Sandu, Dan Canache, Andrei-Victor Sandu, Viorica Vasilache, Ioan Gabriel Sandu — *Halotherapy and Sports* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.19. Gheorghe Romanescu — *The Distribution of Resources and Quality of Salt in Europe* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.20. Laurent Adopo Kouassi, Gheorghe Romanescu — *The Salt of Ivory Coast (Africa)* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.21. Ioan Nistor, Gheorghe Romanescu — *Salt in Canada-Distribution and Resources* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.22. Kei Aoshima, Takamune Kawashima, Viorica Vasilache, Ion Sandu, Felix Tencariu — *Archaeometric Analyses on Briquetages from Minogahama Site, Japan (ca. 6th–7th century AD)* — First International Congress on the Anthropology of Salt (SALT 2015), “Al. I. Cuza” University of Iași, 20-24 August 2015.

I.23. Gheorghe Romanescu, Ionuț Jora, Emilian Panaitescu, Marius Alexianu — *Calcium and Magnesium in the groundwaters of the Moldavian Plateau (Romania) – Distribution and managerial and medical significance* — 15th International Multidisciplinary Scientific GeoConference SGEM 2015, 18-24 June 2015.

I.24. Marius Alexianu, Roxana-Gabriela Curcă, Ștefan Caliniuc — *Salt springs from Romania exploited during early archaeological times: a new candidate for world heritage* — 2nd International Conference on Best Practices in World Heritage: People and Communities, Mahón, Menorca, Balearic Islands, April 29–May 2, 2015.

I.25. Gheorghe Romanescu, Gabriela Romanescu — *Hydrological regime of the Prut River on the Romanian territory* — Simpozionul Internațional Calitatea Mediului și Utilizarea Terenurilor, Ediția a X-a, 8-10 May 2015, Suceava (programme & abstracts).

I.26. Dominique Sordoillet, Olivier Weller — *Appréhender les techniques d'exploitation du sel : Analyses microscopiques et géochimiques sur les sites préhistoriques des sources salées de Lunca et Tolici (Roumanie)* — 20e colloque international GMPCA, April 27–30, Besançon, 2015.

II. NATIONAL

II.1. Marius Alexianu, Roxana-Gabriela Curcă, Codrin Alexianu — *O clasificare a izvoarelor sărate: cercetări etnoarheologice în spațiul extracarpatic al României* — Sesiunea Muzeului Național al Carpaților Răsăriteni, Ediția a XII-a, 10-12 December 2015, Sf. Gheorghe.

II.2. Marius Alexianu — *Sarea și oieritul la munte* — „Țara Gugulanilor”
Simpozion/Seminar de etnoarheologie, etnoreligie, etnoistorie, etnografie ... etno-,
Caransebeș, 26-28 June 2015.

ANNEX II
FIRST INTERNATIONAL CONGRESS ON THE ANTHROPOLOGY OF SALT

20–24 August 2015, “Al. I. Cuza” University of Iași, Romania

PROGRAMME

PLENARY SESSION

Chairmen: Roxana-Gabriela Curcă, Olivier Weller, Valeriu Cavruc, Marius-Tiberiu
Alexianu

Marius-Tiberiu Alexianu, *Anthropology of Salt: Challenges of a New Discipline*

Marius-Tiberiu Alexianu, Olivier Weller, Ion Sandu, Gheorghe Romanescu, Robin Brigand, Roxana-Gabriela Curcă, Vasile Cotiugă, Felix Tencariu, Andrei Asăndulesei, Ștefan Caliniuc, Radu-Ștefan Balaur, Mihaela Asăndulesei, *EthnosolRo Project. Work in Progress*

Ashley A. Dumas, *Recent Archaeology of Salt in the Eastern United States*

Shuicheng Li, *Archaeology of Salt Production in the Three Gorges Region: Focus on the Zhongba Site*

Olivier Weller, *First Salt Making in Europe: an Overview from Neolithic Times*

Takamune Kawashima, *Archaeology and Ethnology of Salt in Japan*

Blas Castellón, *Anthropology of Salt in Mexico in the Past 10 Years. An Overview*

Anthony Harding, *‘Salt in Prehistoric Europe’: the Challenges and Perspectives of a General Book on Ancient Salt*

Dulam Sendenjav, *Usage, Therapy and Magical Cure of Salt among Mongolian Ethnic Groups*

Jayaram Gollapudi, *Depressed Classes of Madagas and its Culture Reflects in Using of Salt in Tanning and Traditional Buried the Body in South India*

Felix Tencariu, Marius-Tiberiu Alexianu, Vasile Cotiugă, Viorica Vasilache, Ion Sandu, *Clay, Fire and Salt. Experimental Approaches on the Prehistoric Briquetage Technique*

Valeriu Cavruc, *The Archaeological Evidence for Salt Production in Romania*

I. ANTHROPOLOGY AND ARCHAEOLOGY (Part 1)

Chairmen: Ashley A. Dumas, Takamune Kawashima, Blas Castellón,
Olivier Weller, Wes Forsythe, Martin Hees

Michele Zuppi, Andrea Zuppi, Paolo Zuppi, Elisabetta Rossi, “*Cum grano salis*” — *a Model of Man's Complexity*

Andrea Zuppi, Michele Zuppi, Paolo Zuppi, Elisabetta Rossi, “*Sapientia*” and Salt

Ralph M. Rowlett, *The Role of Salt in the Fame and Prosperity of Ancient Pompeii*

Tasha Vasiliki Athena Maroulis, *An Insight into the Use of Salt in the Aboriginal Culture in Australia*

Francesca Lugli, *The Use of Salt in Mongolia. An Example of Mogod Region (Bulgan Aimag)*

Henry Kam Kah, *Salt, History and Culture among the Western Grasslanders of Cameroon*

P-J Ezech, *Unity of Sacred and Profane in Traditional Salt Industry of the Okposi Igbo of South-Eastern Nigeria*

Ioan Cojocariu, *Two Examples of Unusual Uses of Salt in Romania*

Ralph M. Rowlett, *Salt and Shell-tempered Pottery in European Prehistory*

Vassil Nikolov, *Formation of the Prehistoric Urban Centre Provadia-Solnitsata*

Gheorghe Dumitroaia, *Archaeological Research in the Salt Springs Area of Lunca and Oglinzi (Neamț County, Romania)*

Alfons Fíguls, Olivier Weller, Thomas Xaver Schuhmacher, Mireia Martínez, Raül Segarra, Ainhoa Pancorbo, Rosa M. Lanaspá, Marc Cots, Aitor Henestrosa, *The Vall Salina: More than 6500 Years of Halite Exploitation. Cardona, the Salt of History*

Gheorghe Dumitroaia, Vasile Diaconu, Ciprian-Dorin Nicola, *Briquetage in Cucuteni Settlements from Moldavia (Romania)*

Alfons Fíguls, Olivier Weller, Fidel Grandia, *The “Vall Salina” of Cardona and the Role of Salt in the Exchange Network during the Middle Neolithic (4500–3500 BC) in Catalonia*

Andrei Asăndulesei, *Settlement Density around Salt Springs from Solca and Cacica in Neolithic and Chalcolithic Periods*

Ionuț Cristi Nicu, Andrei Asăndulesei, Gheorghe Romanescu, Alin Mișu-Pintilie, Vasile Cotiugă, *Archaeological Approaches of Salted Areas from Northeastern Romania*

Elisa Guerra Doce, F. Javier Abarquero Moras, Germán Delibes de Castro, *Brine Processing at the Beaker Site of Molino Sanchón II (Zamora, Spain): A Technological Approach*

Maciej Dębiec, Thomas Saile, *Tyrawa Solna. Salt, Settlements and a Magnetometer Survey along the Lower Course of the Tyrawka River (SE-Poland)*

Gheorghe Dumitroaia, Constantin Preoteasa, Ciprian-Dorin Nicola, *Unique Cucutenian Artefacts Related to Salt Recrystallization*

Robin Brigand, Olivier Weller, *Neolithic Territories and Salt Exploitation in Moldavia (Romania)*

Roxana Munteanu, *Sărata Monteoru: a Chalcolithic Site in a Saliferous Region*

Qiaowei Wei, *Ceramic Management at the Salt Production Site during the Early Bronze Age in the North Shandong, China*

Valeriu Căvruc, *The Bronze Age Salt Production Technologies in Transylvania and Maramureș*

Tomaso Di Fraia, *Reddish Ollas and Production and Use of Salt: an Open Question*

Daniel Costache, Laurențiu Grigoraș, *Settlements, Micro-regions and Natural Resources during the Bronze Age in the Curvature Subcarpathians Area*

Vasile Diaconu, *Salt in the Bronze Age. An Overview of Subcarpathian Moldavia (Romania)*

Neculai Bolohan, Luminița Bejenaru, Alexandru Gafincu, *A Tiny Story about Salt, Herding and Landscape in Late Bronze Age (LBA), Eastern Romania (Work in Progress)*

Alfons Fíguls, Hans Reschreiter, Kerstin Kowarik, *Research on the Use of Hallstatt's Stone Axes: Study of Mechanics*

Martin Hees, *Salt in Southwestern Germany at the End of the Iron Age*

Saturday, 22.08.2015

I. ANTHROPOLOGY AND ARCHAEOLOGY (Part 2)

Chairmen: Thomas Saile, Paolo Zuppi

Alfonso Stiglitz, *Archaeology of Salt Works in Ancient Sardinia*

Blas Castellón, *Subterranean Water as a Source of Salt. Reflections on Technological Variations of their Use in the South of Mexico*

Magda Mircea, *The Sacred Salt Spring of Erechtheion, or How the Aegean Sea Got to Flow High on the Top of Athens' Acropolis*

Wes Forsythe, *The Archaeology of Salt in Ireland*

Alexandru Popa, *Salt vs. Limes in the Eastern Part of Roman Province of Dacia*

Shinsaku Tanaka, *The Development of Salt Industry during the State Formation Period*

Kei Aoshima, Takamune Kawashima, Viorica Vasilache, Ion Sandu, Felix Tencariu, *Archaeometric Analyses on Briquetages from Minogahama Site, Japan (ca. 6th–7th century AD)*

Catherine Liot, Elodie Mas, Javier Reveles, *Salt, Shell and Obsidian. The Role of Salt Producers- Craftsmen in the Sociocultural Dynamic of the Sayula Basin (Mexico) between 500 and 1000 A.D.*

Ashley A. Dumas, *Salt Production as a Reflection of Inter-Ethnic Contact and Culture Change during Late Prehistory (A.D. 800–1100) in South Alabama, United States*

Jorge Alejandro Ceja Acosta, María Luisa Martell, *Archaeological Observations on the Salt Production in Mesoamerica and Other Parts of the World. Technological Implications*

Jorge Alejandro Ceja Acosta, Braulio Pérez, *Ethnoarchaeology of Salt Production in Saltplaces from Oaxaca, Mexico*

Dan Lucian Buzea, Andrea Chiricescu, *The People of Salt and Experimental Archaeology in Romania*

II. HISTORY

Chairmen: Răzvan Pantelimon, Andrei Emilciuc

Sebastian Fink, *Salinization as a Trigger for Historical Change? The Case of Mesopotamia*

Nuria Morère, *Salt and Antiquity in the Iberian Peninsula: Research Perspectives*

Bernard Moinier, *Salt Outlets: Which Statistical Profiles in the Roman Empire?*

Iulia Dumitrache, *The Halieutic Circuit in Scythia Minor*

Ioan Iațcu, *Use of Salt in the Christian Church of Late Antiquity: Literary and Archaeological Evidence*

Mihai-Cristian Amăriuței, Ludmila Bacumenco-Pîrnău, *Salt “Roads” in Moldavia by the 18th Century: Production, Transportation, and Consumption*

Natalia Matveeva, *Salt Works in Western Siberia in the First Half of 18th Century Influence on the Foreign Affairs*

Ioan Iațcu, *Salt and Economic Activities on the Pruth River, from Antiquity until the Late Medieval Period*

Andrei Emilciuc, *Organization and Functioning of Salt Extracting Industry in Bessarabia (1812–1850)*

Irina Cereș, *The Export of Salt from the Principality of Moldavia to the Russian Empire at the End of the 18th – Early 19th Century*

Valentin Tomuleț, *Salt Exports of Bessarabia to Ukrainian and Russian Guberniyas (1812–1850)*

Mircea-Cristian Ghenghea, *From Blessing to Punishment. The Salt Issue in the Romanian Space in the 19th Century as Seen by Foreign Travellers*

Valentin Arapu, *The Export of Salt from Moldavia to Poland (the Second Half of 18th Century – Beginning of 19th Century)*

Răzvan Victor Pantelimon, *Marine Salt Exploitation in the Coastal Area of Chile*

III. HALOTHERAPY

Chairmen: Iuri Simionca, Ioan-Sorin Stratulat

Roxana-Gabriela Curcă, *Halotherapy in Graeco-Roman Antiquity*

Iuri Simionca, *The Underground Salt Mine Environment and Therapeutic Properties*

Marius-Tiberiu Alexianu, *Houses Constructed of Salt in Herodotus and Strabo: the First Halo-Chambers?*

Roua Popescu, Cristina Nica, Mihaela Bertescu, Ovidiu Mera, Nicolae Țigănilă, Mădălina Necula, Iuri Simionca, Gheorghe Stoian, *New Serum Lipid Biomarkers Can Be Useful in Bronchial Asthma and Speleotherapy Treatment Monitoring*

Cristina Nica, Cristina Cercel, Mihaela Bertescu, Ovidiu Mera, Nicolae Țigănilă, Rodica Rogoian, Iuri Simionca, Gheorghe Stoian, *Oxidative Stress Biomarkers Useful in Bronchial Asthma and Speleotherapy Treatment Monitoring*

Ioan-Sorin Stratulat, *Studies Regarding the Balneoclimatic Potential of Cacica Salt Mine, Suceava County*

Maria Canache, Ion Sandu, Dan Canache, Andrei-Victor Sandu, Viorica Vasilache, Ioan Gabriel Sandu, *Halotherapy and Sports*

Ștefana Andrei, *Salina Center Iași – 5 Years Since We Breathe Healthy*

IV. HERITAGE

Chairmen: Katia Hueso Kortekaas, Igor Lyman, Ramón Ojeda-Mestre, Ovidiu Mera

Gheorghe Romanescu, *The Distribution of Resources and Quality of Salt in Europe*

Ricardo N. Alonso, *Neogene and Quaternary Salt in the Central Andes (Perú, Bolivia, Chile and Argentina)*

Takamune Kawashima, *Ethnographical Perspective on Salt in Japan*

Andrea Chiricescu, *Traditional Salt Exploitation in South-East Transylvania*

Katia Hueso Kortekaas, *What Factors Contribute Best to Preserve the Heritage of Inland Salinas in Iberia?*

Arina Ceaușu, *Yām HaMélah, The Sea of Salt*

Martha Monzón Flores, *Huixtocihuatl. The Goddess of Salt*

Laurent Adopo Kouassi, Gheorghe Romanescu, *The Salt of Ivory Coast (Africa)*

Gustavo A. Ramírez Castilla, «*Salt of the Earth*». *Salt Extraction and Trade in Lomas del Real (Costa de Altamira, Tamaulipas, México). A 3,000 Year Old Tradition that is Becoming Extinct*

Ioan Nistor, Gheorghe Romanescu, *Salt in Canada-Distribution and Resources*

Ramón Ojeda-Mestre, Tamara Montalvo-Arce, Jesús Montaña-Avilés, Maribel Patiño, *Environmental Care in Modern Salt Production. An Experience in Mexico*

Jesús Montaña-Avilés, *Baja California Sur the Queen of Salt in Mexico*

Innocent Kouame Kouassi, Gheorghe Romanescu, *Salt Exploitation in Africa*

Oriol Beltran Costa, *The 'Patrimonialization' of the Maras Salt Mines (Cusco, Peru): Traditional Salt Production Systems and Their Use in Tourism*

Igor Lyman, Viktoria Konstantinova, *Ukrainian Traditional Salt Traders ("Chumaks") in the North of the Sea of Azov (Case Study of Berdyansk District)*

Ana Ilie, *Salt in Romanians' Traditions. Notes for the Intangible Heritage in Dâmbovița County*

Roxana Diaconu, Vasile Diaconu, *Wooden Recipients Used for Salt. An Ethnographic Approach*

Ovidiu Mera, Dan Tiberiu Mera, Tudor-Gabriel Bodea, *The Vertical Transportation of Salt in the Old Turda Salt Mine, Romania*

Ovidiu Mera, Dan Tiberiu Mera, Tudor-Gabriel Bodea, Iuri Simionca, *Mining and Tourism in the Turda Salt Mine*

V. LITERARY AND LINGUISTIC APPROACHES

Chairmen: Mihaela Paraschiv, Adrian Poruciuc

Mihaela Paraschiv, *Salt in the Opsartytique Ancient Literature*

Claudia Tărnăuceanu, *Testimonies in Latin Regarding Salt Exploitation in Moldavia in the 17th and 18th Centuries*

Mihaela Asăndulesei, *Salt Symbolism in the Work of Elena Niculiță-Voronca*


Peter A. Dimitrov, *Indo-European Linguistics: IE Onomastics Related to Salt and Salt-Related Places*

Adrian Poruciuc, Norbert Poruciuc, *Salt Terminology in Germanic Languages*

Ileana Oana Macari, *The Grammar of Salt: Morphosyntactic and Morphosemantic Features of Salt Idioms in English and Romanian*

Mihaela Asăndulesei, *Salt-Related Toponyms in the Romanian Area between Carpathians and the Pruth*

ANNEX III



Ethnoarchaeology facing the challenges of globalisation:

Insights from Mali and Senegal

Dr Anne Mayor
Rome, 27.11.2015
Current ethnoarchaeology

APA Archéologie Peuplement de l'Afrique
FACULTÉ DES SCIENCES
FNSNF FONDS NATIONAL SUISSE SCHWEIZERISCHER NATIONALFONDS FONDO NAZIONALE SVIZZERO SWISS NATIONAL SCIENCE FOUNDATION
UNIVERSITÉ DE GENÈVE

Introduction : strategies

As an answer: combination of different strategies
(perfect “Ménage à trois” by Tencariu after Longacre “mariage parfait”...)

1. Ethnoarchaeology (with focus on oral memory, historical accounts or ethnographic collections → heritage studies)

→ Iron metallurgy in Mali
(documentary film by E. Huysecom)

→ Ethnographic pottery collection from Mali at UNIGE, collected 20 years ago
(studies on potter's tools, décors, functions...)



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