ANNUAL MEETING OF THE **EUROPEAN ASSOCIATION** OF **ARCHAEOLOGISTS GLASGOW 2015** 2-5 SEPTEMBER

EAA GLASGOW 2015

PROGRAMME

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University *of* Glasgow

HISTORIC SCOTLAND
ALBA AOSMHOR

0950 - 1000 **Discussion**

Coffee break

1030 - 1050 **Integrating spatial and palaeoenvironmental approaches to land-use in medieval Ireland,** Corcoran, M (University College Dublin)

1050 - 1110 **Topography in preventive archaeology: operating mode integrated into GIS and archaeological information system,** Vachon, V (INRAP); Frederic, A

1110 - 1130 **Ethical and efficient management of science in archeology,** Giesen, E (Inserm)

1130 - 1230 **Discussion**

Poster

Landscape and subsistence at Ibida Fortress (Dobrudja, Romania): zooarchaeological data, Bejenaru, L (Alexandru Ioan Cuza University of Iasi); Stanc, S; Iacob, M

SA26 SCIENCE AND ARCHAEOLOGY: EARTH, WIND AND FIRE AND RESIDUES

KELVIN BUILDING - ROOM 312

Chair: Gill Campbell / Organiser: Gill Campbell

0800 - 0810 **Introduction**

0810 - 0830 **Footsteps round the fires: geoarchaeological approaches to understanding Neolithic structures at the Ness of Brodgar, Orkney, Scotland,** McKenzie, J (University of Bradford); Card, N

0830 - 0850 **Aragonite in archaeological contexts: a new micro-proxy in the study of ancient pyrotechnology,** Toffolo, M (Institut für Naturwissenschaftliche Archäologie, Eberhard-Karls-Universität Tübingen)

0850 - 0910 **Archaeometallurgy from the Bottom-up: Introducing Thermodynamics to Archaeology,** Sabatini, B (University of Oxford)

0910 - 0930 **Modeling Ancient Climate of the Near East: Disasster or Opportunity?,** Scott Cummings, L (PaleoResearch Institute)

0930 - 0950 **Agency of places,** Prijatelj, A (Durham University)

0950 - 1000 **Discussion**

Coffee break

1030 - 1050 **Geological, hydrogeological and geotechnical characteristics of Basarabi (Murfatlar) archaeolgical monument,** Turcanu-

Carutiu, D (Constanta "Ovidius" University); Opreanu, M; Ion, R; Ion, R

1050 - 1110 **Reconstructing Household Behavior and connections: Organic Residue Analysis and the content of Vessels at Late Bronze Tel Azekah,** Linares, V (Tel Aviv University)

1110 - 1130 **Soil microbiology methods for identification of ancient manuring,** Chernysheva, E (Institute of Physicochemical and Biological Problems in Soil Science Russian Academy of Sciences)

1130 - 1230 **Discussion**

Posters

A tale of two technologies: Cucuteni painted and shell tempered pottery from Eastern Romania, Matau, F (Alexandru Ioan Cuza University of Iasi)

Preliminary findings in determining seasonal shellfishing patterns at Pinnacle Point, South Africa, during the Later Stone Age, Nelson-Viljoen, C (School of History, Classics and Archaeology. University of Edinburgh)

Towards the understanding of the paleodiet of Ukrainian populations from the 4th to the 2nd mill. BC: Carbon isotope analysis of organic residues recorded in ceramic vessels, Mileto, S (Freie Universität); Kaiser, E; Evershed, R; Rassamakin, Y

The future of science in Historic England and the English Heritage Trust, Campbell, G (Historic England); Moffett, L

Scientific Analysis of Medieval Window Glass in Scotland - Elgin Cathedral, Spencer, H (Heriot Watt University); Kennendy, C; Buckman, J

Economic resources in Chalcolithic society: bioarchaeological study concerning the Cucuteni site of Costesti (Iasi County, Romania), Bejenaru, L (Alexandru Ioan Cuza University of Iasi); Danu, M; Stanc, S

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ABSTRACTS

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study of human remains, including mummies. Museums make the protection of all human remains a priority and any plans for research using human mummies must be carefully considered and planned. New data from any research based on mummies in museums can be, and should be, applied to both academic analysis and interpretation and public presentation. This paper reviews some of the effects of past post-excavation efforts on the re-analysis and interpretation of three Iron Age bog mummies from northern Germany and a child mummy from South America, and highlights issues for museums who are considering undertaking or permitting analysis of mummies in collections.

SA26 THE ANALYSIS OF PROTEIN-MADE ARTEFACTS IN MUSEUM COLLECTIONS

Caroline Solazzo

SMITHSONIAN INSTITUTION

This paper will review the techniques available for the analysis of organic artefacts made of proteins in museum collections, which include more specifically objects made of fibrous proteins such as keratin and collagen.

When visual identification fails, most non-destructive techniques (Raman, FTIR) can identify the type of materials used, as well as provide some information on the state of deterioration. Species identification however can be difficult to assess as proteins are too similar to show a specific profile using these techniques. Analysis of proteins using mass spectrometry is an efficient method to determine the animal species (and has been called peptide mass fingerprinting), but also to characterise degradation at the molecular level, which makes the technique complementary to other non-destructive analytical tools. This paper will review the use of mass spectrometry as a minimally-destructive technique, show potentials and limitations of the technique and present the advantages of integrating it in the analysis of museum artefacts.

SA26 GEOLOGICAL, HYDROGEOLOGICAL AND GEOTECHNICAL CHARACTERISTICS OF BASARABI (MURFATLAR) ARCHAEOLGICAL MONUMENT

Daniela Turcanu-Carutiu[1], Mihai Opreanu[2], Rodica-Mariana Ion[3], Rodica-Mariana Ion[4]

[1]CONSTANTA "OVIDIUS" UNIVERSITY, [2]ARCHITECHTURE UNIVERSITY "ION MINCU", [3]ICECHIM, NANOMEDICINE RESEARCH GROUP, [4]VALAHIA UNIVERSITY, MATERIALS ENGINEERING DEPARTMENT

The archaeologic site from Basarabi is digged into a lithological generated hill, consisting of chalks and chalky marnes, where Senonian occurs continuously over the Baremiene limestone from the valley Carasu flank, or over the Aptiene gravels. The limestone from Basarabi is compact, with variable thickness from 42 m to 95 m, and below them there are marl and limestone. It is white with flint nodule with 91% $CaCO_3$. From geological and technical point of view, could be identified semi-hard rocks (limestone, limestone breccia, chalks, sandstone, limestone shale, etc) with hardness between 3 and 5, and compressive strength between 700-1000 kg / cm^2. From mineralogical and chemical point of view, the rock is mono-mineral ($CaCO_3$), the rock cementing is a growing process that could crystallize, these crystals having a proper optical orientation. The moisture could cause a crushing of the chalk rock, and this stone suffers over time changing his composition and structure. From technical-mechanical point of view, the chalk stone has the following characteristics: porosity: 0.5-13.5 %, degree of saturation: 0.3-0.994 %, bulk density, 1.9-2.8 kg/dm^3. Due to the low resistence to freeze-thaw, the monument has been covered with cements structures or with a provisory roof, and their influence is discussed in this paper, correlated with the micro-climatic measurements of the sculpted rooms, by using a lower number of sensors well distributed inside and outside. All these parameters help to identify and stop the destroying or damaging process of many artworks from world valuable cultural and historical patrimony.

SA24 NEW TRENDS, NEW FOOD? INVESTIGATING PREHISTORIC DIET IN THE LIMFJORD REGION, DENMARK.

Laura van der Sluis

SCHOOL OF GEOGRAPHY, ARCHAEOLOGY AND PALAEOECOLOGY, QUEEN'S UNIVERSITY BELFAST

The Limfjord region is a sound in northern Denmark with brackish water resulting from the mixing of freshwater from the Baltic and marine water from the North Sea. The varied landscape in the Limfjord is characterised by different biotopes, in the terrestrial as well as the aquatic spheres, which man has been exploiting since the Mesolithic. As prehistoric people living in this landscape experienced many changes, both on societal and environmental level, their adjustments to these changes might be expressed through an alteration in diet. Multi-proxy analysis ($\delta^{13}C$, $\delta^{15}N$, $\delta^{34}S$ and to some extent ^{14}C) of human and animal bones from the Late Mesolithic circa 3900 BC to the Viking Age circa 1050 AD in this area can reveal any dietary changes across the millennia. Dietary isotopic information combined with archaeological information might elucidate whether changes in diet are corresponding to major societal alterations during the Danish prehistory. Additionally, the consumption of food from mixed marine and freshwater environments can pose a problem in calculating reservoir offsets. The incorporation of $\delta^{34}S$ ratios as another dietary proxy might increase our understanding of how to quantify age offsets. As part of a larger project, the isotopic and archaeological datasets will eventually be compared with palaeoenvironmental data obtained from a core taken from the Limfjord to investigate human-coastal environment interaction.

SA10 INVESTIGATING DOMESTIC ANIMAL MANAGEMENT IN EARLY NEOLITHIC SWEDEN

Kurt Gron

DURHAM UNIVERSITY