BANE 2019 – Liverpool
Mind The Gap
University of Liverpool, 22-24 February

liverpool.ac.uk/archaeology-classics-and-egyptology
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Acknowledgements:
BANE A, the HLC UoL Marketing, Recruiting and Events Team (especially Emma Hoey and Andrew Parkinson), the UoL Department of Archaeology, Classics and Egyptology, the Garstang Museum, all UoL student helpers, Hexat Brewing (especially Arder Hulme-Beaman) and SIREN Liverpool.

Venues:
Foresight Centre
University of Liverpool
1 Brownlow Street
L69 3GL Liverpool
T: 0151 794 8060

Victoria Gallery and Museum
University of Liverpool
Ashton Street
L69 3DR Liverpool
T: 0151 794 2348

The Garstang Museum of Archaeology
University of Liverpool
14 Abercromby Square
L69 7WZ Liverpool
T: 0151 794 6793

SIREN Liverpool
54 St James Street
L1 0AB Liverpool
T: 0151 706 8148

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# Schedule Overview

## Friday 22 February

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<th>Time</th>
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| 13:00 - 14:45 | Registration and coffee in the South Atrium and Chandler Room in the Foresight Centre  
                            Tours to the Garstang Museum of Archaeology |
| 14:45 - 16:00  | **Mind the Gap**  
                            The Dead and the Living: Integrating the Evidence |
| 16:00 - 16:20  | Coffee break in the South Atrium and Chandler Room |
| 16:20 - 17:35  | **Mind the Gap**  
                            The Dead and the Living: Integrating the Evidence |
| 18:00        | **Keynote event:**  
                            Ian Hodder – ‘25 years of excavation and research at Çatalhöyük' at Victoria Gallery & Museum followed by wine reception and Sumerian beer tasting |

## Saturday 23 February

<table>
<thead>
<tr>
<th>Time</th>
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| 9:00 - 10:40 | **The Dead and the Living:** Integrating the Evidence  
                            Fieldwork and New Research  
                            Archaeology of Religion, Rituals and Temples |
| 10:40 - 11:00 | Coffee Break in the South Atrium and Chandler Room |
| 11:00 - 12:40 | **Sedentism — Mind the Gap**  
                            Fieldwork and New Research  
                            Archaeology of Religion, Rituals and Temples |
| 12:40 - 13:30 | Lunch in the South Atrium and Chandler Room |
| 13:30 - 15:10 | **Sedentism — Mind the Gap**  
                            Fieldwork and New Research  
                            Morphology, Infrastructure and Relational Space in Settlements |
| 15:10 - 15:30 | Coffee break in the South Atrium and Chandler Room |
| 15:30 - 17:45 | **Sedentism — Mind the Gap**  
                            Fieldwork and New Research |
<p>| 19:00        | Conference dinner and party at SIREN Liverpool |</p>
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<th>Time</th>
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<tr>
<td>9:00 - 10:40</td>
<td>Archaeology of Food in the Ancient Near East</td>
<td>Manufacturing Processes and Cognitive Underpinnings</td>
<td>Mind the Gap</td>
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<tr>
<td>10:40 - 11:00</td>
<td>Coffee Break in the South Atrium and Chandler Room</td>
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<tr>
<td>11:00 - 12:40</td>
<td>Archaeology of Food in the Ancient Near East</td>
<td>Heritage in the Middle East: Moving Beyond Destruction</td>
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<td>Plenary Session (The Gallery)</td>
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<td>BANEAA GM Chair: Karina Croucher</td>
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<tr>
<td>14:00 - 14:50</td>
<td>Charles Burney - Near Eastern Autobiography</td>
<td>Heritage in the Middle East: Moving Beyond Destruction</td>
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<tr>
<td>15:00 - 16:30</td>
<td>Conflict and Endangered Heritage Documentaries Screening</td>
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<td>Archaeology of Food in the Ancient Near East</td>
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## Session schedule

### Friday 22 February

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>13:00 - 14:45</td>
<td>Registration and coffee in the South Atrium and Chandler Room in the Foresight Centre Tours to the Garstang Museum of Archaeology</td>
<td>Session: Mind the Gap Chair: Bill Finlayson Session: The Dead and the Living: Integrating the Evidence Chair: Jo-Hannah Plug</td>
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<tr>
<td>14:45 - 15:10</td>
<td>Maxime Brami – Revisiting the Central/ Western Anatolian Farming Frontier</td>
<td>Piers Mitchell et al – Skeletal Evidence of Violent Conflict in Judea during the 2nd-1st Century BCE</td>
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<td>15:10 - 15:35</td>
<td>Ibáñez et al – Flint Figurines: A New Way of Depicting Human Image in the Middle Pre-Pottery Neolithic B Levels of Kharaysin</td>
<td>Hasmik Simonyan et al – The Reuse of the Metsamor City Quarters as a “Burial Place” from the Urartian Period to the Late Antiquity</td>
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<td>15:35 - 16:00</td>
<td>Charlotte Nash – Accounting for the Broad Spectrum of Social, Symbolic, and Technical Innovations that Accompanied the Adoption and Spread of Domesticates in the Middle East: A Comparative, Cross-Disciplined Approach</td>
<td>Yael Rotem – “In their Life and in their Death, they were Not Parted” – Life and Death in an Early Bronze Age Village Community in the Central Jordan Valley</td>
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<td>16:00 - 16:20</td>
<td>Coffee break</td>
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<td>16:20 - 16:45</td>
<td>Pascal Flohr – More than Meets the Eye: Bridging the Late Neolithic gap in Jordan</td>
<td>Merel Brüning / Peter Akkermans – Recent Research into the Bronze Age and Iron Age Burial Cairns of Jebel Qurma in Jordan</td>
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<td>16:45 - 17:10</td>
<td>Tobias Richter et al – Narrowing the Late Epipalaeolithic - Neolithic Gap in the central Zagros: Recent Work by the Tracking Cultural and Environmental Change Project in the Kermanshah Region</td>
<td>Bleda Düring – Landscapes of Death and Landscapes of Subsistence in the Sohar Hinterlands</td>
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<tr>
<td>17:10 - 17:35</td>
<td>Marek Barański – People, Buildings and Levels: Reassessing the 1960s Stratigraphic Archive of Excavations at Neolithic Çatalhöyük</td>
<td>Santana et al – Evidence of Fire-Induced Alterations on Human Bones from the Late Pre-Pottery Neolithic B levels of Kharaysin (Jordan)</td>
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<td>18:00</td>
<td>Keynote event: Ian Hodder – ‘25 Years of Excavation and Research at Çatalhöyük’ at Victoria Gallery &amp; Museum followed by wine reception and Sumerian Beer Tasting</td>
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<td>9:00 - 9:25</td>
<td>Session: The Dead and the Living: Integrating the Evidence Chair: Jo-Hannah Plug</td>
<td>Session: Fieldwork and New Research Chair: tbc</td>
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<td>Session: Fieldwork and New Research Chair: Bruce Routledge</td>
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<td>Douglas Baird – Struggling with Sedentism in Central Anatolia</td>
<td>Stuart Campbell – Charax Spasinos, a Precarious Survival</td>
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<td>Kate Dudgeon – Challenges and Potential of Archives: Plant-Use and Diet at Abu Hureyra, Syria, 13,000-7950BP</td>
<td>Kay Prag – Greeks at the Table? The Fifth/Fourth Century BC Fortress at Tell Iktanu, Jordan</td>
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<td>12:15 - 12:40</td>
<td>Marek Barański / Mortiz Kinzel / Güneş Duru – What is a Building? Thoughts on Building Continuity in the Neolithic Near East</td>
<td>Jennifer Zimni – Archaeological Excavations at Mount Zion (Jerusalem) – A Project of the German Protestant Institute of Archaeology</td>
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<tr>
<td>12:40 - 13:30</td>
<td>Lunch</td>
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<td>Session: Morphology, Infrastructure and Relational Space in Settlements Chair: Diederik Halbertsma</td>
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<tr>
<td>14:20 - 14:45</td>
<td>Sam Smith – People, Places and Things in Late Pleistocene and Early Holocene Wadi Faynan, Southern Jordan</td>
<td>Tiffany Okaluk et al – Axe Technology in the Early Bronze Age Near East: An Experimental Study to Identify the Raw Material of Ancient Axes Used in the Butchering Process</td>
<td>Giorgia Marchiori – (Re)Considering the Domestic Contexts of the Late Roman Nile Delta</td>
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<td>14:45 - 15:10</td>
<td>Tobias Richter – The ‘Origins’ of Sedentism and the Conundrum of Interpreting Natufian Architecture in the Levant</td>
<td>Souheb Razok – Metallurgy in the Jezireh during the Third Millennium BC in the Light of Archaeological Evidence and Laboratory Analysis</td>
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<td>15:10 - 15:30</td>
<td>Coffee break</td>
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<td>15:55 - 16:20</td>
<td>Bill Finlayson – Sedentism, Aspiration, and the Neolithic</td>
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<td>16:20 - 17:10</td>
<td>Eleni Asouti: Comments, followed by discussion</td>
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| 9:00 - 9:25  | **Session:** Archaeology of Food in the Ancient Near East  
Chair: Özlem Sarıtaş | **Session:** Manufacturing Processes and Cognitive Underpinnings  
Chair: Mattia Cartolano | **Session:** Mind the Gap  
Chair: Dan Socaciu |
| 9:25 - 9:50  | Kate Swinson et al –  
Preliminary Results of the Zooarchaeological Analysis of Animal Bones Recovered from Recent Excavations at the Epipaleolithic Site of Palegawra, North-Eastern Iraq  
Mattia Cartolano –  
The Thinking behind the Production of Anthropomorphic and Zoomorphic Artefacts in the Neolithic  
Lucy Bennison-Chapman / Lori Hager – Tracking the Division of Labour through Handprints. Applying Reflectance Transformation Imaging (RTI) to the Manufacture of Clay 'Tokens' in Neolithic West Asia | Zachary Stancombe – Empires and their “Neighbours”: Representations of Nubians and Puntites in the Egyptian Empire |  |
| 9:50 - 10:15 | Patrick Nørskov Pedersen et al – All Consuming: Bringing Together Evidence of Past Food Consumption in the Natufian and Pre-Pottery Neolithic A at Shubayqa  
| 10:15 - 11:00 | Lisa Yeomans – Avifaunal Remains from Shubayqa in the Late Pleistocene and Early Holocene  
Carla Caria – Fluid Identities: a Cognitive Perspective on the Late Neolithic Figurines from Hacilar and Höyücek | Carla Caria – Fluid Identities: a Cognitive Perspective on the Late Neolithic Figurines from Hacilar and Höyücek  
Sarit Paz – Caucasian Connections: From Local Histories to Integrated Narratives of the Kura-Araxes Culture |  |
| 10:40 - 11:00 | Coffee break |  |  |
| 11:00 - 11:25 | Joanne Clarke / Alex Wesse – Hunters, Foragers and Agriculturalists. Changing Conceptions of Animal / Human Relationships during the Neolithic Transition in the Near East  
Nour Munawar / Jose Zarandona – Iconoclasm in Syria: The Case of Hafez Al-Assad’s Statues | Meir Lubetski – Hebrew Ostraca from Tel Arad |  |
| 11:25 - 11:50 | Pernille Bangsgaard et al – A Neolithic Feast; New Evidence for the Consumption of Wild Boar in the Central Zagros, Iran  
Christoph Bachhuber – Deconstructing Destruction: Thoughts on Looting and ‘Spoliation’ in the Konya Plain (Turkey) | Damjan Krsmanovic – Composing on a Keneman - New Angles of Inquiry on Iron Age Phrygian Inscriptions |  |
| 11:50 - 12:15 | Gwendoline Maurer – Remembering Home through Culinary Practices: The Kura Araxes at 3rd millennium BC Tel Bet Yerah  
Pascal Flohr / Michael Fisher / Michael Fradley – Ethics of Preservation/Politics of Destruction: Cultural Heritage and Humanity in the Middle East | Michelle de Gruchy / Jaafar Jotheri – Filling in the Gaps of the Khandaq Shapur |  |
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<td>Charles Burney - Near Eastern Autobiography Chair: Roger Matthews</td>
<td>Session: Heritage in the Middle East: Moving Beyond Destruction Chair: tbc</td>
<td>Session: Archaeology of Food in the Ancient Near East Chair: Özlem Santaş</td>
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<td>14:25 - 14:50</td>
<td>Gül Pulhan – Safeguarding Archaeological Assets of Turkey (SARAT Project)</td>
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<td>Mariacarmela Montesanto – We Are what we Eat: Food Practices and Identity During the Late Bronze Age II/Iron Age I at Alalakh</td>
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<td>Hannah Johnson – Grain Storage in the Ur III Period: The Textual Perspective</td>
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<td>15:15 - 15:40</td>
<td>15:00 Conflict and endangered heritage documentaries screening and Q &amp; A session</td>
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<td>Daniele Borkowski – Ebla Archives: Calculating Grain Production &amp; Consumption</td>
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<td>Keith Dobney: Comments, followed by discussion</td>
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Session Abstracts

Sedentism – Mind the Gap
Organiser: Douglas Baird (University of Liverpool)

In keeping with the BANEA 2019 theme the Sedentism session will examine issues relating to the value of sedentism as a concept, particularly relating to the communities of the Epipalaeolithic and early Holocene SW Asia. Does the concept, as applied to date, unnecessarily divide up communities with many shared behaviours and in some cases mask important differences between residential practices of some communities? Can we consider a spectrum of reduced residential mobility in analytical approaches, or should we conceive of tipping points and thresholds in changes in residential mobility? What factors might be involved in various forms of reduced residential mobility? Can we associate shifts along this spectrum, or over particular thresholds, with major changes in the development of built environments, in social practices, with increases in social and material entanglements, with demographic changes and/or changing human-animal and human-landscape engagements? How easy is it to operationalise such concepts of sedentism in relation to our archaeological record? Especially given long-standing challenges with identifying previous understandings of sedentism in the record. Can reconsidering conceptual frameworks relating to sedentism help in better understanding inter-relationships within and between communities at the end of the Pleistocene and beginning of the Holocene?

Archaeology of Religion, Rituals and Temples
Organiser: Patrick Biedermann (University of Liverpool)

The session ‘Archaeology of Religion, Rituals and Temples’ includes papers with topics on architecture, cuneiform resources and small finds regarding sacred/religious buildings and phenomena. The variety of presented aspects on religion, rituals and temples will try to give a basic approach to bridge the gap between these topics, which cannot stand without considering the other aspects. Whereas the first part of the session is focussed on architectural aspects, the second part deals with cuneiform resources and small finds that can shed more light upon the function and use of certain architectural and ritual aspects.

Furthermore, the different fields of expertise of the different speakers will encourage a discussion about the destruction, use and layout of religious buildings, the use and meaning behind ritual elements and the connection of both aspects with the different categories of small finds.

Manufacturing Processes and Cognitive Underpinnings
Organiser: Mattia Cartolano (University of Liverpool)

In this brief session, we will focus on manufacturing technologies and processes in Neolithic societies. The papers will explore the potential socio-cultural and also cognitive aspects that can be observed by looking at how Neolithic communities have made figurines, tokens and other cultural objects. The speakers in this session will propose very interesting points that will open the discussion in particular on the gender-based, individual and collective choices of artefact makers in producing and disposing material culture.

Further considerations will focus on how ancient communities perceived and interacted with small clay objects. Key theoretical questions will be around the significance of symbol, identity and labour in certain Neolithic contexts that might challenge the common interpretation of some prehistoric material forms.

The Dead and the Living: Integrating the Evidence
Organiser: Jo-Hannah Plug (University of Liverpool)

Graves are a highly useful source of evidence for archaeologists. The human bones themselves can tell us a great deal about individual people throughout their lives - the physical characteristics of the bones inform us on sex, age, illnesses, repetitive tasks and injuries, and their chemical composition on diet, mobility and dating. Additionally, the contexts in which human remains are found allow us to explore more symbolic aspects of human behaviour. The diversity of intentional choices made in the funerary sphere, for example the placement of the dead in the wider landscape, the incorporation of grave goods, or the manipulation of bodies in specific ways, inform us on past human experiences and tangible interactions between communities and their dead. Bringing these aspects together - the information relating to groups of individuals in life, and their treatment in death - and finding meaningful patterns therein, is a challenging but fruitful task for us archaeologists. Exploring and interpreting these patterns allows us to achieve a deeper understanding of the past people and societies we are dealing with.
The Archaeology of Food in the Ancient Near East
Organiser: Özlem Santaş (University of Liverpool)

Food has always played multiple, crucial, and conflicting roles in human history. The investigation of how politics, ideologies, and economies were related to past production, preparation, consumption and discard practices, has long been a focus of archaeological research. Additionally, scholars have attempted to explore how foodways have intersected with various aspects of social identity, such as status, ethnicity, gender and religion. Although archaeological methods dealing with food (archaeozoology, archaeobotany, material studies, isotope research, etc.) tend to be highly specialised, it is essential to integrate these different approaches to achieve a deeper understanding of the issues. This session aims to bring together these different archaeological disciplines, each with their own possibilities and limitations. By doing so, we can begin to explore the social aspects of foodways and food practices in the ancient Near East.

Morphology, Infrastructure and Relational Space in Settlements
Organiser: Bruce Routledge (University of Liverpool)

This session explores the relationship between spatial order and human interaction at the level of both dwellings and settlements in the Ancient Near East. Particular attention is given to spatial relationships between these two domains and their implications for the ordering and experience of everyday life.
More Than a Symbol: Incorporating Material Substances and Material Contexts in Figurine Analysis

Monique Arntz (University of Cambridge)

‘Manufacturing Processes and Cognitive Underpinnings’

Figurines are a common find on many Neolithic Near Eastern sites. However, despite being intensively studied, some aspects of figurines still remain poorly understood. Often the focus has been on the symbolic aspects of figurine where they were treated as messages or texts that could be ‘read’ and symbolic meaning thus unravelled. Figurines have been used to make claims about many important and more intangible aspects of past societies such as social organisation, religion, identity and gender issues.

I do not argue that figurines could have held symbolic meaning, however I think it is extremely problematic to extrapolate what this symbolic meaning was. Furthermore I argue that placing prime importance on symbolic meaning reduces the actual object, the figurine, to just a carrier of a message instead of a meaningful material object in its own right.

This paper, therefore, will focus on the material substances figurines were made of and will analyse the processes of making, using and depositing figurines -the material contexts- as meaningful in their own right and as integral parts of how people interacted and understood these objects.

Within the framework of craft theory a sensory approach will be applied to the chaîne opératoire. This entails formulating perceptive categories, or those aspects of the material(s) that are recognisable and (possibly) relevant to craftspeople and elements that reflect choices made during the production process. This chaîne opératoire is embedded within a larger aim of creating object biographies for figurines where production, use and deposition are analysed holistically.

Working with a large dataset from two important Neolithic sites, namely Tell Sabi Abyad (Syria) and Çatalhöyük (Turkey), this project can analyse patterns systematically and provide more nuanced and contextual interpretations of figurines.

Deconstructing Destruction: Thoughts on Looting and ‘Spoliation’ in the Konya Plain (Turkey)

Christoph Bachhuber (University of Oxford)

‘Heritage in the Middle East: Moving Beyond Destruction’

The organizers of this session/workshop have encouraged us to ‘move beyond destruction’ in our engagements with the archaeological heritage of the Middle East. Part of this process should include critical assessments of the often normative discourses of archaeological site/object preservation. The ethics of archaeological preservation (or stewardship) in the Middle East risk decontextualizing habitation of archaeological landscapes. In this paper I address two related phenomena from the Konya Regional Archaeological Survey Project (KRASP): the looting of archaeological sites and the reuse or recycling of ancient architectural elements.

By approaching such activities as part of the archaeological palimpsest of the Konya Plain, KRASP is attempting a sustained analytical and ethical engagement with the people who inhabit these landscapes today.

Struggling with Sedentism in Central Anatolia

Douglas Baird (University of Liverpool)

‘Sedentism – Mind the Gap’

This paper considers issues with understanding degrees of residential mobility and stability in 2 neighbouring communities in 9th millennium BC central Anatolia, Boncuklu and Pınarbaşı. Both have many features that might allow their classification as early sedentary communities. However, that would mask potentially significant differences in the residential practices of these communities. The paper analyses some of these contrasts, as well as similarities, to consider more fruitful ways of dealing with a spectrum of residential practices often considered to be sedentary in character, questioning the utility of this label and suggesting we need to consider a more nuanced approach to early sedentism.
A Neolithic Feast; New Evidence for the Consumption of Wild Boar in the Central Zagros, Iran

Pernille Bangsgaard¹, Hojjat Darabi², Lisa Yeomans¹, Tobias Richter¹ and Peder Mortensen¹

¹University of Copenhagen
²Razi University

‘Archaeology of Food in the Ancient Near East’

At the early Neolithic site of Asiab (9660-9294 cal. BC) a pit, located in the centre of a large communal structure was discovered during renewed excavations at the site. The pit contained the skulls of at least 19 wild boars the skull of a brown bear and red deer antler. All carefully placed in a pit that was subsequently sealed. Alongside a small collection of postcranial Suidae remains.

The wild boars include male and female animals and ranges in ages. Some of the larger canines of the males also appear to have been deliberately removed. Such a collection of fragmented but near complete skulls and mandibles, also represent an opportunity for a study of the age and sex of hunted wild boar.

Focus will also be on the context of this unique collection of remains, which is unlikely to be based purely in the day-to-day activities of the hunter-foragers, due to the size and composition of the remains as well as the context itself. The evidence from Asiab points to a group of ritually interred bones and hints at communal activities reinforcing social cohesion at a time when human society was developing agricultural subsistence strategies.

People, Buildings and Levels: Reassessing the 1960s Stratigraphic Archive of Excavations at Çatalhöyük

Marek Z. Barański (Academy of Fine Arts, Gdańsk)

‘Mind the Gap’

Neolithic Çatalhöyük in central Anatolia has been at the heart of discussions of early lifeways for more than 50 years. It was James Mellaart who undertook excavation in the 1960s, and Ian Hodder has continued excavating since the 1990s until very recently. Mellaart led rapid, large area excavations, revealing over 300 buildings that were attributed to 12 successive levels. Under Hodder, excavations were also extensive, but have employed the detailed recording techniques and scientific methods of modern archaeology and have been published in detail. Much discussion of the layout of the settlement and its organisation, however, is still based on the ‘level’ plans published in the 1960s.

In 2013-2016 remnants of series of buildings were reinvestigated in the Gdańsk (GDN) Area which covers to a large extent former Mellaart Area A and B at the East Mound at Çatalhöyük. The GDN excavation provides new insights on spatial and functional organisation of the settlement at the turn of late and final phases of occupation. Furthermore, it challenges the general system of phasing the site which was developed by Mellaart. The re-examined structural and architectural relationships as well as overlapping life cycles of adjacent buildings and spaces suggest that the site was not laid out in horizontally assigned levels but instead grew as a part of a more organic process. For example, there is strong stratigraphic evidence for both floors of contemporary buildings and floors within a particular building to have been set at rather different heights.

The paper discusses the relativity of the level system and Harris diagram and its consequences for reconstructions of the layout of Çatalhöyük or any other tell-site. Additionally, it poses a question about whether radiocarbon dating programmes are the only alternative to this system of phasing.

What is a Building? Thoughts on Building Continuity in the Neolithic Near

Marek Z. Barański (Academy of Fine Arts, Gdańsk), Mortiz Kinzel (University of Copenhagen) and Güneş Duru (Istanbul University)

‘Sedentism – Mind the Gap’

Numerous studies on the Near Eastern Neolithic have long provided important insights on the emergence and development of the sedentary way of life which formed the basis for modern civilization. It is hardly surprising as the Neolithic settlements, in particular tell-sites with well-preserved remnants of architecture, are a fascinating testimony to complex societies and powerful symbolic worlds of the past. Since the 1990s, a rich and diverse literature developed on Neolithic architecture, influenced by anthropology and a set of post-processual approaches. Consequently, themes of cosmology, identity and memory have been drawn on to inspire research into biography of buildings in different ways. Furthermore, various definitions of buildings have been proposed. It is difficult to understand though, why it is still rare for architects and building archaeologists to be involved in this research. Establishing detailed timelines and examining
The residents of Boncuklu Höyük, a mixed forager-farming community dating to the pre-ceramic Neolithic c. mid-9th to mid-8th millennium cal. BC, used their hands to manipulate local clays into artefacts, often leaving behind traces of their palm prints and fingerprints on the surface of the objects. Geometric clay objects are the single-most abundant artefact category at Boncuklu Höyük with over 1,000 clay objects recovered and studied at this central Anatolian village to date. Reflectance Transformation Imaging (RTI), a digital imaging technique that uses multiple images and mathematical models to reveal the 3-dimensional shape of an artefact’s surface, provides a detailed, post-processing interactive view of the prints on each artefact.

The aim of the project is to understand the manufacture, use, and disposal of geometric clay objects at Boncuklu Höyük through an analysis of the hand and fingerprints present on their surfaces. RTI reveals palm and fingerprints on more than half of the study sample consisting of eighty-eighty clay artefacts. Analysis of the prints using friction ridge density protocols indicates that adult females were the primary makers of the artefacts. The results were unchanged when taking into account artefact shape and type, and when considering temporal and locational data. The association of these artefacts during manufacture principally to women suggests an early link in the life of the object to women, potentially suggesting a gender based division of tasks at Boncuklu Höyük.

And Only Stone Matters – The Change from Clay to Stone Architecture within the Temenos Area of Tell Chuera (Syria) during the Early Bronze Age

Patrick Biedermann (University of Liverpool)

‘Archaeology of Religion, Rituals and Temples’

Tell Chuera is located in Northern Syria, between the rivers Balikh and Khabur at the southern margin of the fertile crescent. During the Early Bronze Age the tell had a round shape, a size of up to 65 hectares and was divided into an upper-and a lower part by an inner city wall. The upper city is characterised by a palace and various temples. Some of these temples are located in between domestic architecture, others form a part of a large temenos which will be the main topic of this talk. The temenos consists of three monumental buildings, whereas ‘Steinbau I’ is the largest of them and probably the main temple inside the temenos. During the Early Bronze Age a destruction event happened at the site and is traceable in several areas, also within the temenos. Directly after this destruction layer the buildings of the temenos got rebuilt – not with mudbricks as before, but with stone. One of the best examples of this change in construction materials is ‘Steinbau I’. A mudbrick platform that got overbuilt with a massive stone substructure of a temple in antis, which is one of the largest temples in antis in Northern Syria with a length of 27m, a width of about 15m and a height of around 7m. In my paper I would like to present my recent research on the development of the temple complex based on mostly unpublished excavation results of 12 seasons of excavations at this area of Tell Chuera.

Tracking the Division of Labour through Handprints: Applying Reflectance Transformation Imaging (RTI) to the Manufacture of Clay ‘Tokens’ in Neolithic West Asia

Lucy E. Bennison-Chapman (Independent Scholar) and Lori D. Hager (Pacific Legacy Inc., Berkeley, California, USA)

‘Manufacturing processes and cognitive underpinnings’

The residents of Boncuklu Höyük, a mixed forager-farming community dating to the pre-ceramic Neolithic c. mid-9th to mid-8th millennium cal. BC, used their hands to manipulate local clays into artefacts, often leaving behind traces of their palm prints and fingerprints on the surface of the objects. Geometric clay objects are the single-most abundant artefact category at Boncuklu Höyük with over 1,000 clay objects recovered and studied at this central Anatolian village to date. Reflectance Transformation Imaging (RTI), a digital imaging technique that uses multiple images and mathematical models to reveal the 3-dimensional shape of an artefact’s surface, provides a detailed, post-processing interactive view of the prints on each artefact.

The aim of the project is to understand the structural relationships of architectural features may not always be the main point of interest for the archaeologist, but it seems crucial not only for better understanding of consecutive life cycles of particular buildings but also for more reliable reconstructions and interpretations of building form and structure.

This paper is our attempt to outline the potential for comparative architectural research which allows for a better understanding of common developments and individual approaches in Neolithic building strategies and techniques as well as providing possible reasons which stand behind diversified changes to these structures. Based on case studies from Göbekli Tepe (Turkey), Aşıklı (Turkey), Ba’ja (Jordan), and Çatalhöyük (Turkey) we would like to show how various re-arrangements, superstructures, internal and external additions, compartmentalisation, stabilisation works, etc. formed an integral part of the architectural processes. All these actions shed new light on building continuity in the Neolithic, which is a well-accepted phenomenon, although – as we will attempt to show - can be understood differently.
Ebla Archives: Calculating Grain Production & Consumption
Daniele Borkowski (Durham University)

‘Archaeology of Food in the Ancient Near East’

The Ebla Archives have provided scholars with a unique source of information for the study of Early Bronze Age Syria. In regard to Early Bronze Age economies, however, the Ebla Archives have not been able to provide clear information, due to the nature and preservation of cuneiform tablets. My dissertation aimed at investigating this problem by integrating classical textual studies with computer programs. Using Microsoft Excel, it was possible to insert into a digital framework a vast amount of textual and numerical data, extrapolated from 126 cuneiform tablets. This data was then entered into a Microsoft Access database, where it was possible to create links between different sets of numerical and textual data, thus allowing us to essentially recreate a digital version of the cuneiform tablet. This database was used to calculate the scale of grain production and consumption within the economy of Ebla. The results indicate that the levels of production and consumption within the cuneiform assemblage do not agree, thus suggesting one of two conclusions: the first being that the cuneiform assemblage is either too badly preserved or recorded to provide a full picture of Ebla’s economy. The second being that Ebla’s palatial system did not require or did not wield the necessary political power to record the levels of production in the same way it recorded the levels of consumption. If this is the case, it could be that previous scholarship has overestimated the domination of Ebla’s palatial system on the surrounding landscape, which could suggest a revision of the political landscape of Early Bronze Age Syria.

Revisiting the Central/Western Anatolian Farming Frontier
Maxime N. Brami (Johannes Gutenberg-University, Mainz)

‘Mind the Gap’

In 2016, a workshop was held at the 10ICAANE Conference in Vienna, which brought together researchers working on the Neolithic of Central and Western Anatolia, where research has traditionally proceeded in isolation. The question raised then was, why did farming start in Central Anatolia almost 2,000 calibrated years earlier than it did in Western Anatolia and the Aegean Basin – as a review of c. 1,000 radiocarbon dates from over 50 sites indicated at the time? Does this lag reflect an actual frontier, where farming expansion was halted, or is the observed pattern somehow biased by different research strategies and/or geomorphological processes affecting site recovery in Western Anatolia? In this seminar, I would like to revisit the Central/Western Anatolian Farming Frontier, in light of the contributions to the 2016 workshop and recent publications, particularly from the field of ancient DNA research.

Parthian Rock-Reliefs from Amādiya in Iraqi-Kurdistan
Michael Brown (Heidelberg University)

‘Fieldwork and new Research’

The ancient fortress of Amādiya is situated atop a mesa at the foot of the Zagros Mountains in Iraqi-Kurdistan. In front of the Mosul Gate are two rock-reliefs depicting larger than life figures in traditional Parthian dress. This paper presents detailed illustrations of these sculptures, using digital photogrammetry to enhance eroded features. Based on stylistic analysis of the reliefs, together with a consideration of their settlement and landscape context, it is proposed that they represent local rulers of the early first and late second centuries AD.

Parthian civilisation has traditionally been of peripheral interest to Classical and Near Eastern scholars alike. By highlighting the wider geopolitical significance of the Amadiya fortress and its Parthian reliefs, this paper attempts to ‘mind the gap’ by presenting our findings to a broader audience of ANE scholars.

Recent Research into the Bronze Age and Iron Age Burial Cairns of Jebel Qurma in Jordan
Merel L. Brüning and Peter M.M.G. Akkermans (Leiden University)

‘The Dead and the Living: Integrating the Evidence’

The ‘Black Desert’ in northeastern Jordan is a vast expanse of barren rocky plains interspersed with basalt-covered promontories, part of which is the Jebel Qurma range. Despite the rather inhospitable appearance, the region has an astonishingly rich archaeological and epigraphic record, including large numbers of stone-built installations and countless pieces of rock art and texts in ancient North Arabian script. There are also many hundreds of burial cairns, preferentially
located on remote high plateaus and the summits of the basalt mounds.

Until very recently, virtually nothing was known about the burial cairns of the Jebel Qurma area and about those of Jordan’s basalt desert at large. This picture is now changing dramatically, due to the current research by the Jebel Qurma Archaeological Landscape Project (under auspices of Leiden University, The Netherlands). This multidisciplinary research programme has integrated rich new datasets (settlements, burials, rock-art, inscriptions) in a single interpretative framework, revealing new insights on ancient desert ways of life and death.

Several dozen tombs of various kinds have been excavated by now: ring cairns, tower tombs, cist graves, rectangular cairns, etc. The cairns give evidence of a dazzlingly complex history of use and reuse over the ages; past and present are tied together in continued use.

This paper will present the newest archaeological insights on the burial cairns and their date, construction, content, and complex history of use over the centuries. They provide, for the first time, a unique insight into the treatment of the dead in Jordan’s northeastern basalt wasteland in antiquity.

Charax Spasinou: A Precarious Survival
Stuart Campbell (University of Manchester)
‘Fieldwork and new Research’

For several centuries after its foundation by Alexander the Great, the city of Charax Spasinou in southern Iraq was the major port at the top of the Gulf, linking international trade routes across and beyond the Near East. While recent work at the site has been driven by contemporary concerns around cultural heritage protection, its geographic location has meant that the whole history of the site, in occupation and abandonment, is inter-twined with threats to its survival and preservation. While archaeological investigation since 2016 is providing a wealth of insights into the nature of the city, it also requires us to consider urban resilience and the long term history of heritage loss and preservation.

Fluid Identities: A Cognitive Perspective on the Late Neolithic Figurines from Hacilar and Höyücek
Carla Caria (Leiden University)
‘Manufacturing processes and cognitive underpinnings’

Figurines are among the most commonly found artefacts in Neolithic sites across the Near East. These emblematic objects have often stimulated colourful interpretations, focussing primarily on stylistic elements of the anthropomorphic subjects. Such elements, like their perceived femaleness accompanied by voluptuousness, have historically been deemed as directly linked to concerns with fertility and pregnancy, which led to the assumption of the figurines being ritual objects and representations of deities, often labelled as ‘mother-goddesses’. These interpretations essentially generalize the entirety of the figurine assemblages of the Neolithic world, and erase the possibilities of in-depth analysis of these objects. An often-overlooked aspect is their manufacturing process, mostly touched upon on descriptive terms and in relation to the figurines’ style. However, if any craft is a learned and taught process, we can assume that culturally significant elements are also passed on from the master to the pupil. These can be traced when examining the chaîne opératoire of figurine making. Moreover, it can shed light upon the cognitive reasoning behind the making of miniatures of humans and of animals, and more specifically in the perception of the human body in anthropomorphic depictions. This could be reflected in the multitude of manufacturing techniques encountered in the Neolithic sites of the Lake District region of Western Anatolia, modern-day Turkey. By looking at the figurine assemblages of the Late Neolithic levels of Hacilar and of Höyücek, where the craft of figurine making seems to have started flourishing at the sites, and by drawing upon the works of Douglas Bailey and Lauren Talalay, this presentation will attempt to highlight the possible connections between the manufacturing technique and the perception of the self as an individual, and perhaps as a community member, in the Neolithic societies of these sites. The discussion that will be presented in this session will touch upon specific aspects of the manufacturing process of these assemblages: 1) the making-up of the human body by joining individual pieces, single clay-mass, or two joined vertical halves; 2) the presence, in some cases, of a hollow purposefully-made for the insertion/removal of a head of a perishable material; 3) the application of seemingly decorative pre-baking dots, and post-baking linear scratches in some
examples from Höyükcek.

These aspects will be discussed in order to highlight the possibility of these practices having specific cognitive significance around the perception of the individual’s body and identity, arguing that they possibly stand for a fluid conception of a sense of self, as a single and as a member of a community.

The Thinking Behind the Production of Anthropomorphic and Zoomorphic Artefacts in the Neolithic

Mattia Cartolano (University of Liverpool)

‘Manufacturing Processes and Cognitive Underpinnings’

This paper aims to describe the forms and ways selected Pre-Pottery Neolithic populations in Levant have produced human and animal representations, and to discuss the current challenges in the analysis & interpretation of these archaeological finds. By looking at the content and motif, contextual information, form and matter of all anthropomorphic and zoomorphic artefacts (including plastered skulls and structured depositions), this presentation wants to highlight the possible cognitive underpinnings behind the production of these types of artefacts in relation to the unusual socio-economic developments manifested during the Neolithic, in particular the domestication of certain plant and animal species, the establishment of impressive ritual centres and the appearance of the first large villages. The creation of such large settlements (e.g., Basta, ’Ain Ghazal) suggests significative cognitive changes in the Neolithic individual mindset capable of sustaining new cultural niches characterised by unprecedented levels of social cooperation. Therefore, I investigate whether the anthropomorphic and zoomorphic forms might have contributed to the social development of Neolithic communities facing a diverse range of new challenges in the transition from foraging to farming.


Joanne Clarke (University of East Anglia, Norwich) and Alex Wasse (Yeditepe University, Istanbul)

‘Archaeology of Food in the Ancient Near East’

The process by which hunter / foragers became farmer / herders is widely debated but what is not disputed is that the change happened first in southwest Asia. As the transition was primeval it could be argued that hunter foragers were without awareness of a different kind of understanding of the world, one which allowed for human domination of the environment. In a series of writings, Ingold articulated a vision of change in human-animal relations across the hunter-herder transition that can be summarised as a shift from principles of ‘trust’ to principles of ‘domination’. He argues that hunter / foragers may be considered as dwelling within nature rather than (as in the case of farmer herders) transcending it. In his view, for agriculture to be practiced at all, humans needed to transcend nature, moving at least partially beyond its realm in order to control it (‘domination’). There are many critics of Ingold’s hypothesis but it goes without saying that in a pristine hunter / forager world this transition must have been profound – a veritable quantum leap in the way in which the world was perceived. That this quantum leap happened is attested in the extraordinary building works and symbolism of the PPNA. In this paper we argue that the appearance of desert kites in the eastern steppe of Jordan in the PPNB is testament to the fundamental change that happened in the way in which people perceived animals across the hunter / forager – farmer / herder divide. We argue that unlike previous strategies, hunting with kites can be likened to ‘harvesting’ (in this case large game). Many more animals were entrapped than were needed for subsistence and in the process of entrapment people’s ideological dominion over the animals was reinforced. Hunting with kites we argue, is intimately linked to pastoral behaviour that escalated in the region during the LPPNB and PPNC in which herds were kept for their secondary products while wild game were ‘harvested’ for their meat. We support our argument with evidence for a significant change in the way in which wild animals were represented in the art of the wider region across the hunter / herder transition.
Mind the Gap: The Missing Components of Grief and Bereavement in Understanding Funerary Remains
Karina Croucher (University of Bradford)

‘The Dead and the Living: Integrating the Evidence’

This paper explores whether we are missing a crucial component of understanding past funerary practices by excluding concepts such as grief, bereavement and mourning in the past. Traditionally, many archaeologists would steer away from such interpretations, viewing them as too subjective. This paper challenges this perspective, asking whether there is value in investigating such concepts in our archaeological interpretations. Inspired by collaborations between archaeology and end-of-life care – where understanding grief and bereavement are key – the paper asks whether we can begin to see evidence for continued relationships between the living and the dead through the study of human remains, and what this might tell us about past experiences of grief and bereavement.

Filling in the Gaps of the Khandaq Shapur
Michelle de Gruchy (Durham University) and Jaafar Jotheri (Al Qadasiyah University, Al Diwaniyah)

‘Fieldwork and New Research’

According to historians/historical sources the Khandaq Shapur was dug between Hit and the Persian Gulf in A.D. 324 under the orders of Shapur II (A.D. 309-379) to serve as a defensive feature against pastoralist populations (Spring 2015; Shahid 1995; Gibb 1954; LeStrange 1905). It was restored two hundred years later by Khosrow I (A.D. 531-579) who employed the Lakhmids along this same frontier to defend against nomadic Arabs or Bedhouin (Spring 2015; Gibb 1954). Later, the feature became a famous source of water and the site of the Battle of Karbala, becoming known to the people who live(d) alongside it as a nahr or river (Nahr Alqami, Nahr Husseiny, Nahr Hneidy). The word khandaq can refer to a ditch, trench, or moat, and historians have variously described the Khandaq Shapur as a ditch, trench, moat, and canal (Spring 2015; Shahid 1995; Gibb 1954; LeStrange 1905). While historical sources highlight the Khandaq Shapur’s role in military, it is entirely possible that Khandaq Shapur had a much more complex and varied history until it fell out of use at an unknown date. The main aims of this project two-fold. First, to fill in the physical gaps in our knowledge of the Khandaq Shapur by mapping its full using a variety of sources and groundtruthing. Second to fill in the gaps of the history of the Khandaq Shapur by excavating a series of trenches through the khandaq. This paper presents the preliminary results from groundtruthing and excavation conducted 19 November to 17 December 2018.

Distant but Connected – The First Monumental Walls of the Early Bronze Age in Egypt and the Southern Levant
Joanna Dębowska-Ludwin and Karolina Rosińska-Balik (Jagiellonian University, Krakow)

‘Mind the Gap’

The earliest well-documented fortifications in Egypt come from the period of the First Dynasty, but much earlier a series of monumental walls and a gate installation were built in the Nile Delta at the site of Tell el-Farkha. All the walls were constructed in mud brick, however, they reveal some features atypical of Egyptian architecture bringing in mind Levantine influence. Such an inspiration seems highly possible thanks to frequent trade contacts of both regions. What is more, at about the same time, that is at the very beginning of the Bronze Age, also the first fortification systems of the Southern Levant were erected. Sites like Tel Erani, Tell es-Sakan, Bet Yerah or Megiddo preserved monumental walls built in two major techniques: mud bricks and stones. One could expect that the material preference was forced by locally available sources, but taking a closer look at their localization the case seems to be more complex.

Monumental walls of the Early Bronze Age were founded in various landscapes: the Coastal Plain, the edge of the Negev, the Sea of Galilee, or the Nile Delta, which offer different material backgrounds. However, their ancient builders first chose materials were not in each case the easiest to acquire. Since – in terms of the building materials application – the crucial factor was not directly related to a settlement’s natural environment, what did form the key element? Why did settlements located at the top of steep hills need protective walls constructed of mud bricks in a landscape full of stones? Why did people from lowlands spend so much of their energy to produce mud bricks instead of collecting locally available stones? Did it reflect cultural inspirations?

An excellent example of such a combination is the site of Tel Erani, inhabited by local Levantine
people and Egyptian newcomers, where a massive 8-meter-wide wall was constructed in a time and labour-consuming mud brick technique instead of local stone sources. Landscape analyses corroborated by a series of field trips revealed that naturally defensive localizations with high-range visibility were as strong wall protected as those devoid of the features. Thus, the question arises, how deeply did the landscape influence settlement patterns of the Early Bronze Age Levant or Egypt, and to what extent did the people affect the landscape?

Challenges and Potential of Archives: Plant-Use and Diet at Abu Hureyra, Syria, 13,000-7950BP
Kate Dudgeon (University of Reading)

‘Sedentism – Mind the Gap’
The Euphrates Valley, Syria, is a key region for understanding the change in lifeways between Epipalaeolithic hunter-gatherers and Neolithic farmers as it has early evidence for cultivation and large pre-pottery farming villages. However, the construction of the Taqba dam in the 1970s flooded key sites, prohibiting further excavation. This research uses archival material from Abu Hureyra to investigate plant-use and diet as agricultural societies emerged in this important region. This paper will present the initial results of integrated phytolith and spherulite analyses, whilst exploring the challenges and potential of using archaeological archives, particularly when access to key sites and regions is no longer possible. Phytoliths, microscopic silica bodies produced by plants, are preserved under different conditions to charred plant macro-fossil, which have been extensively studied at Abu Hureyra, and therefore offer new insights into past plant-use at the site. Calcitic spherulites provide an indicator of ruminant dung and have been identified from contexts representing all periods of occupation, highlighting a potential depositional pathway of plant remains, which may originate from dung burnt as fuel. Although no longer accessible, archival material recovered from Abu Hureyra has much to offer current research into understanding the shift to agriculture in the Near East.

Landscapes of Death and Landscapes of Subsistence in the Sohar Hinterlands
Bleda S. Düring, (Leiden University)

‘The Dead and the Living: Integrating the Evidence’
Surveys in the Sohar hinterlands have documented thousands of burial structures spanning some six millennia of occupation, and the burial structures concerned take on a great variety of distinctive forms. Intriguingly the funerary evidence provides a dataset that contrasts markedly with that obtained from settlement data and the analysis of field and irrigation systems. Periods with large amount of funerary structures are often little represented in settlements and agricultural systems and vice versa. How can we make sense of this conundrum, and which dataset is more reliable for understanding population dynamics? This paper will present the data obtained and some preliminary ideas on how to understand them.

Understanding Construction and Activity Areas at Neolithic Sites through Combined Ethnographic, Phytolith and Geochemical Investigation
Sarah Elliott¹, Emma Jenkins¹, Samantha Allcock¹ and Carol Palmer²
¹Bournemouth University
²CBRL, British Institute in Amman

‘Sedentism – Mind the Gap’
This paper summarises results of scientific ethnoarchaeological investigations into abandoned mud and stone constructed village houses and the implications of the results for the interpretation of Neolithic archaeological sites. The INEA project (Identifying activity areas in Neolithic sites through Ethnographic Analysis of phytoliths and geochemical residues), develops and applies a method that combines the analysis of microscopic plant remains (silica phytoliths) and geochemical residues to inform on construction methods and the use of space in recently abandoned historical villages and Neolithic settlements. Ethnographic sediment samples from defined activity areas and building materials from the 19th-20th century village of Al Ma’tan in the At Tafila governorate were analysed to determine if certain anthropogenic actions have particular phytolith and elemental signatures. Archaeological sediment samples from Wadi Faynan 16 and ‘Ain Ghazal
formed the comparative case studies. For the recent village comparative samples, phytolith and elemental signatures were strongest for categories linked to construction practices, particularly for floors and structural features; with geology, age and natural vegetation a key source of variability. When compared with the Neolithic samples, the phytolith and elemental remains were good at recording patterning that could be indicative of certain activity types, but there was also evidence of mixing and multipurpose use that required cautious interpretation.

Sedentism, Aspiration, and the Neolithic

Bill Finlayson (Oxford Brookes University)

‘Sedentism – Mind the Gap’

Within an essentialist understanding of the Southwest Asian Neolithic, the built environment of large archaeological sites is unquestioningly seen as representing significant centres of sedentary population. Sedentism has frequently been evoked as part of the opposition between hunter-gatherer and farmer and is an aspirational part of Neolithic life, a driver behind the development of food production in the Neolithic turning hunter-gatherers into people like us, separate from the natural world, where people are domesticated, own property and accumulate wealth, have privacy, and develop new forms of social organisation. However, the degree to which mobility characterizes hunter-gatherers and sedentism farmers has been challenged, both as an underpinning concept, and also with regard to how difficult it is to identify either mobility or sedentism from excavation evidence. Sedentism and mobility are not simply points on a sliding scale, residential and individual movement are distinct, and residential stability may be matched by logistical mobility. Even where food producers were increasing their residential sedentism, they will have continued to have had significant logistical mobility.

To avoid reinforcing the dichotomy between the natural, wild landscape and the cultural and symbolic settlement, it is worth considering a much more active and temporally charged landscape. Sedentism ceases to simply be about residential mobility, but a more fluid concept where the passage of time may have been defined by the succession of tasks, and their relationship to one another, that will have occurred on a variety of cyclical time paths, including daily, seasonal and annual events. Settlements will contain a temporality that resonates to the cyclical activity that is a central part of food production. Rather than see the settlement as being permanently occupied by all of the community we may see a palimpsest of occupations by different parts of the entire community on different cycles brought together by the significance of place.

If we accept the terminology of sedentism as part of an essentialised model Neolithic evolutionary progress, the focus of our research becomes highly focused on the site and the social and economic methods of keeping people there. Halstead’s (2005) notion of common sense sedentism may characterize much LPPNB settlement, but the issue we should seek to explore is not how we formally classify the settlement pattern, but to understand how people lived. In this paper I will be suggesting ways to research the rhythms and movements connecting and separating multiple sites through their landscape.

Transition of Time and Transformation of Space in the Early Late Chalcolithic Period at Tell Zeidan, Syria

Michael T. Fisher (University of Oxford)

‘Mind the Gap’

The Early Late Chalcolithic Period—i.e., the mid-late 5th millennium BC—was a time of great change in northern Mesopotamia, when the sociopolitical system of the Early Chalcolithic towns and villages gradually gave way to Late Chalcolithic (LC) proto-urban centres. While the preceding Ubaid period has been a major focus of archaeological study for decades, only recently has the poorly-known, “transitional” LC 1 period received attention as a key source of data for discussing the development of social complexity. Based on recent fieldwork and the development of new, more locally-focused chronologies, we can now date at least 80 sites across Greater Mesopotamia to the LC 1 period.

Building off of this reassessment, this paper considers the impact of technological innovations from the Ubaid period on the range of potential socioeconomic strategies in the LC 1, and this proposed sequence of development can provide a new path toward understanding a major shift in the sociopolitical organization of Mesopotamian society. I document an integral part of this shift—the middle—by examining transformations in craft production, subsistence strategies, spatial-functional dynamics, and sociocultural cohesion in order to better understand chrono-cultural
transition and sociopolitical transformation at one of the largest LC 1 sites ever excavated, Tell Zeidan, Syria. Ultimately, I propose that exploring the relationship between concomitant changes in technological innovation and domestic spatial usage can demonstrate both clearer periodological boundaries and greater inter-regional coherence than relying on traditional approaches to the material record alone.

More than Meets the Eye: Bridging the Late Neolithic gap in Jordan
Pascal Flohr (University of Oxford)

‘Mind the Gap’

The Late (or Pottery) Neolithic is a key period in the archaeology of the Middle East, as it is during this time that we find the first ‘real’ farming communities as we imagine them, with small mixed farming hamlets, the distinction between ‘desert and sown’, and the use of dairy products. However, this period remains one of archaeology’s relative gaps, taking place after the much-studied ‘introduction of agriculture’ in the Early Neolithic and the Chalcolithic ‘increasing social complexity’. The Late Neolithic remains underrepresented in both ground and remote sensing surveys, due at least partly to poor visibility and research biases (as shown for example by research by E. Banning and team).

The research presented here aims to address this issue by compiling and reviewing the current evidence for Late Neolithic sites in Jordan (subsequently to be expanded to the whole of the Southern Levant). Using publications and existing datasets, information from Late Neolithic sites is being collected and entered in the EAMENA online spatial database. Over a hundred sites with reliable evidence for Late Neolithic occupation have already been entered. The dataset confirms that there is no lack of Late Neolithic sites, but they are often poorly visible with little evidence present on the surface, and a research bias is evident. Remote sensing (satellite images and aerial photographs) was used to assess the location and current condition of the sites, further confirmed by site visits to selected sites. The next step is to analyse the site locations and, if possible, to establish a model to predict Late Neolithic site location.

While in the early stages of analysis, this dataset forms a starting point to increase our knowledge of the Late Neolithic. This overview of Late Neolithic archaeology and the potential to build a model to find more of the relatively invisible Late Neolithic sites will contribute to bridging the Late Neolithic gap.

Ethics of Preservation/Politics of Destruction: Cultural Heritage and Humanity in the Middle East
Pascal Flohr, Michael Fisher, Michael Fradley (University of Oxford)

‘Heritage in the Middle East – Moving Beyond Destruction’

In bridging the gap between cultural heritage theory and the practice of preserving archaeological sites, monuments, artifacts, and intangible heritage in the Middle East, we encounter the modern ethical contexts in which both preservation and destruction are performed and endured. This paper seeks to address how we prioritize ethical principles such as common ownership of and access to heritage, human rights, and civic duty when approaching cultural heritage preservation across the varied Middle Eastern political landscape. As national governments at times change hands, challenge basic notions of ethical behaviour toward human populations, and reimagine cultural heritage policies according to shifting sociopolitical agendas, the global community can adapt on-the-fly and adopt ad-hoc principles of cultural heritage engagement and preservation. Or, we can look at the large and growing body of recent historical evidence in this field in order to develop robust and flexible theories of heritage management whose premises explicitly include political uncertainty and even a role for bad actors.

The EAMENA (Endangered Archaeology in the Middle East and North Africa) Project considers and records archaeological heritage across over twenty countries in the Middle East and North Africa, including countries that are experiencing ongoing military conflict such as Libya, Yemen and Syria. To frame our paper, we will draw on experience from Afghanistan, for which we will review cultural heritage preservation and destruction over the past forty years. Over that time, different Afghan governments such as the Rabbani/Massoud coalition and the Taliban have taken varied and, at times, destructive approaches to both cultural heritage and human rights. Alongside that recent political history, the global community has alternately challenged and collaborated with national governments on cultural heritage and human rights matters, and those interactions and their outcomes can help inform
meaningful theoretical developments and practical approaches. We will then examine the political and social contexts of heritage preservation practice in which the EAMENA Project currently operates and consider the related ethical implications and how developing theory from practice can yield better avenues for future implementation efforts.

Domestic Material Culture from the Egyptian Nile Delta
Urška Furlan (Swansea University and Centro Archeologico Italo-Egiziano)

‘Morphology, Infrastructure and Relational Space in Settlements’

The Italian Archaeological Mission of Padua University is working at the two connected sites Kom al-Ahmer and Kom Wasit in the Western Nile Delta of Egypt. The excavations over the last six years uncovered several domestic structures from different areas of the sites dating to the Late-Dynastic and Early-Ptolemaic Periods. The paper will present rich and varied material culture recovered from these areas, including amulets, terracotta figurines, limestone statuettes, jewellery, and some rare bronze pieces. The characteristics of the domestic material culture of the time and space and some of the particular iconographic types will be highlighted. The paper will discuss also the traditions, rituals and magical practices that involved the use of these objects and consider their practical role in the daily life. Additionally, the paper will explore certain finds that demonstrate a foreign presence at the sites.

The excavated finds will be contextualised within their archaeological findspot, considering the sites themselves, as well as their relation to the other sites in the Delta. The paper will explore other sites where similar objects were produced and found and debate their circulation in the region. This study of the domestic material culture will present the life of the inhabitants, their values and beliefs at the sites of Kom al-Ahmer and Kom Wasit as well as the area of the Nile Delta.

Evaluating Micro-Contextual Evidence of Animal Management in Neolithic Central Anatolia: Implications for Mobility and Sedentism
Aroa García-Suárez, Marta Portillo and Wendy Matthews (University of Reading)

‘Sedentism – Mind the Gap’

The emergence of the Neolithic in south-west Asia brought about a major transformation in human-animal relations. The adoption of herding entailed changes in the labour, residentiality and mobility of early Holocene communities aimed at controlling animal movement, feeding and mating to varying degrees. In recent years, micro-stratigraphic research focused on herbivore faecal matter has shown the importance of animal management strategies and their implications for sedentary practices and ecological diversity.

Here we present a multi-proxy study of dung accumulations in settlement open spaces for an accurate identification of penning areas. We examine thin-section micromorphology and microfossil evidence to provide new insights into herding practices, domestic uses of animal dung, and foddering strategies.

The microstratigraphic record from the sites of Boncuklu (8300-7800 cal BC), Pınarbaşı (9800– 6000 cal BC) and Çatalhöyük (7100 to 6000 cal BC), offers an exceptional opportunity to deconstruct the nature of local variability in human-animal interactions in Central Anatolia, and their interplay with shifts in residential practices and mobility. Results shed light into the particular circumstances under which early animal management emerged and was adopted by communities displaying different degrees of sedentarisation in this region.

Bread-Moulds: An Experiment-Based Reassessment of the Functional and Cultural Role of the Uruk Bevel-Rim Bowl
Jill Goulder (University College London)

‘Archaeology of Food in the Ancient Near East’

This paper describes a unique experimental-archaeology approach to the enigma of the bevel-rim bowl, the type-fossil of the late 4th-millennium BC Mesopotamian Uruk. Interpretation of the BRB’s function and cultural implications has frequently been debated, with the ‘ration-bowl’ theory persisting in several quarters, but has often been clouded by tenuous analogical links and circular arguments.
To gain a better understanding of the function and significance of BRBs, in 2007/8 I manufactured a total of 28 replica BRBs and conducted experiments to test some of the functional theories advanced over the years by commentators, including the making of bread, yoghurt, cheese and salt.

My experiments demonstrate the BRB’s unique suitability for bread-baking, and offer a new assessment of the BRB as an early example of production-line engineering, ingeniously combining not only mass-production of mould-made ceramics but also industrial-scale production of leavened bread.

This also addresses an issue which has puzzled many commentators, on why such creative attention has been paid to evolving a conceptually new system for producing such a banal item. The BRB is not a serving vessel: it is an active utensil, not a passive container, whose pivotal characteristics enable another large-scale rapid-throughput operation to be carried out.

Assessing Delayed Burial Practices in Neolithic Anatolia using Histotaphonomic Analyses of Human Bone

Scott D. Haddow (Koç University, Istanbul)

‘The Dead and the Living: Integrating the Evidence’

Recent bioarchaeological analyses at several Neolithic sites in Anatolia have revealed substantial intrasite variation in the level of skeletal completeness, preservation, articulation and flexion among primary burials. These observations provide increasing evidence for a period of delay between death and final burial for certain individuals, likely as part of a multi-stage funerary rite either seasonal in nature or involving a predetermined liminal period. There is also evidence for pigments applied directly to the bones of fully articulated primary skeletons at both Körtik Tepe and Çatalhöyük. Furthermore, organic remains from burnt contexts at Çatalhöyük demonstrate that many bodies were tightly bound and wrapped using cordage, matting, textile and animal hides. Based on these observations, it appears that some bodies may have undergone postmortem treatment(s) in order to reduce or remove soft tissue as part of a temporary storage strategy. Potential treatments include exposure, excarnation or desiccation of the corpse. In order to test this hypothesis, thin sections from human cortical bone samples taken from three Anatolian Neolithic sites (Çatalhöyük, Boncuklu Höyük and Barcin Höyük) were analysed using light microscopy and SEM imaging techniques in order to assess variation in bone microstructure preservation. As endogenous gut bacteria released into the body at the onset of putrefaction is believed to be responsible for a particular pattern of microstructural alteration, the lack of such bioerosive attacks may point to postmortem treatments aimed at reducing the process of bodily decay so as to allow for the temporary storage of bodies prior to final interment.

Down by the River: Recent Discoveries from Tell Damiyah, Jordan

Diederik Halbertsma (University of Liverpool)

‘Archaeology of Religion, Rituals and Temples’

Recent archaeological excavations at Tell Damiyah, located in the Jordan Valley, have yielded many unique finds and significant results. The settlement mound, situated at the confluence of the Jordan and Zerqa rivers, commanded one of the few fords over the Jordan River. Interestingly, during recent excavations a 7th century BC sanctuary complex was encountered, which gives evidence of connections with ancient Israel, Ammon, and Moab, both in trade and culture. This sanctuary has been interpreted as a wayside shrine, which one would pass crossing the Jordan River. New results from the ongoing excavations at this small but significant site will be presented and placed in a larger archaeological perspective.

The Material Manifestations of Merchant Identity in early Mesopotamian Dedicatory Practice

Nancy Highcock (University of Cambridge)

‘Archaeology of Religion, Rituals and Temples’

In recent years, the drive to bridge the gap between Assyriological and archaeological evidence has resulted in more holistic approaches to inscribed material culture as scholars have analysed the relationship between text and image and re-situated texts and inscriptions within studies of materiality. The “Memories for Life” project (Cambridge/Uppsala) has been developed in this vein, exploring the construction of personal identity and memory through the commission and dedication of inscribed objects by private individuals (non-royal) in the ancient Near East. Such objects sought to establish an ongoing dialogue between the human individual
Beliefs about Weapons of Mass Destruction in Early Mesopotamia and Anatolia: Perception, Impact and Response

Zenobia S. Homan (King’s College London)

‘Fieldwork and new Research’

This paper will address several common gaps and misconceptions in the ancient history of chemical and biological warfare: first, that there is scant evidence; second, that these weapons would have been viewed and used as they are today; and third, that this distant history bares little relation to modern perceptions and response. After all, the term ‘weapons of mass destruction’ was not coined until the 20th century CE; so how could there be examples of their use date to the 20th century BCE?

To begin with, the fact that there are stories about this specific kind of warfare, as opposed to whether it truly happened, should be considered important in and of itself. The present-day belief that these attacks can take place is the result of centuries of threats, suspicion, opportunism and collective imagination. Accordingly, the analysis provided in this paper will not focus on proving the existence or use of weapons of mass destruction in the ancient world, but the universal fear that such attacks occurred. Reports of and rumours about the use of chemical weapons have been hugely consequential to, for example, the ongoing civil war in Syria. It is also exactly this region to which some of the earliest tales about chemical and biological warfare in human history can be traced back.

In addition, at present many people see weapons of mass destruction as objects used in armed conflict between states, societies or groups; but in the ancient world, attacks of this proportion were first and foremost directed by deities. This paper will discuss examples of plague and poison recorded in some of the earliest written records in existence: 2nd millennium documents from the Near East and Anatolia. They will illuminate how people at the time perceived these phenomena, how it impacted the population, and how both the public and the various governments responded to them. It is of interest, from a modern perspective, whether this can be linked to what we see as warfare (e.g. attacks launched by political opponents; which could coincide with religion); but it should be very clear that the people of the past saw it as warfare either way (divine punishment; which could affect international relations). This paper will argue that it is this way of thinking that fuelled the following millennia of public fear of directed attacks using infectious and toxic agents – and that the phrase ‘weapons of mass destruction’ may be new, but its meaning is not.
canids (e.g. the commensal relationships held by urban foxes and coyotes with humans are well known modern day phenomena), which have been little explored in archaeology. Commensalism has led to disease, most notably due to rodent pests, but it has also led to domestication events (e.g. cats and maybe even dogs). Foxes are recovered in abundance from multiple Near-Eastern Epipalaeolithic and early Neolithic sites. In such contexts foxes are often associated with the broad spectrum revolution as a possible food and fur source. However, their presence in pre-Natufian human burials raises questions regarding human-fox relationships during this period and viewing the remains of these animals solely for their resource potential may overlook important and complex relationships they held with humans. Here we review the occurrence of fox remains from early Near Eastern sites and propose biomechanic and morphometric approaches to analysing them.

Flint Figurines: A New Way of Depicting Human Image in the Middle Pre-Pottery Neolithic B Levels of Kharaysin

Juan J. Ibáñez¹, Thomas Huet², Luis Teira³, Juan Muñiz⁴, Jonathan Santana⁵ and Ferran Borrell¹

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‘Mind the Gap’

A new way of depicting human image was documented in the Middle PPNB levels of the site of Kharaysin (Zarqa, Jordan). Numerous blade fragments, bladelets and flakes show two pairs of opposed notches. Technological and use-wear analysis of these objects indicates that they are not tools, as no use traces are observed neither in the notches nor in the edges outside the notches. Thus, notches are not active zones or part of a system for facilitating the hafting of a tool. Morphology of the objects strongly suggests that they are schematizations of human shape, the upper pair of notches representing the neck and the lower one the waist. For testing this hypothesis, we have compared the morphology of the flint figurines with the outline of the sculptures found in the cache 1 of the nearby site of Ain Ghazal. This cache is contemporaneous to the MPPNB levels of Kharaysin. The spatial distribution of the figurines in the site, most of them recovered near a funerary area where complex rituals took place, including the extraction of human remains from the tombs and its re-deposition, suggests that figurines were associated to these funerary rituals.

Dietary Habits in Anatolia on the Eve of Urbanism

Benjamin Irvine (BIAA - British Institute at Ankara)

‘Archaeology of Food in the Ancient Near East’

The dietary habits of several pre-historic (3500-2000 BC) populations from different environmental regions of Anatolia were investigated using osteological and stable isotope analyses. The sample sites were: İkiztepe (north Anatolia), Titriş Höyük (south east Anatolia), Bademağacı (south Anatolia), and Bakla Tepe (south west Anatolia).

Whilst there has been substantial research into the dietary habits and subsistence practices of early proto-sedentary and sedentary agricultural populations in Anatolia and in later historical periods (namely the Roman and Byzantine periods), the 4th and 3rd millennia BC in particular have remained a void of information. Instead, research in these periods has focused primarily on material culture, where artefacts are studied individually, largely detached from their surrounding environment and social, cultural, technological, and economic contexts. This study begins to fill this void, employing quantitative scientific methods (stable isotope analyses) to address questions about dietary habits and subsistence practices in these pre-historical periods of Anatolia. Analysis of carbon and nitrogen stable isotopes (δ13C and δ15N) was employed on bone collagen from ca. 200 human and faunal osteological samples taken from the Anthropology lab of Hacettepe University, Ankara Turkey, and was conducted at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany. Analysis of sulphur isotopes (δ34S) was employed on bone collagen from ca. 50 human and faunal osteological samples (of the original ca. 200) and was conducted at the laboratory of Simon Fraser University, Canada. Sulphur isotopes of bone collagen from human and animal skeletal samples were analysed to further investigate dietary habits, and in particular the possible consumption of marine, or freshwater resources.

The results provide, for the first time, data and information which bridge the gap between the Neolithic and later Bronze Age societies. They
show that during this time, especially the 3rd millennium, in Anatolia there was an incredible degree of homogeneity in dietary habits both at an intra- and inter-site and regional level, with diets being predominantly terrestrial mixed and C3 based. Furthermore, the results suggest that we can now begin to discuss about an 'EBA package' with regards to food resources that potentially extends across the Greater Near East.

Towards Radiocarbon Dating Archaeological Bone in the Levant

Piotr Jacobsson (University of Glasgow)

‘Fieldwork and new Research’

Taphonomic integrity of a context is essential to reliable radiocarbon dating; if we do not know the path of a sample to its ultimate resting place, interpreting radiocarbon dates becomes. Hence, articulated skeletal remains are among the most reliable types of dating material common on archaeological sites. Throughout south-west Asia, however, dating skeletal remains poses major technical challenges and is often unattainable using routine protocols.

This paper reviews the causes of these difficulties and outlines some of the ways we might be able to tackle the “bone dating” problem. While extensive studies into bone diagenesis carried out in north-western European contexts, concluded that local hydrology might be one of the key drivers in the loss of collagen (the preferred “safe” fraction for radiocarbon dating), our understanding of these drivers for south-west Asia is limited. A better understanding of the mechanisms of collagen loss is important, as it also informs us what autochthonous material might be preserved in the bone and how we might approach isolating it. The paper includes preliminary results from a pilot study into diagenetic variability of south-west Asian archaeological bone.

Grain Storage in the Ur III Period: The Textual Perspective

Hannah Johnson (Independent Scholar)

‘Archaeology of Food in the Ancient Near East’

The late third millennium BCE saw the unification of Mesopotamia’s independent city-states under a dynasty of kings known as the Third Dynasty of Ur and the centralisation of the means of production and redistribution of foodstuffs and other produce. One significant part of the food redistribution system was the guru7, generally translated “granary”, and there are questions to be asked as to the extent of its control over barley redistribution.

Focusing on one province, that of Umma, and using quantitative analysis techniques, this paper discusses the functioning of the granary within the Ur III economy, demonstrating that the granary was an administrative unit controlling a network of storage facilities in various locations in the province. It functioned primarily as a state institution, operating to provision state livestock herds and the cult of the god Šara, the main deity of the province, but with no responsibility for feeding the general population directly. The extent of authority of the ka-guru7, the head of the guru7, is also of interest and will be discussed in this paper. While the results of this study may seem specific to the province and institution studied, they contribute to a broader understanding of the Ur III economy and demonstrate the usefulness of quantitative history in interrogating the large quantities of data that are typical of the Ur III period.

Hollow Ways in Southern Mesopotamia

Jaafar Jotheri (Al Qadasiyah University, Al Diwaniyah) and Michelle de Gruchy (Durham University)

‘Fieldwork and new Research’

Hollow ways are important off-site features that serve as trace fossils of past human behaviour. Thousands have been recorded across the Near East, mainly in northern Mesopotamia where they have been the subject of decades of study. Now, a remote sensing survey supported by ground-truthing has been carried out to detect and map these features in Southern Mesopotamia. A total of 332 archaeological sites surrounded by more than two thousand segments of hollow ways have been identified in this survey. These sites are mostly located in the southern part of the Mesopotamian floodplain where marshes were/are the dominant environment. The ages of these sites vary from the Ubaid period until the present. This paper presents the results of this work, including the first map of the hollow ways in Southern Mesopotamia and a comprehensive overview of the taphonomy of these features from geoarchaeological analysis.
**The Role of State-Access Infrastructures in Conceptualising Heritage Making and Destruction in Post-2003 Iraq**

Mehiyar Kathem (University College London)

*Heritage in the Middle East – Moving Beyond Destruction*

Claims made on heritage by classes, social and cultural groups and political elites are intimately connected to maintaining a presence in society. Heritage is often instrumentalised to not only tell a story – however imagined – about a social or cultural group’s past and present existence, but more significantly serves a specific role to legitimise access to the state and its resources. In this paper, I argue that heritage is essential to the construction of state-access infrastructures – specific social, cultural and political structures in both state and society - which are erected to access the riches and opportunities that the state bestows. Whether in Iraq or elsewhere, state-access infrastructures are purposely crafted to serve groups vying for control of the state and by extension represent a vehicle for social elevation, mobility and cultural survival. Since the 2003 invasion heritage in Iraq has been the subject of fierce and renewed elite based inter-group competition. The imposition of a US devised political system that prizes ethno-sectarian quotas and the deconstruction of the Iraqi state under the occupation has re-politicised the role of heritage. In a situation of state dysfunctionalism heritage takes on particular significance. Rival political elites have constructed competing state-access infrastructures built on fragments of Iraq’s physical and intangible national heritage. This paper contends that state-access infrastructures is a lens with which to understand heritage-making and heritage-destruction, which determines the fate, fortune, life and death of whole-group cultural and social constituencies in post-2003.

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**The Life and Death of North East Temple and the End of Canaanite Lachish**

Igor Kreimerman (University of Cambridge)

*Archaeology of Religion, Rituals and Temples*

Lachish was one of the major Canaanite cities in the Shephelah region of the Southern Levant. Level VI at the site represents the last Canaanite City and dated to approximately 1200–1140 BCE. At the end of the period, the city was destroyed and subsequently abandoned for over a century. Previous expeditions uncovered several structures from Level VI including a temple located at the highest point of the site – known as the Acropolis Temple. The 2014-2016 excavation seasons of The Fourth Expedition to Lachish uncovered another Late Bronze Age temple at the north east corner of the site (Area BB) – known as the North East Temple. The temple was covered with debris of burnt mud brick, charred organic material and many broken pottery vessels as well as many small finds. The current paper will present the architecture and the finds of the temple as well as the processes it underwent on its last days. The destruction process of the North East Temple will be then compared with the destruction of the Acropolis Temple in order to get a better understanding of the decision making of the residents of Lachish on the eve of destruction.

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**Composing on a Keneman – New Angles of Inquiry on Iron Age Phrygian inscriptions**

Damjan Krsmanovic (University of Leicester)

*Fieldwork and New Research*

During the 7th-6th centuries BCE, regional elites in the central-western Anatolian interface marshalled resources and workforces to produce numerous rock-cut monuments in the mountainous area of Türkmen Dağ (Eskişehir and Kütahya provinces). The monuments present some of the most impressive evidence of ancient stone-cutting in Anatolia, yet their chronology, function and meaning continues to be widely debated. Several monuments are framed by inscriptions in the Phrygian language, which remain difficult to decipher due to their brevity and sometimes poor state of preservation. Despite the growth of the Phrygian corpus since the 19th century, the paucity of data, methodologies and historical preconceptions about the inscriptions’ commissioners continue to affect understanding. In this paper I shall pursue two broad strands of argument – a review of past documentation methods, and new possibilities afforded by digital manipulation and imaging techniques. As an example, I shall present new readings of two well-known inscriptions – M-01a framing the Midas Monument at Yazılıkaya, and W-01a framing the Areyastis Monument. In addition, I shall discuss alternative ways in which this epigraphic material may be viewed – not merely as texts to be deciphered (which has been the main objective of scholars), but as material objects with meaningful signalling capacities, being both outcomes and proponents of social and political messages characterizing the dynamics in the region leading
up to the Achaemenid period.

Climate, Complexity and Early Urbanism: Introducing the Climate, Landscape, Settlement and Society (CLaSS) Project

Dan Lawrence (Durham University)

‘Fieldwork and New Research’

Over the last 8000 years, the Fertile Crescent of the Near East has seen the emergence of cities, states and empires. Climate fluctuations are generally considered to be a significant factor in these changes because in pre-industrial societies they directly relate to food production and security. In the short term, ‘collapse’ events brought about by extreme weather changes such as droughts have been blamed for declines in population, social complexity and political systems. Studies seeking to correlate social and climatic changes in the past tend either to focus on highly localised analyses of specific sites and surveys or to take a more synthetic overview at much larger, even continental, scales. This paper will introduce a major new initiative, funded by the European Research Council and involving Durham University, the University of Tuebingen and the University of Leeds. The Climate, Landscape, Settlement and Society (CLaSS) Project will combine archaeological settlement data and archaeobotanical data (plant and tree remains) with climate simulations derived from General Circulation Models using cutting edge techniques. The resulting datasets will represent the largest of their kind ever compiled, covering the period between 8000BP and 2000BP and an area of 600,000km2. The paper will present the first results of the project, examining the relationship between urban sites and climate change around the so-called ‘4.2k event’.

Human Intestinal Parasite Infection in Roman Period Asia Minor

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‘Fieldwork and New Research’

Little evidence exists for ancient human parasitic disease in Turkey in any time period. Similarly, while evidence for parasitic infection in the Roman Period is growing, most of this work is focused in Northern Europe. The aim of this research is to improve our knowledge of ancient parasitic infection in Asia Minor, particularly during the Roman Period. The material studied was sediment from latrines and drains collected from the sites of Sagalassos, Ephesos, and Sardis in Turkey. In order to recover preserved helminths and protozoa, sediment samples were first processed using disaggregation and microsieving, followed by the identification of preserved eggs and cysts with digital light microscopy and enzyme-linked immunosorbent assay (ELISA). Our results show eggs of roundworm (Ascaris lumbricoides) in communal latrines from all of the three cities and eggs of whipworm (Trichuris trichiura) in a private latrine from Ephesos, while ELISA revealed the earliest case of Giardia dysentery in the Old World from the latrine at Sagalassos. These three species are spread by the fecal-oral route, and are commonly linked to poor sanitation and hygiene. It is interesting that we did not find any species contracted by eating undercooked meat or fish, which have been found at other Roman Period sites, particularly from Northern Europe. The lack of species diversity and dominance of sanitation related parasites will be discussed with a focus on the role of climate, sanitation infrastructure, and diet in contributing to parasitic disease amongst inhabitants of these Roman cities.

Hebrew Ostraca from Tel Arad

Meir Lubetski (Baruch College, City University of New York)

‘Fieldwork and New Research’

Wilderness and boundary areas scarcely constitute favourable conditions for comfortable living. Ancient ruins of border forts, however, are outposts of civilizations and provide ideal sites for archaeological research. The southern citadel, Arad, with its Temple, provides a remarkable trove of remains, especially a surprising yield of
inscriptions, dating from the late seventh or early sixth century BCE.

As often with excavated material, it is not easy to decode inscriptions. Yohanan Aharoni, the lead excavator and interpreter of the Hebrew archives at Arad deciphered the inscriptions on ostraca found in the Temple area, near the cella. One of them, ostraca #52, contained the letters pSyd, which he proposed was a PN. He said the name is unknown and he did not offer a suggestion as to its sense.

Using Egyptian collateral sources, this paper analyzes the name and suggests its significance, particularly its priestly and Egyptian connections. It sheds light on the link between the southern neighbor and Judah in the period before the conquest of the Babylonians.

(Re)considering the Domestic Contexts of the Late Roman Nile Delta.

Giorgia Marchiori (Durham University)

‘Morphology, Infrastructure and Relational Space in Settlements’

Domestic architecture is not the first thing that comes to mind when thinking of Egyptian archaeology. Although houses represent the most common building type in the archaeological record, research in Egypt has mostly been focused on other realms. Residential quarters have been excavated, but the majority pertain to specific locations and time periods. However, in recent years an increased interest in domestic contexts has led to the investigations where archaeological and architectural data were combined to understand past social relations, private life, and household activities (specifically of houses of the Nile Valley and Dakhleh Oasis settlements). In this paper, I will focus on the domestic contexts of the Late Roman period in the Nile Delta. Despite the high number of sites in the Delta, few late Roman domestic structures have been excavated and published. Much of the current knowledge on this region’s houses is based on few specific sites where mostly elite residences have been studied, or they rely on the results of past excavations in other areas (e.g. the Graeco-Roman sites of the Fayyum). It is worth taking into consideration the distinct geomorphology of the Delta, its proximity to the Mediterranean trade networks, and its contacts with other regions. This research aims to shed light into the everyday life of a specific region characterised by a dynamic environment, both in habitat and social terms, by analysing how much can be discerned archaeologically about the way in which these households were inhabited and their socio-economic meaning.

Animals in the Landscape, Animals in the Home: Issues of Territoriality, Mobility, Symbolism and Sedentism in the Central Anatolian Neolithic

Louise Martin (University College London) and Douglas Baird (University of Liverpool)

‘Sedentism – Mind the Gap’

The Central Anatolian Neolithic poses an interesting case regarding sedentary behaviours, where despite increased evidence of built environments, populations continued – to a greater or lesser degree – to hunt a range of large wild animals (‘wild’ as far as zooarchaeological analysis can show). In this respect, the area differs from other well investigated regions such as the southern Levant, where Neolithic ‘village’ life is accompanied by a decline in large game hunting – explained by most as resulting from demographic pressure and over-hunting. In an earlier paper (Baird et al 2017, World Archaeology) we have suggested that the wild animal symbolism in and around houses at early Neolithic Boncuklu in the Konya Plain both reflected wider landscape group hunting activities, and also served to bind supra-household groups in unified ritual practices. In this paper, we use large mammal zooarchaeological evidence to explore those hunting engagements in the landscapes around Boncuklu Hoyuk, to address questions of landscape access (and rights?), landscape modification, territoriality and human mobility and how these relate to the greater investment in a village location, in other words sedentary behaviours.

W.M.F. Petrie in the Wadi Gaza: New Methodologies for an Old Data Set

Angela Massafra (University of Glasgow)

‘Fieldwork and New Research’

Processes of culture contact have been approached in traditional studies on early empires through unilateral perspectives such as acculturation studies and World System theories. Over the past decades, however, a new scepticism of these dominant narratives has emerged. The Wadi Gaza area during the period of Egyptian New Kingdom imperialism provides a to-date little utilised analytical arena in which to explore the challenges and opportunities of a
different approach.

The study of this area is critical when considering the current state of archaeological research in the region, which has been halted by several conflicts in the modern era, especially in the Gaza Strip. The impossibility of studying the region archaeologically first-hand, and the loss of material, urges the academic community to find a way to use the material already available from previous excavations, combined with a new approach.

This paper, therefore, discusses the old data set discovered by archaeologist W.M.F. Petrie in the Wadi Gaza, providing a tailored approach to the study of these excavations, thus overcoming the bias produced by old records.

**Sustainability of Early Sedentism: A Case-Study from the Central Zagros, Iraq and Iran.**

Wendy Matthews (University of Reading)

‘Sedentism – Mind the Gap’

This paper investigates the origins of sedentism and the sustainable challenges that this presented. It examines early sedentism through the lens of current goals and challenges. The aim is both to ask real-world questions of early sedentary lifeways, as well as to examine ways in which examination of the past can provide a deep-time perspective on current and future global challenges. The case-study examines the origins and sustainability of sedentism in the Zagros. The focus is on the sustainability and health of early built environments and energy sources and use during the transition from mobile hunting-gathering to more sedentary agriculture. It assesses in particular results from high-resolution micro-analysis of built environments. The outcomes of the Central Zagros Archaeological Project indicate that early settled communities in the eighth millennium BC in Iraq and Iran were constructing hygro-thermally efficient earthen architecture, using a range of biofuels including dung as a renewable second generation fuel, and had a biodiverse diet.

**Remembering Home through Culinary Practices: The Kura Araxes at 3rd millennium BC Tel Bet Yerah**

Gwendoline Maurer (University College London)

‘Archaeology of Food in the Ancient Near East’

The Kura-Araxes – also known as the Early Transcaucasian phenomenon – is an archaeological complex, in which Early Bronze Age migrants from the Caucasus expanded through Russia, southeastern Anatolia, the Iranian plateau and as far as the Southern Levant during the 3rd millennium BC.

Tel Bet Yerah (Sea of Galilee) presents the most southerly point of expansion. Tel Bet Yerah is unique among all known Kura-Araxes sites in that it shows the side-by-side habitation of migrants and the local population at this Early Bronze Age urban center (2770 B.C.E – 2400 B.C.E).

This paper is will explore the feasibility of defining Kura Araxes culinary practices as well as differences between migrant and local food preparation and consumptions. These questions will be explored by drawing on zooarchaeological and ceramic evidence from the migrant occupation area; SA-M as well as the local compound SA-S.

Zooarchaeological evidence will highlight and complement differences in preparation i.e. boiling versus roasting and consumption i.e. culinary preferences and processes of food distribution.

Recent research conducted on ceramic assemblages from Tel Bet Yerah by Sergey Ishoev and Prof. Rafael Greenberg (Tel Aviv University), suggest that the Kura Araxes engaged in communal cooking of e.g. stews, which were then decanted from large to family-sized distribution vessels or individual portions. This stands in stark contrast to Southern Levantine modes of preparation and consumptions, which are dominated by large open platters.

Modes of preparation and consumption are reflective of social structures and norms. Differences between the two communities at Tel Bet Yerah add to the understanding of social interactions between the two communities in the Early Bronze Age Southern Levant.

**Skeletal Evidence of Violent Conflict in Judea during the 2nd-1st Century BCE**

Piers D. Mitchell¹, Jenna M. Dittmar¹ and Yossi Nagar²

¹University of Cambridge
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‘The Dead and the Living: Integrating the Evidence’

This paper presents skeletal evidence of a massacre that occurred outside the city of
Jerusalem around the end of the 2nd century or the beginning of the 1st century BCE. In 2017, the Israel Antiquities Authority conducted a salvage excavation at Migrash HaRusim in Jerusalem. During this excavation, human skeletal remains were found inside a disused water cistern that was located approximately 300 m west of the north-western corner of the present-day city wall. The skeletal assemblage was co-mingled and fragmentary but at least 124 individuals, including children and adults, were found. Pottery sherds associated with the human remains were dated to the end of the 2nd century–the beginning of the 1st century BCE. Sharp-force trauma was noted on many skeletal elements during the excavation, and a sample was retained for analysis prior to reburial in accordance to Israeli Law. The retained sample consisted of partial crania (n=7), mandibles (n=10), vertebra (n=28) and one long bone fragment from a minimum of 23 adult individuals. Silicone impressions were made of tool marks present and analyzed using a scanning election microscopy. Peri-mortem sharp-force trauma, likely inflicted with a sword, was identified on one or more element from each individual. The placement and number of the weapon injuries identified on these individuals reveals the lethal intent of the encounter. When placed within the historical context, we suggest that this skeletal assemblage may be evidence of a massacre following an uprising that occurred during the reign of the Hashmonean king Alexander Jannaeus.

We Are what we Eat: Food Practices and Identity during the Late Bronze Age II/Iron Age I at Alalakh

Mariacarmela Montesanto (Durham University)

‘Archaeology of Food in the Ancient Near East’

The site of Alalakh is located in the modern province of Hatay, Southern Turkey. The site, during the LBA II became part of the Hittite Empire and, after the 14th century, witnessed a steep decline. Only a small section of the site was inhabited during the 13th century until the 9th century BC.

The analysis of archaeological documentation and recent archaeological excavations in Alalakh and in the Amuq Valley reopened old questions concerning the passage from the LBA to the IA, and contributed important historical data to the first centuries of the IA I.

This paper investigates a specific feature in the debate on the LBA-IA transition, i.e. changes in the material culture that have been linked to the arrival of a non-local culture as a consequence of conquest or migration. In particular, the paper will focus on the analysis of cooking and tableware typology and function in relation with foodways to understand the impact that the Hittite imperialism during the LBA II and the Aegean migration during the IA I had on local habits and behaviours at Alalakh and in the Amuq Valley.

The focus will be given to the pottery’s function rather than to the morphology of the vessels to provide important data on the way a “culture” is integrated in local common practices and to understand if the material change (the appearance and introduction of new shapes) reflects also a change in habits and behaviours.

Iconoclasm in Syria: The Case of Hafez Al-Assad’s Statues

Nour A. Munawar (University of Amsterdam) and José A. G. Zarandona (Deakin University)

‘Heritage in the Middle East – Moving Beyond Destruction’

The destruction of statues representing political figures carries symbolic meanings that are negotiated by the people who attack the statue and the regime that the statue represents. Across the Syrian territory, statues of Hafez Al-Assad were created that symbolized the oppressive Ba’athist regime which shaped Syria’s past and present for almost half a century. As a result, a cult of personality ensued. In this paper, we are proposing that the destruction of statues representing the former dictator of Syria, Hafez Al-Assad (1971-2000), may be considered as a key action and the prelude to further violence that engulfed the country. In the same way that the fall of Saddam Hussein’s statue in Firdos Square in Baghdad in 2003 symbolized the end of the Baathist’s dictatorship in Iraq, the attack on statues of Hafez Al-Assad across Syria since the year 2011 signalled the beginning of the conflict that has seen further attacks on culturally significant sites, such as archaeological sites, religious buildings and heritage sites and facilities.

This paper will analyse the destruction of Hafez Al-Assad statues as a classic act of iconoclasm, framed by how Syrian heritage has been utilized by colonial and post-colonial regimes to support their legitimacy and create a narrative that helped to glorify the cult of personality of Hafez Al-Assad and his son Bashar Al-Assad (2000-present), Syria’s current president. Against this backdrop,
the destruction of statues will also be analysed as the starting point of the tragic destruction of cultural heritage in Syria – an event that the international press relentlessly promoted.

Accounting for the Broad Spectrum of Social, Symbolic, and Technological Innovations that Accompanied the Adoption and Spread of Domesticates in the Middle East: A Comparative, Cross-Disciplined Approach

Charlotte Nash (University College London)

‘Mind the Gap’

This study explores how Pre-Pottery Neolithic (PPN) sites in the Middle East (ca.13,000-9,500BP), such as Jericho, Göbekli Tepe, Hallan Çemi and Catalhöyük, demonstrates the inconsistencies of past universal socioeconomic models. It challenges past assumptions of an immediate, unilinear and universal adoption of agriculture, leading to sedentism, revealing that a huge variety of polycentric subsistence models and lifestyles coexisted for thousands of years before gradually favouring sedentary agricultural economies. The eventual spread and adoption of various domesticates in this period was accompanied by a broad spectrum of social, symbolic and technological invocations. By employing a multifaceted approach, the intention is to offer additional insights and clarification to this regionally variable, complex and protracted development.

The significance of socio-symbolic expressions under similar and differing climatic environments and subsequent human alterations to the landscape is compared, alongside localised climate sequencing data and recent DNA evidence of the variegated domestication process. Combined evidence suggests differing reactions to local environmental opportunities and challenges resulted in increased mobility, sedentism and increase in pan-regional trade and communications networks. This enabled an adaptive support system of cohabiting, interlinked but differing lifestyles and further experimentation that resulted in the dissemination of innovations across the Middle East. One of the key findings is that many of these complex processes had their roots in earlier - less visible - Natufian group practices. This indicates, not a depart from earlier activities but, cultural continuities and further development of pre-existing Epipalaeolithic social developments.

Axe Technology in the Early Bronze Age Near East: An Experimental Study to Identify the Raw Material of Ancient Axes Used in the Butchering Process.

Tiffany Okaluk¹, Haskel J. Greenfield¹, Tina L. Greenfield², Aslihan Yener³ and Aren Maeir⁴

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² University of Saskatoon
³ ISAW, New York University
⁴ Bar Ilan University

‘Fieldwork and New Research’

The Early Bronze Age (3800-2500 BCE southern Levant; 3000-2000 BCE Anatolia) in the Near East saw a significant shift and decrease in stone tool types. Specifically, the almost complete disappearance of Chalcolithic style chipped/ground stone axes and adzes after the EB I. Explanations for this change in material culture assumes the replacement of stone technology with copper metal technology. The main archaeological problem that inhibits the tracking and understanding the emergence of utilitarian metal tools is the recovery and preservation of metal axes in domestic/use contexts due to recycling and reuse. Butchery marks on archaeological faunal assemblages provide indirect evidence for utilitarian tool use and mitigates issues pertaining to reuse and recycling of metal tools.

Micromorphological criteria defined through experimental axe studies (chipped stone, ground stone, copper, and tin bronze) now allows for raw material identification of chop marks on bones under low power magnification. The results are presented in this paper.

This method is applied to two Early Bronze Age III assemblages from widely different regions. 1) Göltepe, the habitation site connected to the Kestel tin mine on the southcentral Anatolian plateau, and 2) Tell es-Safi/Gath, a large fortified tell site in the central Shephelah of modern Israel. Both assemblages are from domestic contexts and were subject to detailed zooarchaeological and slice mark analyses prior to chop mark analysis.

The method enables quantification of specific axe mark types to track changes in butchery practices and technology.
Caucasian Connections: From Local Histories to Integrated Narratives of the Kura-Araxes Culture

Sarit Paz (Tel Aviv University)

‘Mind the Gap’

The Kura-Araxes cultural complex is one of the most spatially extensive and temporally durable traditions of the Ancient Near East. By the second quarter of the 3rd millennium BC, various elements of the Kura-Araxes cultural package are found throughout Anatolia, the southern Caucasus, the Iranian plateau and the Levant. This phenomenon is an outstanding example of cultural connectivity across geographical and social boundaries, and represents a process of cultural transmission in which migration plays an important part.

For decades, the research of Kura-Araxes Culture was dispersed and fragmented, largely due to modern political borders. Local and regional studies were conducted in different countries, using various languages, terminologies, and chronological divisions. Recently, various studies that crosscut geographical and political boundaries have been initiated, and attempts have been made to establish common ground for a more unified and coherent discourse.

Weaving local histories and specialized studies into wider narratives offers a better understanding of the Kura-Araxes Culture as a whole: habitus and its local expressions; the symbolic and spatial creation and negotiation of social and cultural borders; and the mechanisms and dynamics of Kura-Araxes dispersal.

The presentation will review some of the recent trends, and offer a glimpse into what unifies the Kura-Araxes world.

All Consuming: Bringing Together Evidence of Past Food Consumption in the Natufian and Pre-Pottery Neolithic A at Shubayqa

Patrick Nørskov Pedersen, Amaia Arranz Otaegui, Anne Jørgensen Lindahl, Lisa Yeomans and Tobias Richter (University of Copenhagen)

‘Archaeology of Food in the Ancient Near East’

The transition from hunting and gathering to plant cultivation and animal domestication in southwest Asia has commonly been phrased as a shift in subsistence. Although valuable, a focus on subsistence has tended to ignore the social aspects of food procurement, processing and consumption. Where social factors have been taken into account they have tended towards functionalist explanations. Furthermore, where social parameters of food consumption have been taken into account there has been a dominant focus on ‘feasting’, whereas every-day food consumption has rarely been studied. In this contribution, our starting point is that the shift towards plant cultivation and animal domestication was first and foremost a fundamental shift in what people ate, how food was prepared and in what settings it was consumed, and that these actions were situated within explicit social fields. Thus, we argue that the transition from hunting and gathering to agriculture should be more explicitly re-phrased as a shift in foodways than as a shift in subsistence.

We illustrate our argument using archaeological data from Late Epipalaeolithic and Early Neolithic sites in the Shubayqa area of northeast Jordan. Since 2012 excavations at two sites in this area have revealed a rich archive of fauna, botanical remains and material culture, which provide various lines of evidence for food procurement and making and explore the ways in which the constituent parts may have meshed together to form past foodways. This paper summarises our research to date and outlines methodologies we will use to better understand food as a whole as we go forward. This phase of research will experimentally explore the practicalities of food preparation and storage as well as resultant use-wear traces on ground stone, lithic and worked bone artefacts which can be compared to similar traces on the archaeological assemblages. The ultimate aim is to reconstruct a chaîne opératoire of food from procurement, preparation, consumption through to discard in order to a better understanding of Late Pleistocene and Early Holocene foodways.

The Central Levant the 4th and 3rd Millennia BC

Graham Philip (Durham University)

‘Fieldwork and New Research’

The discipline of archaeology has tended to divide the Levant into two broad units of analysis - north and south. Each has been understood as following developmental trajectories that were quite distinct, at least until the second millennium BC. The analytical value of these ‘objects of study’ has largely gone unquestioned, but may actually have served to narrow research horizons. Recently, the emergence of new data from EBA Lebanon, which was until recently one of the
major gaps in our knowledge, in combination with work in the upper Orontes Valley of Syria, has produced evidence for forms of organization and networks of connectivity that have not previously been documented, and that may require us to reconsider some of our assumptions regarding the nature of communities in the Levant during the 4th and 3rd millennia BC. This paper seeks to present some of this new evidence and work through its implications for the development of complex societies in the Levant.

**Passing on and Leaving Behind: a Temporal Analysis of Burial Practice at Late Neolithic Tell Sabi Abyad, Syria**

Jo-Hannah Plug (University of Liverpool)

*‘The Dead and the Living: Integrating the Evidence’*

Excavations conducted at Tell Sabi Abyad from 1986 until 2010 have yielded the funerary contexts of around 300 individuals, dating from 6400 to 5800 cal BC. Throughout this 600-year period a wide array of funerary practices is observed, ranging from simple primary inhumation to elaborate, protracted rituals sometimes involving fire. Detailed analysis of the stratigraphic contexts, coupled with numerous radiocarbon dates from the human bones, allow us to identify temporal trends in the treatment of the dead. While various aspects of funerary treatment appear to be very short-lived, others persist and evolve throughout time. This paper will argue for both the presence of tradition and of space for idiosyncrasies in the treatment of the dead at this Late Neolithic site.

**Greeks at the Table? The Fifth/Fourth Century BC Fortress at Tell Iktanu, Jordan**

Kay Prag (University of Manchester)

*‘Fieldwork and New Research’*

The history of the southern Levant in the last centuries of the first millennium BC is driven by the complex power politics of the time, the struggles between Greeks and Persians, the conquest by Alexander the Great, the rising power of Rome, all set against the aspirations of local dynasts. The lands east of the Jordan River were fully integrated in these events even though their histories are less well recorded.

Set on a prominent rocky outcrop guarding the descent of road and river from the eastern plateau, and commanding to the west a prospect over the fertile irrigated fields of the southern ghor, a small fortress with a long history at Tell Iktanu played a role in these events, with evidence of warfare, industry and storage as well as imported Greek pottery; the latter includes domestic pottery reflecting non-local food preparation processes, suggesting that Greeks served here, perhaps as mercenaries.

**Safeguarding Archaeological Assets of Turkey (SARAT Project)**

Gül Pulhan (BIAA - British Institute at Ankara)

*‘Heritage in the Middle East: Moving Beyond Destruction’*

The project titled, Safeguarding Archaeological Assets of Turkey (SARAT) aims at developing capacity for people who are involved in various sectors of archaeology and heritage and increase awareness for the general public in different aspects of archaeology in Turkey. The project has a pro-active approach and works towards filling certain gaps both in practice and perception of archaeology in a country which, although not in conflict, nevertheless has many of the potential threats affecting archaeological heritage. The overall goal is to contribute to better protection and appreciation of archaeological heritage in the country. The project carries out four interconnected programs: A free on-line course on ‘Safeguarding and Rescue of Archaeological Assets’, a public opinion poll to understand the public perception of archaeology in Turkey, awareness-raising activities on looting of antiquities and the damage it causes to archaeological heritage with registered antiquities collectors in Turkey, and news-writing workshops for the media who shape the public view on archaeology and heritage. The project uses its web site (www.saratproject.com) and social media actively to share its goals and activities and to establish a platform for reliable archaeological information.

SARAT is a Cultural Protection Fund project and is carried out by the British Institute at Ankara (BIAA) in partnership with the Research Center for Anatolian Civilizations of Koç University in Istanbul, Turkey (ANAMED) and the United Kingdom branch of ICOM.
Metallurgy in the Jezireh during the Third Millennium BC in the Light of Archaeological Evidence and Laboratory Analysis

Souheb T. Razok (University of Liege)

‘Fieldwork and new Research’

Few studies have dealt the metallurgy development in the Near East in the literature of Archaio-Metallurgy, although there has been a plethora of metallurgical finds coming from the Jezireh region since the eighties of this century as a result of the salvage excavations in Syria, Turkey and Iraq.

This, in fact, has led our study to focus on the history of metallurgy development in the Near East as a multi-disciplinary, archaeo-metallurgical and archaeometric study in order to analyse all the data provided form these different disciplines.

The Jezireh region has been selected since it is a key area in the study of metallurgical activity during third millennium B.C. This allows us to have a better understanding of the role of metallurgy in ancient Near Eastern societies. The geographic framework that we have chosen for our research goes beyond the problem of modern borders of the three countries that share the research area.

In our study, 800 metal objects of copper-based alloys (including 250 analysed samples) and other materials related to metalworking (crucibles, molds, slag and ores) from various archaeological sites in the Jezireh region, have been studied and re-evaluated to trace the development of metal industry within a geographical context that is culturally homogeneous.

Therefore, in this paper we discuss our findings of the metal artifacts at focusing on its archeological, technical, and artistic dimensions. We also discuss the features of metal production in the Jezireh region.

Narrowing the Late Epipalaeolithic - Neolithic Gap in the central Zagros: Recent Work by the Tracking Cultural and Environmental Change project in the Kermanshah region

Tobias Richter¹, Hojjat Darabi², Amaia-Arranz Otaegui³, Pernille Bangsgaard¹, Golnaz Ehadi¹ ², Anthony Ruter¹, Lisa Yeomans¹ and Peder Mortensen¹

¹ University of Copenhagen
² Razi University, Kermanshah
³ Eberhard-Karls University, Tübingen

‘Mind the Gap’

Our picture of the transition from hunting and gathering to early cultivator-herder societies in the eastern wing of the Fertile Crescent still lacks considerable detail in comparison to what we know of the same periods in the Levant, Upper Mesopotamia or Anatolia. Although fieldwork in the central Zagros Mountains during the 1960s and 1970s, as well as more recent efforts by Iranian and international teams, have provided a tantalizing glimpse of the emergence of Neolithic societies in the region, our understanding of the transition from the Late Epipalaeolithic to the Neolithic is still critically under-developed. In this presentation we summarise the initial results of the fieldwork carried out by the Tracking Cultural and Environmental Change project, a joint research initiative between Razi University and the University of Copenhagen, between 2016 – 2018, at the Neolithic settlements of Asiab and Ganj Dareh. Although the project has to date focused more on Neolithic rather than Epipalaeolithic settlements, it aims towards narrowing the gap between these two periods in the central Zagros.

The ‘Origins’ of Sedentism and the Conundrum of Interpreting Natufian Architecture in the Levant

Tobias Richter (University of Copenhagen)

‘Sedentism – Mind the Gap’

Around 14,600 years ago Natufian hunter-gatherers began to construct durable stone architecture in appreciable numbers. The building surge of the Early Natufian (c. 14,600 – 13,600 cal BP) marks a significant change in human settlement and the use of space, and has been widely seen as an indicator for a more sedentary way of life, i.e. the origins of sedentism. The Early to Late Natufian site Shubayqa 1 in northeast Jordan is just one of a handful of Late Epipalaeolithic sites in the Levant that has produced stone dwellings. Meticulous excavation of these structures provides an opportunity to examine the biographies of Natufian dwellings in greater detail, and to draw inferences about building activity and the idea of sedentism. Drawing on observations from archaeobotany, zooarchaeology, micromorphology, spatial analysis, architecture and artefacts analysis, it is argued that the link between building and sedentism is not as straightforward as has often been suggested.
In Search of Early Bronze Age Potters at Tell es-Safi/Gath: A New Scanning Method for Identifying Shaping Techniques and Production Groups

John Ross¹, Kent D. Fowler¹, Haskel J. Greenfield¹ and Aren Maeir²

¹ University of Manitoba
² Bar Ilan University

‘Fieldwork and new Research’

In this paper, we present an alternative approach for identifying pottery production groups by classifying shaping techniques on freshly cut thick sections. We expand existing identification criteria by piloting a new method for characterising vessel structure. We demonstrate how this simple and low-cost method permits clear and rapid identification of the signatures indicative of shaping techniques to complement conventional macroscopic (radiographic) and microscopic (thin section analyses) approaches. Ceramic thick sections are scanned onto a computer using a desktop printer scanner to create high-resolution images, which are enhanced using Photoshop and Magnification® software. Material from Early Bronze Age houses at Tell es-Safi/Gath are used to demonstrate the utility of the method for understanding the domestic economy. We discovered that methods of vessel manufacture were far from homogenous. Our paper discusses how shaping techniques intersect with the domestic repertoire to understand how an early urban neighbourhood was supplied with ceramic containers. We propose that this alternative approach has considerable analytic potential for addressing ‘producer specialisation’ at the spatial scale of the household.

1.5km from the site a cemetery was found, in which people were buried in groups, in tombs quarried in the soft rock (Nahal Tabor Cemetery). The burials at the cemetery, which probably served the inhabitants of Yaqush, reflect enduring burial traditions of well-defined social groups, with distinctive differences between them, in terms of wealth, skills, and connections with distant regions. This paper will survey the complementary evidence from the village and the cemetery and point out its contribution to our understanding of the EBA village society in the southern Levant.

A tale of Two Towns: Morphology, Structure and Planning at Tel Beersheba and Tell Mastuma.

Bruce Routledge (University of Liverpool)

‘Morphology, Infrastructure and Relational Space in Settlements’

In the study of the Ancient Near East, spatial order in the layout of settlements has generally been addressed under the rubric of city planning. Often, this entails a conflation of two distinct issues – planning practices (i.e. the institutional, technical and organisational means by which a settlement layout is conceived and realised by a central planning intelligence through a programme of building) and planning principles (i.e. the non-random spatial and relational order evident in any given settlement layout). These issues are distinct because planning principles can be realised in either a bottom-up or a top-down manner, whereas planning processes are specific to top-down approaches. In this paper I will examine two roughly contemporary Iron Age sites, Tel Beer-Sheba in Israel which is usually interpreted as a centrally planned regional administrative centre, and Tell Mastuma in Syria, which is usually interpreted as an organically developed rural town. Settlement morphology and spatial syntax will be examined in order to highlight the planning principles shared by these two Iron Age settlements and to reflect on how and why this common order might have developed.

“In their Life and in their Death, They Were not Parted” – Life and Death in an Early Bronze Age Village Community in the Central Jordan Valley

Yael Rotem (University of Haifa)

‘The Dead and the Living: Integrating the Evidence’

Tel Yaqush was a small agricultural village in the Central Jordan Valley, which existed uninterruptedly for about 1000 years (~3600-2550 BCE), while sweeping changes occurred in the region. The archaeological evidence from the site represents agricultural village lifestyle, and social organization which is based on coexistence of extended families or kin-based groups. About
Evidence of Fire-Induced Alterations on Human Bones from the Late Pre-Pottery Neolithic B levels of Kharaysin (Jordan)

Jonathan Santana¹, Eneko Iriarte², Luis Teira³, Juan J. Ibáñez⁴ and Juan M. Pontificia⁵

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‘The Dead and the Living: Integrating the Evidence’

The Pre-Pottery Neolithic site of Kharaysin (Zarqa, Jordan) has a large repertoire of burials from the PPNA and PPNB levels. This repertoire includes primary and secondary burials, and skull caches. In 2016, a pit was found with the secondary disposal of burnt (MNI=2) and unburnt (MNI=1) human bones in the Late PNNB levels. This contribution explores all the alteration due to fire and its archaeological context. The data obtained suggest that burnt human remains were probably intentionally cremated. Moreover, bones were subjected to fire when the decay process had already finished or was at a late stage, suggesting a secondary cremation. After burning, bones were collected and moved to a new location, which was the final burial. In the Neolithic of the Near East, cremations have been documented in the Pre-Pottery Neolithic C of Beisamoun (Israel), and the Pottery Neolithic sites of el-Kerkh (Syria) and Yarim Tepe II (Turkey). In these cases, archaeologists have found pyres related to the cremated bones, even primary cremations located at the place of the pyre, but there is no evidence of pyres in Kharaysin so far. The finding of Kharaysin provides an early example of cremation that could be related to the changes in the burial practice at the end of the PPNB. This example might reflect the use of fire as a complementary rather than contrasting strategy, which was used to manipulate corpses in secondary burial practices.

Sus Exploitation at Boncuklu Höyük; a Pre-pottery Neolithic Site in Central Anatolia

Ozlem Saritas (University of Liverpool), Louise Martin (University College London) and Douglas Baird (University of Liverpool)

‘Archaeology of Food in the Ancient Near East’

Boncuklu Höyük is a pre-pottery Neolithic site in the Konya basin of Central Anatolia. The earliest settlement phase spans approximately 8,300 to 7,800 cal. BC, and is associated with sub-oval domestic mudbrick buildings interspersed with open spaces. The meat diet of Boncuklu is dominated by aurochs and boar (Sus scrofa) contrasting with other Neolithic sites in Central Anatolia. However, Boncuklu Höyük is not the only site with high levels of Sus exploitation in Anatolia. At Hallan Çemi and Çayönü (Southeast Anatolia), the intensive exploitation of boar/pig is also indicated. In this paper, we address biometric and demographic evidence for wild boar exploitation at Boncuklu in comparison with other Neolithic sites in Anatolia. The process of localized early pig management in Central Anatolia remains poorly understood in comparison to other domesticates (e.g. sheep and goats). The aim is to define the nature of pig hunting in order to understand the relationship between human and pigs in the region.

Purity Without borders: Material Culture and Jewish Diaspora in the Late Second Temple Period

Friederike Schöpf (German Protestant Institute of Archaeology, Jerusalem / Goethe University Frankfurt a. Main)

‘Archaeology of Religion, Rituals and Temples’

Since the end of the 19th century so called chalkstone vessels of the Early Roman Period are known through various excavations in Jerusalem and Israel. They have been interpreted as signs of specific Jewish concerns for purity – concerns that were followed intensively by the Jewish community during the Late Second Temple Period/Early Roman Period. In the Jewish thought, following the Bible and early Rabbinic literature, stone is not susceptible to impurity in any form.

The archaeological finds of vessels made of chalkstone in Jerusalem have been put into this tradition, even more during the excavations after 1967 in the Jewish Quarter of Jerusalem where they have been found in direct vicinity of the Temple Mount.

Recent findings of those chalkstone vessels in the Galilee and all over the state of Israel challenged the assumption that the vessels are exclusively connected to the Jewish Temple and disappeared after its destruction 70 CE. Their concentration in household contexts suggest a more private and individual use and they use extended as late as the 2nd century CE.
While most of the archaeological findings of the recent years are concentrated in the region of Galilee and Iudaea as known Jewish religiously observant environment during the Roman Periods, Tall Zira’a, near Gadara (Northern Jordan), stands out in its geographical position and pagan environment.

These findings of Tall Zira’a bring up the question how purity obligations were practiced in the early Jewish Diaspora during the Roman Periods. Growing numbers of those finds in Jordan – also in small scale settlements - in general show a larger distribution than originally thought. I would like to discuss if we see here a religious concern, a certain 'aesthetical' trend or a matter of identity.

How have they been relevant to a community which had no frequent access to the Temple or Jerusalem as a holy centre? Could the indication of the objects change in a more Gentile environment like Jordan?

Perhaps more important – where should we draw the line for a definition of Diaspora? Would the community of Tall Zira’a consider itself outside the borders of ‘Biblical Israel’ as we do nowadays or would they feel connected to the area of Galilee and Iudaea more than towards the Decapolis of Gadara?

In an interdisciplinary approach regarding material finds and texts my work is trying to understand the daily life in the Diaspora – or where Diaspora began.

The Function of Desert Kites: A New Hypothesis

Mariam Shakhmuradyan (Yerevan State University / National Academy of Sciences of Armenia)

‘Archaeology of Religion, Rituals and Temples’

The present paper discusses the function of large-scale stone structures known as ‘desert kites’. These structures have been discovered in huge numbers (∼ 5800) in the Middle East (Armenia, Turkey, Iraq, Syria, Jordan, Saudi Arabia) and Central Asia (Uzbekistan, Kazakhstan). Though the research of ‘kites’ has a century-long history, neither the function nor the place and time of their origin have yet been determined. The existing archaeological data suggests that ‘kites’ of the Near East were built between the Neolithic and Iron Ages. The most widespread view is that ‘kites’ served as hunting traps. Other views have also been advanced, including that they were used as corrals or as fortresses. Based on the analysis of the structure, forms and cultural landscape (cultic buildings, necropoles, petroglyphs, idols, etc.) of the ‘kites’, this paper proposes that these structures were not hunting traps or corrals, but were cultic buildings.

The Early Parthian Palace at Charax Spasinou, Basra province, Iraq. Preliminary results

Mary Shepperson (University of Liverpool)

‘Fieldwork and new Research’

Alexandria-on-Tigris was the last city founded by Alexander the Great before he died in 324 BC. It was to be a great port city at the head of the Gulf, connecting the Indian ocean sea trade with the overland trade routes west to Palmyra, Petra and beyond. It continued in this role with varying fortunes until the 3rd century AD. The city is generally known by its later name as Charax Spasinou, and in 2016 the Charax Spasinou project was initiated with the aim of surveying the site and its surrounding area, including extensive magnetometry survey. Limited excavation was also undertaken in the form of small test trenches intended to ground-truth selected parts of the geophysical results. In autumn 2018, test excavation targeted a very large building, identified through the magnetometry survey, which appears to be a palatial residence dating to the 2nd-1st centuries BC. This dates the building to the early part of the city’s life, which was punctuated by destructive flooding episodes. The preliminary results of this work are presented here, showing the scale of the monumental architecture and demonstrating the potential of the site for further work.

The Reuse of the Metsamor City Quarters as a “Burial Place” from the Urartian Period to the Late Antiquity

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2 Service for the protection of historical environment and cultural museum-reservations, Ministry of Culture, Yerevan

‘The Dead and the Living: Integrating the Evidence’

The Metsamor archaeological site is located in the Armavir region (Republic of Armenia). The excavations were carried out by the joint
Armenian-Polish archaeological team and were concentrated in the northern terrace of the Big hill (Mets Blur).

During the excavation seasons 2013-2018 in the area of the northern city quarters of Metsamor, ten human skeletons have been unearthed, suggesting that some were victims of a raid on the settlement. Some of the walls and the corners of the buildings in this area were adapted for the burials. The anthropological materials are dated back mainly to 7th -6th cc. BC and 1st -3rd cc. AD.

The excavated area of the city quarters (about 500 square meters) are distinguished by several cultural and stratigraphic layers, where the evidence of fire, destructions and reconstructions has been documented. Hereby, besides the actual graves, the remains of individuals (complete and non-complete) were unearthed in the free areas among the earlier structures. Taking into consideration the above mentioned, as well as the directions, situations, not right anatomical positions of the skeletons, we can assume that those individuals have not been buried.

Therefore, we can conclude that the examined area of the city quarters during the Late Urartian period because of some natural or/and anthropogenic factors has been destroyed and probably been abandoned for a while. The existence of not buried individuals can be explained by those situations, but for sure during the period of Late Antiquity the same area has been reused as a “funeral place” or cemetery. The reuse of urban quarters as a funeral area maybe was a part of social-political reality of that period and its reflection, while the further examination of the materials can lead to more detailed analyses and results to understand the borders and distribution of the fixed situations.

People, places and things in Late Pleistocene and Early Holocene Wadi Faynan, Southern Jordan

Sam Smith (Oxford Brookes University)

‘Sedentism – Mind the Gap’

A series of Late Pleistocene and Early Holocene occupations in Wadi Faynan span the traditionally accepted time period for the transition to sedentary lifeways in SW Asia. However, criticism of simplistic dichotomies between mobile and sedentary communities demands that we develop more sophisticated models of mobility at this time. Beginning with a consideration of Late Pleistocene and Early Holocene landscapes in Southern Jordan, this paper will explore the potential of Epipalaeolithic and Early Neolithic material culture to contribute to these debates. Results suggest that analysis of material culture at arrange of scales may allow us to reconstruct patterns of interaction; exploring how people moved through their landscapes and interacted with other groups both in the Faynan region and more widely across the Levant.

Empires and their “Neighbours”: Representations of Nubians and Puntites in the Egyptian Empire

Zachary Stancombe (University of Cambridge)

‘Mind the Gap’

Within studies of the Near East, valuable insights can be obtained by looking at differing comparisons with the smaller, less focused upon regions. This is evident with Egypt and its neighbour to the south; Nubia. Empires commonly misrepresent the various groups they dominate in order to promote their own interests and this is increasingly evident in Egypt’s relationship with Nubia. However, a more nuanced approach, combined with a comparison to Punt, another of Egypt’s neighbouring regions, reveals just how impactful differing relationships can be. Using visual representations in the New Kingdom, around the time of Thutmose III, when the powerful Egyptian empire was possibly at its zenith, shows that the usual iconography of Empire is far less prevalent than expected. Instead it is conflict, among more direct competition, that can drive victors to be more polemic with their representations, as shown by the comparison with a conquered Nubia versus the trading partner Punt. Both were key areas of resource trading and gathering for the Egyptians, and yet the conquered nation was represented far more negatively as ‘vile Kush’ versus the more positive ‘God’s land’ of Punt. This is particularly evident in the imagery found within the religious and mortuary temples that the Egyptians had constructed. Both types of site are richly decorated with visual imagery and iconographies. Study of this set of iconographic data can add to the understanding of Empire. Not only does it reflect potential historical occurrence, but it also has the potential to reveal the identity of the Egyptian Empire in terms of how it saw itself. Consideration of the way in which Egyptians perceived ‘difference’ will allow new insight into the Egyptians’ view of their own place in the cosmos and it is this sense of the Egyptian identity that can be used to interpret and explain their Empire’s
Policies and strategies. This research, utilising comparisons to understand issues of Empire identity, can be extrapolated to explore the way in which Empires across the Near East represent conquered groups, and then in turn, what this says about the Empire itself.

**Preliminary Results of the Zooarchaeological Analysis of Animal Bones Recovered from Recent Excavations at the Epipalaeolithic Site of Palegawra, North-Eastern Iraq**

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‘Archaeology of Food in the Ancient Near East’

Palegawra, a Zarzian cave site located in the Bazian valley in Sulaymaniyah province, is important for our understanding of Epipalaeolithic foodways in the Fertile Crescent. The site represents a long series of repeated occupation. The length of activity, combined with good organic preservation, has resulted in tens of thousands of bones being recovered from recent excavations. The site therefore provides an excellent opportunity to enhance our understanding of the subsistence strategies used by hunter-gatherers during this period in the Eastern Fertile Crescent.

Palegawra was first excavated by Howe and Braidwood in the 1950s. As was the norm during this period, sieving and flotation were not used. Consequently, the resulting zooarchaeological analysis conducted by Turnbull and Reed (1974) is problematic due to recovery bias. Although the majority of the interior of the cave was fully excavated in the 1950s, the entrance to the cave remained undisturbed. Investigation of this area, utilising modern excavation and recovery methods, has the potential to give us a clearer picture of subsistence at the site. With this in mind, as part of the University of Liverpool Eastern Fertile Crescent Project, excavations were renewed and took place in 2016 and 2017. In contrast to previous excavations, a comprehensive sampling strategy was undertaken, using a combination of flotation and dry sieving.

This paper will present the preliminary results of the analysis of the food taxa recovered from these excavations. Prey choice will be explored, along with butchery patterns and an initial analysis of body part data. In addition, the paper will also consider whether there were shifts in subsistence strategy between earlier and later phases of the site. The results of the recent excavations will also be compared to those from the 1950s and the role that differential recovery methods may have played in these findings will be explored.

**Avifaunal Remains from Shubayqa in the Late Pleistocene and Early Holocene**

Lisa Yeomans (University of Copenhagen)

‘Archaeology of Food in the Ancient Near East’

A substantial assemblage of avifaunal remains have been identified from Natufian and Early Neolithic sites at Shubayqa in northeast Jordan. This paper presents results of research focusing on how migration routes of these birds might reflect changing environmental conditions. Humans intensely exploited migratory waterfowl at certain times of the year which provided an important source of food in cooler months. Hunting methods resulted in large numbers of birds that were quickly processed for consumption and perhaps storage for leaner times of the year. The avifaunal remains from Shubayqa therefore provide evidence of an important source of food as well providing a proxy indicator of environmental conditions and bones of birds of prey are evidence that people used feathers and talons raptors possibly as a source of decoration. Later in the sequence of occupation at Shubayqa there is evidence that dogs were present in substantial numbers and the influence of a new hunting method with the use of dogs to target ground dwelling species of bird will also be discussed.

**Archaeological Excavations at Mount Zion (Jerusalem) – A Project of the German Protestant Institute of Archaeology**

Jennifer Zimni (German Protestant Institute of Archaeology, Jerusalem)

‘Fieldwork and New Research’

The current excavation project (since 2015) of the German Protestant Institute of Archaeology is located on the southwestern slopes of Mount Zion in Jerusalem – within the borders of the Anglo-Prussian Protestant Cemetery.

Mount Zion had been included in the walled city of Jerusalem throughout various periods of time.

The relevance of Mount Zion for archaeology lies in its continuous settlement from the Iron Age until
the Byzantine and Umayyad period.
The project of the GPIA contains two excavation areas in total – area 1 which will be presented in the following – and area 2, the so called Greek Garden, located uphill Mount Zion, towards the Dormition Abbey.

Area 1 is already known as the location of the “Gate of the Essenes” an often challenged term which earlier excavators have established for the found gate according to the description of Flavius Josephus in the “Jewish War” (§§ 142-148).

As the gate had been of interest for several years (Maudsley in 1973, Bliss and Dickie in the 1890s and Pixner in the 1970s) the multi-annual campaigns of the GPIA aim to explore the settlement phases linked to the southwestern city gate from the 8th century BCE until the 8th century CE.

After excavating parts of the south-western city gate and the corresponding walls dating from the Iron Age over Hasmonean/Herodian to the byzantine era, it was also possible to examine the adjacent domestic settlement structures.

This year’s campaign also revealed that byzantine domestic structures were built directly over a paved Roman street. The walls of the byzantine rooms still show large amount of plaster. Inside the rooms there were still some pieces left of simple white mosaic floors.

Additionally the GPIA excavated a limekiln built of dry masonry inside the byzantine settlement proofing that also craft activities had taken place on Mount Zion.

Concluding, the GPIA project on Mount Zion promises unique insights into the past 3000 years of Jerusalem’s history.

Within the end of the field season 2018 large parts of the byzantine city in this area have been uncovered. Besides residential houses overbuilding older roman infrastructures also cisterns as well as hydraulic and craft installations were uncovered.
Poster Abstracts

Size Matters: Revisiting the Issue of Site Boundary at Metsamor in the Light of New Evidence
Otto Bagi (University of Warsaw)

The multiphase (ca. 4th millennium B.C. to 17th century A.D.) settlement and cemetery of Metsamor in the northern Ararat Plain, Armenia attracted the attention of archaeologists for over 70 years. However, one of the most fundamental research questions, the extent of the site, remains unresolved. This issue was not seriously addressed since the publication of the excavation monograph 'Metsamor' in 1973. Since then, more than 30 years of fieldwork took place at the settlement and its necropolis, alas largely unpublished, which rendered the conclusions of the monograph mostly outdated. The recent discovery of unpublished maps and plans dated to the late 1980s – early 1990s prompted our team to revisit the issue and compile a new dataset through mostly non-intrusive methods and pit our results against the hypothesis of previous excavators. This poster will present the preliminary results of our survey project and proposes the redefinition of site boundaries during the main phases of the settlement and cemetery: from the Late Bronze Age to the end of Urartian period.

Preliminary Analysis of the Worked Bone and the Production Sequence from Shubayqa 6
Asta S. Halvorsen (University of Copenhagen)

A large assemblage of worked bone artefacts has been uncovered from the PPNA site of Shubayqa 6. In the 2018 season of excavation, a small cluster was excavated on top of a floor layer. The cluster entailed 6 grooved stones, along with 18 pieces of worked bone, 19 stone and ostrich eggshell beads, as well as raw materials and preforms of ostrich eggshell. This poster will present a short preliminary analysis of the worked bone assemblage with a special focus on the production methods, specially a proposition of the function of these grooved stones in the production sequence of worked bone. Experimental reproduction of the bone points using the grooved stones showed great promise and could possibly provide great insight in to the possible uses of grooved stones. The grooved stones were also very successful in creating polish for worked bone and ostrich eggshell beads. Grooved stone have previously been found at Shubayqa 6, but these have been manufactured from the local basalt or pumice. The grooved stones found at this cluster were manufactured from non-local soft stones.

How to Remove a God
Isabelle Hood (University of Glasgow)

How do you actually go about removing a god? How do you really discourage, demote, replace, forcibly remove or ban, or kill a god? Often such changes are just a result of passage of time, evolving circumstances, different groups and traditions in different places. Sometimes it’s a more intentional attempt though.

This overview is an illustrative guide to themes relating to the above from the Ancient Near East. It looks at the effects of time (syncretism, political and demographic change, effect of local champions, waning popularity, removal and destruction, replacement). It looks at framing changes as the actions of the gods themselves (whereby the gods decide the hierarchy, can kill, banish, and otherwise undermine each other). It looks at changes to effectiveness of gods (gods that are retired, demoted, reduced to aspects of other gods, their myths re-attributed to others, gods who can be protected against…).

It seeks to draw together themes to illustrate that, sometimes, even omnipotence can’t save you in the end…

The Hanging Vessels from Metsamor Cemetery. Form and Function
Mateusz Iskra (University of Warsaw) and Tigran Zaqyan (Service for the protection of historical environment and cultural museum-reservations, Ministry of Culture, Yerevan)

Among the most characteristic ceramic findings from the Metsamor tombs dated roughly to the Iron I period are highly decorated jugs with three or four suspension lugs. These objects had been encountered mainly inside kurgan chambers together with numerous bronze artifacts and other precious items. Owing to the fact that some “ceremonial” bronze objects were also attached to the vessel suspensions it is probable that hanging jugs had some religious connotations in local society. This view is supported by a lack of sherds
belonging to this vessel type from the settlement area. In addition the form of hanging vessels that is popular in Metsamor is very rare in other contemporary sites from the region.

The Obsidian Assemblage from Sofular Höyük, an Early Neolithic Site in Central Anatolia

Murat Karakoç (Gazi University, Ankara) with contributions by Stuart Campbell and Elizabeth Healey (University of Manchester)

Sofular Höyük is a small, aceramic Neolithic site in Central Anatolia, discovered in 2011 and excavated in 2016 and 2018 by Professors Okşan Başoğlu and F. Volkan Gungördü. It is located at the north-eastern edge of the Central Anatolian obsidian source region and is broadly contemporary with better-known sites in the region such as Aşıklı Höyük and Musular, as well as those on the Konya plain.

The chipped stone assemblage is large (some 4835 artefacts have been examined to date). It is dominated by obsidian, although there are a few artefacts of basalt and flint; the flint artefacts were presumably made from the flint eroding from a nearby outcrop, although there is no indication of any flint working on site. The nearest obsidian sources, on the other hand, are between c. 40 and 65 km to the south and west, some across mountainous terrain, but, unlike the flint, the obsidian was acquired as raw nodules and reduced at Sofular to produce blades and flakes, many of which were utilised without further modification but others were abruptly retouched along an edge or transformed into small geometric forms, scrapers and arrowheads.

The artefacts in the assemblage have been individually recorded (by MK) according to their techno-typological attributes and visual characteristics which suggested that more than one type of obsidian had been used. To test this we geochemically analysed the 133 artefacts available to us (about 2.75% of the obsidian assemblage) using pXRF following the Manchester Obsidian Laboratory protocol. The results showed that four compositional groups of obsidian were present which we were able to match to the elemental composition of the source samples in the Manchester Obsidian Laboratory’s geo-referenced source collection; they demonstrate that obsidian was obtained from four different sources, some of which were unexpected.

These results and a general overview of the techno-morphological aspects of the assemblage will be summarised in the poster. We will also discuss the compatibility of the visual analysis with the geo-chemical results and the importance of having a comprehensive geo-referenced source collection for assigning artefacts to source. Finally, the use of obsidian will also be compared to that of other contemporary communities.

Agricultural Sustainability of a Chalcolithic Community in Southern Marmara (5900-5750 cal.BC): Archaeobotanical Materials from Aktopraklik, Northwest Anatolia

Emma Percival (University of Liverpool)

Anatolia is a key region in researching the origins, development and spread of agricultural economies. My research on Chalcolithic plant use in Northwest Anatolia (south Marmara region) is based on the study of carbonised plant remains from the site of Aktopraklik (Bursa, Turkey). The well-preserved nature of the materials allow for the examination of crop species used by the prehistoric inhabitants of the site alongside an evaluation of crop processing and use areas and their organisation in relation to site architecture and planning. The broad suite of crops identified at the site demonstrates the diversity of plant use at the site, indicating sustainable and well-adapted agricultural practices and culinary technologies. Although archaeological research within the region has intensified in recent years, archaeobotanical research remains underrepresented in this important region. Consequently, the findings from the Aktopraklik archaeobotanical assemblage will provide novel insights into our understanding of the changing environmental and subsistence strategies of the Marmara region, informing on the wider socio-economic interactions in Northwest Anatolia and beyond.

The Zagros in Prehistory: Geography, Chronology, Demography

Joe Roe (University of Copenhagen)

As the eastern arm of Braidwood’s “hilly flanks”, the Zagros Mountains are of critical importance to the early prehistory of Eurasia. Pioneering field research by figures such as Flannery, Hole, and Mortensen, confirmed that the region has a rich Epipalaolithic and Neolithic archaeological record. Significant results from the Middle Palaeolithic, Upper Palaeolithic and Chalcolithic have also been reported. However, political instability in the 1970s–1990s shifted the attention of researchers from the Zagros to more accessible
regions of Southwest Asia. As a result, our knowledge of the region lags significantly behind regions such as the Levant and Anatolia. After this long hiatus, active field research into the prehistory of the Zagros has resumed in the last decade, with new projects initiated by Iranian and Iraqi archaeologists as well as renewed international collaborations. These include the Tracking Cultural and Environmental Change (TCEC) project, a collaboration between the University of Copenhagen and Razi University (Kermanshah, Iran).

One of the aims of the TCEC project is to gather “baseline” data on basic issues of chronology, prehistoric geography and palaeoeconomy that is lacking for the Zagros in comparison to other parts of Southwest Asia. To that end, this poster presents a review of known prehistoric sites and published radiocarbon dates from the Zagros. Statistical analysis is used to explore the chronology, site distribution and palaeodemography of the region according to currently available data.

A Survey of Early Prehistoric Sites in the Razavar Valley (Kermanshah, Iran)

Joe Roe and Patrick Nørskov Pedersen (University of Copenhagen)

This poster presents the results of a survey of the Razavar Valley (Kermanshah, Iran) undertaken jointly by the University of Copenhagen and Razi University in 2018. This part of the Central Zagros has produced some of the earliest evidence of the ‘Neolithic Revolution’ in the eastern Fertile Crescent (e.g. at Asiab, Ganj Dareh, and Sheik e-Abad), as well as important Middle and Upper Palaeolithic remains, but our understanding of the wider landscape context of these sites remains incomplete. We surveyed a part of the Kermanshah plain, otherwise probably the best known area of the Central Zagros, that has not yet been systematically explored: the basin of the Razavar River, a tributary of the Qara Su to the north of Kermanshah city. Our aim was to perform a high-coverage, targeted survey with a focus on identifying sites with potential for excavation. We used a tablet-based, “paperless” recording system to map, photograph and document sites, as well as salient natural features such as springs. The survey team was also equipped with GPS-tracking watches, to maintain a precise record of which areas were surveyed. In total we identified 59 sites. Preliminary, 19 of these are of potential early prehistoric date, although many are only small surface scatters. Of particular interest are two tells, Tepeh Ghalah B (RZVR67) and Tepeh Salaar Abad (RZVR68), situated in the central part of the valley. A summary of our findings at these and other sites in the Razavar Valley are presented in this poster.

Metsamor: The Life of a Settlement Shown through the Small Finds

Dan Socaciu (University of Liverpool)

This poster aims to showcase some of the small finds recovered from the recent excavations at the site of Metsamor (Armenia). The Armenian-Polish Archaeological Mission, started in 2013 and ongoing, has been focusing on a settlement area north of the citadel, uncovering a complex, multi-layered stratigraphy. Alongside significant quantities of pottery and animal bones, the backbone of most archaeological research, the material record is rich and diversified. Grinding stones, loom weights, fishing net weights, alongside rarer objects such as a bread stamp and a cache of polished stone tools, speak of domestic activities, but there are also luxury items that belong to a rich community with access to foreign trade goods. Small finds recovered from archaeological contexts can inform about a wide range of activities within a site, both secular and religious, providing information on both the everyday lives and actions of people in the past, and the more unusual or special events. The site of Metsamor is no exception to this and is a good case study for the insights that small finds can provide into the lives of past communities.
Food and drink in Liverpool

Liverpool has countless places to eat and drink to offer, with Bold Street in the centre - offering a wide variety of establishments - a good place to start. Further from the centre the Baltic Triangle is known for the interesting and creative venues in old warehouses, and Lark Lane - near Liverpool’s parks - for various more intimate restaurants and bars. The options in Liverpool are endless, but for the purposes of this conference a selection of tried and trusted places to eat and drink near campus and the city centre are presented below.

**Food**

*The Quarter offers good bites from breakfast to dinner.*

7 Falkner St, open 9:00-23:00.

Enjoy some good pub food at *The Blackburne Pub & Eatery*, best sticky toffee pudding around!

24 Catharine St, open 9:00 – 23:00.

*The Pen Factory* is good for a nice bite and a drink.

13 Hope St, open 11:00-0:00 (closed on Sundays).

For a lovely Indian or Bangladeshi meal, visit *Remora*.

4 S Hunter St, 17:00-23:00 (reservation advised).

You can find cheap and easy student food and pints at *The Font*.

1 Arrad Street, open 11:00-23:00.

For good Portuguese food and an easy-going ambiance, we can recommend *Café Porto*.

14 Rodney St, open 12:00 – 00:00 (closed on Sundays).

Enjoy great tea, scones, and meals at *Leaf*.

65-67 Bold St. Open 9:00-22:00 (closed on Saturdays).

Go to *Crust* for Italian-approved pizza.

25 Bold St, open 11:00-00:00.

Tasty Indian street food is offered at the two locations of *Mowgli*.

69 Bold St and 3 Water St, open 12:00-22:30.

**Drinks**

For a good cup of freshly roasted coffee go to one of the two locations of *92 Degrees Coffee*.

24 Hardman St, and 36 Myrtle St, open 10:00 - 18:00.

Enjoy a very wide selection of ales and beers at *The Ship & Mitre*.

133 Dale St, open 9:00-0:00.

The Liverpool classic *The Philharmonic Dining Rooms* uniquely boasts Grade I listed gentlemen's urinals!

36 Hope St, open 11:00 – 0:00.

Have an ale or cider in the grungy little pub *The Pilgrim*.

34 Pilgrim St, open 12:00 - 23:00.

At *The Grapes* you can enjoy a drink and live jazz on Sundays.

60 Roscoe St, open 11:00 - 1:00.

Live music, a good pint, and vegan comfort food. You can get it all at *The Caledonia*.

22 Caledonia St, open 12:00 - 1:00.