

data archive of the resultant ions for future re-analysis and widespread applications. Crucially, this comprehensive 'healthy' baseline is hoped to provide a basis for comparison in the analysis of pathological bone from Aalst and for other archaeological populations.

- Bona et al. 2014: DOI 10.1371/journal.pone.0087215
- Johnston & Buckley 2021: DOI 10.1021/acs.jproteome.0c00555
- Procopio, Chamberlain & Buckley 2017: DOI 10.1021/acs.jproteome.6b01070
- Sawafuji et al. 2017: DOI 10.1098/rsos.161004

662 RUN TO THE VALLEYS [PAM]

Session theme: 5. (Extreme) Environments – Islands, Coasts, Margins, Centres

Session organisers: Pereira, Telmo (Universidade Autónoma de Lisboa; Instituto Politécnico de Tomar; Centro de Geociências da Universidade de Coimbra; UNIARQ, Centro de Arqueologia da Universidade de Lisboa) - Abrunhosa, Ana (CENIEH - Centro Nacional de Investigación sobre la Evolución Humana; ICArEHB - Interdisciplinary Center for Archaeology and Evolution of Human Behaviour)

Session format: Regular session

Pleistocene and Early Holocene hunter-gatherer ecodynamics were characterized by the exploitation of resources from their natural sources. As environmental conditions changed, the presence, amount, quality, and visibility of many such biotic and abiotic resources also changed. Moreover, the overall comfort may have also been decisive in occupying or not a particular space during specific periods in relation to environmental conditions and accessibility to such resources.

One of the best setups where a diversity of resources and humans clustered were valleys and canyons. But, these geomorphological features were also where considerable erosion and deposition occurred. Ultimately, the environmental conditions that caused sedimentation and/or erosion were responsible for allowing the preservation or causing obliteration of the evidence of human presence and testimonies of human activity.

In this session, we bring together case studies of single and multiple occupation sites in valleys from around the world during the Pleistocene and Early Holocene. Our goal is to discuss human behaviour, adaptation, ecodynamics, resource exploitation, and archaeological visibility.

ABSTRACTS

1 THE MIDDLE STONE AGE IN THE TANZANIAN RIFT VALLEY: DGS, A NEW SITE IN THE OLDUVAI GORGE

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Abstract format: Oral

Adaptation and exploitation of the environment by human groups in terms of its surroundings is one of the circumstances that make human beings particularly unique. Middle Stone Age (MSA) research in East Africa has received special attention over the past years. Dorothy Garrod Site (DGS), discovered during a fieldwork survey in 2017, demonstrate the enormous potential of Olduvai Gorge (northern Tanzania) for the study of the MSA period. DGS shed new lights on an almost unknown area at least for the MSA with a known stratigraphic context.

This communication reports on a new MSA site, located on the north bank of the Olduvai river and embedded within the Ndutu Formation, specifically in a cemented tuffaceous silt level. DGS is characterized by only one archaeological level that has yielded a functional association between faunal remains and lithic industry.

DGS shows a human occupation where lithic and fauna display evidence of human manipulation (knapping, percussion and burning remains), contributing enormously to understanding the settlement patterns and the interaction of modern humans with the environment.

From a technological point of view, the site is characterized by discoid methods and the near absence of other technological methods and lithic points. All raw materials used have a local origin, either of primary or secondary access. This pattern seems to correspond to the open-air deposits studied in the area. In contrast, the exogenous raw material

- obsidian from southern Kenya- is well known from sheltered deposits to the north and south of the Olduvai Gorge which was a passing point for the obsidian circulation.

2 LOCATING CAVE ENTRANCES AND OTHER KARSTIC PHENOMENA USING DRONE-DERIVED LIDAR DATA AT RIVER LIS' CANYONS (LEIRIA, PORTUGAL)

Abstract author(s): Dias, Rita (Era - Arqueologia, Conservação e Restauro; ICArEHB) - Fonte, João (Universidade da Maia/ISMAI; ERA Arqueologia S.A.) - Pereiro, Tiago - Hipólito, João (ERA Arqueologia S.A.) - Monteiro, Patrícia (LARC-DGPC; ICArEHB) - Pereira, Telmo (Universidade Autónoma de Lisboa; Instituto Politécnico de Tomar; Centro de Geociências da Universidade de Coimbra; UNIAHQ)

Abstract format: Oral

Prehistoric spatial networks were subject to a plethora of variables both natural and human-dependent in an ever-changing landscape. In that sense, the central coast of western Iberia is an interesting case study to hunter-gatherer dynamics between coastal and inland territories, due to specific ecological and geomorphological features, abundant flint resources, and karstic canyons that connect the coast to the mountains inland.

To this day, there have not been many LiDAR surveys focusing on the discovery of karstic features entrances, and the few attempts were mainly focused on locating sinkholes. Here we attempt to investigate the existence of various types of entrances (small vertical cave shafts, horizontal and sub-horizontal caves, and rockshelters) in a densely vegetated terrain, with difficult foot access, through high-resolution drone-derived LiDAR data. An efficient pipeline to collect, process and visualise LiDAR-derived point clouds and elevation models of karstic landscapes was developed to further contribute to the understanding of prehistoric spatial networks in this type of landscape and specifically, in this case, the resources exploited in each settlement and the pathways used to move across and between landscapes. In addition, and depending on the increase in the cave entrances dataset, there is good potential for automating its mapping through artificial intelligence.

3 LATE PLEISTOCENE ARCHAEOLOGY OF THE TANANA VALLEY, ALASKA

Abstract author(s): Wygal, Brian (Adelphi University)

Abstract format: Oral

The Tanana Valley in interior Alaska has been home to the Dene people since time immemorial. Their longevity is a testament to the rich and changing ecosystems of interior Alaska. Consequently, the region has established a benchmark for late Pleistocene archaeology throughout eastern Beringia and has been critical for understanding the timing and routes of First Nation peoples in the Americas. In this paper, we review the unique periglacial environments of the middle Tanana Valley through the study of its rich geoarchaeological and palaeoecological records contained in deep deposits of calcareous aeolian loess. A history of research at key sites in the region combined with advances in archaeological methods and theory improves our understanding of people, plants, and animals during the Late Glacial period. While the Mead, Broken Mammoth, and Swan Point archaeological sites provide detailed views into late Pleistocene behaviors and especially their food quest, recent research from the Holzman site reveals specific aspects of Paleolithic life in the subarctic.