

THE 11<sup>TH</sup> INTERNATIONAL CONGRESS  
ON THE ARCHAEOLOGY OF THE  
ANCIENT NEAR EAST

LUDWIG-MAXIMILIANS-UNIVERSITÄT  
MUNICH, GERMANY  
03 – 07 APRIL 2018







# The 11<sup>th</sup> International Congress on the Archaeology of the Ancient Near East

03 – 07 April 2018

Ludwig-Maximilians-Universität  
Munich

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## Welcome Address

Dear Guest,

We warmly welcome you at the 11th ICAANE in Munich!


For the next days will have the opportunity to exchange your ideas about the fascinating past of the Near East with more than 700 scholars from more than 40 countries.

We, the members of the organizing committee, did our best to prepare an agreeable setting for the conference. More than 600 lectures will be presented in up to 14 parallel sections and workshops. Since the lecture rooms are all very close and the lectures will start at the time indicated in the programme, it will be possible to switch between sessions. More research is presented on more than 70 posters.

There will be ample space for meetings and social gatherings during the coffee breaks and two evening receptions.

All the necessary information is summarized in the 11ICAANE program and in the information sheets in your conference map.

For any further questions or help please turn to the conference bureau in A 120. The programme and abstract can be found at <http://www.icaane2018.vorderas-archaeologie.uni-muenchen.de/programme/index.html>.

Up-to-date information concerning changes in the schedule will be announced on [twitter](#)  (@11icaane / #11icaane) and on the notice boards in the Main Hall.

We wish you a very pleasant time in Munich and hope you enjoy this week full of new insights into the Archaeology of the Ancient Near East.

Prof. Dr. Adelheid Otto

Head of the Institute for Near Eastern Archaeology

LMU Munich

Host of the 11th ICAANE

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**ABBASNEJAD Seresti**, Rahmat – **ASADI**, Kamal  
University of Mazandaran

### **The Analysis of Chalcolithization of Central Plateau of Iran on the Basis of Archaeometallurgical Data**

From the viewpoint of the studying of craft specialism, metalwork enjoys more distinct specifications than the other specialties. The process of the formation and the expansion of metallurgy in central plateau of Iran during the chalcolithic period onwards have been possible by some mechanisms such as planning and management about metal production and procurement of metal objects and manufactures for native and exotic societies. The craft specialism of metalwork in prehistoric societies of central plateau of Iran, has been accomplished by five groups consist of miners, casters, molders, merchants and consumers in the form of industrial chain At the end of 5th millennium and during the 4th millennium B.C.

The analysis of some evidences which were discovered from ancient mines and archaeological sites indicate that the ancient in this region exploited the mineral materials, shaped them into objects, and created a metallurgical cycle. The studying on explored ancient materials such as metal, precious and semi-precious stones such as agate, turquoise, marble and azure from the ancient sites and the graveyards and the other simultaneous areas in the central plateau of Iran, and the focusing on probable sources of the mentioned materials and finally the discovering of some evidences that indicate the existence of the early administrative mechanisms in the mentioned region, conveys the currency of goods' exchange and trade in a level of the regional and beyond regional. The consumers of metal products divided into two groups: native and un-native groups.

Discovering some indicators of the 4th millennium culture of Uruk such as beveled rim bowls in the central plateau of Iran and central Zagros like Tepe Sialk, Tepe Qabristan, Arisman and Godin Tepe sho cultural interactions between these regions and Southwest of Iran and Mesopotamia. According to the present evidences, metal has entered to the exchange cycle since 4th millennium B.C. Thus, the central plateau of Iran has played its role at the economic, social and political evolution of 4th millennium B.C. in Southwest Asia.

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**ABU JAYYAB**, Khaled  
University of Toronto

### **Hamoukar as a highland gate way to the lowlands: Mobility and its role in shaping LC1 and LC2 communities**

The southern extension of Hamoukar (Khirbet al Fakhar), in northeastern Syria, is considered an anomaly among early Late Chalcolithic sites (LC1-2 4400-3800 BC) in the region both in terms of its size and the amount of imported obsidian raw materials recovered. Interpretations of the site's formation and its role in the settlement history of the region have been made with these variables in mind. Such interpretations (see Al Quntar et al. 2011; Ur 2010; Wilkinson 2002) tend to emphasize the role of group interaction and mobility in the foundation of the site.

Most notably, Wilkinson (2002) argued that the site's primary function was a temporary gathering place for mobile groups engaged in craft production activities and exchange. However, the role of mobile groups in the foundation and utilization of the site remains restricted to hypotheses. Examining the ceramic

assemblage at the site and the processes that led to assemblage formation contributes significantly to this debate.

Technology and technological choices have been shown to be socially embedded (Lemonnier 1993) and reflect group affiliation and in some cases even group identity (Jones 1997). With this principle in mind, the formation of a ceramic assemblage at a given site carries within it a history of relations that could be teased out and used to understand group interaction. In this paper I show that the study of the ceramic assemblage from the site contributes significantly to the understanding the role of mobile groups at Hamoukar and adds to the robustness of past arguments. Employing a chaîne opératoire approach, supplemented with petrographic analyses, allows us to isolate different communities of practice based on distinct sub-assemblages. In this paper I will show that some of the sub assemblages (grey wares) could be considered foreign to the region and have strong affiliations with highland Anatolia. I will combine this evidence with other lines of evidence (Obsidian analysis, ethnography, and site morphology) in order to create a more nuanced picture of the role of mobility in Hamoukar's history and provide a partial reconstruction of mobility cycles within Northern Mesopotamia.

I will argue that vertical mobility during the LC1-2, between the highlands of the Taurus and the lowland Jazira plain (northern Syria and Iraq), played an important role in the formation of the Hamoukar. Moreover, I will demonstrate that the material culture of mobile groups contributed to the creation of what is broadly referred to as a 'ceramic spheres' of interaction in the eastern Jazira.

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**ADACHI, Takuro**  
Kanazawa University

### **A Chronological Division of the Iron Age III Period at the Tappe Jalaliye Site in Gilan, Northern Iran**

Iron Age gravesites are common in Gilan, Northern Iran. As the result of many years of research, some archaeologists have subdivided this era into three periods—I, II, and III. Of these, the Iron Age III period is thought to date between approximately the 8<sup>th</sup> century cal BC and the 6<sup>th</sup> century cal BC. During field seasons between 2002 and 2004, the Tappe Jalaliye site at Gilan in Northern Iran was excavated by joint Iranian and Japanese archaeological expeditions. The aim of this paper is to reconsider the Iron Age III period in Northern Iran on the basis of C14 dates from this site. Observations reveal the presence of two Iron Age III building levels at Tappe Jalaliye—layer II and layer III. Seven C-14 dates have been obtained from these levels—two from layer II and five from layer III. Those from Layer III approximately correspond with the 8<sup>th</sup> century cal BC, the beginning of the Iron Age III period. Moreover the presence of incised decorations and large jars from this layer provides additional evidence of a pottery assemblage from this period.

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**AGHA, Nuha**  
Haifa University  
**BARBÉ, Harvé**  
Israel Antiquities Authority

### **Archaeozoological Perspectives on Late Medieval Holy Land: Diet and Status in the Mamluk Castle of Safed**

The study of faunal remains is crucial for reconstructing past economic systems, and for identifying cultural patterns that are reflected in food preparation and consumption. Yet, only a handful of faunal assemblages from the late medieval times in the Holy Land were hitherto systematically studied. An archaeozoological study of remains from the castle of Safed is presented to highlight aspects of daily life in the Mamluk state on the one hand, and the potential contribution of similar studies to the archaeological research of urban Islamic societies, on the other.

During the Mamluk period (1291–1516 AD) Safed served as the capital of the Galilee, ruling the land between Nahr el-Litani and Samaria. In its centre was the castle – a focal point of political and economic power. Our data derive from a corridor of the castle that was filled with a dense accumulation of domestic refuse. The large quantity of pottery that was retrieved included both local and important wares that were dated mostly to the 14th–15th centuries. The assemblage thus provides a rare opportunity to study urban life of the Mamluk elite.

The data indicate that the animal economy was based heavily on raising caprines, with a special emphasize on sheep. The demographic profile of these animals is indicative of herd management oriented towards the production of meat. A high frequency of food waste was observed, in oppose to the high frequency of butchery waste that characterizes the surrounding dwelling quarters. These results reveal the high status of the inhabitants of the castle, and shed light on their relations with the population of the city itself. They also point to the particular place of Safed in the hierarchy of the Mamluk regime in the Holy Land.

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**AHMAD, Mustafa**

University Lumière 2, Lyon – Institut français du Proche-Orient, Erbil

### **Islamic Archaeology in Iraqi Kurdistan: Sulaimaniya Region as a study case**

Islamic archaeology emerged as an independent field of inquiry more than one hundred years ago. It developed relatively late compared with other branches of archaeology, but has since gained considerable momentum. At the outset, the excavation of Islamic sites was characterized by a desire to recover artifacts, especially as that ensured funding and sponsorship for projects. In the twentieth century, however, the discipline of Islamic archaeology has become more rigorous, and the late nineteenth-century emphasis on recovering artifacts has been superseded by an outlook based on a more comprehensive examination of the material remains of the past. While undergoing this methodological change in the twenty-first century, Islamic archaeology also responded to a variety of local conditions unique to it alone.

Some excavation projects have been executed since the last century in Syria, Lebanon, Palestine and Iraq opened the gate on the subject of Islamic archaeology amongst the other branches of archaeology. And thanks to the approaches that have been worked on by Donald Whitcomb, Alan Walmsley, Marcus Milwright and others, this subject has been more illuminated on. The focus of the archaeologists on few specific regions shed the light on the importance and the originality of Islamic archaeology in each region. *The imposed question here: can we talk about Islamic archaeology in Iraqi Kurdistan?* This paper sheds light on the case of Islamic archaeology in Iraqi Kurdistan, and in the Sulaimaniya region as a case study. Excavations that have been done in the last few years in this part of Iraq focused mainly on the ancient periods. On the other hand, many sites have Islamic occupation phases in their layers. Through following and studying the Islamic pottery in some excavated sites (such as Kani Shaie, Girdi Qala, Yasin Tepe and Bakr Awa) and the pottery obtained from the survey projects (the survey projects in Rania, Peshdar, Bingird, Sharazur, Tanjaro and Qaradagh), we can draw an outline of the Islamic archaeology in the studied region.

The methodology applied in this study is focused on following the Islamic phases in the archaeological sites in Sulaimaniya, comparing the ceramic results in each area and the reasons behind the divisions of

the region into sub-regions depending on the diversity and variation of pottery traditions and techniques and the different landscapes in the Islamic periods.

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AHRENS, Alexander

German Archaeological Institute, Orient Department, Damascus Branch

### **From the Jordan Valley to the Transjordanian Highlands – First Results of the Wadi Shu‘aib Archaeological Survey Project**

The Wadi Shu‘aib Archaeological Survey Project (WSAS) was initiated in 2016. Its aim is a thorough survey and re-evaluation of all archaeological and historical sites in the Wadi Shu‘aib, which connects the southern Jordan Valley with the Transjordanian highlands near the town of as-Salt, ranging from the Neolithic to the Ottoman Period. The paper presents the results of the survey campaigns conducted in 2016 and 2017. The two campaigns of the WSAS have shown that the region was inhabited from at least the Pre-Pottery Neolithic until the Islamic and Ottoman periods.

During the survey campaigns conducted in the recent years, several archaeological sites along the course of the wadi were surveyed thoroughly. Six of these sites were already known in the scholarly literature (such as Khirbet Jazzir, Khirbet as-Suq, Khirbet el-Mu‘allaqa, the Wadi Shu‘aib Neolithic site, Tell Bleibil, Tell Nimrin), but detailed descriptions of all of these (including damage assessment) were altogether lacking. The remaining sites, such as Khirbet Shu‘aib (located close the Mosque and Shrine of the Prophet Shu‘aib), were hitherto unknown and were therefore surveyed for the first time.

One important find of the survey thus far was a rim fragment of the distinctive Cypriote White Slip Ware II bowl (“milk bowl”) at Tell Bleibil, located at the mouth of the Wadi Shu‘aib, which thus far was thought to be devoid of Late Bronze Age occupation. This may close the apparent gap of occupation in the vicinity of the region, since Tell Nimrin (located ca. 1500 m south-west of Tell Bleibil) features Middle Bronze Age IIB occupation, followed by Iron Age remains, whereas Tell Bleibil was thought to feature Early Bronze Age remains, followed by Iron Age remains. The find if the pottery fragment of WS II Ware may alter this picture to some degree, making it possible to fill this “gap of occupation” in this region.

Tell Bleibil was also found to feature a fortification wall made of mudbricks, as was already noted by earlier scholars such as W.F. Albright and N. Glueck. Targeted archaeological excavations and radiocarbon sampling may help to clarify the date of this structure and the dating of this site in general.

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AJORLOO, Bahram

Islamic Art University of Tabriz

### **An Archaeological Expedition to the Arch of Alishāh in Tabriz 2017: An Approach to a Revision of Previous Investigations**

Renowned as the “Arch of Tabriz”, the religious complex of Alishāh of Tabriz, including a religious school (*madrasa*), a convent (*zāwīya*) and a tomb called *Tāwus Khāneh*, was constructed under the patronage of Khwājeh Tāj al-Din ‘Alishāh Tabrizi, grand vizier of the Ilkhanid ruler. According to historical sources of the Qajar period, this religious complex, damaged by terrible earthquakes of Tabriz and deserted after the end of Ilkhanid rule, had been converted into the fortress of Tabriz by ‘Abbās Mirzā Farmānfarmā, the Qajar crown prince, during the Russo-Persian war in 1804–28.

In 1971, Ali A. Sarfarāz directed the first archaeological expedition to the Arch of Tabriz and unearthed earlier architectural plans confirmed by Wolfram Kleiss (AMI 1981). Archaeologically, the remainig *iwān*

of the Arch of Tabriz is not the ruins of the famous Mosque of ‘Alishāh. Evidently, the remains of that mosque should be sought at the eastern side of the site, wherein the fantastic stucco Kufic inscription of *al-Salāt Me ‘rāj al-Momen* had been left by 1981. The *iwān* itself was constructed in two phases by the attaching processes of two detached earlier (northern) and later (southern) buildings.

From a later investigation undertaken in 1999-2001, B. Ajourloo proposed that the remaining *iwān* is to be identified as a mausoleum dedicated either to Sultan Abu Sa‘īd Bahādor Khan or Kh<sup>w</sup>ājeh Tāj al-Din ‘Alishāh-e Tabrizi himself (Tāwus *Khāneh*). B. Ajourloo, moreover, dated that *iwān* to the period 1318-38, on the basis of historical interpretations. Architecturally, the remaining walls of this building cover an area of 51 x 65 m.

An archaeological salvage excavation under the supervision of the author, in January–March 2017, at the northwest corner of the *iwān* that had not been excavated in 1971, led to some new findings: Contrary to A. A. Sarfarāz (1971) and B. Ajourloo (2001), the western wall had more than 65 m length toward the north; and the Qajarid bastion and stronghold built by ‘Abbās Mirzā had been constructed just on the top of ruined Ilkhanid walls. Furthermore, despite the fact that A. A. Sarfarāz recorded no traces of tile working and pottery sherds in his 1971 excavation around the high *iwān*, a mass amount of tile works and pottery sherds related to the Ilkhanid period was recorded in the northwest corner. This supports the hypothesis that the remains of the mosque, madrasa and convent should be sought on the northern, north-eastern and north-western areas of the site. It should be noted that Ilkhanid–Timurid historians report the location of ‘Alishāh’s tomb just behind the mosque, wherein the high *iwān* is placed that is postulated to belong to the Tāwus Khāneh by B. Ajourloo (2001).

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ALAFANDI, Rami – ABDUL RAHIM, Asiah  
International Islamic University Malaysia

### **The Aleppine Houses, Its Designs & Decorated Interiors During the Ottoman Era**

Aleppo is the second largest city in Syria and is the commercial capital of Syria. Aleppo has a long history, extending from the third millennium B.C. to the Islamic era. Islamic rulers made Aleppo great by rebuilding its walls, gates, towers and citadel. The Muslims also built mosques, schools, houses, inns, markets, hospitals, bathhouses, and public facilities. Consequently, Aleppo flourished and became an important station on trading roads. Aleppo was part of the Ottoman Empire from 1516 to 1918; the third largest city in the Ottoman Empire after Istanbul and Cairo. As part of this empire, local Aleppine architects and artisans combined their techniques and cultural heritage with those from other parts of the Ottoman Empire. Due to growth in population, the Ottomans developed and expanded the city, provided facilities, and established more neighborhoods outside of the walls. The polychrome wooden decorations flourished in the Ottoman era in Syria to decorate the wealthy houses by talented craftsmen to represent the owner’s wealth, social class, and knowledge. This paper employs a historical and descriptive approach to explore the history, designs and decorated interiors of the houses by using the documentation of the houses done by the first author from 2006-2010. Since 2012, much of Syria’s architectural heritage has been destroyed due to the conflict. In Aleppo, the losses in both ancient and modern parts of the city have been tremendous. Some traditional houses have been damaged. This paper will highlight the current situation of the Aleppine houses.

ALASAAD, Jumana  
Ruprecht Karls University Heidelberg

### **The Early Bronze Age Pottery from Tell Bakrawa and the plain of Shahrizor**

Recent surveys and excavations in the Shahrizor region of Sulaymaniyah province in Iraqi-Kurdistan are shedding new light on region's ancient history and cultural development. Bakrawa is one of several sites in this region, where occupational layers from the beginning of the Early Bronze Age are found in both the lower city and on the citadel, yielding significant assemblages of pottery.

In this presentation, I will review the latest results from study of the Early Bronze Age Pottery excavated at Tall Bakrawa. The paper will outline the typical characteristics of the Tell Bakrawa ceramic assemblage, and compare these with Early Bronze Age pottery from other sites in the plain of Shahrizor in northern Iraq. Examinations based on traditional pottery studies are supplemented by archeometrical analyses of the sherds from Bakrawa.

-----  
ALAURO, Silvia – HEINHOLD-KRAHMER, Susanne

### **Die „Tagebuchblätter“ von E.O. Forrers Türkeireise (1926) – Überarbeitung für ihre Edition**

Bei den „Tagebuchblättern“ handelt es sich um Aufzeichnungen einer Forschungsreise in die Türkei, die der Schweizer Keilschriftforscher und Hethitologe E.O. Forrer (1894-1986) mit Unterstützung der Deutschen Orient-Gesellschaft (DOG) und weiterer Sponsoren vom 17. August bis 28. Oktober 1926 unternahm. Während der gesamten Reise begleitete ihn der Würzburger Religionswissenschaftler und Byzantinist E. Weigand als Kenner der türkischen Sprache und der Türkei. Über weite Strecken dieser Reise mit von der Partie war auch der Altorientalist H.H. von der Osten aus Chicago.

Forrers Ziel dieses Unternehmens war es zum einen, die Richtigkeit seiner von Fachkollegen angezweifelten Lokalisierungen hethitischer Orte und Länder archäologisch nachzuweisen. Zum anderen wollte er einen für eine Grabung geeigneten Ort ausfindig machen, die er unter seiner Leitung plante, und die unter der Schirmherrschaft der DOG stattfinden sollte.

In unserem Vortrag möchten wir über einige interessante Aspekte, insbesondere über Erfolge und Misserfolge, von Forrers Reise sprechen, aber auch über Schwierigkeiten berichten, die sich bei unserer Arbeit an der Edition seiner Tagebuchblätter ergaben.

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AL-HAMDANI, Abdulmeer  
The Iraqi State Board of Antiquities and Heritage

### **The Settlement and Canal Systems in the Lower Southern Mesopotamia during the First Sealand Dynasty (1721-1340 BCE)**

#### Introduction

Ancient states and early complex societies emerged in areas where urban settlements had the resources to house large populations and where economic and political centers and institutions could be established to run society. By contrast, marshes, isolated deserts, mountain peaks and thick forests served as refuges for those who wanted to escape from the state.



This paper examines the hypothesis that under certain historical and environmental circumstances, the marshes of southern Iraq, which are normally considered places of refuge, could become centers of political power and develop a political organization independent of that associated with the irrigated areas and urban societies. The focus of this paper will be on the archaeological evidence for an example of political independence in the ancient Mesopotamian marshes during the first Sealand dynasty (1721-1340 BCE). The data will also help us to understand the archaeology of the Sealand during this time of political centralization in the southern Mesopotamian marshes. It is an attempt to understand the settlement and canal systems at the time when the marshes of southern Mesopotamia witnessed governmental structures and independence, the first Sealand Dynasty (1721 -1340 BCE). To date, all information concerning this dynasty has been based on textual sources unsupported by archaeological data.

### Questions and objectives

How were independent state institutions that are typically associated with state societies developed in the marshes of southern Mesopotamia, and what is the archaeological imprint of this development? Does the settlement system in the marshes differ from that in other areas? Does the settlement pattern show a linear distribution of settlements alongside elevated river levees and canal systems similar to the pattern that can be seen in the irrigated area? Or, does it show isolated turtleback islands within marshes and intensive "bird's foot" deltas? Or, do we find a combination of both linear systems and turtlebacks? Does the settlement system indicate the existence of large and sustainable settlements with centralizing institutions similar to those in urbanized areas, or does it indicate the dominance of small isolated and remote mobile villages and hamlets? In what ways was the settlement system impacted during the time that the marsh area was important politically? Were more sites in the marsh areas occupied? In what ways was the settlement pattern different during the Sealand and marsh dynasties compared to the preceding and the subsequent periods? How does ethnographic data from the contemporary marshes help us understand the settlement system, landscape, and the economic resources of the ancient marshes? How are settlements distributed in the landscape of the marshes?

These questions can be approached using a mixture of ethno-historical and ethnographic data to evaluate the economy and ecology during times of centralization in the marshes. What are the resources in the marshes that might allow people to practice political and economic independence or at least autonomy?

-----  
**AL-HUSSAINY, Abbas Ali**

University of Al-Qadisiyah, Department of Archaeology

### **Preliminary results of the 2016-2017 Mi-Enlil-Arakhtum Survey**

The "Mi-Enlil-Arakhtum", named after the two ancient branches of the Euphrates is a 2016-2020 survey project carried out in the area north of Diwaneyah, in the two districts of Sumer and Daghara. This area was only partially explored by Adams during the 1960s-1970s "Heartland of Cities" survey, while the greater majority was unsurveyed. The 2016-2017 campaigns allowed to identify hundreds of new sites dating from the Uruk to the Ottoman periods, with the Parthian and Sasanian periods providing the most extensive evidence.

The methodological framework applied to this project consists both in intensive topographic documentation through remote sensing and modern high-resolution devices such as UAVs (drones) and GPS and the careful collection of diagnostic materials from the surveyed sites.

The starting point of the survey project was to create a basemap including different types of satellite imagery, in order to detect new sites. Then, intensive survey have been carried out at the sites by using UAVs and GPS and creating topographic grids, for collecting diagnostic sherds, objects as well as animal

bones, soil and plant samples in order to provide additional information about the modern and ancient environment and culture.

-----  
**ALI, Cheikhmous**

UMR 7041 - Archéologies et Sciences De L'Antiquité

### **Reed Constructions in Mesopotamian Glyptic: State of the Question**

The marshy area of south Mesopotamia constituted the hinterland of cities since the fourth millennium BC. This is reflected by an exceptional iconographic documentation. These are scenes traditionally interpreted as illustrating the sacred stables of the goddess Inanna. A careful analysis of these documents, combined with several other archaeological evidence and ethnographic comparisons, reveals a better understanding of these architectural representations that not only evoke stables, but also various other public and private buildings. This new reading makes it possible to understand the organization of this zone and to show the role that the population of this "hinterland" has played in relation to the major urban centres of the time.

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**ALKHALID, Mohammed**

### **Social Vs. Genetic Change; the Formation of the Middle Bronze's Culture in Ebla**

Two important changes have marked the transition from the Third into the Second Millennium B.C. the first one is change in the material culture and the end of the Early Bronze Age pottery horizon, while the second is the appearance of the Amorites as dominant political power to role most of the Second Millennium B.C. urban centres in Syria and Mesopotamia. In this paper the relationship between the change in the material culture and the change in the population in Ebla will be the critical issue in understanding the transition phase. Preliminary results of Genetic and Anthropological-based study of the late third and early second millennium B.C. transition phase will be presented. Genetic and Isotopic analysis will be performed on the human bones found in Ebla and dated to the both phases of Early and Middle Bronze Age. Furthermore, the study of the pottery assemblage discovered in the same context of the bones under analysis will be carried out in order to define, when and how the Middle Bronze Age pottery horizon has been formed and affected by the "ethnic" change.

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**ALMASI, Tayebbeh – MOTARJEM, Abbas – MOLLAZADEH, Kazem**  
Bu-Ali Sina University

### **Tepe Yalfan Hemedan – Site in Iron Age III**

Iron Age III in western Iran especially in the cultural area of Hamedan plain is of particular importance in archeology studies. Regarding the historical position of Hamedan, undoubtedly there are many important settlements in this age that have not been well studied. Tepe Yalfan is one of the areas of Iron Age III in the southeast of Hamedan plain, which is located at the confluence of two Simin and Yalfan Rod. With construction of Ekbatan dam and its penstock, Tepe Yalfan was located in the middle of the dam. In 2006-2007, Tepe Yalfan was excavated two cultural Iron Age III and the Islamic Cemetery were identified. Due

to the limited excavation, only a part of mud-brick wall with rubble foundation was found. The pottery obtained from the excavation was compared with other sites such as Nushi\_Jan, Godin and Baba\_Jan to specify the history of the site. Based on conducted studies, Tepe Yalfan is a settlement associated with the center (the capital of the Medes) around 800 to 600 BC. The objective of this study is to investigate and explore the data obtained from the Yalfan site.

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**AMATO, Flavia**

University of Trieste, Scuola di specializzazione interateneo in Beni Archeologici

### **Aradetis Orgora: lithic artefacts of a site of the Southern Caucasus, Georgia**

The Aradetis Orgora mound, one of the most important archaeological sites in the Shida Kartli region of Georgia, in the Southern Caucasus, and the neighbouring Doghlauri cemetery revealed a large quantity of lithic artefacts, flakes and formal tools. They are made of the same materials, obsidian and chert, but different in purpose. This paper shows a synthesis of the ongoing analysis of the stone tools unearthed during the excavation of 2013 to 2016 on the Aradetis Orgora Main mound carried out by the Georgian-Italian Shida Kartli Archaeological Project and of those of the Doghlauri cemetery salvage excavation lead by prof. I. Gagoshidze in 2012 and 2013. Dated to the Kura-Araxes period (second half of the 4th-first half of the 3rd millennium BC) and to the Late Bronze/Early Iron Age periods (15th - 7th centuries BC), the stone tools from the settlement are strictly related to domestic and agricultural activities and are represented for the most part by sickle blades; whereas, the most attested group in the Kura-Araxes graves of the Doghlauri cemetery are projectile points linked to burial rituals. The main focus of the paper will be the analysis of shape variations of the sickle blades in the different periods, aiming to understand if the adopted morphology depends on functional efficiency or on stylistic and cultural choices.

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**ANVARI, Jana**

Freie Universität Berlin, Institute for Prehistoric Archaeology

### **Neolithic doom: Researching modern perceptions of the prehistoric transition to agriculture as negative heritage**

My postdoctoral project researches modern perceptions of the transition to agriculture during European/Near Eastern prehistory as an 'original sin' of humankind that set into motion a number of further developments, which in the present threaten the very basis of life of the human species. Such ideas – publicised in books, magazine articles, and TV and radio shows, which comprise the research data for this project – are incongruent with archaeological knowledge about the transition to agriculture and its long-term social effects, among which this presentation will focus on perceived negative social outcomes of farming, such as social inequality and warfare. This presentation seeks to explore this topic as a case of – so far – failing intangible heritage management: a failure of archaeologists to effectively communicate with the public about an episode in the past that is relevant to constructing identities in the present and trajectories for the future. However, since only archaeological research can provide factual knowledge about the centuries and millennia directly following the transition to farming, the *Neolithic doom* debate theoretically provides a prime opportunity for archaeology to present its strengths and relevance to a wide public audience.

ARAD, Alon

Tel Aviv University

## **High-Resolution Study of the Early Bronze III 'Plaza' at Tel Bet Yerah (Khirbet Kerak) and Its Implications for Migrant/Indigenous Interaction**

The renewed excavations at Tel Bet Yerah have revealed, since 2009, a large open area – provisionally termed 'the plaza' – that extends from the previously excavated Circles Building (the Tel Bet Yerah Granary) on the south, to a massive mudbrick wall on the north, covering an estimated 500 sq. meters. The high concentration of Khirbet Kerak Ware (KKW) found on the plaza, suggests that the area was used by 'KKW people' – the socially distinctive group generally considered to be part of the Early Transcaucasian (or Kura Araxes) cultural expansion at the start of the 3rd millennium BCE.

As presently understood, KKW-using newcomers inhabited the monumental, but unfinished and abandoned Circles Building that borders the plaza. With five distinctive phases defined above the mud plaster plaza floor, it is evident that the group used this space for an extended period and for a variety of communal, everyday activities such as food preparation, butchering, flint knapping and waste disposal. The excavation, designed with an emphasis on high-resolution artefact retrieval, allows us to methodically reconstruct the sequence of activities, to trace the spatial patterns of artefact distribution, and to compare the KKW-using and indigenous population's behavioural routines.

Presenting a quantified, systematic analysis of the stratigraphic sequence and spatial patterns, together with a review of the material culture, this study may serve as a basis for the reconstruction of KKW domestic activity in the 'plaza' and as a case study that will contribute to a more coherent discussion of migratory behavior and of social and cultural interactions.

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ARCE, Ignacio

German-Jordanian University

## **The "Audience Hall" of Khirbat al-Mafjar Revisited**

As a result of the research conducted, firstly within the Jericho-Mafjar Project as specialist in architectural stratigraphy (a joint project between the Oriental Institute of Chicago and the Palestinian Department of Antiquities), and afterwards directing the Project Understanding and Preserving Early Islamic Jericho: Khirbat al-Mafjar, awarded with a Marie-Curie IEF Grant (carried out at the Carsten Niebuhr Centre of the University of Copenhagen), relevant new hypotheses and conclusions have been reached on the Umayyad complex of Khirbat al-Mafjar, which offer an alternative narrative to many aspects of those offered by Hamilton.

Some of the results achieved on the *qasr* and the general sequence of construction of the complex have been presented in several academic venues. These preliminary results will be published in the Levant supplement series, as part of the proceedings of the conference held in London in 2015 on the archaeology of Jericho, organized by CBRL & UCL.

In this paper will be presented the hypotheses and conclusions reached on the so-called 'Audience Hall'. The thorough review of its remains and the material evidence recorded in the past allows to present a new and alternative hypothesis for its architectural configuration, with special attention to its vaulting system and the arrangement of its spaces and built structure. The important role played by the scenographic design behind their arrangement helps explaining some anomalies in what otherwise is a structure very regular in plan. The sequence of construction of this building in relation to the annexed structures and the complex itself, confirms some of the hypotheses put forward previously, and clarify the slight changes of use underwent by the structure during its construction, and its significance.

Besides, it will be presented the result of the documentation and survey program carried out in October-November 2016 on the unique mosaics from its floors, as well as the preliminary achievements of the virtual reconstruction of the complex by means of a 3D model. This model serves to bring together all the material evidences gained (including all the carved stucco panels), as a useful tool to understand its actual appearance, to present the site to the visitor, but also as a way to test and verify the hypotheses put forward during the research process.

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**ARCE**, Ignacio  
German-Jordanian University

### **The Preliminary phasing of the *Maqam an-Nabi Musa***

The aim of this paper is to present the preliminary results of the phasing of the *Maqam an-Nabi Musa*, a monumental complex built around the cenotaph of the prophet Musa, located in the *Bariyah* (the wilderness East of Jerusalem) halfway between Jericho and Jerusalem. This phasing proposal is the result of the inspection and related research conducted during 2017 as part of the assessment commissioned to the Author by UNDP, of the ongoing rehabilitation works funded by the EU. The need to evaluate the impact of the rehabilitation works to the historical structure of the *Maqam an-Nabi Musa* Complex made it necessary to conduct a stratigraphic analysis of the built structure, trying to understand the phasing and sequence of construction of this singular complex.

The complex was founded in the year 668 A.H. / 1269 A.D. by the Mamluk Sultan *al-Malik az-Zahir Baybars*. Since then the complex has grown throughout the centuries till reaching its present and monumental configuration. Its development is recorded in several historical sources, including pilgrim accounts, several inscriptions kept at the site dating interventions, and the Waqf administrative records. The research has focused on the material evidence, presenting the conclusions and hypotheses derived from the stratigraphic analysis, and trying in a second stage to relate the construction sequence achieved to the sequence recorded in the historical sources. The detailed and precise understanding of this sequence is essential, not only for the proper understanding of the site, but also to guarantee the required preservation, management and an adequate presentation to the visitor of the history and values embodied in the monument.

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**ASADI TASHVIGH**, Somayeh – **ABBASNEJAD SERESTI**, Rahmat – **SHAHMOHAMMADI**, Nafiseh  
University of Mazandaran

### **Archaeology of Childhood A Review of Jar Burials of Children at The Center of Iranian Plateau during Sialk IV<sub>2</sub> period (3200-2900 B.C)**

Children are inseparable and bases of societies, however, they have been ignored, except recent years, through archaeological narrations. Among the other archaeological evidence, burials are of the most important sources for anthropological analysis of ancient societies, especially prehistoric ones. However, in many cases, burials have been neglected alongside with connected problems to dead. In present paper, it is attempted to study jar burials recovered from Sialk IV<sub>2</sub> (3200-2900 B.C) period from characteristic sites such as Southern Sialk, Arisman C<sub>3</sub>B, Qoli Darvish II<sub>3</sub>, Tepe Sofalin, and Ozbaki. There are considerable problems at Sialk IV<sub>2</sub>, among them; especial jar burials for children and infants, and adult burial absence from recovered ones, except one case, and can be investigated from various aspects. It appears, Jar burials of children and infants can be regarded as the main characteristics of Sialk IV<sub>2</sub> period

and, on the other hand, improve our knowledge on health condition, subsistence, and life style at central plateau while make new horizons to the problems of the period. The paper also can initiate studies on archaeology of childhood and children of Iranian prehistory.

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**ASHBY, Darren P.**  
University of Pennsylvania

### **Religious Architecture on the Southern Tigris: Local forms, shared practices**

As a durable manifestation of social values and intentions, architectural remains provide an important window into the beliefs and activities of past societies. In the context of religion, the built environment plays a central role in controlling access to and structuring experience of the divine. Therefore, the analysis of religious architecture can shed light on how past societies organized religious practices, participated in religious rituals, and interacted with the supernatural.

In this paper, I present the results of my analysis of three external, isolated rooms at the entrance to late third millennium BCE temples or temple complexes in southern Mesopotamia. Two of these were part of structures at Tell al-Hiba, ancient Lagash – one in a building in the Bagara of Ningirsu; the second in the tripartite entrance through the enclosure wall of the Ibgal of Inana. The third was located at the entrance to Building B 33 at Tell Senkereh, ancient Larsa. All three rooms were only accessible from outside the structure in which they were embedded. Two of them contained a podium against the back wall, while the third was empty.

Scholars have previously noted the morphological similarities between these three rooms (Sievrtsen 1998: 87; Thalmann 2003: 61). However, the rooms have never been the focus of a comparative study. Using archaeological, textual, and iconographic evidence, I explore how these rooms might have functioned based on their dimensions and contents, and how these qualities influenced the experiences of the people using them.

I conclude that these spaces could accommodate a variety of uses based on their location in a religious complex and the needs of their creators. In form, they represent a local religious architectural tradition centered on the region of the southern Tigris, particularly the city-state of Lagash. In function, however, they belong to a wider Mesopotamian religious practice, as demonstrated by comparable installations recovered near the entrances to religious architecture at Nippur, Khafajah, and elsewhere.

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**ASHKENAZI, Jacob**  
Kinneret College on the Sea of Galilee

### **Family rural Churches in Late Antique Palestine: a socio-archaeological study**

Religious Buildings that were built by private initiators was a common phenomenon in Late Antique Levant. Most of these initiatives took place in cities and are well documented both in Literature and in Archaeology. Private religious buildings are also widely spread in rural landscapes as emerges from surveys and excavations that took place in the Levant in the last decades. The study of rural public religious buildings, namely churches, reveals a vivid picture of the social and economic fabric of rural society. In this paper I intend to focus on one unique manifestation of rural building environment: Family churches that were built outside the village's boundaries but in a close distance. While examining the appearance of this phenomenon in the provinces of Byzantine Palestine I set out to clarify its social and economic background and to understand how it differentiates from equivalent private efforts within the village

boundaries. In order to point to the significance of these private family churches I adopt Pierre Bourdieu's 'theory of fields (*champs*)', and offer a sociological look at the phenomenon. Accordingly, I propose that it was the product of a symbolic and economic competition in the 'field of religious goods' between the rural 'lay' elite and the provincial ecclesiastical hierarchy.

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**ASKARPOUR, Vahid**  
Islamic Art University of Tabriz

### **Archaeological Enactive Semiotics of Assyrian Sacred Tree**

The paper concerns with the Assyrian sacred tree motifs and its related elements according to the findings of stone panel relief sculptures found within the room B of northwestern palace of Ashurnasirpal II, located in ancient capital of Kalhu, today Nimrud. The semiotic aspects of sacred tree have examined to reconstruct contextual processes involved in becoming meaningful of it. To that end, a deliberate distance from textual-linguistic semiologic explanations has taken. Compared with textual contents of the royal inscriptions, especially the ones related to deities of Assyrian pantheon, what which could be achieved through the visual contents of stone reliefs was different; both in concepts and the ways conceiving that concepts. It discussed that for the sacred tree motif to be meaningful, the materiality and material conditions embracing it were of vital importance. To access the condition of meaningfulness belonging to sacred tree, the material semiotics as a part of material engagement theory, itself the main approach in cognitive archaeology applied. Some textual codes and indicators used as keys to explore and discuss what has said through stone panels of sacred tree, which are missing or unachievable within the textual evidence. The motif of sacred tree, its related, interconnected visual elements, architectural and material contexts of its appearance, brings into existence together some critical cosmological conceptions, enacting them materially through intentional, directed practical engagement with the world. The whole of Assyrian royal world has been enacted materially through the sacred tree which gathered together certain deities of Ištar and Ninurta with the land of Assyria, royal members, building activities and related prosperity of the kingdom within both the earth and the heaven. The knowledge achieved through the sacred tree is for the most part archaeologically graspable, itself a testimony of the certain role archaeology could perform in detecting complementary, nontextual information about ancient cosmology and religious beliefs, even within historical civilizations, rich of textual records.

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**ATOOSA, Artism**

### **Investigating the Changes and Transformations of Settlements in Ize Plain from the Beginning of the Neolithic Period to the End of the Chalcolithic Period**

Ize Plain, located in the northeast Khuzestan, is one of the important ancient regions in southwest Iran in various cultural and historical eras. According to the performed archaeological excavations, it was found that the region exhibits some settlement evidence from the Paleolithic period to the recent times which is unmatched in its kind. Although considerable activities have been conducted on this plain, most of them are related to the Paleolithic eras or to the Elamite, historical, and Islamic periods, and the time rang from the Neolithic to the late Chalcolithic periods has not been much considered by archaeologists. Therefore, aiming at clarifying the latent angles of the Neolithic and Chalcolithic eras of Ize Plain and investigating the patterns and the settlement transformations of this region during the mentioned periods, a research was designed by the authors according to the data obtained from archaeological excavations and

environmental and anthro-archaeological studies, so that based on the obtained information and using various spatial, statistical, environmental, and GPS analyses the resulted data, the intended results would be achieved. The results of the present study indicated that Ize Plain has faced with a decrease in the frequency of settlements during the Neolithic period, yet during the Chalcolithic period and with an expansion in the influence scope of Khuzestan cultures, especially Shushan as well as the cultures of the Central Zagros, this plain, as one of the main regions in trans-regional relations, faced with an increase in settlements.

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**AVRUTIS, Vladimir Wolff**

University of Haifa, Zinman Institute of Archaeology

### **Reevaluation of Chalcolithic burial customs – A Late Chalcolithic Domestic and Burial Site, Southern Levant**

The site of Neshar-Ramla Quarry in Israel is located in the Lod Valley, bordering the Judean Shephelah and the Mediterranean coastal Plan. Late Chalcolithic remains (4500-4000 BC) revealed a settlement including various agricultural installations, storage facilities, and domestic and burial caves.

The excavation yielded a rich pottery assemblage, alongside shells, flint and stone tools. Analysis of the various finds suggests the site was inhabited by an agricultural community relying mainly on animal husbandry and partly on marginal hunting. The pottery is strongly related to that of other Ghassulian–Beer-Sheva sites, albeit with its own regional variations.

Mortuary practices at the site include a great variety of practices – often within a single cave. Although multiple, secondary burials were the norm in Neshar-Ramla and elsewhere, few primary burials were recorded as well. The most common burial practice recorded at NRQ is the secondary deposition in ceramic ossuaries, ossuary jars, large ‘V-shaped’ bowls, kraters and holmouth jars. A different burial practice was piling of all bones from a single adult individual, with a skull on top. The presence of primary burials within the same cave, suggests that these two burial modes were practiced at the same time, or that they represent a chronological progression from one to the other. Of special interest regarding burial practices, are the presence of orthostats in several caves.

The duality of this site is revealed through these unique burial caves and their connection to the adjacent settlement, furthering our insights into the role of death in Late Chalcolithic communities in the Levant.

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**AYDOĞAN, İnan**

Ege University

### **Başur Höyük An Uruk-Related Settlement on the Edge of the Upper Tigris Valley: An Uruk Colony? A Gateway City? Or an Administrative Centre?**

Uruk Culture, which began to appear in southern Mesopotamia from the beginning of the 4th Millennium BC, has also brought up discussions on what and how the nature of this expansion or spread, which has been identified in Northern Mesopotamia since the second half of the 4th Millennium BC. The researchers tried to explain the widespread geography of Uruk cultures with theories (Uruk World System, diaspora, acculturation, hybridization). These theories have been tried to be supported by settlements with different characteristics. For instance, the northern extension of Uruk material culture is explained by colony activities in Habuba Kabira settlement, while in Arslantepe settlement it is explained by emulation. In



addition to these, there are settlements like Hassek Höyük and Hacı Nebi, which are thought to lived together with the local people and the southern ones.

Başur Höyük is located within the Siirt provincial boundaries of the Upper Tigris Basin. The settlement excavated within the scope of Ilisu Dam and HEPP Salvage Excavation Project directed by Haluk Sağlamtimur is located at the place where the Mesopotamian plains intersect with the Anti-Taurus Mountains. The settlement was settled from the beginning of the 5th millennium BC to the end of the 2nd millennium BC with occasional interruptions. In the layers, which dated to Late Uruk Period, numerous archeological materials have been identified in the settlement encircled by the wall, such as structures thought to have a public function, beveled rim and conical bowls, spouted and unspouted jars, mineral-tempered Uruk wares. This paper will focus to interpret the archaeological material to define the social organization in the settlement and to make proposals about the possible role of the settlement within the interregional interaction network with taking into consideration the geographical location, climatic conditions, proximity of raw materials sources and potential pastoral production of the settlement.

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**BAHRAMIYAN, Saeid**

University of Tehran, Department of Archaeology

### **Khervali: An Extensive Middle Paleolithic Workshop in the North of Susiana Plain, West of Central Zagros, Khuzistan, Iran**

While extensive studies about the Pleistocene Humans activities at the Alborz and Zagros Mountains, Survey and study of many areas such as hilly areas, plains and edge of deserts has been a significant progress in recent years. Nonetheless many of these areas has not been regarded at the same, there are limited information about the Paleolithic periods from these areas. Among of these areas it can be mentioned Khuzestan province, specially, northern and northwestern areas (northern highlands of Susiana plain) despite of limited Paleolithic surveys in many recent years, has obtained evidences sound important. The Site of Khervali is one of the scantling declared Paleolithic sites in recent years which located in the west of Zagros Mountain in northern highlands of Susa Township, near of western bank of Karkhe River. The aforementioned site was discovered and surveyed systematically in 2012. due to extension of site and distribution of artifacts, sampling of entire of site was impossible, For this reason just four parts of site selected for sampling of artifacts which 330 artifacts were collected in total. The result of techno-typology analysis of artifacts indicated that the Khervali is a middle Paleolithic workshop site with considerable accessibility to local raw material.

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**BAJOORVAND, Bijan**

University of Tehran

### **Pottery changes during the period from Susa I to Susa II based on studies from potteries discovered in the terminal susa A phase in Tapeh Sangar, Khuzestan**

The terminal susa A phase in the Susiana plain is usually regarded as a transitional period between Susa I (Late Susiana) and Susa II (Uruk), due to the beginning of the process of changing the style and texture of the pottery, a period when the fine and decorated potteries in the Susiana period changed and displaced by coarse and simple ones in the Susa II period. This study aims to examine the nature and the quality of these changes and to determine whether these pottery style changes have done in a gradual process, or in fundamental manner. For this purpose, the pottery index species belonging to the terminal susa A – Late

Susiana – and its subsequent phase – Early Uruk – were studied in terms of shape and style. This study was conducted on the basis of the excavated samples of the terminal Susa A in the Tapeh Sanjar. Therefore, these pottery samples were analyzed and compared with the samples discovered from the late Susiana 2 and the early Uruk phase in the exploration of this site and other important sites in Susiana plain. Tape Sanjar located on 15 km north of Susa. Studies on the potteries in this phase have shown that the samples are very similar to the late Susiana 2 ones in terms of paste color, pottery texture, temper and firing quality, but there was a slight difference, in which no sign of usual Susiana pottery decoration was on them, and also a few of these samples were engraved with wavy striped lines. On the other hand, the bulky and heavy form of the edge of these potteries, was a sign of the end of the Susiana fine pottery tradition and the beginning of the Uruk pottery one.

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**BANIJAMALI, Leila**

Tarbiat Modares University

**ALAEI MOGHADAM, Javad**

Zabol University

**ALAEI MOGHADAM, Fatemeh**

Bojnord University

### **Excavation on Jam Site, Mahalat**

Jam Site, located in the city of Mahalat in Markazi province of Iran, is one of the largest sites in the region which is of great importance in archeological studies of the area due to its specific environmental and settlement conditions. This site is situated on the northern margin of Lalar River (the middle Qomroud) and is the largest ancient site identified on the edge of the river. This site was identified in 2008 during an archaeological survey in the city of Mahalat by the authors, and afterwards, study and excavation of this site became the top archeological study among the other sites in the region. Archaeological research was considered relying on several fundamental questions, including the actual limit and expansion of the sites, its settlement periods, as well as its role in the settlement system of the region during the eras with cultural evidence. In this regard, three study seasons were carried out, including the speculation in order to determine its arena and limit, systematic investigation of the site and its pathology, and also excavation to perform a stratigraphy along with scientific experimentation for absolute dating which revealed many of the hidden aspects of this site and the historical region of Lalvar. According to the obtained results, it was found that the settlement in this region has started during the Chalcolithic era and continued till the Bronze Age; and after a long interruption, this region has again witnessed an extensive settlement from the middle-Parthian period to the early Sassanian eras. It is highly probable that the region may have been used as a small and seasonal village in the first period with less than 2 hectares, and then in the historical period with its expansion on the margin of the river Lalarvar, its area reached to more than 50 hectares, and as it was the largest site of this era, it assumed a central role in the structure of the settlement.

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**BARLAGIANNI, Giota**

University of Athens

### **Prehistoric Palettes from Mesopotamia and Aegean**

This paper focuses on the analysis of Mesopotamian and Aegean palettes from 6th to 3rd mil. B.C. The aim of this research is twofold, as it regards on both the creation of a complete catalogue of all Mesopotamian

and Aegean specimens and the examination of their typology, as well as their functionality. Stone or bone palettes represent a small proportion of the prehistoric material cultural assemblage of Aegean and near eastern communities. However, palettes constitute one of the most shared items in eastern Mediterranean. The geographical distribution of these findings includes western Iran, Mesopotamia, southern Anatolia, Cyclades, Crete, and Egypt. In the last case, palettes have been examined, but little is known about the rest of them, and especially those of Mesopotamia and Aegean. Their typological affiliation shows great similarities, although they appeared in remote areas and at different chronological periods. Mesopotamian and Cycladic palettes seem to share some stylistic forms. In the same way, some Egyptian examples of rectangular shapes have their parallels in Crete and Cyclades. Furthermore, their mortuary context seems to be another common feature characterizing them. These particular shapes being established in different cultures and periods indicate that different social needs can be expressed in the same way without necessarily the mediation of mobility, trade or contacts between populations. Palettes are such an example, because as a local expression of specific needs, they could serve many purposes and their use appears to be relevant to the requirements of each society.

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**BATIUK, Stephen**

University of Toronto

**JALABADZE, Mindia**

Georgian National Museum

**GRAHAM, Andrew**

University of Toronto Mississauga

### **Report on 2016-17 seasons of The Gadachrili Gora Regional Archaeological Project Expedition (GRAPE)**

The Gadachrili Gora Regional Archaeological Project Expedition (GRAPE) is a joint venture between the University of Toronto, the Georgian National Museum (GNM) and the National Wine Agency of the Ministry of Agriculture (of the Republic of Georgia) to investigate the emergence and evolution of Neolithic Cultures in southern Caucasus and the development of Georgian viticulture and viniculture. GRAPE's role is to illuminate the development and adaptation of agricultural and horticultural practices across a series of 6th millennium Neolithic rural settlements of the Shulaveris-Shomu Culture, focusing on the two sites of Gadachrili Gora, and the culture's eponymous site of Shulaveris Gora. A regional survey aims to establish a more holistic understanding of the Neolithic landscape, as well as settlement of later periods. This paper presents the results of the first two seasons of the project and the resulting changes in our understanding of the chronology of the Shulaveris-Shomu culture, and the development of viticulture in the ancient world.

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**BATTINI, Laura**

Collège de France

### **Meeting Points in the Old-Babylonian Cities: an Overview from Archaeological and Epigraphical Sources**

The increasing of knowledge in landscape does not result in a better comprehension of the topography of ancient Mesopotamian cities. What is not yet understood is if in the ancient city was present a place like the Greek agora, a meeting point where people can get together, round up, exchange, look at the messages of political and religious powers. In archaeological sources only a plan of a Mesopotamian city is known

(Nippur) and from excavations few examples of the social space inside the city are known and sometimes not yet understood. Epigraphical sources are not very expressive about the social utilisation of non-private and not-official places. But the conjunction of these multiple data let us better perceive the functioning of the city, especially in the Old-Babylonian period.

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**BELLUCCI, Benedetta**  
University of Pavia

### **The Two-Headed Eagle on Ancient Near Eastern Seals**

Two threatening heads, claws and huge bodies: among fantastic creatures represented in Near Eastern art, the Two-Headed Eagle is one of the most striking and mysterious. Images of double-headed birds of prey are encountered in Near Eastern art since 3rd millennium BC, but their number increased in Anatolia from the Old Assyrian Colony Period throughout the Hittite Kingdom. Often included in the figurative field of stamp, cylinder and ring seals, their representation spread to monumental art. Despite their manifest importance in the figurative art of the Hittite Kingdom, their meaning remains unclear.

By perusing such artistic representations, this paper aims to sketch a history of the motif in Ancient Mesopotamia, Syria and Anatolia. New evidence provided by the publication of the seal impressions on Emar tablets, left by seals belonging to Hittite officials and to local functionaries, may leave room for new hypothesis on the subject.

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**BEN-SHLOMO, David**  
Ariel University, Institute of Archaeology

### **Cooking Pots in Iron Age II Judah: Confined or Mobile Distribution?**

Recent petrographic and chemical studies of Iron Age pottery from Jerusalem and other sites in Judah indicate a specific clay selection and potter's technology in the production of cooking ware. The cooking pots were usually made from non-calcareous clay (mostly derived from terra rossa soil) and were tempered with calcareous sand and/or quartz. The potters during this period seem to avoid the use of Moza clay with dolomite sand, a clay common in the Judean hills, for the production of cooking pots. Cooking ware imported from outside the region of Judah also occur. Several aspects of this production will be examined: were there specialized production centers for the cooking pots in Judah and its surroundings (one possibly at Jerusalem?); is cooking ware during this period mobile between sites and regions? Can we see towards the Iron Age IIB-C a major technological shift towards quartz tempered cooking pots? Quartz tempered cooking pots dominate the cooking ware assemblage in the southern Levant from the Hellenistic period onwards. Compositional analysis and technological aspects of pottery and cooking ware from several sites will be examined, in particular at Jerusalem, Tel Moza, Tel Hebron, Khirbet Yatir, Khirbet Qeiyafa and Sochoh, as well as Tel Malhata, Horvat Uza, and Horvat Qitmit. The different phases of the Iron Age II will also be compared as far as possible through to the 6th century BCE.

**BERGOFFEN, Celia J.**  
Fashion Institute of Technology, New York

### **Late Cypriot Bichrome Ware as an Expression of Commercial Mobility**

Bichrome Ware represented a radical departure from earlier Cypriot pottery in its wheelmade technique, figurative decoration, and new shapes, most importantly the krater. This distinctive style incorporates elements of both Canaanite and Cypriot ceramic traditions without logically evolving from or being directly dependent on either one. Based on analyses of the ware's style and distribution in Cyprus, the Levant and Egypt, this paper suggests that the appearance of Bichrome ware not only signals changes in consumption practices on Cyprus inspired by contact with the Levant, but that its construction was adjunct to the new commercial relationships, established through personal connections, which activated the trade between Cyprus and southern Canaan during the transitional Middle to Late Bronze ages in the 16th c. B.C.E.

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**BERNBECK, Reinhard – HUBER, Barbara**  
Freie Universität Berlin

### **Radical Restructuring in an Early Village: Rahmatabad (Fars Province, Iran) in the Fifth Millennium**

The archaeological site of Rahmatabad was excavated as part of a series of rescue projects during dam construction in the Bolaghi gorge near Pasargadae. The site lies at a strategic point where the Sivand river exits from the Bolaghi gorge. On the one hand the site has a long Neolithic sequence spanning aceramic to ceramic phases. On the other hand, the early Chalcolithic period is particularly well represented, with two major settlement phases from the Middle Bakun period. In our paper, we provide new information on these two phases, their architecture, spatial functions and settlement structure. The two Bakun phases are starkly different in terms of durability of buildings, the degree of a planned layout and the diversity of installations. We discuss to what extent portable finds help us understand these rapid and fundamental changes. Furthermore we insert the evidence from 5th millennium Rahmatabad into larger discourses about Bakun period socio-political developments.

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**BEUGER, Claudia**  
Berlin – Halle  
**HASAN, Abdulwahhab Sulaiman**  
Erbil – Soran

### **A buffer zone between Assyria and Urartu? – Report on the preliminary results of the Khalifan Survey Project 2014-2017 (Autonomous Region of Kurdistan)**

The Khalifan district (Soran) is an archaeologically nearly unexplored area. In the north it includes the confluence of the Rawanduz River and Great Zab and in the south the Alana Valley, which leads to the Rania Plain. The main routes are passing this district as part of one of the most important links between Erbil and Lake Urmia (Hamilton 1937; Levine 1973; Radner 2012). For this region the era of the rival states of Assyria and Urartu is of particular interest. In some of the maps on historical geography the Khalifan district is attributed to the Assyrian-dominated land of Habriuru (Levine 1973, 1976-1980), but in most cases the Khalifan district belongs to an undefined area between the spheres of Assyrian and Urartian

influence (Fuchs 2007; Boehmer 1973; Marf 2014; Danti 2014). The cuneiform sources certainly mention cities and villages that may be located in the Khalifan district (Frayne 2003-2005; Radner 2012). It is our main concern to create an archaeological data-basis in order to ensure a better localization of such toponyms. With Pir Wali, situated in a depression directly on the Rawanduz River, now the first site is known, which clearly shows characteristic Neo-Assyrian ceramic finds. However, the starting point for this talk will be some smaller fortresses, which were observed on hilltops close to the rivers or in the higher mountains. They are reminiscent of the fortification structures of the Late Bronze and Iron Age in the Lake Urima region, which form a hierarchically organized network for defense and possibly for communication by means of remote signals (Kleiss 2015, Earley-Spadoni 2015). Biscione (2009) already assumed that such kind of architecture may exist in the area of the Great Zab, but they were not archaeologically proven at that time.

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**BEWLEY, Robert – BRADBURY, Jennie**  
University of Oxford

### **Endangered Archaeology in the Middle East & North Africa: Remote Sensing, Training and Culture Heritage in the MENA region**

The Middle East and North Africa are home to some of the most spectacular archaeological sites in the world. From Palaeolithic flint scatters to great post-antique cities; the archaeological heritage of this region is under increasing threat from massive and sustained population explosion, agricultural development, urban expansion, warfare, and looting. Endangered Archaeology in the Middle East & North Africa (EAMENA) is a five-year project, supported by the Arcadia Fund and Cultural Protection Fund, based at the Universities of Oxford, Durham, and Leicester. The project uses satellite imagery to record and interpret archaeological sites and landscapes that are under threat across this region. This paper will provide an update on progress of the EAMENA project, including some preliminary results, as well as discussing its future direction. It will review some of the challenges and successes of the project over the past three years. We will discuss our current training initiatives, and outline how we are working to facilitate the uptake of the EAMENA database as a longer-term record for the MENA countries, to assist with improving the protection of the cultural heritage in the region. By working with local archaeologists and other interested parties we hope to share information and skills, strengthen networks and raise awareness.

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**BIELIŃSKI, Piotr**  
University of Warsaw, Institute of Archaeology

### **Space organization of Bahra 1 an Ubaid culture related settlement on Kuwaiti desert**

Bahra 1 is a large chalcolithic settlement situated on As-Subbiya desert about 7 km from the shores of Kuwaiti Bay. Since 2009 it is excavated by joint Kuwaiti-Polish mission. Settlement of which over 10.000 sq. meters was uncovered up till now contains remains of at least 10 separate building units. In the western and central part of the village they are arranged along more or less same axis. Structures exposed on Bahra are representing two different architectural traditions coexisting within same village. Most of the uncovered houses are multi-roomed and rectilinear but there are also remains of some curvilinear structures. Pottery found there represents mostly decorated and undecorated Ubaid 2/3 ceramics while the rest belongs to Red Coarse Ware of Arabian Neolithic.

**BOBOKHYAN, Arsen**

National Academy of Sciences of Armenia, Institute of Archaeology and Ethnography

**GILIBERT, Alessandra**

Ca' Foscari University of Venice

**HNILA, Pavol**

Freie Universität Berlin, Institut für Altorientalistik

### **Solving the Enigma of the Dragon Stones. Preliminary results of the Excavations at Karmir Sar on Mount Aragats (Armenia)**

This paper reports the preliminary results of the ongoing excavations at the site of Karmir Sar on Mount Aragats (Armenia). Karmir Sar, one of the largest summer pastures on Mount Aragats, is a 40-hectares, multi-period site located at 2850 m asl on the south slope of the mountain. Excavations started in 2012 as a joint venture between the Armenian Academy of Sciences, the Freie Universität Berlin and Ca' Foscari University Venice. So far, we focused on the impressive concentration of prehistoric remains, including chalcolithic traces, numerous late third-millennium cromlechs and at least eleven examples of “dragon stones” (Arm. *vishaps*). “Dragon stones” are megalithic basalt stelae decorated with animal imagery. Between one and five meters high, these stelae are solitary monuments sometimes shaped in the form of a fish, sometime decorated as if the prepared hide of a horned animal had been draped on them; rarely, additional animals such as birds or snakes are added to the composition. Such stelae, found pre-eminently in Armenia, South Georgia and Eastern Turkey, represent the most ancient and most enigmatic examples of the monumental art in the Caucasus. In the past century, local scholars advanced diverse hypothesis as to their date, function and significance, mostly based on folk traditions and only very occasionally on fieldwork observations. The excavations at Karmir Sar are the first direct and systematic investigation focused on the archaeological contexts of the “dragon stones”. The preliminary results shed a new light on almost every aspect of the birth of monumental art in the Caucasus.

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**BORS DORF, Pierre**

Ludwig-Maximilians-Universität Munich

### **A Monumental Sasanian Building at Gird-i Kazhaw (Iraqi Kurdistan)**

In the Sasanian period, perhaps under the reign of Kavadh I. (488–496 & 499–531 AD), a large building was constructed on mound A in Gird-i Kazhaw, close to an important spring that was guarded by a small Sasanian fortress. Excavations have revealed parts of a great hall with large pillars made of stone and mortar that supported a baked brick vault. Different types of floors furthermore suggest multiple architectural phases, each probably representing a change in function. Architectural comparisons possibly point to links with Christian monuments of that time and region, links which are reinforced by cross-stamped pottery also found at Kazhaw. However, the precise function of the building remains unclear for the time being. It may have been connected to the Sasanian fortress on mound B and the efforts of the Sasanian state to more closely control the Shahrizor during this time.

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**BOURKE, Stephen J.**

University of Sydney

### **From Chalcolithic Village to Canaanite Town: The 2017 Field Season at Pella in Jordan**

The 2017 field season at Pella in Jordan explored the earliest Late Chalcolithic and Early Bronze Age I period horizons on Tell Husn (south of the main tell). On Khirbet Fahl, work in the northern part of the Iron II Civic Building uncovered lines of column-bases forming the eastern side of a monumental entranceway. Expanded work in the area of the MBA palatial residence encountered EBA I and Chalcolithic period horizons, below two phases of MB I occupation which pre-date the palace construction.

On Husn, excavations exposed thin horizons of Late Chalcolithic (ca. 4000-3900 calBC) occupation above bedrock. This featured orthostat-lined deep pits containing numbers of 'V'-shaped bowls. On the northern summit, three phases of Early Bronze Age I (ca. 3800-3500 calBC) occupation featured exterior grinding installations and clay-lined storage facilities. These exterior work areas were associated with a 10-12m long apsidal housing unit, partially excavated by season's end.

On the southern slopes of Khirbet Fahl, excavation in a 4 x 5m sounding, south of the MBA palatial residence, uncovered two phases of MB I material earlier than the palatial residence, before encountering substantial walling from a late EB I period structure, which sealed a round-house of earlier Chalcolithic date.

Excavations in a 10 x 3m probe through the northern reaches of the Iron Age I-II Civic Building uncovered traces of five large column-bases associated with a monumental 'Bit-Hilani' style entranceway, strongly reinforcing previous suggestions that this structure served as the Civic/Administrative centre of Pella in the later Iron I/earlier Iron II periods.

The presentation will discuss major architectural and object assemblages, and place each in local and regional contexts.

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**BRADBURY**, Jennie  
University of Oxford

### **The Koumba Coastal Survey Project, Northern Lebanon**

Started in 2016, the Koumba Coastal Survey (KCS) aims to explore the long term dynamics of coastal change and settlement along the northern Lebanese coast, from Madfoun in the south to Shika in the North. Until recently, this region had largely escaped the impact of mass urban sprawl and development. It therefore represents one of the only remaining coastal areas with relatively well-preserved archaeology. Unfortunately, this situation is rapidly changing, with new beach bars, green houses and industrial units being constructed along this coastline at an unprecedented rate. This paper will discuss findings from the initial two seasons of this project and illustrate how, using remote sensing techniques, alongside field survey, we can explore shifts in settlement, utilisation and perceptions of this region over time, from the Palaeolithic to the 20th century AD. It will also discuss the techniques being used by the project to document and monitor the threatened heritage of this region, building an understanding of how past natural and anthropogenic events may have transformed and shaped settlement, and use of this coastline over time.

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**BUCCELLATI**, Federico  
Alexandria Archive Institute, Energetics Calculator for Ancient Architecture

### **Energetic Cost Calculator for Ancient Architecture**



Architecture is one of the main elements of material culture that archaeologists find in the archaeological record, with the primary research focused on the typology, function, and the life of the building as shown in the stratigraphy. There is, however, another important aspect which is seldom explored: the process of construction leading up to the first use of the building. The *chaîne opératoire* methodology can be used to explore this process, allowing for its disarticulation into discrete steps. It cannot, however, explore the material, temporal, or energetic ‘cost’ of these steps; cost-calculation-algorithms are needed which can be applied to the volumes of ancient architecture. These algorithms attempt to answer specific questions regarding the cost (in time, material and/or energy) needed for the steps in the construction process on the basis of the actual (as present in the archaeological record) or estimated volumes of the building.

The Energetic Cost Calculator for Ancient Architecture (EnCAB) Project builds on work done in analyzing the AP Palace of Tell Mozan, expanding the number of algorithms to allow for a broader range of architecture types to be examined. These algorithms are presented as a web-based calculator, allowing users to enter their own data, compare their results to a range of examples and explore the types of sources used in generating each algorithm.

Due to the flexibility of the interface, users can also explore the process of construction by considering alternatives: if a different material was chosen for a particular architectural element, what would be the difference in energetic cost? If a building was larger or smaller (in rooms or percentage of built space), how much would the total energetic cost change? Such questions can help archaeologists understand the decisions taken by ancient builders and planners in organizing the spatial disposition within a building or a settlement as a whole.

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**BUTTERLIN, Pascal**

University Paris 1 Panthéon-Sorbonne

### **Mari and the Syrian crisis, facing the unbelievable**

The French excavations at Mari have since a long time facing a lot of challenges, and among them the absolute necessity to manage the inheritance of a long history of cooperation between France and Syria. This meant both excavations, site and archives management in an ongoing scientific project, in which a lot of data remains unpublished. Confronted as all the archaeologists working in this region to the multiscale current crisis, the Mari team has been eager to provide an adequate answer to new challenges and this paper will present the different dimensions of its action, from the monitoring of the plundering process on the site, to the different actions involving the management of the archives and the cooperation with patrimonial institutions. Those actions go alongside a reflexion upon the history and the future of this kind of great archaeological operations in the Near east.

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**CABRAL, Ricardo – TOMÉ, André**

University of Coimbra

**RENETTE, Steve**

University of Pennsylvania

### **The Role of Digital Technologies in the Documentation of the Endangered Archaeological Heritage of the Bazian Valley (Iraqi Kurdistan)**

Recent developments in the field of 3D technologies, including access to low cost volumetric surveys, virtual reality systems and 3D printing, have been gradually transforming the traditional modes of

recording, research and dissemination of archaeological heritage. The application of these digital technologies has opened a wide range of possibilities and solutions in the preservation and dissemination of archaeological sites, playing an especially important role in unstable socio-political contexts.

It is in this context that the Kani Shaie Archaeological Project, which takes place in Iraqi Kurdistan, has, since 2013, adopted a multi-scale 3D scanning methodology, combining Unmanned Air Vehicles, photogrammetry, GIS and handheld laser scanners for the documentation and preservation of the site and its archaeological remains.

The use of these digital tools proved to be not only a solution for the remote analysis of archaeological data, providing greater insight into the archaeological contexts and artifacts, but simultaneously allowed us to develop a virtual reality application that provides an interactive approach to the dissemination of the archaeological heritage to the public. The application of these technologies will assist in the coming years to document in a digital format the threatened and rapidly disappearing cultural heritage of the Bazyan valley.

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**CALDERBANK, Daniel**  
The University of Manchester

### **Sealand Period Pottery at Tell Khaiber: Standardised Vessels and Dispersed Communities of Practice**

Plain, standardised pottery is often interpreted as the direct result of state interference. Production of vessels is thought to have been governed by state attached specialists, whilst their communal contexts of use are said to have strategically promoted shared political identities. Recent studies, however, call into question the assumed mass-production of ancient pottery, and increasingly emphasise the decentralised structure of state societies.

Excavation at the Sealand period (c.16th century BC) site of Tell Khaiber, southern Iraq, has provided critical new material with which to examine these issues. In this period, the evidence for Babylonian state collapse stands in stark contrast with the continuation and resilience of a distinct pottery tradition – a tradition of plain, standardised vessel shapes. We can not, therefore, view Khaiber's pottery as a materialisation of state power.

Morphological analysis of Khaiber's vessels suggests that they were manufactured in a context of low skill and low productive scale. Despite this, there was a clear desire on the part of all specialists to produce pots conforming to specific and distinctive shapes. Indeed, the vessels excavated at Khaiber are virtually identical to those found at the contemporary mid-2nd millennium site of Failaka Island, located approximately 200km southeast at the head of the Gulf. This paper seeks to understand the social and economic networks that connected these disparate communities and framed their potting activities.

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**CAMPBELL, Katie**  
Oxford University

### **The City of Otrar and the Mongol Conquest: Resilience and Revival**

The Mongol expansion of the 13th century is often seen as the cut-off point for archaeological studies of the Middle East and Central Asia. According to historical accounts, it was a catastrophic event characterised by significant destruction of major cities and massacre of their populations, leading to fundamental changes in their economic and societal organisation. However, many of these apparently

razed cities seem to have quickly rebounded, or at least experienced some continuity. The city of Otrar, in present day Kazakhstan, was the first in the Empire of the Khwarezmshahs which experienced the Mongol onslaught, in the winter of 1218/19. However, large-scale excavations undertaken since the 1970s demonstrate that the city experienced continued occupation until the 18th century, and apparently thrived during the 13th and 14th centuries.

This paper will examine the evidence for both the historically attested sack of Otrar and the city's subsequent revival, from a review of previous excavations combined with an analysis of more recent work at the site. Drawing on data primarily from former excavation reports and new dating evidence from work undertaken in the summer of 2017, the paper will consider the factors which contribute to the continuation, and even flourishing of occupation at Otrar during the 13th and 14th centuries. It aims to focus on the Mongol conquests from an archaeological perspective as a transformative event, rather than considering it as a historical hiatus in urban prosperity.

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**CAMPBELL**, Stuart  
The University of Manchester

**HAUSER**, Stefan  
Universität Konstanz

**KILLICK**, Robert

**MOON**, Jane  
The University of Manchester

### **Mapping and protecting Charax Spasinou, southern Iraq**

Founded by Alexander the Great in 324 BC, Charax Spasinou was briefly the capital of the independent kingdom of Characene/Mesene in the latter half of the second century BC. Subsequently the Arsacid Rulers of Parthia took control of the city which then became the main entrepôt for the flourishing trade between the large cities of the Arsacid realm and India.

Today, the remains of Charax Spasinou are spread over an area of some five square kilometres, contained within city walls that still survive to several metres in height. Extensive sherd scatters are visible on the surface as well as war damage and evidence of recent looting.

A three-year programme of mapping and geophysical prospection of the city started in 2017, of which a main outcome will be a management plan including appropriate measures to ensure the longer term protection of Charax Spasinou. Our paper will present the preliminary results, which indicate the layout of the city and include the excavation of evaluation trenches that produced pottery, coins and other artefacts.

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**CAPARDONI**, Marco  
University of Pavia

### **Settlement Pattern and Mobility in Southern Cappadocia (Niğde Province, Turkey) during the Chalcolithic**

Southern Cappadocia is a vast region located in the southern fringes of the Central Anatolian Plateau, today broadly corresponding to the provinces of Niğde.

Given its location, close to some major passages through the Taurus Mountains, which put the region at the center of long-distance trade from remote times, Southern Cappadocia took on a key role for the relations between Asia Minor and Mesopotamia.

It is therefore surprising that, given such historical outstanding importance, this region has been relatively neglected by scholars until recently.

In this context a survey project was undertaken between 2006 and 2009 on the behalf of the Universities of Pavia and New York (ISAW), under the direction of Clelia Mora and Lorenzo d'Alfonso, across the northern edges of the Bor Plain with the aim of spotting, mapping and dating archaeological sites, defining the ancient route system and obtaining information on pottery production techniques.

The extensive survey conducted in these years by a team from the University of Pavia covered an area of about 800 square km across the province of Nigde and led to the recording of 37 sites dating from the Late Neolithic through to the Middle Ages, most of them never mentioned in literature.

The study of pottery sherds pertaining to the prehistoric periods between Late Neolithic and Late Chalcolithic (6500 – 4000 BC) has been the object of a study in press while the study of the development of the settlement pattern in the region has been addressed in my PhD thesis successfully defended in 2017 at the University of Pavia.

The paper resumes such developments with a particular emphasis on the problem of mobility during the Chalcolithic period. The interpretation of survey evidence for such periods, in fact, is other than straight. According to a multidisciplinary approach including pottery study, petrographic analysis of pottery collected during the survey, GIS based Spatial Analysis of environmental variables and sites distribution, isotopic analysis of ovicaprids teeth from excavated sites in the region and comparisons of settlement patterns at the regional level, it will be discussed how the expansion of the settlement amount recorded through the Chalcolithic can be reasonably interpreted as the reflection of the debut of subsistence strategies and a widening of the interactions sphere based on mobility.

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CARMELLO, Sara

### **Some considerations about the religious interactions between Aramaic-speaking people and Egyptians**

A relatively large number of Aramaic papyri, as well as numerous objects with Aramaic inscriptions, have been discovered in Egypt, testifying the relevant presence of Aramaic-speaking communities along the Nile valley. Thanks to these documents, it is possible to obtain not only details about the religious life of the Near Eastern foreigners who lived in Egypt, but also to delineate the religious interactions and exchanges between Egyptians and Aramaic-speaking people.

In fact it is extremely interesting to point out which kind of interactions took place under the Persian occupation (and more generically during all the Late Period) when so many different religions were accepted and peacefully coexisted in the same territories.

In the undeniably religious melting pot of the Late Period, the choice of the god(s) to worship among this large and heterogeneous multi-religious pantheon was presumably an important matter. These foreigners could choose different beliefs, cults, even priesthoods, independently from (but without necessarily rejecting) their ethnicity and their native religion.

As a consequence, foreign people often maintained the faith in their own official gods and, at the same time, decided to worship also some deities of their adoption land or of other lands of the ancient Near East. But autochthonous and foreign religion did not properly merge and did not create “something new”: apparently, they coexisted and interacted along the Nile valley maintaining their characteristics as much as possible unaltered, distinct and ethnically well recognizable. New gods and new cults were not created,

but some interesting loans and exchanges took place instead: and these aspects deserve to be analyzed in detail.

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**CASADEI, Eloisa**  
Sapienza University of Rome

### **Cooking in the temple. The itinerary of food in Southern Mesopotamian temples during the Third Millennium BC**

During the Third Millennium BC, temple organizations were multifunctional economic entities capable to manage a proper self-sufficient organization. Textual evidence throws light on the administrative mechanisms related to the temple's lands and properties, capable to guarantee the economic independence of these organizations, as well as the relevance of barley as primary method of payment. On the other hand, temple buildings were composed of several units characterized by different purposes. The association between architecture and material repertoires provides useful information for the functional reconstruction of these units, in most cases pointing to food processing activities and consumption. For whom were these food-related activities performed? This question represents a still open problem, if simply worshippers during rituals, employees, or a kin-based group of peoples who effectively lived in association with the temple. The present paper intends to investigate the archaeological evidences that can help in better defining the relation between temple and food. The detailed analysis of the fixed installations will be associated to the quantitative and spatial analysis of the materials related to storage, cooking and consumption.

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**CASELLI, Alessandra**  
Sapienza University of Rome

### **Living in the Southern Levant during Early Bronze Age I: reconsidering house types, domestic installations and spatial organization of settlements**

A strong cultural change occurred in the Southern Levant during the 4th Millennium BC, between the collapse of the Chalcolithic period (ca. 3800 BC) and the beginning of the Early Bronze Age I period (ca. 3600-3000 BC). The discontinuity between the Late Chalcolithic and the Early Bronze Age I can be noticed in particular through the domestic architecture, which is a basic aspect to investigate the socio-economic organization of human communities. The Late Chalcolithic domestic architecture was characterized by a broad-room plan, on the contrary, during the Early Bronze Age I, domestic buildings usually had a curvilinear plan, which disappeared during the following periods. The paper will consider new data from the excavations at Jebel al-Mutawwaq, Jordan, together with other key sites of the EB I Southern Levant. In addition to the plan of the houses, the paper will analyze how the rooms were distributed inside the buildings, how many rooms there were in each house, if each building had an open courtyard and if the houses were gathered in quarters. These pieces of information are significant to understand if the consequences of the regionalism in the EB I Southern Levant, visible mostly from the pottery assemblages, are recognizable also in the features of the private architecture and in the inner organization of the settlement plan. The aim of the paper is to understand the evolution and the characteristics of the domestic buildings through the analysis and the comparison of the archaeological data coming from selected sites between Cisjordan and Transjordan.

### **Ban Qala: A Late Chalcolithic site in the Qara Dagh Valley in Iraqi-Kurdistan**

This paper presents the results of the first season of excavation at Ban Qala, Iraqi Kurdistan. Ban Qala is located on the south of the village of Tilla Zayet in the Qara Dagh Valley, approximately 41 km south of Sulaymaniyah. The site was first identified by Iraqi archaeologists in a survey carried out in 1940s. In 2015, the Qara Dagh Regional Archaeological Project team conducted their own survey and was able to identify the presence of Late Chalcolithic material at Ban Qala. This year the excavation of a step trench on the southern slope of the site revealed LC 1-2 and LC 3-5 occupation levels. This paper will discuss the data collected and provide interpretations on the implication of the Late Chalcolithic period in the Qara Dagh Valley. The strategic position of Ban Qala, close to the main road that leads to the east, via the Pass of Gilazarda, to the Shahrizor plain and to the west via the Bazian Plain to Chamchamal, suggests that the site was part of a trade network connecting these regions. This is indicated by the presence of stone tools, particularly obsidian, that were manufactured from materials not local to Ban Qala. In addition, the recovery of several, beveled rim bowls in situ suggests that local ceramic production was being carried out, but within the context of a wide-spread Mesopotamian ceramic tradition. The context of these bevel rim bowls also affords some indication of their function.

The Ban Qala excavation is one of the first conducted in the Qara Dagh Valley and contributes to our knowledge of the occupational history of the area and provides a regional perspective from the mountainous region of Northern Mesopotamia. Future research will concentrate on continuing the reconstruction of the chronological sequence of the site and exploring the presence of earlier periods.

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CELLERINO, Alessandra – FOIETTA, Enrico  
University of Turin

### **The sanctuary and cemetery at Kal-e Chendar, Shami, in Khuzestan (Iran)**

The *Iranian Italian Joint Expedition in Khuzestan* started excavation at Kal-e Chendar in the valley of Shami, in nowadays Khuzestan, about 30 km north of the modern city of Izeh (Iran), on October 2013. This project falls within a Memorandum of Understanding between signed the Research Institute for Cultural Heritage and Tourism of the Islamic Republic of Iran, Iranian Center for Archaeological Research and the Centro Ricerche Archeologiche e Scavi di Torino per il Medio Oriente e l'Asia and the Dipartimento di Studi Storici, University of Torino. The expedition is co-directed by Vito Messina and Jafar Mehr Kian. The authors of this report are members of the four seasons of excavation (Alessandra Cellerino being field director). The site was already investigated in 1936 by the famous explorer Aurel Stein further to the accidental discovery of outstanding antiquities which are now in the Iran Bastan Museum, Tehran, namely the amazing and well preserved bronze statue portraying a nobleman in Parthian dress. Stein excavated for few days and identified an ancient sanctuary, considered in the subsequent literature as one of the most reputed religious places of Hellenistic and Parthian Elymais.

The site revealed, indeed, traces of monumental terraces built in undressed stones and placed, at different elevations, following the natural slope of the valley, whose wide extension leads one to suppose that they must have supported large buildings, or even complexes of buildings, made in undressed stones and/or baked bricks. These buildings have been progressively plundered over the centuries and almost nothing remains with the exception of re-used or loose-on-surface stone blocks of masonry, column bases and brick fragments. The importance of the religious complex of Kal-e Chendar is revealed by the presence of fortresses and small *qalas* guarding the site from different accesses, like the peaks of Bilevah, overlooking the site from the west. In any case, the sanctuary and cemetery at Kal-e Chendar were located in a very

suggestive mountainous landscape, in which architectures or other features actually seem meaningless out of their natural background.

According to the results of our four seasons of excavation, it can be deemed that the religious complex at Kal-e Chendar was however of particular type: a wide cemetery occupied the areas surrounding the monumental terraces, at least at a given moment, thus implying that the religious and funerary functions were here strictly interrelated. Previous survey and excavation allowed us to verify the presence of monumental tombs built in undressed stones. We were able to recognize at least 32 occurrences up to now but we expect that hundreds and hundreds will be discovered at the site in the future. All the tombs recognized have been looted repeatedly, in ancient and modern times: some of them have been excavated in order to prevent further unauthorized activities and the loss of data and information. These are underground saddle or flat-roofed chambers built in undressed stones. If some of them appear as normal burials used for many depositions, there are also monumental family chambers that seem to have been part of more articulated funerary complexes, in which corridors, sometimes stepped, were used as walkways to other – buried or semi-buried – structures. The type of family tombs, with large chambers accessed by stairways and containing funerary benches, find comparisons with samples known at Susa, Babylon, Kish and Seleucia on the Tigris and provide interesting information on the social milieu of the people who decided to be buried there. The most interesting feature of these monumental family tombs appears to have been the fact that their façades had a monumental setting, with hinged stone doors decorated by carved geometric patterns, and could be viewed from the outside, only part of the tomb having been underground. The hinged doors blocking their entrances could be opened many times for entering the funerary chambers, while rituals were performed in external niches or secondary chambers. The monumental impression of some tombs leads to an aristocratic milieu: this seems confirmed by what remains of the funerary goods which appear to be dated to the Hellenistic and Parthian periods quite confidently. The golden and bronze objects of T23, as an example, testify to the customs of a wealthy plutocracy, well accustomed to the trends of the Hellenistic and Parthian upper classes.

Especially the pottery assemblage, of which we will introduce the preliminary results of the archaeometric analyses performed at the Dipartimento di Scienze della Terra and the Dipartimento di Chimica of the University of Torino, shows clear influences and finds comparisons with the contemporary ceramic production of the near lowlands of Susiana and Mesopotamia.

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CEREDA, Susanna  
University of Vienna

### **Investigating the perception of built space through a deposit-oriented approach – the micromorphological study of floors at the site of Arslantepe (Malatya, Turkey)**

The way people perceive the built environment is reflected in the way they interact with it. Such interactions produce material traces, some of which microscopic, that may get embedded within the architectural space itself. Therefore, by adopting a deposit-oriented approach we can unravel these less visible traces, providing clues for understanding the way people experienced space. This paper focuses on the 4th millennium BCE buildings from the site of Arslantepe (Malatya, Turkey). During this period, the site experienced the formation of a proto-state system that found its physical expression in the construction of monumental mud-brick buildings with administrative and ceremonial functions. A micromorphological investigation was carried out in order to provide a high-resolution analysis of the interaction between people and those structures that had a central role in mediating the socio-political dynamics of the period. Therefore, floor samples were collected in different rooms and examined under the microscope in the form of 30 µm thin sections. Observations on the arrangement and distribution of the minute floor components revealed hidden evidences about construction, use, circulation and

maintenance of the built environment. In turn, this information, combined with the general architectural layout, was used to furnish insights into the way people perceived and experienced their physical surrounding.

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**CHARLES, Mike**  
University of Oxford

### **For the people? Household level plant consumption and disposal in Old Babylonian Ur**

Archaeobotanical remains from sites in southern Mesopotamia are generally in short supply for a combination of reasons including on-site preservational conditions and archaeological sampling decisions. Curiously one of the exceptions to the sparse and sporadic nature of the record are the ‘food offerings from Ur’ recovered from the Royal Tombs which include material identified as ‘flat bread’ and ‘perforated crab apple’ in addition to the more commonplace finds of cereals [barley & wheat] pulses [peas & chickpea] and dates [Ellison et al. 1978]. Recent excavations in Old Babylonian areas of the site have, critically included systematic, large scale recovery of plant remains from and provides us with a much clearer indication of the types of plant material used and deposited by the households of the city in contrast to Royal elites. The results of this work will be presented and assessed for their socio-economic significance within the city and across the region.

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**CHARPIN, Dominique**  
Collège de France

### **Epigraphical discoveries at Ur, 2017 season: a survey**

The epigraphic discoveries of the 2017 season at Ur give us an adequate knowledge of the chronological and sociological situation of the buildings excavated. In the big house of Area 3, 45 tablets have been discovered around and inside the burial vault ; they belong to the archives of a Babylonian general, Abisum, who occupied the building during the reigns of Hammu-rabi and Samsu-iluna (1757-1738). Area 4 gave Old Babylonian school tablets of the elementary phase, and at a depth of more than 4 meters, a few Ur III tablets. The last level of the new house excavated by the Munich team was empty; but discarded tablets, fragments of envelopes and sealed tags show it had been previously inhabited, at least from the reign of Sin-eribam (1842) to the reign of Šilli-Adad (1835), by Sin-nada, a scribe who was intendant (UGULA É) of the Ningal temple.

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**CIFARELLI, Megan**  
Manhattanville College New York – University of Pennsylvania Museum  
**DAN, Roberto**  
ISMEO: Associazione Internazionale di Studi sul Mediterraneo e l'Oriente

### **The Hasanlu Decorated Belts in Context**

When societies connect (or collide), their visual cultures mix in ways that express the power dynamic of the relationship. The mixed material culture that emerges from interactions, and the processes that



contribute to the mixtures, are often described as acculturation, assimilation, syncretism or hybridization. To understand the nature and meaning of a repurposed “foreign” image in new settings, or emergent “local” imagery integrating elements from outside cultures, we must delve into the circumstances of local production and use rather than concentrating exclusively on determining the geographical and chronological origin of new motifs and works of art. Archaeological and architectural context are critical to this endeavor.

Period IVb (c. 1050-800 BCE) at Hasanlu provides material for a case study of hybridization of visual culture in contact situations. At Hasanlu, excavators discovered fragments of nearly 100 decorated sheet-metal belts, a type of armor introduced to Hasanlu through contact with Transcaucasia. Within artifact class at Hasanlu, three types predominate: Transcaucasian imports transformed through local use, a locally produced type that imitates the design of Transcaucasian belts in a Hasanlu-specific, utilitarian vernacular, and belts decorated with an elite, carefully wrought amalgamation of visual elements drawn from the eclectic collections of local and imported, contemporary and heirloom, objects in temple treasuries. Previous analyses of these decorative schemes have concentrated on tracing the points of origin of certain motifs, and extrapolating aspects of relationships between Hasanlu and other lands. This discussion shifts the focus to the interaction between the decoration of belts and the contexts in which they occur, including elite male burials, temple treasuries, and in the arms of enemy combatants who were crushed as the burning buildings collapsed. In so doing, it aims to illuminate the processes of artistic interaction in context.

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**ÇILINGIR CESUR, Sevgül**  
Ege University

## **The Conception of Masculinity and Femininity in Hittite Rituals**

Hittites formed a culture that syncretizes religious beliefs and cultures prevailing in Anatolia and even on northern Syria through the 2<sup>nd</sup> millenium BC. To achieve this syncretization, religion was one of the most efficient social component which gives a path to gather the local and foreign cultures under one state. The religious practices served as social bonds that keep different folks and cultures together. Among many religious practices, rituals provide lots of information about Hittite social life and how they understand the world. According to cuneiform texts, Hittite rituals were organized for negative or positive circumstances they experienced such as plague, curse, death, birth, disease, infertility, white/black magic, illness etc.

When dealing with Hittite magical rituals it can be clearly seen that genders played an important role in conducting these religious practices. Both men (LÚAZU, LÚMUŠEN.DÛ, LÚIGI.MUŠEN, LÚDU) and women (SAL/MUNUSŠU.GI, MUNUS<sup>hašaya-</sup>, MUNUS<sup>SUḪUR.LÁ</sup>) could carry out rituals as experts. Similarly, the patients (EN.SÍSKUR/MUNUS.SÍSKUR), whom the ritual was organized for, could be either men or women. But this paper concentrates neither on the genders of ritual practitioners nor the patients. The issue that will be observed in this research is the conception of masculinity and femininity on the basis of some symbolic meanings underlying the ritual materials.

The materials applied in rituals are not coincidental. On the contrary it can be thought that they were arranged according to the purpose of ritual or the magical practices that will be held during the performance. Furthermore, a large variety of rituals include diverse symbolic actions and gestures. It can be drawn from the texts that the concepts of masculinity and femininity of the materials are clearly expressed in some ritual texts. For instance, on the 10<sup>th</sup> day of Hittite funerary ritual, they take down the statue of the death from the sitting-chariot and bring it into the tent and set it up on the throne (GIŠGU.ZA) of silver. But if it is a woman (the queen) then they seat it up on the GIŠ<sup>hapšalli-</sup>bench. Moreover, in analogy magic while some materials such as bows (GIŠPAN), arrows (GI/GIŠGAG.Ú.TAG.GA) or weapons (GIŠTUKUL) signify masculinity, stool (GIŠ<sup>hapšalli-</sup>), spindle (GIŠ<sup>huiša-</sup>) or distaff (GIŠ<sup>hulali-</sup>) are the materials that

symbolize femininity. Therefore, this paper aims at examining these materials that refer to masculinity and femininity in cuneiform texts of Hittite rituals by making comparisons between rituals and their materials.

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**CLUZAN, Sophie**

Louvre Museum, Near Eastern Antiquities Department

**LECOMPTE, Camille**

National Center for Scientific Research – Archéologies et Sciences de l'Antiquité / Du village à l'État au Proche et Moyen-Orient

### **A propos des temples de Mari Ville II: Société humaine, société divine et leurs substituts de pierre**

Les temples de l'horizon chronologique de la Ville II de Mari ont mis en évidence l'existence d'une attention particulière portée à la représentation humaine dans l'expression et l'acte de la dévotion. La quantité de statues déposées dans ces édifices reflète l'importance que revêt la substitution, dans les temples, de la présence humaine par des représentations et traduit le statut très particulier accordé à cette coutume, nous interrogeant en retour sur la fonction précise de ces substituts.

En dépit de l'existence de certains standards, que nous rappellerons, l'individualisation de chacun de ces substituts marque ce vaste ensemble votif. Parallèlement à un usage inégalé de l'écriture, cette volonté s'exerce par une réelle capacité à évoquer des physionomies et des visages et par la mobilisation de certains artifices susceptibles d'évoquer la nature ou la fonction des personnalités représentées.

Au-delà de l'accent porté sur les particularités des individus, de véritables catégories sont en place, que définissent des spécificités partagées. Ainsi, les individus représentés, identifiés comme des acteurs sociaux, révèlent en partie quelles catégories professionnelles entretenaient un lien privilégié avec les temples de Mari dans le cadre de l'offrande votive. Après leur présentation synthétique, l'exposé étudiera la pertinence et les limites de leur étude contextuelle dans la perspective d'une meilleure appréciation de leur statut respectif et de leur fonction.

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**COOPER, Lisa**

University of British Columbia

### **Assyrian Period Domestic Occupation at Bestansur: Results of the 2017 Spring Excavations**

Results of the University of British Columbia's recent archaeological investigations of the Late Assyria period occupation at the site of Bestansur in the Shahrizor Plain of the Sulaimaniyah Province of Iraqi Kurdistan are reported here. The 2017 excavations in Trench 14, an area more than 30 metres to the southeast of the central mounded site of Bestansur have exposed domestic units separated by narrow alleyways and open areas, some paved with pebbles. The recovery of reconstructable *in situ* pottery vessels and diagnostic sherds provides a rich dataset for identifying how these ceramics were made and used by Bestansur's inhabitants. The pottery is also vital for helping to establish a date for the site's occupation, which, from what can be made out thus far, was settled in the late 7<sup>th</sup> century B.C.E. Studies of the built environment of Trench 14 at Bestansur are being enhanced by the implementation of photogrammetric recording of architectural features and deposits. This system is of utility for producing geo-referenced orthophotos that can easily be transformed into highly accurate plans after the season, allowing for a more efficient use of time in the field – time that can be spent excavating instead of drawing. Even more

importantly, the system has produced 3D models and complete top-down views that greatly enhance a visualization of the built domestic spaces and their associated furnishings, thereby assisting in our aim to understand the movement and behaviours of the people who once inhabited these places.

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**COPPINI, Costanza**

University of Udine, Department of Humanistic Studies and Cultural Heritage

### **The Land of Nineveh Archaeological Project: Middle and Late Bronze Age pottery production and distribution in the Land behind Nineveh**

The territory extending to the east of the northern course of the Tigris River, included in nowadays Iraqi Kurdistan, is currently being investigated by many archaeological projects. These researches provide new information and data about the exploitation and the settling of this area. Particularly relevant is the territory surveyed in the frame of the Land of Nineveh Archaeological Project (LoNAP), which encompasses the fertile plain to the north-east of Nineveh, delimited by the Zagros foothills, i.e. the Land behind Nineveh. In the Second Millennium BC, this area was intensively settled and was crucial for economic purposes.

In the present paper, we are going to present the Middle and Late Bronze Age ceramic material from the survey conducted by the ongoing Land of Nineveh Archaeological Project, and to establish comparisons and connections with assemblages from survey projects and ongoing excavations located in neighbouring areas. The final aim will be to place the occupation of the Land behind Nineveh in a broader socio-political context, thus delineating the changes occurred in the considered time frame.

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**CORNELIUS, Izak**

Stellenbosch University

### **The Material Imagery of Sam'al and Gōzān – A Tale of Two Cities**

The excavations at the sites of Zincirli (Aramaic kingdom of Sam'al/Yādiya/Bīt-Gabbāri) and Tell Halaf (Aramaic kingdom of Bīt Bahjāni) have revealed an important collection of visual or material imagery from the beginning of the first millennium BCE in the form of reliefs, statues, stelae, ivories and seals.

A selection of material and motifs from these two sites will be described, analysed and last but not least compared. What are the similarities and what are the differences between the material from these two cities? What were the influences from earlier periods and from other cultures (e.g. Hittite, Luwian, Assyrian or Phoenician)?

Are there common characteristics in the material from the two sites which can be described to a general "Aramaic" culture? Can the material imagery from these two sites contribute towards the formulation or definition of what might be called "Aramean art"? Is this at all possible or should one remain skeptical as e.g. Bonatz (in Niehr, *The Aramaeans*, 2014:205)?

**COUTURAUD, Barbara**  
University of Liège

### **Images of War: Materiality and Context**

Many images of war from the Ancient Near East during the Early Bronze Age have survived. These have been studied principally in terms of their depictions of battles and fighting techniques from that time: weapons, clothing, etc. Less questions have been asked concerning the reasons for producing such images, the 'intentions' lying behind their creation that can explain, apart from a purely ideological aim, how specific motifs were used to depict the military theme across different media.

One way of reaching these 'intentions' is certainly to focus on two essential points of the figurative material culture, the media and the context of exposure, by asking a central question: how can these two criteria serve the discourse conveyed by an image? Indeed, the construction of an image that embodies a concept or a message is necessarily defined by the object on which it is affixed and the place where it is displayed.

In light of some well-known examples, and in this perspective, I will advance some definitions of the image of war and highlight by which means the medium and the context of exposure condition the implementation of an image, arguing that technical constraints, the size of the object or the public intended to see it play a role in the effectiveness of the iconographical and ideological discourse conveyed by an image.

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**CRAWFORD, Cory**  
Ohio University

### **Dimensions of Iconicity in Iron Age Syro-Anatolian Imagetexts**

This paper presents some of the results of a study of Syro-Anatolian monuments that combine figural and textual information, categorizing and analyzing the different spatial, visual, technical, and linguistic dimensions of these monuments in order to chart the different strategies exhibited in bringing the two together. Studies of hieroglyphic texts (especially Egyptian, Mayan, and Hieroglyphic Luwian) and even of cuneiform monumental inscriptions have shown how boundaries between script and image were frequently blurred, and how texts were also available for visual consumption as icons and not only as linguistic signs. Alphabetic texts from the ancient Near East have frequently been left out of this discussion of iconicity, but nothing inherent about alphabetic script militates against use of alphabetic texts as iconic, especially when one recalls its origins in depiction. The specific goal of the study is to see whether or not we can discern in the alphabetic monuments an attempt to treat the writing itself as available for apprehending as icon and not simply as means to a verbal end, and if so, to what extent this effort can be ascribed to cultural interactions between Luwians and Semitic-speaking artisans. I conclude that it is indeed possible to see a Northwest Semitic tradition of visualizing text as icon likely stretching back into the Bronze age, if not earlier, that forces us to consider the visual dimensions of text in this region more carefully than has been done in the past.

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**CUENCA, José Luis Blesa**  
Autonomous University of Madrid

### **Kulträume der arischen Völker aus der frühen Eisenzeit**

Die Vorgeschichte der zarathustrischen Religion handelt von einer Angelegenheit, die unter den Historikern von Mittelasien im Altertum in letzter Zeit viel Interesse geweckt hat. Solche Elemente sehen tatsächlich so aus, als ob sie aus den Stadtgesellschaften der Bronzezeit stammen. Doch diese (nicht unanfechtbaren) Behauptungen müssen berücksichtigen, dass das Wesen dieser Kulte eine völlige Neuheit der Eisenzeit ist, die gemeinsam mit einer neuen Kultur kam, die sich zu jener Zeit in der Geschichte des Alten Orients einfand; die Arier. Wir gehen von Forschungen aus, die im Rahmen des turkmenisch-spanischen archäologischen Teams in Dahistan (Südwestliches Turkmenistan) durchgeführt werden, um auf diese Weise die Beweise von Kulträumen unter den vorachämenidischen Gesellschaften Mittelasiens zu untersuchen, und sie in Zusammenhang mit den schriftlichen Quellen zu bringen. Dies alles dient dem Versuch, besser zu verstehen, wie der religiöse Glaube unter den ersten arischen Völkern war.

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**CUNLIFFE, Emma**  
University of Newcastle

### **Archaeologists and the military: reassessing cooperation 13 years after Iraq**

When Coalition forces invaded Iraq in 2003, the consequences – for both the Iraqi people and their heritage - were dire. As Iraq devolved in sectarian conflict, major archaeological sites were heavily damaged by occupying forces, and hundreds of others were systematically looted. Archaeologists who cooperated with military forces were heavily criticised by some for working with the military and so ‘providing academic and cultural legitimacy to the invasion’ and contributing to a wider ‘ethical crisis’ in archaeology (Hamilakis, Y. 2003, *Public Archaeology*, 2: 107).

13 years on, international focus is once again heavily invested in the conflicts and security crises in the Middle East, threatening the people and their heritage. Yet has archaeology as a field moved on? What lessons have been learned?

This paper presents an overview of some of the key developments in military cultural property protection in the last 13 years, focussing on lessons learned by both archaeologists and military professionals. The paper is timely, given the release of the UK Chilcot Report into the invasion of Iraq, and the ratification by the UK of the 1954 Hague Convention for the Protection of Cultural Property in Armed Conflict. It argues that the time has come to re-evaluate our relationship, and offers a platform founded in ethics and international law from which to do so.

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**CYTRYN-SILVERMAN, Katia**  
Hebrew University, Jerusalem

### **The First Mosque of Tiberias: Religious Architecture After the Conquest**

Excavations at Tiberias since 2009, mainly focused on studying the architecture of the Umayyad mosque and its phases, has exposed an even earlier mosque, most probably datable to the seventh century. This finding is unique, allowing us to evaluate not only data from historical sources on early mosques in general, but also their reflection on later structures. In addition, by studying the early phase of the mosque in Tiberias vis-a-vis the existing city layout and especially the nearby cathedral church, also part of the author's project, it is possible to add some important insights on the gradual Islamization of Tiberias.

DAADLI, Tawfiq  
Hebrew University Jerusalem

### **Examining the Urban Tissue of a "Lost" Town through Archeology and Historical Documents: The Town of al-Lid as a Case-Study**

In the last decade, I have led a community archaeology project in the town of al-Lid, which is situated on the coastal plain 20 km from Jaffa. The excavations concentrated on a caravanserai that used to occupy the center of the old town, which was completely demolished after the war of 1948. The excavation was combined with an architectural survey of the remains of the Ottoman town, as well as the retrieval of court documents, *sijillat*, and endowments deeds, *waqfiyyat*. The analysis of the material culture and the historical documents reveals the complexity of a small town that used to stand between Jerusalem, on the mountainside, and Jaffa, on the coastal plan.

In this talk, I will concentrate on our research of the urban transformation of al-Lid during the late Ottoman period. I intend to examine the impact of these changes on the urban tissue, focusing on exploring the role of spiritual habits, like shrine visits and shrine buildings, in shaping the urban tissue. Through the historical documents, in particular the court documents, I will examine the role of the nobles in shaping the town's built environment and social life, especially through their donations and endowments for shrines.

Through this paper, I would like to use this case-study to illustrate a research that is based, on the one hand, on archeological and architectural data, and on the other on historical documents. The combination of both sources, I believe, help unearthing the complex social structures and their impact on the ground.

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D'AGOSTINO, Anacleto  
University of Pisa  
ORSI, Valentina  
University of Florence

### **Excavations at Uşaklı Höyük**

The archaeological excavations started in 2013 at the site of Uşaklı Höyük, a multi-period site located in the north Central Anatolian Plateau, have revealed remarkable evidence dating to the Late Bronze and Iron Ages. Sectors of two monumental buildings, a temple in the lower town and a palace on the acropolis, first identified through geophysical prospection, show similar architectural elements which belong to a common Hittite tradition dating to the 15th-12th cent. The finding of fragments of cuneiform tablets on the slopes confirms definitely the importance of the settlement as a Hittite centre in the Late Bronze Age. The occupation dating to the Iron Age period, centred on the mound, is characterised by a large building activity with a complex retaining structure constituted by a large stone glacis, walls and earthen fillings. Architectural remains of later periods have been also identified and partially exposed.

This paper will present a preliminary overview of the principal results achieved during the first five seasons of excavations.

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D'AGOSTINO, Franco – ROMANO, Licia  
Sapienza University of Rome

### **Unesco in Iraq: the Case of Ur**

The 17th of July 2017, during the UNESCO World Heritage Committee 40th Session in Istanbul, the file titled *The Ahwar of Southern Iraq: Refuge of Biodiversity and the Relict Landscape of the Mesopotamian Cities* has been accepted in the World Heritage List. The Marshland (Ahwar in Arabic) file is made up of seven sites: three archaeological sites (Uruk, Ur and Eridu) and four wetland marsh areas in southern Iraq, it is therefore a mixed natural-cultural heritage site (only 10% of the UNESCO sites belongs to this category). The paper will briefly report on the general file and will focus on the Italian activity in Ur, aimed at the conservation of the 3 most endangered monuments of Ur: Dublamakh (2013), Royal Masusolea (2014), and Ziqqurat (2018).

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**D'AGOSTINO, Franco** – **ROMANO, Licia**  
Sapienza University of Rome

### **Seven Excavation Campaigns at Abu Tbeirah**

Since 2012 seven excavation campaigns have been carried out at Abu Tbeirah, a 3rd millennium BC city located near Nasiriyah. The paper will present the results of the interdisciplinary researches carried out since now and the discoveries in the excavation areas, that are shedding new light on the life of a southern Mesopotamian city. Moreover, the preliminary results of the 2017 excavation of Abu Tbeirah harbor, a huge artificial basin surrounded by a rampart and linked to the main channel crossing the Tell, will be presented as well.

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**DALLAI, Margherita**  
University of Florence

### **Intramural funerary hypogea as living space: some case studies from Mesopotamia**

In some cases, even though it seems paradoxical from a terminological point of view, funerary architecture can also be considered as integral part of the living space. This, for example, is the case of the intramural funerary hypogea. They are familial collective tombs containing multiple progressive burials and characterised by multiple vaulted chambers. These hypogea are usually placed underneath the dwellings and palaces and are connected to the overlying living structures through stairs, corridors or shafts; for this reason, they are considered an integral part of the house and, consequently, of the living space. Therefore, it can be argued that the inner space of these graves was used by the living on a continuous basis. After analysing the relationship between the tombs' localisation and the overlying structures, we will investigate the organisation of the built environment, the accessibility of the various rooms, and we will try to understand how people perceive these spaces. To achieve these results, the principles of spatial and activity-area analysis will be applied, since both are essential for the analysis of the movements and sensory experiences of the people who frequented those spaces.

**DALL'ARMELLINA, Vittoria**

Ca'Foscari University of Venice, Department of Humanistic Studies, Sciences of Antiquity

### **Images of a New Aristocracy – A koinè of symbols and cultural values in the Caucasus, Anatolia and Aegean during the Bronze Age**

The paper will present the preliminary results of the author's PhD project, which deals with the diffusion between the Southern Caucasus, Anatolia, the Aegean Islands, Crete and Mainland Greece, in the course of the Bronze Age, of selected types of *insignia dignitatis*. These apparently reflect the birth of a new ruling elite that maintains its power through military exercise, and is also associated to the spread of particular funerary customs (e.g. funerary burrows and other elite burial types) mainly. It becomes increasingly clear that these northern portions of the Near East share some cultural specificities which set them apart from the better known traditions of Mesopotamia and the SyroLevantine region. A series of characteristic items, mainly weapons but also parade standards, and different types of ornaments, spread in this northern areas. They are strongly linked to a warlike symbolism, and characterise a warrior aristocracy whose concept apparently originated and developed between the Caucasus and Anatolia and spread from there toward mainland Europe, in particular towards the Aegean area. In the presentation, these concepts will be illustrated by the distribution of selected categories of items.

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**DAVTYAN, Ruben**

Max Planck Institute for Social Anthropology

### **Glass vessels from Achaemenid-era burials from Lori Berd (Armenia)**

Blue glass vessels from Achaemenid period found in the necropolis of Lori Berd contain three funnel-necked beakers (burial no. 105), a flask (burial no. 106) and a rhyton (burial no. 109).

The form of the funnel-necked beakers is known from Achaemenid-era toreutic and pottery particularly from Western Asia Minor, Iran and Caucasus. Direct parallels of the glass flask and rhyton can be found from Northwestern Iran and from Lebedovka-II, a necropolis in Western Kazakhstan.

The investigation of the glass vessels of Lori Berd reveals the itineraries of cultural and material exchange between the peripheral areas of Achaemenid empire and beyond its borders.

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**DE BACKER, Fabrice**

Alois Musil Center for Oriental Archaeology – University of Vienna

### **The Khirbet al Khalde Archaeological Project: An overview on Land Use and Water Employment in Pre-Islamic Jordan**

The Wadi Yutm Archaeological Survey Project (WYAS) was initiated in 2011 by the post-graduate student John Scott for his doctoral dissertation on conflict archaeology at University of Bristol, UK. The project was conducted to draw an updated archaeological data map of the Wadi Yutm region, near Aqaba, in Jordan, for all time periods.

The Khirbet al Khalde Archaeological Project was initiated by Doctor Fabrice De Backer and Doctor John M. Scott, in affiliation with the Department of Archaeology of the Al-Hussein Bin Talal University, Ma'an,



for the study and preservation of the archaeological sites linked to the Idumeans, Nabateans, and early periods recovered during the WYAS.

This huge, long term project intends to analyze the Land Use and Water Employment in Southern Jordan, more precisely the international trade system impact on local, smaller human groups and areas in connection with water sources or grazing areas.

With the attention already provided to this project by the University of Vienna since 2011, we intend to record, study and preserve Khirbet al Khalde, located on a strategic trade route between the Red Sea and the Levant, from the threatening dangers linked to the conservation of the buildings and structures.

Khirbet al Khalde, « the ruins of Khalde », is a wonderful area located at the foot of a high, rocky mountain, on the Eastern side of the highway between Ma'an and Aqaba, in Jordan, with a huge potential in archaeological features linked to Land Use and Water Employment.

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**DE GRUCHY, Michelle**  
Durham University

### **Observations on the North Jazira during the Uruk Expansion from a Study of its Routes**

While the precise nature of the Uruk Expansion/Phenomenon has been debated over the last three years, there is no doubt that it represents a centuries-long period of regular, long distance exchange and interaction between nascent Southern Mesopotamian city-states and surrounding regions. To learn more about the precise nature of the Uruk Expansion, I have studied the routes along which this interaction took place in the North Jazira region of Northeast Syria and Northwest Iraq. This paper presents a summary of the results. First, it is argued that polities had already begun to form in the North Jazira by the start of the Uruk Expansion. Second, who would have travelled the routes and their travel priorities are examined. Third, it is demonstrated that the Uruk Expansion was a polarizing force in the North Jazira that split the region and left it divided in the centuries that followed.

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**DE JONG, Lidewijde – PALERMO, Rocco**  
University of Groningen  
**UR, Jason**  
Harvard University

### **Shaping Imperial Spaces. The Erbil Plain from the End of the Assyrians to the Seleucid Empire**

Northern Mesopotamia was a crossroad of Empires. The trans-tigridan region, in particular, became the political and administrative core of the Assyrian Empire between the 9<sup>th</sup> and the late 7<sup>th</sup> c. BC. Yet, the formation and development of such complex imperial landscape did not end after the fall of Nineveh and in fact it was transformed, adapted and re-booted during the Seleucid period (late 4<sup>th</sup> – late 2<sup>nd</sup> c. BC). Colonising activities, hybridization in material culture and long-distance connections considerably changed settlement patterns as well as the socio-cultural framework of the Seleucid world, and particularly of this area. Indeed, thanks to recent archaeological research in the Kurdistan Region of Iraq we are now on the verge of re-discovering this important and yet long-forgotten period, whose archaeological record still appears obscure and not properly investigated.

Therefore, this paper explores major changes connected to the Seleucid reshaping of the landscape through recently collected archaeological data. Differences in site location, morphology, hierarchy, and

connectivity will be discussed, also in relation to both earlier and later periods. Ceramics data will be included in the analysis with the goal of highlighting traces of continuity and developments of new styles and fashions. The talk will primarily use evidence from the Erbil Plain Archaeological Survey, but it will also include legacy data at both regional and broader scale, as well as historical records in order to assess the impact of the Seleucid Empire in this part of the Near East.

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**DEHPAHLAVAN, Mostafa – ALINEZHAD, Zahra**

University of Tehran

**MOHAMADKHANI, Kouros**

University of Shahid Beheshti

**MALEKZADEH, Mehrdad**

Iranian Centre for Archaeological Research

### **The Newly Discovered Cemetery of Iron II Age in Qareh Tepe of Segezabad**

Qareh Tepe of Sagezabad is one of the most important and distinguished sites in Qazvin plain. There have been carried out numerous excavations in Qareh Tepe and the other sites in Qazvin plain but the cultural features of Iron III Age and Achaemenid Periods have not received proper attention. The original border of this tepe was measured and determined in 2016 through archaeo-geophysical and sounding operations that yielding remarkable results. The area increased from 12 to 27 hectares under alluvial soils in perimeter area of site. The evidence obtained indicates an important and extensive site belonging to the late period of this site.

There was also discovered a cemetery of high significance that, according to the excavations carried out in 2016 and the cultural material found inside the graves, belongs to Iron Age II. Remarkable evidence was found in this cemetery reflecting the cultural features of this particular period, including deranged graves, infants buried next to adults, infants buried in pithos and clay crocks, bodies in ash heap, etc. There burial is in three layers more details of which require additional excavations.

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**DERMECH, Sarah**

UMR 7044 Archimedes – Université de Strasbourg

### **Shaping architecture through colors**

This paper will focus on the evidence of the use of colors during the PPNA and PPNB in the Northern and Southern Levant within both domestic and “public” architecture (i.e. the communal buildings).

Evidence suggests that a differentiated use of colors in the two regions and particularly in the two contexts exists.

In the PPNA or final PPNA communal buildings, where people are assumed to have gathered and performed symbolic/cultic/ritual activities, colors, mostly wall or floors paintings, were used to develop a sense of unity. By applying solid colors (white or red) on broad dados inside dark subterranean and circular buildings, these contributed to the creation of a particular sensorial environment, probably in relation to the activities supposed to take place there.

On the contrary, different colored material –pebbles, red clay and so on- were used to create visual contrasts inside buildings, probably in order to facilitate the perception of architectonic elements like benches, platforms, pillars, and thresholds. At Dja'de, geometric patterns in red, white and black were

intrinsically linked to the manipulation of forms here, echoing the circular and ‘tripartite’ plan of the building.

In the Northern Levant, although colors and paintings were used for different purposes, it seems that they are almost exclusively found inside “public” buildings.

The situation is different in the PPNB Southern Levant, where evidence of wall and floor paintings is to be found inside houses. They can be simply ornamental, highlight architectural elements or feature a symbolic meaning when used to mark the location of a grave.

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**DI LUDOVICO**, Alessandro  
Sapienza Università di Roma

### **Alterations and New Locations for Old Themes: On Changing and Traveling Cylinder Seals’ Motifs**

Cylinder seals are one of the most typical and widespread classes of artefacts of the ancient Near East. They carry a huge quantity of information related to different fields of the life of ancient cultures, but this can often become the source for misleading interpretations. In particular, the recycling of cylinders and of the themes depicted on their surface raises a number of issues, mainly because of the many dark sides bound to the possible functions of these artefacts in daily life. In this paper some case studies will be considered, dealing with both *well-experienced* seals and themes *traveling* through long-distances or different ages. The basic aim is to extract as much as possible the information hidden in such phenomena and to outline the way they developed through the cultural history of ancient Near Eastern peoples. In doing this, the complexity of seals as artefacts and of seals’ themes as dynamically structured messages will be highlighted and discussed.

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**DI PAOLO**, Silvana  
National Research Council - Institute of Studies on the Ancient Mediterranean, Rome

### **Encoding Space and Place in Old Babylonian Households**

Considering the architectural system as a system of signs, this paper wants to investigate the concepts of space and place as conceived in Old Babylonian architecture. While space is an open and abstract idea (the synthesis of space organisation and the built form), place is defined by the human experience. Thus, the ultimate goal of a ‘built structure’ is the activation of a potential content of environment by converting space to a place, intended as a container which contains ‘events’.

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**DIBO**, Suzanne

### **La mobilité de la culture syrienne vers l'Assyrie durant la période néo-assyrienne**

La prospérité urbaine des civilisations provient principalement du développement économique accompagné par un pouvoir politique puissant capable à élargir les limites de ses territoires. C'est le cas de l'empire néo-assyrien (912-612 av. J.-C.) qui a connu une grande expansion au Proche-Orient. L'histoire assyrienne était marquée par une grande variété d'évènements et un cadre politico-culturel plus complexe.

Suite aux opérations des expansions des rois assyriens, le pays d'Assur était un centre où se fond plusieurs cultures dont la culture syrienne était la plus marquante. Les syriens (araméens et phéniciens) avaient laissé en héritage beaucoup d'éléments de leur culture matérielle (objets en ivoire) et quelques traditions architecturales (plan Bit Hilani). Cette culture venait se superposer à la culture assyrienne en créant dans certains cas un art hybride. Ainsi, on peut bien distinguer entre un art proprement assyrien et un style artistique originaire de la région syrienne.

L'objectif de cette recherche est d'éclairer les influences syriennes sur le pays d'Assur et de comprendre les modalités d'arrivée de la culture matérielle syrienne en Assyrie: par les déplacements des peuples syriens eux-même ou c'était un simple pillage de guerre ou des tributs présentés par les pays vaincus?

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**DIETZ, Albert**

Ludwig-Maximilians-Universität Munich

### **The Iconography of the Ancient Near Eastern Storm-Gods**

Storm-Gods were venerated all over the Ancient Near East, from Anatolia to Egypt and the Levant to Iran, because of their direct influence on society: natural forces like rain, storm, thunder and lightning, as well as drought and sandstorms, commanded the respect of the people because their life depended on it. To get a comprehensive understanding of how Storm-Gods were treated and depicted, all visual representations of all periods and regions of the Ancient Near East have to be taken into consideration. This kind of iconographical study has never been done before, even though the Storm-Gods are some of the most important deities in the Panthea of the Near East. We can find depictions of them on cylinder seals, steles, reliefs, sometimes rock-reliefs and more rarely as statues or figurines. Although on kudurru, where representations of deities are ubiquitous, there are rarely anthropomorphic depictions of a Storm-God. The symbols and attributes are therefore analysed as well. By collecting the depictions of Storm-Gods in chronological order for each region, I want to show consistency as well as changes in the depictions. The reasons for change can be political, social, cultural or religious. Therefore, an examination of the historical framework is vital.

Especially in times of intense cultural contact and exchange as well as in multicultural societies, situations arose in which several Storm-Gods and their pictures, as well as their names, were confronted. In these cases, the concepts of multiplicity, fluidity and translatability come into play. No matter how different the language, culture and political system might be, as long as deities who share similar attributes are venerated, areas of responsibilities or abilities, they can be compared. The act of translating and transferring foreign Panthea or deities has to be seen in the context of an international network in which economic, political and cultural exchange takes place.

But images are not just mere representations of underlying concepts and ideas. They play a central role in shaping beliefs and spreading religious meaning. The act of seeing is historical and always socially defined. The visual perception is not only influenced and controlled by congenital abilities, but also by learned abilities that were gained while growing up in a special socio-cultural environment. That is why seeing is constructed historically and socially. The iconographical representations reveal important characteristics of deities and help to identify them. Every image has an implicit beholder since it was manufactured with a specific audience (human, divine, etc.) or an intention in mind. By re-contextualising the images of Storm-Gods into their original environment, one can reconstruct a unity of the historical phenomena. Without context, most of the original meaning of these images is otherwise lost to us.

In this paper, I want to show the results of my dissertation about the iconography of the ancient Near Eastern Storm-Gods.

**DIFFEY, Charlotte – BOGAARD, Amy – CHARLES, Mike**  
University of Oxford

### **‘Farming the City’: Agriculture and storage in the Late Bronze Age**

During the late Bronze Age in Western Asia (c. 2500-1200 BC) the growth and development of large cities necessitated a change in the construction of the built environment, both inside and outside the core urban area. Within the city environs, the establishment of a large-scale sustainable agricultural system, utilizing resources from domestic producers through taxation and state-run estates, would have been necessary to ensure food for daily consumption as well as a storable surplus for periods of instability. Similarly, within the city itself the everyday living space was augmented by the construction of large storage facilities and food preparation areas. Archaeological research into the establishment of these agricultural systems, however, has been restricted due to the lack of direct archaeobotanical evidence recovered from primary contexts (e.g. storage) in these early cities. Instead, scholars have tended to rely mainly on documentary evidence, which provides a biased and partial picture at best.

This paper will seek to address this issue by presenting archaeobotanical results from the Bronze Age cities of Tell Brak in north-east Syria and the Hittite capital of Hattusha in Central Anatolia. At both sites, large, intact charred cereal stores have been discovered providing a unique snapshot into the harvest of each city. This material has been interpreted through the use of crop stable isotope analysis and functional weed ecology as a means of inferring crop growing conditions and agricultural regimes. This work will shed light on the wider nature of Bronze Age farming as well as providing a link between the rural environment and the urban landscape of the city.

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**DOLATI, Maryam**

Buali Sina University, Faculty of Archaeology, Department of Art and Architecture

### **Introducing and Typology of metal objects of Sarm cemetery**

One of the most important Iron Age's sites in central plateau is Sarm hill. This site is located in 61 km South Eastern of Kahak district, county of Qom. Sarm iron age cemetery is one of the biggest cemeteries in the north central of Iran. Among the important findings of this cemetery are metal objects. In this study, all the metal objects of the cemetery were studied which have not been introduced so far. Accordingly, the current study tries to introduce typology and classification of metal objects of Sarm grave by studying them. Metal objects of the cemetery were divided into two groups i.e. weapons and ornaments. Most of these objects were made of bronze and a few of them were made of iron. The applied method in this research was descriptive-analytical. After the introduction, description and classification of these objects, the type, materials and frequency of them were studied. The result of the study showed that the materials, shape and construction methods of metal objects from Sarm cemetery are comparable with other cemeteries such as Sialk A, Sialk B, khurvin, Gheitariéh in new Iron Age of central plateau.

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**DOLCE, Rita**

Roma Tre University, Department of Humanistic Studies

### **The many-faceted power of visual communication and its reception. Some suggestions from the Mesopotamian and Syrian Evidence**

The image and its reception, both in the intentions of its creator and on the part of the viewer, by its very nature contains different levels of perception, comprehension and semantic meaning. These distinct levels can be grasped through a parallel study of the visual document itself and the artefact that forms its support, alongside aspects such as the gender of the human subjects that appear in it, in a combination of factors that suggest new potential interpretations.

Attention is focused on the one hand on the type of subjects and their identity/role as a category of analysis in the visual sources of the ANE and on the other on the different types of artefacts that vehicle the message and meaning, with differing degrees of dissemination and reception, sometimes with a strong social impact that is inversely proportional to the relative “importance” ascribed to the works themselves.

In other words, a *second world* of communication, of widespread and enduring impact, proliferates alongside that entrusted to main monuments, of a royal and official nature in the broad sense.

From this point of view, the long-standing and hotly debated issue of the Audience and the individuals who accessed the “pictorial narrative” takes on special interest and may offer further opportunities for understanding the system of transmission of values and meanings in some archaic cultures of the Near East.

In this context, the question of who the viewers and witnesses to visual communication were, recently revisited regarding the media operations of the Neo-Assyrian Period and still without plausible responses to the many unanswered questions, is central to the broader issue of the pictorial language of works of various types and belonging to different cultures, and of their range of reception.

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**DONALD**, Alexander  
La Trobe University

### **Cypriot Elaborate Style glyptic in review**

The term ‘Elaborate Style’ has been used to describe the finest quality cylinder seals associated with Cyprus since it was first introduced by Edith Porada in 1948. The implicit hierarchy of the standard Cypriot glyptic typology has fundamentally shaped scholarly understanding of seal behaviour and socio-political structure on the island in the Late Bronze Age. Elaborate Style cylinders (conventionally identified as those made of hard stones and engraved with supernatural scenes of deities, human-animal hybrids and fantastic beasts) have been associated with a narrow ruling Cypriot elite. This understanding has arisen largely from art historical analyses and has yet to be adequately tested against archaeological evidence. While seals of this type feature prominently in museum collections, sparingly few have been found controlled excavations on the island. Problematically, the group is also over-represented among finds attributed to Cyprus in both the Aegean and Near East. The paper uses available contextual data, iconographic evidence and specific object biographies to reconsider the Elaborate Style from a Cypriot perspective.

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**EDMONDS**, Alexander Johannes  
University of Tübingen

### **Rediscovering “Zagrology”. In Search of a lost Discipline**

In the course of research on the ancient geography of the Zagros, the present author undertook research upon the papers of Cecil John Edmonds (1889-1979), a British political officer stationed in Iraqi Kurdistan during the first half of the 20<sup>th</sup> century, now housed in St. Anthony’s College, Oxford. Quite fascinatingly, the archive contained a series of notes entitled “Zagrology”. In exploring these, the present author

discovered that C. J. Edmonds had carried out an extensive correspondence with various archaeologists over the years in what he termed “Zagrology”. This consisted of the interdisciplinary study of the Zagros and its peoples in both ancient and modern times, contrasting the land use, traditions, and archaeology of the present and past, so as to better understand as to how environment might impact upon the development of complex societies and cultures.

C. J. Edmonds never seems to have published anything explicitly on this topic, but the premise of this imagined discipline of “Zagrology” as may be ascertained from his notes is intriguing. Hence, it is here sought to outline “Zagrology” as defined by C. J. Edmonds, and to resurrect this concept and modernise it for the purposes of 21<sup>st</sup> century academic research.

Having established a provisional methodology for “Zagrology”, this is then applied to various case studies within Iraqi Kurdistan, comparing ancient and modern responses to different common historical scenarios, and demonstrating as to how this “lost discipline” may shed new light upon old questions. Finally, the future prospects of “Zagrology” are discussed.

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**EHTESHAMI, Niloofar**

University of Tehran

**RIAHYAN, Reza**

Islamic Azad University, Science and Research Branch – Cultural Heritages, Tourism and Handicrafts Organization

**DEHPAHLEVAN, Mostafa**

University of Tehran, Department of Archaeology

### **A Study on Settlement and Burials Patterns of Faryab Plain in the Parthian and Sassanid Periods**

Southeastern Iran includes some parts of Fars, Kerman, Sistan and Baluchistan provinces and the Northern shores of Makran. This area, because of having some significant sites, from Prehistoric periods to Islamic centuries, such as Shahdad, Shahr-e-Sukhteh, Teppe Yahya and Shahre-e-Daghyanos, played a vital role in archaeological studies and surveys. Moreover, the vicinity of the mentioned zone to the main commercial ways that connected west to east of Iran, enhanced its importance in several periods.

The Faryab plain is one of the most important cultural areas of Southeastern Iran that somewhat ignored in archaeological activities till now. This plain is situated near Faryab, in Kerman province. In Faryab plain, some archaeological sites like settlements and burials had been detected that dating back to Parthian and Sassanid periods. The research methods are library studies, cognition of environmental conditions, study and documentation of the archaeological data and processing them by GIS. The sites of the Faryab plain, both Settlements and burials, are related to each other, based on classification and comparison of the potteries with adjacent sites. The preliminary study of data, comparative chronology of the burials and some similarities between the cultural materials of settlements and burial, confirm this hypothesis that the burial (stone graves) sites are belonged to the seminomadic societies.

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**EINWAG, Berthold**

Ludwig-Maximilians-Universität Munich

### **The survey at Tell Fāra / Šuruppak**

The survey of Tell Fāra started as part of the regional QADIS survey project in Central Iraq directed by N. Marchetti. Earlier excavations at Tell Fāra were conducted in 1902/03 on behalf of the Deutsche Orient-Gesellschaft and in 1931 by the University of Pennsylvania, a short surface survey was conducted by H. Martin in 1973.

Approximately 1000 cuneiform tablets were found in the „houses“ during the regular excavations. They form one of the earliest Sumerian text corpora and are part of a centralized administration, headed by a ruler. The excavated remains testify a flourishing city between 3000 and 2000 BC. In the excavations on the central mound a considerable number of houses and large silos were uncovered but official buildings like temples, or a palace and a city wall were so far not detected. This does not fit with the picture of the city retrieved from the texts.

The survey at Tell Fāra / Šuruppak started in October 2016 and was continued in 2017. The structure of ancient Šuruppak, one of the research questions, is investigated with modern methods, including aerial photos and systematic prospections of selected areas. The main mound suffered by massive looting. In the shallow Lower Town the damage is less. The systematical survey shows insights in not yet investigated issues of the city of Šuruppak during the 3<sup>rd</sup> millennium. Industrial zones, as stone working, pottery production and other economic activities seem to be concentrated in the Lower Town.

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EITAM, David

### **The Natufian, Hunter-Gatherer or Food Preparing Society? The Architectural Remains of Natufian Huzuq Musa, Jordan Valley**

New aspects of the Natufian culture are revealed through a study of the late Natufian, partly excavated site of Huzuq Musa in the Southern Jordan Rift Valley. The 0.5-hectare late Natufian single-period and short-life site holds some 30 round small dwellings and special socio-economic activity areas. The well-preserved surface architectural remains, aided by the functional interpretation of the numerous rock-cut installations, reveal particular activities. These include communal processing of wild cereal vs. private processing of plant food near the dwellings, and the presence of a large central building. Consequently, residents of Huzuq Musa, a small village with ca. 100 inhabitants, could be shown to have prepared wild cereal meals as a plant-based food, in addition to their hunting. This study raises the crucial question, was Huzuq Musa a unique case or is it the first uncovered example of changes consistent with a shift from a hunting-gathering to a food preparing society of the Natufian people in general?

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ELENDARI, Rasha  
University of Toronto

### **Migrating People or Styles? Reinvestigating the “Oval” at Godin Tepe Level VI**

The presence of Uruk-style material culture at Godin, specifically inside the “Oval Compound”, has often been cited as an example of an Uruk outpost within an indigenous settlement. Following this model southern Mesopotamian merchants, traveling from (or via) Susa to the western Iranian highlands, built or took over an enclosed structure in a central and physically distinct area of the site that was separated from the local town.

In this paper I argue that, while Uruk style cultural traits were evident in the material assemblage of the “Oval”, this may imply less the presence of traders or agents from Uruk itself but the use of shared values and standards within a wider network that involved locals as well as foreign traders. This analysis will use



wide range of datasets (archaeological samples and records, survey data) and scientific approaches (petrography, GIS) to reinterpret the social and cultural identity of the occupants of the “Oval Compound”.

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**EMELIANOV, Vladimir**  
St. Petersburg State University

### **LBAT 1593 and Gender Aspects of the Mesopotamian Cultic Calendar**

This paper is a commentary on the translation of the Late Babylonian astrological prediction LBAT 1593 by E. Reiner. Reiner thought that the text said that certain months were meant for boys to be born, and the others for girls. However, the text actually says that the months of the Babylonian year are divided into masculine and feminine, because, firstly, in the lines of the tablet under discussion there is no word DUMU ("child"), and secondly, according to the cuneiform explanatory texts, the lines contain a brief description of monthly rituals associated with male and female deities, and these rituals coincide with male or female designations of the months.

The paper considers the following topics:

1. Male and female time-periods of the Nippur and Standard Babylonian calendars;
2. The male/female opposition in the Mesopotamian festivals;
3. A man's love for a man in Mesopotamian menologies;
4. The role of the third gender in the Mesopotamian cultic calendar.

**ERB-SATULLO**, Nathaniel  
Oxford University

### **Metallurgy and Mobility in the Caucasus**

In the study of Ancient Near Eastern metal production and exchange, past research has frequently focused on long-distance movement of metals. Using several different case studies drawn from my field and laboratory research on the Late Bronze and Early Iron Age in the Caucasus, I argue that relatively short-distance movements of people and materials between adjacent lowland and highland areas were major factors in the spread of metallurgical practices. The first case study concerns the metallurgical complexes of the eastern Black Sea region. Survey and laboratory analysis of production debris suggests that metal resources in foothills and mountain regions were well connected with population centers along the coastal lowlands. Synthesis of legacy chemical data on metal artifacts from this region shows that during the Bronze and Early Iron Age, adjacent highland and lowland areas along the greater and lesser Caucasus ranges formed spheres of common metallurgical practices, while adjacent lowland areas show subtle but distinct differences.

A second case study, drawn from my new project in eastern Georgia, discusses innovation in iron technology at a hilltop site along major routes of access between highland and lowland areas. The results of this analysis suggest that while mountains are physical impediments to movement, they can also act as pumps, drawing people together from disparate lowland areas during the summer months. While the search for metal resources may not have been the sole, or even the main motivation for these movements, the presence of ore in many of these highland and transitional foothill zones helped to disseminate technical knowledge and metallurgical resources throughout the region.

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**ERDEN**, Ayşe Gül  
Ege University

### **Symbol of Sun**

Symbols are visual images representing an idea, a signal, or a sign of a universal truth. People have symbolized and used the objects and forms that are important to them. The symbol that constitutes the subject of this study has been referred by various researchers with different names such as "signe royal", "Cappadocian symbol" and 'sun symbol'. Several comments have been made about whether this symbol is part of a kingdom's administrative mechanism or that it is a "symbol" that must be evaluated within the belief system of the time. The symbol is first seen in Anatolia at the early stages of the Assyrian Trade Colonies Period. It is thought to be derived from the Mesopotamian solar disk and has been introduced to Anatolia through Assyrian merchants. The motif which bears unique Anatolian features is seen on ceramics, stamps and weapons during the late stages of the Assyrian Trade Colonies Period. During the Late Bronze Age, it appears on medallions in the settlements both in and outside of Anatolia. The aim of this study is to reveal new interpretations of the symbology related to the sun through the typological classification of the symbols, the re-evaluation of the archaeological material within its contexts and assessment of different opinions about the meaning of the symbol.

**ERSKINE, Neil**  
University of Glasgow

### **Crossing the data-theory bridge: identifying routes and interpreting experiences in Middle Bronze Age Anatolia**

The interactive importance of routine, movement, and landscapes in socialisation and the creation of meaning are common themes in social theory and interpretative archaeological approaches (e.g. Giddens 1979; Munn 1990; Pandya 1990; Ingold 1993; Gibson 2007; Casey 2008; Lund 2012). However, they are rarely examined in ancient Near Eastern contexts, even where there is abundant evidence for routine travel, such as Kārum Period Anatolia, or for specific route networks, such as the hollow ways of the Early Bronze Age Jazira. Two motifs in the literature may explain these lacunae: a tendency to focus on sites rather than routes and foreground migratory patterns, the logistics of trade, or the goods or ideas transported in studies of movement; and secondly, an aversion to explicitly interpretative approaches, possibly due to their frequently vague connections between data and theory.

This paper seeks to address these issues by drawing together excavation and survey data, remote sensing data, and textual material, to identify specific routes taken between Kaneš and Aššur by Middle Bronze Age merchants. Thereafter, by employing Deleuze's (2006) concept of the fold, which explains the internalisation of experiences in a process of continual development, as a bridge between data and social theory, I will explore travellers' specific interactions with archaeologically-identifiable places and objects to consider how routine movement on these routes informed their understanding of the world. In doing so, this paper presents a theoretically-aware but data-centred methodology with which ancient social meaning can be addressed; an analysis of Assyrian trade movement with a focus placed firmly on the individual merchant and their specific experience; and an account of how movement informs both individual worldviews and society-level ontologies.

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**ESMAEILI, Maryam**  
Islamic Azad University

### **The Analysis and classification of potteries. From Tasouj – Kavar Region Fars Province**

One major theoretical goal of author is potteries typology of this area from Sassanid and Islamic period. Study of potteries from Kavar-Tasouj has been done with objectives, recognition, classification of potteries from this area according to shape, color, decorations construction techniques description and separation of potteries related to era and Islamic period. Also, index works of different periods have been studied in view of designing with potteries of adjacent and contemporary area for their chronology. Sassaned potteries found in most of enclosures but, major part of these potteries as been studied from networked enclosure of Tasjouj-Tol-eSorkh, fragments of edge, bottom, and body of pottery. The color of potteries dough is gray, pink, bright red, bright brown. Their chamot is fine sand, medium, sand, coarse sand. Sometimes plant materials used as chamot. Potteries baked with proper temperature and few of them baked low, most of them are wheelwright. Decorations used on the surface of potteries include .motifs, way carving horizontal and vertical lines which are parallel, and additional high relief. Probably pottery of this area effected by other parts of Fars like ; Pasargadae, Qasr-e Abu Nasr, Boushehr ,Firoozabad , Persepolis ,Potteries of Islamic period found in several enclosures includes; glazed pottery and non glazed pottery which composed fragments of edge, bottom, and body of containers.,Potteries of this area are wheelwright too, and their dough color is pink:

Chamot is fine sand and medium sand. They baked with proper temperature and have a firm texture, The color of glazes is green, blue and white. This study has been done through library and filed method, and

determined upon information analysis, comparing surface findings of enclosures with adjacent and contemporary area, archaism, control and pottery method of this area.

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**EZER, Sabahattin**

Adiyaman University, Department of Archaeology

### **New Researches in the North of Fertile Crescent – Adiyaman Region**

Adiyaman is a region in the northernmost part of the Fertile Crescent that has been settled continuously since prehistoric times. In the region nearly all of the studies of Prehistoric and Protohistoric periods were carried out in the Euphrates valley, west of Adiyaman. Surveys started in 1977 under the Lower Euphrates Project continued with some rescue excavations. The last surveys in the area were conducted by the Tille excavation team between 1985-1988. New studies on prehistoric and protohistoric periods of Adiyaman have been resumed in 2013 after 25 years and still continue.

The studies that started in the Central District primarily then headed to the west of Adiyaman and followed with the north. Finally, surveys continued on the eastern side of Adiyaman. Until 2016, 78 archaeological sites were examined. Of these, 38 were first brought to the archaeological literature by our research team. As a result of these studies, although the 3<sup>rd</sup> and 2<sup>nd</sup> thousand BC settlements were determined, the process from the Neolithic to the Iron Age was traceable. Undoubtedly, Adiyaman is located in the Northern Syrian cultural region. However, ceramics revealing the relations with Eastern Anatolia were also discovered in the finds. *Halaf* type ceramics; *cyma-recta*, *caliciform*, *Syrian bottle* vessels belonging 3000 BC and *grooved rim ceramic* from 2000 BC secured in surveys, set forth the cultural association with the neighboring regions. *Karaz* type ceramics recovered in the middle and northern settlements of Adiyaman show the relations with the Eastern Anatolia Region. The flintstone core and blades found in almost all settlements reveal that the region is very rich in terms of flintstone sources.

It is utmost important for the region and researchers that all periods are uninterruptedly determined in Adiyaman, starting from the Paleolithic Age.

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**FEIZI, Mahsa**

Tehran University – University Lumière 2, Lyon

### **Emāmzādeh ‘Abdollāh, a medieval Islamic building, at Soltāniyeh, Iran**

Emamzadeh Abdollāh is an octagonal building the west of Soltānieh plain, approximately 120 m west of the large mausoleum of *Öljeitü*. Similar to the mausoleum, the main material is brick and plaster. The lands around this building is covered with cultural debris, including pottery, bricks and bones. Although from today’s viewpoint it is located in the suburb of the modern city of Soltāniyeh, its location, its architectural character and observations of travelers in the 19th century indicate that it belonged to the ancient city of Soltāniyeh, built by the Il-khan *Öljeitü* as a seasonal capital in 1302-1312 AD and remaining the capital until the end of Ilkhanid period. During the middle and later Islamic periods, the Soltānieh plain is regarded as a favorite place for the Iranian ruler. The reason for this were its cool climate in summer (with abundant grass, birds and animals) and its location on the one of the main arteries of communication between central and northwestern Iran. This paper presents an architectural analysis of the building of Emamzade Abdollāh and its ceramics. It must be mentioned that the cultural material is provided by a primary archaeological survey in 2006 and after that in 2016. Historical documents of 19th

century together with the result of the archaeological survey and studies of Ilkhanid archaeological sites of Iran give the clues to understand the date of construction of this building.

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**FEIZI, Nasim – NASAB, Hamed Vahdati**

Tarbiat Modares University Tehran, Department of Archaeology

**WYNN, Thomas**

University of Colorado, Department of Anthropology

### **A New 3D Method to Calculate the Index of Symmetry for the Middle Paleolithic Points: the Mirak Site-a Case Study**

There is a growing body of literature that recognizes the importance of symmetry in the study of the evolution of hominid cognition. The development of stone tools and the evolution of human cognition are two sides of the same coin. Thus, it is essential that appropriate quantitative methods should be presented to measure the symmetry of stone tools. The last three decades have seen a growing trend towards such methods the most important of which is Symmetry Index. However, it seems that the use of this method is technically challenging. Thus this paper proposes a new methodology for measuring the deviation of symmetry using 3D comparison. This paper focuses on the stone points of the largest Middle Paleolithic open-site in Iran, Mirak. Our results show that the Index of Deviation of Symmetry (IDS) analyzes all points as symmetrical tools, while this number drops to 133 pieces using 3D comparison. In addition, *paired samples t-test* suggests a positive correlation between the increasing proportion of surface preparation and the decrease in deviation of symmetry on the two sides of the tools. Thus, it is likely that symmetry is affected by the morphology characteristics.

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**FARAHANI, Alan**

University of California, Cotsen Institute of Archaeology

### **An Archaeobotanical Analysis of Long Term Changes in Agricultural Practice at Kani Shaie, Iraqi Kurdistan**

**Abstract:** The archaeological site of Kani Shaie is a small (<3ha) tell site located in Iraqi Kurdistan not far from contemporary Sulaymaniyah. Archaeological evidence as well as radiocarbon dates procured from excavations at the site indicate in-habitation from at least 3500 BCE well until the Middle Islamic period, ca. 1400 CE. Excavations in 2015 and especially 2016 included a substantial archaeobotanical sampling component, which entailed the sampling of every archaeological deposit and the subsequent spatial recording of those samples using electronic digital mapping methods. The paper presents the analysis of over 150 samples collected at the site, comprising about 800L of analyzed archaeological sediment. The paper identifies continuities and discontinuities in major food crops (emmer wheat, barley, fig, etc.) through time, especially in new foods that appeared in the later Sasanian and Middle Islamic periods, which include rice and possibly hazelnut. The final discussion also includes methodological suggestions for other projects in the area based on the results of this study.

**FELDMAN, Marian H.**

Johns Hopkins University, Departments of History of Art and Near Eastern Studies

### **Monumental Architecture and the (De)construction of Memory during the Ur III Period**

The rulers of the Ur III dynasty, especially Ur-Namma and Shulgi, have left particularly impressive remains of their time in power, in particular massive ziggurat structures. These monumental buildings still dominate the landscape even today, constructing a potent legacy for the Ur III rulers. In contrast, hardly anything structural survives from the preceding Akkadian state. In part, this is because the capital city of Agade remains unidentified and thus unexcavated. Yet, even at well excavated cities where we know the Akkadian kings built, such as Nippur, practically nothing had been recovered archaeologically. Indeed, the ziggurat projects of the Ur III rulers like the Ekur of Enlil at Nippur rested on foundations that obliterated the immediately prior structures. This talk examines the possibility that the monumental construction projects of the Ur III rulers either intentionally or otherwise erased the physical presence of the Akkadian rulers from the spaces of ritual activity in southern Mesopotamia, thereby manipulating the legacy of this first territorial state whose memory survived primarily through literary means.

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**FINLAYSON, Bill**

University of Reading

### **Process, progress, people and places in the early Neolithic**

The principle focus of Neolithic study has been on processes of development – principally animal and plant domestication, aided and abetted by various forms of social, ideological, and cognitive developments. The process of becoming Neolithic through innovation, sometimes described as neolithisation, is seen as a critical human development, with vast global impacts. Much of this happens in a cultural vacuum, where the Neolithic has become polycentric or decentred, but united by the idea of progress. In this, the Neolithic is typical of many early developments in prehistoric archaeology, which grew out of a process of underwriting the notion of progress. The evolutionary progression, from savage to barbarian, from old stone age to new, or from hunter-gatherer to farmer – all incorporated the notion that all aspects of life changed together, society, ideology and economy – both suiting a checklist approach and the generalisations of a law based ‘new’ archaeology. The checklists are still there, confirming the rules of becoming Neolithic, and the flow charts that characterised aspects of the new archaeology are echoed by the complex mapping of entanglement. Societies and brains are obliged to develop to cope with the increasing demographic pressure, yet there is still remarkably little focus on people, choices, history or culture.

An increasingly rich and diverse database lay behind the calls for a decentred Southwest Asian Neolithic, but it still seems that the key attributes we pull from this database are the ones that unify the Neolithic, the successful achievements of progress targets within the checklist. These suffer from issues of equifinality – where the Neolithic is defined in terms of later developments, and research becomes a quest for origins. This fundamentally misunderstands the multiple processes of change that were occurring and obscures detail in synthesis. In contrast, I argue that we need to escape from these ahistorical approaches, and the top down models that ignore the detail of archaeological evidence, instead beginning to approach the Neolithic with a historical perspective.

One of the best documented forms of evidence available is the built heritage, the architecture and settlement planning that becomes a major feature of early Neolithic communities. Neolithic architecture has been understood to represent each of the key facets of the Neolithic: ‘houses’ representing increasing demographic pressure and a new social order, storage representing the food production systems and developing ideas of ownership, and ‘ritual’ buildings being a material product of new ideologies. This scheme both oversimplifies the organisation of the built environment and masks the substantial diversity between regions and individual settlements. If architecture and settlement organisation reflect and

construct society, what does this diversity represent, and does diversity help us to understand agency in the Neolithic – and from there can we begin to understand the context of decision making?

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**FISCHER-GENZ, Bettina**  
Deutsches Orient-Institut Beirut

### **A medieval collective burial at Qornet ed-Deir (Jabal Moussa, Lebanon)**

During the archaeological investigations at Qornet ed-Deir in the Jabal Moussa Biosphere Reserve (Lebanon), a medieval collective burial was discovered in a subterranean chamber covered with massive limestone slabs. This was part of a multi-room building complex, surrounded by natural limestone cliffs in a strategic position on the top of the mountain close to the village of Quehmez in the Nahr el-Dahab valley. Craniums of at least 7 individuals, male and female, were found in the last days of the preliminary investigation in what appeared to be an already disturbed burial chamber. A special investigation of the remaining fill was carried out under the supervision of the physical anthropologist Nada Elias, which provided additional data and shed more light on this unexpected discovery and its architectural and historical context.

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**FLOHR, Pascal**  
University of Oxford

### **Reconsidering and protecting the Pottery Neolithic in the Southern Levant**

During the Late, or Pottery, Neolithic, arguably the first farming communities as we imagine these came into existence, with the typical distinction between desert and sown. In addition, the period is key for understanding the effects of climate on societies, as it comprises both increasing climatic instability, as well as the most extreme Holocene rapid climate change event of around 6250 BC (the so-called 8.2 ka event). However, still very little is known about the Pottery Neolithic, especially in the Southern Levant. Compared to other periods only few sites are known, which could be due to a population decrease, a visibility issue, or a combination of both. Nonetheless, some evidence is present, and this paper sets out to give an overview of the current state of research of the Pottery Neolithic in the Southern Levant, bringing together existing evidence, and reinterpreting this using, among other things, GIS.

The second aim of the paper is to assess the state of preservation of the currently known Pottery Neolithic sites using remote sensing. If indeed the sites are not well known because they are small with a low visibility, they could be under severe threat of development – if indeed there are only few sites dating to the period, it is key that these are preserved at least until they can be studied.

**FLOHR, Pascal**

University of Reading – University of Oxford

**NIEUWENHUYSE, Olivier,**

Leiden-Delft-Erasmus Centre for Global Heritage and Development – Freie Universität Berlin, Institut für Vorderasiatische Archäologie

**AKKERMANS, Peter – VAN DER PLICHT, Hans**

Leiden University, Faculty of Archaeology

**Interpreting the effects of abrupt climate change on prehistoric society: Tell Sabi Abyad and the 8.2 ka event**

Climate change is often cited as a primary cause for social, economic, or political changes as observed in the archaeological record. However, this is frequently only based on an approximate synchronicity, while a clear framework for studying the causal link between climatic and socio-economic change in the archaeological past is often missing. We have developed such a theoretical framework, using examples from present day and historical climate change, but putting these in a clear archaeological context. We apply this interpretive, holistic framework to Tell Sabi Abyad. This Late Neolithic site in northern Syria was inhabited before, during, and after the so-called 8.2 ka event. This event, the most extreme and sudden (onset in less than 10 years) climatic anomaly of the Holocene, brought a few centuries of cold and arid conditions to the Middle East. Going beyond merely establishing approximate synchronicity of culture and climate, and contrasting with earlier interpretations of societal collapse, we find evidence for resilience and small-scale adaptation. Was climate change a primary trigger or did it strengthen trends that were already ongoing?

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**FOBBE, Seán**

RASHID International

**RASHID International – Research, Assessment and Safeguarding of the Heritage of Iraq in Danger**

RASHID International e.V. is a worldwide network of archaeologists, cultural heritage experts and professionals dedicated to safeguarding and promoting the cultural heritage of Iraq, ancient Mesopotamia. We are committed to developing the history and archaeology of Iraqi cultures, for we believe that understanding the past is key to addressing the present and to building a prosperous future. Much of Iraq's heritage has been lost forever. Militant groups have destroyed mosques, churches and shrines, smashed artifacts, bulldozed archaeological sites and illegally trafficked antiquities on an almost industrial scale. Iraqi cultural heritage has suffered grievous and in many cases irreversible harm.

RASHID International was founded as an answer to these despicable crimes and ongoing threats to Iraqi cultural heritage. In my presentation I intend to discuss RASHID International's work protecting Iraqi cultural heritage and especially the legal-political contexts of archaeology and cultural heritage.

One major theme will cover our work to frame cultural heritage as a human rights issue at the United Nations and under the various international legal instruments. Archaeology and cultural heritage protection are often criticized for focusing on mere 'stones' and 'things'. I will describe the important human element of cultural heritage and how RASHID has been promoting a human rights-based approach to archaeology and heritage protection.

The second major theme of our political efforts is the promotion and enhancement of the 1954 Hague Convention and its Protocols. I will outline their core provisions and explain why it is in the best interest of Iraq and other countries to ratify and make use of its various instruments. I will also discuss the critical



role that NGOs and archaeologists play in the success of these efforts.

A third and final theme will cover protection initiatives promoted by RASHID International on the national level, e.g. the formation of an Iraqi Blue Shield Committee, the marking of antiquities with a tracer substance to prove provenance, the creation of funds similar to the UK Cultural Protection Fund 2016-2020 etc.

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**FOWLER, Kent – WALKER, Elizabeth – ROSS, Jon – GREENFIELD, Haskel**  
University of Manitoba  
**MAEIR, Aren**  
Bar-Ilan University

### **The age and sex of Early Bronze Age potters from Tell es-Safi/Gath, Israel, Israel**

The organization of craft production has long been a marker for broader social, economic and political changes that accompanied urbanism. The identity of producers is out of reach using conventional archaeological data. There has been some success using epidermal prints on artifacts to identify the age and sex of producers. However, while age estimates are well developed, determining the sex of ancient potters is complicated by similarities between the prints of adult women and adolescents of either sex. In this study, we examined prints on EB III pottery from the early urban neighborhood at Tel es-Safi/Gath, Israel. We introduce two measurement techniques of mean ridge breadth (MRB) for distinguishing the age and sex of prints using digital photographs imported into the measurement software Macnification® normally used in biomedical research. Our analysis accounted for ancestry and the shrinkage of marl clays, which can both substantially impact age and sex estimates. We applied a modified version of the Kamp et al. (1999) regression equation to the MRB for each individual print. Our analyses indicate that the measurement techniques produce comparable results. The sex of producers complicates inferring their age. Only children and adult males can be clearly distinguished. Half of the prints were made by adult females/adolescents and the other half by adult males. This result suggests that pottery production was not a gendered craft and men did not dominate pottery manufacture at early urban centers in the Levant. The pattern contrasts with finger print studies of post-state urban pottery production during the EBA in Mesopotamia.

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**FRAGNOLI, Pamela**  
Austrian Academy of Sciences, Austrian Archaeological Institut  
**PALUMBI, Giulio**  
University Lyon

### **The Handmade Red-Black Burnished ware from Arslantepe (Malatya): investigating multi-scaled phenomena of mobility through ceramic materiality**

The handmade red-black burnished ware (RBBW), that appeared in the Anatolian Upper Euphrates Valley at the mid-fourth millennium, could represent an ideal case-study to investigate multi-scaled phenomena of mobility. With respect to the coeval wheel-made light-colored ware of south-Mesopotamian influence, the RBBW belongs to a completely different tradition showing at first affinities with Central Anatolia and, by the beginning of the third millennium BCE, with the Kura-Araxes ceramics of the Southern Caucasus. The archaeological evidence points to the fact that during this time-span RBBW was produced by and was the expression of pastoral communities that populated the region of the Upper Euphrates. For these

reasons, the appearance of the RBBW and its diachronic changes seem to reflect the movement of people, ideas and artifacts framed into processes of emulation, hybridization and conservatism in practices of craft production.

In this paper we address to questions of materiality and mobility through the analysis of the RBBW from Arslantepe in the Malatya Plain during the late fourth and early-third millennium. The materiality of RBBW will be investigated through a “*chaîne opératoire*” approach focusing on the procurement of the raw materials, modalities of preparation of the ceramic pastes and morphological repertoires by integrating archaeometric, technological and morpho-functional data. These data will allow to better interpret issues of mobility in the frame of a broader diachronic and regional perspective using the archaeological evidence available from Arslantepe and other sites of the region.

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**FRASER, James**  
Nicholson Museum, University of Sydney  
**CARTWRIGHT, Caroline**  
British Museum

### **Investigating rural complexity after urban collapse: new excavations at the late 3<sup>rd</sup> millennium BCE site of Khirbet Um al-Ghozlan, Jordan**

When large, fortified, mounded settlements were abandoned in the early-mid 3<sup>rd</sup> millennium BC, the economy of the southern Levant is thought to have reverted to agro-pastoral subsistence. The appearance of several small, enclosed sites in upland areas, however, suggests that post-collapse communities maintained a complex rural economy through the exploitation of different environmental zones. In early 2017, a new project by the British Museum commenced excavations at Khirbet Um al-Ghozlan, in Jordan’s east rift escarpment, to test the hypothesis that these sites were processing centres for upland fruit crops such as olive and grape, and were enclosed to protect seasonally-produced caches of oil and wine. Although Khirbet Um al-Ghozlan is only a small, rural site less than 1 ha in size, the knoll is enclosed by a monumental circular wall. Excavations in four trenches uncovered the remains of at least two EB IV architectural complexes. The nature of these complexes, and their associated finds, suggest that Khirbet Um al-Ghozlan served as a specialized storage site possibly associated with the production of olive oil in the late 3<sup>rd</sup> millennium BCE.

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**FRIBUS, Alexei**  
Kemerovo State University  
**GRUSHIN, Sergei**  
Altai State University  
**SATAEV, Robert – DUBOVA, Nadezhda**  
Institute of Ethnology and Anthropology of Russian Academy of Science

### **Excavations at Gonur Depe BMAC Bronze Age Site of Turkmenistan in 2014-2015 Years: Graveyard and Living Spaces on the South-West**

During 2014-2015 years Margiana expedition continued excavations in the South-Eastern part of Kara Kum desert, at Gonur Depe (2300-1600 BC). We focused on several items: stratigraphy and chronology of different areas of the Palace, special researches of construction horizons; complete analysis of the anthropological data from new burials; checking of early excavated constructions and old dumps using

metal detector. Special attention was paid to the South-Western area of Gonur Depe, situated between so named “Ritual animal burial” and central part of the site (Tranche 12).

Tranche 12 was opened in 2005 by Victor Sarianidi, who has found Gonur Depe site in 1972 and excavated it till the 2013. On the first stage some living premises, several burials close to them and most interesting – two fragments of encircling wall, very similar to the main one, surrounding the palace, citadel and some temples were unearthed. But there were no any continuation of these fragments of the wall. In 2012 to the west of the previous excavated buildings more rooms were excavated. There are round and oval pits in the floors of these premises, as well as a few ordinary niches in the walls. Pottery fragments and a small number of animal bones are most of the finds there. It can be concluded that they were living and household rooms. Most interesting is room 40, where several clay animal figurines and animal bones covered with ash inside the large capacities from raw clay, constructed on the floor, were found. In this premise some rituals connected with cattle breeding could take place.

In 2014-2015 to the west of room 40 we found two new rooms (53, 54) and a number of open yards. A double-oven was located in the south-east corner of the room 53. Similar ovens are typical for Gonur Depe. A large chamber of the oven was covered by fragments of a big jar. Among them there was one fragment of a vessel with a drawing of “hut motive”. The figure on its surface repeats the image of the crescent-roof building well known in the Near East, especially on steatite objects, but these motives are rare for BMAC sites. Most often such images were used in ornamentation of soft stone (chlorite and steatite) objects. At Gonur Depe many steatite objects – vessels of different forms, cosmetic flacons, biconical spindles and beads – are resented. Victor Sarianidi not once noted that Margiana steatite vessels have close analogies with Tepe-Yahya and Shahdad objects. The vessel from room 53 in Tranche 12 probably could hardly have been imported: it is made from the raw clay in the typical Gonur Depe technique.

An important feature of the premises adjacent to the previously mentioned southern fragment of the encircling wall is that many burials were found in them. The number of graves increases in the direction from the south to the north. Apparently, burial in this part began to occur when the premises were already abandoned. Gradually a small graveyard was formed. By archaeological context it can be dated as 2300-1900 BC.

Of particular interest is the grouping of graves in small units, the presence of specially prepared empty pits between the actual burials, as well as various clusters of clay balls, anthropomorphic and theriomorphic figurines. It is important to note that many graves only at this one cemetery of all ones found at Gonur Depe were arranged one above the other. Moreover, the construction of a new grave did not result in a robbery of an earlier one, what may indicate that there were graves of relatives. This version is confirmed by a higher frequency of discrete anthropogenetic traits than in ordinary populations.

Our works are supported by RHF/RFBR project 16-01-00288.

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FUCHS, Christian  
Berlin

### **Archaeology and Building Archaeology on the Rab’-e Rashidi Complex in Tabriz, Iran**

In a joint project of the Islamic Art University of Tabriz, the Iranian Cultural Heritage, Handicrafts and Tourism Organisation and the German Archaeological Institute, comprehensive study, assessment, restoration and site management is due to start in August 2017. The Rab’-e Rashidi was a large scale complex with various functions established by the Ilkhanid vesir Rashiddudin Fazlullah-e Hamandani under the reign of Gazan Khan in the early 14<sup>th</sup> century AD. The complex, east of the historic centre of Tabriz not only hosted a mausoleum for the vesir himself but also numerous functions of teaching, instruction, charity, health care, housing, farming etc. Little has remained of that complex, and the major and almost exclusive source of information on the complex is its founding document, composed by the

founder Rashiddudin himself. Presently, remains of lost buildings and settlements can be traced, but only few have been excavated and thus little of its inner organisation and functions is known to present date. Thus the given situation appears to be reversed in comparison to most other research projects of this type: Usually little or no written documentation exist before research actually initiates. In this case we have a firm base of written contemporary sources and the archaeological excavation and the subsequent architectural interpretation aims at verifying and solidifying the written information.

Today's site is dominated by the ruins of a Safavid-period fortification with towers, curtain walls and a large bastion. First investigations on site began in August 2017, focusing on the documentation, interpretation and safeguarding of one of the large southern bastion as the largest Safavid structures on the site. Further work will include a 3D scan, production of plans, a limited archaeological excavation on top of the bastion, a summarizing interpretation of the history and construction features of the structure, and finally a proposal for its safeguarding and restoration. The paper will present the results of this initial research within the framework of the Rab'e Rashidi project. It intends to present the outcome and its meaning within the general evolution of the site. It also intends to raise questions and to point out possible future research topics.

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**FUJII, Sumio**

Kanazawa University, Institute of Human and Social Sciences

### **Built-in Pier-house at the Rockshelter Settlement of Jabal Juhayra: New Insight into the PPNB Pastoral Transhumance in Southern Jordan**

Abstract: Our previous investigations in the Jafr Basin suggested that PPNB southern Jordan witnessed a rise of pastoral transhumance making a round trip between farming communities to the west and agro-pastoral outposts to the east. Evidence came from the occurrence of domestic sheep and goat bones at the remote outposts outside their natural habitat range and the interactive material flow between the parent settlement area and the outpost area. However, it still remains an open question why architectural concepts differ so markedly between the two adjacent areas. It would not be enough to say that different environment necessitated different adaption. Now that the same population groups were involved in the seasonal migration, there should have been some similarity between the two architectural landscapes.

Our recent excavations at the Late PPNB rockshelter settlement of Jabal Juhayra have found a missing link to bridge the large gap. Of significance is the finding of a built-in pier-house at Rockshelter 6. The typological sequence from this unique structure to its subsequent forms suggests that the initial pastoral transhumants inherited the traditional pier-house from their parent settlement and, then, gradually modified it so as to fit well into a new lifestyle in the arid periphery. This paper introduces the unexpected discovery and discusses the process of pastoral nomadization in southern Jordan from a new and different angle.

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**GAGOSHIDZE, Iulon**

Georgian National Museum, Tbilisi

**ROVA, Elena**

Ca' Foscari University of Venice

### **Kura-Araxes graves at Doghlauri (Georgia): results of the 2012-2015 salvage excavations**

The cemetery of Doghlauri is part of the important multiperiod site of Aradetis Orgora in the Shida Kartli region of Georgia. As a result of the construction of the Ruisi-Agara section of the new Tbilisi-Senaki-Leselidze highway, which crossed it, the cemetery was excavated in 2012-2015 by a Georgian team headed by I. Gagoshidze. Excavations resulted in the discovery of more than 400 graves of the Early Bronze (Kura-Araxes) and Late Bronze/Early Iron Age graves. 67 of these date back to the Kura-Araxes period: together with 12 previously published burials, they make Doghlauri one of the largest ever excavated Kura-Araxes cemeteries. The Kura-Araxes material from the 2012-2015 salvage excavation at Doghlauri (mainly pottery vessels, but with a significant component of small finds, most of them in metal) was fully processed in the course of the 2017 field campaign of the "Georgian-Italian Shida Kartli Archaeological Project". It will be presented in the proposed paper together with some considerations about the chronological position, cultural affiliation and burial customs of the Aradetis Orgora Kura-Araxes population in the framework of the evidence of the Shida Kartli region and, more in general, of the Kura-Araxes culture distribution area.

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**GALLIO, Giulia – RENETTE, Steve – TOMÉ, André – CABRAL, Ricardo**  
University of California, Davis

### **A Late Ottoman-period cemetery from Kani Shaie, Sulaimaniyah**

The Late Chalcolithic and Early Bronze Age site of Kani Shaie in the Bazyan Basin, Sulaimaniyah Province, Iraqi Kurdistan, was reused as a cemetery during the late Ottoman period (18<sup>th</sup>-19<sup>th</sup> century AD). A joint project of the University of Coimbra and the University of Pennsylvania has conducted excavations at the site since 2013 uncovering a total of 25 burials (?). At the foot of the site, ceramics and poorly preserved architectural remains demonstrate the existence of a village of the same period. The graves contained male and female young adults, children, and infants. While the burial practices are consistent with Islamic tradition in the region consisting of stone lined cist graves with individual inhumation, three of the interred children were buried with jewelry of glass, stone, and metal beads.

The remains have been reburied following the guidelines of the Sulaimaniyah Directorate of Antiquities. Before reburial, the remains were carefully documented and subjected to pathological analysis. This paper presents a rare study of late Islamic burial practices and the population of a small, rural settlement that was inhabited at a time of increasing Kurdish independence and the emergence of the local Baban principality.

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**GARCÍA-SUÁREZ, Aroa**  
University of Reading

### **Defining early village space: integrated micro-contextual analyses of buildings and open areas at Boncuklu, Central Anatolia**

This paper examines concepts of space and their social implications at the early agricultural site of Boncuklu (ca. 8500-7500 BC), situated in the Konya Plain and predating the larger settlement at Çatalhöyük. Here, repeated reconstruction of houses on the same location, a feature possibly associated to household continuity, has resulted in a stratigraphic record constituted by multiple production and depositional events, a detailed reflection of the histories of people and place at this site.

Micromorphological and geochemical analyses of floor plasters and the occupation residues accumulated on top of them have revealed key differences between domestic built environments and the so-called non-standard structures, buildings that do not conform to the classic features of residential constructions.

While the latter display evidence for repeated long-term use, these appear to be dynamic spaces, characterised by a dense array of frequently repositioned features, such as pits and hearths, and lacking the marked symbolic division of internal space into clean and dirty areas typical of domestic structures at Boncuklu. Microstratigraphic observations have allowed to distinguish multiple layers of highly articulated siliceous plant materials representing residues from plant processing activities occurring in non-standard structures, likely performed at the suprahousehold scale. Similarly, microscopic data from outdoor spaces, dominated by accumulated plant and bone remains, points to their use as cooking and food preparation areas, activities that were again likely performed at a communal scale.

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**GENZ, Hermann**  
American University of Beirut

### **Towards a Definition of the Early Bronze Age Glyptic Styles from the Central Levant: New Evidence from Tell Fadous-Kfarabida (Lebanon)**

While Early Bronze Age glyptic finds from Palestine and Jordan as well as from Syria have received considerable attention in the scholarly literature, the same unfortunately cannot be said about the material from Lebanon.

For a long time Byblos was the only site with a considerable number of Early Bronze Age glyptic finds, but the often unclear stratigraphic and contextual situation of the material hugely diminished its scientific value.

Fortunately in recent years new and better stratified material has emerged from Sidon, Tell Arqa and Tell Fadous-Kfarabida, which for the first time enables us to better define the glyptic styles in use in the central Levant during the 3rd millennium.

In this presentation the glyptic finds from Tell Fadous-Kfarabida, located on the Lebanese coast just 12 km north of Byblos, will be presented in detail, with a special emphasis on the iconography of the seals and seal impressions, as well as their contribution towards the external relations of the site. A few observations on the possible function of the cylinder seals and the seal impressions on pottery vessels will conclude the presentation.

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**GEROCHRISTOU, Athina D.**  
University of Athens

### **Less than 5 m<sup>2</sup> to live in? Some considerations on the small circular buildings of the Halaf Culture**

The circular buildings -the so-called *tholoi*- constitute one of the main characteristics of the Halaf Culture settlements. At least one circular building has been found in each of the vast majority of the Halafian settlements known, while at some sites (e.g. Yarim Tepe II) a significant number has been observed. The dimensions of these buildings can vary significantly with a diameter between some 1.5m. to 12m. (e.g. Tell es-Sawwan), though on average it is 4-6m.

This paper focuses on the examination of the small circular buildings, concentrating on those with diameter smaller than 2.5m. The exact use of the halafian *tholoi* is still under discussion and in particular questions remain concerning the operation of the smaller circular buildings. I will investigate the function of the small *tholoi*, with special reference to those of Yarim Tepe II, Chagar Bazar, Kerküşti Höyük and Domuz Tepe. Each of those cases is of particular interest. Of the significant number of *tholoi* found in

Yarim Tepe II, only a few of them have diameter less than 2.5m. At Chagar Bazar, on the other hand, most are of that size. Nearly half of the buildings of Kerküšti Höyük are that small in size, and some of them even smaller at under 2m. across. At Domuz Tepe, four particular buildings of a semi-circle form were located, with a diameter up to 2.5m

Initially, I will present the architectural type and its main features. Turning then to the buildings of the settlements mentioned above and drawing upon the evidence of the material culture found within them, I attempt to reach conclusions regarding their purpose, by broaching the following questions: Why are those buildings so small in comparison with others? Is their small size connected to a different function? What they were used for?

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**GHOLINEZHAD, Mostanser**  
Birjand University

### **A Short Introduction of Identified Archaeological Sites in South Khorasan (Based on Archaeological survey in Qaenat Region)**

South Khorasan, in the east of Iran is approximately an unknown region for archaeologist; in comparison, with west and central part of Iran. In historical sources, Qohestan was mentioned as a semi-independent region under the governance of Simjurid who were a Turk family that served the Samanid dynasty. The reports show the huge amount of tax that gathered from Qohestan state. Due to this condition and importance of this area in Islamic ages, some archaeological surveys was held there (from 2015-2017) that was identified 353 sites in Qaenat region. These sites belong to Paleolithic till late Islamic period. The results and materials that found in this investigation show the relation of these sites with each other and neighbor region like North Khorasan, West Afghanistan, Turkmenistan, Central Iran and Sistan in different ages.

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**GILIBERT, Alessandra**  
Ca' Foscari University of Venice

### **Civic community and public space at Ugarit**

This paper proposes to interpret ancient public space as a material correlate of civic communities, using the Late Bronze Age city of Ugarit as a case-study. Civic communities acted as significant political factor throughout the history of the ancient Near East, both as institutions (e.g., political assemblies) and as informal groups (the “town's crowd”). A growing body of evidence and innovative approaches shows that, particularly in the Upper Syrian Euphrates region of the Late Bronze Age (cf. above all Tell Bazi and Emar), these forms of social aggregation and political negotiation were influential and sometimes antagonistic alternatives to monarchical powers. In this paper, I approach the study of past communal political life by analyzing with an integrated, GIS-based methodology the planning and use of public squares at Ugarit. The contribution aims at highlighting the relevance of public space for understanding the balance of power in the cities of the Late Bronze Age and discussing the chances and limits of relating civic politics to specific features of the ancient urban design.

**GÖTTING, Eva**  
Freie Universität Berlin

### **A Demon's Travel Kit. An Introduction to the Items Depicted on Amulets against the Demoness Lamaštu**

Lamaštu is a female demon, known for attacking in particular babies and pregnant women. To ward her off, amulets depicting Lamaštu were produced. The amulets were used from the LBA to the IA and found in the Levant, Southern Anatolia and Mesopotamia.

The highly elaborate amulets show Lamaštu surrounded by a variety of items. These objects can be interpreted as a travel kit given to the demoness during the exorcism ritual in order to persuade her to leave the afflicted. Among these items are provisions (e.g. bread, oil), travel gear (e.g. sandals, shoes, blanket) and objects of everyday use with a female connotation (e.g. spindle, fibula, comb, mirror), as well as animals symbolizing her negative character (e.g. pig, dog, scorpion).

In this paper, Lamaštu's travel kit shall be discussed in detail and the chronological development of different object sets shall be pointed out. Within the corpus of Lamaštu incantations, striking parallels can be found to the iconography. The amulet imagery will therefore be discussed within its ritualistic context. Furthermore, the cultural-anthropological significance of the object selection and their symbolic meaning will be addressed in order to shed some light on the character of this fearsome ancient Near Eastern demoness.

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**GOLANI, Amir**  
Israel Antiquities Authority

### **Beyond Ornamentation: Contextualizing Research of Personal Adornment in the ANE**

Whether revealed in graves, referred to in texts or portrayed in reliefs, the context of personal adornments in the Ancient Near East clearly indicates their use beyond simple ornamentation. Jewelry was made to be seen, carrying intrinsic value as prestige, cultic and economic items. Its personal nature makes it a crucial component in social interaction, creating a vehicle used to convey information concerning wealth, status, rank, gender, ethnic identity as well as religious beliefs. Raw materials and techniques of manufacture are a measure of technological sophistication, cultic significance and an indication of trade connections and patterns, also making jewelry an important element for commerce. The methodological underpinnings for the study of personal ornaments are thus necessarily interdisciplinary, examining the archaeological context of what was found, how and where, as well as their cultural context. Cultural context can be drawn from textual sources, statues, figurines, reliefs and pictorial representations, all showing jewelry's significance by how and by whom it was worn and for what purpose.

However, as much of our research originates from an art historical perspective drawn from elite burials, sacred texts and stylized depictions of divine royalty, our understanding may primarily reflect an elite narrative. Examining the context of a larger dataset would better place personal ornaments as media reflecting avenues of inter-cultural contact, exchange and the assimilation of cultural traits and the changes affecting them over time.

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**GOODMAN, Reed**  
University of Pennsylvania Museum of Archaeology and Anthropology



**BRYANT, Robert**  
The University of Sheffield  
**PITTMAN, Holly**  
University of Pennsylvania

### **A New Tool for Recording and Analysis: Integrating Evidence from Heritage, Current and Landscape Field Work**

As part of a Research Opportunity Development Grant at the University of Pennsylvania, entitled “Mesopotamia and the Persian Gulf: Cities and Maritime Networks 2500 – 2000 BCE,” an open-source web application has been developed to combine heritage and active projects at Ur and al-Hiba/Lagash. This web application, a scalable, dynamic-model Django interface with robust API access, integrates all aspects of archaeological enquiry: from individual artifacts and samples within archaeological context, to widespread networks of interaction embedded in changing landscapes and ecosystems. It also includes built-in resources for landscape analysis through the OpenLayers GIS libraries and simple Three.js 3D visualization.

This paper will present the web application’s database schema, highlighting its ability to accommodate diverse heritage and contemporary datasets from sites in the city state of Lagash and Ur and then query that multi-scalar and multi-temporal data to offer fresh insights into the region’s socio-natural environment and its relationship to the greater Mesopotamian littoral.

We combined selected data from ongoing excavations in southern Iraq at the site of Nigin with heritage data from Lagash and Ur to test and demonstrate its inherent usefulness as well as its interoperability between research schema. The web application’s ability to cross-reference information from these various projects, despite differences in recording styles, provides a powerful tool for cross-comparative analyses, ranging from pottery types and architectural details to signatures of paleo-environmental flux.

Because the database can emulate variable dataset schemas, it can connect disparate record types and tables across projects into a single database structure through semi-automated imports, and leverage that singular back-end structure to perform sophisticated queries between divergent project data in the Middle East. When fully operational it will be made freely available to our colleagues in archaeology and its related fields.

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**GORZALCZANY, Amir**  
Israel Antiquities Authority  
**TORGË, Hagit**  
Bar-Ilan University

### **Islamic Tombstones Reused during the Early Islamic Period from Ramla, Capital of Jund *Filastin***

Fragmentary Muslim tombstones uncovered in secondary use in various excavations in Ramla provide a *terminus post quem* in the mid or late tenth century AD for their reuse. The ceramic evidence indicates that 70 years at the most elapsed between the last interments and the reuse of the tombstones as building material.

The reutilization of tombstones is a common archeological occurrence. In most cases, it is carried out after a period of time sufficient to negate emotional links between the burial and the builders. Another option is ethnical replacement, with no emotional relationship between new dwellers and the previous population to which the deceased had belonged.

The phenomenon in Ramla, where such a short period elapsed between installation and the reuse, is thus an exception. What were the circumstances that led to such an unusual comportment? A traumatic event, such an earthquake, should be considered a possible explanation. Based on the dates on the tombstones, such event must have post-dated the year 961 AD. This could place the quake in 1033 AD, two generations after the erection of the tombstones.

As for the lifespan of the reconstruction phase that followed that earthquake, pottery assemblages related to it include types diagnostic to the Fatimid period, and no longer used during the Crusader period. Analyzed along with the simultaneous abandonment evident in several sites in the city dated to that phase, a second catastrophic event may be suggested, possibly the 1068 AD tremor. In such case we receive a well-defined period, limited by two powerful earthquakes, providing *termini ante* and *post quem* for the ephemeral reconstruction of Ramla.

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**GOULDER, Jill**

University College London, Institute of Archaeology

### **The use of working donkeys and cattle in 4<sup>th</sup>/3<sup>rd</sup>-millennium BC Mesopotamia: social and economic impacts in the light of modern working-animal studies**

In 4<sup>th</sup>-3<sup>rd</sup> millennium BC Mesopotamia, the systematic use of donkeys and cattle for traction and transport is increasingly recognised as providing vital underpinning to the rapid development of complex societies. Ploughing oxen have often held centre stage in archaeological models of this period, following Sherratt's proposition of the Secondary Products Revolution. The current body of literature on this crucial period of prehistory lacks a holistic assessment of the mechanics and logistics of the 'animal industry', including a thorough reworking of presumptions about ploughing and transportation norms and the social and economic implications of the shift from human to animal motive power.

Donkeys and cattle (both oxen and cows) are used in their millions today for work in developing regions – sub-Saharan Africa in particular – and there is a growing body of recent studies by NGOs and agencies examining the social and economic impact of their adoption, often within the last 50-100 years. There has been only limited archaeological interpretational use of such sources in Ancient Near Eastern studies to date; in my PhD thesis I assess from close qualitative analysis of hundreds of such studies the likely daily effect in antiquity on farm and household life of working animal adoption for ploughing and local transportation. Donkeys in particular are neglected as an influence, as the marked rarity of donkey remains in the archaeological record has resulted in a profile in the Ancient Near East which is at odds with donkey use in modern developing regions.

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**GRBANOVIC, Ana Marija**

Bamberg University

### **Beyond the Stylistic Idiosyncrasies: Identity and Mobility of Ilkhanid Stucco Craftsmen in the Isfahan region circa 1300**

The long-standing tradition of architectural stucco revetment production in Iran culminated in Seljuk (1037-1194) and Ilkhanid (1256-1353) monuments. Based on the scrutiny of ornamental iconography and design of Seljuk stuccos, Raya Shani (1989) argues that the Seljuk stucco craftsmen were organized in regional schools. Building on her stylistic analysis, which does not include studies of epigraphy and artistic techniques, Shani puts forward the idea of the 'Kashan stucco school'. Sheila Blair (1986; 2003; 2006)

discusses the identity of Ilkhanid stucco craftsmen by relying on the stylistic and epigraphic research of stuccos, craftsmen's signatures and primary written sources. This leads Blair to propose that: a) stucco craftsmen worked in multiple media (stucco, metal and ceramics); b) stucco inscriptions were designed by professional calligraphers; and c) the design process required the use of large amounts of paper. Seljuk and Ilkhanid stucco craftsmen workshops mobility and identity nonetheless remain the key scholarly gaps in studies of Islamic stuccos.

The aim of this paper is to re-examine these traditional assumptions and to provide new information about Ilkhanid stucco craftsmen workshops mobility and composition. Research draws on stylistic comparison, discussion of stucco design, epigraphy and artistic techniques. The examination of craftsmen's signatures suggests new information about role division in stucco workshops, craftsmen's professions and their mobility. The role of paper in Ilkhanid stucco design was limited and subject to different stucco artistic techniques. Rather than calligraphers' signatures, the majority of Ilkhanid stucco signatures seem to be those of stucco workshop masters, who worked solely with stucco. The stucco craftsmanship mobility appears to be mostly limited to smaller geographical units, although famous examples of itinerant craftsmen and artists do exist.

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**GREENFIELD, Tina**

University of Saskatchewan – University of Cambridge

**MCMAHON, Augusta – PETRIE, Cameron – O'CONNELL, Tamsin**

University of Cambridge

### **Herd Animal Management and mobility in Early Dynastic Sumer**

This paper presents the results of the first two phases of a project to assess domestic animal management strategies and potential intra-and inter-regional mobility in the 3<sup>rd</sup> millennium BC in southern Mesopotamia. Through combined zoo-archaeological and isotope analyses, we explore the varied diets and water intake of oxen, sheep, goats and donkeys from Ur and Abu Salabikh. Integrated data from two contemporary sites allows for robust comparisons of both animal management strategies and economic behaviour. Isotopic analysis can support hypotheses about intra-and inter-regional mobility, while the zooarchaeological data inform on status, consumption and ritual behaviour. Initial results suggest a variety of feeding strategies, including optimal barley to sub-optimal weed/marsh resources. Drinking water sources for these animals also included optimal free-flowing and more stagnant water. Consumption patterns suggest varied preferences that potentially link to differential access to meat resources. These results allow a picture of the varied diets, resources and micro-environments near southern Mesopotamian cities and the choices available to these cities' inhabitants.

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**GROSSMAN, Kathryn**

North Carolina State University

**GRAHAM, Lisa – MCCARTHY, Andrew**

University of Edinburgh

**PAULETTE, Tate**

North Carolina State University

### **Prehistoric Archaeology in the Polis Region: Survey and Geophysics at Makounta-Voules and Stroumpi-Pigi-Agios Andronikos, Cyprus**

The northern coast of Cyprus has long been of interest to archaeologists researching the Chalcolithic and Bronze Age on the island. However, no prehistoric sites have been excavated in the region around the modern town of Polis, along the island's northwest coast. With easy access to rich mineral sources, to the sea, to resources in the upland forests, and to arable agricultural land, this region would certainly have been attractive to the prehistoric inhabitants of the island. In the summer of 2017, the Cypriot Department of Antiquities granted us a permit to conduct surface collection and geophysical survey at the site of Makounta-Voules, a large, multi-period prehistoric site about 4 km from the coast of Chrysochou Bay, just north of Polis. The site of Makounta-Voules has been visited by archaeologists many times in recent decades but until now has not been subjected to systematic, intensive survey. In this paper, we present the results of our first season of work at Makounta, outline some implications of our results, and describe our plan for future excavation work at the site. We will also present the results of a salvage project that we conducted on behalf of the Department of Antiquities: surface survey and geophysical study of the site of Stroumpi-Pigi-Agios Andronikos, a small prehistoric site threatened by a highway expansion project.

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**GUAGNIN, Maria**

Max Planck Institute for the Science of Human History, Jena – University of Oxford

### **The Neolithic of northern Arabia: Local adaptation and long-distance exchange of ideas**

First excavations of Neolithic sites in the southern Nefud desert of Saudi Arabia are beginning to reveal a pattern of distinct local adaptations but also show some evidence of contact with the Levant. The lithic industry shows some affinities with Levantine types, and domestic livestock is thought to have been introduced from the Fertile Crescent. However, the transition to the Neolithic is likely to have been gradual, and economic strategies were adjusted to local environmental conditions and landscapes.

The site of Jebel Oraf, in the Jubbah oasis of northwestern Saudi Arabia, now provides evidence of pastoral mobility patterns in the late 6<sup>th</sup> millennium BC. A series of hearths shows repeated seasonal occupation on the edge of a palaeolake, with subsistence based on cattle pastoralism and hunting. Remarkably, occupation of the site continued on a smaller scale even after the palaeolake dried up and the region turned into desert. The occupants of Jebel Oraf thus show remarkable resilience and adaptability in the face of climatic change. Historic evidence also suggests they maintained contact with the southern Levant throughout the Holocene and into the 20<sup>th</sup> century – likely using routes across the Nefud desert, the Wadi Sirhan, and the Azraq basin.

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**GÜNEL, Sevinç**

Hacettepe University

### **A Center of Intercultural Relations in Western Anatolia: Çine-Tepecik**

The geographical location of western Anatolia plays an important role in the cultural development of the region as well as defining the nature of interregional cultural relations. Archaeological researches carried out in Western Anatolia in recent years shed new light on cultural influences and external contacts impacting the region. Tepecik, a mound settlement, lies on the Çine Plain in the Region of Maeander. The mound was settled continuously from the Final Neolithic/Chalcolithic period to the Late Bronze Age. At the prehistoric Layers of the mound, especially pottery tradition, lithics and marble vessels and figurines shed light on not only the periods of limited data in the region of the Maeander but also prehistoric cultures in western Anatolia. On the other hand, the cultural history of the second millennium BC is illuminated by

cultural remains at Çine-Tepecik and is given a certain chronological definition. Tepecik has revealed strong fortifications with towers, as well as buildings erected for the purpose of storage and also workshops. In the Late Bronze Age, the seal impressions from the 'Pithos Building' are of great importance to understanding the cultural history of this area. They present philological and iconographical evidence of significance to the historical geography of Western Anatolia as understood from Hittite texts. The seal impressions date to the period of the Hittite Empire. The seal impressions with hieroglyphic-Luwian inscriptions attest that the local administration of the settlement at Tepecik stood in direct connection with the Hittite Kingdom. The glyptic finds of Tepecik are unique to date in the West of Anatolia, not least because they originate from an archaeologically secured context in a building, socialized with pithoi and local and Mycenaean pottery. Otherwise, seal impressions with hieroglyphic-Luwian inscriptions have so far only occurred in West Anatolia as isolated finds or in secondary contexts. In addition, the Mycenaean vessels prove that the settlement of the Late Bronze Age was heavily influenced by the Mycenaean culture. The examples with figurative designs shown in this period, typical for the early and middle phases of the Late Helladic III C, are of interest. The connection of these regions via valleys opening to the coast stripe of the Aegean with the Maeander and the natural passes reaching to the North, South and East constitute an important factor.

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**GÜR, Barış**

Dokuz Eylül University, Faculty of Letters, Department of Museum Studies

### **Route of antiquities illegally removed from Syria and the case of Turkey**

The cultural heritage has been damaged since the beginning of the civil war in Syria. Museums are being robbed, archaeological sites are looted, antiquities are becoming a commodity. Especially, it is known that Isis obtained source by selling antiquities despite the destruction videos and photographs of museums and archaeological sites. On the one hand, local groups on the other hand, terrorist organizations loot antiquities in Syria, It seems that they have tried many routes for foreign markets. The antiquities that are removed from Syria are being tried to illegally transport to their neighbors Jordan, Lebanon and Turkey, where new buyers are tried to be found or looking for ways to get out of the border.

In this speaking, I will evaluate the content of the antiquities, the ways in which the antiquities were captured, the city-based distribution of the antiquities, the role of the Syrians in the smuggling and the illegal activities of the smuggling of the antiquities, which were taken illegally from Syria and captured by the Turkish security forces in different cities in Turkey between 2012-2017.

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**HAASE, Claus-Peter**

Museum of Islamic Art, Berlin

### **Stratigraphical Problems in the Early Islamic Madinat al-Far Excavations, 1987-2001**

This "Madinat al-Far" is the Eastern counterpart near the Balikh river north of Raqqa to its namesake West of the Euphrates near Balis. The main results of the excavations of the urban site as for material quantity are a rich variety of private and some princely architecture with its stucco and painted ornamentation, quantities of ceramics, metalwork, coins and some important objects of glass, bone and ivory of the early Abbasid period. According to the coin finds it was inhabited at least until the 840s CE; the stucco ornament styles are all of a pre-Samarra type. Few Umayyad coins and unspecific ceramics were found, very little in stratigraphic context. No clearly pre-Islamic material is documented.

Two main construction periods are clearly defined, but mostly heavily destroyed. Most of the finds stem from masses of debris heaped up after one or two disasters, probably earthquakes. But under these constructions and debris heaps another earlier construction period is documented in up to more than 2 m depth. The main feature is a rectangle stone and mortar wall.

Among the main questions is the possible connection of this earliest third period with stone walls in the “citadel” part outside the original walled square compound and their date. The existence of this deep layer in our opinion still confirms the identification of the site with Hisn Maslama, the foundation of the Umayyad general Maslama ibn Abd al-Malik, well documented in Arabic sources as situated more or less exactly in this region. Also, an Abbasid afterlife of these possessions is confirmed, but size and shape of the original foundation remains to be studied.

With the loss of the majority of finds of the nine campaigns through plunder and destruction of the magazines in Hiraqla near Raqqa – stucco, ceramics and other material except for the most important objects which are in Damascus – the interpretation is very difficult in spite of the preserved documentation. Perhaps the large unexcavated parts will reveal new and better proofs one day.

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**HALAMA, Simon M.**

Ludwig-Maximilians-Universität München

### **Interpreting Alalakh’s Late Bronze Age Palaces: some suggestions on intended function and meaning**

Alalakh’s Late Bronze Age Palace, as excavated by Leonard Woolley and in parts still visible today, is the result of several separate building processes, in each of which existing structures were partly replaced, partly retained and partly altered. Also the layout of the larger complex of the so called fortress which integrated the palace structure and occupied the whole northern end of the city’s mound was changed considerably by these works. After the initial construction of the fortress-palace complex at least two more major building phases can be discerned. But how did the changes introduced in each subsequent phase affect the use of the building, the perception of visitors and the position of the resident king? Based on the layout of these three stages in the palace’s life and the changes in visibility and access patterns some suggestions will be made as to the intentions of the builders who introduced these changes and to the meaning possibly communicated to visitors as well as to inhabitants of the city who might only have known the palace from the outside. Finally, the question of the identity of the involved rulers and the implications for the political history of Alalakh will be discussed.

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**HAMARNEH, Catreena**

Classical Archaeology, von Humboldt zu Berlin

### **Between gardens and fields: “And they shall build up a wall” (Jordan)**

Since the dawn of agriculture, humans have transitioned to the domestication of plants, cultivating crops that adapted to the pressures of changing environment to fulfilling not only their nutritional needs, but also the psychological needs by creating “mini- gardens”.

Nabateans, (BCE 37– c. CE106), harnessed the preciously little available water, managed not only to survive in an arid environment but also to change the landscape surrounding it into a greener space. Their ingenuity surpassed carving the rock into building various dry – wall installations that made agriculture

more possible. These walls performed various functions, created new space and elated Nabataeans as wizards of the desert, boosting their trade.

Their modification of the landscape stemmed not only to produce food to sustain themselves and the visitors who flocked the capital but also to marvel and beautify their space, as farmsteads, gardens and fields spread all around their hinterlands. These surrounding were defined by various wall installations that not only created boundaries but played a major role in changing and redefining the landscape.

This study gives preliminary results of a documentation survey and analytical study conducted between 2016- 2017 that reflects upon Nabataean built dry walls, their various usages in agricultural field, orchids and pleasure gardens. The study builds its first conclusions based on field results, literature sources and laboratory analysis.

The preliminary study showed a variation in using dry build wall installations between irrigated orchids and rain based agriculture in the fields. Not only that but also each space had other installations restricted to space function weather field or Garden. These varied between protection, water collection, and storage amongst others. This paper will show and discuss their variation and specific usages by giving examples from sites located in the hinterlands of Petra.

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**HAMMER, Emily**  
University of Pennsylvania

### **The City and Landscape of Ur: An Aerial, Satellite, and Ground Reassessment**

Despite its status as one of the best-excavated cities in Mesopotamia, the city of Ur was passed over entirely by the archaeological revolution in landscape archaeology. Woolley's investigations were long in the past by the time intensive surface collections were undertaken at Uruk, Mashkan-shapir, and Kish. Wright's survey of the Eridu basin provided some regional context for the site, but he did not undertake systematic work at Ur. With the return of archaeological research to the site, it is an appropriate time to take stock of what is known about the demographic and structural history of urbanism there, based on a spatial reassessment of the excavations and a close analysis of remote sensing datasets, including declassified intelligence imagery from the CORONA satellite program (1960-1972) and the U2 aerial program (1959). This review shows the particular challenges to landscape archaeology presented by a complex site like Ur. It also suggests that the settlement complex was much larger than previously supposed by 20th century surveyors. Preliminary results from a surface survey undertaken in spring 2017 allow for evaluation of hypotheses derived from the imagery.

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**HARABASZ, Katarzyna**  
Adam Mickiewicz University in Poznań

### **Beyond the social pattern. The life cycle theory in studying of human osteobiography. A case from the Neolithic Çatalhöyük**

The paper aims to outline foundations of the research model integrating the life cycle theory, as formulated by Sabrina Agrawal, with research methods of human osteobiography, aimed at effectively studying the biography of prehistoric human beings. Different benefits and strengths of this integrated approach, both at theoretical and methodological level, will be scrutinized. The effectiveness and heuristic potential of this approach will be discussed by applying it to the study of biography of individuals from different stages in their live cycles originating from the Neolithic site of Çatalhöyük in Central Anatolia. In particular, the

paper will discuss the results of analysis of the biography of two adults individuals having different age and sex category, buried in two different locations and in different burial rite. Proposal biographical examination includes the results of stable isotope evidence of diet, which provide a direct link between individuals quality of life and their biography which is going beyond social status. The presented analysis is aimed at showing research potential of the advocated model as well as illustrate a possibility of grasping different dimensions of biological and social being from the past individual life.

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**HARFOUCHE**, Romana

UMR 7041 The National Center for Scientific Research, Archéologies et Sciences de l'Antiquité, Paris-Nanterre

**POUPET**, Pierre

UMR 5140 The National Center for Scientific Research e.r.

**BALDI**, Johnny Samulele

Institut Français du Proche-Orient

**YAZBECK**, Corine

Université Libanaise, Département d'Archéologie

**HERVEUX**, Linda

UMR 5133 The National Center for Scientific Research Archéorient, Lyon

**ABDALLAH**, Chadi

Remote Sensing Center, The National Center for Scientific Research Liban

**HOMSY-GOTTWALLES**, Grace

Université Libanaise, Département d'Archéologie

**ABBOUD**, Mohammad

Lebanese International University, School of Engineering

### **New multidisciplinary insights on settlement and land-use in the mountainous hinterland of Byblos since the Early Bronze Age (Nahr Ibrahim Archaeological Project)**

A multidisciplinary and diachronic project was undertaken on the Nahr Ibrahim valley, a major river in Mount Lebanon, within the french-lebanese scientific cooperation program CEDRE and with the support of the General Directorate of Antiquities. The archaeological project is now developed with the financial support of the french Ministry of Foreign Affairs, the french National Center of Scientific Research (CNRS-Université Paris Sorbonne), the Lebanese Council for Scientific Research (Remote Sensing Center) and the School of Engineering of the Lebanese International University (Surveying Department). The leading partner is the french CNRS and the lebanese leading partner is the archaeological department of the Lebanese University.

The Nahr Ibrahim Project aims to characterize the settlement patterns in mountainous regions since the first agropastoral societies and their environmental impacts on forests, soils and water resources particularly through landscape terracing (a typical feature of Mount Lebanon). The starting point of this active field research was that the study of well-known textual and iconographical evidence emphasized the importance of the wood trade from the lebanese forest via the city of Byblos toward Egypt and Mesopotamia, but the nature of settlement and of ancient environmental resources is still largely unknown as archaeologists never explored mountainous sites.

New excavations were therefore undertaken in the upper Nahr Ibrahim valley (Yanouh-Mghaira) on the first Tell in Mount Lebanon that offers a five millenia archaeological stratification (EBA to Ottoman period).

The definition of transitional periods and the timescales of changes are examined through archaeological and historical data, <sup>14</sup>C datings, geology and soil science (palaeosols), paleobotany (anthracology,



carpology, phytoliths). The study of the Nahr Ibrahim watershed is linked to a multiscale approach of the territory lying between Nahr el-Kelb toward south and Nahr el-Jaouz toward north in order to map the variations in land-use in a large area of influence of the City-State of Byblos.

The integrative approach brings into light the patterns of the exploitation of natural resources from the forest clearing around 6000 BP up to the first recognized settlement in the early third millennium BC and the shaping of agricultural terraced landscape. The first unpublished results reveal the existence of the oldest known settlement in the Lebanese mountain that dates back to Early Bronze Age II and that was inhabited by an agrarian community. It shares cultural aspects with the famous coastal sites but it also presents original features in its architectural techniques and in its products (pottery, sickles).

This fresh acquired data from the field throw a new light on the history of a territory that played a major role in the development of the coastal city of Byblos (local productions and trade) and more widely in the socio-economical history of Near East.

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**HARRISON, Timothy P.**

University of Toronto, Department of Near and Middle Eastern Civilizations

### **The ‘Lady of Tayinat’ and Female Representation in Neo-Hittite Art**

The remains of a majestic female statue were uncovered during the 2017 excavations at Tell Tayinat (ancient Kunulua), royal city of the Neo-Hittite Kingdom of Palistin/Walistin/Patina, located in the North Orontes Valley, southeastern Turkey. The statue was found lying face down on a thick bed of broken, shard-like fragments and chips of basalt in the vicinity of what has been identified as the citadel gate on the site’s upper mound. The head and upper torso of the female figure were recovered largely intact, although her face and chest had been intentionally—possibly ritually—defaced in antiquity. Broken portions of her eye sockets, nose and face were recovered from the bed of basalt chips, but also fragments of other sculptures, likely including remains from sculptures previously found deposited elsewhere within the gate area, including the head of the Neo-Hittite King Suppiluliuma (ca. early 9<sup>th</sup> century BCE), discovered in 2012. The identity of the female figure, or ‘Lady of Tayinat’, is not yet clear. However, stylistic elements suggest the statue represents a human figure, possibly the wife of Suppiluliuma, or—more intriguingly—Kupapiyas, the wife (or possibly the queen mother) of Taita, the presumed dynastic founder of Palistin/Walistin. The discovery of the Lady of Tayinat further accentuates the remarkable sculptural tradition of the Iron Age communities of Syro-Anatolia, while also highlighting the prominent role women played in the political and religious lives of these early Iron Age communities. This paper will present the results of the 2017 Tayinat Archaeological Project (TAP) excavations, and attempt to contextualize the statue in light of female representation in Neo-Hittite art.

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**HASEGAWA, Shuichi**

Rikkyo University, Christian Studies

**HASHIMOTO, Hidemasa**

Tenri University

**TSUMOTO, Hidetoshi**

Ancient Orient Museum, Tokyo

**ONOZUKA, Takuzo**

University of Tsukuba

### **The excavations at Tel Rekhesh, Israel: The results of 2013-2017 seasons**

The resumed excavation at Tel Rekhesh in the Lower Galilee has revealed on top of its mound a monumental late Iron Age building complex and a Jewish Roman village including the early first century CE synagogue. We will report these recent findings and evaluate its archaeological and historical significance.

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**HASSAS, Najmeh**

Faculty of Architecture in Gdansk University of Technology

### **The Living space in nomadically architecture**

Nomadic life is organized between their two residence places, summer and winter residences. That means their life style is also adapted with their movement life. Black tent is nomadic home. This tent is provided from natural materials around of them in their territories. Tent fabric is from nomadic goat hair and tent wooden columns are from trees that they find in the nature. They know their environment and try to use the nature in the best ways. Architecture is certainly one of the most important element to shape the space in tribal life. It is an essential source of information for the understanding of the original spatial concepts and relation of people and nature in nomadic life. Many actions of everyday life take place within some sort of spatial order determined by visible or invisible boundaries. It is clear and visible in the inside of the tent space. Nomadic people dividing the black tent by their equipment. They have borders in the small place of the tent inside's. This research shows the ways that built environment was organized in nomadic living space and how the perceptions of nomadic people and their sensory experiences can affect to their architecture and their understandings of the space.

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**HEFFRON, Yağmur**

University College London

### **Assyrians *in situ*? Changing mobility and the archaeology of Kanešean religion**

Second millennium occupation of Kaneš's lower town is periodised into three archaeological levels, each with a distinct profile of textual visibility. It is from the earliest Level II (1970-1834 B.C.) that the sweeping majority of the Kültepe texts derive, with a sharp decline in the number recovered from Level Ib (1832-1690 B.C.), while the final Level Ia (ending *ca.* 1650?) is entirely atextual. Such a pattern is indicative of major changes in the nature of Old Assyrian presence in Anatolia and therefore in the patterns of mobility surrounding *kārum* period trade.

Meanwhile a distinct group of Assyrians, called the 'residents' (*wašbutūm*) are attested in the texts as a category of foreigners removed from the caravan circuit and firmly *in situ* as permanent settlers, presumably into Level Ia.

Traditionally, Kültepe texts have been the most – if not the only – reliable source for gauging Old Assyrian presence in Anatolia. Archaeological evidence, on the other hand, has been described as decidedly local, betraying no sign of the Mesopotamian expats in residence at Kaneš for nearly three hundred years.

Recent research has fine-tuned the historical chronology of the *kārum* period at Kaneš, while the ostensible invisibility of foreign presence in Kültepe's material culture is being brought into question. Within Kültepe's archaeological inventory, items associated with household ritual constitute a particularly significant category when considering cross-cultural exchange, admixture of tradition, and identity display within a heterogeneous community of local and foreign residents. This paper will track changes in the material correlates of ritual activity at Kültepe and situate these against the wider context of the socio-

economic changes reflected in texts. As the nature of the *kārum* period mobility and Kanešean residence changes, are there any concomitant transformations in the ways in which household base religious practices are formulated?

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**HEIDARI**, Yadollah – **ZAREI**, Mohamad  
Bu Ali Sina University

### **Effects of Parthian and Sassanid Coins on the Iconography of the Qajar Period: Mo'aven-ol Molk Tekiyeh, Kermanshah**

Located in Kermanshah at the west of Iran, the Mo'aven-ol Molk building is one of the most important Iranian Tekiyehs of the late Qajar period. Studying its tiles led us to valuable information on the integration of art and religion in the Qajar period. Different decorations with mythological, epic, religious and national motifs in different parts of building like *Husseiniyeh*, *Zainabeeh* and *Abbasiyeh* had a great influence on people gathering in the Tekyeh who performed ceremonies such as the *ta'ziyeh* in the Qajar period in Kermanshah. The tiles of the *Abbasiyeh* section contains significant representations of Parthian and Sasanian kings that correspond to their coins. This paper aims to find out the tendency of Qajar artists in creating the tiles paintings, which indicated the effect of Parthian and Sasanian coins and the relationship between these painting with other tile themes at the Tekiyeh. As a result, the reference to ancient Iranian culture and art, the attention to ancient Iranian topics, can be identified as a most important factor in creating paintings with ancient Iranian motifs during the Qajar period. Meanwhile, Western painters that taught painting at the *dar al-fonun* School had a strong impact on Qajar period artists in the painting of tiles and creating portraiture of Tekyeh: As if they had an example of painting which was made by Western artists from the Parthian and Sasanian kings.

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**HEIL**, Fabian  
Ludwig-Maximilians-Universität Munich, Distant Worlds Graduate School

### **The Role(s) of Ritual Practice in Bronze Age Cyprus**

This paper focuses on ritual practices throughout the Cypriot Bronze Age and presents the final results of my PhD thesis about *The Role(s) of Ritual Practices in Bronze Age Cyprus*. My approach incorporates current research in sociology, religious studies, and cognitive studies in order to assess diverse aspects of Cyprus' cultural history in the local Bronze Age. As ritual actions form a central component in human interrelations, they are crucial for understanding how human actions create and renegotiate tradition in the cursus of social interaction and the development of societies.

Apparent phases of isolation during the Early and Middle Bronze Age of Cyprus (c. 2500–1700 BCE), uniformity in material culture in combination with its later 'hybrid' character during the Late Bronze Age (1200–1050 BCE) suggest that a combination of different foreign cultural elements gave rise to a new, 'hybrid' culture. Supposedly this was caused by the immigration of groups or at least their imitation by local elites, although these changes can also be traced in the context of ritual practices. But it is to be considered, that ritual practices and actions are not solely to be analysed according to the question of what a ritual is and what kind of group identity they are connected to. Instead these complexes of actions need to be engaged with an emphasis of their performative and communicative aspects, their framing features and what role they may have played in their respective context. Within this approach, the perception of an enigmatic lack of cult places during the local Early and Middle Bronze Age will be reviewed and the

development of elaborated ritual practices during the Late Bronze Age reconsidered. Additionally, this approach challenges the claim that foreign elements were adopted wholesale in these contexts. Instead, it will be argued that foreign objects and ideas were carefully chosen according to recognizable criteria known from processes within ritual dynamics.

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**HEIL, Manuela**  
Ludwig-Maximilians-Universität Munich

### **Investigating the Nature of Mobility and Transfer in the Western Zagros Region**

The recent excavations at Gird-i Shamlu, a small site in the Sharizor plain in Iraqi Kurdistan, have revealed an Early Bronze Age settlement which shows beside its local tradition, also changing influences in the material culture. These are deriving from a vast geographical area, which extends from the Iranian highlands to the Central and Northern Mesopotamian cultural zones.

Besides the use of painted Scarlet Ware tradition, which is distributed among the societies in the varying regional units of Central Mesopotamia and Western Iran, the use of a second painted ceramic tradition appears of which so far only little is known about.

This paper aims to clarify the relation of these traditions and to investigate how mobility and transfer manifests itself in the material culture of Gird-i Shamlu. The therefore developed concept can be used as an explanatory model for the interactions of the different societies on a horizontal (space) and vertical (time) level in the transregional network.

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**HEMATI AZANDARYANI, Esmail**  
University of Bu-Ali Sina, Department of Archaeology  
**KHAKSAR, Ali**  
University of Bu-Ali Sina, Iranian Culture Heritage, Handicraft and Tourism

### **Investigating effects of elements on formation of troglodytic structures of Hamadan province**

There are considerable complexes of troglodytic remains in various regions of Iran, including troglodytic architecture of Hamadan province such as Arzanfoud Hamadan, Samen Malayer, and Qaleh Jouq Famenin. By recent years, there have been studies about troglodytic architecture, however, never involved in effective factors on formation of troglodytic architecture in Iran and Hamadan province, of which present paper involved. Research method is based on field works and bibliographical investigations, which are visiting different troglodytic architectures in Hamadan province and reference to archaeological excavations, while bibliography refers to records, books and reports of archaeological surveys and excavations. The results indicate that climetic-geographical, defensive-security, and religious conditions were among the most significant conditions of formation of troglodytic complexes, however, cultural, political, social, and economic conditions were among other important conditions.

**HENRIKSEN, Agnes T.**

The British Museum and University College London

### **The visual communication of the Ur excavations 1922-34**

The excavator, brush in hand, kneeling in front of an almost uncovered artefact is a well-known image of the heroic archaeologist at work. Photographs like this provide visual evidence of fieldwork in all its complexity and are part of the stories of the discovery of objects and their legitimacy.

Field photography serves several significant purposes in archaeology, such as clear overviews of buildings, objects in situ, and contexts in general. However, the type of images discussed in this presentation were not produced to fulfil such scientific agendas. They are, however, as deliberately produced as the other types of photographs and should as such be treated with the same critical approach.

This paper concerns a case study of the collection of photographs produced by the Joint Expedition of the British Museum and the University Museum, Philadelphia at Ur, Iraq from 1922 to 1934. The collection contains some iconic and regularly used images of the director of the expedition, British archaeologist Leonard Woolley at work in the field. The collection was digitised in 2016 which now allows us to investigate these photographs and question them in new ways. The key questions in this paper are: why were these images produced and what demands were they fulfilling? This paper focuses on their purpose and role in the communication of the discoveries made at Ur by the two museums over the twelve years of excavation work.

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**HERR, Jean-Jacques**

Ecole Pratique des Hautes Etudes-Sorbonne – Ludwig Maximilians Universität Munich

### **Pottery Technological Analysis for the Neo-Assyrian Period in the Peshdar Plain**

The ceramic repertoire of the first half of first millennium BC in the Rania and Peshdar Plains in Iraqi Kurdistan has been known mainly thanks to the pottery discovered during the survey of the SGAS project (Sulaymaniyah Governorate Archaeological Survey) and the excavations of the Peshdar Plain Project in the Dinka Settlement Complex. Thanks to the stratified archaeological contexts provided by the excavations, it has been possible to have a more accurate insight on a local ceramic assemblage. Until now, archaeologists of the Neo Assyrian Period have mainly studied the morpho-stylistic criteria of the pottery in order to establish the date of a specific settlement or to link sites together into a broader chronological framework. On the other hand, our studies are focused on the technological analysis of the pottery aiming to cast light on the technological choices involved in the pottery production and the possible differences among sites of this region. This method will hopefully help to better assess the network of knowledge transfer for making pottery in the western foothills of the Zagros. Moreover, this method is hoped to provide a better framework for assessing the synchrony of sites during a period of wide communications within the Neo-Assyrian Empire.

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**HERRMANN, Jason T.**

Institute for Ancient Near Eastern Studies, University of Tübingen

### **The Urban Development of Sam'al (Zincirli) from the Perspective of Remote Sensing**

This paper will relay current knowledge of the multi-phase lower town at modern Zincirli, Turkey (ancient Sam'al) as determined through near surface geophysical prospection. The results of a magnetic gradiometry survey, conducted in 2007 and 2009, helped to guide excavations and interpretation in the extensive lower town, now conducted as the Chicago-Tübingen Archaeological Project in Sam'al. These results, however, deserve reassessment in light of results from five seasons of excavations and additional geophysical prospection with depth-sensitive techniques. Ground-penetrating radar (GPR) and electrical resistance tomography (ERT) surveys in the lower town now permit us to move beyond initial interpretations of the magnetic gradiometry results that stressed the latest preserved phases in the lower town.

Special emphasis will be on the underlying Early Bronze Age settlement was discovered to extend beneath the southern Iron Age lower town in 2015, which proved to be much larger than previously believed. This first evidence of a settlement of potentially "urban" scale in this period in the Islahiye Valley, was further investigated in 2017 through resistance tomography and excavation. Results help to fill out our image of this poorly known era, otherwise represented only by nearby mortuary sites. Transformations in the urban morphology of Sam'al from the Early Bronze age settlement to the hierarchical and idealized Iron Age urban form are then considered in respect to cultural and political transformations in the region. The results of these multi-sensor investigations provide a benchmark for applications on similar sites, demonstrate the urban scale and nature of Early Bronze Age Zincirli, and form the basis for further remote sensing and test excavations at Zincirli.

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**HERRMANN**, Virginia R.  
University of Tübingen  
**SCHLOEN**, David  
University of Chicago

### **Zincirli, Turkey: Recent Results from the Chicago-Tübingen Excavations**

Excavations and remote sensing at Zincirli Höyük, Turkey (ancient Sam'al) by the Universities of Chicago and Tübingen in August and September 2017 have begun to illuminate the Bronze Age prehistory of this well-known Iron Age city and to refine our understanding of the Iron Age urbanization process.

Though copious Early Bronze Age pottery was produced by the late 19th-century excavations on the Zincirli citadel, the existence of an extensive lower town of this period was unsuspected until recent excavations reached beneath the southern Iron Age lower town. In 2017, a pilot season of electrical resistance tomography was carried out to try to delineate the extent of the Early Bronze Age lower town occupation and identify associated fortifications of this period.

Likewise, a Middle Bronze Age occupation at Zincirli was previously only known from a few published sherds and finds. New excavations at the peak of the central mound are revealing a destroyed stratum of this period contemporary with the palatial center of nearby Tilmen Höyük.

The pace and process of the city's refoundation, expansion, and settlement in the Iron Age II following a long settlement hiatus have also been clarified by the excavation of four stratigraphic sequences in the large circular lower town – two in the north (2008–13) and two in the south (2015–17), including excavations below the city's South Gate – together with radiocarbon dating and a long stratigraphic sequence on the southern citadel mound. This more refined chronology can help us understand the role of urbanization in the political development of the Iron Age kingdom of Sam'al, while the investigation of early residential areas is shedding light on the socioeconomic organization of the first settlers of the lower town.

### **Excavations in the Hittite city of Nerik (Oymağaç Höyük/Turkey)**

Oymağaç Höyük is an archaeological site located in the poorly-known interface zone between Central and North Anatolia, c. 50 km as the crow flies from the Black Sea coast. Our field research, ongoing since 2007, has documented settlement activities dating from the Chalcolithic to the Iron Age; in the Roman and Byzantine periods, the site was used as a cemetery. In this paper, the focus will be on the Hittite period, when the settlement reached regional prominence, and also remarkable supra-regional significance. From the 16<sup>th</sup> century BCE onwards, the site was dominated by a majestic temple building with diverse annexes, and it included fortifications combined with a vaulted underground passage to a spring. The geographical location, the monumental architecture, fortification peculiarities, the specific character of the material culture and finally the cuneiform texts found on site indicate incontrovertibly that the site is to be identified with Nerik, an important cultic city long-known from Hittite written sources. The excavations identified episodes of building, destruction and rebuilding activity that can be compared with the textual evidence, which they sometimes confirm and sometimes contradict. Some architectural phases date to a period in which the region is believed to have been controlled by the Kaska, the arch-enemies of the Hittites. We also have identified a previously-unknown class of pottery that we attribute to the Kaska, so-far archaeologically completely elusive. In this way we are coming closer to the reconstruction of interactions in a border zone contested from the 15<sup>th</sup> to the 13<sup>th</sup> century BCE between the Hittites and the Kaska.

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**HØJLUND**, Flemming  
Moesgaard Museum

### **The collapse of the Dilmun Kingdom and the Sealand Dynasty**

Ten years of excavations (2008-2017) by the Kuwait National Council for Culture, Arts and Letters and Moesgaard Museum in Tell F3 and Tell F6 on the island of Failaka in Kuwait has greatly improved our understanding of the period from the collapse of the Dilmun Kingdom, c. 1700 BC to the incorporation of Dilmun in the Kassite empire c. 1465 BC.

A series of phases covering the period in question and identified on Failaka and in Bahrain will be presented based on a new program of radiocarbon dating. The relationship between post-collapse Dilmun and the south Mesopotamian Sealand Dynasty will be discussed.

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**HOPPER**, Kristen  
Durham University

### **From the local to the imperial: Landscape transformations between the Late Iron Age and the Islamic period on the Gorgan Plain, northeast Iran**

This paper will explore the relationship between landscape transformations and the influence of territorial empires on the Gorgan Plain of northeast Iran between the Late Iron Age and the Islamic period. Recent research by the Gorgan Wall Project, for example, has highlighted the considerable investment in defensive infrastructure (including the nearly 200 km long Gorgan Wall) that took place in this region during the Sasanian period. However, what do we know about contemporary settlement types, distributions, and

agricultural and pastoral land use? How do these patterns compare to settlement and land use in both earlier and later periods? What does this tell us about the impact of imperial policies and local responses, and how they changed through time?

Using new data derived from the remote sensing of historic satellite imagery, and both recent and previously published field surveys, a series of signature landscapes relating to particular periods and environmental zones on the Gorgan Plain have been identified. These signatures can be discussed in terms of how they represent the changing relationship between urban, rural, and mobile pastoral communities through time. These results can also be compared to several case studies from other regions of the Near East to discuss the impact of empire, and more specifically particular imperial policies, in transforming these landscapes.

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**HORDECKI, Jędrzej**  
Adam Mickiewicz University

### **The TP and TPC Area at Çatalhöyük East in the context of Phrygian and Hellenistic Settlement**

Çatalhöyük is very well known Neolithic site located on Konya Plain. However, during 24 years of excavation there were exposed and excavated many featured dated to later than Neolithic and Chalcolithic times. The aim of this paper is to present the result of excavation late strata from two trenches: TP and TPC excavated between 2001 and 2017 and to put it in multiregional context. On both those trenches there were registered numbers of late occupation layers. Altogether there were found buildings, ovens and kilns and pits backdated to Phrygian and Hellenistic times.

The results will be presented in few steps. Firstly, the presentations of late strata analysis. Secondly, the scrutinize of raw materials like animal bones and pottery. Thirdly, the regional and multiregional analysis of settlement in later, historical periods contemporary with Çatalhöyük settlement.

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**IAMONI, Marco**  
University of Udine

### **The Northern Lebanon Project (NoLeP): an archaeological survey of the district of Koura and the area of Tripolis**

The paper will present the first results of the Northern Lebanon Project, a survey carried out in the district of Koura (area of Tripolis, Lebanon) by a team of the Lebanese University and the University of Udine. Although historical sources (e.g. Amarna archives) and archaeological surveys carried out in neighbouring areas (e.g. the Plain of Akkar) suggest that this region was characterised by a dense settlement system, no systematic investigations have, thus far, taken it under examination.

NoLeP aims at filling this gap with the survey of the hilly plain extending westward of Tripoli, focusing in particular on the Bronze and Iron Ages, in order to explore the exploitation of the countryside and the interrelations between rural sites and the large coastal urban centres of the 2nd and 1st millennium BC. This will provide crucial information to understand more thoroughly the ancient occupation as well as of the material culture of the northern Lebanese area, shedding thus light on a region which was a part (if not the core) of ancient Amurru.



**ILYASOV, Djangar**

Institute of Fine Arts of the Academy of Sciences, Tashkent

## **Two Little-known Groups of Glazed Pottery from Central Asia (9th-12th centuries)**

It is well known that ceramics, including glazed pottery, account for the greatest mass of material recovered in excavations of medieval sites in the Near and Middle East, as well as Central Asia. Decades of scholarships have been devoted to the typology, styles and technological aspects; Museums and collectors aspire to have samples of the best products in their collections. Among them, ceramics from Khurasan and Mawara al-Nahr take pride of place. Nevertheless, there are two groups of glazed pottery which are not so widely known. The present study aims at characterizing these ceramics.

The first group belongs to the rather well-known "Afrasiab Ware". It is pottery with underglaze mono- and polychrome painting on white and, less often, coloured (black, brown) slip background, covered by transparent, colourless lead glaze. It is widely represented and best studied in Samarqand and Nishapur. Without doubt, the quality and quantity of production of these two important centres was the reason why ceramics of other areas of Mawara al-nahr, in particular, of the Tashkent oasis and its capital Binkath-Tashkent, were overlooked. This principality, known under the name of Shash, was conquered by Arabs in 8th century and located on extreme northeast periphery of the Abbasid Caliphate. Archaeological excavations in Tashkent and on the other archaeological sites of the area (Qanqa-Kharashkath, Abrlygh, Tunkath, etc.) took place in the 1960s and -70s. The finds, together with material from construction works in 1980s and 2000s, provide ample evidence that in the 9th-11th centuries Tashkent was an important centre of manufacture of glazed pottery of "Afrasiab type". The ceramics from Tashkent have their own original features. In 1986, Ludmila Brusenko published a monograph on the Tashkent ceramics, containing a classification of some types. Unfortunately, this material remained almost unknown in the west, mostly due to the language barrier and the kind of photographic reproductions that did not really allow to estimate the high quality of the Tashkent ceramics. Consequently, classifications as "Afrasiab/Samarqand" or even "Nishapur" persist for the pottery of Khurasan and Mawara al-nahr of the Samanid period.

In the last decades, studying of the Tashkent ceramics has continued, and has allowed to define an array of features in its decoration which distinguish it clearly from the production of Samarqand and Nishapur. This way, the rather general picture of Central Asian ceramics of the Samanid period becomes refined, as regional characteristics can be differentiated. I am confident that our recently published monograph on glazed pottery of the Tashkent oasis (2016) will help to promote this change in scholarship.

Another group of glazed pottery, different from the Tashkent ceramics, appeared in the western art market since c. 2000. It has caused interest, first of all, with its unusual and stunning design, whimsical zoomorphic and anthropomorphic images. Dating to the 10th century and foggy reference to "the Eastern Iranian world" is everything that short summaries in auction and exhibition catalogues had to offer. Technologically, these ceramics belongs to the type with underglaze slip painting, meaning that they could be grouped with other ceramics of the 10th-11th centuries. They are set apart, however, by their lilac coloured slip background and unusual graphic style.

A preliminary study of this group of ceramics indicated that it could have originated in the region of Tukharistan in the 10th- early 11th centuries. The archaeological finds made on the territory of Southern Uzbekistan (i.e. in Northern Tukharistan) in different years (1936, 1986 and 2011) have helped in this matter. Hopefully, new finds will help to localise this group of pottery more precisely some day. The fact that a "new" group of ceramics, practically unknown before, was discovered in the 21st century gives hope that exciting discoveries in this area of knowledge are still possible!

From the discussion of the two groups, it can be derived that there is some potential to enhance our picture of the development in Near Eastern ceramics of the Islamic period, even with respect to some objects that are considered original masterpieces of Islamic and World Art.

**INTAGLIATA**, Emanuele  
University of Edinburgh  
**NASKIDASHVILI**, Davit  
Tbilisi State University

### **Defending the Caucasus in Late Antiquity: first report of the ‘Forgotten Borderlands’ survey project in southwest Georgia**

After a century of relative peace, war between Rome and Persia burst out again in the 6<sup>th</sup> century AD and was fought at full scale along the eastern frontier. Lazica, western Georgia, remained an important battleground during this war between AD 522 and AD 561/562. By protecting Lazica, the Romans would have, inter alia, prevented the Persians from reaching the Black Sea coast and threatening by sea Constantinople, and protect the access through northeastern Anatolia. Despite its importance, however, Lazica and its fortresses have so far attracted relative little interest by the archaeologists.

This paper would like to present the results of the ‘Forgotten Borderlands’ survey project, which aims to shed more light on the frontier defensive system of Lazica by focusing specifically on the architecture of a selection of military infrastructures in the provinces of Guria and Adjara believed to be late antique in date (Petra, Ask’ana, T’olebi etc.).

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**ISERLIS**, Mark  
German Archaeological Institute, Berlin  
**GREENBERG**, Raphael  
Tel Aviv University

### **Contact Between First Dynasty Egypt and Specific Sites in the Levant: New Evidence from Ceramic**

New optical mineralogy and XRF studies of ceramics from First Dynasty royal tombs at Abydos and from Tel Bet Yerah, in the Jordan Valley, reveal a very close correlation between vessels from Egypt and both fired and unfired wares from a potter’s establishment at Tel Bet Yerah, marking the first time that vessels found in Egypt can be attributed a site-specific origin in the Levant. Other vessels, most of them previously identified as ‘metallic ware’, included some that originated in the northern Jordan Valley. The vessels found in Egypt most likely span the entire First Dynasty, beginning with Djer, whereas the equivalent material from Tel Bet Yerah falls in the EB II period, radiometrically dated at Bet Yerah to 3100 – 2900 BCE. No evidence was found for a more southerly origin of imported Levantine wares in the First Dynasty tombs.

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**IŞIKLI**, Mehmet  
Atatürk University in Erzurum

### **A New Royal and Religious Space in Ayanis Citadel: The Hall with Podium**

As known, Urartian State was the first centralized political unit in the marginal zone of Ancient Near East including Southern Caucasus and Eastern Anatolian Highland. This centralized state has been disciplined the mountainous zone over the course of three centuries. Rusa II was the last great king of tercentenary Urartian royal line. He is the king who leaved a legacy consisting of most striking archaeological materials

of Urartian archaeology. Ayanis Castle which is located on the eastern shore of Lake Van was one of the great projects of him. The excavations at Ayanis Castle is one of the longest archaeological project concerning Urartu in the Highlands. The fieldworks at Ayanis during the past two years (2015-2016) presented obtrusive results. Undoubtedly prominent one among these is a new exclusive space in the Temple Area including *Haldi susi* temple. This monumental building in other words “the hall” is located behind the susi temple and between Temple Area and Eastern Pillared Hall. The plan of the hall has been drawn, with the dimensions being 22 × 8 metres. The mudbrick walls of the hall are plastered and painted in Egyptian Blue. A small part of floor of the hall, which is located exactly behind the susi temple, is paved with alabaster (onyx) slabs. The most remarkable discovery in this hall is the alabaster podium, which was elaborately decorated. This marble podium rests in a central location against the southern wall of the hall. The hall with platform is of considerable interest because of the valuable and diverse finds recovered, as well as its architectural features and monumentality. A large number of small finds were obtained inside the hall during excavations. Most of them are unique and prominent samples of Urartian art. The main aim of the paper is to analyses this unique space in every respect.

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**IZZO**, Pierfrancesco  
Sapienza University of Rome  
**FRADLEY**, Michael – **ZERBINI**, Andrea  
University of Oxford

### **Snapshots from the past: aerial perspectives of endangered archaeological landscapes in Palestine**

Aerial archaeological and remote-sensing techniques are valuable tools for understanding archaeological landscapes, as well as more recent land-use change that have impacted on elements of these ancient remains. The study of historic aerial photographs and satellite imagery it is possible to identify sites that may have subsequently been destroyed by human or natural landscape change. Limited access to aerial and satellite imagery collected since the 1940s has restricted the development of these techniques over Palestine. This situation is evolving as restrictions on access to commercial satellite imagery are reconsidered, as well as ongoing efforts to bring together historic aerial photographs, enabling new forms of analysis of the archaeological landscapes of Palestine. This paper will demonstrate these applications, using GIS software to create a geo-referenced chronological photo sequence of the Salfit region and Jericho Oasis (developed in Oxford University basing upon the ongoing Project at Jericho of Sapienza University of Rome). We will discuss the threats to these archaeological landscapes over the last century that can be identified via these aerial images, and how changes in access to this data will allow these techniques to be used more widely for heritage management in Palestine .

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**JAMIESON**, Andrew – **JACKSON**, Heather  
University of Melbourne, School of Historical and Philosophical Studies

### **Community engagement and the *Syria: Ancient History – Modern Conflict* exhibition and symposium**

The war in Syria has resulted in the deliberate destruction of the country’s heritage sites, cities and monuments, including UNESCO World Heritage sites Palmyra and the old city of Aleppo. In part, Islamic State finances its war mongering by selling in the West antiquities looted from archaeological museums.

To counter the war on cultural heritage and terrorist propaganda a public exhibition and symposium titled *Syria: Ancient History – Modern Conflict*, at the University of Melbourne’s Ian Potter Museum of Art, in Australia (28 March to 27 August 2017), was designed to highlight cultural heritage destruction and preservation with a focus on archaeology and the conflict in Syria. This initiative included a plan to broaden awareness within the wider community through direct engagement with archaeological objects, defusing the power of the extremists and disarming social disaffection. This paper will critically examine the curatorial development, media coverage and community engagement associated with the exhibition and symposium on Syria which generated intense interest and debate in response to the heritage crisis in the Middle East.

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**JAMMO, Sari**

University of Tsukuba, Department of History and Anthropology

### **Emergence of the cemetery in the Near East: A case study of Tell el-Kerkh, northwestern Syria**

People in the Ancient Near East societies treated their deceased in various funeral practices and were buried in various locations. Most often deceased were buried close to the habitation area or associated to the residential structural buildings. Deceased were buried in caves and on terraces, beneath walls, floors and between structure buildings, courtyards and cemeteries. According to the Oxford Dictionary of English, “Cemetery is a burial ground”. Therefore, we may define the cemetery as a ground which has been used for burying the deceased exclusively. So, it is not a house, nor a cave, nor even an indoor place including a courtyard. Cemetery also consist of a large number of burials resemble the modern communal cemetery. If we define the cemetery mentioned above, when and where was the first cemetery emerged in the human history? How and why? Fortunately, we excavated one of the earliest such “cemeteries” in the northern Levant. In this paper, I would like through this research to introduce our excavation results and place our “first cemetery” in that history. I will try to explain how and why the cemetery appeared in the Near Eastern prehistory.

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**JEAN, Mathilde**

Université Paris 1 Panthéon-Sorbonne

The National Center for Scientific Research – UMR 7041 Archéologies et Sciences de l’Antiquité, Team VEPMO

### **Tracing ceramic exchanges: how is Tell Arqa (Lebanon) included into the regional trade networks? Some evidences from the Early Bronze Age**

Excavated since the 1970’s, Tell Arqa (northern Lebanon) is an emblematic site of the Early Bronze Age in the Northern Levant, which extensive stratigraphic and ceramic sequence is now a well-known and published reference for current research. The rich ceramic assemblage still reveals new evidences on the Early Bronze Age societies: through the study of the ceramic fabrics, this paper highlights non-local wares which demonstrate the integration of the site into the regional mobility and trade networks. Macroscopic and microscopic observations in thin sections are used to draw a line between exogenous and local ceramics, and are combined with typological and technological features in order to understand these exchanges. Which vessel types were exchanged, which sites were implied into these mobility networks, and when did it take place? Three kinds of mobility are examined here: imports, imitations and exports. A

number of imports are evidenced in Tell Arqa during all the third millennium, probably alternatively coming from inner Syria and the Lebanese coast. Some imitations of exotic wares in local fabrics may also be recognized, illustrating the mobility of ideas, types and styles. Finally the identification of exports from Arqa to other regions, at an early stage, already gives interesting results pointing out inner Syrian and Egyptian trade partners. Therefore, beyond the local features, the detailed analysis of the ceramic assemblage from Tell Arqa reveals the wide mobility of people in the EBA Levant.

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**KAERCHER**, Kyra  
Cambridge University

### **Chronology and Social Identity in the Middle and Late Islamic Periods in Northeastern Iraq via the Study of Unglazed Earthenwares**

This paper analyzes the unglazed ceramic assemblage from Gird-i Dasht to gain a better control on the chronology of the site, as well as better understand the social identity of the people at the site in the Middle and Late Islamic Period. The Rowanduz Archaeological Project, located in Soran, Iraqi Kurdistan, has excavated at the mounded site of Gird-i Dasht since 2013, uncovering the final two phases of use of this strategic fortress. Glazed ceramics place the later level in the Late Islamic Period (1500–1850 CE). Although only one radiocarbon sample for the earlier phase has been processed, it provides a date in the 11<sup>th</sup> century CE, and comparisons with glazed Islamic wares suggest that this earlier level dates to the Middle Islamic Period (1000–1500 CE). The predominance of unglazed ceramics in Islamic contexts is well attested, and yet these assemblages are typically under-published due to a focus on the art historical studies of glazed wares. Without firm stratigraphic control and absolute dating technologies, local, utilitarian earthenwares can easily be misattributed to pre-Islamic and even prehistoric time periods. Unglazed wares typically lack surface treatment or have been wet-smoothed, slipped, painted, molded, or incised with designs. Such diagnostic surface treatments provide archaeologists with greater potential for chrono-geographic precision in interpretation.

During the Middle and Late Islamic Periods, Gird-i Dasht was a strategic, highly fortified site, located between the Kelishin and Gal-i Ali Beg Passes leading from Highland Iran to Northern Mesopotamia. This region in the Northern Zagros was overseen by the caliphate and different dynasties originating in Mosul and Iran, and witnessed the Mongol invasions in the 13<sup>th</sup> century. Understanding the unglazed wares and placing them in a spatio-temporal frame can help to elucidate settlement patterns in the northern Zagros region during this politically dynamic era. It also can shed light on social identity, in that unglazed wares are locally made, therefore we have a baseline to study what is local versus what is possibly being imported or emulated by the elites or those in political control. The forms of the unglazed wares in combination with household or fortress archaeology can suggest categories of social identity within the settlement itself. This gives us a deeper understanding of life and its changes during the Middle and Late Islamic Periods in Northeastern Iraq.

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**KAFABI**, Zeidan  
Yarmouk University  
**PETIT**, Lucas  
National Museum of Antiquities, Leiden

### **Artistic expression at Tell Damiyah from the Late Iron Age until the Ottoman Period**

Seven seasons of excavations have been conducted by the Jordanian-Dutch expedition at Tell Damiyah, a small settlement mound located in the central Jordan Valley. It is situated in the Zor, directly south of the confluence of the Zerqa and the Jordan River. The site consists of two parts, the upper Tell and a lower terrace that occupies the western and southern sides. The site is small in area and measures only three hectares at the bottom and has relatively steep slopes from all directions. Civic and ritual buildings dated to the Iron Age were excavated on top of the Tell, partly damaged by later Persian/Hellenistic, Byzantine and Ottoman occupation remains. One of the intriguing finds from the Iron Age was a cultic building containing many human and animal figurines, anthropomorphic statues and other artistic finds. This paper presents a study of the artistic objects excavated at Tell Damiyah, dated from the 7th century BC to the Ottoman period. Those objects contain intriguing information about the way of life and aftermath at the small site of Damiyah.

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**KALLAS, Nathalie**

Freie Universität Berlin, Institute für Vorderasiatische Archäologie

### **Powerful buildings and building power. The case of the MBA palaces in the Levant**

The palaces of the MBA Levant dominated the cities and their surrounding territories. These massive structures with their advantageous placement, and emphasized scale and elevation remodeled their environment and shaped the urban space. Furthermore, they had the capacity through their visual and relational properties to carry messages that can be interpreted by specific audiences and were used by the ruling elites as a means of communication on a grand scale to convey clear-cut messages of authority and power. These structures are especially interesting to investigate for the employment of architectural communication, and to trace the remainder of the political and ideological messages they hold, as they are the product of wide ranging contacts and a complex peer polity interaction.

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**KAMALIZAD, Jaleh**

Tehran University

### **Firūzān, an Ilkhanid settlement in southwest of Isfahan, An overview on historical and archaeological data**

During the last decades, many archaeological projects in Isfahan have been focused on the urban facilities and monumental architecture. However, based on historical sources and material culture, it can be said that rural communities and Countryside settlements such as Firūzān played an economic and supportive role to the urban society of Isfahan.

Before Mongol invasion, Firūzān was a village in the *rustāq* of Lanjān, an ancient and fertile plain along the Zāyandeh Rūd river in southwest of Isfahan. But during the Ilkhanid period, Firūzān was developed and changed to a flourishing and populous settlement. In the middle of the 8<sup>th</sup>A.H/14<sup>th</sup>A.D century, the famous traveler Ibn Battuta and also the author Mustawfi in his *Nuzhat al-qulub* described Firūzān as one of the three major thriving cities of Isfahan.

Considering the subject that Firūzān has not been investigated comprehensively, based on historical sources and the results obtained from archaeological survey conducted in 2015, the author is going to examine the reasons of development of Firūzān and introduce its Ilkhanid monuments briefly. The study of the characteristics of Firūzān as a Ilkhanid town with an agricultural economy base is another goal of this paper.

**KANJOU, Youssef**

University of Tübingen, Institute for Ancient Near Eastern Studies

## **The role of Syrian archaeologists and foreign archaeological missions in the protection of the Syrian heritage**

The Syrian heritage has suffered, as the Syrian people, considerable damage during the conflict, which began in 2011 and is continuing in some areas until now. It is unfortunately to say that the battles were severe in many of archaeological sites, especially those inscribed on the World Heritage list such as Aleppo, Palmyra and Bosra. That has led to the destruction and loss of a part of this heritage, which is important not only to the history of the region but also to the history of humanity.

The reasons of heritage destruction revert to the pre-war period and other factors found because of the war itself; we believe that in both cases there are common factors that have contributed to this sad consequence. One of the main factor is the inability of the heritage protection authorities, both national and international, to increase the knowledge between the Syrian community about the importance of its heritage and raise the awareness of it, especially between young people, who have the ability to protect it now and in the future.

Meanwhile, there are 140 foreign archaeological missions from international scientific research institutes and World universities are working annually until 2011; the effort of these missions has helped uncover important stages in the cultural development in Syria from the Palaeolithic to the present, the activities of these missions have covered all Syrian areas without exception, thus the Syrian archaeology had acquisition famous in the worldwide. These missions also helped to train a number of Syrian archaeologists who also contributed to supporting Syrian archaeological research. Because of the war, all those missions had stopped their researches and the current situation had led to the emigration of Syrian archaeologist outside their homeland.

I present in this talk the main reasons that have contributed to the destruction of the Syrian archaeology, both direct and indirect; and the effort of the archaeology missions working in Syria to alleviate this damage, particularly in the raising of awareness about the importance of Syrian heritage. For this reason, I will talk about book, the history of Syria in 100 sites, which contain information about 103 Syrian archaeological sites that have been excavated by archaeological missions. The book have distributed free to Syrian schools inside and outside Syria, with the idea to distribution the Archaeological knowledge among students with the hope of protecting the Syrian heritage.

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**KARIMIAN, Hassan – AFZALI, Zeinab**

Tehran University

## **Water Supply Infrastructures of the Ancient City of Sirjan**

Researchers focusing on the study of the ancient cities consider water supply installations as one of the main factors in formation and continuation of these cities. Such infrastructure finds particular importance in cities situated in dry and hot desert areas, where development and longevity of urban centers depend fully on water resources, so much so that water security has become the main concern of residents and rulers of desert cities. A fundamental need that has forced them to dig subterranean canals (*qanats*) even from distant locations, and to develop networks and installations for the supply, distribution and storage of water. Without doubt, one can consider the remains of such water supply networks as Iran's valuable archaeological evidences. Moreover, digging of *qanats* and other water supplies can be considered as one of the most ancient evidences of human relation with nature – methods that have had the least destructive effect on the environment.

The ancient city of Sirjan (12 Km southeast of the new city of Sirjan in Iran) was constructed in connection with water transfer, distribution and reservoir networks, and its continued development and expansion relied on such infrastructure. The present paper is an attempt to investigate, based on the available historical texts and field studies, the effect of such water supplies on the formation and development of the urban spaces of this city. Furthermore, hydro-troglodytic structures of Sirjan are also introduced, highlighting the fact that due to hard crust of the earth in this city, implementation of digging and water transfer had been a tedious and torturous operation, but more importantly, without which development of the ancient city of Sirjan was never possible.

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**KARIMY**, Amir Hossein  
Isfahan Art University

### **The Phenomenon of Pseudo-Stucco: Carved clay decorations in the historic city of Meybod, Iran**

There are several sources published by Islamic art historians or archaeologists (e. g. Carboni and Komaroff, 2002; Wilber, 1955 etc.) on types of architectural decoration in Persian art of the Ilkhanid period, most of them are concentrated on royal monuments or mosques and focused on decorations like tilework (*kāshī*) and stucco (*gach-borī*). Yet there is another kind of decoration which can be found in the rural architecture around central desert of Iran, especially in the cities of Meybod and Yazd (in Yazd province). Technical analysis during conservation projects sponsored by Meybod cultural heritage research center, revealed that this specific decorations are in fact made by fine clay-straw (*sim-kāhgel*) covered with a thin layer of whitewash to resemble stucco. This local kind of decoration with vegetal or geometric motives is indiscernible from stucco in first glance, could be named as “pseudo stucco” or simply carved clay. Discussing the date of this technique, relevant cases has been found in historic houses which are attributed to 14th-15th centuries (coinciding with the reign of Muzaffarid rulers in Yazd), although the roots of this technique are traceable on earlier instances in this region. This paper represents the various kinds of the clay decorations and discusses the technical context of their appearance on the basis of five case studies.

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**KATZY**, Elisabeth  
Vorderasiatisches Museum, Berlin

### **The terracotta figurins at Tell Halaf in the Hellenistic period. Between continuity and change**

This paper addresses coroplastics in the Khabur region from the Hellenistic period and the figurines show strong parallels with Ancient near eastern images. The settlement continuity at Tell Halaf is a good opportunity for a stylistic and iconographic case study of terracotta figurines by questioning the continuation of traditions or possible changes. The so-called “Persian Riders” are a particularly good example therefor. These terracotta horsemen, especially "Persian Riders" from the site of Tell Halaf, indicate a strong continuation of local traditions although they adapted temporary Hellenistic features. Local traditions can be observed in the following categories, such as fabric, style, technique and somewhat in their iconography. During the 3<sup>rd</sup> century BC, the "Persian Riders" got a new face according to Hellenistic ideals. During the 2<sup>nd</sup> century BC, they were replaced by terracotta horsemen with a double-modeled body, no longer wearing the "Persian Cap" but instead are represented with the Macedonian cap as headgear, the so-called “kausia”. At this point one may ask about the possible function of this group of figurines and



the interpretation of terracotta horsemen, especially the "Persian Riders" in this region. The objective of this paper is to identify the characteristic features of this group from this region, and to bring them regional and cultural historic context.

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**KENNEDY**, Melissa A.  
The University of Sydney  
**BADRESHANY**, Kamal  
Durham University

### **Mobility, ‘Caliciform’ Ware and the Changing Cultural Landscapes of the Levantine Late 3<sup>rd</sup> Millennium BC**

One of the most characteristic features of the Levantine 3<sup>rd</sup> millennium BC is the sudden and widespread distribution of drinking paraphernalia – ‘Caliciform Ware’. These mass-produced vessels have been discussed extensively in regards to their form, chronology and distribution. Yet these discussions have frequently omitted the upper Orontes, the Beqa’ and northern Lebanon. However, recent analysis from Tell Nebi Mend in the upper Orontes, Syria, suggests that the goblet assemblage and cultural horizon of this site differed considerably from that of the central and lower Orontes and the Ebla *chora*, the heartland of the Syrian ‘Caliciform’ tradition. The identification of a new and distinct goblet culture or horizon within the northern and central Levant suggests that the ceramic landscape of the region was distinguished by a number of regional variants and expressions, with each of these potentially indicative of specific areas of cultural interaction and influence. These cultural spheres of association, shed light upon the varying trajectories of urban development and the cultural and economic interactions between the northern and southern Levant during the 3<sup>rd</sup> millennium BC.

This paper will present the results of a recent typological, petrographic and chemical (ICP-AES and MS) analysis of the Tell Nebi Mend goblet assemblage, situating the corpus in its wider regional context. It will also explore the mobility of ‘Caliciform’ Ware and its associated technology and the potential mechanisms for its transference throughout the wider Levant during the closing stages of the 3<sup>rd</sup> Millennium BC.

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**KERTAI**, David  
Hebrew University of Jerusalem

### **The Architecture of the Gaze: Palace J/K at Zincirli**

The citadel of Zincirli contains an impressive ensemble of Syro-Anatolian palatial architecture. This paper focuses on Palace J/K, presents a critique on the architectural historical discourse surrounding it and attempts to formulate different approaches to the study of architecture. As most Syro-Anatolian palaces of the Iron Age, the complex is generally described as a Hilani. The current discourse limits itself to the question “what is a Hilani?”, answering it in typological and morphological terms. This has led to a focus on the lowest common denominator. This paper will ask “what did the palace aim to do?”. A more contextual and phenomenological approach allows the complex to be described as externalizing hospitality through the creation of in-between spaces where guests could be entertained. Through a precise placement of architectural components the accessibility of bodies and the gaze were constrained and guided, creating subtle hierarchies that enhanced the status of the king without making them too overt.

## **Settlements And Population Fluctuations During The Prehistoric In The Bavanat River Basin Based on archaeological Survey**

Abstract: Fars Cultural sphere have different perspectives, including mountain areas with cold weather, Central areas with a temperate climate and the southern areas which is limited to the northern Persian Gulf coasts; have warm weather which for the purpose of analyzing Fars prehistoric cultures, each area should be studied separately. According to importance of the issue, Bavanat River Basin was investigated with aims to identify all cultural monuments, provide the archaeological maps of area, and investigate the evolutionary process of settlements in different periods, assessment of environmental impact on the formation of settlements, explanation the culture position of the study area. During the survey, 200 relic was identified which is dateable from the Neolithic period to the Late Islamic period. The oldest relic is related to the Neolithic period that possibly due to climate change in the second half of the seventh millennium BC Marvdasht plain people moved this region; after that until the Bacon era, no settlement has been identified. From eight areas was obtained painted pottery buff of Bakun period, also from seven areas was identified Lapui period pottery that in the Lapui period alongside red ceramics, was also identified buff painted pottery. From Banesh period was identified as one area, it seems that in the Banesh period and coincided with the beginning of urbanization in the Fars, this basin is abandoned to the Achaemenid period.

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**KHARABI**, Arwa

Anthropology and human genetics, Université Libre de Bruxelles

## **Between death and memory: New evidence for tombs reopening in Urkesh “the Capital of Hourrites” in the first half of the second millennium B.C.**

In tell Mozan some Middle Bronze Age graves were reopened, reused, robbed and manipulated in various ways. Despite the fact that the management of funerary space can often be responsible for these upheavals, it is not the only reason for humans to overhaul burials. From our point of view, the missing of bones, body parts or whole body can be inadvertent act explained by 1) the intention to bury new individuals within a specific old grave 2) the intention to empty a pit in order to move the bones to re-bury them elsewhere, or 3) the recuperation of certain bones as relics or memorials. These manipulations attest to an intentional act and are generally interpreted as being part of some kind of death cult or burial ritual.

This presentation focuses on the graves of the Middle Bronze Age showing signs of bone manipulation likely linked to ritual gestures (ancestor reverence, kispum, etc.). The goal here is to examine those burials trying to 1) reconstruct the process of the bone manipulation, and 2) understand the ancient Mesopotamian ideology of death. To this end, the burials in question are compared to cuneiform documents from Bronze Age Mesopotamian ancient cities which are expected to reveal new insights and expand our understanding of ancient practices. Our analysis, based on the taphonomy of burials, shows that re-opening of some burials occurred, which is not fully in accordance with Middle Age texts discovered in Mesopotamia.

The site of Tell Mozan lies tucked in the Northeast corner of modern day Syria, located between the Tigris and the Euphrates River in the region known as Mesopotamia. Evidence recovered inside the royal palace identified the site as the ancient city of Urkesh, an important urban centre of the ethnic group known as the Hurrians.

### **Description, Classification and Typology of the Excavated Parthian Pottery from Qal'eh-i Yazdigird, Kermanshah Province, Iran**

Due to the very few excavated archaeological sites related to Parthian period in western Iran, a Parthian pottery assemblage – by absolute dating- has not been known yet. That's why it is difficult to define the Parthian sites in western Iran. Therefore it's necessary to study a precise dated collection of the Parthian pottery in order to have a better understanding of this period in the western regions. One of the most important sites in western Iran is Qal'eh-i Yazdigird, where has been excavated recently. The Qal'eh-i Yazdigird complex is situated in western Kermanshah province, by forty square kilometers extent. According to the excavations, reported pottery and other data like coin, it seems that this site is related to the late Parthian period. The typological study of ceramic assemblage of the site can demonstrate a wealth of ceramic vessel shape and decoration of a typical settlement of this period. This corpus can be a significant reference for those who seek a firm ground to compare the materials collected during the surface survey of archaeological sites of western Iran.

Scrutinizing of pottery suggests that most of them have been made locally, but some others are probably from other sites and show cultural-commercial relationships between this site and other contemporary ones. Therefore, based on the recovered ceramics from Qal'eh-i Yazdigird it seems that during the Parthian period the region was not completely closed and not having contacts with other regions, but it shows to some degree partial influence from those regions.

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**KNUDSEN, Nadeshda B.**  
Tel Aviv University

### **What was the Purpose of Figurines? Reflections on the Possible Significance of Zoomorphic Figurines from Tel Bet Yerah**

The study of material culture from prehistoric periods is beset with analytical limitations due to the absence of written or other sources that could facilitate a clear understanding of their proper use and importance. However, in contrast to the obvious function of most artefacts, the study of miniature animal figurines poses additional challenges as, in themselves, they afford no immediate apparent practical application.

The multiple excavations at Tel Bet Yerah over the last century have yielded a large quantity of such zoomorphic figurines dating to the Early Bronze Age. As part of on-going research on ceramic animal figurines from the Southern Levant, this case study offers the opportunity to explore some possible reasons for their production and purpose during the start of the 3<sup>rd</sup> millennium BCE. This was a period of apparent peaceful co-habitation between the local inhabitants and the recently arrived migrant Khirbet Kerak Ware (KKW) people who are thought to originally derive from Transcaucasia. Both of these groups simultaneously retained their independently distinct material culture packages, their own segregated and particular communal activities throughout this time. Moreover, they were also both consistent in their production and use of distinct miniature zoomorphic figurines.

Viewed through the prism of the period, this paper will incorporate aspects of spatial use and organisation, animal economies and related material culture, as well as the technological and cognitive applications of figurine production. Benefitting from the prime opportunity of intra-site comparisons, an enhanced narrative is offered, indicating that alongside differing types of manufacture, there may equally be varying

realms of social and cultural meaning attributable to miniature animal figurines, rather than merely a single over-arching emphasis and identity.

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**KOIZUMI, Tatsundo**

Institute for Advanced Studies on Asia, University of Tokyo

**OJIMA, Hitoshi – YOSHIDA, Ayami**

The Industrial Technology Institute of Ibaraki Prefecture

### **An Experimental Analysis of Ubaid and Late Chalcolithic Pottery. Reproduction of clay and pigments**

This paper will contribute to a pyrotechnological study of pottery making techniques in the Ubaid and Late Chalcolithic periods of West Asia. Particularly we are to make a brief report on results from experimental analyses of reproduced clay and pigments of the Ubaid and Late Chalcolithic periods, the originals of which had been uncovered at Salat Tepe in the Upper Tigris, southeastern Turkey. We had previously reported results of the 2011 to 2014 pyrotechnological study for estimated firing temperatures of pottery during HUT (Halaf-Ubaid Transitional) to Late Chalcolithic periods (10th ICAANE). In this presentation, we are going to discuss results of experimental firing of the clay and pigments compared with the previous ones in the 2015 to 2016 study.

One of results that not only gehlenite and pyroxene, but also wollastonite are identified in the reproduced clay by experimental firing is nearly same to that of other experimental firings of sun-dried bricks at Salat Tepe. The clay could, then, be reliable to experimental analysis. At the same time, re-firing of sherds from Salat Tepe, originally showing gehlenite and pyroxene, indicates wollastonite at more than 950°C. Therefore, the firing temperature of one group of pottery at Salat Tepe can be more accurately estimated during 900°C to 950°C. Additionally, further experimental firings have shown that reproduced pigments, with approximately similar main elements to that of originals at the site, are adhered on the surface of pottery at temperature ranging between 850°C and 1000°C.

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**KOLIŃSKI, Rafał**

Adam Mickiewicz University

### **Upper Greater Zab Archaeological Reconnaissance (UGZAR) – a summary report**

The UGZAR project was carried out in years 2012-2017 in the area located on both banks of the Greater Zab river. The aim of the project was to register archaeological sites and other heritage monuments on an area of more than 3 000 km<sup>2</sup> limited by the Greater Zab river and Bastora Çay in the South, and Akrê and Harir Mountains in the North. During five field campaigns as much as 260 archaeological sites were documented representing settlement from the PPN period down to the Late Ottoman times, as well as 62 heritage monuments (including castles, churches, mosques, mills, and cemeteries with carved tombstones). Additionally, the UGZAR team visited nearly 100 caves in search for traces of human Prehistoric settlement. The last field season, in the Fall of 2017 will certainly increase these numbers. The paper will attempt to draw first conclusions on the settlement history and heritage preservation in the study area, which appears to be very differentiated in terms of natural conditions, settlement history and alignment to cultural provinces.

**KOPANIAS, Konstantinos**  
National & Kapodistrian University of Athens

### **A Reappraisal of the Greek Migration in Cilicia and Pamphylia during the Early Iron Age**

Various Greek authors from the Archaic to the Roman period mentioned a migration, that took place from the Aegean and West Anatolia to Pamphylia and Cilicia right after the Trojan War. The meagre archaeological evidence, as well as the Arcadocypriot and Mycenaean elements in the Pamphylian dialect also indicate that, after the collapse of the Hittite kingdom, small groups of settlers migrated from the Aegean, west Anatolia and Cyprus to Cilicia. From (at least) the end of the 10<sup>th</sup> to the late 8<sup>th</sup> century a kingdom, called Hiyawa in Luwian and *Qw* or *'mq 'dn* in Phoenician inscriptions, controlled Cilicia and possibly also Pamphylia. Its subjects were called Hiyawa in Luwian and *dnnym* in Phoenician respectively. The term Hiyawa stems from the Hittite geographic term Ahhiyawa, which referred to one of the Mycenaean kingdoms in the Aegean during the LBA; both terms originate from the ethnonym 'Achaeans', later used also by Homer. At least one of the rulers of the Kingdom of Hiyawa considered himself to be a descendant of a certain Muksas/*mpš*, which shows that the later stories about Mopsos were not entirely fictitious. The Achaean settlers in Cilicia and Pamphylia gradually merged with the Luwian population. Herodotus later called them Hypachaeans, in order to denote that they were neither Achaeans or Greeks, nor Luwians or Cilicians.

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**KÖPP-JUNK, Heidi**  
Universität Trier

### **Women on the move in ancient Egypt**

In the Pharaonic period, a high degree of mobility is documented in all classes of society, but the sources predominantly refer to male travelers, while women are much less frequently documented on journeys. For this reason, this lecture is focused on the few women who were attested. Non-literary and literary texts as well as archaeological sources from the Old, Middle and New Kingdom were used for the study. The main focus lies on women traveling within Egypt as well as on those who travel abroad. In the lecture, some of these few traveling women will be introduced; their motivation for the start of the trip and the means of transport used by them will be discussed. In addition, travel speed and accommodation as well as imminent dangers en route are presented.

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**KRAUS, Steffen**  
Curt Engelhorn Centre for Archaeometry, Mannheim

### **Prehistoric Mining and Metallurgy in Uzbekistan**

The earliest metal finds in Central Asia date the beginning of metalworking to the 6th/5th millennium BC. Often the Central Asian copper deposits and in particular those of Uzbekistan are mentioned as raw material sources, but without substantiating this with geochemical data. Also systematic excavations in the mining areas were rarely carried out, and if, then usually at medieval sites that were already known from written sources. Prehistoric mining always played a minor role in the previous (Russian/Soviet) investigations, why only a rough description of the extent of Central Asian copper ore deposits and their significance in prehistoric times can be found in literature. Therefore, only little information about the

beginning of the exploitation of copper bearing deposits is known. On the other hand, the traces of prehistoric mining, especially in Uzbekistan, are often destroyed or covered by medieval and modern mining activities, for which reason the prehistoric exploitation of deposits can only be proved on basis of the analytical approach. Geochemical data are already available for the copper deposits of the Iranian highland or the Caucasus, but there exist practically no geochemical characterisation for the copper deposits of Central Asia. Therefore the primary aim of the project funded by the Deutsche Forschungsgemeinschaft (DFG) is, based on selective surveys and sampling of the ore deposits, the establishment of a data basis in order to investigate the potential of the Uzbek copper deposits in terms of their prehistoric exploitation. Another focus of the project is on the sampling and analysis of archaeological objects from Central Asia. Based on the conjunction of the chronological classification of the objects between the Chalcolithic and the Early Iron Age and the detailed geochemical characterization of the ore deposits new knowledge about the prehistoric use of resources and their distribution overtime are expected placing the importance of the copper ore deposits of Usbekistan as suppliers of raw materials in a wider context.

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**KÜHNE, Hartmut**  
Freie Universität Berlin

### **Reconstruction and Function of the Middle Assyrian Building P at Dur-Katlimmu**

The Middle Assyrian Building P at Dur-Katlimmu has been considered a part of a palace because the excavated texts from it are mentioning the palace of the Grand Viziers residing at Dur-Katlimmu. Fragmentary as it is the architecture almost certainly represents an annex to the main building. Within the biography of the building, the active phase to be investigated in this paper, phase IIa, can be dated rather precisely to the years 1260 – 1200 BC covering the reigns of the kings Shalmaneser I and Tukulti-Ninurta I. In recent literature, the architecture has been interpreted as a warehouse or storage functioning as a granary. New studies of the archaeological record within the project „The Citadel of Dur-Katlimmu in Middle and Neo-Assyrian Times” sponsored by “The Shelby White and Leon Levy Program for Archaeological Publications” suggest multiple functions. These may throw some light on the role of palaces so frequently mentioned in Middle Assyrian annals to have been founded in newly established provinces.

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**KUTZER, Evelyn**  
Leiden University

### **The Socio-Cultural Value and Function of Music. On musical instruments and their performances in Mesopotamia of the 3<sup>rd</sup> millennium BCE**

Music is often conceived as an autonomous form of art which acts freely from social, political, technological, and cultural developments. However, music does not simply passively represent society and its values. Rather, it is an active and dynamic entity which is influenced by and influences these trajectories simultaneously. Music is a universal and omnipresent feature of human life and a carrier of culture-specific contents and expression. It is appreciated consciously during concerts or accompanies traveling, sports, and work activities. It fulfills multiple functions, such as to communicate, silence, influence or calm emotions, and therefore provides parameters which may shape experiences, perceptions, feelings, and behavior.

Bearing this in mind, music can be understood as a reflection of its socio-cultural and historical context. This presentation aims to shed light on the development of musical entertainment and the socio-cultural value and function of music in ancient Mesopotamia in the late 4<sup>th</sup> and 3<sup>rd</sup> millennium BCE. It investigates changes in the form, venue and occasion of performances which are continuously affected by trajectories such as time period, religion, politics, technology, and style. The research presents an interdisciplinary approach which compares and combines complementary evidence provided by iconographic sources, archaeological remains and literary texts. The latter portray music as a medium which carried social and culture specific identities in form of epics, myths, prayers, lamentations, and hymns. Textual sources document that instruments were regarded as sacred cultic devices, and had been the appropriate way to communicate with the gods. Music was performed at diverse events, e.g. during banquets, building ceremonies, ritual processions, various cultic acts, or burial ceremonies. This image of the Mesopotamian musical culture is confirmed and extended by numerous visual representations featuring musical performances, as well as the exceptional instrument remains discovered in the Royal Cemetery in Ur. A survey of musical scenes has led to the definition of various topics. This scholar-imposed scheme allows to examine instruments in their performative function. Thus, it is possible to investigate the socio-cultural role of music from different perspectives and provides information about characteristics of political, intellectual or religious life.

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**KZZO**, Ahmed Fatima  
Sapienza University of Rome

### **Serpents on Old Syrian Cylinder Seals from Ebla**

Images of serpent is presented in the ancient near eastern art in different periods. The representation of serpent is always argument to discuss. Sometimes it is interpreted as symbol for the divinity, other times as worship object, as presentation of evil power, or as symbol for fertility. In this paper I would present cylinder seals from Ebla dated to Old Syrian period which bear images of serpent and attempt to answer different question: As the originality of this motive in the art? And the role of the serpent in the ancient near eastern art and cultur?

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**LABBAF-KHANIKI**, Meysam  
University of Tehran  
**HOPPER**, Kristen  
Durham University  
**SAUER**, Eberhard  
University of Edinburgh

### **Fortifications and the Defensive Landscapes of Kalat (Northeastern Iran)**

The Kalat region is located in northeast Iran between the Kopetdag and Hezarmasjid mountain ranges, which act as natural defensive features. Overlooking the main routes passing through these ranges, the strategic town and fortifications near Kalat have played an important role in both the mythology and history of Khorasan. At least one middle Persian manuscript and several Islamic period historians and travellers testify to the defensive significance of Kalat throughout history.

Archaeological surveys carried out in April 2012 and October 2016 in the Kalat region have succeeded in identifying abundant evidence to support the textual accounts, confirming the important role of this region

in the defensive landscape of northeastern Iran. Monuments explored include linear walls following the crest of steep mountain ridges, guarded by chains of watch-towers, a vast fortress (the Arg-e Forud), and gorge-blocking barriers that likely controlled movement into and out of the region. These features were recorded through pedestrian survey and remote sensing (drone-photography and analysis of satellite imagery). This methodology proved a useful way of navigating the steep and sometimes difficult terrain of the region. Moreover, test trenching in two areas of Kalat's fortifications have provided us with interesting information about the dating of the occupation of some of these features.

Using the historical documents and archaeological findings, this paper will firstly introduce the fortification system of Kalat and secondly place it within the defensive landscape of greater northeastern Iran.

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**LANARO, Anna – LORENZO, D'Alfonso**

Institute for the Study of the Ancient World, New York

### **Kınık Höyük: New Information from Southern Cappadocia**

The archaeological project at Kınık Höyük (KH) started in 2011 after a four-year survey in Southern Cappadocia (Niğde, Turkey), during which KH was identified as the major center of the region in pre-classical times. The site comprises a central rounded mound, a large squared terrace, and a vast lower town, together covering at least 24 hectares of land. KH, located at the foot of the Melendiz Dağları at the eastern edge of the Konya Plain, was a crossroads of crucial importance from prehistory to the Medieval Period thanks to its control over the Cilician Gates, the main pass through the Taurus Mountains connecting the Levant and greater Anatolia.

The past seven campaigns have witnessed the opening of five operations on both, the mound and lower terrace, uncovering a continuous occupation from the Late Bronze to the Seljuk and Early Ottoman periods, divided into seven distinct levels of habitation.

For the Hellenistic period, evidence of a cult building was found, documented by a storage area and trash deposits extraordinarily rich in broken votive objects and remains of sacrificial and banquet activities. The construction of this sanctuary probably dates back to the Achaemenid period (5<sup>th</sup>-4<sup>th</sup> c. BCE), as indicated by the presence of several zoomorphic vessels. During the Iron Age, the citadel of KH was entirely enclosed by fortifications, consisting of a plastered stone wall, preserved up to 13 m high at some points, and by several superimposed ramparts. The earliest known phase of the citadel walls can be dated, based on ceramic finds and the analysis of <sup>14</sup>C samples, to the Late Bronze Age.

Due to the lack of archeological excavations, Southern Cappadocia has been mischaracterized as somewhat isolated from the greater socio-political developments of the ancient Western Asia. However, many indicators, such as the dynamics of ceramic production, fortification techniques, and the presence of silos, attest to strong connections between KH and the Hittite core region from the Late Bronze Age into the Post-Hittite and Iron Age. Therefore, the archeological project of KH aims to fill many historical gaps and build up a new diachronic view of this region. In this paper, we intend to give an overview of the most relevant discoveries so far.

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**LANGE, Sarah**

University of Tübingen, Institute for Ancient Near Eastern Studies

### **Wooden Boxes Full of Bones and Precious Finds – the Complex Archaeological Record of the Tomb VII in the Royal Palace of Qatna**



Almost eight years after the last excavation season at Qatna, Syria, the archaeological record of the Middle and Late Bronze Age two-chambered “Tomb VII” in the Royal Palace has been studied to its full extent and concluding remarks can be made. Sixteen wooden boxes could be identified within the Tomb VII that contained a collection of intact skeletons, neatly arranged bone assemblages, and unsorted heaps of bones. In addition to the bones, these boxes also contained prestigious objects, for instance jewelry, ivory objects, and stone vessels of different kinds. But those boxes were not the only places within the tomb, where bones and objects were accumulated. In the East of the Southern chamber, early burials were found that were pushed back to the rear of the chamber and subsequently “built in” and in some parts covered by the surrounding wooden boxes. Together with the wooden boxes, two big assemblages of vessels – ceramic vessels in the West of the Southern chamber and stone vessels in the West of the Northern chamber – were brought into the tomb as well.

Even though the find situation of this tomb is highly complex, detailed observations facilitate the reconstruction of the chronological order in which some of the depositions of the skeletal remains were made and how the dead individuals as well as the accompanying grave goods were treated. It is the goal of this lecture to shed light on the different ways how human remains were placed inside Tomb VII, to discuss which intentions might have accompanied the different settings, and to evaluate to what extent the different arrangements might be ritually motivated or emerged from practical considerations. The fact that some of the skeletal remains were pushed back, and later intact individuals, as well as isolated bones were brought to the tomb, shows that at least two different sequences can be differentiated, during which skeletal material was deposited in three different ways within the tomb. Thus, it is necessary to apply a variety of interpretations to the different settings. However, for the most part it can be assumed that the dead were re-deposited from different places. Interestingly, the objects that most likely once accompanied the dead were not necessarily associated with the individual dead anymore, but were combined in new arrangements at central places, where they could easily be placed next to and on top of another. Thus, they were still in the realm of the dead but dissociated from any individuals.

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LAU, Hannah  
Koç University

### **Mobility, Agropastoral Cooperation, and Emergent Social Complexity in the Halaf Period: Evidence from Animal Management Practices at Domuztepe**

The Late Neolithic Halaf period is one of critical importance for understanding the emergence of social complexity in the Ancient Near East. The nature of social organization and its implications for Neolithic peoples’ mobility during this time is, however, contested. One way to clarify these issues is to pay explicit attention to the scale of cooperation among ancient people in various aspects of their economies. We can identify changes in ancient peoples’ relationships with one another and when they transform into different forms of social organization. This study examines ancient peoples’ cooperation in agropastoral production by combining data from zooarchaeological and isotopic analyses from domesticated animals to explore ancient herding practices at the Halaf Period site of Domuztepe (ca. 6000-5450 cal. BCE) in Southeastern Turkey. Isotopic indicators of animal mobility provide proxies for the movement of their human caregivers and, when combined with paleodietary evidence and demographic data from zooarchaeological analyses, elucidate the scale at which villagers cooperated in their animal management practices. This study evaluates Neolithic peoples’ animal management practices for daily subsistence and for large feasting events at the site. Faunal data from the site’s three feasting assemblages, when compared to its quotidian subsistence system, provide a means of assessing resource and labor coordination among inhabitants by elucidating the animal management strategies employed by Neolithic agropastoralists in these different

consumption settings. Such coordination has implications for reconstructing the political economy and emerging social complexity of the wider region during the Late Neolithic.

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**LAWRENCE, Dan**

Durham University

**RICCI, Andrea**

Christian-Albrechts-Universität zu Kiel

**ALIYEV, Tevekküll**

National Academy of Sciences

### **Mesopotamia without a Bronze Age? Long term trends in settlement in the Mil Steppe, Azerbaijan**

The Mil Plain lies in south-western Azerbaijan, between the Kura and Aras rivers, and today consists of a dry steppe landscape crossed by small rivers and streams flowing down from the Karabakh Mountains to the west. Several seasons of remote sensing, survey and excavation work carried out by a team from the German Archaeological Institute, the Azerbaijan National Academy of Sciences and Durham University have revealed a complex and diverse landscape history in this region. The survey investigated an area of several hundred square kilometres, demonstrating a high degree of landscape preservation, and consequently very rich archaeological remains. Numerous *tepes* dated to the Neolithic and Chalcolithic periods have been recovered as well as several larger sites attributed to the Late Antique and Islamic periods. Extensive work at the site of Oren Qaleh, a major Sasanian fort and Islamic city, excavated by Russian archaeologists during the Soviet period, has revealed a substantial lower town and two large canals. In contrast to this, the evidence for occupation in this region during the Bronze Age is very limited. This paper will provide the first overview of the long term trends in settlement visible in this region derived from the archaeological survey, covering the Neolithic to the Islamic periods. We will examine demographic changes through time and identify periods when major structural transformations of the settlement pattern occurred. These will then be contextualised within a wider social, economic and political setting, bringing in results from other parts of the project, including geomorphological studies and investigations of local irrigation networks. We will also compare the results to the trends visible in comparable dry farming setting across the Fertile Crescent, including Syria and Northern Iran.

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**LEVENSON, Felix**

Freie Universität Berlin, Institut für Vorderasiatische Archäologie

### **Studying architectural energetics – body and mind in its social setting**

The study of architecture usually focuses on the reconstruction of floorplans, technological aspects or the functions of buildings. Other main points significant to the shaping of the living space often remain unstudied, such as the social implications of building projects, e.g. the motivation and decision making before the actual building process as well as the energetic value for individual buildings. Who is involved in the decision making and building? How many are needed to execute a project? How much material is needed? How is it procured and transported? These are just a few questions we need to address in order to gain a complete picture of the effort involved in such projects.

For this purpose, I propose a new methodological approach, using cognitive studies, operational chains of the (pre-)building process to be eventually connected with entanglement studies. The Late Uruk period

architecture from Uruk/Warka (c. 3,500 BCE) will serve as case study because it offers a variety of different building techniques and sizes alongside one another.

Through quantification of workforce and energetics it will be possible to better understand the social interaction of the building process. A further aim of this research is an assessment of the relation between monumentality and actual size, suggesting that monumentality is a social category rather than exclusively size-related.

Taken together, it is the aim of my paper, to create an understanding of how architecture not only visibly shapes the living space but also shapes its perception.

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**LHULLIER, Johanna**

The National Center for Scientific Research UMR 5133, Archéorient

**BENDEZU-SARMIENTO, Julio**

Director of the DAFA, National Center for Scientific Research – EXT 500

**MARQUIS, Philippe**

Curator, Ville de Paris, former director of the DAFA

### **Ancient Bactra and its Oasis from during Protohistory**

In this presentation, we will give an overview of the recent results of the ongoing study of the data gathered during the researches led by the DAFA team between 2004 and 2017 in Bactra Oasis. We will focus on two major sites: Bactra, known as the capital of the Achaemenid satrapy of Bactria, but in fact settled since at least the middle of the 2<sup>nd</sup> millennium BC; and Cheshme-Shafa, one of the very few Central Asian sites that could be attributed to the Achaemenids. We will also briefly present the results of some surveys led in the Oasis. We will sketch the outlines of the settlement pattern of Bactra Oasis during the Protohistory, from the Bronze Age to the Achaemenid period.

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**LINDSTRÖM, Gunvor**

German Archaeological Institute, Eurasia Department

### **The statue of a Seleucid king from Elymais/Iran. Rediscovered, reassembled, set in context**

The paper presents the results of a recent research project on a bronze statue of a Seleucid king in the National Museum of Iran. Discovered already in the 1930ies the fragments of the statue attracted few attention due to their deformed state. However, within the project it turned out to be the most prominent archaeological testimony of the Hellenistic presence in the regions east of the Tigris River.

The head of the statue was mutilated in antiquity, so that it seemed impossible to identify the king. By means of photogrammetry a three-dimensional state model was created which, in turn, served to reconstruct the original physiognomy by means of computer animation. Moreover, other pieces of the statue were identified and reassembled which led to a reconstruction of the whole figure: a Seleucid king leaning naked on a spear held with raised arm - a pose derived from statues of Alexander the Great.

The statue is from an ancient sanctuary in Kal-e Chendar/Shami in ancient Elymais. It was discovered with other pieces of ancient statues made of bronze and marble. Of these the so-called Parthian nobleman is the most well-known. But whereas the Parthian nobleman is almost complete the statue of the Hellenistic king was deliberately smashed into pieces. This raises the question, how images in Greek style were perceived after the Seleucid Empire has been conquered by the Parthians.

**LINKE, Julia**

Historisches Museum der Pfalz Speyer – Albert-Ludwigs-Universität Freiburg

### **A royal shaping of space – The building activities of the Urartian kings**

Taking a closer look at the official buildings in Urartu – like e.g. temples, city walls, and irrigation systems – their highly standardized building technique and appearance catches the eye. It seems that the constant boasting of the Urartian kings about how much they are engaged in various kinds of building activity is more than a mere topos. Rather, they seem to actually have had a remarkably impact on the building processes itself. Concerning Urartu, this is of special interest because the impact of the „state“, or the central authority of the king respectively, on the land and especially the periphery has been vividly discussed due to the environmental conditions of the Urartian territory.

In my paper I'd like to focus on the uniformity of Urartian architecture and highlight its implications in respect to the actual political sphere of influence of “the state” and/or the kings in Urartu.

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**LÖHNERT, Anne**

Ludwig-Maximilians-Universität Munich

### **School tablets from Ur**

The field excavation in Ur in March 2017 yielded close to one hundred written documents out of which 13 are school tablets. The paper wants to present these school tablets including their archaeological context, and furthermore to set these school tablets in a wider frame and to compare them with school tablets known from other places such as Nippur or Isin.

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**LORENZON, Marta**

University of Edinburgh, School of History, Classics and Archaeology

### **Built environment and materiality: synergy and power**

The built environment is a key component of community living and deeply affects human activities. Likewise, architectural materiality impacts directly on the built environment and influences the community perception of architecture. The use of stone, brick, or wood is never casual, but is often the compromise between opportunistic, environmental and economical choices.

While developing environment-behavioural studies (EBS), Rapoport (2006) analysed connections between the built environment and human behaviour for over 40 years. Focusing on the relationship between culture and architecture, EBS theory combines the concepts of culture, design and environment. In public architecture, such as palaces and religious buildings, these decisions are often taken with a keen regard to the community perception and her understanding of the cultural-political message contained in the buildings.

This paper focuses on a limited number of Bronze Age case studies from the Levant and Egypt to highlight how building materials are used by the ruling class with the specific goal of creating subliminal political messages, impact community perception and through changes in materiality transform the built environment into symbolic architecture.

In particular, the paper will focus on examples of public architectural transformation and reused over time, investigating how the passage of power between different groups affect the building materials employed,

the typology of buildings and the construction techniques with the final aim to highlight the Bronze Age relationship between materiality, architecture and power.

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**MAAB, Hardy**

Ludwig-Maximilians-Universität Munich

### **The emergence of a professional group in the Early Iron Age: engineering seismologists**

At the end of the second millennium BC, the evidence is increasing that structural innovations are being introduced in regions of the Near East and Eastern Anatolia with strong seismic activity. These innovations can be seen in the archaeological/architectural features. That implies that geological activities (interacting with difficult soil-engineering parameters) are a positive catalyst for technical construction development.

Furthermore, it is being investigated why geo-active habitats are extremely attractive for the genesis of settlements.

The focus of research here is on the development of construction technology in the Early Iron Age, the Empire of Urartu and the pre-Achaemenid cultural space. Characteristic designs are presented here, which also developed independently in other cultural areas. These constructions include e.g. timbering, various base insulations, foundation-grids, reinforcements of the primary containment system, combinations of wood-stone or wood-clay constructions and interlocking masonry. It turns out that a specialization of geoengineers and engineering seismologists had already been established within a regular building technology.

The expertise that characterized this professional group (which can only vaguely be seen in the written sources) was transported along the tectonic fault lines and constantly renewed.

To date, this old building knowledge against ground acceleration has been preserved in the traditional construction of countries with strong recurrence of earthquakes. However, corruption and the use of low-quality modern building materials in the low-budget construction industry displaces this old empirical knowledge. This requires human lives every year.

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**MACGINNIS, John**

British Museum

### **The Darband-i Rania Archaeological Project**

The Darband-i Rania Archaeological Project is a new field project launched by the British Museum in conjunction with the Iraq Emergency Heritage Management Training Scheme. The IEHMTS is funded by the UK government and delivered by the British Museum with the aim of training Iraqi archaeologists, drawn from across the country, in order to equip them for the challenges ahead. In order to provide the field training for the scheme, two excavation projects are being run. The Darband-i Rania Archaeological Project is the northern of these. Fieldwork commenced in the autumn of 2016 and is expected to continue until 2020. The aim of the work is to explore the ancient fortifications at the Darband-i Rania, the pass connecting the Rania Plain to Peshdar Plain on a major route from northern Mesopotamia to Iran. Excavation is being carried out at two sites: Qalatga Darband, a large open site overlooking the Lower Zab river at the western end of the pass; and Usu Aska a fort inside the pass itself. The occupations of these two sites are predominantly Hellenistic/Parthian and Assyrian respectively. This paper presents the results of

the first two seasons, including the discovery of a monumental stone building containing statuary of deities in the Graeco-Roman tradition.

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**MAIORANO**, Maria Pia

University of Naples "l'Orientale", Department of Asian African and Mediterranean Studies

**GENCHI**, Francesco

University of Bologna, Department of History and Cultures

### **The Late Neolithic encampment of HD-2 - RaMs al-Dadd, Sultanate of Oman (fourth–third millennium BCE)**

Located on a rocky headland surrounded by the sea, the site of HD-2 (RaMs al-Dadd, Ash Sharquiyah, Sultanate of Oman) is an archaeological area which was firstly recorded by the Joint Hadd Project in Eighties. Due to the imminent construction of new touristic structures, Ministry of Heritage and Culture of the Sultanate of Oman involved the Italian Archaeological team headed by Dr. Francesco Genchi, under the supervision of the late Prof. Maurizio Tosi, for a rescue archaeology excavation. The site was heavily damaged by the several climatic and anthropic actions which destroyed, during the last forty-fifty years, most of the stratigraphy. This paper presents the results of the excavations carried out between December 2016 and January 2017. The excavated area has been organized in five wide trenches which revealed the disposition of the main attended areas and gave us the possibility to collect and study a big amount of flint tools. The site may be a flint-knapping area and the discovery of post-holes arranged in semi circular shelters with scatters of finished tool, flakes, few cores, wastes and raw material blocks, may indicate a temporary settlement or encampment. The latest occupation has been dated to the beginning of the third millennium BCE due to the discovery of two small blocks of copper found on the basal layer of a shelter. Despite its own peculiarities, HD-2 looks as an example of the scarcely known passage between the Late Neolithic Period 2 (IV millennium BCE) and the Early Bronze Age of the Ja'alan (III millennium BCE).

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**MAKOWSKI**, Piotr

Warszaw University

### **Life among the ruins. Khirbat edh-Dharīh in the Middle Islamic Period**

Khirbat edh-Dharīh was placed along the *via nova Traiana* (King's Highway), on the eastern slope of Wādī La'bān, which is a southern branch of one of the largest wadi systems in Jordan, Wādī al-Hasā. It was a small village oriented around the important religious complex functioning between the 1st and 4th centuries AD. The area of the sacral temenos was resettled in the 6th century. At this time, the cellar of the Nabataean temple was converted into a small church. When the church went out of use in the second half of the 7th century, members of the Muslim elite adapted the religious area into a dining room (*quadriclinium*). Ceramic records suggest that the site was abandoned in the mid-9th century.

The paper attempts to examine the nature of the next phase of Khirbat edh-Dharīh occupation. During the Middle Islamic period, numerous extremely crude structures were erected above the preserved remains of the Nabataean, Roman, Byzantine and Early Islamic constructions. The new foundations were limited to single-rows, hastily constructed partition walls and closings of doorways and passageways. All these pragmatic households are the kinds of occupation defined by seasonal settlement and non-intense land use. Most of them were related to the assemblages of the plain handmade pottery.

The purpose of this paper is twofold. The first objective is to present a diachronic analysis of the spatial development of the site during the Middle and Late Islamic periods. My initial studies seem to confirm that the particular structures did not function simultaneously. In other words, I would interpret the process of adaptation of the Khirbat edh-Dharih ruins as a series of seasonal reoccupations. Clearly, the adaptation of the structures previously left in the state of ruin shows that new settlers, struggling with mainly environmental difficulties, were forced to utilize the simplest solutions. Looking from the *longue durée* perspective, it is apparent that the beneficial placement of the ruins must have repeatedly encouraged the semi-nomadic, mainly pastoral communities to settle. It seems obvious that relatively well preserved structures may have afforded shade on sunny days as well as protection from the rain and wind for the new inhabitants. Moreover, with minimal effort it was possible to adapt them into simple dwellings, or even shelters. The second aim is to present the results of preliminary analysis of the ceramic evidence from the Khirbat edh-Dharih's last phase of occupation. Generally speaking, it can be assumed that this assemblage mainly consists of plain handmade pottery. The existence of well-stratified material examined by the French-Jordanian mission hints at a hope of establishing consistent and stratigraphically linked typologies of pottery records. There is no doubt that an assessment of this archaeological material is also significant for wider settlement studies. An analysis of ceramic records coming from well-defined stratigraphic contexts provides also a starting point for broad studies on the phenomenon of the appearance of plain handmade ware in the Levant in the period between the 10th and 13th centuries AD. In my opinion, its spread can be associated with a phenomenon of dispersal and relocation of settlements and the intensification of the nomadization process stimulated by adverse environmental and socio-cultural conditions.

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**MALOIGNE, Helene**

University College London, Department of History

### **Beard or no beard: racializing Sumerians and Semites**

In the interwar period the origins of the Sumerian race were a hotly contested subject. Archaeologists, philologists and anthropologists put forward a plethora of theories about the homeland of the Sumerians and possible connections to other languages and cultures, proposing in turn the Indus Valley, the Caucasus, Polynesia and the Bantu language. The Sumerians were presented as polar opposites to the Semitic populations of the Middle East and newly discovered statues and reliefs from excavations such as Ur, Kish, the Diyala region and others were used to delineate perceived racial characteristics exclusively of the male population of these two 'races' by comparing absence or presence of beards and head hair as well as dress as defining ethnic characteristics. Comparisons to contemporaneous Semitic populations of the Middle East and Europe (be they Arabs or Jews) played a significant role in these 'academic' arguments. My research investigates the interdependence of socio-political developments in interwar-period Europe and the Middle East such as the Mandate system or the Eugenist movement with archaeologists' search for a definition of the Sumerian and Semitic races in the Ancient Near East.

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**MANCINI, Serenella**

Sapienza University of Rome

### **The Pottery Corpus from Estakhr (Fars): Preliminary Results of a New Comprehensive Study**

The aim of this paper is to present the preliminary results of the study of the ceramic material collected during the 2012 campaign carried out by the joint Iranian-Italian Archaeological Mission in Estakhr (Fars, Iran). Estakhr, an important centre in the early Islamic period, was investigated as early as the 1930s by the Archaeological Missions of the Oriental Institute of Chicago. Nonetheless, the pottery was never published, except for a short report by E. Schmidt (1939) and a recent publication by K. Nováček (2009), the latter considering only fine ware.

The ongoing research focuses on the pottery from a new trench excavated in the quarter to the west of the mosque. The corpus is characterized by a high degree of uniformity and relates to a chronological time span ranging from the 9<sup>th</sup> to the 12<sup>th</sup>-early 13<sup>th</sup> century CE. It consists mostly of unglazed wares, the glazed class representing only about 6%. Moulds and kiln furniture items have been identified, which suggest the presence of local ceramic production, as seems to be confirmed by the preliminary analyses conducted on the fabrics. In addition, some imports have been recognised: opaque glazed wares of the Early Islamic period and a Far-Eastern stoneware specimen. An important part of the research is being carried out through geochemical and mineralogical approaches (XRD, OM, and SEM). In particular, a study on opaque glazed ware is currently under way in order to understand its technological features and place of production.

This preliminary comprehensive study provides a better understanding of Estakhr's role, both as a ceramic manufacturing centre and as a trading post.

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MANCLOSSI, Francesca

Centre de Recherche Français à Jérusalem

### **Neither diffusion of ideas nor simple trade of objects: the moving of specialized Canaanean blade knappers during the Early Bronze Age in the Southern Levant**

Canaanean blades are large standardized flint blades mainly used as sickle inserts, and are one of the lithic hallmark of the Early Bronze Age in the Southern Levant (4th-3<sup>rd</sup> millennium BCE). Recent studies combining a detailed technological analysis and spatial distribution of the entire range of Canaanean production waste, debitage and tools offer new insight on the appearance of this sophisticated technology in the region, and on the organization of its production/consumption system.

In the Southern Levant, Canaanean blades were produced using the lever-pressure technique, one of the most complex and sophisticated knapping techniques. Although some authors have suggested a local invention and development, the absence of the evolutionary stages required for the invention of this techniques indicates that it must have spread in the Southern Levant from another core area. Considering the difficulties in learning and mastering the lever-pressure technique, and given the lack of a "sophisticated" technological background able to reproduce it, the emergence of the Canaanean blade technology reflects the movement of some knappers, probably coming from the North where an older lever-pressure technique tradition is attested since the Neolithic.

Given the time required to master the pressure technique, and the necessity to maintain the knapping skills with regular practice and elevated productivity, only a few expert knappers were contemporaneously active, supplying the mass consumption of Canaanean blades in the region. The limited number of specialists involved in their manufacture seems to suggest that the production/distribution system of Canaanean blades was more complex than previously thought. As indicated by the spatial segmentation of the chaîne opératoire, itinerant knappers moved from their workshops to other places, villages and cities, exchanging and producing blades along their routes.



**MARCHAND, Florine**  
Université Libre de Bruxelles

### **Kunara Lithic Industry: A Preliminary Report**

Kunara is located in Suleymanieh Province, in the North-Eastern part of Iraqi Kurdistan and excavated since 2012 by the Peramagron Project headed since 2015 by Dr. Aline Tenu. The lithic industry is composed of 75 artifacts made in both flint and obsidian. Flakes, blades and bladelets (untreated and retouched) were found in all areas (A, B, C, D and E) excavated until now (in Upper and Lower town) in levels dated to the Early Bronze Age. In this communication, we will present a preliminary overview of the typo-technological aspect of the collection. We will show that, despite the metallurgy appearance and even a small amount of pieces, the lithic industry of Kunara is rich and informative. The lithic tools are manufactured in local and exogenous raw material demonstrating a regional supply but also extra-regional exchanges. The debitage techniques used on the site are diversified to produce tools dedicated to day life activities. The Bronze Age lithic industry in Iraqi Kurdistan remains unknown but those artifacts show that the stone tools keep their socio-economical status inside Kunara community.

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**MARCHETTI, Nicolò**  
University of Bologna

### **New Results for the Bronze and Iron Ages at Karkemish (2016 and 2017 Seasons)**

The sixth and seventh campaigns of renewed archaeological excavation and conservation at Karkemish (modern Karkamış Höyük, Gaziantep) took place in 2016 and 2017 under the joint auspices of the Universities of Bologna, Gaziantep and Istanbul with funding also from the Italian Ministries for Foreign Affairs and for Education, Universities and Research and from the Sanko Holding. Excavations were conducted for the first time on the acropolis (area AA), on its north-western end, where a monumental late LB I complex which lies just under the surface (later levels having gone completely lost there) was exposed. Substantial LB II levels were dug both in area P, in Woolley's so-called North-West Fort, and in area C East in the Lower Palace, both contexts having given evidence for administrative activities. From the latter, in particular, come c. 250 sealings from a fill below a monumental building: 110 bullae were inscribed by over 20 different seals belonging to over 10 officials (three of them actually were princes, one of whom is also attested at Emar) from the time of Ini-Teshub. They were applied to a multitude of different goods which we reconstructed by studying the reverses and so now we can plot the relations between officials, how they used their multiple seals and which goods they actually managed. A monumental silos in area S dates from Iron I, a thriving phase at the site, while Iron II is represented – besides some new sculptures from the time of Katuwa from the LPA – by stratigraphic sequences at various spots, the most remarkable one having been found in the Outer Town, where three layers of houses rise above virgin soil in area F. The Iron III period was extensively documented in the LPA with a new monumental residency, from which two administrative tablets document the use of the Karkemish mina at the site, in areas T and V with spacious houses and working installations, in elite buildings as in area F and in the majority of the burials excavated at Yunus. The Achaemenid phase (Iron IV) is well represented both with a village in the LPA and a necropolis in area F East.

MARCHETTI, Nicolò – JABBAR, Basim – ZAINA, Federico

QADIS. Preliminary report on the 2016 and 2017 Iraqi-Italian survey seasons in the south-eastern region of Qadisiyah (Iraq)

Between 2016 and 2017, four seasons of the QADIS survey project have been jointly conducted by the University of Bologna and the State Board of Antiquities and Heritage (SBAH) in the south-eastern region of the Qadisiyah province, in collaboration also with the University of Qasidiyah and with additional funding by the Italian Ministry for Foreign Affairs. The main aims of the project are to produce a new understanding of a multi-layered historical landscape through cutting-edge documentation techniques including combined use of different spatial datasets and new aerial photogrammetric surveys using UAVs, to plot urban plans from visible surface remains coupled with their fine chronological attribution through systematic collections of surface materials and aimed small-scale superficial soundings, to connect epigraphic sources with settlement patterns, to map the landscape of silted channels also studying its historical development and, in general, to check and update the bulk of Adams' seminal results through an integrated survey methodology. Thanks to the latter, more than 50 new sites previously unrecognized by Adams' "Heartland of Cities" survey were identified thus far, providing as well extensive documentation on the urban layout of some major centers including Tell Drehem/Puzrish-Dagan, Tell Dlehim/Tummal?, Bismaya/Adab, Tell Jidr/Karkara and better understanding the hydraulic landscape of the region by documenting more than 700 paleochannels and several ancient agricultural fields.

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MARCINIAK, Arkadiusz

Adam Mickiewicz University in Poznań, Institute of Archaeology

### **Mobility of people and ideas in the Near East in the second half of the seventh millennium BC. The Late Neolithic Çatalhöyük in its regional and pan-regional context**

The second half of the 7<sup>th</sup> millennium cal BC marks the major transformation in all domains of existence of the Near Eastern Neolithic communities including the mode of farming and husbandry, subsistence practices, social organization as well as ceremonial and funerary practices. The Late Neolithic also involves a dynamic demographic expansion of farming groups and the construction of new and powerful forms of connectivity among different regions, involving integration of the hitherto unoccupied regions. These developments led to creating regional identities across different parts of the Near East.

The recently completed work on the Late Neolithic levels at Çatalhöyük East significantly contributed to better understanding of this important period in the history of the Near East. The paper aims at addressing multiscalar nature of connectivity between inhabitants of the Late Neolithic Çatalhöyük and contemporary groups from different parts of the Near East. It will address the procurement of different raw materials such as shells, obsidian, and flint from far afield as well as the exploitation of local environment for timber, clay and pasture in the immediate vicinity. It will also examine materials of foreign origin in the Late Neolithic strata at Çatalhöyük as well as presence of different objects, motifs and architectural solutions of the Çatalhöyük provenance across different parts of the region. In more general terms, the paper will attempt to scrutinize the nature of movement of people and ideas between Çatalhöyük and different regions of the Near East ranging from southern Levant and Upper Mesopotamia through Cappadocia and western, south-western and north-western Anatolia.

**MARESCA, Giulio**  
University of Naples “L’Orientale”  
**MORTAZAVI, Mehdi**  
University of Sistan and Baluchestan

### **Looking for the Elusive Iron Age in Iranian Sistan: “Missing Links” and Troubled Human-Environment Interactions**

The Iranian Sistan region, on the border between the Islamic Republic of Iran and Afghanistan, constitutes today, together with the southern region of Baluchistan, one of the widest provinces (*ostān*) of the Islamic Republic of Iran: *Sistān va Balūchestān*. From a morphological point of view, it represents the westernmost and terminal sector of the Sistan Basin. The fragile ecological balance of this fluvial/lacustrine basin is totally dependent from the hydrology of its tributary rivers, especially the Hilmand River, whose course has acted for millennia as the “umbilical cord” for all living species in the region, man included.

Iranian Sistan has been the theatre for important archaeological discoveries (thanks to the scientific efforts carried out both by Italian and Iranian archaeological teams), concerning mainly the proto-historic and the Achaemenid periods (outstandingly testified, respectively, by the sites of Shahr-i Soktha and Dahane-ye Gholaman).

At the present stage of the researches, however, Iranian Sistan surprisingly seems to reveal a total lack of any archaeological evidence to be related to the first phases of the Iron Age. Literally nothing, indeed, is known for the period encompassed between the collapse of the Bronze Age urban settlement of Shahr-i Soktha (Period IV: ca. 2200-2000 BCE) and the emergence of Dahane-ye Gholaman during the Achaemenid period (mid-VI century BCE).

Several hypotheses have been put forward to explain this “gap”, *e.g.* particular research trends orienting the history of the archaeological investigations in the area towards some specific periods more than others, radical climatic and socio-economic changes which significantly affected the cultural development and the population dynamics in the area at the end of the Bronze Age (making the Iron Age archaeological evidence nearly “intangible”), peculiar hydrological and geo-morphological features (Aeolian erosion, shifting sand dunes) that may have physically hidden every archaeological trace of the centuries encompassed between the Late Bronze Age and the Achaemenid period.

The paper aims to outline all the possible reasons for this archaeological gap and to figure out, consequently, new strategies to fill it.

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**MARF, DLshad A.**  
Salahaddin University, Erbil

### **Architectural remains in the Sharbazher district, Kurdistan, Iraq**

Sharbazher district located to the east of Sulaimania in Iraqi Kurdistan, the district bordered by from the east with Iranian, the Lower Zab from the north and west. The plain and valley of Shabazher surrounded with several mountain ranges.

To the moment the archaeological field survey in this district is very limited. This paper focuses on the architectural remains of the casteless and bridges in this district. During this survey several bridges and castles have been recorded for the first time. The architectural remains are dating back to different periods, the castles are date back to the ancient periods, particularly to the Iron Age, and the bridges are mainly built during late Ottoman period.

**MARGUERON, Jean-Claude**  
École Pratique des Hautes Études IV, Paris

### **A propos des temples de Mari Ville II: quelle place pour les images dans l'espace architectural du temple de Ninni-zaza?**

La connaissance acquise ces dernières années du volume ancien et de l'organisation interne des temples de la Ville II de Mari conduit à s'interroger maintenant sur les aménagements possibles ou prévus pour déposer les images (statues, plaques gravées, mosaïques...) qui ont été retrouvées sur les sols, le plus souvent dans un grand désordre. Une mise en ordre de ce matériel dans l'espace architectural compris dans sa totalité (i.e. son volume) pourrait permettre de préciser le fonctionnement des temples mésopotamiens du III<sup>e</sup> millénaire. Le choix du temple de Ninni-zaza pour conduire cette interrogation est motivé par sa richesse en matériel et la relative simplicité de son organisation architecturale.

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**MARTIN, Harriet**

### **Correlating Abu Salabikh Tablets, Pottery and Glyptic**

Abu Salabikh and Fara remain the best examples of Early Dynastic cities to produce both cuneiform tablets and glyptic. Most fortunately at Fara a collection of tablets were found associated with seal impressions on the floors of a large house in Trench XIII f -i. Both have been dated to Early Dynastic IIIA.

At Abu Salabikh the only in situ tablet finds were on the Level IC2 floors of the Southern Unit in 6G64. This paper will link these tablets with their contemporary pottery and glyptic. Its evidence suggests the Abu Salabikh tablets date to very early in ED IIIA.

Grave 88 was virtually contemporary with the tablets from IC2 floors. Grave 88's pots are described in Moon's 1987 catalogue as dating to ED II-III A (Moon 1987: Nos. 214, 488, 586, 674 and 680), that is, at the very end of ED II or the very start of ED IIIA.

Below the IC2 floors deep soundings penetrated ED I and early ED II levels, producing seal impressions dating from Jemdet Nasr through early ED II. A stamp seal with a full-face lion's head was found on a Level IC floor possibly slightly later than that with the tablets. The lion's head resembles the lion heads on Mesilim's mace head but also lion heads on Anzu Sud style seals from Fara.

Level IB floors were laid about 0.8 m. above those of Level IC2. Grave 1 (pottery dating to early ED IIIA) was dug from this level. A cylinder seal from Level IB was carved in Boehmer's Early Meskalamdug Style, considered by him contemporary with early ED IIIA.

Complementing the stratigraphy from the Southern Unit in Area E is the less well published information the 6H82 House excavated in the later seasons. The house predates the Level IC2 Southern Unit floors. Late ED II style pottery was found on its floors together with late ED II style glyptic. Only one badly robbed grave, Grave 234 in the central courtyard, was contemporary with the house floors. Its fill contained a tablet said to have "archaic ductus, resembling that of the archaic texts from Ur" (Krebernik and Postgate 2009: 14).

A number of later graves cut into the 6H82 House floors. The earliest contain late ED II-early ED IIIA pottery similar to that of Grave 88. One with a tablet fragment may be slightly later than Grave 88, but appears earlier than the early ED IIIA Grave 1.

Finally finds from a drain cut into the 6H82 floor levels included one tablet but also two cylinder seals, one possibly late ED II and one belonging to the Boehmer's Early Meskalamdug Style (early ED IIIA).

We conclude that pottery and glyptic finds from both the 6G54-64 Southern Unit and the 6H82 House suggest the tablets found on the IC2 Southern Unit floors date to a point in time when late ED II pottery and glyptic were morphing into the styles of the early ED IIIA.

MAS, Juliette  
UMR 7192

### **A Complete Pottery Sequence From the Late Chalcolithic till Islamic Times in Iraqi Kurdistan: New Discoveries at the Site of Bash Tapa**

Bash Tapa is a ca. 5 ha settlement located about 30 km South of Erbil in Iraqi Kurdistan. Its exploration was begun in 2013 by a French archaeological mission, led by Lionel Marti (CNRS UMR 7192, Paris). The trenches excavated so far focused on the Bronze Age levels but the survey carried out at the site of Bash Tapa and the analysis of the recovered pottery revealed that the site was occupied since Late Chalcolithic till medieval times without any major break.

The study of the pottery from Bash Tapa already provided us with important chronological benchmarks and could be understood as an important cultural marker. In fact, we could observe a shift in the tradition to which Bash Tapa material belonged through time. This paper will give an overview of the Bash Tapa pottery discovered during the four first campaigns of excavation between 2013 and 2017, its links with the other regions of the Near East, its significance for chronology and how it can help to better define the archaeological landscape of the Kurdistan region of Iraq.

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MASETTI-ROUAULT, Maria Grazia  
Sorbonne University

### **Late Bronze and Iron Age Levels at Qasr Shemamok: First Evaluations about the impact of the Assyrian Empire Presence in the Region East of Calah**

Qasr Shemamok, 25 km SW of Erbil (Kurdistan, Iraq), has been identified since the 19<sup>th</sup> century as the remains of the Assyrian city of Kakzu/Kilizu. After the first explorations of the site, carried out by H.A. Layard, V. Place and later by G. Furlani, a French team has started, on 2011, a new program of researches, oriented by the conceptions and perspectives opened by the modern studies of the Assyrian empire, about its formation, structure, impact and legacies in the landscape west of Erbil.

The paper proposed for the 2018 Munich ICAANE will present the most recent results of the archaeological researches carried out by the international team working at Qasr Shemamok in 2016 and 2017, as well as of the environmental studies developed in its area. Our recent excavations in Late Bronze levels in the Citadel can offer some information useful to understand the conditions and the politics of the Assyrian expansion in the region since the beginning of the Middle Assyrian Empire, when the local Mitanni authority and culture have been replaced by Assyrian domination.

The plan of the city, the Citadel and the Lower Town, as well as the landscape around Qasr Shemamok seem to have been seriously modified during the Neo-Assyrian period, namely during Sennacherib's reign. Exploiting the results of recent geophysical and geomagnetic studies, as well as of the interpretation of satellites images, of the urban settlement and of its rural and natural environment, we can propose a possible interpretation of the function of Kilizu area in the context of the management of the Empire, leading to its final crisis.

**MATOÏAN, Valérie**  
Centre National de la Recherche Scientifique – Archéorient

### **Space and time in Ugaritic iconography**

How can we approach the notions of space and time through the analysis of the artistic productions of the inhabitants of Ugarit?

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**MATTHEWS, Roger**  
University of Reading

### **Cultic resilience at the dawn of Sumerian cities, 3000-2700 BC: city seals and inter-city cultic processions**

The world's first cities developed on the plains and marshlands of south Iraq in the fourth millennium BC. In this paper, I present the results of new research into a formative episode in the early development of Mesopotamian cities, focusing on a body of evidence that sheds light on inter-city interactions at the dawn of urban life: the so-called 'city seal' evidence, dating to 3000-2700 BC.

The material focus is on a distinctive assemblage of evidence in the form of seal impressions on clay bureaucratic artefacts – proto-cuneiform tablets and sealings. What distinguishes these impressions – and we have no actual seals – is that they feature proto-cuneiform signs that represent the names of cities, many of which we can identify with known sites. These documents form the world's earliest evidence for inter-city collaborative activity of some kind. Using new scientific approaches, including portable x-ray fluorescence, I will situate the city seal evidence within the context of cultic collaboration between early Sumerian cities.

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**MCCARTHY, Andrew – GRAHAM, Lisa**  
University of Edinburgh

### **On the origins of urbanism in western Cyprus: a view from the Palaipaphos hinterland**

Urbanism in Cyprus has long been an enigmatic subject, slower to manifest than its neighbouring regions and eventually appearing rather abruptly in the local sequence. Until recently, Palaipaphos and the west of Cyprus has been particularly understudied vis-a-vis urbanism and state formation, and only in the past decade has archaeological activity in this region targeted urbanism's precursors in the Early and Middle Cypriot Bronze Ages. One such excavation at Prasteio Mesorotsos, located in the immediate hinterland of Palaipaphos, has revealed a long and continuous prehistoric sequence showing the artefactual and social developments that took place in the periods prior to the establishment of Palaipaphos, the first and only urban settlement in the west of Cyprus in the Late Bronze Age. Importantly, the rural site of Prasteio Mesorotsos was abandoned in the Middle Cypriot Bronze Age followed by a hiatus of occupation for several hundred years during the Late Bronze Age. It is proposed here that the inhabitants of Prasteio Mesorotsos left their interior riverine location to be amongst the first inhabitants of a new and burgeoning community on the coast, in the vicinity of what would become Palaipaphos. This paper examines the evidence of increasing complexity at Prasteio Mesorotsos, showing how the inhabitants of this long-lived village began to increase social hierarchy in the Middle Bronze Age, setting them on a trajectory toward increasingly stratified society that prompted the desire to increase inter-regional trade and international contacts by

establishing a coastal settlement. The evidence from Prasteio will be used as a proxy to understand previously collected extensive survey data from the region that also supports the interpretation of a rural abandonment at the end of the Middle Cypriot Bronze Age and clustering of new activity around Palaipaphos at the same time. Importantly, since Palaipaphos became the focus of sustained urban and religious development for thousands of years following the Late Bronze Age, it is unlikely that the first traces of the city's foundation will survive in the archaeological record in great detail. Thus we propose that the stratified sequence and final abandonment of Prasteio Mesorotsos, considered alongside corresponding survey data showing a rural depopulation in the region, can be aligned with the first traces of inhabitation in the Palaipaphos vicinity. Taken together these several strands of data provide a picture of the precursor social structures in the region, an idea of the motivations behind resettlement and hints at the origins of urbanism in western Cyprus.

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**MCCLARY**, Richard Piran  
University of Edinburgh

### **Archaeology of the Object: A Detailed Study of the Production, Decoration and Distribution of *Mina'i* Wares**

Drawing on the methodologies of a range of disciplines, including material science, archaeology and art history, this paper provides a detailed study of the multiple stages and diverse materials involved in the application of different layers of glaze colorant to *mina'i* wares.

Due to the problems of restoration and overpaint encountered in the study of complete vessels, the findings of the paper are based on a combination of recently excavated and archeologically provenanced sherds, as well as fragments acquired by museums prior to the emergence of a commercial market for such wares in the early 20<sup>th</sup> century.

Forming part of a larger project to define the taxonomy, iconography, distribution and historiography of this well-known but poorly understood class of medieval Iranian ceramics, the research is based on the detailed examination of several hundred sherds from collections around the world.

The large corpus allows for an understanding of the general trends as well as the specific variations in the production process, and provides evidence for the earliest development phase of Persian miniature painting, from a time when virtually no manuscript paintings survive.

The final section of the paper uses the wide distribution of the sherds from archaeological excavations to demonstrate the extensive trade in such Iranian wares in the pre-Mongol period. This trade extended as far north as the Volga basin, Moscow, and Belarus, west to Constantinople, and as far east as Kayalik in north-eastern Kazakhstan.

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**MEHRABANI**, Marzieh  
Tehran University

### **Özarik tepesi: A Parthian Site in Central Arshaq of Ardabil Province**

The Özarik tepesi or Espand hill is located in two kilometers far from the northern part of Gol teppeh village. The village is located in fortyfive kilometers far from northern part of Ardabil province in Central Part (Central Arshaq). The distance between the village and the border of Azerbaijan country is less than ten kilometers. The Height of mentioned site from surrounding of the land is about 6 meters, and dimensions are about 28\*104 meters. Illegal excavations have seriously damaged on this site.

Furthermore, among agricultural farmlands and the cross an irrigation canal on the north part is damaged to site seriously. The discovered cultural remains from the hill consist of pottery sherds and pieces of stones cut which according to their arrangement more likely seem to be the foundation of an architectural structure. Firstly, the present study will focus on the dating of the site. It is considered by analyzing and surveying the pottery sherds on hill. Regarding the form and decoration, the pottery sherds are comparable with the Parthian pottery sherds in Azerbaijan regions in Iran such as Hasanlu Tepe, Yanik Tepe, and Germe. Secondly, the identified structure on the hill will be investigated. According to inflicted serious damages to the hill, tracking the structure of architectural works is not possible easily.

Finally, the importance of the mentioned site will be examined in the term of cultural landscape. The location of this site, the surface pottery, and architectural works of the present area are comparable with the Parthian enclosures which sounds to be a link between these sites which will be discussed in the present study comprehensively.

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**MEIJER**, Diederik  
Leiden University

### **Images in Context: The Interpretations of Weather God Imagery**

This paper discusses the phenomenon that images, representations and symbols depend on a high degree of cultural familiarity if they are to be understood. How do we acquire this familiarity? Etic and emic information must guide us, and the many representations of the so-called Weather God with his varying equipment, as well as textual information, are used as a case study. This deity has been associated variously with vegetation, the Sea, snakes, bulls and mountains, and there have been several distinct (local) traditions that we tend to merge into one “easy” label.

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**MELČÁK**, Miroslav  
Oriental Institute, Czech Academy of Sciences  
**NOVÁČEK**, Karel  
Palacký University Olomouc  
**STARKOVÁ**, Lenka  
University of West Bohemia Plzeň

### **Monuments of Mosul in Danger Project**

The project Monuments of Mosul in Danger ([monumentsofmosul.com](http://monumentsofmosul.com)) was launched in reaction to a serious threat to the Mosul architectural sites from ISIS (Daesh), who seized the town in June 2014. Since then, dozens of historical sites have been razed to the ground or severely damaged. Monuments of diverse types, such as mosques, madrasas, mausolea, graveyards, churches and monasteries have been subject to destruction. The destruction of Mosul was completed during the liberation operation from October 2016 to July 2017 and is currently subject to documentation. Other damage can be anticipated during the post-war reconstruction of the town. The paper will present the main objectives of the project (monitoring destructive activities; architectural and historical analysis of destroyed monuments by means of preserved visual and plan documentation; creation of 3D virtual models of destroyed monuments) and demonstrate its applicability in the post-war reconstruction of the town.



**MENEGHETTI, Francesca**  
Goethe Universität

### **What could be a miniature? Investigating miniature oxhide ingots from Late Bronze Age Cyprus**

During the Late Bronze Age, Cyprus enters the Eastern Mediterranean exchange system as exporter of copper and other commodities. The coastal sites and their elites all likely controlled this trade, receiving exotica and luxury items and assimilating foreign habits. Not only Late Bronze Age Cyprus absorbs, but also re-elaborates this “international” imagery in something original, giving birth to an elitist iconography, where symbols of power are used to enhance and promote the elites’ position inside local society.

In this context, the iconography of oxhide ingots plays an important role. In the material culture, oxhide ingots appear from the 15<sup>th</sup> century BC, when they are first depicted on cylinder seals. Then, from the 13<sup>th</sup> century BC oxhide ingots become more widespread on bronze objects like four-sided stands and figurines, such as the Bomford figurine and the Ingot God. Finally, in the 12<sup>th</sup> century BC they start to be produced as miniature oxhide ingots. Because of their material and of their complex but, at the same time, peculiar iconography, these artefacts can be considered an example of the cultural mixing active on the island at the end of Late Bronze Age.

Ten miniature oxhide ingots are currently known as coming from Cyprus, and most likely from Late Bronze Age contexts. They differ from standard oxhide ingots for dimensions and weight. In fact, the pieces under consideration are between 7cm and 11cm long and weigh between 70g and 240g, whereas the standard ones are 50-80cm long and have an average weight of 25kg. Interpreted alternatively as votive objects, weights or lately as commercial samples, miniature oxhide ingots from Cyprus have always attracted the interest of many scholars. However, what is more visible, that is the drastic reduction of dimensions from standard to miniature ingots, was rarely taken into consideration during the interpretation of these items. Therefore, without discarding the past readings, this paper would try to further investigate miniature oxhide ingots in the light of the miniaturisation process behind them.

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**MERLONGHI MIANI, Marzia**  
University of Udine

### **Decolonizing archaeology in the Holy Land**

The so called “Holy Land” (actual territories of Israel and Palestine) did not undergo toward a decolonization process after second world war, unlike other countries in the Near East: some scholars (e.g. Albert Glock, Edward Said, Ilan Pappé, Nadia Abu el-Haj) affirm that the creation of the state of Israel brought peoples, mostly from Europe, to build a new State on an Arab land rich in archaeological and historical remains, traditions and intangible heritage.

Arab population did not undergo toward the formation of an independent State and Arab culture was, if not totally erased, for sure not involved at all in the creation of the state of Israel.

Particularly, speaking about archaeology, Europeans, Americans or Israelis conducted the main excavations: archaeology of the Holy Land began as a western construct with deep religious ties and, after 1948, with nationalistic purposes.

After the Oslo accords in the 90’s, along with the creation of the Palestinian Department of Antiquities and Cultural Heritage, a process of decolonization in theory and practice of archaeological work began in the Palestinian Territories.

On the other side, in Israeli archaeology the interpretation of field data is sometimes still inspired by a biblical background. Moreover, Arab population is not an active stakeholder in management and research (this is especially and sadly true in Jerusalem area and in occupied territories).

Yet, some field projects and new studies demonstrate how is possible to work toward an interpretation of archaeological data that could be inclusive and free from western bias.

I would like to try to investigate if a change in perspective is coming in field and theory of archaeology of Southern Levant: I will try, using some case studies, to explain the real possibility of a shared approach to practice, theory, fieldwork and interpretation in the most contended land in the World.

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**MIKI**, Takehiro  
Freie Universität Berlin

### **Considering mobility of pottery and potters during the Chalcolithic period in Fars, Iran: a comparative analysis of ceramics from Tall-e Gap and Rahmatabad**

My paper is concerned with Chalcolithic pottery in the province of Fars (Iran). In terms of decoration and production technique, the black-on-buff ceramics of the Chalcolithic (5th millennium) are more homogenous than the preceding Neolithic wares (c. 6,200 - 5,000 BCE). The degree of mobility of pottery and potters, which must have had an important role in the diffusion and development of the black-on-buff ceramic tradition in Fars province in general has been intensely discussed in recent years (Alizadeh 2006, Weeks et al. 2010, Petrie 2011). I approach mobility and regional interaction through the reconstruction of pottery production aided by ICP-AES (Inductively Coupled Plasma Atomic Emission Spectrometry) analysis and thin-section petrography. I focus on two contemporaneous sites belonging to the Middle Bakun period (c. 4,800 - 4,500 BCE), Tall-e Gap in the Marv Dasht plain, and Rahmatabad in the Kamin plain, about 40 km north of Tall-e Gap.

The presence of a kiln was confirmed at Rahmatabad (Bernbeck et al. 2005). Re-analysis of ceramic collections from Tall-e Gap allowed me to find misfired ceramics and a part of production-related tools, which suggests that pottery production was carried out at both sites. However, chemical analysis of pottery also reveals an astonishing similarity of the two sites, suggesting either shared clay acquisition strategies or exchange of ceramic vessels. Painted motifs and ceramic production techniques are comparable at both sites. Thus, these results suggest frequent movement and interaction of potters between two fifth millennium BCE sites, a pattern that will be set in relation to earlier theories of Chalcolithic mobility patterns.

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**MINEN**, Francesca  
Ca' Foscari University of Venice

### **Flaying the enemy in Assyria. A brief study on Neo- Assyrian archeological and textual evidence (XI-VII s. BCE).**

The proposed paper aims at presenting a comprehensive study on the practice of flaying war enemies based on both archeological and textual evidences. Assyrian royal inscriptions have delivered to us abundant iconographical representations and descriptive narratives on various aspects of Assyrian warfare. One of these themes is that of the punishment of the enemies defeated in battles and sieges. Mesopotamians kings never abstained from celebrating their military achievements in the works they commissioned. As a matter

of fact, the representation of war violence was believed to be the most striking and effective way to exhibit and increase the echo of their power.

Textual and visual sources attest different practices of how the Assyrians punished their defeated enemies. Such practices, like amputation, impalement and flaying, should be considered in the light of war ethics, religious beliefs, mythical or historical precedents or cultural background in general. Such comprehensive considerations have so far focus on different types of amputation, but a general assessment on the practice of flaying is still lacking.

It has been argued so far that the practice of flaying has been transferred to humans and adopted as a punitive torture after observing everyday slaughtering and flaying activities of animals. It is believed that the reason for such transfer lies in the perception of such practice as particularly painful. This paper will argue that such practice implies also an ideological feature.

Therefore, the paper will introduce the basic sources depicting the practice of laying. Firstly, the bas relief representations will be displayed; secondly, the mentions of flaying in royal inscriptions will be presented and commented. This point will allow a further discussion on the basic concepts of human and animal skin and on the terminology of leather working, which finds wide attestation in the royal inscriptions concerning humans. Such contingency might reflect an aspect of a more general ideological view of the enemies of the Assyrians, which were often degraded as animals.

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**MINUNNO**, Giuseppe  
University of Florence

### **Two depositions of equid remains at Tell Afis**

Two depositions of equid remains have been discovered during the excavations of the Italian Archaeological Mission at Tell Afis (Syria). Both of them belong to Iron Age contexts. The aim of the paper is to investigate the meanings of these features, which seem to involve a change in the local ritual activities. The practice of burying equids in Syria (which is well attested for the Bronze Age, but not so for the Iron Age), as well as an evaluation of the role of equids in Iron Age Syrian society, contribute to contextualize the evidence from Tell Afis.

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**MITTERTRAINER**, Anahita

### **Sasanian cities – images of political power?**

My archaeological dissertation asks how political authority was created and reproduced by the early Sasanian rulers (224-338 AD) in the cities of Bīšāpūr, Gūr, and Dārābgerd in south-west Iran and how architecture was perceived by their subjects.

Early Islamic writers such as Tabari point out, that the founding of cities constituted a royal privilege in the early Sasanian period and was further one of the characteristics of a successful reign. These sources imply an inherent connection between the cityscapes and political power. Contemporary historical sources for the early Sasanian period on the contrary are sparse and do not tell us much about concepts of space and political authority. Architectural remains are therefore the main source of information for our understanding of the original spatial concepts behind Sasanian cities. The spatial approach has developed into a strong trend within the humanities and social sciences, in the field of the exploration of the Sasanian Empire, however, space as an explicit research object regarding the cities has been neglected so far.

Taking the examples of Bīšāpūr und Gūr, this talk will present the outcomes of an analysis of the organization of the built environment in Sasanian cities in the ancient province of Fars. Thereby it focuses on the ways the built environment was organized and highlights three aspects of the city – the hinterland, the layout of the cities, and the architectural space – and their role in articulating political authority.

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**MIYAKE, Yutaka**  
University of Tsukuba

### **Excavations at Hasankeyf Höyük, an Early Neolithic site in southeast Anatolia**

It has been generally thought that in southwest Asia the beginning of food producing economies or the systematic cultivation of morphologically wild cereals (pre-domestication cultivation) had a great impact on the development of prehistoric societies. However, new evidence from Hasankeyf Höyük in southeast Anatolia, which was mostly occupied during the later tenth millennium cal. BC, indicates that social complexity could have been improved alongside other early Neolithic sites of the upper Tigris without relying on cereal exploitation. All the plant and animal remains recovered from the site are morphologically wild, and wild progenitors of cereals are virtually absent from or insignificant in the plant assemblages. The presence of communal buildings, complex mortuary rituals, elaborate craftsmanship, long-distance trade networks and lively symbolic behaviour indicate that the sedentary hunter-gatherers of the upper Tigris developed rather complex societies that compare well with those of the PPNA in the Levant.

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**MIYAUCHI, Yuko**  
University of Tsukuba

### **Where were the children buried? Reconsidering childhood in the Near Eastern prehistory from age and buried location**

Dividing the burial place of children from adults can be seen in many cultures throughout the world. In the Ancient Near East, this practice seems to have started from the Late Neolithic period. Children were buried in residential sites, often under the floors of buildings, and adults were buried in communal cemeteries outside the residential area. It is highly likely that changes in the views on children and childhood happened in this period. However, discussion of the boundary to divide the burial place is insufficient. This paper focuses on the age of children and the place they were buried, to discuss the boundary age to divide the place to bury the dead, and reconsider the view of children and childhood at that period. The age of children are estimated through research on human skeletal remains. This paper takes its main focus on Mesopotamia, but comparative material from the nearby region will be also discussed.

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**MÖNNINGHOFF, Hannah**  
University of Bern

In collaboration with Ekin **KOZAL**, Sabina **KULEMANN-OSSSEN**, Mirko **NOVÁK**, Alexander **SOLLEE**, Sebastian **VON PESCHKE** and Deniz **YASIN-MEIER**

## **Sirkeli Höyük through the Iron Ages (Eastern Cilicia, Turkey): Results of the Turkish-Swiss Missions Fieldwork in 2016 and 2017**

Sirkeli Höyük, situated at the foot of the Misis mountains by the Ceyhan River is one of the most prominent sites in Cilicia. The new excavations, which are conducted by a joint Swiss-Turkish mission since 2006 (Departments of Near Eastern Archaeology of Bern and Çanakkale Onsekiz Mart Universities), have shown that Sirkeli Höyük was occupied continuously from the fourth to the late first millennium BCE. Especially the discovery of a large lower town through geophysical and archaeological surveys as well as extensive excavations, suggest that the ancient settlement reached its largest extent during the Iron Age. Excavations of Iron Age contexts have furthermore provided much evidence on how the settlement developed during this period. Especially the revised ceramic sequence and the stratigraphy of the multiple excavated areas bear abundant information about the growth of the city and its susceptibility to supra-regional influences throughout the Iron Age. This paper will investigate these issues by reviewing the results of the current Swiss-Turkish mission in the light of regional and supraregional developments.

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**MOGHADAM**, Javad Alaei

University of Mazandaran and a Faculty Member of Zabol University

**BAKHTIARVAND**, Artism

Shahid Beheshti University

## **Investigating the Model of Production System and Good Distribution during the Bronze Age of Sistan Based on Archaeological Studies**

As human societies entered into the era of complexities during the Bronze Age, one of the most important issues undergone major changes was the system of production, distribution, and trading. During these periods, on the one hand, intra-regional and inter-regional trading and economic relationship were widely extended, especially with distant areas; and on the other hand, production and distribution systems witnessed various evolutions to increase the production and provide a comprehensive distribution with better economic gains. These changes and evolutions, despite having a relatively similar appearance, according to different natural and environmental, cultural, communicational, technological, and even military conditions, have different and diverse structures and specifications that led into various models of production, distribution and trading. One of the regions that witnessed many settlement, demographic and cultural changes and became one of the important settlement poles of this era is Sistan region. During the recent period, various studies have been performed on the Bronze Age of Sistan based on archaeological research, but to this date no research, including scientific models, has been carried out about the production systems and production of commodities during the Bronze Age of Sistan; thus, some issues related to production and distribution patterns of this region still remain shrouded in mystery. Therefore, an independent and comprehensive study was carried out through the analysis of data collected from an archaeological survey of Sistan Plain as well as the results of archaeological excavations. The results indicate that production of goods during the Bronze Age of Sistan has been a kind of purposeful and closed production in a macro-network of regions, and following that the distribution system has a guided structure in a smart system and in three general levels. On the other hand, observable fluctuations obtained from the production and distribution system of the Bronze Age of Sistan indicate the major changes occurred in the structure of this system over more than 1400 years.

**MOGHADAM**, Javad Alaei

University of Mazandaran – Zabol University

**HAJI**, Seyed Rasoul Mousavi – **MEHRAFARIN**, Reza

University of Mazandaran

**NASHLI**, Hasan Fazeli

Tehran University

## **Investigating the Origin of Settlements in Farahan Plain Based on the Archaeological Studies**

Farahan plain, located in Markazi province, is one of the richest regions of Iran in terms of the existence of ancient sites, which has been rarely considered by researchers. This extensive plain, with an area of more than one thousand square Km, leads to the Iranian Central Plateau on one side and to the Central Zagros mountain ranges on the other side; hence, it is considered as one of the regions where the meeting and connection of various cultures are predictable. According to a comprehensive archaeological survey performed by the authors in 2012 to 2016 on Farahan plain, a total of 750 ancient sites were identified from among which 34 sites belonged to the pre-historic eras, including sites from the late Neolithic period to the first millennium B.C. With reference to the archeological surveys and the studies conducted on Farahan plain and its surrounding highlands, no evidence of settlements earlier than the late Neolithic period is observable in this area, therefore, the starting point of settlements in Farahan plain has remained unclear. Accordingly, a research based on investigating the cultural similarities existing in archaeological findings of the sites on Farahan plain with those of the neighboring and distant areas and also based on identifying the probable immigration routes in different eras has been carried out. The results show that although in two sites with evidence of Neolithic period, only some similarities with those sites situated in Zagros area are seen, during the Chalcolithic era more similarities are observed with the settlements in the central plateau. Therefore, it can be argued that although it is probable that the first settlement groups may have entered Farahan plain from Zagros area, an increase in population rate and formation of extensive settlements on this plain have taken place during the Chalcolithic period, and most of the settlement places formed during this period are rooted in the cultures of the central plateau.

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**MOGHIMI**, Niloufar

University of Tehran, Department of Archaeology

**DAVOUDI**, Hossein

Tarbiat Modares University, Department of Archaeology

## **The Rise of Accounting System and Administration in the Central Plateau of Iran during the Fourth Millennium BC**

The study of the circumstances surrounding the development of record-keeping for information purposes, managing, planning the resources, and of what these records looked like, in prehistoric human societies has always had significance in archaeological research. Such research is important because it relates to the beginnings of the use of accounting and reckoning systems in the Neolithic period, which came to be one of the principal elements of institutionalized management and bureaucracies under urbanization and in historical periods. The ancient site of Ālou from the Late Chalcolithic period in the Qazvin Plain of Central Plateau of Iran, provided a considerable collection of tokens. This research deals with tokens and their function in the mentioned site during the last phases of Chalcolithic period. The discovering of discarded lumps of clay bearing the stamp seal impression beside of tokens is very informative to understanding the role of tokens in this site. The principal goals of this paper are to re-identify the accounting and reckoning

systems in the Fourth Mill. BC and evolutionary stages of these systems in the Central Plateau of Iran. It is apparent from implemented studies that in the studied society, the tokens were used for keeping track of farm products and of animal counts. Also it seems that the tokens are principal devices in administration system in the site to simplify the process of management.

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**MOHAMADIFAR**, Yaghoub – **HEMATI AZANDARYANI**, Esmail  
University of Bu-Ali Sina, Department of Archaeology

### **A new attitude to rock arts of Hamadan province, western Iran, regarding archaeological researches**

Hamadan province at western Iran is one the richest cultural region of Iran, as appear in numerous numbers of cultural and historical remains and sites. Rock arts are among the most important cultural, historical evidences of Hamadan province, while, until recently, there were only two sites of Darreh Divin of Alvand and Kamar Nebeshteh of Tuyserkan. However, the authors of present paper, with other researchers, introduced several sites of rock arts at different regions of the province, considering significance of rock arts at archaeological studies. There are different problems through research processes of rock arts at Hamadan province including unknown location, destruction, interpretation, and chronology of rock arts. The authors attempt to present research strategies in order to introduce, interpret, and chronology of rock arts of Hamadan province; based on field works and bibliographical studies. Conclusions indicate that there have been identified more than ten sites of rock arts including Azandaryan, Doustali, Qeshlaq, Argas, Arzanfoud, Ali Abad, Tarik Darreh that mostly relate to Alvand Mountain and its montane valleys. They could be date using stylistic and Semiological patterns, considering absence of laboratory facilities; furthermore, it demands ethnoarchaeological researches (migratory routes, identification of summer and winter residences), further any other subjects, to interpret rock arts.

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**MOLLABEYRAMI**, Margan  
Islamic Azad University, Central Tehran Branch  
**DEHPAHLAVAN**, Mostafa  
Archeology Department, University of Tehran

**ZEHTABVAR**, Omid  
Anatomy Section, Basic Sciences Department, Faculty of Veterinary Medicine, University of Tehran

### **A Study and Analysis of Animal Bones of Iron Age III and Achaemenid Periods in Qareh Tepe of Segezabad**

Zoology is one of the most important branches of ecology that studies and analyzes animal remains in archeological sites in order to show the roles played by animals in the survival of human and also to reveal the interactions between human and ecology. Studying the animal remains and bones and categorizing them into different groups has made the identification of climate conditions, animal dispersal, their population, subsistence economy, nutrition diets, etc. possible.

One of the most significant archeological sites in Iran is Qareh Tepe of Segezabad. This paper tends to study more than 5000 pieces of animal bones found through excavations in 2014, 2015 and 2016 in this site. The layers within which the pieces of bones were found belong to Iron Age III and probably Achaemenid Periods, a majority of which have been successfully identified. It comprises of different types like small and large ruminators, small and big one toed hoofed, carnivores, wild boars, etc.

The small ruminators outnumbered all the other types and played a major role in the subsistence economy of Qareh Tepe of Segezabad during Iron Age III and Achaemenid Periods. The large ruminators and the one toed hoofed come next.

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**MONAMY**, Elisabeth  
University of Bern

### **The mediation of Near Eastern Archaeology as cultural heritage**

In a time when the scanty material remains are destroyed for political or religious reasons, the existing scientific results in the research of Mesopotamia are given a very different value: a much higher one, as at present no research is possible on the spot. The knowledge of ancient Mesopotamia is better or worse documented, depending on the area or topic. The excavation reports and the latest theories on life in Mesopotamia rank in special libraries. But what happens with all this knowledge? It remains beautifully reserved for small elite. Why are not our professional results brought to a broader audience? We archaeologists and Assyriologists should go out and explain our theories, insights and our knowledge to a wide audience. The cultural heritage of Mesopotamia does not belong behind closed doors! If we want the field of Near Eastern Archaeology and Assyriology to survive, we have to look up from what we are doing from time to time and explain to our surrounding why it deserves to survive! The ancient Near East is less and less common in public, and when, usually in a disaster report. Even the destruction of ancient sites in Syria and Iraq excite at most a brief media outcry. Also because few know what exactly is actually lost forever.

Cultural heritage generally refers to in linguistic usage as "something that has been preserved and preserved as a cultural value". It is the legacy of artefacts and intangible attributes of a society, group or nation which is inherited from past generations, preserved in the present and granted for the future generations. Paragraph 27 from the Universal Declaration of Human Rights deals with the cultural heritage in two ways: on the one hand, the right to participate in cultural life and, on the other hand, the protection of its contributions to cultural life.

In this sense, everyone, and especially the descendants of Mesopotamia, should know what a great culture on their soil once dominated the world. Only through knowledge can further damage to cultural property be reduced and hopefully once stopped. And now the most important question: how should this knowledge transfer look like? Books translate and give away? Preparing and implementing workshops on prevention? Restoring, reconstruction, 3D models are possibilities.

In this paper, the author will argue how Near Eastern archeology and Assyriology can be passed on or mediate in a scientific way as cultural heritage to provide insights into ancient Mesopotamia the ancient Near East to diverse targeted groups in different manners using distinct methods. It will focus on teaching methods in Western countries as well as in the modern Near East.

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**MONROE**, M. Willis  
University of British Columbia

### **Investigating Historical Religious Groups with Digital Methods: The Database of Religious History**

The burgeoning field of Digital Humanities has spawned many projects aimed at reconstructing networks of individuals in the ancient past. The Database of Religious History (DRH) is attempting to use the vast



expertise of scholars of religion to build an open and free source of comparative data about the parts and components of religious experience throughout time and space. The initial unit of analysis was a religious group, defined roughly as a community of people sharing common practices, beliefs or institutions. This community need not be explicitly recognized in the historical record. The data used to create these entries primarily came from historical texts. The social nature of this initial unit of analysis allows researchers to compare traits like membership cost and practices and burial traditions across a wide range of areas and time-periods.

In order to meet the requests of contributors to the database we are designing a new questionnaire aimed explicitly at archaeologically excavated religious places, both in the built environment and in the natural landscape. This new poll will allow data derived from excavation to inhabit the same methodological space as data entered by textual historians. The combination of this new poll and others also in the works will build up a rich set of comparative religious experiences derived from textual and archaeological data.

Currently, the DRH enables scholars to analyze the interaction between variables coded in our data across time and space. The addition of a new way to enter archaeological data will allow scholars to input their data more directly into the project. This will hopefully expand the coverage and allow for comparison with areas that are less well attested in the historical record, and crucially clarify behaviors and traditions that are currently only attested in texts.

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**MONTESANTO**, Mariacarmela  
University of Liverpool

### **Lost in transition: The Late Bronze-Iron Age pottery assemblage in Tell Atchana/Alalakh**

The transition from the Late Bronze to the Iron Age in the Eastern Mediterranean and the Near East is recognised as a period of major social and historical significance. Despite being at the centre of these changes, the Late Bronze-Iron Age transition at Alalakh and in the Amuq Valley generally remains poorly understood in terms of chronology and local development.

This paper will present for the first time the pottery assemblages coming from Late Bronze Age II and Iron Age I contexts retrieved from the renewed excavations at Alalakh.

In particular, this paper will analyse the changes that might have occurred in the local ceramic assemblage, with a special remark on the function of food processing and consumption.

Pottery is linked with the environment it was created and the identification of a particular task performed by a vessel may be used to draw information related to social and cultural practices as well as on the economy and identity.

Furthermore, they were playing an important role in the communities' social life and as such, they can be considered as semiotic devices capable of conveying special meanings related to culture, identity status and social behaviour.

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**MORA**, Clelia – **BALZA**, Maria Elena – **BIXIO**, Roberto – **DE PASCALE**, Andrea

### **Cappadocia, a "Hidden" Landscape: "Underground World" and Neo-Hittite Evidence**

The topic of the origin and dating of the underground and rock-cut structures of Cappadocia is much debated. One of the authors who particularly speculated on this issue is M. Urban (cf. Urban 1973/6, p. 153; 1973/7, p. 175; 1973/8, p. 207; 1986, p. 81). In some of his works he suggested that Christian (Byzantine) populations, which underground structures are generally ascribed to, have often reused

preexisting spaces. Even though definitive archaeological and textual evidence has not yet been found, Urban supposed the existence of links between Hittite (2<sup>nd</sup> millennium B.C.) or Neo-Hittite (1<sup>st</sup> millennium B.C.) artifacts and underground structures; however, he is more inclined to attribute the defensive line of Cappadocia, made up of underground shelters, to the period of confrontation between Phrygians and Assyrians (VIII-VII century B.C.).

Given the morphological, lithological and climatic characteristics of the region, Urban's suggestions seem to be fairly plausible. Indeed, it would be surprising if ancient people who lived there for several centuries had not taken advantage of the shape of the landscape and the nature of the rocks to start digging the first underground buildings, even if it had been only for the sake of creating comfortable environments. This topic is undoubtedly attractive, albeit difficult to resolve in the current state of knowledge and research.

In a recent paper (Mora, Balza, Bixio, De Pascale 2017) we examined the particular features of the Cappadocia landscape taking into consideration some terms recurring in Hittite cuneiform texts of the second millennium BC and some Neo-Hittite (Iron Age) monuments and inscriptions. The research was conducted by means of a multidisciplinary approach that took into account the various methods and instruments employed in speleology, geology, archaeology, and history. In the proposed paper, the same Authors intend to continue the investigation, analyzing in more detail the Neo-Hittite monuments and inscriptions of the Cappadocia area. In particular, the textual evidence, the features and peculiarities of ancient monuments, and their spatial connection with underground and rock-cut structures, will be examined in order to find some interesting clues for reflection on the subject.

Special attention will be primarily paid to some Neo-Hittite sites and inscriptions: Karaburun, Suvasa/Sivasa, Göstesin/Ovaören/Yassı Höyük and Topada, all located in Northern Cappadocia (see the map below, from the quoted – note 1 - article).

All these Neo-Hittite monuments and inscriptions lie very close to underground structures and seem to relate to military events or defensive structures (see the map below [From Bixio 2012], depicting the site of Karaburun).

For this reason, we think that an in-depth examination of all the available evidence (textual, archaeological, topographical), from different perspectives, would contribute to better understanding the ways in which the ancient Cappadocia space has been shaped by its inhabitants.

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**MORADI, Amin**

Mazandaran University, Babolsar

### **Correlations Between Northwest Iran and Ilkhanid Architecture in Introducing Ottoman Mosque Archetypes Between 14<sup>th</sup> and 15<sup>th</sup> Centuries**

In the history of mosque architecture, it is important to consider debates about the basis of formation and unusual architectural style which is seen in the plan of the Blue Mosque in Tabriz and similar types in the architecture of Ottoman mosques. In this respect, identifying effective areas in the architectural pattern of different regions of the world can be one important axis to connect with the debate in architectural history. Using a descriptive-analytic method and data gathering from written material, as well as reviewing historical documents about Ali-Shah Mosque in Tabriz and also considering the results of excavations on the Ali-Shah area, this study aims to identify structural form and spatial relations of Ali-Shah Mosque in Tabriz. Results of computer analyses showed that the most elementary structural information on the biggest mosque of medieval centuries in Iran indicate general ambiguities. Besides, in contrast with previous studies, it can be mentioned that not only the largest constructed brick arch in the world, but also one of the biggest domes of the Islamic world has been built in Ali-Shah Mosque. The direct effect of architectural pattern of Ali-Shah Mosque on the architectural structure of Ottoman mosques around 1464 AD-1385 AD as well as Blue Mosque in Tabriz are the most significant findings of this study.

**MORADI, Elham – MORTAZAVI, Mehdi**  
Department of Archaeology, University of Sistan & Baluchistan  
**JAHERD, Mahdi**  
Department of Archaeology, University of Tehran  
**MAHFROOZI, Ali**  
Iranian Center for Archaeological Research

### **The Role of Metal Crafts in Sociocultural Systems of Gohar Tepe**

Gohar Tepe (36 ° 40'42"N 53 ° 24'07"E) is one of the largest Bronze Age sites in the south and south-eastern shore of the Caspian Sea. The site discovered and excavated by Ali Mahfrouzi from 2000 to 2011. Most finds which had been excavated from the site, including metal objects, pottery, and stone objects, are found from the Bronze and Iron Age graves. In most case, special finds of graves (weapons and ornaments) are made by Bronze (copper and tin). This alloy is not native to the region and possibly had brought by trade to the area in the third millennium B.C. Graves's rich Cultural material suggests their importance for settler during their life and after passing away, so it can be said that they are accompanied by social and religious beliefs. On the other hand, the emergence of specialized metal smelter kilns in the Gohar Tepe urban environment from the Bronze Age and Iron Age is a sign of complex community development, as well as other concurrent and neighboring community's evidence, has passed.

This talk will have two main purposes, a source of metals found in graves and According to the Types of the metal found in the graves, in order to understand the sociocultural system of its inhabitants in Gohar Tepe Complex Society in Bronze and Iron Age.

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**MORADI, Hassan**  
University of Tehran  
**NIKZAD, Meisam**  
Tarbiat Modares University  
**EMADI, Habib**  
University of Tehran

### **Archaeological Survey in Neyriz, eastern Bakhtegan Lake, Fars Province**

The Neyriz plain is located in eastern Fars province between Shiraz and Kerman. In addition to its location, the Neyriz was known as a production center for military equipment by clay tablet from Persepolis. Given to these, an archaeological survey was lunched in spring 2017. The Neyriz survey resulted to identification 110 sites spanning a time range from middle Paleolithic to late Islamic. These sites include tell and open site, cemetery, castle, Qantas, pool, mill, mosque, sanctuary, house, stone-heaped graves, bathroom and an old tree. Although some Paleolithic and Neolithic open air site was identified on the hillside of Barfdan at southern part of Neyriz plain, but it seem the northern part of the Plain was occupied in Parthian period by development of Qantas technology. The Qantas as the most important factor in sites distribution, has many related works such as pools, partakers, baths and pools. The article is present preliminary results of the 2017 survey.

**MORANDI BONACOSSI, Daniele**  
University of Udine

**The Land of Nineveh Archaeological Project  
Settlement and Landscape in the Land behind Nineveh between the Bronze and Iron Ages**

The presentation will discuss the results of the 'Land of Nineveh Archaeological Project' (LoNAP) initiated in 2012 by the Italian Archaeological Mission to Assyria of the University of Udine in the Kurdistan Region of Iraq. LoNAP aims to reconstruct the formation and transformation of the cultural and natural landscapes of the piedmont region to the east of the Upper Iraqi Tigris Valley and to provide for their protection and management in innovative ways.

The paper will focus on the settlement and landscape transformations characterising the region between the Bronze and Iron Ages.

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**MOUAMAR, Georges**  
University of Lyon 2, CNRS – Archéorient (UMR5133), Maison de l'Orient et de la Méditerranée –  
University of Damascus

**Identification of a new material culture and circulation of potteries stemming from the production centres of the early regional states during the 3<sup>rd</sup> millennium in Central Syria**

The recent archaeological investigations carried out in Central Syria and more particularly in the area of the Syrian steppe (Bādiyat Al-Shām) have highlighted the importance of this particular region, especially in order to understand the urbanisation dynamics and to clarify the emergence of an early territorial state on the margins of the Syrian Desert.

The studies carried out on the vestigial remains, more precisely clay or stone objects, for the first time evidenced a cultural area in the steppe region of Western Syria exhibiting a previously unknown material culture. In addition, the pottery materials of this region were part of a large programme of archaeometric (chemical and petrographic) analyses carried out at more than 50 sites, which revealed the presence of regional pottery production workshops. These data enable us to advance new hypotheses on the pottery boundaries within Central Syria and on the yet unsuspected economic and cultural influence of distinct regions. The area of the Syrian steppe, characterised by a specific regional identity, probably matches a political confederation mentioned in the Ebla tablets, which document the political and economic history of this region during the 24th century BC.

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**MÜHL, Simone**  
Ludwig-Maximilians-Universität München

**Excavations at Gird-i Shamlu 2015–2016: A Bronze Age and Late Chalcolithic Site in Southern Kurdistan**

The paper will summarize the results of the 2015 and 2016 excavations and discuss the implications of these results on our understanding of the regional modes of interaction between eastern Mesopotamia and the western Zagros during the 3<sup>rd</sup> and 2<sup>nd</sup> millennium BC.

The site of Gird-i Shamlu is situated in the center of the Shahrizor Plain in Halabjah province, Iraqi Kurdistan. Its archaeological remains show that this site offers significant information on the

archaeological material and history of the 2<sup>nd</sup> millennium BC. The Middle Bronze Age layers at the site are characterized by the discovery of a new ceramic form, the so called Shamlu pottery, which is named after this site and represents an intrusive element amongst the region's material culture. This pottery follows layers with pottery types known from old Babylonian contexts in Mesopotamia. Changes of the settlement system as well as in ceramic production together with historical information might indicate movement of people between the Iranian Highland and the Mesopotamian lowland. During the latest season in autumn 2016 and 2017 excavations in the lower town of Shamlu have revealed Early Bronze Age structures and artifacts datable to the Akkadian and Early Dynastic periods. The early 3<sup>rd</sup> millennium BC architecture was destroyed by a fire and revealing finds of a local pottery tradition with a prolonging Late Chalcolithic repertoire that mixes with eastern Mesopotamian and North West Iranian Early Bronze Age key types.

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**MÜLLER-NEUHOF, Bernd**

Deutsches Archäologisches Institut, Orientabteilung

### **Challenging the Marginality of the Jawa Hinterland in the 5th/4th Millennium BCE: Hillforts, Agriculture and Mines in the arid Northern Badia (NE Jordan)**

The arid Northern Badia in northeastern Jordan was until recently considered a marginal region, lacking settlements, evidence for socio-economic activities, and contacts with its neighbouring regions, Mesopotamia, Syria and the Southern Levant. Based on the results of recent archaeological fieldwork in this region, this image has to be revised for certain periods, particularly the Late Chalcolithic and Early Bronze Age I (mid 5th/4th millennium BCE).

The identification of large-scale flint mines with an export-oriented flint tool industry in the limestone desert in the eastern part of the Northern Badia and the discovery of several hillfort sites with evidence of artificially irrigated terrace agriculture in the basalt desert in the western part are challenging this common attribution. In addition to presenting the results from the most recent fieldwork activities, including an update of the chronology of the 5th/4th millennium colonization in the Northern Badia, this paper will also present possible evidence for connections with neighbouring regions.

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**MÜLLER-WIENER, Martina**

Museum of Islamic Art, Berlin

**GUSSONE, Martin**

Technische Universität Berlin

**ULLRICH, Burkart**

Eastern Atlas, Berlin

**SALMAN, Ibrahim**

German Archaeological Institute, Berlin

### **Settlements Below the Plane: Multidisciplinary archaeological surveys in al-Hira (Iraq)**

Following a first surface survey in the area of historical al-Hira (Iraq) in 2015, a second, more comprehensive campaign was conducted in October 2016 in the precincts of al-Najaf International Airport. It was based on a multidisciplinary approach involving magnetometer surveys (75 ha), UAV photogrammetric prospection (225 ha), archaeological surface survey (225ha), stratigraphic survey of existing pits and investigation of surface features. The exceptional results confirmed the strategy followed. The comparative evaluation of the data retrieved by the various methods proved to be consistent and mutually corroborative. Most fascinating are the results of the magnetic prospection, revealing large, densely built areas organized according to at least two different urban and architectural patterns. The results of the archaeological survey suggest that the observed differences might be interpreted in terms of

chronological development and utilization. The paper will present an overview of the work, focusing on the archaeological relevance of the results and submit these for discussion.

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**MUHESEN, Nibal**

University of Copenhagen, Center for Multi-Cultural Heritage; Carsten Niebuhr, Department of Cross-Cultural and Regional Studies, Archaeology and Heritage of Syria

### **The urban heritage damages and the possible aspects of Urbicide attested during the current Syrian conflict**

Since a focus of reconstruction operations will be in the cities Aleppo, Homs, Damascus where the urban heritage of these cities felt on the frontline of aggression and destruction for almost the entire duration of the conflict, this paper will explore the extent of this destruction and the impact it may have on the reconstruction stages later. Indeed, Syrian urban heritage was already extremely fragile and poorly protected in the period before the conflict, though the UNESCO listing of the old towns of Damascus and Aleppo for example came as a response to the wild modernization of the city centres. Such diversity is displayed in the Ancient City of Aleppo or the ancient parts of Homs, where one can find historic public markets (souks) that are thousands of years old, in addition to ancient houses, religious building, and several ancient monuments. All of these cities are part of the place's collective ethnic, anthropological and cultural identities. The paper will attempt to cover the specific features related to the emergence and later developments of the concept of Urbicide in a Middle Eastern context in general and in the complex Syrian setting in particular.

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**MULLER, Béatrice**

The National Center for Scientific Research, Paris

### **A Propos des Temples de Mari (Ville II): Hierarchie dans les Armees de Nacre**

Les incrustations en coquille (nacré ou non nacré) destinées à constituer des panneaux figuratifs, production mésopotamienne spécifique du DA III, proviennent, à Mari, de contextes liés plus ou moins directement à la sphère religieuse, qu'il s'agisse de temples ou de bâtiments destinés à leur administration. L'un des thèmes les plus fréquents est d'ordre militaire.

Aucune tentative n'a été proposée jusqu'à présent pour décrypter une hiérarchie entre ces "soldats" : entre le simple homme de troupe et le "dignitaire", armes portées, costume, attitude et gestes, relations avec d'autres personnages sont certainement significatifs d'un rang et de rôles spécifiques. L'étude, qui ne se privera pas de comparaisons avec la statuaire ou de références à leurs inscriptions et aux titulatures des grands personnages du IIIe millénaire, se fondera sur un inventaire systématique et s'appuiera sur les schèmes structuraux inhérents à ce type de matériel.

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**MUMCUOGLU, Madeleine – GARFINKEL, Yosef**

The Hebrew University of Jerusalem

### **Eternal Cultic Symbol: The Recessed Opening**

Recessed openings received scant attention in studies of ancient Near Eastern architecture and iconographic representations. The motif was likewise overlooked in research into later Greek, Roman, Byzantine and Gothic architecture. The impetus for our own investigation into this feature arose during excavations at Khirbet Qeiyafa, a 10th century BCE Iron Age site in Israel, when a unique stone building model was uncovered with three recessed doorframes around a central door. First, our study on this architectural feature led us to document the surprising history of recessed openings from their emergence in the late prehistory of the ancient Near East to their representation in contemporary architecture. Second, it seeks to offer explanations for the cultural continuity of this phenomenon for some 6,500 years. Although the economy, technology, demography, social organization, settlement patterns, religion, burial customs, iconographic styles underwent immense changes during this time, the concept of recessed openings remained intact and was never abandoned.

We will try to explain the remarkable durability and vitality of recessed openings and integrate cognitive and semiotic studies to explore how this phenomenon fulfilled very basic needs in cultic architecture and perceptions of the sacred.

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**MUNAWAR**, Nour A.  
University of Amsterdam

### **Archaeologies at War: Modern Warfare and Cultural Heritage in Syria and Iraq**

The Middle East and Northern Africa have been drowning in conflicts, civil wars, political unrests, and chaos for the last decades. Scholars argue that conflicts play a significant role in changing the urban, social and power structures, and therefore meanings and values are constantly transforming. Many have seen those transformations as negative ones, since they were - in some way or another - either reinforced by the postcolonial regimes that have been - still in some cases are - ruling the MENA region (Libya, Syria, Yemen, and Iraq) or served the aims of new-colonialist and imperialist agendas produced by/from the West.

In parallel, scholars considered that conflict and social disorder result in severe damage and loss of irreplaceable and unique things in addition to psychologically affecting people linked to those sites. Archaeologically, post-conflict contexts provide transformations and new (re)interpretations of contested heritage, particularly in the aftermath of war when new narratives, legends, and symbols are required to (re)build the nation. Simultaneously, it is clearly spotted that destruction and reconstruction of cultural heritage can be the two sides of the same coin, as they both have aim to political goals and exercise powers through and over the space.

This paper seeks to clarify the impacts of warfare on the cultural side in the Middle East, particularly on the archaeological heritage in contemporary Syria and Iraq. I aim to investigate how post-conflict transformations can be deployed to fill in the gap - that was created by postcolonial regimes - between the society and archaeology as a discipline. This paper goes further to debate how wars, conflicts and the increasingly violent world influence archaeology and can help in the emergence of new approaches to research and (re)construct archaeological sites in the aftermath of wars. I argue that archaeology can become much dynamic and relevant to societies in the post-conflict recovery, and the transformations accompanying and following conflicts can assist reimagining archaeology as an inclusive and healing discourse.

**MURA**, Mathilde  
University Paris 1 Panthéon-Sorbonne

### **From scratch to smash: diachronic analysis of looting patterns and military occupation of archaeological sites in the Middle-East**

After Iraq and Afghanistan, the current Syrian and Iraqi situation, under the ISIS threat, is alerting again the international academic community. Even so, for too many years, archaeologists used to work only as punctual consultants for NGO's and the main documentation produced consisted on monthly inventory of the damages. Since the last tragic events which have torn apart the middle-east, the academic community got involved significantly, and we can now consider a new archaeological discipline focusing on the study of the damages.

Satellite, aerial and drone imagery data is now allowing us to go back in time and record the impacts of looting and military occupation over time on archaeological sites. Using these technologies, combined into a Geographic Information System, we will see how practices evolved from scratching the surface to smashing cultural heritage figures within a few decades. This paper also suggests to go further than diachronic monitoring and address a spatial analysis of these damages to identify areas to be excavated in the future. Using analytic tools, we will consider concentration and repartition information to highlight the strong-potential areas for scientific activity.

This paper will focus on two regional case studies, firstly with an examination of the thirty years-old damages from the Sharizor plain, next to Halabja, in Iraqi Kurdistan. Then, in the light of the first results we will consider the south section of Syrian Euphrate, in the district of Deir-e-Zor. Within those two regions, focus on preeminent archaeological site will allow to consider in details the implemented methodology.

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**MUSTAFA**, Kibaroglu

Eberhard-Karls University of Tübingen, Institute for Pre- and Protohistory and Medieval Archaeology

**KOZAL**, Ekin

Çanakkale Onsekiz Mart University, Institute of Archaeology

**KLÜGEL**, Andreas

University of Bremen, Department of Geosciences

**HARTMANN**, Gerald

Georg-August-University Göttingen, GZG-Geochemie

**MONIEN**, Patrick

University of Bremen, Department of Geosciences

### **On the Origin of Red Lustrous Wheel-made Ware (RL): Preliminary Results of Chemical, Sr and Nd Isotopic Analysis and Archaeological Interpretation**

The Red Lustrous Wheel-made Ware (RL) is a very distinctive Late Bronze Age ware type with a polished red surface, produced from high quality red clay. RL was distributed in a vast area stretching from Anatolia to Cyprus, Levant and Egypt. RL ware plays an important role in the understanding of the cultural connections between different regions and sites of the Eastern Mediterranean including Anatolia, Cyprus, the Levant and Egypt during the Late Bronze Age. It was subject of numerous archaeological and archaeometric studies. However, the origin of this ware is still not identified. In previous studies, Cypriot origin of the ware has been proposed by various scholars. But new archaeological evidence (chronological and typological analysis) from Anatolia by the second author, indicate that the production place of RL ware should be located in Anatolia, more precisely in Rough Cilicia.



A project has been initiated to examine the origin of the ware in terms of archaeometric analysis (trace element, Sr and Nd isotopes, petrographic and X-ray diffraction analysis). RL samples from Alalakh, Boğazköy and Kilise Tepe and modern clay samples from Central and Southern Anatolia, North and Southwestern Cyprus were collected and analyzed using archaeometric methods.

In this paper, we will report first archaeometric results of trace element and isotopic analysis of  $^{87}\text{Sr}/^{86}\text{Sr}$  and  $^{143}\text{Nd}/^{144}\text{Nd}$  ratios of RL ware from Central and South Anatolia together with clay samples from Anatolia and Cyprus. The focus will be on the newly identified RL forms of *krater* and its subgroups excavated at Kilise Tepe (South Anatolia), level III (ca. 1500-1300 BC). Preliminary result of archaeometric analysis show that this new form with its subgroups belongs to the main corpus of RL. Since this form is only found in Rough Cilicia, it is highly probable that they were produced in this region.

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**NADALI, Davide**  
Sapienza University of Rome  
**POLCARO, Andrea**  
Università degli Studi di Perugia

### **Italian Archaeological Expedition to Nigin, Southern Iraq: New Results from Recent Excavations**

Tell Zurghul, the ancient Sumerian Nigin in the ancient State of Lagash, is currently excavated by a joint Italian archaeological expedition of Sapienza University of Rome and University of Perugia since 2014. The paper presents the results of the most recent excavation campaigns carried out in 2016 and 2017 covering three areas (A, B, and D) in the central region of the site and a survey carried out along the western edge of the city (Area C). Recent agreements with the Department of Geology of both Perugia and Rome aimed at the study of the hydro-geological morphology of the site with special focus on the investigation of the areas once covered by water, i.e. the presence of marshes and canals, as the same Gudea of Lagash mentions in his inscriptions. Furthermore, the study also encompasses the analysis of the ancient shape of the city across time, from the Ubaid to the late third/beginning of the second Millennium BC.

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**NADEZHDA, Dubova**  
Institute of Ethnology and Anthropology, Russian Academy of Science  
**VLADIMIR, Kufterin**  
Bashkir State Pedagogical University

### **Paleoanthropological Data from Bronze Age Sites of Southern Turkmenistan and Migration Routes of the Ancient East**

Paleoanthropological data from Bronze Age sites of Southern Turkmenistan is enough presented. All material, collected before 1990s show that during Neolith population not only of this region but also of Southern parts of Uzbekistan and Tajikistan is very similar by their anthropological features to the synchronous ones of Iranian plateau and Anatolia. In the Bronze Age the situation became more complicated. Population growth, migrations in different directions, settling on previously unoccupied territories and connected with them formation of large protourban centers where many trade and cultural routes intersected took place. As a result of these processes, certain anthropological complexes developed

on some territories and others ones appears on others. From the second hand, new anthropological components have come to the southern part of Middle Asia, early from the South-Western Asia and Indus Valley and later from the Eurasian Steppe.

Bronze Age site of Turkmenistan Gonur Depe (2300-1600 BC) gave new numerous paleoanthropological data, which can be successfully analyzed by different statistical methods. Discoverer and excavator for more than 40 years of this site which occupied more than 50 hectares prof. Victor Sarianidi underlined many times that together with many hundreds of pottery typical for northern foothills of Kopeth Dag, in its premises and tombs cylindrical perforated jars similar to those from Indus valley, several vessels with folded neck, found parallels with those from the territory of ancient Syria as well as grey polished vessels like ones found in Tepe Hissar were found. He and many other scholars found many other archaeological evidences of wide and close contacts with Near and Middle East form one hand and Indus valley from the other.

But archaeological data cannot give answer if these analogies are a result of trade and cultural contacts or the real migration and metisation of the population from different territories took place. Not rare only physical anthropology together with analysis of ancient DNA can solve this problem.

Paleoanthropological material at Gonur Depe and satellite settlements has been collected since the 1990s by O. Babakov, A. Nechvaloda and authors of this text. It is published partly. Many craniological traits of the series demonstrate a variation from the smallest to the largest values. This, together with the results of the multivariate analysis of a wide range of cranioseries from Eurasia, gave good reasons for researchers to talk about the heterogeneity of Gonur population both in terms of fixing more archaic and more progressive South-Caucasoid forms. The presence among inhabitants of Ancient Margiana of brachicranial skulls, not fixed earlier in the Bronze Age of Middle Asia, was also shown. But the conclusion that complex of traits, which are characteristic of the most ancient population of the Indian subcontinent can be also fixed in this group, was based only on the close position of Harappa, Mohenjo Daro, Timargarha, Butkara with Gonur series.

Statistical analysis of some parameters of Gonur skulls (dimensions of lower-alveolar part of the face skeleton, the degree of face protrusion and other) help to separate them for four clusters, one of which has significant pronounced prognathism (degree of face protrusion). Male skulls of this cluster have longitudinal and transverse diameters below the average for the whole group, i.e. a slightly smaller head than the one that is typical for the sample as a whole. In comparison with the whole group, they are characterized by a broader nose, slightly larger cranial and facial indexes, as well as a face that is more flattened both in the upper (naso-molar) and middle (zygo-maxillar) parts of the face. This complex of features is precisely the case for the Ancient population of the South Asia. It should be especially underlined that this data are presented only male skulls, whereas the described features are more often and in a more vivid form observed among female.

It can be summarized that these results statistically prove that in the Bronze Age there was a real migration of the population from South Asia to Margiana.

Our works are supported by RFH/RFBR project 16-01-00288.

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NAEH, Liat

Hebrew University of Jerusalem

### **The Snake “Lieth at the Door”: A Long-lasting Levantine Tradition of Placing Sculpted Snakes near Openings**

This paper aims to point to a continuous visual tradition in the material culture of the Levant, where sculpted images of snakes were placed around openings, most notably on the rims and handles of pottery vessels. I will argue that the espousing of snakes with diverse types of thresholds and liminal spaces has

lasted for millennia in the Levant, tracing back to the Chalcolithic Period, mostly on open vessels, and reaching its apex during the Middle Bronze Age, on closed containers; nuanced echoes of it may have also lingered well into the Iron Age, with depictions of snakes crawling around windows on clay-made architectural models. Examined through a diachronic lens, this visual convention presents itself as being deeply meaningful to the ancient Levantines. Was it a symbolic trope of apotropaic qualities, a performative means, or more of a mythological allusion – as have been suggested regarding depictions of snakes on architectural models? And in what ways did this local custom evolve in dialogue with the salient, multifaceted and pan Ancient Near Eastern portrayal of the snake as a symbol?

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NAFARI, Reza – KAZEMI, Aboozar – LORPOUR, Mojtaba – ESTAKHR, Zohre

### **Introducing and Classification of the Kaftari Period Pottery Collection of Tall-e Sabz, Fars, Iran**

The Kaftari Period of the Marvdasht Plain of Fars in southern Iran is considered as part of the Elamite Period. Despite the significance of this period in characterizing the cultural development of Marvdasht Basin, there is still several gaps in our knowledge about this period. Much of the available information on this period comes from excavations at major site of Malyan. Tall-e Sabz in the Marvdasht plain is a Kaftari period site which underwent excavations during the past years. In the present study, the ceramic collection of these excavations at Tall-e Sabz is analysed. Considering manufacturing techniques, the recovered ceramics from Tall-e Sabz are hand-made, properly fired, average quality, and thin cover. Red ware is dominant in Early Kaftari but is gradually replaced by painted buff wares. Regarding Tall Sabz, located at the cross point of Kur and Sivand, and its status as the third largest Bronze Age settlement in Marvdasht Plain, studies on the pottery data from this site can help us to better understand the Kaftari Pottery and culture, complex concepts, and Intra-cultural knowledge of the Bronze Age on the Marvdasht Plain.

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NEUMANN, Kiersten  
University of Chicago, Oriental Institute

### **A Sense of Time in Place: Temple Construction and Renovation in Assyria**

The construction of an Assyrian temple followed a well-organized sequence of actions, each of which was marked by singular materials and activities. Examples include the determination of an auspicious time by way of divination, the recitation of words in the form of incantations and prayers, the pouring of liquid as libation, the deposition of foundation materials, and the erection of monumental doorways and parapets for the superstructure. Such a project demanded the participation of expert scholars and craftsmen, and at times, the king himself, and was materialized by way of a selection of local and exotic raw materials, and masterfully crafted works of art. The amalgamation of these elements afforded a particular embodied sensory experience and, as I will argue, perception of time that marked the activity of temple construction as ritualized practice within an Assyrian elite performative landscape.

Since there is no dedicated sensory organ for time perception, our sense of time is relational, it is measured by other sensory phenomena such as visual, auditory, and emotional states as the world around us changes. As such, time perception is at home in discussions of architecture and sensory experience in antiquity. Though not directly observable in the preserved material culture because it is a cognitive function, the importance of time to the Assyrian temple built environment can be discerned through the reconstruction of the ritualized practices that led to its creation. The connection between the temple and particular

perceptions of time that was established during this structure's construction had a lasting and meaningful impact on people's conceptions of and interactions with this built environment – a divine dwelling place on earth.

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NEUMANN, Melanie  
Mainz University

### **Re-evaluating the archaeological material of the Giparus and Ningal-Shrines at Ur**

Archaeological research at Ur was extensively conducted by a joint expedition of the British Museum (BM) and the University Museum of Pennsylvania (UPM) from 1922–1934 under the direction of Charles Leonard Woolley. During the third and fourth season, from November 1924 to February 1926 the team uncovered the “Ningal building” of the Neo-Babylonian and Kassite periods and the Giparu buildings of the Kassite and older periods.

With my paper at the ICAANE 2018 in Munich I want to shortly outline the purpose of my dissertation project. It is aimed at achieving new information on the Giparu buildings and associated shrines of Ningal from the earliest construction phases to the Kassite period by analysing original documents which have lately been made available on an open-access basis by the British Museum. Those documents include for example field reports written monthly by Woolley during the excavation at Ur, field notes, photographs and object cards. Furthermore I am going to concentrate on the question of the transmission of religious cultural traditions and how these can be traced not only by utilizing the archaeological remains but also the philological sources. Since the Giparu has evidence of a continuous occupation of about 1500 years, it is highly suitable for questioning the development of religious traditions in one of the most important ancient Mesopotamian cities and thereby shows its high importance for the study of the Ancient Near East in general. My paper will present preliminary results gained by examining both the original field reports and the field notes.

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NIAKAN, Lily  
Iranian Center for Archaeology Research

### **The Salvage excavation at Cham Papi the Establishment and Cemetery site, Middle and late Bronze Age, central Zagors, Simereh Dam**

The central Zagors was made special cultural and Geographical district at the Bronze Age. This area by having the local and indigenous indicators had relevance with adjacent cultural districts.

The Geography and environmental conditions of area had influenced on the formation of cultures of area from the prehistoric to present time.

The Cham papi site is located on 38S0685699/ UTM 3694764 with 726 Meters altitude from sea level. The site is formed on the rock from the third period of Geology. It's located on north of Seimare River, near the Kafari Canyon, on 55 KM the road of Ilam Province to Derah Shar City, 15 KM far of Badreh City and north of Valiasr town. It has 21 Meters height with steep slope. The current rivers in this geographical range are Jaber and Kalam Rivers. These two rivers near the Kafari Canyon joint to each other and made one river which call it Ruieh River. This river at the north part of canyon joint to the Simereh River.

The Cham Papi site is one of main sites which were declared at Archaeological exploration project that was carried out in 1394 at Kafari canyon. This site is located on the Melah Roitah Mountain, because of illegal excavation in the site some part of revetment walls were declared and also some human bones observed

on the surface. According to dispersion of human bones on the surface of the site, indication that it's should be a cemetery. The site was documented by expedition and prepared for excavation.

According to material that found in the graves probably the burials of this cemetery are belong to middle and late Bronze Age. Structure of architecture the graves are in different shapes, such as square, rectangular and oval shapes. The skeletons are in different position, such as germinal (fetal) position and prone position. The graves are not far from each other and most of them are in a line.

The graves were separated from each other by revetment with clay mortar but some of them separated by mud wall. Most of graves have tomb space except the oval shape and two of rectangular shape and one of square shape were covered with stone. Some of other graves have revetment without mortar, their shapes almost in rectangular or triangular shapes. At some of graves made tegumentary for grave by placing the several shaven boulders alongside each other. Some of graves lacking this coverage but superficies of them covered by stones. Remains of wall's foundation on some of graves indicate that this graves are older than other graves. Beside all of skeletons according to the social position placed some of fictile and metal utensil as gift.

Burial objects inside the graves were leggy potteries or without leg, potteries with handles, pots, cups and etc. with red and buff colors straw and fine sand and some of them has decorating.

The metal objects include daggers, arrow, passementeries, head pin, earring, rings, wristlet, axis, needle and metal utensil which because of humidity they were oxide.

One of the important grave is the grave with square shape that animal skeleton was found inside it. The animal skeleton is look like dog skeleton and it seems to bury with special rituals.

According to the material were found inside the graves and kind of graves, can guess that the Cham Papi cemetery were used for centuries by inhabitants of cultural district of area at Bronze and Iron Age.

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**NICOLLE, Christophe**

Collège de France - The National Center for Scientific Research, Paris

### **New data on the Assyrian triangle urban cultures according to the first results of the Bash Tapa's excavations**

Since 2013, the Bash Tapa excavations (Iraqi Kurdistan) reveals different layers of occupation of this tell located in the south plain of Erbil. With its first occupation of the Ninivite 5 period and the latest occupation preserved at the top of the tell dating from the second part of 13th century BC (reign of the medio-assyrian king Tukulti Ninurta I), the site and its different architectural phases testify a long-term occupation as can be seen from the description of these levels. Bash Tapa and other sites of the region rarely exceed the 7-8 ha. Therefore the main query deal with the urban morphology of Bronze and Iron Age of cities in this part of Assyria, which seems very different from those known in southern Mesopotamia and in the Djezira. There is also the question of the function of such agglomerations. Several architectural discoveries of the Middle Assyrian period at Bash Tapa make possible to find the beginning of an answer.

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**NIKZAD, Meisam – RAJABI, Zahra**

### **Last Hunters and First Farmers in Southeastern of Caspian Sea, Iran**

The southeastern of Caspian Sea is a region which has very important in the studies of origin of Neolithic life style in northeastern of Iran and west central Asia which Mesolithic and Neolithic evidence reported there from eighty years ago onward. Although Neolithic dispersal was considered in Northeast Iran and

central Asia, but the southwestern Caspian Sea has less attractive for Neolithic researchers in this regard. Yet, Mesolithic evidence come from excavated Cave sites such as Hotu, Kamarband, Ali Tappeh and Komishan, and Neolithic evidence come from soundings and surface survey some open sites and also aforementioned Caves sites. For Neolithic transition in this area, we can fallowed to type of explanations: In situ or Imported Neolithic transition. The lacks of evidence for domestication, the gap between Mesolithic and Neolithic sites and the proximity of this geographical region to the well-known candidates of the origins of early domestications (Zagros-Tauros and Levant), undermine the in situ Model. But the present of Chakhmaq/Jiton in open sites, Caspian software in the caves with Mesolithic layers, have supported imported Models. In fact, the present data has supported integrated view comprised from the arrival of migratory farmers and adoption some Neolithic package items such as Pottery and Domesticated animals by locale Mesolithic Bands.

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**NISHIAKI**, Yoshihiro

The University Museum of the University of Tokyo

**GULIYEV**, Farhad

Azerbaijan National Academy of Sciences, Institute of Archaeology and Ethnography

### **Mobility and Sedentism in the Earliest Neolithic Societies of the Southern Caucasus**

The emergence of sedentism and the emergence of a farming economy did not coincide in prehistoric southwest Asia. The prevailing view is that sedentism, likely practiced in certain regions and periods even in the Paleolithic, preceded farming; conversely, one cannot rule out the existence of farming communities with a certain degree of mobility even after the Neolithic period, when farming became one of the major means of subsistence in southwest Asia. One can refer to the Neolithic society of the Southern Caucasus as a possible case of the latter. A farming economy was introduced into the region approximately eight thousand years ago, probably as a consequence of influences from the Fertile Crescent of southwest Asia, where cereal cultivation and animal domestication started at least a few millennia earlier. However, the local societies in the southern Caucasus do not seem to have merely adopted the same socio-economic system from southwest Asia. Based on a range of archaeological records including architectural styles, rebuilding patterns of the architecture, and distinct patterns in the distribution of artifacts and refuse in the sites, this paper argues that the earliest Neolithic communities of the Southern Caucasus were not as sedentary as those in many parts of the Fertile Crescent in southwest Asia.

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**NOKANDEH**, Jebrael

National Museum, Tehran

**JAHEDEH**, Mahdi

University of Tehran, Department of Archaeology

### **Rescue Archaeology of Nay Tepe, Iran: Gorgan Plain**

Nay Tepe is a two hectare round flat-topped hill located to the north of Fazel -Abab, in the Golestan province (North-East Iran). The site is located 16 km north-east of Tureng Tepe, at the longitude 54°45'11.56 "E and latitude 36° 58'55.54" N. In April 2012, during the Zaringol dam construction project, some areas of the site were destroyed. A salvage excavation project, directed by J. Nokandeh, began at the same time to prevent the complete destruction of the site. The team opened six trenches, which have been named A1, A2, B, C, D, and E. Through this salvage project, some characteristic pottery types and shapes

dated mainly to the Iron Age and historical period of Iran were discovered. These shapes find parallels with Tureng Tepe IV-V, Yarim Tepe IV, and Iron Age layers of Agh Tepe and Bazgir. Besides these ceramic finds, other archaeological material such as abrasive stones, mortars and pestles, have been found. Stratification of archaeological layers showed six phases. Based on the ceramic regional and chronological comparisons, the ceramic from Ney Tepe can be dated to the Iron Age II in early Phase. However, due to the destruction of the site's upper layers during the dam construction, the exact end of the settlement is not clear. This talk will discuss the archaeological finds of the first season at Nay Tepe.

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**NOVÁK, Mirko**

Bern University

**JAMIESON, Andrew**

University of Melbourne, School of Historical and Philosophical Studies

**NIEUWENHUIJSE, Olivier**

Freie Universität Berlin

**PUCCI, Marina**

University of Florence

### **The SHIRĪN initiative: past, present and future**

SHIRĪN (*Syrian Heritage in Danger: an International Research Initiative and Network*) was created in 2014 in response to the war in Syria. SHIRĪN brings together a significant proportion of those international research groups that were working in Syria prior to the war, to make their expertise available to wider heritage protection efforts. SHIRĪN's international committee includes the directors of several long-term international research programs, and others who share their strong commitment to the effective protection of the heritage of Syria. Since its creation, SHIRĪN has raised awareness about heritage initiatives, particularly via the website and through the development of National Committees. The board members have communicated SHIRĪN's aims and activities at meetings, congresses and conferences, and in publications, letters and exhibitions. One important objective is to aid our Syrian archaeological colleagues; several examples demonstrate support and opportunities in this area. Whilst the development of SHIRĪN and the creation of National Committees were promising first steps, the full potential of the SHIRĪN initiative is yet to be fully reached or realized. This paper provides a critical overview of the past activities, present projects and future plans of the SHIRĪN initiative.

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**NUNN, Astrid**

Universität Würzburg

### **Are Sumerians and Babylonians different? Skin colours on polychrome statues**

Since 2011, Astrid Nunn, Heinrich Piening and Barbara Jändl have worked together as a team to investigate the polychromy of Mesopotamian stone statues dating from the 4th to the 1st millennium BCE. Although Near Eastern archaeologists have conducted several scientific analyses of Mesopotamian painted murals, on glazed material and neo-Assyrian or Achaemenid reliefs, the polychromy of Mesopotamian stone statues had not previously been the subject of further study. The two main reasons are the almost complete destruction of the colours themselves, and the ensuing difficulty of adapting the technical equipment to the spectroscopy process.

In this paper, Astrid Nunn will specifically address the aspect of skin colour, an area that had led to several unexpected discoveries. To the team's great surprise, it turns out that the skin colour differs depending on the millennium in which the statue was made. In the third millennium skin tones are lighter than in the second and in the second millennium skin is redder than in the first.

In the first section of this paper, the author will compare the statues with other coloured Mesopotamian media, primarily wall paintings. In doing so, she will address both the congruence and the deviations from these other polychrome sources. It is widely acknowledged that skin colouring is a social construct that is subject to societal ideas, preconceptions, and ideals; this explains why in many cultures female skin is depicted as lighter than male skin. This is not the case in the ancient Orient. There are, however, a few examples in which light- and dark-skinned figures are juxtaposed. This leads the author to conclude her paper by examining the motives determining colour choice and to consider whether it is possible to narrow down the theoretical bandwidth separating realism from symbolism and the religious and political attitudes of commissioners and recipients.

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**ODAKA**, Takahiro

The University Museum, University of Tokyo

**NIEUWENHUYSE**, Olivier P.

Freie Universität Berlin

**MÜHL**, Simone

Ludwig-Maximilians-Universität Munich

### **From the seventh into the sixth millennium in the Shahrizor, Iraqi Kurdistan: Filling the gap**

Currently, several archaeological and palaeo-environmental investigations in the Shahrizor Plain, an intermontane valley in Sulaymaniyah province, Iraqi Kurdistan, are gradually revealing the local prehistory in this region. For the Late Neolithic period (7th-6th millennia BC), however, archaeologists are still struggling with explaining a large apparent gap between the late seventh and early sixth millennium BC. Following the traditional chronology established for Upper Mesopotamia, no sites are known between the 'Jarmo/Proto-Hassuna' and the 'Late Halaf' stages. Was the plain abandoned around 6000 BC? To solve this enigma, a few tiny Late Neolithic sites have recently been investigated by the Shahrizor Survey Project in 2012. They possibly fill the gap. The analysis of the potsherds collected on the surfaces of these sites demonstrates the regional distinctiveness of the plain: the culture-historical sequence followed a trajectory different from the classic Upper Mesopotamian Hassuna/Samarra to Early-Middle Halaf sequence. This leads us to reconsider regional interactions during the Late Neolithic period. We propose that local communities adopted 'Halaf' lifeways very late in the Halaf cultural sequence.

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**ÖZKUL FINDIK**, Nursen

Gazi University, Ankara

**MEIER**, Deniz Yasin

University Bern

### **Islamic Period Ceramics Found in the Cesspits in Adana/Tepebağ Höyük Excavation**

Situated at the city center of Adana, Tepebağ Höyük, which is bordered by Seyhan River on the east, is one of the biggest mounds in the region since it extends over 20 acres of space.



In this report, the purpose is to introduce and evaluate the Islamic period ceramics in cesspits which have been revealed as a result of Adana/Tepebağ Höyük excavations in 2017. The cesspits in the trenches BE 36 and BD 36, which are on the northeast of mound, have a variety of ceramic artefacts from Iron age to modern ages. Ceramic pieces which were specific to the powers that ruled the region throughout history have been unearthed in some places, existing side by side. The fact that there have been no ceramic pieces found in the cesspits from early Islamic period to the late Ottoman period, is quite interesting and needs to be discussed. Based on the ceramic artefacts: who lived in the region, in which period they lived and their cultural features of kitchens' have been assessed in addition to the typological identification. Within their own groups, glazed and unglazed ceramics have been organized in open and closed forms, while unglazed ceramics were introduced as cooking, serving and storage vessels, and also the roots of imported glazed ceramics have been discussed.

The majority of Islamic period ceramics belongs to the Abbasid, who ruled the region over a long period of time, period glazed and unglazed (8<sup>th</sup> to 10<sup>th</sup> centuries) ceramics. Another group of ceramics found in cesspit belongs to the Ottoman period (18<sup>th</sup> to 19<sup>th</sup> centuries Kütahya production). Additionally, the pipe pieces found in all cesspits that belong to the same period form another important group. On upper level, many imported porcelain pieces from modern ages have been found.

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ÖZMEN, Öznur  
9 Eylül University, İzmir

### **The Eye of Power – An Example Of How Social Conditions Shape Rituals: The Case of Eye Idols**

The idols that emerged in the North and South Mesopotamia and neighboring regions in the Late Chalcolithic period and are particularly emphasized in the eyes are known as 'Eye Idols'. We see from the archaeological records that these idols spread a wide of time and geographical distribution. During the excavation in Tell Brak in 1930s, a building discovered as known 'Eye Temple'. Thousands of idol made of terracotta and alabaster, limestone, steatite stones were revealed in this building. M. E. L. Mallowan identified this objects as an 'Eye and Spectacle Idols'. According to Mallowan, 'Eye Idols' used for the ritual object for a cure of eye illness or symbolizes a protective of an god/goddess. Apart from the fact that these idols are regarded as a ritual objects of the belief system, various opinions about their functions have been put forward such as weight, pot-covers, a functional tool used for spinning wool.

The Late Chalcolithic Period in Upper Mesopotamia is a period that is expressed by most of the researchers occurred great changes such as the emergence of social stratification, the increase in specialization, the institutionalization of social division of labor and centralization of power. In addition these developments, it is thought that religious rituals were converted to more systematic and were reconstructed under the control of the temples. We can consider the temples as an organized center in Mesopotamia that combines politic, ideologic and religious manipulations. In this context, if we regard 'Eye Idols' as a ritual object of an institutionalized belief system as especially in Tell Brak 'Eye Temple', can we think of it the sacred object that serves the creation of the perception of 'a God/Goddess or 'panoptic' power who sees everything, knows everything and exists everywhere'? Can we think of the eye idols as an object attributed to holiness that was used to create the perception of surveillance of society?

In this study, firstly, geographical distributions, typological features and chronological sequences of the idols are investigated. Then, it will discuss whether the eye idols followed a linear and narrative sequence for similar purposes in different cultural contexts and societies within belief systems; and the opinions about the various suggestions and symbolic meanings suggested by the researchers are examined. Finally, the use of eye idols is reinterpreted by different points of view regarding the functions and meanings of the idols by considering in dynamics of the period.

**ORENDI, Andrea – DECKERS, Katleen**

Universität Tübingen, Institut für Naturwissenschaftliche Archäologie

**KAMLAH, Jens**

Universität Tübingen, Biblisch-Archäologisches Institut

### **A Phoenician Agrarian Center: Archaeobotanical and archaeological investigations at Tell el-Burak, Lebanon**

In regard to Near Eastern archaeobotanical investigations, Lebanon is still underrepresented. Archaeobotanical data have been recorded on only a few excavation sites, most intensively at the Phoenician settlement of Tell el-Burak which is situated in the southern Sidonian Coastal Plain between Sidon and Tyre.

This paper wants to present the archaeobotanical results represented by the anthracological and the seed data in combination with the archaeological remains. The investigation of the before mentioned sources reinforces the assumption that Tell el-Burak was established by the city of Sidon (or Sarepta) as a production and trade center for wine, and possibly olive oil. The agricultural resources of grapes and olives were most probably cultivated in the immediate vicinity of the settlement and probably along the western slopes of the hill country further inland. The archaeobotanical as well as the archaeological record from Tell el-Burak show how Phoenician principal towns might have organized and shaped their environs for economic reasons. Systematic archaeobotanical sampling allowed the investigation of the chronological and spatial distribution of the archaeobotanical material within the Phoenician settlement itself. Moreover, the archaeobotanical data helped to understand the function of certain architectural structures of Tell el-Burak.

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**OSELINI, Valentina**

Sapienza University of Rome

### **On the move: is it the vessel or its idea? The Ceramic Horizon of Middle Bronze I-II in the Lower and Middle Diyala Basin**

The region of the Middle Diyala River can, during the 2<sup>nd</sup> millennium BC, be considered a crossroads for three different cultural areas: Southern Mesopotamia, Northern Mesopotamia and Iran. During the Middle Bronze Age, it has been considered an area influenced by both the kingdom of Eshnunna and the kingdom of Babylon. The sites located in the Lower (Tell Harmal, Tell al Dhiba'i, Tell Asmar, Ishchali) and Middle Diyala Region (Tell Yelkhi, Tell Halawa, Tell Suleimah, Tell Oweissat, Tell Keith Genj) represent the principal contexts in which it is possible to find out data to define the Middle Bronze Age ceramic horizon in the Diyala Basin. In the specific case of the Middle Diyala, it is necessary to define the ceramic horizon and to identify the local features and the foreign influences on the pottery assemblage. Furthermore, it is interesting to compare the Middle Diyala and the Lower Diyala sets in order to observe their grade of compatibility and to highlight which elements serve to define the Diyala pottery region. With this view, the analysis here presented shows that the types of beakers, jars and flasks tended to be widespread in the two areas more than bowls, vats and vessel used in the production processes. Moreover, the presence of specific shapes within the Diyala pottery assemblages allows us to consider this region involved in the wide cultural phenomenon which interested the Mesopotamian area during the first half of the 2<sup>nd</sup> millennium BC. The contribution here presented intends to emphasise what types and categories can be considered widely spread and questions if they reflect the presence of a wide ceramic horizon and if they were imported or locally produced. With the help of the archaeometric analyses on some MB sherds from Tell Yelkhi, the aim of this paper is the understanding of what is on the move, the vessel or its idea.

**OSMAN** Abdollah, Mohamed El-Sayed  
Freie Universität Berlin

### **Caravans, routes, and the cognitive map of Nubia during the Old kingdom**

One of the most discussed issues in Old Kingdom Egypt is the political and economic relations between Egypt and its southern neighbours in Nubia. From the second half of the Old Kingdom and the first intermediate period, several attestations from autobiographies and rock inscriptions, such as Herkhuf's journeys, mentions scattered details and events that took place in both lower and upper Nubia. Such evidence would not stand alone to construct a comprehensive interpretation of the situation in Nubia during the late Old Kingdom and the first intermediate period. One can already realize that most of what was happening between Egypt and Nubia can be understood through multiple models of coexistence, mobility, and economic exchange.

Combining the textual evidence and the available few archaeological evidence added in the last years some insight to this topic. Nevertheless, this paper is intending to take another step forward in this topic, through correlating the textual and the archaeological evidence within landscape geo-spatial analysis. Yet, another dimension is needed to complete the picture, which is the human behavioural factor. In order to examine the textual and archaeological evidence within the landscape attributes, it is important to consider a multiple theoretical approaches, which try to integrate the aspects of human behaviour within the mobility and exchange models, in order to examine and adjust the results of geo-spatial analysis, which should illustrate a map the network once took place between Egypt, Lower Nubia and Upper Nubia.

The study will focus on the concept of (the Cognitive map of Nubia during the Old Kingdom), trying to answer questions such as the locations of the toponyms known from the textual evidence, and where travelling routes used to be located. This study is a combination between GIS spatial analysis, and anthropologically based conceptions of human cognitive knowledge and environmental knowledge.

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**OTTO**, Adelheid  
Ludwig Maximilians Universität Munich

### **The LMU Munich excavations 2017 at the South Mound of Ur**

A team of the LMU Munich participated at the excavations at Ur which are directed by Elizabeth Stone. The investigated area was chosen as far distant from AH as possible, at the southern edge of the South Mound near the city wall. The aim was to investigate the structure of the random city regions in comparison with the central areas. The results indicate that this area was certainly not a marginal urban quarter inhabited by less privileged people in the Isin-Larsa-period. The partly excavated, spacious house belonged to an educated elite person, the manager of the Ningal Temple. The tablets and sealings allow a precise dating within the 19th cent. MC, which offers a precious chronological fixpoint for pottery and other material.

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**PALERMO**, Rocco  
University of Groningen, Institute of Archaeology  
**FLORIO**, Giovanni  
University of Naples Federico II, Department of Earth Sciences  
**CELLA**, Federico  
University of Calabria, Department of Biology, Ecology and Earth Sciences

**PIEROBON-BENOIT, Raffaella**

University of Naples Federico II, Department of Humanistic Studies

### **What lies beneath? Geophysical Investigations and Archaeological Evidence at Tell Barri (Syria)**

The site of Tell Barri (Syria) has been the object of investigations since 1980. It has been occupied for more than 5.000 years and presents a complex stratigraphy both on the main mound and in the lower city. In 2008 and 2010 a team of geophysicists from University of Naples Federico II joined the Italian Archaeological Expedition at Tell Barri in order to explore subsurface features and detect traces of ancient buildings in the lower town, an area which has been interested only by minor archaeological explorations. The investigated area (1.6 hectares) lies at the bottom of the southern slope of the tell, and it was purposely chosen because of its proximity to the sole large building unearthed in this area (Area M), which has been dated to the Seleucid-Parthian period. The objective of the investigation was to have a much clear idea of the lower town pattern and to assess the wider architectural context of the excavated structure. Two geophysical methods have been employed. Considering a possible deep burial of archaeological remains, and due to clayey sediments accumulation, a frequency domain electromagnetic survey was carried out. This was also combined with a vertical gradient magnetometry. The analysis revealed an apparently regular urban plan, with dense infrastructures organized around passageways, thus emphasizing the importance of this area in relation to the organization of the architectural space in the ancient city. The talk will explore the results from a geophysical and archaeological perspective (and satellite image analysis), also in light of the outcomes of excavation tests carried out in correspondence of some features highlighted by the magnetometric data.

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**PALMISANO, Alessio – BEVAN, A. – SHENNAN, S.**  
University College London, Institute of Archaeology

**ROBERTS, N. – WOODBRIDGE, J. – FYFE, R.**  
Plymouth University, School of Geography

### **Long-term population patterns and pollen-derived land cover change in the Eastern Mediterranean basin: some examples from Levant and Anatolia**

The “*Changing the Face of the Mediterranean* project” is a Leverhulme-funded Plymouth-UCL collaboration which aims to reconstruct long-term trends in population dynamics and vegetation change from the introduction of Neolithic farming to Medieval times (ca. 9000-1000 BP), on a pan-Mediterranean scale, in order to assess if and how human impact has shaped natural landscapes over the millennia. In the present paper we consider some preliminary results from two Eastern Mediterranean case studies: Levant and southwestern Anatolia. We compare radiocarbon summed probability distributions (SPD), archaeological site counts and summed estimated site sizes in order to understand how human demography changed over the *longue durée*. Furthermore, these three archaeological proxies are also compared with land-cover change aggregated pollen records to assess how far these two independent sources show common and synchronic trends in terms of population and environmental change in the Eastern Mediterranean. This approach allows us to explore to which extent the rises and falls in population transformed the environment from nature-dominated to culturally-modified.

**PALUMBI, Giulio**

University Lyon

**GULIYEV, Farhad**

Azerbaijan National Academy of Sciences, Institute of Archaeology and Ethnography

**POULMARC'H, Modwene**

Université Lyon

**MURADOVA, E. – CINQUE, L.**

**FABBINDER, Jörg**

Bayerisches Landesamt für Denkmalpflege – Ludwig-Maximilians-Universität Munich

**SCHEIBLECKER, Marion**

Ludwig-Maximilians-Universität Munich

**BECKER, Florian**

Bayerisches Landesamt für Denkmalpflege

**GONDET, Sébastien**

Université Lyon

**LYONNET, Bertille**

French National Centre for Scientific Research, UMR 7192

### **The 2017 investigations at Kiçik Tepe (Tovuz, Azerbaidjan), new data on the neolithic and chalcolithic periods in the Kura river valley**

Kiçik Tepe is a small artificial mound located in the Tovuz district of Western Azerbaijan at around 10 km from the Kura river. The first season of investigations at Kiçik Tepe was carried out in summer 2017 and aimed at enlarging the archaeological picture on the developments of the Neolithic and Chalcolithic communities that inhabited the region during the sixth and fifth millennia.

Previous excavations in the same region at the nearby sites of Hacı Elamxanlı Tepe, Goy Tepe and Mentesh Tepe have shed some light on these trajectories. However, several issues on the chronologies and developments of the Late Neolithic period, the transition from the Neolithic to the Chalcolithic and finally the diversification of the chalcolithic developments are still left unanswered.

Excavations at Kiçik Tepe aimed at answering these questions.

The exposure of about 150 sqm in summer 2017 has allowed to identify three levels of occupation with related architectural remains. Geophysical prospections were also carried out at the site.

In these paper the results of the first excavation campaign will be presented and finally they will be compared and discussed with those coming from the nearby neolithic and chalcolithic settlements in order to broaden the archaeological picture on the sixth and fifth millennium developments of the Kura river valley.

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**PAPPI, Cinzia**

Leopold Franzens Universität

**COPPINI, Constanza**

Freie Universität Berlin

### **From Ahazum to Idu: The Archaeological Survey of Koi-Sanjaq/Koya (Iraqi Kurdistan)**

Excavations at Satu Qala (Iraqi Kurdistan), the Assyrian provincial capital of Idu, highlighted the role of the region of Koi Sanjaq/Koya within the wider context of the political and economic developments of Northern Mesopotamia in the second and first millennium BC. The data gained by the archaeological survey project of the region of Koi-Sanjaq (ASK), conducted by the University of Innsbruck from 2015 to

2017, provided insights into the historical developments of the region. Furthermore, the data provided by the analysis of the surface materials and by those from the excavated contexts at Satu Qala represent a unique tool for a better understanding of the political and economic dynamics of a region, which remained for long time unexplored. The typological analysis of the collected surface materials, contextualized in their historical and archaeological framework, will add new insights into the settlement patterns and the mobility of the region of Koi-Sanjaq. This paper will focus on the last results of the fieldwork of 2016 and 2017, discussing in particular the political developments of the Middle and Late Bronze Age of the region, the transition from the Middle to the Late Bronze Age and the still unsolved problem of the connections between Idu and its hinterland.

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**PAROW-SOUCHON**, Hannah  
University of Cologne

### **Mobility and land-use in the Upper Palaeolithic of the Levant**

The PhD thesis, of which the final results shall be presented, is concerned with the reconstruction of Late Pleistocene settlement dynamics and mobility in the Southern Levant. A dataset is used spanning the timeframe from the Early Ahmarian to the beginning of the Epipalaeolithic. The spatial distribution of the sites in relation to environmental conditions and resources (water and raw material) is evaluated in the context of the spatial distribution of Pleistocene sediments. A statistical evaluation of environmental factors which significantly explain the variability in the dataset shall be given and particularities in site locality choice for the different cultural units highlighted. Furthermore, an attempt is made to separate discrete functional units of sites through the evaluation of the representation of the reduction sequences preserved on site, the working time, the diversity of the tool assemblages as well as indications for curatorial activities. In general, the Upper Palaeolithic of the Levant is characterised by a stable residential mobility system adapted to the patchy distribution of resources. A stable use of the environment can be contrasted to a highly dynamic cultural development.

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**PARSA**, Sarvenaz  
Freie Universität Berlin, Institut für Vorderasiatische Archäologie

### **The Significance of the natural environment in Zoroastrianism and its reflection in Sasanian sacred architecture**

Chahar Taqs (generally known as Zoroastrian fire temples), are of the most important building types that have remained from late antiquity in Iran (mostly from the Sasanian era, i.e. 224-651 CE). Aside from being architecturally important and easily recognizable sites, they give us important information about locational preferences of Zoroastrians. The landscape setting of these monuments has not been studied comprehensively previously.

In the Sasanian era, when Zoroastrianism became the state religion of the empire, many fire temples were built throughout Persia. While there are few contemporary written documents about particularities of ritual life, traditions (Avesta, Bundahishn and other religious texts) give us a good sense of Zoroastrian values and beliefs.

In my contribution, I will use indications from Zoroastrian written tradition to identify specific values and meanings bestowed upon landscape features such as mountains, water etc. From such a reading, I derive

idealized locational attributes for fire temples. I will put these results in relation to field research about the real positions and architecture of such fire temples in the province of Fars, Iran.

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**PAUL, Jarrad William**  
University of Melbourne, Australia

### **Uğurlu and Ulucak: the tale of two worked bone collections**

The Neolithic way of life spread across northwest Anatolia (6500 BCE) through a complex series of trajectories involving people, animals, and material culture. Bone tools played an important role in this prehistoric tool kit, known for their durability and adjustable function. Two sites in this region, Uğurlu and Ulucak, contain sizeable bone tool collections. This paper will compare and contrast the assemblages at both sites to investigate local variations and regional similarities. Geography also plays an important role in this discussion, with questions relating to the adaptability of the landscape in regards to faunal populations. A discussion concerning the two collections will focus on typological and comparative analysis.

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**PAULE, Anna**  
Independent researcher from Linz

### **Adoption and Adaptation of Near Eastern Iconography in Ancient Cyprus. The Winged Sun Disc and Related Symbols**

Astronomical symbols, such as winged sun discs and disc-and-moon-crescents, have a longstanding tradition in the ancient Near East. This paper, however, focusses on the evidence from ancient Cyprus. Most of this material has been investigated in part, but not in the form of a comprehensive study of these symbols and their use before and after 1000 BC.

The adoption of Near Eastern astronomical symbols in Cypriot iconography correlates with the first occurrence of Levantine cylinder seals on this island and was soon fostered by local production (XVIth/XVth-XIIth c. BC). As is known from Near Eastern forerunner models, sun and moon symbols occur repeatedly in Late Cypriot glyptic imagery. This also applies to several specimens which were produced or reworked in Cyprus but found in Greece (Thebes, Treasure; XIIIth c. BC). During the Cypro-Archaic period these ancestral symbols were adapted to a new purpose. Unlike Late Cypriot sun and moon representations, Cypro-Archaic astronomical symbols are no longer mainly known from glyptic imagery (scarabs), but represented in metalwork (gold jewellery, metal vases) and sculpture of this period (stele of Sargon II, grave stelae, Hathoric capitals; mid-VIIIth-Vth c. BC).

The aim of this paper is to show how these symbols were employed on ancient Cyprus and to explore their (re-)appearance on this island, which was stimulated by contacts with the Near East. For this purpose, the paper evaluates in parallel Cypriot and Near Eastern evidence to highlight the similarities and differences regarding the use, representation and signification of the symbols.

**PAZ, Yitzhak**  
Israel Antiquities Authority

### **Excavating A City's Hinterland: A Multi-Disciplinary Research of the Hinterland of Tel Yarmouth during the EBIII**

One of the problems in archaeological research of the Ancient Near East is that while cities and towns, located on elevated mounds, are thoroughly explored, their hinterlands are generally completely unknown and un-explored. The immediate surrounding of Tel Yarmouth, one of the largest urban centers that flourished during the third millennium BC in the land of Israel was of no exception, until now. In the current paper I will discuss the recent multi-disciplinary scientific project that is being conducted on behalf of the IAA since 2014 in the immediate surroundings of Tel Yarmouth. This study includes archaeological excavations and surveys, geological, geomorphological and micro-morphological inspections, OSL analysis and GIS research.

This project has already produced break-through discoveries. One is a unique open air site, located c. 150m. south-west of Tel Yarmouth, in which an agricultural plot or a field was found, where crops like wheat and barley were cultivated during the EBA.

Additional plots, located further southeast, were found and seem to have been continuously used during the EBA, early Iron Age and the Byzantine periods, the periods that are represented at Tel Yarmouth. Ceramic typology and OSL analysis have confirmed these dates.

Another discovery were no less than six caves and rock-shelters, located less than 200m. west and south to Tel Yarmouth, in which domestic activity was detected, probably connected with the processing of agricultural products that were cultivated outside the city walls. They revealed no mortuary remains while contained large amounts of domestic pottery, and were located at the very heart of the hinterland, with hundreds of rock-cut installations related to them.

All of the above mentioned agricultural plots, rock-cut installations and caves can be dated to the EBIII, the zenith of the city at Tel Yarmouth, and more specifically, can be related to the existence of the monumental palace B1 at Tel Yarmouth. Moreover, we suggest that the monumental investment in the establishment of palace B1 was accompanied by the monumental investment in the creation of the fields and outskirts in which agricultural products were processed, maybe by peasants who dwelt outside the city walls. This hinterland, explored for the first time and in the largest scale so far in ANE archaeology, was no doubt one of the economic sources for commodities that were consumed, stored and traded by the urban entity that governed Tel Yarmouth during the 3<sup>rd</sup> millennium BC.

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**PEDERSEN, Ralph K.**  
Southwestern A/G University, Waxahachie  
**SEMAAN, Lucy**  
University of Balamand

### **An Underwater Excavation at Ain al-Mreisseh, Beirut: Reaching Across the Academic-Public Divide**

The endangerment of archaeological sites and cultural heritage is a growing concern throughout the world. Lebanon is no exception. The rebuilding of the central district of Beirut from the ruins of the civil war has significantly damaged and eradicated archaeological sites. The danger holds also for underwater sites as coastal development and land-reclamation, including the building of new harbors and resorts, is rapidly occurring along the waterfront throughout Lebanon. The destruction of sites underwater is further



compounded by a burgeoning dive tourism industry, as fishermen and sport divers often pick artifacts from the sea floor as souvenirs without regard to their meaning or to cultural heritage.

In 2013, the authors conducted an excavation of a site 14 meters beneath the sea, off the coast of Ain al-Mreisseh. Initially hypothesized to be a possible shipwreck site, the excavation instead revealed what appears to be an anchorage used repeatedly from at least the Iron Age and into the Late Roman/Byzantine period. This project was launched as a rescue investigation as the site was the target of sport-diver tourism. The excavation was, however, not only done for the benefits of research but as an exercise in collaboration between archaeologists and the sport diving community. This endeavor constitutes an example of what can be accomplished when academia engages the wider public in the creation of cultural conservation awareness. This paper will present an overview of the Ain el Mreisseh field season and the potential such projects have in fostering a sustainable approach to the preservation and management of Lebanon's underwater cultural heritage.

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**PERŠIN, Metoda**  
Freie Universität Berlin

### **Building 2 at Tell Fadous-Kfarabida (Lebanon): An architectural, stratigraphic and functional study of an Early Bronze Age Building**

The author discusses an Early Bronze Age building from Tell Fadous-Kfarabida, one of the sites on the Lebanese coast, which are, due to the modern settlement process, disappearing at a fast pace. The studied building was partially destroyed by modern construction works as well. Nonetheless, it offers exceptionally preserved walls and an abundance of well-stratified material. This paper deals with all aspects of the material analysis of the building with a focus on ceramics. The detailed study of the material enables the dating of the building in the first half of the third millennium BC and helps expand our knowledge of the Early Bronze Age in Lebanon.

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**PEYRONEL, Luca**  
IULM University of Milan, Department of Humanities  
**VACCA, Agnese**  
Sapienza University of Rome

### **Survey and Excavations at Helawa, Southwest Erbil Plain, Kurdistan, Iraq**

The project of the Italian Archaeological Expedition in the Kurdistan Region of Iraq (MAIPE, IULM University of Milan) focuses on a small part of the Erbil plain, namely the area of Helawa/Aliawa, located 28 km southwest of Erbil. During 2013-2016, archaeological fieldwork has been carried out at Helawa, an irregular mound of ca. 10 ha. The field surveys, carried out since 2013, and their results so far indicate an occupation spanning from the Halaf to the Late Chalcolithic 3, with a later re-occupation of the site in the 2<sup>nd</sup> and 1<sup>st</sup> millennia BC. The 2016 excavations at Helawa allowed to pinpoint this sequence, revealing a LC 2 multi layer occupation uncovered on the top and on the southern slope of the main mound, and a LC 3 followed by a late Middle/Late Bronze Age occupation in the north-eastern small mound of the site. Aim of this paper is to present and discuss these evidence within a regional framework of analysis, focusing on the developments and the local trajectories in the Trans-Tigris area, which will be compared with data from the surveys and excavations in the Erbil Plain, the Middle Tigris region and finally, the Syrian and Iraqi Jazirah.

**PINNOCK, Frances**  
Sapienza University of Rome

### **Representing the elites in Middle Bronze I-II Ebla**

In the Middle Bronze I-II public buildings of Ebla several images of members of the elites were found: life-size or smaller basalt statues were displayed in, or rather outside, temples, in palaces, and in city-gates, human characters were represented in cylinder seals, cult basins, stele and in wood inlays and figures in the round. I will present the evidence, and will try to discuss several issues about this production. The style of statuary changes in time: was this only a consequence of the influence of Aleppo school or depended also from an evolution of the local taste? Is there a meaning in the use of the standing or sitting position, both for men and women? Can a parallel be detected with the use of human figures in the mature Early Syrian period, the Age of the State Archives of Ebla?

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**PIZZIMENTI, Sara**  
Sapienza University of Rome

### **Sumer in Arabia. Tracing the Jemdet Nasr Presence in the Arabia Peninsula and the Red Sea through Pottery and Cylinder Seals**

Contacts between Lower Mesopotamia, round the Arabia, up to the Red Sea and along the Wadi Hammamat started in the most formative stage of their development. While artifacts clearly dated to the Ubaid period have been recovered in Eastern Arabia, the earliest object distinctively of Mesopotamia type, such as cylinder seals, has been dated to the Late Uruk and Jemdet Nasr Period (second half of the 4th and the beginning of the 3th millennium BC).

Findings clearly dated to the Jemdet Nasr Period both in Arabia and Egypt, such as pottery or cylinder seals, could thus represent the evidence of contacts with the Lower Mesopotamia, as imports or products locally manufactured in Southern Mesopotamia tradition, allowing also the identification of preferred trade routes.

Aim of this paper is to make a general reassessment of the contacts between Lower Mesopotamia, Arabia Peninsula and Egypt in late 4th - early 3rd millennium BC, through the analysis of the presence of pottery and other artifact.

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**POGGIO, Alessandro**  
Scuola Normale Superiore, Pisa

### **From Collections to Contexts: Typological and Art-Historical Researches on Graeco-Persian Glyptic**

Dealing with unprovenanced objects from museum collections is a challenging task, since few data about their original contexts are available. It implies that only typological and art-historical analyses may help assess the original function and meaning of these objects.

Such an approach fits well with ancient glyptic: material and artistic aspects of these objects favoured the development of an appreciation that nourished a wide-range market for centuries, so that these items are scattered in collections throughout the world, generally without precise provenance information. The 'Graeco-Persian' corpus has been part of this phenomenon. Scholars, thus, investigated these objects in

order to outline their historical and geographical coordinates: from Adolf Furtwängler's studies onwards, this corpus was attributed to the western fringe of the Persian Empire, an area that raises questions about the interplay between local, Hellenic and Persian cultural elements.

However, a number of aspects related to Graeco-Persian glyptic are still overlooked. My current research, in particular, is focused on a small corpus of Graeco-Persian tabloid seals that I have managed to enlarge substantially. In my paper I shall outline the probable cultural and artistic background of the Graeco-Persian tabloid seals on the basis of a combined analysis of style, iconography and typology. My study, thus, is aimed at overcoming the lack of data about their provenance and reflecting on their original function. These results will shed light not only on the Graeco-Persian tabloid seals, but also on the Graeco-Persian category in general.

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**PORTILLO, Marta – MATTHEWS, Wendy**  
Department of Archaeology, University of Reading

### **Investigating the use of space and human-animal interactions in early farming built environments: the microarchaeology of livestock dung**

There is a growing recognition of the fundamental importance of the built environment to the lives of people, as well as the value of interdisciplinary approaches to studies of ecological and socio-cultural practices. There has been long debate about the extent to which early farming built environments reflect the nature of social relationships and behaviors at the household and community scales, and how these may be linked to food-producing strategies, and particularly the emergence and spread of domestication. Livestock dung is a key interdisciplinary area of research as it provides valuable information on a wide range of environmental and ecological issues, as well as socio-economic and cultural aspects of human life-ways. However, this ubiquitous material in many settlements, especially after the domestication of herds, is regularly overlooked or missed using conventional excavation procedures, despite its worldwide economic importance as suppliers of manure, fuel and building material.

This paper examines much-needed holistic interdisciplinary sampling strategies and analytical techniques for multi-proxy studies of livestock dung within built environments. It highlights the value of interdisciplinary analytical methods in archaeobotany, geoarchaeology and biochemistry (phytoliths, dung spherulites, micromorphology, GC-MS) and comparative geo-ethnoarchaeological data to enable a robust identification and interpretation of dung remains. This research integrates reference models and comparative analytical data-sets on the characteristics, preservation and context of modern dung materials, dung-products and depositional contexts in current farming communities that maintain aspects of traditional ways of life. These materials include fresh dung pellets, sediments from pens, dung cakes, dung fuel from ovens, and building materials (roofing, mud-bricks, wall and floor plastering).

To illustrate its potential major contribution for tracing the interactions and relations between humans and animals within built environments, and particularly the various ways that these built environments were organised and their cultural implications, a selection of case-studies are examined from mobile hunting-gathering to sedentary farming in the Near East, 10,000-6,000 BC. These case-studies are primarily from the central Zagros region, one of the core regions in the spread of farming, with comparative ethnoarchaeological reference to central Anatolia and the Upper Khabur. These demonstrate the value of the still needed interdisciplinary studies of livestock dung for delineating human-animal interactions and the use of the living space on the threshold of early food communities, and the developments of early farming systems in key episodes of environmental and social change.

**POURMOMENI, Shima**  
University of Tehran

### **A Typological Study of Ceramic Wares from Harmangan, a Newly Excavated Neolithic Site in Bavanat Basin, Fars Province, Iran**

The Hormangan site is located on the southern part of the Bavanat River basin in the northeast of Fars province. This site was excavated for the first time in winter 2016, different layers of which yielded diverse type of ceramics wares. A comparative typological study on the potteries of the site with other similar potteries from the different regions of Fars Province made it possible to establish not only a relative chronology for the site itself but according to the known typology regional and interregional communications were also determined. Ceramics of this site include plain and painted ware, most of which are vegetal tempered, although mineral tempers are also visible as their clay sources. Core of this potteries are mostly gray, that shows they are under uncontrolled fire and were baked in open kilns. The most common rim types are out flaring and up right forms. Some bowls in the lower half take carinated forms, showing traces of mat to indicate that how they were made. Potteries from this site is comparable to Neolithic types of tepe Moshky, Jerry B, Bashi, Kushkehezar in the Kur river basin and the upper Neolithic layers of the tepe Rahmatabad in the Pulwar river basin. Based on the pottery style, Hormangan is probably the oldest known settlement in Bavanat basin, but it seems that this pottery style came from tepe Moshky of Kur river basin to the Hormangan site.

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**PULJIZ, Ivana**  
Eberhard Karls Universität Tübingen

### **New perspectives on rural archaeology: excavations at Muqable III**

Our knowledge of rural sites in the Ancient Near East is still very limited when compared to the intensively investigated cities. Therefore, a small settlement in the Eastern Tigris Plain, only 2.3 ha in size, is in the focus of a new research project. It is the Bronze Age site of Muqable III, located 5 km to the Southeast of the urban centre of Bassetki in the province of Duhok (Autonomous Region of Kurdistan in Iraq). Since 2015 it is being excavated by a joint German-Kurdish expedition. After assessing the sequence of occupation in the first season by excavating a step trench on the slope of the hill, the second season conducted in 2017 aimed at exposing larger areas of the uppermost occupation layers dating to the Middle Bronze Age and the Middle Assyrian Period. Both periods are also well attested at the nearby site of Bassetki, thus indicating a strong connectedness between both sites.

One of the main objectives of the ongoing research project investigating the role of small settlements during the second millennium BC is to clarify whether Muqable III was a self-sufficient village or served as a specialised production site integrated into a superordinate economic system. In doing so it will be possible to understand the relationship between a major urban centre and its rural hinterland. The preliminary results of this study will be presented in this paper.

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**PUTURIDZE, Marina**  
Tbilisi State University

### **Mobility Between the South Caucasus and the Near East: in Context of Cultural Interaction Early and Middle Bronze Age Societies**

Since such a remote past, as the Paleolithic era, mobility always had a certain role in the progress of different societies. Importance of this factor became incomparably higher when the priority claim on metal production was increased. Mobility of certain groups of society usually is connected with complicated socio-economic, especially the trading, activities and therefore it should be considered in entire context. Obvious that factor of mobility becoming much important and as well intensive, simultaneously with the progress of exchange system of metal goods and sources. Early- and Middle Bronze Age societies of different regions of the Near East and the Caucasus, especially those, rich with different type of sources, mostly metal ores and with absolute deficit of it, were definitely included in this process. From this point important information has been accumulated from various Early- and Middle Bronze Age sites from the both mentioned areas. They indicate about the intensively progressing trading system, as well the widening exchange of fashionable style metal production, certain kind of sources and the different technological achievements. Integration of such kind of artifacts and issues connected with metal producing especially are clearly recordable in South Caucasian Middle Bronze Age cultures of early and developed stages of it. This artifacts, interpreting of which devoted our paper, directly proofs in favor of much activated mobility, increase of trading and exchange activities between the South Caucasus and the Near East during the above mentioned chronological phases.

Obviously that Middle Bronze Age highly developed Trialeti culture appeared to be influenced from the certain regions of the Near East rather more than the earlier phases societies of South Caucasus. We draw special attention to those artefacts of this culture which indicate about the existed mobility system of Caucasian and Near Eastern worlds. The mentioned cultural phenomenon of South Caucasus was characterized with close interaction with the Near East and adoption of technological and high artistic style achievements from this area of Ancient World.

One of the determining factor of exchange and trading processes was the intensification of mobility system. It appears that exploitation of sources and producing of metal artifacts arise the urgent necessity of organization of mobility system between the discussed regions. Undoubtedly, metal producing was the defining factor that assisted in organization of the mobility system between the above mentioned regions.

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**QUENET, Philippe**

Université de Strasbourg – The National Center for Scientific Research-UMR 7044 Archimède

### **Old and New: The Urukian Occupation at Eridu**

The first exploration of Abu Shahrain, ancient Eridu, happened in the mid-19<sup>th</sup> century at the onset of near-eastern archaeology. It was carried out by J. G. Taylor. Excavations at the site were resumed more than sixty years later in the late 1910s, first by R. C. Thompson in 1918 and by H. R. Hall the year after. Almost thirty years elapsed before the Antiquities of Iraq sent a team to the site, directed by F. Safar, who undertook a 3-year excavation programme. After a 60-year break, a new field project was initiated by F. D'Agostino in 2014.

Each team contributed in its way to a better understanding of the history of the site and the evolution of South-Mesopotamian cultures. Among these, the Uruk Period has been generally overlooked. Reconsidering the past results and combining them with a recent study of a set of objects conserved in the collection of the British Museum provide some clues as to the kind of monumental architecture that developed at the site in the late 4<sup>th</sup> millennium.

**RADNER, Karen – KREPPNER, Janoscha – SQUITIERI, Andrea**  
Ludwig-Maximilians-Universität Munich

### **The Peshdar plain project 2015-2017: Investigating a major assyrian settlement on the Empire's eastern frontier (Kurdish autonomous region of Iraq)**

Since 2015 the Peshdar Plain Project, directed by Karen Radner (LMU, Munich) and conducted under the auspices of the Sulaymaniyah Antiquities Directorate, has completed 5 excavation campaigns at the “Dinka Settlement Complex”, a major Neo-Assyrian site in the Bora Plain (Peshdar district, Autonomous Kurdish Region of Iraq). The project was inaugurated after the chance find of a Neo-Assyrian tablet dated to 725 BC at Qalat-i Dinka, indicating that the area was part of the Border March of the Palace Herald that was created in the 9th century BC to guard access along the Lesser Zab to the empire's heartland. Several C14 dates from the excavation confirmed the Neo-Assyrian dating of the site's main occupation.

The results of the geophysical survey, the surface pottery survey and excavations indicate that the Neo-Assyrian “Dinka Settlement Complex” extended over an area of ca. 60 ha, including the seemingly distinct sites of Gird-i Bazar and Qalat-i Dinka. The ancient *qanat* irrigation system, still partially in use in the Bora Plain, may have been created to provide for this settlement.

So far, we exposed more than 1000 m<sup>2</sup> of buildings, streets and production areas. Bioarchaeological and material data provide rich new information for many aspects of life on the eastern frontier of the Assyrian Empire. The site also provides us with the welcome opportunity to synchronize Assyrian and Western Iranian pottery cultures.

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**RAMAZZOTTI, Marco**  
Sapienza University of Rome

### **The Visual Language of the Mesopotamian City-State**

The City-State can be considered a historical ideal-type and an aesthetic archetype encapsulating different policies and economies of the ancient world. In the present contribution, the ideal-type and the archetype of the Mesopotamian City-State will be delineated considering the textual and figurative role played by a selection of its descriptions and representations over time. Thus, the three central parts of the paper will discuss the Mesopotamian City-State described or represented in different traditions, starting from the cultures closest to the Land of Sumer and continuing with the most geographically and chronologically distant cultures until the present time.

In particular, the research will first introduce the Mesopotamian City-State through Max Weber's epistemic definition of the “ideal-type” and through A. Warburg's aesthetic definition of the “archetype” (§1); second, the contribution will debate how the Mesopotamian City-State as historical ideal-type and aesthetic archetype wrote a cultural memory of ancient Near East urbanism mostly founded on the temple, agrarian and imperial economies and politics (§2, §3, §4); and third, the paper will delineate why such figurative and textual language of the first Babylonian cities have inspired different ancient and modern ideologies of urban origin as the origin of civilization (§5). Following the epistemic and aesthetic introduction to this textual and figurative research, section §2 will decode some texts and images of the “temple” City-State focusing on the most ancient sacred city of Eridu; section §3 will present some texts and images of the “agrarian” City-State thematically centred on Uruk, the so-called “first city”; section §4 will present some texts and images of the “imperial” City-State, Akkad the undiscovered and “invisible” capital of the “first world empire”.

In the concluding remarks §5 will then be discussed *how* the three ideal-types and archetypes of the Mesopotamian City-State here selected have generated a specific lexical and figurative language of the first

cities. Finally, will be detailed *why* the ideological modelling and/or manipulation of such ideal-types and archetypes supported, in modern and contemporary historiography, a succession of interpretative primates: the primate of “oriental despotism”, the primate of “theological socialism”, the primate of “primitive democracy” and, in the present time, the archaeological, historical and aesthetic researches of a “prehistory of imperialism”.

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**RASTEGAR FARD**, Mina – **DEHPAHLAVAN**, Mostafa  
University of Tehran, Department of Archeology

### **Position and Dignity of Priests in Elymais Dynasty**

According to archeological finds and historical texts, the Elymais dynasty began their reign on 187 B.C, after defeating Antiochus III and continued to exist until the end of Parthian era. The cultural political geography of Elymais is considered to have existed in the mountains of Bakhtiari (south Zagros) domain and a large part of modern Khuzestan province which were, as a whole, the domain of ancient Elamite dynasty. Historical texts related to this area have not been found so as to clarify the details of Elymais administrative and governmental structures. Archeologists and art historians have sought to shed some light on hidden aspects of this political and cultural field by studying the archeological findings. Some reliefs of this period are considered to be among the most important archeological findings in this field. Individuals can be seen wearing different cloths while standings in a position close to the first man (the King) on the reliefs and other finds of this era. Existence of specific elements in the figures in these reliefs, such as a shawl hanging from the left shoulder (which is among exclusive Elymaian features) and holding symbolic objects in hands, confirms importance of religious authority. In this paper, authors have attempted to determine the rank and position of these people with regards to the subject of several reliefs, position of individuals in accordance with other people position, type of clothing and their posture. Presence of mentioned individuals or group of individuals in reliefs and sculptures discovered in religious sites, can to some extent determine their social position as religious authorities.

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**READE**, Wendy  
University of Sydney

### **Scenes of the Nile – a Rare Fresco-painted Pavement from Amarna, Egypt**

When Pharaoh Akhenaten and his Queen Nefertiti built their new capital in the desert at Amarna, occupied for only 15 years in the 18th Dynasty, from c. 1347 to 1332 BC, they had it decorated in splendid fashion. The Nicholson Museum at the University of Sydney is fortunate to have in its collection five sections of what little remains of a fresco-painted plaster pavement excavated in the 1920s by the Egypt Exploration Society in the complex known as the Maru-Aten. This extraordinary structure contained a row of interlinked T-shaped water tanks with low, plastered walls surrounded by fine, plastered floors. The plaster was painted with colourful aquatic plants in this period of great artistic distinction and innovation. To the visitor it must have given the illusion of wandering through a richly flourishing Nile scene in and around the water pools.

This presentation examines the evidence of artistic process that the pavement reveals, and explores the pursuit of this functional art form in the Maru Aten in the context of painting at Amarna and Malkata, from where it has been suggested the artisans were brought after working on the palace of Amenhotep III. The recent conservation of two of the Nicholson Museum panels has provided a unique opportunity to gain

fascinating insight into the methods of the artisans who created them, including the nature of their plaster and pigments through XRF and microscopic analyses, and their fresco-painting processes as revealed in the surface of the plaster in the form of impressions of brush strokes, baskets and textiles.

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**REICHEL, Clemens**

University of Toronto, Department of Near and Middle Eastern Civilizations – Royal Ontario Museum

### **Domestic or not so domestic: on the multi-functionality of space in domestic structures of Late Chalcolithic northern Syrian cities**

Abstract: This paper will address challenges faced when defining domestic versus non-domestic space in proto-urban settings, using data from the Late Chalcolithic settlement at Hamoukar in Northeastern Syria for a case study. Between 2001 and 2010, three multi-room complexes were excavated at that site in a walled settlement dating to Late Chalcolithic 3-4 (3800-3400 BC). An initial identification of these buildings as "administrative compounds" was based on the recovery in certain parts of these complexes of numerous storage vessels and of thousands of clay sealings that suggest the presence of complex bureaucratic procedures that are irreconcilable with domestic space. A more detailed overall analysis of their ceramic, faunal and botanical assemblages, however, suggests that the function of these buildings was as much residential as it was administrative / economic. Using comparable data from contemporary sites of the Upper Khabur region and other areas of the Near East this paper will discuss the pivotal role that specialized production and storage had within the incipient urban fabric of northern Syria during the late fifth and early fourth millennium BC.

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**RENDU LOISEL, Anne-Caroline**

University of Strasbourg

### **Sensory Landscapes in Akkadian Divinatory Texts**

In the present paper, my aim is to investigate the sensory dimension of a city – and its cultural values – as it is described in the cuneiform divinatory treaties (1<sup>st</sup> millennium BCE). In these series, each phenomenon observed or perceived in daily life (natural/meteorological phenomena, noisy activities, odors, luminous effects...) has been scrupulously described and compiled in thematic lists. Interpreting them as omen – a divine message – the scribes of ancient Mesopotamia enumerated all the occurring conditions of these events; each observation leads to an interpretation.

I will focus on a huge corpus of divinatory texts written in Akkadian (2<sup>nd</sup>-1<sup>st</sup> millennium BCE), called *Šumma ālu ina mēlē šakin* "If a city is set on a height." *Šumma ālu* collects all the omens occurring in daily life, especially inside a city or in the house of the individual. In its final version (1<sup>st</sup> millennium BCE), *Šumma ālu* contains about 120 tablets (one may add its "non-canonical" tablets) and constitutes one of the most important divinatory treaties in the 1<sup>st</sup> millennium BCE (Freedman 1998, 2006, 2015). In *Šumma ālu*, sensory phenomena may help to characterize the landscape of daily life, urban space and its boundaries, such as the public passage-way (street, road), the palace and the temple. What are the sensory features qualifying a city (that make the city stand out from Nature (the steppe for example)? How are the public places sensitively defined (street, square, palace, temple...)? By trying to answer these questions, my paper aims at identifying and defining the inner cultural concepts related to the senses and their consequences in the definition of the various urban spaces, as they are presented in the Akkadian divinatory cuneiform texts (1<sup>st</sup> millennium BCE). I will examine the impacts of the sensory phenomena on



the rules at stake in the interactions between the individual and his various environments (on the social, political, and religious levels).

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**RENETTE, Steve**

University of Pennsylvania

**TOMÉ, André – CABRAL, Ricardo**

University of Coimbra

### **Kani Shaie: A local center within the changing interaction spheres of the Late Chalcolithic and Early Bronze Age**

Kani Shaie is a small site, ca. 1ha, located in the Bazyan Basin in Sulaimaniyah Province, Iraqi Kurdistan. Survey at the site identified its main occupation during the Late Chalcolithic and Early Bronze Age. Since 2013, a joint project of the University of Coimbra and the University of Pennsylvania has conducted excavations at the site with the aim to analyze the affect of changing interregional interaction and mobility patterns on a small community in the Zagros foothills. Through three seasons of fieldwork, the Kani Shaie Archaeological Project (KSAP) has revealed an important local center of the fourth and early third millennium BCE, a period virtually unknown in the region with a material culture that has until now not yet been identified. This dataset consists of a wide range of painted ceramics and a diverse group of seal impressions that reflect a wide-ranging interaction sphere encompassing the Trans-Tigridian and Zagros regions. Importantly, the site was inhabited at least from the Ubaid period almost uninterrupted until the middle of the third millennium BCE. During the Late Chalcolithic the settlement was a node within the overland routes of the Uruk network as evidenced by the presence of both local and Mesopotamian ceramics as well as seal impressions and numerical tablet. In the Early Bronze Age it became a local center that served as a meeting point for communities from the highland valleys and lowland plains. This paper will discuss the evidence from Kani Shaie for a continued, although drastically changing communication and mobility network over a period spanning 2000 years.

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**RICETTI, Melissa**

### **Akkadian motifs in the seals and sealing from Kültepe/Kanesh**

The seals and seal impressions from the site of Kültepe are one of the richest and most diverse corpora of ancient Near Eastern glyptic art. Seal imagery includes motifs carved in Old Assyrian, Old Babylonian, Old Syrian, Ur III, Isin-Larsa and Anatolian styles whose combination often resulted in innovative hybrid compositions.

Thanks to the Assyrian presence in Anatolia, local artisans were able to elaborate a peculiar style which combined foreign and indigenous subjects. Local patterns show a certain familiarity with Mesopotamian art and its mythological repertory. Some figures and features are of Akkadian origin though translated into the Anatolian visual language. How and when the Akkadian tradition was assimilated is still not completely clear. Mythological subjects barely appear on Old Assyrian seals and the archaeological levels preceding the Assyrian settlement in the lower town of Kanesh do not show any possible harbingers. Recent excavations on the citadel, however, are shedding new light on the contacts between Anatolia, Syria and Mesopotamia during the Akkadian period.

This paper will analyse the use and rendering of Akkadian subjects and iconographies by Anatolian seal carvers at Kültepe/Kanesh during the Old Assyrian period in the light of most recent findings.

**RICHARD, Suzanne**  
Gannon University

### **The Madaba Regional Archaeological Museum Project (MRAMP): A Strategy to Protect Cultural Heritage in Jordan**

The MRAMP is an initiative whose primary goal is to protect, restore, and preserve the cultural heritage of the Madaba Archaeological Park West by (literally) encompassing this ancient site by a museum. This ambitious and exciting project envisions the restoration of the Ottoman Buildings which, along with the adjacent “Roman Road” and the “Burnt Palace,” will eventually constitute the first floor of a newly designed museum, whose upper floors will also showcase over a dozen archaeological projects from the region. This combined American-Italian-Jordanian collaboration represents the long-term vision of four field archaeologists concerned to protect the archaeological projects and the material culture of the Madaba Region. Archaeology, cultural heritage, tourism, economic development, and stakeholders all go hand in hand in a project such as this. This is a community-based project and we have created partnerships with schools and universities, enlisted the cooperation of the municipality, the small business owners, private organizations and companies, and the local families, many of whom trace their ancestry back to 1880 to these very Ottoman buildings. The 2016-2017 field seasons have laid the groundwork for the ensuing restoration, construction, and setting up of the entire Museum operation. This project aims to preserve Jordan’s heritage through community engagement and capacity building to ensure the sustainability of this Museum by the local community. The paper will discuss the broader issues of the impact this project will have on the cultural, social, an economic life of the community. Beyond protecting precious antiquities, the Museum will serve as a very concrete symbol linking the community of Madaba to its unique cultural legacy.

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**RICHARDSON, Amy**  
University of Oxford

### **Early Neolithic mobility of people and things in the Central Zagros: the evidence from Bestansur**

Sedentarising communities in the Early Neolithic engaged with expansive networks through which people and raw materials travelled across the ancient landscape. Investigations at Bestansur, dated to 7700 cal BC, have revealed a community deeply embedded in these networks of exchange, drawing on the resources, technologies, and ideologies that spanned Southwest Asia. This paper explores the evidence for human interactions and mobility through analysis of the material assemblage at Bestansur. The inhabitants situated this early village at the edge of the Sharizor Plain (in modern Iraqi Kurdistan), poised in the centre of an axis of mobile materials from which they could shape their tools and adornments: obsidian from the north, carnelian from the east, and marine shell from the Mediterranean and the Gulf. The results of these analyses examine the relationship between adornments made from mobile materials and the remains of at least 72 individuals interred within the ‘House of the Dead’ at Bestansur.

**RITTER, Markus**

University of Vienna, Department of Art History

### **Umayyad Audience Halls Reconsidered**

Questions on the form, the function and the ceremonial of princely reception and meeting places in early Islamic architecture have been discussed since Grabar (1955) and were recently taken up by various scholars including Whitcomb (2016). Consensus holds that architecture under the Umayyad caliphs developed in the Syro-Palestinian Levant, or Bilad ash-Sham, and was indebted mostly to late Roman and early Byzantine traditions. Looking to palaces, Bier (1993) concluded that the role of Sasanian models was marginal, at the most through literature and metaphor, thus on a conceptual level.

While one prominent case of an aiwan with a subsequent square domed room is known, referring to a Sasanian palatial scheme, the majority of reception spaces in Umayyad residences and palaces uses a three-aisled hall with an attached room of various type. These halls are usually understood from the familiar basilica scheme in late antique Roman and early Byzantine architecture, such as by Creswell (1969) when comparing the three-aisled hall with triconch in the palace of Mshatta in Jordan.

This paper argues that this familiarity may be deceptive and, starting from the case of Khirbat al-Minya (Ritter 2017), reviews the discussion and the evidence. It points out characteristics that differ from the basilica scheme and from audience halls known in late antique architecture and proposes to consider a wider array of models for Umayyad audience halls including examples in Mesopotamia.

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**ROBERT, Sataev**

Institute of Ethnology and Anthropology of the Russian Academy of Science

**LILIIA, Sataeva**

Bashkir State Agrarian University

**NADEZHDA, Dubova**

Institute of Ethnology and Anthropology of the Russian Academy of Science

### **Plants, animal and human images of Ancient Margiana (Turkmenistan) in the context of cultural space of Ancient Near East**

Among the materials from archaeological excavations of administrative-ritual center of Ancient Margiana Gonur Depe (South\_Western Kara Kum desert, 2300-1600 BC) a large amount of different images of plants, animals and human beings are present. They are – clay plastics, stone carving (stone figurines, glyptic), toreutics, images on the pottery, artistic casting (compartment seals), bone carving items and stone mosaics. All these artifacts can be divided into several groups: three-dimensional (figurines, statuettes), convex relief ("bas-relief" - images on stone and metal seals & metal vessels), counter-relief (in-depth - carved on clay, stone or metal) and flat (mosaic images). "Subject" (individual) and "composite" (combination of different, including by manufacturing techniques, images) can be distinguished. Images are presented in variety of materials: clay, stone, metal, ivory.

The images of plants found at Gonur Depe almost always are stylized, so it is difficult to talk about the species of the depicted plants. The most recognizable is the image of the "tulip". Phytomorphs like clay "cone" (possibly they were symbols of "world tree"), "buds", models of fruits ("stone pistachio" and flower like jewelry can be attributed as three-dimensional images). Phytomorphic images are met on the stone flat seals and cosmetic bottles. Most numerous are pictures of "world tree" of branched or less often

"pyramidal" ("leaf-shaped") forms, not rare in combination with stylized images of "goats" on the pottery. Sometimes on the pottery phytomorphic ornaments can be seen.

Animals images (real and mythological ones) are very numerous and made in different techniques. Zoomorphic images on the compartment seals are most common. More often they are figures of scorpion, snake, bird and feline. Goats are most popular on the pottery. Special place among animals' images is occupied by small clay plastics. Bulls make up the largest number among figurines, little less are "camels" and "dogs". Clay and stone figurines of cat are also met, but bones of this animal were not found on the site.

Anthropomorphic plastics are mostly terracotta figurines, which, presumably, had a sacred purpose. Most common are flattened figurines - female, male and without sex signs. All of them have almond-shaped eyes and well-modeled coracoid nose. All female figurines, except two ones (from the special room) do not have legs as opposed to males, which usually have those. Male figurines instead of hands often have flattenings such as wings and heads look like birds ones. Human images are met on the metal and stone seals, rare – as a top of the hairpins and on the mosaics. Special place is occupied by the so named stone composite statuettes, usually found in funeral context and which interpretation is a subject of discussion. Some anthropomorphic images have individual patterns that can be interpreted as portraits, what give us possibilities to speak about the physical anthropological features of the population.

The main part of plants', animals' and human images are made in the style characteristic for the Ancient Near Eastern art. That once more confirms status of BMAC and Ancient Margiana particularly as one of the significant components of the Ancient Near Eastern culture.

Our works are supported by RFH/RFBR project 16-01-00288.

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**ROBBERGER, Elisa – KURMANGALIEV, Anna**  
Ludwig-Maximilians-Universität München

### **Semanticizing Ancient Near Eastern Seals and Sealings: The DigANES Project**

Ancient Near Eastern seals and sealings provide us with a huge but complex set of visual and textual data. More than a century of analyses and publications by archaeologists, art-historians and philologists gave rise to often discrete bodies of knowledge, difficult to reconcile for the individual scholar. Thus, it remains unfeasible to gain a comprehensive overview and acquire reliable quantitative data on the circulation of seals, their motifs, and inscriptions.

In 2017, the Institute for Near Eastern Archaeology of Ludwig-Maximilians-Universität Munich launched a BMBF-sponsored project to develop a concept for "Digitizing and Labeling Ancient Near Eastern Seals and Sealings" (DigANES). Our approach centers on the breakdown of complex images into pictorial elements and a structured integration of artefact-, image-, date-, context- and inscription-related data, including the creation of persistent identifiers and links to existing repositories.

In this paper, we present the current stage of the project, the structure of the SQL-database on which it is based, and the principles applied when labelling pictorial elements with the help of a controlled vocabulary. A case-study from the Old Babylonian glyptic repertoire will illustrate the advantages and challenges of a combined qualitative and quantitative analysis.

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**ROUSSET, Marie-Odile – GEYER, Bernard – AWAD, Nazir – SHABO, Shadi**  
Archéorient, University Lyon

### **The defensive system of the arid margins of Northern Levant during the Middle Bronze Age**

In a region of around 7000 km<sup>2</sup>, the geoarchaeological survey of the mission "Arid Margins of Northern Syria" discovered more than one thousand sites. They were in a rather good condition, and for some of them in an exceptional state of preservation. All placed within their environmental context, they shed new light on the knowledge of the steppe area for all periods in the history of Syria and the Middle East. Our paper will discuss the period of the Middle Bronze Age, which witness a more defensive character of the sites and, above all, the protection of the useful territory.

The question of borders and, more broadly, of territorial boundaries in the ancient Orient is one of the subjects often debated and the discoveries made in the zone of the arid margins have several times contributed significantly to this debate. Thus, one of the oldest boundary marked on the ground is the "Very Long Wall" that we connect with the Early Bronze Age IV. Fortification of "Arid Margins" zone in the Middle Bronze Age is different. At that time was built a hierarchized (in terms of distribution and dimensions) network of fortresses, forts, towers, small towers and enclosures. Since most of this system was located within the area we were surveying, we were able to date it by pottery collection and to define on the ground its implantation modalities and morphological characteristics. One of the decisive criteria for the location of the sites is the visibility between establishments to allow light signals communications. According to this logic, we were able to reconstruct the extension of this network well beyond the limits of the zone we have been surveying, on a distance north-south of about 150 km for an average depth of 30 km. This research, using satellite imagery, has allowed to discover unknown and unpublished sites, some of them reaching up to 50 ha and to connect this network with the large contemporary cities known around the steppe: Yamhad (Alep), Qatna (Tall Mišrifa), Ebla (Tall Mardih), Tall al-Nāṣiriya, Tall al-Ṭūkān and Tall al-Šūr.

These largely unpublished data, based on the analysis of a corpus of nearly a hundred sites, connected with the context of the settlement of the margins of the steppe during the Middle Bronze Age, allow us to propose a first interpretation of the functions of this network. The findings of the mission "Arid Margins of Northern Syria" thus make it possible to reinterpret the results of the work on the neighboring regions and sites and to consider the whole from a broader and systemic point of view, thanks to a method of survey and global analysis, diachronic and multidisciplinary, developed, tested and validated by our team.

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**SABZI**, Mousa

Lourestan University, Department of Archeology

**TAJBAKHSH**, Roya – **REZAEI AZANDARYANI**, Hossein

Islamic Azad University

### **Investigation and analysis of rock arts at Dodangeh, Borujerd, Western Iran**

Rock arts highly considered in studies of history of art, archaeology, and anthropological investigations; they are the most evidential records in social archaeology. During archaeological surveys at Borujerd at 2016, there were identified some rock arts and cup marks at Dodangeh village, 17 km southeast of Borujerd. The rock arts presents anthropomorphic (archer, rider, and stood), and zoid (goat, deer, and dog), reliefs, and geometrical and symbolic designs. Within different sizes, rock arts present relevant connected or single depictions that scarcely distributed in open space. The designs generally performed following hammering, engraving and/or scraping the slabs. Following erosions and types of the designs, it seems they date to different periods, however, exact chronology demands laboratory studies. By recent studies, one could suggest that the designs are comparable to different Iranian (especially from western regions) and foreign rock arts, considering quality and quantity of arts. The authors involve in introduction and analysis of the studied rock arts.

**SADER, Helene**  
American University of Beirut

### **Wine industry at Tell elBurak? New evidence from the 2017 season**

Tell el Burak is a site on the Lebanese coast, 9km south of Sidon. The last excavation seasons (2011-2017) have focused on the Iron Age settlement (8th-4th c. BC) which is located on the southern slope of the mound. Among the important finds were an enclosure wall, a cultic installation, 4 major buildings in area 3 and a large plastered vat in Area 4 on the southeast foot of the site. This paper will present the latest archaeological features exposed in 2017. It will then attempt to draw some conclusions about the nature of the activity that took place on the site in the light of the recently exposed features including the results of the palaeobotanical data and the results of the content analysis of the amphorae. The presented evidence as well as a comparative survey of installations from other Iron Age sites may lead to the suggestion that industrial activity linked to wine production may have existed on Tell el Burak during the Persian period.

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**SAĞLAMTIMUR, Haluk – BATIHAN, Metin**  
Ege University

### **The Materialization of Power: Başur Höyük Early Bronze Age Graves**

Başur Höyük is situated near The Başur Stream, which source is around Bitlis Mountains and flows into Botan/Tigris River, in Southeastern Anatolia. The salvage excavation in Başur Höyük carried out in the framework of the Ilisu Dam Project directed by Haluk Sağlamtimur in years 2007-2015. During the excavation seasons between 2011 and 2015, the stone cists and earth graves were discovered which built by destroying Late Uruk Period architecture layers. All of graves contain very rich and eligible burial gifts and point to extraordinary burial custom. The C14 results from the organic remains, which found in the graves, showed that, these graves were dated beginning of the Early Bronze Age I (3100-2900 BC).

Among the findings, there are lots of Niniveh 5 pottery that emerged at the beginning of the 3rd millennium and were considered regional pottery of Northern Mesopotamia; weapons like spearheads and axes; bronze spoons; cylinder seals made of various stones and metals; thousands of stone beads, and various ceramic objects; crafted into specific shapes game stones. This kind of organization, which dated after the 'Uruk System Collapse', for ritual activities and production of the burial gifts require social and economic cooperation, full-time specialization and labor force, highly complex mining activities and long-distance trade. In this regard, the burial findings and its sophisticated iconography can be an indicator multi-component socio-political organization which is related to burial customs and metals to specialized pastoralists from the mountains, Late Reserved Slip and Ninive 5 ceramic assemblages to west and south and local products. This idea support that Başur Höyük was a regional center on the borderline between different cultural worlds and geographic environments.

This study is a preliminary report which consists of the first evaluations on Başur Höyük Early Bronze Age I graves. In the light of the graves that can provide us to understand the process of new socio-economic, cultural structure after the Late Uruk Period in Upper Tigris Valley and network of interaction with communities in Eastern and Southeastern Anatolia, Syria, Iran, Iraq and the Caucasus.

**SALAMAT, Soheil – ABBASNEJAD SERESTI, Rahmat**  
University of Mazandaran, Department of Archaeology

### **The Application of Tin-Based and Arsenical Bronze in 4<sup>th</sup> and 3<sup>rd</sup> Millennium Metallurgy of Iranian Plateau: A New Look**

The research question of the study is the importance of ancient metallurgy in terms of alloying, focusing on tin-based bronze in economical interactions of prehistoric societies. The researchers aim to analyze the discovered evidence from the excavation of prehistoric sites of Iranian plateau and Mesopotamia. The required evidence was gathered through library study and documentation.

In the late fourth millennium and early third millennium B.C. we observed the emergence and rapid development of urban centers in Mesopotamia and the sociopolitical changes had major influences on economy of the regions by affecting the supply and demand system. Although ancient metallurgy initiated from parts of southwest Asia like the plateau of Iran, with abundant and rich metal resources as well as facilities like fuel and water, the major impact of using copper-based alloys in decorative and functional objects by the main urban centers of Mesopotamia have an undeniable role in the methodology and the scale of production in this region. Most of the sites belonging to the 4<sup>th</sup> and 3<sup>rd</sup> millennium B.C. in various parts of Iran Plateau such as Tel Iblis, Shahdad, Shahr-e Sukhteh, Tal malyan, Yahya Hill, Jiroft Hill, Hesar, Silak and Arisman, as well as the evidence from ancient mines and accumulated hills of metal smelting, evidently prove this claim. In addition, Mesopotamian writing sources emphasize on provision of the need for raw materials from the regions, most notably the plateau of Iran.

As we know, copper naturally contains abundant impurities such as combinations of iron, arsenic, lead, nickel, bismuth and tin. Metallurgy is the result of thousands of years of human effort in shaping hard and bony objects, and the ancient metallurgists provided the ground for the improvement of copper properties, by mixing and changing the technical methods. Undoubtedly, the elusiveness and toxicity of pseudo-metal made the ancient metallurgists to look for a suitable alternative to it. In this process, they succeeded to discover tin. With this discovery, bronze alloys entered a new stage. In the metal mixing step, they deliberately added the metals and pseudo-metals such as tin, antimony, nickel, zinc and arsenic to copper, and enhanced the properties of durability, strength, hammering as well as other physical properties. Evidence suggests that in the middle of the third millennium B.C. the tin-based bronze replaced the arsenic-based bronze. In addition, according to some recent researches, the western regions of Iran are considered as an important source for the production of tin and its export to the urban centers of the Mesopotamia and southwest of Iran.

In this study we concluded that tin-based bronze was used in most ancient sites of the 4<sup>th</sup> and 3<sup>rd</sup> millennium B.C. on the plateau of Iran. The metalworkers had access to less tin, which was probably provided by local resources and the transnational trade flow. The authors of the paper will try to analyze the methodology and quantity of tin and arsenic based-bronze used in the metalwork of these courses, and evaluate the role of tin metal in the economic interactions of the Southwest region of Asia.

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**SANTI, Aila**  
Sapienza University of Rome

### **Reinterpreting the *miṣr*: New Insights for a Revised Chronological Attribution of the Mosque-*dār al-imāra* Complex in Kūfa**

The structural-topographical association of the Friday mosque and the *dār al-imāra* stands out as one of the most eloquent –although less studied– phenomena in early Islamic monumental rhetoric. According to the Abbasid historical tradition it first emerged, due to the urgent need to safeguard the public treasure

from the threat of thieves, in the *miṣr* of Kūfa in 638-40 CE. This view, substantially contaminated by interpolations and literary *topoi* characterizing 9th-10th-century anti-Umayyad propaganda, appears to be principally aimed to deny both an Umayyad attribution to this peculiar ensemble and the existence of any sort of programmatic will underlying its advent and spread.

Despite its manifestly mendacious character, the Abbasid tradition turned out to be decisive in interpreting the archaeological evidence left uncovered by the excavations in Kūfa, constituting a sound basis for the firm belief —K. A. C. Creswell being one of its most authoritative defenders— that a set of haphazard events should be regarded as the main agents in the shaping of the material vocabulary of “Primitive Islam”.

The aim of this paper is to provide an alternative view of the whole issue through a critical analysis of literary sources and an accurate review of the archaeological data available. It will seek to propose a new dating for the emergence of the first *dār al-imāra* as well as for its direct connection with the Friday mosque, finally revealing interesting insights into the development of the monumental vocabulary of the Umayyad ruling élite.

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**SAUER**, Eberhard W.

University of Edinburgh

**NOKANDEH**, Jebrael

National Museum of Iran – Research Institute of Cultural Heritage and Tourism

**REKAVANDI**, Hamid Omrani

Iranian Cultural Heritage, Handcraft and Tourism Organisation of Golestan Province

**NASKIDASHVILI**, Davit

Tbilisi State University

**NEMATI**, Mohammad-Reza

Iranian Cultural Heritage, Handcraft and Tourism Organisation of Tehran Province

### **Interconnected Frontiers: Trans-Caspian Defensive Networks of the Sasanian Empire**

Fieldwork, under the auspices of the ERC-funded ‘Persia and its Neighbours’ project (2012-2017), has shed fascinating new light on defensive strategies of the Sasanian Empire. Between the late fourth and the sixth century AD, Persia built up the most massive military infrastructure of any Near Eastern Empire – rivalling if not dwarfing that in the late Roman world. The largest Sasanian fortresses exceed the average late Roman legionary fortress c. thirty times in size, the longest fort-lined Sasanian frontier wall is more than three times the length of its longest late Roman counterpart. Yet these monuments are remarkable not only for their sheer scale, but form part of a sophisticated system. Architecturally similar mega-fortresses are found to the west, east and south of the Caspian Sea, from northern Iran to modern Dagestan. The largest, near Tehran, may have played a central role, and there is archaeological and written evidence to suggest that these fortifications served as temporary bases for large mobile armies. Our project has succeeded in precisely dating three more of these vast purpose-built military compounds. At least two of them are earlier than the fifth-century Great Wall of Gorgan, and they are, more or less, contemporary to the pass defences of Dariali Gorge in modern Georgia. The skilful use of its natural mountain barriers, notably the Caucasus, Alborz and Hindu Kush, and a sophisticated network of artificial fortifications enabled the Sasanian Empire, by and large, to hold its enemies at bay and create the right conditions for inner prosperity and urban growth.



**SCHEIBLECKER, Marion**  
Ludwig-Maximilians-Universität Munich

### **Magnetic investigations in the Shahrizor Plain, Iraqi Kurdistan**

Architectural structures, but also other archaeological features such as ditches, pits, graves, ovens or kilns can be traced by magnetometer prospecting. Moreover, we receive additional information about the alteration of the ancient landscape due to detrital remanent magnetization of the sediments, the shifting of water streams and the action of humans. In combination with an archaeological survey, the results of the geophysical prospection serve for reconstructing the organization of space in these settlements as well as epoch-spanning analysis of settlements and its establishment, urbanization and hierarchy.

The case example is Wadi Shamlu within the Shahrizor plain in northeastern Iraq with its more than 30 ancient settlements. They consist of a few multi-period settlements (Gird-i Shamlu, Tell Begom) and a lot of single-phase flat settlements or farmsteads. All these sites, dating from Neolithic to Sasanid period, were archaeologically surveyed. First magnetic surveys in the Shahrizor plain followed in the years 2014, 2015 and 2016 by Jörg Fassbinder. Settlement traces belonging to different periods as well as a Parthian temple were found. The first geophysical campaign to investigate the flat settlements in the Wadi Shamlu took place in March 2017. The first site revealed rounded structures partly enclosed by a ditch. Such features were in this region so far unknown. A second site close to it revealed an assembly of stone or mudbrick buildings with rows of rooms including ovens or kilns.

The paper will introduce to the technical background of the magnetometry survey in the Shahrizor and summarize first results of the investigation of flat sites in the center of the plain along Wadi Shamlu. Finally, a look on the future prospects of this research will be given and its implications to the archaeology of the Kurdistan region.

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**SCHMALENBERGER, Eva**  
Ludwig-Maximilians-Universität Munich

### **Women in Neo-Assyrian Palaces: The case of Nimrud/Kalḫu**

Palaces are mostly discussed for their role as instruments of power and representation and usually linked first and foremost to the role of the king. As part of my Master's thesis, I took another approach, focusing on the palaces function as residences. My main interest lies hereby on the women of the court. They appear in texts and in some rare cases in imagery, but until now it hasn't been clear where exactly in the palace they lived and worked.

The following were my central questions, while working on this topic:

- Which women lived in the palace and which roles did they have?
- Can the female quarters be located inside the palace?
- What installations and finds hint at female presence or residential quarters in general?

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**SCHOOP, Ulf-Dietrich**  
University of Edinburgh  
**HENDY, Jessica**  
Max Planck Institute for the Science of Human History, Jena

### **The emergence of intensive dairying as a socioeconomic strategy in Chalcolithic Anatolia**

The adoption of milk products into the human diet represents a major step-change in the history of food production. Much recent effort has been invested to identify the beginnings of milk-use, successfully pushing it into increasingly remote times. Less attention has been paid to the circumstances surrounding the *full* adoption of milk production into human economy.

In Anatolia, this comparatively rapid transition seems to be marked by the first appearance of specialised equipment used for the processing of milk (such as churns) in the late 5<sup>th</sup> and 4<sup>th</sup> millennia BC. This initial development does not seem to be characteristic for Anatolia as a whole but displays a distinctive focus on the highland areas in the north and the southwest which have produced early evidence for pastoral economies with a pronounced dairying component.

The talk will discuss the possible economic and social factors which contributed to trigger and sustain this development. The situation at the Late Chalcolithic site of Çamlıbel Tarlası in north-west Anatolia will serve as a case study to demonstrate the complexities of the question. Together with other evidence, the paper will discuss the results and implications of an ongoing research project investigating the remains of pottery churns found here with biomolecular methods.

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**SCHOTSMANS**, Eline M.J.

PACEA - De la Préhistoire à l'Actuel: Culture, Environnement et Anthropologie, UMR 5199, CNRS-Université de Bordeaux

**TIBBETTS**, Belinda W.

University of Exeter, Department of Archaeology

**VASIC**, Milena

Freie Universität Berlin

**HADDOW**, Scott D.

Koç University

**KNÜSEL**, Christopher J.

PACEA - De la Préhistoire à l'Actuel: Culture, Environnement et Anthropologie, UMR 5199, CNRS-Université de Bordeaux

**MILELLA**, Marco

Department of Anthropology & Anthropological Museum, Universität Zürich-Irchel

**Gender differences and the funerary use of pigments at Neolithic Çatalhöyük (7100-6000 cal BC)**

Evidence of pigments in funerary contexts has the potential to shed light on burial dynamics, social differentiation and the symbolic nature of past societies. The funerary use of colourants is well known throughout the Neolithic Near East, a pattern that is sometimes associated with gender differences. The study presented here focuses on pigments in burials from Neolithic Çatalhöyük (Central Anatolia, 7100-6000 cal BC), including the significance and possible social meanings of the colourants employed. Specifically, we investigate the presence of sex, age, and diachronic patterns in these attested cases, versus the null hypothesis of a lack of demographic and temporal differences in their use. All excavated primary and primary disturbed depositions at the site were investigated. The remains with colourants were then analysed by means of elemental, topographical (distribution on the skeleton) and statistical methods. The results are consistent with a relative homogeneity in the use of pigments at Çatalhöyük, even if specific features may indicate subtle social nuances driving this practice. By comparing these results to those from other Near Eastern Neolithic contexts and ethnological parallels, we discuss the perception and representation of gender at Neolithic Çatalhöyük.

**SCHWARTZ**, Glenn M.  
Johns Hopkins University

### **Second-Millennium BC Urbanism at Kurd Qaburstan on the Erbil Plain: 2016-2017 Results**

The 109 hectare site of Kurd Qaburstan, one of the largest Bronze Age mounds on the plain of Erbil in the Kurdistan Region of Iraq, has been subject to investigations by the Johns Hopkins University since 2013. In 2016 and 2017, a study season and excavation campaign provided new information on the Middle Bronze and Mittani occupations of the site. Mittani period excavations on the high mound included continued excavation of elite residential architecture and a “squatter” occupation that included a burial with unusual clay statuettes. Excavation of Middle Bronze occupations on the lower town exposed domestic architecture and an open plaza. Also significant was a sounding to virgin soil, revealing that occupation in that part of the lower town was restricted to the Middle Bronze period. On the high mound, excavations revealed a Middle Bronze acropolis fortification wall and large-scale architecture inside it. Complementing our excavation program was geophysical survey, which documented 18 hectares of Middle Bronze architecture in the eastern lower town. Particularly remarkable was the identification of a large public building, probably a temple, and brief soundings in that area confirmed its date as Middle Bronze. Zooarchaeological and archaeobotanical analysis continue to provide information on the plant and animal economy of the second millennium BC settlement.

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**SCOTT**, Sarah Jarmer  
Wagner College

**COSTELLO**, Sarah Kielt  
University of Houston – Clear Lake

### **The Birds, the Beasts, and Humanity: Agency and Changing Worldviews in Early Mesopotamian Glyptic Contexts**

From the earliest evidence of human settlement through to the middle of the 3<sup>rd</sup> millennium BCE, the function of glyptic imagery in Mesopotamia changed dramatically, while the images themselves maintain a surprising consistency. The earliest glyptic images were designed to express a relationship between humans and the natural world around them, while later seal imagery was intended to communicate information essential to the early city-state economy. It is only through a thorough understanding of the imagery in its functional context that such a change is determinable.

Two specific examples highlight this change. The first is a small, carved stone found at the early Neolithic site of Gobekli Tepe in Turkey, better known for its carved megaliths. This small stone palette illustrates that Gobekli Tepe, far from anomalous, was in fact deeply imbedded in patterns of visual culture found elsewhere in the Near East during the early Neolithic period. The rich imagery at Gobekli, along with the corpus of early Neolithic glyptic from the region, allows us to decode the symbols on the object and to interpret its meaning. Depicting a human figure flanked by a bird and a snake, it presents a picture of the human agent as part of a larger cosmological system.

The second example is an early third millennium seal impression from the site of Ur. Depicting what is commonly known as a ‘combat’ scene, one particular image impressed on a number of sealings is unique, in that it combines with a number of other visual elements, and is found in a number of distinct contexts with a variety of administrative artifacts. The scene can be considered as both ‘traditional’ as well as innovative given an analysis of its archaeological context, alongside a comparative analysis with earlier imagery. Not only does this image represent the continuation of an earlier tradition where humans are seeking an understanding of their place within the cosmological system, but it communicates a new

understanding of humans as a dominant agent, adept at controlling and administrating resources and establishing social hierarchy. Imagery in visual culture from this period includes many of the same glyphic icons, yet they are found in different compositions that cast humans in a new communicative role with their surroundings and each other.

This paper uses two examples to pose the argument that while seal use follows a fairly consistent conceptual trajectory, the contextual and conceptual framework of seal imagery changes considerable from prehistory to protohistory.

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**SEABROOK**, Melina – **TWISS**, Katheryn C.  
Stony Brook University

### **Spatial Variation in Ur Faunal Remains**

The power of faunal remains to shed light on urban socioeconomic distinctions is well established. However, we know little about how animal exploitation and consumption varied within Mesopotamian cities. We therefore examine faunal assemblages from two Old Babylonian areas inside the ancient city of Ur. Excavators identified the relevant deposits as refuse, probably deriving from households rather than temples or other communal organizations. Unlike most published Mesopotamian fauna, these were recovered using dry-sieving and flotation. We compare and contrast the two assemblages, focusing on their taxonomic proportions, skeletal element distributions, and taphonomic signatures. We then use our results to discuss suggested economic and status differentiation in Old Babylonian Ur.

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**ŞERİFOĞLU**, Tevfik Emre  
Bitlis Eren University  
**MAC SWEENEY**, Naoise – **COLANTONI**, Carlo  
University of Leicester

### **Rough Times: The Lower Göksu Archaeological Salvage Survey**

The Göksu River valley in Rough Cilicia was a vital channel of communication between the central Anatolian plateau with the Mediterranean Sea. The valley was more than simply a thoroughfare however. As the only significant concentration of easily-cultivable land in the region, the river valley was the breadbasket of Rough Cilicia. Over the course of its history, the valley acted as both route and destination, its role changing in line with shifting patterns of inter-regional exchange and politics.

The Lower Göksu Archaeological Salvage Survey Project (LGASSP) is investigating the *longue durée* of settlement patterns and landscape use in the valley, building on the work of previous survey projects in the upper areas of the valley as well as on the results of previous excavations. By adopting an explicitly landscape-focused approach, LGASSP is developing a new understanding of the relationship between sites and routes – of both inhabiting and moving through the landscape in different periods from the Early Bronze Age to the Byzantine era.

Crucial to our work are the notions of networks, and our project explores the layers of social meaning that were mapped onto the landscape. From Hittite imperial trading to Byzantine pilgrimage routes, and from Early Bronze Age intensive agriculture to Iron Age pastoralism, LGASSP traces the dynamic interplay between settlement and mobility, fixity and movement.

This paper will present the first full summary of the project's work after five field seasons, from 2013 until our final season undertaken in summer of 2017. It will therefore offer the first public discussion of

important new material, with implications for our understanding of a wide range of archaeological periods in Anatolia and the eastern Mediterranean.

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**SHAMMAS, Samar**

Ludwig-Maximilians-Universität Munich

### **The „Syrian“ Tell el-Yahudiyeh Ware**

Tell el-Yahudiyeh Ware is commonly regarded as an indicator of the connections between the Levant and Nile Valley. Additionally, it shows the mobility of material culture, transfer of prestige goods, ideas and manufacturing techniques during the Middle Bronze Age through the Eastern Mediterranean.

Although this pottery has been the subject of numerous publications, which classified and analyzed this rich material, especially from Tell ed-Dab'a and the Nile Valley but also from southern Levant, the "Syrian" Tell el-Yahudiyeh Ware repertory appears sporadically in publications. In fact, no systematic work has been conducted on this group of vessels, which comes mainly from the Damascene and southern Syrian sites.

This paper presents the unpublished Syrian repertory of Tell el-Yahudiyeh Ware and is part of my PhD project. It brings into focus this pottery's typological attributes, decoration motives, chronology and its position within the other repertories. Moreover, the paper will aim to reconsider the exchange relations and trade roads that connected southern Syria with other regions from the Levant and will interpret the shift of value of Tell el-Yahudiyeh Ware in its "standardization" phase and the extent to which the Syrian potters mastered making and decorating such vessels.

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**SHARIFI, Mahnaz**

Academic member of Iranian center for Archaeology research

### **Archaeological Excavation At Cham Routh Tepe, Seimare, Central Zagoros**

The Cham Routh Tepe is located at 50 Meters on the South bank of Seimare River at Sirvan Township, Ilam Province. It's extent around tow Hectares. The first season of Archaeological excavation was carried out by the author at January 2015. During the first season of excavation, 3 cultural periods have been cleared, which include Iron Age, late Sasanian Period and early Islamic Period.

At this season of excavation, 17 Trenches, 5\*5 Meters was excavated on purpose of recognition of cultural consecution of region, establishments and study of the remnants of Sasanian Architecture. During the excavation some Architectural spaces were discovered, they are the stone structures type with the plaster mortar (Rubbles and plaster mortar). This kind of structure known as the Sasanian characteristic. According to types of the potsherds which found at inside of the Architectural spaces that include the routine utensils and also some parts of the reservation supply utensils with the stringed and palm leaf motifs, most probably the mentioned structures belong to the late Sasanian and early Islamic Periods. The Iron Age layer lacking any architectural space, just very lass potsherds were found at this layer; most probably they belong to immigrant society. The most parts of the structures strongly were destroyed but according to remnant parts and the materials culture which were found at inside of Architectural spaces, likely the Architectural spaces belong to the residential part and some parts of them belong to practical part. The recognized Architectural spaces, in terms of use divided to three parts. First the residential units second the kitchen part and third are the stalls part. Generally the recognized Architectural structures belong to two residential units and some practical parts which are located outside of residential units for

example the kitchen or stalls. Building NO.1 is located at the west part of mound in the vicinity of the road which is leading to the Cham Routeh village. Building NO.2 is located at the east part of the mound. This two building have northeast-southwest plan. Inside the rooms was plated by soft plaster and at some of the rooms flooring by rock and smooth mortar. The practical parts (kitchen and stalls) are locating at between these two units or building (Building NO.1 and 2). There are free passages between the units, according to some evidence some of the daily activity like cooking was done over there. This shows that at that time the cooking was done in the outside of home. According to plurality of Sasanian sites at this area such as the Barza Qavaleh which is one of important Sasanian site in this area (the Sasanian City and Castle with unparalleled stucco), it's seams that, this area was one of the Sasanian colony which after the west borders of Forat threats the Sasanian survivors pay attention on this area.

According to that, this area was far away from the political centers, it seams that the Sasanian princesses at the time of Arab attacked they immigrated to far places like this area, and after the Sasanian Empire totally fell down they lived at this area and this establishment was used until early of Islamic period then after some times this area got abandoned for good.

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**SHEIKHI, Mahta**  
University of Tehran

### **The Impact of Neo-Assyrian Art on Mannaean Societies of Western and North Western Iran**

The objects kept in today's major museums display symbolic images that indicate values and hidden meanings retrieved from the current beliefs of their societies; analytical study and identifying the symbols used in these objects reveals the influence of religion and religious traditions in Manaen societies and deep relations between this culture and Neo Assyrian culture.

In this research by examining and analysis of the most prominent symbolic images such as the sacred tree, winged gods, mythological creatures, Ishtar goddess on golden tablets, earthenware, ivory tablets and other objects found in Ziwiye, Hasanlu and Qalaichi sites as well as ivory objects with pictures of battle scenes, chariot riding and formal ceremonies found in Manaen sites, we try to take a close look at impact of religion on Manaen art and profound impact Neo Assyrian art and culture had on the Manaen art and culture.

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**SHEPPERSON, Mary**  
University of Liverpool

### **The Sealand building at Tell Khaiber: A first analysis of monumental architecture from the Sealand State**

Tell Khaiber is a Sealand period site 19km from Ur. Excavation was completed at the site in spring 2017 and this paper presents the first architectural analysis of the monumental public building which stands at the centre of the site.

Little is known about the Sealand Dynasty which ruled a large swathe of southern Babylonia during the second millennium BC; information comes only from a small collection of texts and no Sealand sites had been identified archaeologically until Tell Khaiber. The Tell Khaiber building is securely attributed to the Sealand Dynasty by a cuneiform archive recovered during the excavations, making it the first major building of the Sealand kings to be studied.

The Tell Khaiber building is a large rectangular structure covering around 4400 sq m. It has several unusual features, including a massive perimeter wall made up of rectangular towers, suggesting that the building was heavily fortified, or at least was meant to appear so. However, the archive and other architectural elements suggest this was not a simple military fort. The in-depth examination of the building's architecture presented here, combined with spatial and lighting analyses, attempts to understand how this unusual structure functioned, how it differs from contemporary public architecture, and what it might tell us about the ideology and organisation of the mysterious Sealand state.

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**SHIKAKU**, Ryuji

Okayama Orient Museum

**NOJIMA**, Hisashi

Hiroshima University

**HOSHINO**, Masato – **UESUGI**, Kentaro – **YAGI**, Naoto

Japan Synchrotron Radiation Research Institute

**OKAMURA**, Hidenori

Kyoto University

**NISHIAKI**, Yoshihiro

University of Tokyo

### **Image and metalworking technology: Bimetallic sword from northern Iran**

Iran has a long history of Metal objects: the highly developed metalworking tradition is also well-known at northern Iran during late 2<sup>nd</sup> and 1<sup>st</sup> millennium BC. In northern Iran, such areas as Talish, Dailaman, Azerbaidjan, bimetallic sword that has bronze hilt casted on Iron blade is a typical metal object of early Iron age. Archaeologists had been recognized it as a key to understand how newly introduced Iron was adopted in northern Iran. But they did nothing but a typological study and left chronological or metallurgical studies, because pottery in this area is too local to compare to other areas and X-radiography, although effective for non-destructive study for metal objects, usually uses energies that are too low to observe the structure inside. Our inter-disciplinary study group worked on this issue by using a synchrotron radiation facility with the world's highest energy, SPring-8 (Hyogo, Japan). This paper is casting a new light on Bimetallic sword's uninvestigated subjects such as its origin and production technique. The figure reconstructed from CT images of swords from Ghalekuti II and other museum collections may reveal cultural influences possibly of Caucasian origin and local tradition, combining newly introduced iron and local bronze working tradition.

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**SHIMOGAMA**, Kazuya

The Ancient Orient Museum, Tokyo

### **People and Graves Before Settlement: Pursuing Early Bronze Age Mobility at Rumeilah on the Middle Euphrates**

Despite continuous efforts, finding archaeological evidence on ancient mobility is notoriously difficult to prove, while many scholars have been emphasizing the role of mobile pastoralists in the Syrian Bronze Age communities. In this paper, the discovery of an Early Bronze Age extramural cemetery at Rumeilah on the Middle Euphrates, Syria, will be presented, in order to discuss the identity of buried group and mobility. The examination of the archaeological data, including ceramic vessels and other types of grave goods

recovered from the graves, and with the help of AMS radiocarbon dating, revealed that the Rumeilah underground graves and tombs in the cemetery were constructed prior to the late Early Bronze Age settlement mound formation in the area, in this case, Tell Ali al-Hajj (approximately 1 km distant from the graveyard). This suggests that the dead buried in the graves may belong to a mobile pastoralist group who exploited the surrounding territories before settling, and the very human group may have later settled on previously uninhabited natural land, beginning to build mudbrick structures in the course of regional urbanization process.

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**SMITH, Robert W.**

Mid-Atlantic Christian University

### **The Abila Icon Fragment and its Continuing veneration in a Byzantine/Umayyad Pilgrimage Complex**

The Abila Icon Fragment discovered in the summer of 2016 is a significant art object that is made more valuable by the context of its discovery. This discovery is shaping the interpretation of the complex and the worship activities at the site. The discovery also provides insight into the religious situation in the region of the Levant during the Byzantine/Umayyad transition period when icons were officially prohibited by imperial order in Christian Byzantium and also officially proscribed by Muslim Umayyad Caliphs who ruled over Bilad al-Sham from Damascus. While local people modified many images in ecclesiastical contexts during the later seventh century in Jund al-Urdunn, the Abila Icon Fragment was preserved in public view. It was associated with the continuing sacred appeal of the pilgrimage complex to the remaining Greek speaking Christians and Islamicizing Arabic speakers who left evidence of their veneration at the site.

The lower left corner of the icon measuring c. 58 cm tall and 49 cm wide preserves most of a raised relief codex-carrying, haloed figure within a 10 cm wide incised guilloche frame decorated with a series of crosses, four-petaled flowers and fleur-de-lis carved into argillite. The excavators recovered the icon fragment at the location of its tertiary use in a ritual area of the Abila pilgrimage complex attached to the west side of a five-aisle transept church that a great earthquake destroyed in AD 749. When the site was subsequently salvaged, the mosaic flooring and local stonework such as the icon buried beneath fallen ashlar was left behind, but the metal objects were recycled and the marble wall veneers and opus sectile flooring was taken to convert into lime.

In its final phase of ritual use the Abila Icon fragment was plastered horizontally face-up into the base of a waterway where water washed over it from a c. 3 m. tall artificial waterfall. The water in the cascade originated c. 1.2 km. to the south at Ain Quwaylibah and flowed through the aqueduct which one of Abila's Bishops had restored in AD 568. The excavator understands the waters flowing over the icon to have been sacralized before they flowed into piping and eventually bubbled up in a fountain within the atrium. Since the top of the icon fragment was found pressed up against a step it is apparent that the head of the figure was already broken off when it was installed. The former use of the icon would be the subject of informed speculation like that at the end of this presentation if the size of the object and further excavation had not exposed the context of its secondary use.

The secondary phase of ritual use of the Abila Icon Fragment took place just two meters from its find spot. A ritual room cut down into bedrock is located just to the south of the waterway. In the northwest corner of a ritual room, the designers of the pilgrimage complex formed a tall rectangular niche in the wall. The west and east sides of the niche show evidence that the icon fragment would have wedged vertically closing the face of the niche and that water would have washed across the vertical face. An argillite slab at the base then directed the cascading water into a drain. Adjacent to the niche a small reservoir provided the water supply that allowed water to drain through incised channels to three bowl shaped pools where small



*eulogia* would be washed and sacralized. The reason for the removal of the icon from this venue appears to have been destruction from the earthquakes that preceded the great earthquake. Evidence for the recent refurbishment of the complex shows in its unplastered wall modifications and unrepaired mosaic flooring in rooms adjacent to where the icon was located.

The primary phase of the ritual use of the Abila Icon is suggested from evidence regarding its original size from the fragment itself, from preserved Early and Middle Byzantine artwork, from evidence in the architecture of the five-aisled basilica and the evidence regarding the emerging use of icons in Christian worship during late antiquity. The icon preserves a fragment of the cloak and foot of a second figure moving to the right. If the icon originally centered on the Christ figure there then could be four flanking codex-carrying Evangelists. A recently restored contemporary setting like that is seen in an apse of the Red Monastery in Sohag, Egypt. If the Abila icon had similarly-sized figures within a frame that went all the way around it could originally have stretched to a width of as much as c. 2 meters. Interestingly, there are two venues that could accommodate a vertically installed stone slab suggested in central locations in the basilica, first along the chancel as screening and second at an inset niche in the south wall.

The Abila Icon Fragment was a locally created piece of religious artwork that in conjunction with the architecture and sensory experiences helped to create sacred space and make the pilgrimage complex a desired destination for believers who referred to God as *Allah* and others as *Theos*. The discovery of this object will contribute to the recent discussions of water in the Byzantine world and the creation of religious spaces discussed by Alexei Lidov. The historical focus of the pilgrimage site remains to be revealed in the ongoing excavation, but it is clear that water which washed over the icon fragment played a distinct role in the second and third locations of the icon. In the community of Islamic scholars studying the transitional period of the Rashidun and Umayyad caliphates Abila will become a prime example of spiritual continuity of sacred space.

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**SMITH, Stefan L.**  
Universiteit Gent

### **Morphological Similarities in Late Chalcolithic and Early Bronze Age Sites across the Syro-Jordanian Steppes: A Mobility of Ideas and/or People?**

While moderate differences in material assemblages and settlement morphologies at a local level can be put down to small-scale cultural-economic variations, similarities at the geographical macro scale are often attributed to cultural connections, implying at the very least a mobility of ideas, and possibly one of populations also. Depending on the spatial and chronological distances involved, this latter explanation can often appear unlikely, however. Alternatively, it can be proposed that similar conditions precipitate similar responses by largely unconnected groups of people, and that some of the convergent material contexts and morphological characteristics of disparately located sites are simply particularly good fits for their respective socio-economic and natural environments.

With this in mind, the author's ongoing project "Human Adaptation in Climatically Marginal Environments of late-5<sup>th</sup> to 3<sup>rd</sup> Millennium BC Syria and Jordan" has identified a number of similarities in settlement morphologies across the semi-arid Syrian and Jordanian steppes, covering a distance of more than 600 km end to end. This has long been recognised for the "Kranzhügel" settlements, however further analysis has shown strong similarities between other settlement types also, for example Late Chalcolithic or Early Bronze Age enclosure structures in northeastern Syria and northeastern Jordan. Much of this data involves sites that have never before been investigated, either on the ground or via remote sensing. Additionally, the few excavations in the region have also uncovered some correlations, for example between the internal road structures at Tell Chuera and Tell al-Rawda, with the latter described by its excavators as having been constructed "as if from a blueprint [...] derived from the earliest [examples] of this ideal city type with radial and concentric streets" (Castel & Peltenburg 2007). While the uncertainty

of the local climate of these steppes, with severely fluctuating year-on-year precipitation levels, makes a degree of mobility-as-norm in their ancient populations likely, these ground discoveries alone are not enough to provide strong evidence for long-distance movement. By putting them together with a holistic mapping of the archaeologically unexplored regions between the Western Jazira, the Shamiya, and the Jordanian Badia, however, a more complete picture emerges. This paper will disseminate these early results of the abovementioned larger project, using all available ground and remote sensing-based data to ascertain the probability of a widespread mobility of ideas, and possibly people, across the large distances of the Syro-Jordanian steppes during the Late Chalcolithic to Early Bronze Ages, ca. 4400-2200 BC.

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**SMOGORZEWSKA, Anna**  
Institute of Archaeology, University of Warsaw

### **Pots and people. Mesopotamia-Gulf interaction in the Ubaid period**

Ubaid pottery spread from its homeland in southern Mesopotamia to the vast areas of the ancient Near East. Ubaid influences can be found in the Gulf, where over 60 Ubaid-related sites have been recognized. The role of Ubaid pots in the Gulf as well as how they got there are issues open to discussion. According to the migration theory, Mesopotamians may have carried pottery as luggage when travelling in the Gulf region. In a different model, Ubaid pots found their way into the Gulf in the course of long-distance trade exchange with Mesopotamia. Excavations at the site of Bahra 1, located in northern Kuwait, provided new data on the character of the Mesopotamia-Gulf relations. The Bahra 1 assemblage with more than 16,000 sherds, representing a wide range of vessel types, offers an excellent opportunity to reconsider the nature of these relations. Imported Ubaid Ware is believed to have had a special role in Gulf communities as a major conveyor of social status and element of display. The wide array of pottery types from Bahra 1 indicates that Ubaid Ware played more diverse roles, extending well beyond its symbolic function. Bahra 1 represents a mix of local and Mesopotamian traits in its material culture. Mesopotamian features are significantly varied and numerous. The strong Mesopotamian presence at Bahra 1 could have resulted from close and direct contacts with Mesopotamia. Taking into consideration the location of the settlement and its early dating, Bahra 1 could have been established by the Mesopotamians to serve as the first way station, especially during the first phase of contacts between Mesopotamia and the Gulf.

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**SOLLEE, Alexander E.**  
Ludwig-Maximilians-Universität Munich

### **Reinvestigating the Lower Town of Tell Halaf/Guzana**

Tell Halaf, ancient Gōzān or Gūzāna, is best known for richly decorated monuments excavated by Max Freiherr von Oppenheim and his team in the early 20<sup>th</sup> century. While studies dealing with the site's history and its archaeological remains have mainly focused on the enigmatic ruler Kapara and the large buildings that occupied the fortified citadel, the extensive lower town has rarely been the focus of scholarly attention. Therefore, many questions concerning this part of the ancient settlement remain unanswered. By taking a new look the results of Max Freiherr von Oppenheim's excavations in the light of the more recent work carried out by the Syro-German mission that investigated the site from 2006 until 2010, this paper will re-evaluate the archaeological evidence available for the lower town of Tell Halaf. Special attention will be given to determining when the lower town was added to the citadel and how it developed. Furthermore, it will be evaluated whether the architectural remains as well as the objects found within

provide any hints on the cultural background of the inhabitants of Tell Halaf. The gathered information will then be used to discuss which aspects of the materials recovered from the lower town can be characterized as Aramaean and to which extent the transformation of Tell Halaf into a Neo-Assyrian provincial capital caused the general population to accept elements of Assyrian culture.

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**SOLOGUBOVA, Maria**

The State Hermitage Museum, Oriental Department

### **Family values in Old Babylonian pantheon. Image of the god's spouse in Old Babylonian glyptic**

Glyptic of the Old Babylonian period is the most important monument representing visual concept of divine pantheon. Numerous cylinder seals contain images of anthropomorphous figures used to be interpreted as deities of Babylonian pantheon, each of them characterized by certain iconography. As a rule, concrete God or a Goddess can be identified not just with divine attribute, posture and costume, but also with their place in a field.

Babylonian society of the 2<sup>nd</sup> mil. B.C. was traditionally patriarchal. Divine community reflected mundane patterns. First and foremost - God's spouse had to assist her husband to fulfill his preordained duty.

Religious texts mention the role of divine spouse in the cult of her husband. A worshipper could ask the Goddess to deliver his pray to her spouse and control him to comply with worshipper's request. This motif used to be reflected in glyptic art. The standart for Old Babylonian glyptic scene includes the head male deity placed rightwards with several minor intercessor deities and human worshippers to the left. Goddess could be represented either as one of intercessors, or as a spouse of the head deity staying behind him. But there are some exceptions.

There is an Old Babylonian seal at the State Hermitage Museum with unique representation of five Goddess'. It is not obvious what Goddess is the central character of the representation. On the seal from the Hermitage the sole male figure is "a nude hero" *lahmu* with sacrificial kid. The significance of this character in the scene has to be clarified. Apart from the original likeliness of the Goddesses presented here each of them has its own distinctive features. They are posture, costume, headgear and several attributes (staff, accompanying creature). The details cut very carefully are evidence of the seal origination from Sippar's workshop. The seal is not inscribed. To identify these Goddesses we have to analyze the iconography of each figure and to search for analogues and similarities in world museums' collections. Presentation of five goddesses in one scene makes the Hermitage seal a unique sample of Old Babylonian glyptic art and needs more intensive study.

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**SONIK, Karen**

Auburn University, Department of Art & Art History – University of Pennsylvania Museum of Archaeology & Anthropology, Middle East Gallery

### **Minor and Marginal? Model and Transgressive Women in Mesopotamia's Pictorial and Literary Arts**

The relative scarcity of female figures in the extant written and pictorial sources of the ancient Near East has long been remarked. Significant scholarly efforts over the past three decades have, consequently, examined closely those limited contexts in which female figures do appear in order to shed new light on their roles and status in Mesopotamia (social, political, religious, legal, economic, funerary, and

otherwise), as well as to illuminate those few female figures that have loomed unusually large in the extant sources. What these scholarly efforts have revealed is striking. Third millennium BCE texts, objects, and images attest to the presence and participation of female figures in crafting and entertainment, cultic and temple contexts, and legal and economic transactions, as well as to their status and agency both in life and in death. And yet, by the early second millennium BCE, the marginalization of both goddesses and mortal women in literary, pictorial, and (arguably also) social contexts seems already to have been well underway. This contribution examines some of the outcomes of these processes of marginalization—including constraints on female agency, as reflected in the minor, genericized, and supporting roles in which even the great goddesses are increasingly cast; the modeling of ideal(ized) social functioning and behaviors, with an emphasis on female figures as intercessors and helpers; and the appearance of vivid demonstrations of the consequences of violating established gender norms—as they are materialized in pictorial and written sources. It also highlights, however, the ways in which the generic classification of female figures, and the over-emphasizing of their superficial commonalities, has tended to obscure even the remarkable features or functioning of specific individuals. Case studies draw on such corpora as the Lamashtu amulets, presentation scenes in glyptic art, and the Gilgamesh narratives.

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**SORKHANI**, Roghayeh Rahimi  
University of Mazandaran, Department of Archaeology

### **Mobility in Dalma period on the basis of material culture**

Dalma ceramics have been found in large quantities in the northwest of Iran and Central Zagros. Some scholars have previously suggested that Dalma wares were produced locally and Dalma ware homogeneity interpreted as a material reflection of a late prehistoric highland ethnic group. Then, on the basis of previous studies, possible explanations have considered the mobility of information or the movement of potters. In this article we will study small quantities of distinctive wares were imported in Dalma contexts and additional evidences that can show the movement of material goods that preserved in archaeological contexts.

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**SOTIRIOU**, Konstantinos-Orfeas  
National and Kapodistrian University of Athens, Archaeology and History of Art Department

### **Fluid as Water: The Various Participants in the Antiquities Smuggling Phenomenon, a Real Threat**

The antiquities smuggling phenomenon seems to have taken a new direction. Recent events have revealed that there are far more dangerous consequences of this devastating practice beside those affecting scholars and academics (Bauer 2013, 1). Leaving aside those people locked into poverty from economically depressed countries - but rich in cultural heritage sites - who are seeking extra money to merely survive (Brodie et al., 2000), now we have to contend with organized criminal groups and people from every spectrum in society who are trying to make a profit from looting (Sotiriou 2016, 342-3).

Researchers have pointed out a series of problems that impede any comprehensive study of the antiquities smuggling phenomenon (Proulx 2013, 111). With a special permit from the Greek Police HQ (number 2565/15/528492), and taking into consideration and respecting the Greek Law about sensitive data information (Greek Law 2472/97), we examined a considerable number of official arrests conducted by the Department Against Antiquities Smuggling of the Greek Police (Athens office). Our aim was to reveal the

essential facts and actualities around this phenomenon, which then could be used as a tool to combat this phenomenon.

This paper will present 10 case studies, extracted from the list of official arrests, that reveal the extremely fluid network of participants in antiquities smuggling, based on their professions. These different incidents satisfactorily reveal how dangerous this phenomenon could grow to be within our society: because of the potential great profits combined with the relatively small penalties for such deeds, compounded by a lack of understanding of the damage by them, and the destabilizing role of organized crime.

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**SOWADA, Karin**

Department of Ancient History, Macquarie University

**OWNBY, Mary**

University of Arizona

### **The Old Kingdom of Abroad: Petrography Results of Cermanic Jars from Giza, Egypt**

The so-called Combed Ware jar is a ceramic hallmark of Levantine commodity exchange during the Early Bronze Age. Significant quantities are known from elite tombs of the Fourth to Sixth Dynasties at different sites in Egypt, with the broadest chronological range of vessels coming from Giza. A large part of this material is now in the Museum of Fine Arts, Boston (MFA). These vessels have been subjected to archaeometric study, revealing origins in the Central Levant for much of the corpus examined. Yet the jars have never been investigated petrographically.

This paper presents the results of petrographic analysis on a number of Fourth Dynasty two-handled Combed Ware jars from Giza held in the MFA. The results enable a larger assessment of the origin of the vessels, and thus the nature of Levantine exchange patterns during the early Old Kingdom.

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**STEIN, Diana L.**

Birkbeck University of London, Department of History, Classics and Archaeology

### **A New Angle on the Contest Scene: Exploring its Context on Third Millennium BC Seals and Sealings**

Described as one of two defining themes of Early Dynastic glyptic, the contest scene is often contrasted with the so-called banquet scene and associated, albeit tentatively, with different categories of people and administration. But the two themes do occur in the same composition, and further down the line derivatives of both become icons of kingship: the one in Babylonia and the other in Assyria. This paper re-examines their relationship on 3<sup>rd</sup> mill. BC seals and sealings and suggests that they refer to different aspects of the same event. While the main protagonist of the contest scene evolves from hybrid figure to nude hero to the king himself, the underlying theme is generally understood to be a metaphor for the generic struggle between the domesticated, civilized and structured world on the one hand, versus the wild, uncivilized and chaotic forces that threaten it, on the other. Looking at older examples of the contest scene on Early Dynastic seals, I suggest that originally there may have been another, more personal angle to this interpretation; one that explains the inconsistent role of the main contestants and that ideally suited the ideology of an emergent elite, whose authority was based on might and increasingly also on a privileged association with the divine.

**STEPNIOWSKI**, Franciszek M.  
University of Warsaw, Institute of Archaeology

## **2D, 3D, and Other Dimensions. On Spatial Scaling in the Art of the Ancient Near East**

The Ancient Oriental art offers a broad overview of the “dimensionality” – perfectly flat wall paintings, reliefs of differentiated depth/protrusion (from *bas-reliefs* to *haut-reliefs*, and from sharp edge contouring to softer, plastic modeling), mixed forms (reliefs adjoining the statuary, or vice versa) , and, finally, “full size” 3D statuary. While such a classical typology may be useful when presenting the art preliminarily, and using technic-based criteria, it may be too narrow when attempting at a more nuanced approach. When undertaking it, questions may be asked as to the “multisensory” aspects of this art, its functional contexts and locations. A few examples, coming mainly from the Hittite Anatolia, Amorrite, Kassite, and Assyrian Mesopotamia, shall be presented. Inspirations, then, to develop such considerations, should be searched for not only in the literature discussing the Oriental art phenomena (as, e.g., Henriette A. Groenewegen-Frankfort, *Arrest and Movement. An Essay on Space and Time in the Representational Art of the Ancient Near East*, 1<sup>st</sup> ed. – 1951), but also in more general works by art historians, (as, e.g., Ernst Gombrich, *Art and Illusion*, 1<sup>st</sup> ed. 1960), or even these by artists themselves – albeit modern (as, e.g., Wassily Kandinsky *Punkt und Linie zur Fläche/Point and Line to Plane*, 1<sup>st</sup> ed. 1926).

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**STRUTH**, Simone  
Bamberg University

## **An Interdisciplinary Method for a New Reading of the Abbasid Stucco Panels from Samarra**

The Abbasid city of Samarra (9th century, Iraq) is one of the largest archaeological sites of the ancient world with an excavation area extending over 57 km<sup>2</sup>. Among the most relevant findings from this site are the decorated stucco panels today preserved in numerous collections worldwide. About 100 years have passed since their discovery and the later publication in Ernst Herzfeld’s pioneering work *Der Wandschmuck der Bauten und seine Ornamentik* (1923). Following Herzfeld, the stucco panels from Samarra have been so far studied mainly for their ornamental features and as autonomous units, without any focus on their technical characteristics or their archaeological context. In-depth technical and archeological analyses of this material have in fact shown that the conclusions offered by Ernst Herzfeld with his original three-style categorisation need substantial revision.

Based on a number of selected stucco examples, this paper aims at reconsidering Herzfeld’s stylistic theory and proposes a new approach to these archeological findings. Excavation reports, historical photographs, and sketchbook notes will be used to relocate the stucco panels in their archaeological context. Within this interdisciplinary frame and through comparative analysis related to design, technique, and function the stucco material from Samarra (not only from Herzfeld’s but also from the Iraqi excavations) will be presented in a new categorisation and interpretation. The analysis so far suggests the presence of different agents and craftsmen in the formation of the „Samarra styles“, and accounts for possible contacts with other centres of the early Islamic period.

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**SULTAN**, Ahmad  
Université de Strasbourg – UMR 7044 Archimède

## **New data from Kaškašok III in Northern Syria**

Kaškašok III is a site of Jezirah, located on the left bank of the wadi 'Aweij. It measures 4 ha and rises about 20 m above the surrounding plain. It is part of four hills, numbered from I to IV, of which III is the most important. The site was excavated between 1986 and 1991 as part of salvage operations undertaken in the area of the future lake northwest of Hassakeh. The research was carried out by a Syrian team from the Directorate General of Antiquities and Museums of Syria (D.G.A.M.S) headed by Antoine Suleiman. The results obtained from this site have never been published except in a preliminary and very incomplete form.

Seven areas were excavated, including four squares on the top of the site and three stratigraphic sounding on its slopes. These operations made it possible to define the periods of occupation of the site. They extend from the period of Obeid in the 5th millennium until the early Bronze age in the 3rd millennium, passing by the period of Uruk in the 4th millennium.

For each excavated zone, there is architecture and finds. For example, there are several dozens of buildings, several hundred objects and several thousand sherds. We are therefore dealing with a large amount of data covering at least ten occupational levels.

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**TABATABAEI**, Neginsadat  
Tehran University

### **Religious Propaganda in the Form of Islamic Inscriptions**

Among the topics that were discussed during the Safavid era (1501-1722), the topic of the Friday Prayer is particularly relevant. One of the most controversial issues among the principles of Twelver Shiism is the incumbency or sanctity of Friday prayer during the absence of the twelfth Imam. Safavid kings had insisted on performing Friday prayer. With the support of the court, Shia Jurists (*faqih*s) authored many treatises about the incumbency of Friday prayer. The significance of Friday prayer has been reflected on the inscriptions of the Safavid religious buildings; for instance, inscriptions on the Sheikh Lotfollah and Shah Mosque contain verses from the Surat al-Jum'a of the Quran, which highlight Friday prayer. Obviously, with reference to verses of Quran, the Safavids were able to insist on performing Friday prayers. On the interior of the dome of the Sheikh Lotfollah mosque, the complete text of Surat al-Jum'a is calligraphed. Remained texts from Safavid era shows until the ages of Shah Abbas the first (c.1588 – c.1629). There were serious controversies among Shia Jurists. Shah Abbas utilized the significance of the art of epigraphy to propagate the Safavids' opinions. The art of epigraphy played an important role in spreading Safavids' opinions. By using the arts of calligraphy and tiling, they increased the efficacy of contents of the inscriptions.

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**TAHERI**, Mohammad Hosein  
University of Tehran  
**HARANDI**, Danial  
Art University of Isfahan  
**SARDARI**, Alireza  
Iranian Center for Archaeological Research

### **Identification of pigmentes of Tal-e Mash Karim wall painting at the Chalcolithic site of Iran**

There are few remains of Prehistoric murals in Iran. So, identification of pigments that were used in them is beneficial information for study of Prehistoric painting technology and method of Iran. The present

study reports some of the results obtained from the application of different analytical techniques to characterize three pigments of Chalcolithic site of Tal-e Mash Karim, Central Iran. The characterization of the studied paintings was carried out by means of optical microscopy (OM), scanning electron microscopy (SEM) equipped with an energy dispersive X-ray detector (EDS), X-ray diffraction (XRD) and Fourier transform infrared spectroscopy (FTIR). Identification of the main element of calcium and calcite crystal phase represents the white limestone for white coloring. XRD analysis and identification of hematite in red pigment, indicated of the red ochre. Also, the FTIR analysis of black pigment indicates of application of coal ash in colors.

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**TAHERI, Sadreddin**

Art University of Isfahan, Faculty of Research Excellence in Art and Entrepreneurship, Department of Art Studies

**SOLTANMORADI, Zohreh**

Bu-Ali Sina University of Hamedan, Faculty of Art & Architecture, Department of Archaeology

### **Political Iconology of Mythical Creatures in the Achaemenid Architecture**

This article has tried to look at the representation of mythical creatures in the Achaemenid architecture to find the semantic roots of them, in the art of ancient Iran and adjacent civilizations especially Elam, Mesopotamia and Egypt. By researching their myths and beliefs, and looking at the motifs of their artifacts, we want to shine a flash on relationship between these cultures, and perusing the migration of these symbols.

We reviewed nine archetypal symbols in the Achaemenid architecture. First, a bas-relief in Pasargadae cut upon a stone slab depicting a guardian man. It is most likely a resemblance of Cyrus himself, possessing four wings shown in an Assyrian style, dressed in Elamite traditional clothing, with the Egyptian Hemhem crown. A fish-man on the walls of palace "S" in Pasargadae may refer to an Apkallu, one of the seven Mesopotamian sages or demigods who are said to have been created by the god Enki to establish culture and give civilization to mankind. Besides that, we can find a Bull-Man, maybe Kusarikku, an ancient Mesopotamian mythological demon shown in artistic representation with a human head and torso, and bovine hindquarters. He is characterized as a doorkeeper to protect the inhabitants from malevolent intruders. Winged Bulls on the walls of Apadana palace in Susa are maybe symbols of Tishtar (god of rain) in his battle with Apush (demon of drought), or just mighty protectors of the palace. Achaemenid winged globes are derived from an Egyptian origin, placed above the entrances to all the temples in order to commemorate the victory won by Horus over Set, i.e., by the principle of light and good over that of darkness and evil. This pattern turned to the symbol of god Assur in the Assyrian art. The battle between a king and a beast in the entrance of Tachara palace is presumably connected with a bas-relief from the Ninurta temple in Nimrud, that Ninurta with his thunderbolts pursues Anzu (Imdugud). Gopat (winged bull or lion with human face with a great emphasis in the Avestan literature) and Shirdal (eagle-head lion) have used in all the ancient eastern arts. Man, eagle, lion and bull each have their magical power and territory. When they combine, the result would be an unconquerable guardian for shrines. Egyptians built the statues of lion-man to show Pharaoh with his human head and body of a bowed lion, that was a symbol of supernatural powers. Mesopotamians added a pair of wings to this mixture. The mythical creature found on the walls of Tomb-e Ajori must be mušhuššu, the sacred animal of Marduk and his son Nabu depicted on the Ishtar Gate of the city of Babylon. Achaemenid diplomacy was based on political, cultural and religious tolerance; therefore is not unexpected for their art to be combined and transnational.



TAMM, Alexander  
Goethe-Universität Frankfurt am Main

### **Excavations in Gird-i Kazhaw (Iraqi Kurdistan). Middle Bronze and Late Sasanian Settlement Layers**

Gird-i Kazhaw is a small hill in the Sharizor plain, which was already settled in the Early Bronze Age. Although already in the mountainous areas of the Zagros, the material culture shows clear affinities to Mesopotamia, especially the Diyala and Hamrin regions. In the Middle Bronze Age a new settlement was founded right to the north of still existing and flourishing older Kazhaw. The new foundation seems to have had more connections to the Iranian culture, and is linked to the migration of the so-called Shamlu people, maybe tribes from the Zagros mountains. As suddenly as the Shamlu settlement emerged it also vanished again, leaving behind the people, who were already living in this area since several generations. After a hiatus of nearly 2,000 years the mounds of Gird-i Kazhaw are suddenly resettled in Sasanian times. Mound B was fortified in order to protect the nearby spring of Bestansur and to control the trade route from Hamadan to Arbil and Kirkuk. On mound A a large building was erected, which might have served to provide housing and rest for merchants, but which also seems to be linked to Christian communities in the region. Based on a coin find the construction programme in Kazhaw can be dated to Kavadh I. and maybe has to be seen in the light of attempts to tie trade closer to the Sasanian Empire and strengthen Sasanian presence in the Sharizor plain.

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TARAGAN, Hana  
Tel Aviv University

### **"Woven" Walls: Textile as Power in the Umayyad Palace at Khirbat al Mafjar (Jericho)**

Stucco carpets and paintings resembling textile carpets totally covered the walls of the Umayyad palace at Khirbat al-Mafjar (724-748 CE) near Jericho. They were restored by British archeologist Robert W. Hamilton and are currently on display at the Rockefeller Archeological Museum in Jerusalem. These carpets present an interweaving of geometrical patterns populated by images of objects, human busts, animals, and fantastic creatures.

The origin of these patterns lies in the portable textiles woven from silk, wool, and other precious materials which were brought to the Umayyad palace as gifts, goods, or booty from cultures with which Islam had contact through conquests, trade, or diplomatic relations. They represent and express cross-cultural encounters and a network of exchange between the Umayyads and China, Sassanid Iran, Sogdiana, Central Asia, Byzantium, and Coptic Egypt.

This lecture will focus on two of the palace's carpets, each of which covers an entire wall. The first is carved from stucco and is comprised of an infinite chain of connected medallions in a uniform and rhythmical pattern, with each featuring an image of a human bust. The second 'carpet' is in fact a mural resembling a carpet, with an image of the royal hybrid creature, the *Senamurv* (Simurgh?), inside the circular pattern. In both cases, however, the patterns featuring on the clothing reflect those of the actual clothing worn by royals and the elite in Sasanian Iran and Central Asia.

I shall contend here that textiles constituted far more than simply functional objects, but were a prime luxury item. Textile gifts presented by one ruler to another were inscribed with a shared vocabulary of power and prestige. By receiving these textiles the Umayyads acquired not only a lexicon of terms containing royal codes, but also the 'right' to join the 'family of kings'.

The use of textiles or carpet-like patterns from various royal sources for covering the walls of the palace added not only prestige to the palace's owners, but is also congruent with the textile mentality

characteristic of Islamic art, in which the textiles covering the Kaaba (*kiswah*) in Mecca, a tent, carpet, cushion, curtain, and so forth, was its ultimate expression since the dawn of Islam.

The study is based on visual and literary primary sources, which presents a mine of information and relates to portable textiles as both gifts and booty and describes their 'pathway of portability' from the inspirational courts to the Muslim caliphs' 'woven' walls.

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**TARANTO, Sergio**

Universitat Autònoma de Barcelona

### **Husking tray: a shared technology between the Late Neolithic communities of the Near East?**

The paper focuses on a pottery shape used by the communities of the Near East during the 7th and the first half of the 6th millennium BC: the so-called husking trays.

These are large trays made of a coarsely strew-tempered clay with a wide oval base and low sides. Their most interesting peculiarity is that incisions and impressions cross enterally their interior surface. Their actual function has always remained unclear.

The husking trays were found for the first time and in abundant quantities in the Hassuna area; for this reason, they were considered for a long time a fossil guide of this culture.

In the successive decades, they were found in sites very far away from the Hassuna area and, consequently they were interpreted as exchanged objects, proofs of the strong interconnections between the Neolithic communities of the Near East.

Thanks to a reanalysis of the previous data and the new archaeological finds it seems that, in reality, the diffusion of this pottery shape bypass the chronological and spatial boundaries previously supposed to be. Moreover, recently an experimental analysis has suggested that they could have been trays to bake bread and the incisions/impressions on their inner surface were anti-adhesive arrangements.

This paper aims to discuss the evidence supporting the idea that the husking trays could be better understood as a technology shared between the communities of the Near East.

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**TASHIRO, Megumi**

Hacettepe University Graduate School of Social Sciences

### **An Experimental Trial to Reconstruct of Burial Custom from Hasankeyf Höyük**

Hasankeyf Höyük is one of the sedentary settlement dated to the 10<sup>th</sup> millennium cal. BC in the upper Tigris valley. The site is located on the left bank of the Tigris, about 2 km east of Hasankeyf, in Batman province, Turkey. The first excavation had conducted by a Turkish team in 2009 and, since 2011, the excavation has been continued by a Japanese team from University of Tsukuba.

From this site, 116 human burials were discovered. Most of the burials were placed along the walls and buried under the residence floors. And also most of them kept tightly flexed position. Particularly of note is that 40 individuals had pigments on their bone's surface. It means 34% of skeletons had painted for burial or some reasons. There are two colors, Red and Black pigments were recognized and a large number of them presents clear forms. These forms can be divided into three types; band type, liner type and unclear form type. In this presentation we will call these skeletons as "Painting Human Bones".

In this presentation, I want to attempt to the reconstruct of burial process in Hasankeyf Höyük. On that account, I divided the sex and age for 3 phases (0-12yr: immature, 12-19yr: sub adult, more20yr: adult /

These skeletons were identified by Osamu KONDO, University of Tokyo) and analyzed of the place of burials, the relationship of burial goods, and the position of the painting human bones closely. Through of these analysis, I would like to refer to the character of painting human bones like who were painted, how and when they were painted and buried.

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**TEEGEN**, Wolf-Rüdiger  
Ludwig-Maximilians-Universität Munich  
**SCHULTZ**, Michael  
University of Göttingen

### **The people from the PPNB site Nevalı Çori**

Prior to the construction of the Atatürk dam at the upper Euphrates, the German Archaeological Institute at Istanbul and the University of Heidelberg have excavated the PPNB site Nevalı Çori. The excavations led by Harald Hauptmann unearthed at the site not only a PPNB phase, however, also Bronze Age and Iron Age layers. From all periods, burials were excavated. The tombs were mainly placed inside the houses. Sex and age were determined using the anthropological standard methods (e.g. Ferembach et al. 1980). The pathological alterations in the bones and teeth were recorded according to Schultz (1988) and Teegen (2004).

As a rule, the skeletal remains were poorly preserved. Often, thick layers of lime made it difficult to locate and to analyze the bone surfaces. Due to these taphonomic alterations, the teeth gave the best evidence of diseases and behavior. The teeth of most of the individuals showed the presence of stress markers in form of linear enamel hypoplasias and root hypoplasias. Females showed particular severe growth disruptions of the teeth.

Apparently, some females used their front teeth as tools; probably they were basket makers. The alterations are similar to those found in Abu Hureyra by Theya Molleson (2006) and in other PPN sites. The PPNB sample from Nevalı Çori is relatively small. However, there are strong indications for sex-dependent tasks in adults and elevated stress in female infants.

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**TENU**, Aline  
The National Center for Scientific Research

### **The 2016-2017 Excavation seasons in Kunara (Iraqi Kurdistan)**

Kunara is located on the bank of the Tanjaro River, about 5 km south-west of the modern day city of Suleymaniah in Iraqi Kurdistan. It is a 7-9 ha site identified during a survey conducted in 2011 by the *Mission archéologique du Peramagron*, directed at that time by Christine Kepinski. Four seasons of excavation took place since 2012. They revealed at least three different levels, mostly dated to the last part of the 3<sup>rd</sup> Millennium. Public edifices were discovered both in the upper town and in the lower. The sophisticated building techniques they show as well as the discovery of a finely carved cylinder seal, a sealing and about 40 cuneiform tablets and fragments indicate Kunara was probably a regional centre. The results of the 2016 and 2017 campaigns will be presented.

**THEOBALD, Wesley**  
The University of Queensland

### **Before the (Old) Assyrians came: A new assessment of Kanesh's involvement in Early Bronze Age trade networks**

Kanesh is famously known as a regionally influential hub in the Old Assyrian (OA) trade network of the Middle Bronze Age, but its previous situation differed considerably, and like other large cities of Central Anatolia, was only significant in its immediate area. Contrary to prior scholarly suspicions, Kanesh in the EBA did not have the predisposition to develop into the powerhouse that it was during the height of the OA Period, any more than its larger Cappadocian neighbours. Prior studies on EBA Kultepe include summaries of excavation findings, and inclusion in some helpful ceramic distribution patterns, but there remains an inadequate consideration of relationships and network analysis during this period. Distribution patterns are important, but only part of the picture; this study includes synthesis of a wider range of site-relevant evidence, to pinpoint the role that Kanesh held in trade and exchange during the latter part of this era. This is inclusive of local, imported, and imitated ceramics, the "Kultepe-type" alabaster idols, smaller metal artefacts, architecture, seal iconography, and inscribed references; corroborating evidence also derives from key interactive or influential cities of the greater region. A clearer picture may then be drawn of the city's role and relative importance in relation to trade links in the region, a first step toward theorising the rise of the Old Assyrian network.

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**THUESEN, Ingolf**  
University of Copenhagen, Department of Cross-Cultural and Regional Studies  
**MARCHETTI, Nicolò**  
University of Bologna, Department of History and Cultures

### **Heritage and Threat (HeAT): An EU Joint Project Initiative on Cultural Heritage**

Today's world contains a host of phenomena and situations that constitute threats to objects, sites and practices deemed "heritage" by stakeholders. Yet there is still a dearth of systematic information about this broad palette of threats, a dearth that constitutes a gap in our general knowledge and an obstacle to the purposeful activity of governments and institutions at times of crisis evaluation and intervention or post-crisis reconciliation. The HeAT project aims at addressing this situation through:

- systematic analysis of threat to and through heritage in different geo-cultural locations;
- the production of a sophisticated cross-cultural typology of threat in the form of practical manuals for use, among others, by governmental organs, global organisations, NGOs and peace-keeping forces;
- small and thought-provoking exhibition(s) to popularise academic findings.

The project is collaborative, transnational and interdisciplinary. It brings together scholarly results and insights gained from research into four different localities and situations. In this presentation of the project we focus in particular on the situation and challenges in Syria, Iraq and Turkey through selected study cases (such as e.g. the detailed assessment of the impact of dams).

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**TONGHINI, Cristina**  
Ca' Foscari University of Venice

### **The citadel of Urfa from Late Antiquity to the Ottoman period**

This paper presents a summary of the results of a new project carried out at the citadel of Şanlıurfa, Turkey, in 2014-2016. On the basis of a stratigraphic analysis of the archaeological remains preserved above ground at the citadel, together with the study of historical photos and a re-examination of the written sources, this research has established a sequence that illustrates the building history of the citadel. This research is contributing to a better understanding of the evolution process that led to the development of a mature military architecture in the area and of the building techniques that were employed in this context.

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**TOUROVETS, Alexander**

University of Louvain

**MASUMIAN, Mohammad**

Azad University of Tehran and University of Kurdistan

### **Excavations in Tepeh Zarduyan (near Marivan Iranian Kurdistan)**

During our excavations in Tepe Zarduyan, we have discovered a very large cemetery of the Parthian period from where a great number of funerary jars and coffins has been unearthed. We were surprised to see that the dimensions of some coffins reached human ones and were adorned with a lot of fine ornamental elements like bands, false handles and side handles. These later reproduced the form of the corpse of an animal whose style and iconography is possible to compare with many painted figures on the ceramics of different periods in Iran.

This luxury decoration and the surprisingly good quality of the firing of the coffins leads us to think that they were made to protect the bodies of persons of high rank. A survey on the site let us know that other coffins were buried here. Beside these great coffins, were a lot of poteries of lesser dimensions and different quality. We observed that they were placed by pairs their mouth facing each other. We suppose that they were used as reserves of food for the deads during their journey in the neitherworld.

Moreover and unexpectedly, we discovered traces of funerary architecture like partition walls dividing the area of the cemetery in different parts and isolating the "main" sector of the site where the great coffins have been buried. Also, we observed some large zones where stones have been placed very carefully side by side on one level. It appears that the partition walls have been built to limit the extension of these different stone area.

Our future studies are to described the links between walls, the stone areas and the material buried in the jars.

Beneath each of these "beds of stones", a lot of funerary jars were buried with no clear relationship between them and at different depths under the stone surface. All the coffins and jars discovered have been brought to the local museum of the city of Marivan in order to be completely cleared of the earth in a more suitable and secured space.

We noted that the stones seems to have been hewn and bring from carries of limestones located at some distance of the cemetery. To the contrary, the local stone is obviously harder and shows a variety of blue coloured surfaces. However, it seems to have been less frequently used in the cemetery. A very large modern cemetery occupies a large part of the teppeh and according the story we were told, the site is reputed by the the people of this side of the lake of Zerbor ( face to the city of Marivan) as an old sacred place.

In a very next future (this year) we plan to excavate more surfaces of the cemetery and mainly the area where the great coffins have been found. However, the survey we have led on the site shows that the cemetery seems to reach a lenght of about 400 m long.

Tepeh Zarduyan is far from have given all the answers to the question we have arisen. However our works can already bring some new data to the knowledge about the burial tradition of the Parthian period.

**TSOUPAROPOULOU**, Christina  
University of Cambridge  
**ANDERSSON**, Jakob  
University of Uppsala

### **Communicating with the divine through commemorative objects in 3rd millennium BCE Mesopotamia**

Commemorative objects – most often casually referred to as votive objects – are overt indicators of a mindset in which people of all walks of life communicated with the divine. Even more so than pious acts or utterances, they represent lasting markers of commitments to the divine. The most clearly marked and efficacious of such objects are inscribed with the name of the person making the gift and nearly always the deity receiving the gift, and the inscriptions themselves often relate to the social standing of the person. This talk will present some of the results and developments of a project currently running in Uppsala and Cambridge which, by combining archaeological and philological expertise, aims to contextualise and analyse the agency and materiality behind the use of inscribed objects commissioned by private individuals in the ancient Near East during the better part of three millennia. We will focus on how the types, materials and archaeological context of such commemorative objects, as well as the diplomatics and formulae of their inscriptions, played a role in negotiating the social identities of their producers and patrons, and how the materiality of such inscribed objects enabled their owners to communicate with the divine. Our preliminary results apply to the third millennium BCE in Mesopotamia.

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**TSUNEKI**, Akira  
University of Tsukuba

### **Difference in occupation and violence by gender in the Kerkh Neolithic Society, Northwestern Syria**

Over 240 human skeletons were unearthed at the Pottery Neolithic cemetery of Tell el-Kerkh, which provide us with information about the society. These skeletons reveal that men sometimes died as a result of social violence while women suffered domestic violence. The particular men of the time used to be engaged in flint knapping and the women appear to have been engaged in textile making. This further indicates that gender roles in their occupations as well as violence associated with gender appear to have existed even in the Pottery Neolithic societies of the Near East.

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**TUCCI**, Giulia  
Sapienza University of Rome

### **Style vs. Function: contexts and consumption of jewelry in the Late Bronze Age southern Levant**

At the dawn of modern archaeology the concept of style, in a purely materialistic approach, was used in archaeological investigations and for interpretations as a typological parameter in the classification of artefacts.

Currently Style represents an instrument of analysis through which one tries to give meaning to a cultural subject that is no longer part of its original context. This tendency is manifested when the archeologist looks for clues and hints about the meaning of an item in the context, or about the integration in the context

itself, and when the researcher investigates the manipulations of the object as a result of cultural phenomena.

As an evolution of this theoretical path, Style has been postulated as a symbol and driving force of expression and communication. Moreover, production does not necessarily imply the intention to communicate something, as it may be experienced in the absence of an audience, spectator or receiver of the message. Not always, therefore, is possible to identify a meaning or a function subordinated to a certain manufacture, which however shows its own style.

The limits of the archaeological approach and research often lie in the nature of the data, which lead us to pay more attention to form and shape, thus creating a sort of "objectification" of culture, placing in the background the active role that objects have in building the cultural and social relationships.

The ultimate purpose of this paper is to go beyond the merely decorative intent of jewelry by investigating functions and contexts of personal ornaments in the Southern Levant during the Late Bronze Age.

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**TÜRKER, Atila**

Department of Archaeology, Ondokuz Mayıs University

### **Devret Höyük: An Anatolian Village in Central Black Sea Region**

Located on a long ridge descending to the plain from Mt. Çakırdağ in Suluova, Amasya, Devret Höyük is one of the "smallest" (50 x 60 x 12 m) mounds of Anatolia. It has a five-layer Early Bronze Age deposit with a thickness of 4.00 m under a weak Late Hellenistic settlement over it. Stratification starts from LCA/EBA I and continues until EBA III. A total of 17 intramural tombs were unearthed as of Layer II at the excavations, and the figure is likely to be greater than 20 together with those which are dispersed. The fact that most tombs were directed to the north-northwest as well as their hocker types are common characteristics. Of the tombs, three are pithos graves and one contains a violin-shaped idol relief. Some tombs have a single gift, whereas some of them have multiple gifts. Especially metal works are striking among the grave gifts (shaft-hole and flat axes, spearheads and arrowheads, pins, a bracelet, an earring, and a jug). Of them, the shaft-hole and bronze combed axe was first found in its respective context except for the illegal excavations. The ceramics have the typical shape and ware characteristics of the period and are quite diverse. Numerous (about 200) flint blades obtained among the stone works make it inevitable to thoroughly reconsider this lithic product as well in production and commercial activities. Although the finds mostly have Central Anatolian traditions, unique works with Anatolian-Balkan relationships were found too. Apart from them, original finds like an idol with a pawn-shaped are also available.

The excavations we carried out at the mound, which had been exposed to intensive destruction by treasure hunters, yielded very rich finds despite the destruction. They showed how important such small settlements other than the excavated large-sized mounds might be in the cultural history of Anatolia. This also encourages one to think to what extent small units should be taken into consideration when proposing settlement patterns.

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**TUMOLO, Valentina**

Eberhard Karls Universität Tübingen, Evangelisch-Theologische Fakultät, Biblisch-Archäologisches Institut

### **The seal-impressed jars in the Levant during the Early Bronze Age: from production to use. Visual perception and cultural connections**

During the Early Bronze Age the practice of pot-sealing becomes a widespread phenomenon in the whole Levant. This system, which consists of impressing seals on the pots before firing, creates permanent marks on the ceramic supports, mainly storage vessels. Besides a series of aspects shared by the whole area, the practice features regional characteristics, spanning from the pottery productions chosen to be sealed, to specific iconographies and themes. The still unclear meaning and functions of the seal impressions should be investigated as closely related to the nature of the messages conveyed, possibly encoding and transmitting ideas associated with the local socio-economic and cultural backgrounds. This paper deals with technical and aesthetic aspects of the seal-impressed jars, and examines their possible manufacture and functional contexts. It aims to present an overview of the distribution of iconographies and themes, highlighting the local trends *versus* common features, as well as connections throughout the entire Levant. The evaluation of how the selected representations might have been perceived will offer insights for outlining the role played by these peculiar media in the visual communication system of the Levantine setting at the time of development of the first urban societies.

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VALLET, Régis

The National Center for Scientific Research – Institut Français du Proche-Orient in Irak, Erbil

### **Early Uruk Expansion in Iraqi Kurdistan: New Data from Girdi Qala and Logardan**

Excavation on the sites of Girdi Qala and Logardan in Iraqi Kurdistan, west of the Qara Dag range in Chamchamal District (Sulaymaniyah Governorate), started in 2015. The scientific purpose of this new project is to study the formation of complex societies, the appearance of territorial polities and long-term intercultural processes. The main goal of the first campaigns was to begin to establish the sequence of the sites, by excavating well-preserved in situ levels. At both sites, after a geophysics and archaeological survey, we opened four or five trenches (A-E). We shall only present here the trenches that provided Chalcolithic remains, but the sequence of occupation of the sites ranges from the Late Halaf (Logardan Trench C) or Ubaid (Girdi Qala North Mound) to Islam (Girdi Qala Main Mound, Trenches A and B).

The Uruk presence is documented by a series of features that excavations are just starting to reveal. At the Main Mound of Girdi Qala, the southeastern slope (Trench C) was the center of large-scale pottery production during the first half of the fourth millennium BC. The excavation has enabled us to identify ten well-preserved overlapping layers close to the surface and almost the whole sequence has shown pottery production or firing structures. Although it is likely that the Main Mound (15m) of Girdi Qala was an indigenous Late Chalcolithic settlement (LC 2-3) the large majority (70%) of the ceramic assemblage collected in Trench C belongs to South Mesopotamian (Uruk) classical traditions, which shows that Uruk pottery was made on-site by resident craftsmen. Thus, the search for a residential area of the South-Mesopotamian settlers was amongst our main goals. The settlement located on a secondary North Mound was opened in 2016 (Trench D). Five successive levels of middle-Uruk domestic architecture, with features such as pottery pipes (the oldest known of this type) or a carefully pebbled street were recognized, but the sequence continues below. The most significant feature is that any local shapes or wares are virtually absent; the pottery belongs exclusively to Southern Uruk traditions. The domestic areas exposed in Trench D of Girdi Qala northern mound constitute the first evidence of a south-Mesopotamian Middle-Uruk settlement east to the Tigris River and north to the Hamrin basin.

At Logardan, the 2015 campaign provided also clear evidences for a very early Uruk presence, with a stone ramp to access the site (Trenches A and B). In 2016, a Trench D opened at the top of the site (30m) excavated on four levels, on a surface of 250 sqm with a height difference of about 5 m between the surface and the deepest vestiges. This extensive excavation allowed us to recognize different phases of occupation between the beginning of the fourth and the second half of the third millennium BC. A monumental Early Uruk public building, provided with massive stone foundations resting upon a recessed mudbrick terrace,



represents level four. Moreover, unlike Trench C at Girdi Qala, where a local LC2 tradition was also documented, Level 4 of Logardan Trench D yielded exclusively south-Mesopotamian-related shapes. The presence of such early and massive architectures in central-northern Mesopotamia is an unexpected discovery. For the moment, it has no parallel north of Tell Uqair.

Despite longstanding assumptions that the Uruk expansion started during the late LC3 phase, it is now clear in the Qara Dagħ area that contact with Southern Uruk people occurred from a very early period (late LC2). In terms of absolute chronology, the Uruk expansion at Girdi Qala and Logardan does not appear ca 3600 BC, but rather ca 3900 BC. Incidentally, the Qara Dagħ seems to represent the limit of this expansion in the late LC2, as there is not (yet) evidence of a Southern Uruk manifestation east of this range before the LC3. It is very likely that the valleys of the Zagros Piedmont in the Qara Dagħ area were part of crucial exchange zone centered on a main road network: the so-called Great Road of Khorasan.

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**VAN DE VEN, Annelies**

School of Historical and Philosophical Studies, University of Melbourne

### **Iran and the East – Displaying the Persian Connection**

The narrative of historical progress created through museological engagements with the Achaemenid Empire has primarily focused on the era's legacy in the West. Despite the prominence of Biblical, Hellenistic and Aryan frameworks in the scholarship of this period, the Empire was based in Western and Central Asia, and a great deal of its material and territorial wealth was located in an area now termed Greater Iran, consisting of Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Afghanistan and Pakistan. Through trade relations, diplomatic exchanges, and the dissemination of religious beliefs, Achaemenid influence even extended beyond their tribute paying Empire as far as India and China. These connections were made even stronger under the Parthian, Sassanian and successive Perso-Islamic empires. Within the archaeological record it is visible in the exchange of material goods, cultural ideas and artistic trends along the steppe routes. Rather than being seen as the eastern peripheries of a Western-facing Empire, these regions should be understood as central to its success and cultural endurance.

In this paper I will highlight an alternative museological approach that focuses on the Asian legacy of the Achaemenid Empire and its successors. By contrasting these with the canonical historical narratives prevalent in displays of Achaemenid culture I intend to demonstrate the need for a re-Orienting of Achaemenid Culture.

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**VAN DIJK-COOMBES, Renate Marian**

Stellenbosch University

### **The Architectural Origin of Mesopotamian Standards in Uruk and Jemdet Nasr Period Iconography**

Standards are well represented in Mesopotamian visual culture. The most famous examples, such as those depicted on Eannatums' Stele of the Vultures, Naram-Sin's Victory Stele, and on Neo-Assyrian palace reliefs, tend to represent battle standards, or standards associated with war. Other types of standards include divine standards, royal standards, city standards, and architectural standards.

The earliest standards in the iconographic record of Mesopotamia date from the Uruk and Jemdet Nasr periods (ca. 4000-2900 BCE). Types of standards from these periods include the ring-post with and without streamer, the ringed pole, the Bùgelschaft, and the floral/star standard. These are depicted in a

variety of media, predominantly cylinder seals and impressions, but also stone vessels, inlays and architectural models. Some of these standards are also represented in the archaic Uruk script. In the visual sources, the Uruk and Jemdet Nasr period standards are all represented in architectural settings. They can either form part of the architecture, or they can be representative of architecture. This paper will discuss these early architectural standards.

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**VERED** (Rosenblum), Ariel

Department of Bible, Archaeology and Ancient Near East, Ben Gurion University of the Negev

### **Taking over the reins: a mural painting from Arslantepe revisited**

The mural paintings of Arslantepe, Stratum VIA (SE Turkey, 3rd millennium BC) offer a unique perspective into the ideology of this complex, pre-urban society at the time of the "Uruk expansion". One painting, located in corridor A796, was seen as evidence for the adoption of southern Mesopotamian symbols by the local ruling elite. However, a detailed examination of the painting reveals a more complicated picture. Considerations of symmetry, iconography and style suggest that the painting was made in several phases, and that its design was significantly altered. Furthermore, the analysis indicates that the horned animals that formed part of the original painting were purposefully preserved and integrated within the later design by the addition of reins. This testifies to the enduring power of local traditions as a source of legitimacy and power at Arslantepe, even at a time of change.

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**VEZZOLI**, Valentina – **TONGHINI**, Cristina

Ca' Foscari University of Venice

### **The Islamic period settlement in Kurdistan/Iraq: results from the Land of Ninive Archaeological Project**

This paper aims at providing a general picture of Islamic period material culture and settlement features in the region of Dohuk governorate (Kurdistan – Iraq) on the basis of results issued by archaeological research carried out by the Land of Ninive Archaeological Project (Università degli Studi di Udine). The regional picture based on the available literature is extremely fragmentary, and it can be stated that the Islamic period has remained largely unexplored especially in the region of Northern Iraq. Past archaeological research into the Islamic period in Iraq has been limited mainly to large urban centres, and capitals (Samarra, Kufa, Baghdad and Wasit) and has concentrated primarily on architecture and urban patterns, while rural areas have remained unstudied.

Archaeological investigations carried out in Dohuk area by LoNAP, focused on multi-period occupations, have brought to light an incredibly rich documentation regarding the occupation of rural lands connected to Mosul, the main political and economic centre of the region during the Islamic period, since the first centuries of Islam (mid 7<sup>th</sup>-8<sup>th</sup> cent.) and until Ottoman time (and even later).

The paper will present these new data, focusing in particular on material culture (identifying regional and interregional features of ceramic production and consumption) and on settlement distribution (providing elements to identify major and secondary centres), underlying continuity and change of occupation during the Islamic period.

VILAS, Ignacio Prieto  
The Complutense University from Madrid

## **The Orientalizing monumental complex from “Pozo Moro” (Spain) and its Near Eastern roots and parallels**

In 1971 a singular monumental complex was exhumated in an Iberian necropolis in the province of Albacete (Spain). It could be identified as the first use of that location, so all the other graves and funerary monuments were placed surrounding the central building of that complex once it had collapsed. It consisted in a temenos made of an adobe wall, acting as a peribolos, surrounding a pavement of small white pebbles forming the shape of an ox-hyde. The peribolos had only one entrance that also was the exit once the visitor had finished the walk around the building. At the center of that temenos there was this building, a cuadrangular monument, made with ashlar blocks that included a cremation grave. The osteological analysis concluded that the deceased person was a 55 to 60 years old male and the grave goods included, among other objects, an Attic Black-Figure lekythos, an Attic Red-Figure kylix and an etruscan bronze oinochoe. A huge amount of limestone blocks laid on the ground evidencing their original position according to the height of the building when it was erected.

The study of the pseudoisodomy of the stone blocks and other architectonic characteristics and elements helped to reconstruct it at the National Archaeological Museum (1980). It seemed clear that the monument had two bodies in height and that it originally was, at least, more than five meters high. Three steps were the base of this tower that had four lion-shaped sculptures acting as the corners of such a surprising monument. Many blocks were also carved with bas-relief scenes that showed a mythological narration along the four sides of the building following, as we propose, a right-to-left sequence. A cavetto cornice above torus separated the first body of the building from the second, that started with other four lion-shaped sculptures acting as its corners. Some blocks carved with high relief scenes, very badly preserved, belonged to this second body that ended with another cavetto cornice above torus and some stepped ashlars.

The stylistic realization of the whole iconographic program soon was identified as deeply influenced by neohittite or siriohittite art, something that clashed with the chronology of the grave goods, dated in the late 6th. Century BC. Some of those scenes reminded of mythological episodes from ancient Near Eastern religions but they couldn't be explained clearly in connection “one with the other” in a logical order. Actually we defend an interpretation of the narrative sequence of the iconographic program identifying the scenes as singular episodes of different but intimately linked mythological cycles from Ancient Near Eastern religions. The selection of these episodes (mythemes), seen as a whole sequence, show a narration of heroization and divinization to honor the deceased person for whom the monumental complex was built. Its message is related to the legitimation of divine kingship of the deceased person and his lineage.

In our opinion, the narration follows an order where we find at first the representation of the Goddess in her holy garden, then the feat of the Hero, the episode of his death, his descent to the Netherworld, the fight against the monster after his “renaissance” and, finally, the Sacred Marriage with the Goddess.

We will discuss the original Near Eastern prototypes and parallels.

Some of the scenes have been studied by distinguished scholars such as Kempinski, Rundin or Kennedy but, from our point of view, with no definitive conclusions.

Our latest researches, included in our Ph.D. Thesis, shed new light on the metrology, modulation and other architectural aspects of this Mediterranean spread type of monuments, including the work of masons and artisans that link it to the phoenician presence in the Iberian Peninsula since the 9th. Century BP. We also offered a new reconstruction proposal that served as the model for the new re-erection of the orientaling building that nowadays can be seen at the National Archaeological Museum in Madrid. Also, the iconographic program represented in the monument has to be seen as a mythological narration of deep Near Eastern roots, through the phoenician sieve, that arrived to the Iberian Peninsula with the phoenician

and canaanite colonization and that served to the particular interests of the orientaling iberian elites with their own interpretations.

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VINET, Alice – GUILBEAU, Denis

Université Paris 1 – Panthéon Sorbonne

### **Obsidian on the move: from the sources to the tool**

The paper explores the mobility and the exploitation of a predominant raw material throughout Pre- and Protohistory in the Near East: obsidian. It will focus on the techno-functional data from Tepeçik-Çiftlik, a site occupied during Pottery Neolithic and Early Chalcolithic, from 7400 to 6000 cal. BC. This Anatolian site is located in a small and circumscribed plain in Cappadocia, Turkey – a close environment from the obsidian sources of Göllü Dağ and Nenezidağ. It, thus, provides an excellent setting to highlight the role of the local communities in the production and the diffusion of Cappadocian obsidian.

This paper will present the results of the techno-functional analysis of the obsidian industry from the Early Chalcolithic levels (around 6000 cal. BC). The consumption of obsidian will be addressed from the start – the procurement of the obsidian at the sources, till the end – the rejection of the production's waste and the used tools in the houses.

The technological analysis comprises the study of all items (cores, flakes, blades, waste etc.) obtained during the production of tools. The recognition of the productions allows the identification and the location of the several processing steps. For instance, the shaping of the volume to be flaked often occurred on the sources whereas the preparation of the striking platform(s) and the phases of 'debitage' took place on site. The functional approach enables the recognition of activities in which the tools were used. Some craft activities, such as bead's production or pottery making, occurred on site. Whereas others took place in the surrounding areas (harvesting, leather processing etc.).

By tackling the obsidian's production and use, this paper address the mobility of the local communities, the know-hows and the traditions.

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VOGEL, Helga

Freie Universität Berlin

### **The Riemchengebäude in Uruk-Warka: a monumental grave?**

In the late 4<sup>th</sup> millennium B.C. a monumental subterranean structure was built at the edge of the administrative and cultic centre of Uruk-Warka. The building, commonly known in ancient Near Eastern archaeology as Riemchengebäude, was fully excavated under the direction of Ernst Heinrich (1937/38) und Heinrich Lenzen (1955/56; 1956/57); however it was published only in preliminary reports.

This contribution discusses the use of the Riemchengebäude as well as the processes that led to the destruction of the building. The previous assumptions have always been that the Riemchengebäude is a closed find deposit with in-situ findings. While this view needs fundamental reconsideration, there is no simple solution for the complex and often contradictory findings. *One* possible interpretation is: first use as a monumental grave, looting(s), an event X occurred (fire, strong force effects), wholly or partially destruction, filling. Results are based both on the analysis of the original excavation documents and on the study of the artefacts from the Riemchengebäude included in the Uruk-Warka collection of the DAI Orient Department (Berlin) at the University of Heidelberg.

The research project on the Riemchengebäude is funded by Fritz Thyssen Foundation, Germany. The overall aim of the study is the final publication of the building with particular references to its social-cultural contexts.

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**VOSOÜQ BABAE**, Elham – **VOSOÜQ BABAE**, Elahe  
Mazanderan University, Babolsar

### **Historical & Structural Evolution of the Urban Network of Saveh City in the Safavid Era**

Historical texture is a complex of historical monuments that is the primary core of each city and indicates the process of formation and development of the city. Saveh city is one of the famous Islamic cities and has several historical monuments, but till now there have been no comprehensive archeological studies about its historical texture. Thus, the purpose of this research is to study the process of historical evolutions in the city of Saveh during the Islamic era, especially during the Safavid era, and also to identify the historical texture of the city. This purpose is: 1) What factors have resulted in the creation of Saveh city? How has the city developed prior to and after the Safavid era? How is the spatial layout of archeological monuments in the city of Saveh? Data gathering in this research is made using two document and field methods. In the first stage, all Islamic resources in which the word Saveh was mentioned were studied, and in the next stage the entire historical monuments of Saveh city were registered, analyzed and studied on diagrams and maps. The result of this research indicates that Saveh city had been first established near the Gharechay and Mozdghanroud rivers at the southern part of the city, because of the need for water. It became very important as a 'link city' during the Saljuq era. In the Safavids period, it reached its maximum development. Due to inappropriate conditions of the land, and the anti-flood characteristic of the southern lands, it will develop toward north and western north.

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**WAGNER-DURAND**, Elisabeth  
University Freiburg

### **The Assyrian Kings, their Images and the Ontologies of Philippe Descola**

In accordance with the profound theories set out in his book *Beyond Nature and Culture* (2013, French original: 2005), anthropologist Philippe Descola has recently argued that images (figurations) are indexes of the ontology dominant in the society in which they have been created (Descola 2015). As such, images correspond to and refer to the ontological construction of the world, intellectually fabricated by those raised and living in it. While Descola refrains from asserting that images alone can be used as a systematic heuristic tool to derive the ontological status of a society or community, his approach opens new perspectives in the analysis of ancient Near Eastern visual culture. Thus, this paper aims to examine the images of the Neo-Assyrian king, who is the most important human entity in Mesopotamian society and its world order, based on the ontologies articulated by Descola. By looking at matters of interiority and physicality and their expressions, this contribution seeks to gain insight into both the prevailing ontology during the Neo-Assyrian times in Northern Mesopotamia and the visual expression of kingship in relation to this ontology.

**WALKER**, Bethany  
Bonn University  
**GADOT**, Yuval  
Tel Aviv University

### **Agricultural Terracing and Rural Revival in Late Medieval Palestine**

Terraced hillsides are one of the characteristic elements of the topography of the highlands of Bilād al-Shām. Intimately tied to certain patterns of land use, land tenure, and water management (including the control of drainage from run-off irrigation), and requiring extensive coordination in labor for construction and maintenance, ancient agricultural terraces are an insufficiently explored window on pre-modern rural societies, which directly reflect traditional land use and labor organization. The growing interest among geographers, soil scientists, historians, and archaeologists in relic terraces has been bolstered by the “rural turn” in Islamic Studies, as well as recent developments in scientific techniques that allow for more precise dating of the terraces themselves.

This paper presents the preliminary results of a newly launched, multi-disciplinary investigation of Khirbet Beit Mazmil in its terraced landscape. The project, The Medieval Jerusalem Hinterland Project, which is funded by the German-Israeli Foundation for Scientific Research and Development, combines archaeological excavations of a late Mamluk and Ottoman farmstead with survey, excavation, and OSL dating of relic terraces that historically belonged to its lands. Informed by a critical analysis of medieval Arabic and Ottoman Turkish texts (legal treatises and *fatwa* manuals, agricultural manuals, geographies, local chronicles, endowment documents, and tax registers), the preliminary results of this project is suggesting ways in which medieval Jerusalem’s agricultural hinterland was revived from the 15<sup>th</sup> century, and village communities in the vicinity thrived at a time of settlement and agricultural decline in other parts of Bilād al-Shām.

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**WEEKS**, Lloyd – **FRANKE**, Kristina – **CABLE**, Charlotte  
University of New England

**AL ALI**, Yaaqoub Yousif – **BORAIK**, Mansour – **ZEIN**, Hassan  
Archaeology Section, Dubai Municipality

### **Saruq al-Hadid: A Persistent Temporary Place in Late Prehistoric Southeastern Arabia**

Saruq al-Hadid, in Dubai, UAE, is one of south-eastern Arabia’s most important and enigmatic archaeological sites. Past excavations at this isolated desert site have revealed an assemblage of copper, iron, gold, stone and ceramic artefacts, mostly of Iron Age date, that is unprecedented in its scale and diversity. Since 2014, three seasons of excavation and post-excavation analyses by the SHARP team have identified a deep, stratified sequence human occupation at the site stretching back into the Bronze Age. These earliest deposits at the site provide a unique insight into human exploitation of Arabia’s desert environments, evincing persistent yet intermittent and temporary occupation of the site at a time of dramatic settlement change in the second millennium BCE, and providing important context for understanding the site’s Iron Age floruit as a locus for inter-community gatherings and cultic practices. This paper will address the Bronze Age occupation of Saruq al-Hadid and its significance for understanding mobility as an adaptive mechanism in late prehistoric southeastern Arabian society. It will challenge – in a way now increasingly common in Near Eastern archaeology – the interpretive value of a binary distinction between nomadic and settled populations, and explore the social and material connections maintained by the site’s temporary occupants in order to better understand the nature of their mobility.

**WEIDE, Alexander**

Institute for Archaeological Sciences, University of Tübingen

**RIEHL, Simone**

Institute for Archaeological Sciences, University of Tübingen – Senckenberg Center for Human Evolution and Paleoenvironment at Tübingen

**STARKOVICH, Britt**

Institute for Archaeological Sciences, University of Tübingen – Senckenberg Center for Human Evolution and Paleoenvironment at Tübingen – School of Anthropology, University of Arizona

**ZEIDI, Mohsen**

Senckenberg Center for Human Evolution and Paleoenvironment at Tübingen – Department of Early Prehistory and Quaternary Ecology, University of Tübingen

**CONARD, Nicholas J.**

Senckenberg Center for Human Evolution and Paleoenvironment at Tübingen – Department of Early Prehistory and Quaternary Ecology, University of Tübingen

### **The emergence of agriculture outside the Levantine corridor: Chogha Golan (western Iran) and its significance for the Neolithization process in the Near East**

Bioarchaeological research during the last twenty years demonstrated that agriculture did not emerge in a single core-area, from where it spread out into other parts of the Near East. Most scholars rather see the Neolithization as a mosaic-like process, to which each sub-region within the Fertile Crescent contributed in its own way. Among the major factors influencing regional subsistence strategies and their development, differing environmental conditions and the uneven distribution of wild progenitor species seem to have played key roles. By using Chogha Golan in the central Zagros Mountains as a case study, we demonstrate that early farmers of the region cultivated a distinct set of crops, which does not represent an introduced package from the northern Fertile Crescent. Instead, early farming was embedded in a traditional hunter-gatherer subsistence economy, which made use of a high diversity of wild resources available in the local environments. Among them, wild grasses represent staples at many sites of the region and were only gradually replaced by the emerging crops. This regional pattern in the Zagros Mountains is unique among early Neolithic landscapes of the Fertile Crescent and highlights the diversity of pathways into farming societies.

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**WEIGEL, Friedrich**

Deutsches Archäologisches Institut – Orient Abteilung

### **Facets of Life in an Ancient Oasis Settlement: Contrasting Living Spaces at Tayma (Saudi-Arabia)**

Studies on “built environment” in the Near East often focus on residential architecture and rarely emphasize the existence of a variety of constructed living spaces which constitute settlements (e. g. habitation, representation, work, subsistence). The ancient oasis of Tayma, situated in the deserts of NW-Arabia, depended on the availability of and access to water constraining both permanent habitation and autonomous subsistence to the oasis itself. Its area was structured by a vast system of walls defining several “Compounds” with distinct characteristics. Their variety is exemplified by Compound E which was dominated by a dense “urban” residential quarter (Area E-South/F) of the Lihyanite to Pre-Islamic periods and Compound A confining a large intramural agricultural zone (Area H) featuring an elaborate canal system and few buildings of the Iron Age (11<sup>th</sup> to 6<sup>th</sup> century BCE).

In this case study, drawn from results of recent fieldwork at the site by the Saudi Commission for Tourism and National Heritage and the Orient Department of the German Archaeological Institute with funding by the German Research Foundation (DFG), these contrasting living spaces are analyzed. Both influenced and were influenced by embodied experiences as well as socio-cultural values. This integrating view on these very different areas of Tayma allows for a better understanding of the complex interplay of various living spaces each constituting different facets of everyday life in an ancient oasis settlement.

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**WELTON, Lynn**  
University of Toronto

### **Continuity and Innovation During The Iron I at Tell Tayinat: Local Traditions, Sea Peoples and the Land of Palistin in Broader Perspective**

During the 12th century BC, the site of Tell Tayinat, located in the Amuq Plain of southern Turkey, was re-occupied after a period of abandonment lasting more than 800 years, during which time the primary settlement in the Amuq Plain was located at Tell Atchana-Alalakh. The earliest Iron I levels from the site exhibit a variety of cultural influences, including both materials that demonstrate continuity from the Late Bronze Age and signs of innovation. Later Iron I levels, beginning in the 11th century BC, provide an assemblage characterized by increasing quantities of Aegeanizing ceramics and other artifact types. These Aegean influences have often been linked to the arrival of the so-called Sea Peoples in the region, a discussion which has been fueled by the recent identification of Tayinat as the capital of a kingdom known from inscriptional evidence as Palistin. However, these Aegeanizing materials exist alongside a variety of other forms of evidence (both historical and archaeological) for local continuity. This discussion will describe a variety of forms of data, including architecture, ceramics and bioarchaeology, from the Iron I levels at Tell Tayinat. The archaeological data will then be assessed in light of the growing body of historical information in order to evaluate the current state of the evidence for the relative impact of intrusive influences on local traditions and provide a broad outline of the site during this transformative period.

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**WHITCOMB, Donald**  
University of Chicago

### **Toward an Archaeology of Sasanian Cities**

In 1985, Hugh Kennedy wrote an article, "From Polis to Medina;" this set a new paradigm for seeing the urban transition from Late Antiquity to Early Islam. A monograph on Qasr-i Abu Nasr, evidence of this transition in Shiraz, was published that same year. Kennedy has more recently studied the same subject in Iran, with less impact due to the state of research on Iranian cities.

This paper will explore the archaeology of Sasanian cities and offer suggestions for delineating the Islamic city in Iran. Older excavations of Jundishapur, Bishapur, and Istakhr will be considered as preliminary models. More important will be new research with some recent initiatives by Iranian archaeologists. Archaeological investigation of cities is a formidable problem and one might begin to suggest some directions for future programs.



**WHITCOMB, Donald**  
University of Chicago  
**DAADLI, Tawfiq**  
Hebrew University, Jerusalem

### **Early Islamic discoveries at al-Sinnabra (Khirbet al-Karak)**

The Umayyad palace at Sinnabra, also known at Khirbat al-Karak, on the Sea of Galilee, was excavated almost 70 years ago. Recent research by the authors (Whitcomb 2002, Da'adli 2017) has led to new excavations that have concluded at the end of February. The focus of attention was the area north of the basilical palace following the hypothesis that the early Islamic mosque should be located there. Da'adli has written on the historical evidence for Sinnabra in which the site was the winter capital of the Umayyad Caliphs, beginning with Mu'awiya ibn Abi Sufyan.

Further research by Whitcomb suggests that the site is more than another *qasr*, or rural estate, but may be modelled on the late classical praetorium and represents an administrative center or early Islamic *dar al-imara*. The structure closely parallels a basilica complex at nearby Tabariyya (Tiberias). Early Islamic urban plans generally seem to suggest the main mosque was located immediately north of such a building. The excavation thus became the search for the mosque of Mu'awiya, datable to the later 7<sup>th</sup> century. North of the palace wall was a broad prepared surface or plaza and, in the last days of digging, a series of two rows of large column bases made of stone and mortar concrete. These bases would indicate a hypostyle hall very similar to the earliest phase mosque of Tiberias (Cytryn 2016). While it is far too early to claim discovery of the Sinnabra mosque, further investigation of this site may potentially add information on this earliest phase of the Islamic city.

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**WICKE, Dirk**  
Goethe-Universität Frankfurt am Main

### **Results of the first two seasons of excavations at Gird-î Qalrakh, a local site in the Shahrizor-Plain**

In 2016 and 2017 the first two seasons of excavations by Goethe University Frankfurt took place at the site of Gird-î Qalrakh in the Northeastern corner of the Shahrizor-Plain, Iraqi Kurdistan. Despite its small size of 3,5 ha, the rather steep and high mound covers a long occupational sequence from the early 3rd millennium BC into the Islamic period. Major aim of the project is the establishment of a local pottery sequence and to conduct microarchaeological research in combination with archaeobotanical analyses. The research issue addresses the question of the local impact of the changing world-politics around that rather peripheral area. The paper will present the first results of this project.

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**WILLIAMS, Kimberly D.**  
Temple University, Department of Anthropology  
**AL-JAHWARI, Nasser**  
Sultan Qaboos University, Department of Archaeology

### **Umm an-Nar Burial Rituals at Dahwa, Northern Oman**

Umm an-Nar burial rituals have received a good deal of attention throughout the Oman Peninsula. Communal tombs and associated burial pits are known from both coastal and island sites, as well as small and large Umm an-Nar settlements. The Umm an-Nar tomb and associated bone pit at the settlement at Dahwa constitute an exceptional case because of the significant evidence of interregional exchange between Indus and Magan on the north Batinah Coast at this site. Specifically, a large amount of both Indus and Indus-inspired ceramics were found in both settlement (DH1) and mortuary contexts at the Dahwa sites. There is strong evidence for interaction and movement between these two ancient cultures, likely centering on the industrial copper smelting at the site. This leads us to suggest that people at this site not only received traded Indus goods like many other sites on the Oman Peninsula, but instead operated an important regional center. This also leads to question of the identity of the people living and working at Dahwa, and explore the potential for exchange not just of goods, but of people and ideas. This large tomb and bone pit, therefore, provides an important avenue to explore if and how mortuary rituals were affected by these intensive interactions. We have documented how the material culture in the settlement strongly suggests the presence of Indus people or at the very least, Indus ideas. Evidence will be presented from both the well-stratified bone pit and the Umm an-Nar tomb itself. This paper will explore the mortuary ritual and material culture assemblage from this tomb, and consider how these lines of inquiry inform the broader concepts of exchange and mobility across the Sea of Oman during the Bronze Age.

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**WINTER, Holly**  
University of Sydney

### **South Levantine ‘Courtyard’ Palaces: Questions of Form and Function**

The function of South Levantine Middle Bronze Age (MBA) ‘Courtyard’ palaces remains an issue after more than 100 years of investigation. Traditional concerns with monumental form and administrative function overlook a consistent association with funerary practices, which is far more in evidence than any putative administrative/redistributive role so often asserted. This notional administrative function has been challenged by research emanating from the renewed Tel Kabri excavations.

The central function of the classic Courtyard Palaces at Tell el–Ajjul, Megiddo, and Shechem (and perhaps similar structures at Jericho, Lachish and Tel Sera) remains at issue. This presentation will review the evidence, both form and functional, relating to the status of the major Courtyard palaces listed above, exploring new ideas relating to funerary use, based on a consideration of the rich burial assemblages associated with the structures. It may be possible to view these structures as funerary palaces, housing the royal funerary cult and curating deceased royal ancestors and elite followers.

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**WORDSWORTH, Paul**  
Oxford University

### **Reconsidering the Demise of an Early Islamic Capital in the Southeast Caucasus: Bardha ‘a and the Kura plain in the 11th-12th century**

The history of the early Islamic capital of Arran (al-Ran) has traditionally culminated in the terrible attack of the Rus in 943, portrayed in detail by Arabic historians. After this period, Bardha ‘a is described as being largely abandoned, with most of its quarters left in ruins and the capital moved to nearby Ganja. Although this is often written as the end of occupation in the city, its name continues to appear in later medieval

histories and two monumental tomb towers dating to the early 14th century attest its continuing importance. This paper examines Bardha‘a after the arrival of the Rus, presenting recent archaeological investigations in the city and the surrounding rural area. The deep stratigraphy in the urban centre has not only revealed continuity from the early Islamic period onwards, but a city that continued to flourish long after it ceased to be a provincial capital. Furthermore, while the focus of archaeological investigation in the south Caucasus so far has largely rested on large urban centres, the results of archaeological survey in the hinterland of Bardha‘a reveal that this period is also a time of transition outside the city. As a region that developed increasing independence during the fragmentation of the Abbasid caliphate, the changes observed in Arran can offer new perspectives both on the structure of the province in the early Islamic period and its economic vitality as a vassal state under the Seljuqs. In combination with ongoing excavations at other contemporary sites in the south Caucasus, it is now possible to review the regional importance of smaller urban centres in the 11th-12th century and their role as part of a broader economic and political network.

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**YAĞCI, Remzi**

Dokuz Eylül University, Edebiyat Faculty, Department of Museology

### **The Presence of the Phoenicians, Phrygians, Assyrians and Greeks in the Late Bronze Age in Cilicia: An Archaeological Assessment**

During the 7th and 6th centuries B.C Late Iron Age in the Cilician Chronology, Cilicia lived its halcyon days with the ever growing trade due to its geographical position in the intersection of both maritime and land trade routes. The region was seen by the Phoenicians, Phrygians, Assyrians and Greeks as a zone expansion. All these powers made alliances with local people or fight against each other in order to establish new trade centers, create new settlements or to take control over the region. Within this context, Cilicia was seen as a buffer zone that played an essential and strategic role. After sea and ground battles and the propagandist declarations of the New Assyrian Kingdom, new trade centers and settlements were established. In this paper, the presence of the Phoenicians, Phrygians, Assyrians and Greeks in Cilicia will be discussed under the light shed by archaeological evidence and historical accounts.

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**YAŞIN, Deniz**

Bern University

### **Urban Archaeology in Cilicia, TepebağHöyük/Adana Excavation: A General Overview From The 2th To The 1st Millennium BC**

The ancient landscape of Cilicia between Syria, Cyprus and Anatolia is divided into the western, mountainous, so-called rough Cilicia and the eastern, plain Cilicia, which is known today in Turkey as *Çukurova*. Adana is located in the Centre of the "Plain Cilicia", on the both side of the river Seyhan, just south of the Taurus Mountains and about 50km north of the Mediterranean coast. The Hittite, Egyptian and Akkadian sources mention the town of *Adaniya*, which has been occupied since 16th century BC. Even then, the town was the capital of the region, known as Kizzuwatna in the second millennium, and as *Kawa*, *Qawe*, *Quwe*, *Que*, *Hiyawa* and *Humē* in the first millennium BC.

The site of TepebağHöyük, one of the biggest mounds in the region since it spreads about 20 acres of space, has located at the old city center of Adana, has yielded a continuous stratigraphic occupation sequence from the Bronze Age to the present. The investigations have so far focused on a larger excavation site on the highest peak of TepebağHöyük. In 2017 new trenches were set on the northwest side of the hill for a

precise investigation of the urban development of the site. This paper outlines the stratigraphy of the site and describes the architectural remains as well as the ceramic sequence on the basis excavations from the 2nd to the 1st Millennium BC.

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**YILMAZ, Mehmet Ali**

Uşak University, Faculty of Science and Letters, Department of Archaeology

### **New Data about Bronze Age Settlement of Erzincan/Altintepe**

Altintepe, northeast of Erzincan Plain section is located in a volcanic hill height of 60 m. The most brilliant period of Altintepe in terms of settlement history was during the period of Urartu Kingdom (9th-6th centuries BC). Findings that the settlement in Altintepe started earlier are obtained by ongoing excavations.

Although it is mentioned in the publications of the first term excavations carried out by Prof. Dr. Tahsin Özgüç between 1958-1969 that the settlement in Altintepe started in the Bronze Ages, this comment does not contain concrete data. Archaeological data of the Bronze Ages have been obtained with the second period excavations carried out by Prof. Dr. Mehmet Karaosmanoğlu since 2003. Architecture, pottery and some analytical studies helped in dating the settlement. The traces of the Bronze Ages have been removed on a large scale, with the settlement in Altintepe continued from the beginning until the Turkish period.

In the second term excavations, finds of architecture and ceramic belong to the Bronze Age were found in two different areas at Altintepe. The South of the Apadana (reception hall), belongs to Urartu period, within a tamped-soil area measuring 5x5 m, probably the installation belongs to furnace was discovered. The pedestal in the area where the oven is located suggests that it is covered with a porch above this place. Another area was uncovered to the east of the open air temple belong to the Urartu Period. Here in 5x6 m in size, ballast walls and floors of tamped-soil in a furnace room, were encountered with a mudbrick basin and platform in front of the north wall. In addition, oven, furnace and workshop area in another room which is next to the other room indicates that this room used as workshops. The ceramics obtained from both sides are handmade, well-polished and often geometric incised decoration. The C14 analyses on burnt wood fragments obtained from the excavated areas revealed that the settlement dates back to 1850-1750 BC. In this article, it is aimed to determination Altintepe's place and importance by comparison with the other settlements which are known by excavations of Bronze Age data obtained from Erzincan / Altintepe Castle.

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**YULE, Paul A.**

Heidelberg University

### **Gender, age and social rank of the Samad Late Iron Age population (Sultanate of Oman): nothing new?**

Graves are our most important category of information in pre-Islamic south-eastern Arabia, but the burial customs are rarely analysed in connection with biological sex and age estimates of the interred individuals. Excavation and study carried out between 1980 and 1996 of multi-period cemeteries in Central Oman (Sharqiyah north governorate) brought over 190 skeletons of the Late Iron Age (post 300 BCE–300 CE) and numerous others from previous periods to light. Manfred Kunter (Gießen University) and Burkhard Vogt (DAI Bonn) first outlined the rules for the burial customs of men and women. Because the publications appeared mostly in German language, Gulf specialists hardly discuss them. The burial

customs consist of a few simple rules governed by the biological sex, age, somatic constitution and the social rank of the interred. Socially high and low-ranking men and women are clearly identifiable. Rank-indicating attributes include the length of the grave, the position of the flexed individual, the number and kind of grave goods. They wanted their rank to be recognisable. Clear signs of different social ranks contradict the usual conception of the Bedouin as polities of equal social rank. There are few or no connections with the customs of the previous and subsequent periods. The pathology reveals no traumatic injuries from fighting which one would expect to judge from warrior graves.

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**ZAHIM MOHAMMED**, Hussam  
Freie Universität Berlin

### **The Archaeological Museum in Iraq between present and Future**

The archeological museums in Iraq have experienced a long chapter of neglect. Recent scientific research efforts in the last 25 years delivered minimal results compared with the history and archeological value of the cultural sites and museums. The latter – in particular – suffered under the massive geopolitical unrest. This paper is based on the results of my unpublished master thesis (titled: "The Archaeological Museum in Iraq: History, Present and Future" written in German and supported by the "Deutsche Orient Gesellschaft"), during which most of the currently museums opened across the country were surveyed on their inventories, current conditions, staff and management.

A comprehensive overview of the museums in general will be presented first, followed by a detailed examination of the recently opened ones. Afterwards the research results will be discussed, along with answers to the following questions: In what condition are the museums now? How are they being managed? And how could they be improved?

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**ZANOUS**, Hamidreza Pasha  
Nankai University  
**ZOHOORI**, Majid  
Kashan University

### **Some Thoughts on the Iranian-Chinese Maritime Trade in Late Antiquity and Early Islamic period**

The Sasanians' competition with the Romans for control of markets and trade routes stimulated the Sasanians to establish ports in various parts of the Persian Gulf, the Arabian Sea, and the Indian Ocean near to China. Since evidence for direct maritime trade between the Sasanian Empire and China is exiguous, it has often been asserted that there was no direct sea commerce between these two powers and civilizations. Scholars such as George Hourani claim that there is nothing to prove direct Chinese sailings to Iran before Islam. Some assume that even after the rise of Islam it took centuries before maritime trade between China and Iran was established. Based on historical, archaeological and numismatic evidence found in Iran and China, we will argue that Persian-Chinese maritime contacts already started from sixth century A.D. It will be shown that while Persians were present in the southern ports of China commercial relations with China increased also in the ports of the Persian Gulf. From the ninth century A.D. on, the Persian Gulf ports became centers of regular maritime trade between Iran and China.

**ZAREI, Hamid**  
Iranian Center for Archaeological Research

### **Archaeological Survey of Kharg Island (North of the Persian Gulf, Iran)**

Kharg Island is located with an area about 31 km<sup>2</sup> in the north of the Persian Gulf and 57 km to the northwest of Bushehr port. Geologists attribute its origins to 14,000 years ago. The survey was conducted by the author for two months. The purpose of this study was to identify ancient sites, clay types, irrigation systems and how to supply water. During this study, works from Sassanid and Islamic sources were identified. These works include ancient hills, wells, water reservoirs, aqueduct, ossuary and graves of the Islamic period located in the eastern part of the tomb of Mir Mohammad Hanafiye and in the west of the island of Kharg. Based on the results of this survey, which was conducted in a descriptive and analytical manner based on field studies, the island has been a popular habitat that has been associated with East Asian countries, such as China. Also, the guidance of surface waters from seasonal rainfall to small dams and natural wells, and several aqueducts have been other impacts of the island's people for access to freshwater.

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**ZARTNER, Katharina**  
Universität Mainz

### **Hairy Hero(es)**

Among the various supernatural beings which were part of the Ancient Near Eastern mindscape barely any other figure had as great a longevity as the so-called (naked) hero with six curls, who was called lahmu, “the hairy one”, in the first Millennium BC. He has been depicted on a variety of different objects (such as cylinder seals, terracotta figurines, reliefs...) dating from the Early Dynastic to the Neo-Assyrian Period – in sacred and official contexts as well as in secular and private ones. This proves that this being played an important role in different aspects of life in Ancient Mesopotamia. While the “hero's” outward appearance with the characteristic untamed hairstyle (usually portrayed through six big curls) remains almost the same over the Millennia its purpose seems to change: from participating in combat scenes with wild animals and protecting the herds to being Ea's attendant and guarding gates to functioning as an apotropaic figure. But what was the ideological significance of the motif and how did it change over time? Although the “hero with six curls” belongs to the more prominent figures in Ancient Near Eastern art he has received relatively little attention among scholars so far. The complex nature of this figure can only be deduced on the basis of the widely distributed archaeological material. By analysing the collected material with regard to iconographic aspects (How and in which function is the hero depicted and with whom does he interact?), considering also the circumstances of the respective period and the textual evidence, the following issues can be addressed: Against which backdrop did the figure emerge? Bearing in mind that “hero” is an anachronistic term – what kind of terminology is best suited to embrace the meaning of a figure who is neither man nor god? How is this intermediate being related to men, gods, mythical beings, animals and nature with whom/which it interacts? And what can we learn about the perception of and the connections between all of these aspects ?

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**ZEIDI, Mohsen – CONARD, Nicholas J.**  
University of Tübingen, Department of Early Prehistory and Quaternary Ecology – Senckenberg Centre for Human Evolution and Palaeoenvironment at University of Tübingen

## **Techno-typological analysis of the chipped lithic artifacts from Chogha Golan, Ilam Province, Iran**

This paper presents the results of techno-typological lithic analysis from our excavations at Chogha Golan, an aceramic Neolithic tell site in the foothills of the Zagros Mountains in western Iran. In the summer of 2009 and 2010 researchers from the University of Tübingen in collaboration with the Iranian Center for Archaeological Research excavated a small area of the site to document its cultural and chronostratigraphic context. AMS radiocarbon dates indicate that the site was occupied from 11,700 to 9,600 cal BP. In addition to large assemblages of faunal and botanical material, we recovered rich assemblages of chipped lithic artifacts from all 11 of the main find horizons at Chogha Golan. The lithic industry at Chogha Golan is characterized by unidirectional bladelet production using a pressure technique documented by extremely numerous bullet cores. The bladelets from the reduction sequence have been used for a variety of standardized tools. Comparison of the lithic industry at Chogha Golan with other early Neolithic sites in the Zagros region documents many similarities as well as regional variations that we address in the current paper.

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**ZEYNAVAND**, Mohesn  
Isfahan University of Art, Department of Archaeology  
**SHARIFI**, Fereshteh  
Bu-Ali University, Department of Archaeology

## **Deh Luran plain after around half a century (Archaeological review Survey), southwest of Iran**

Deh Luran Plain, located south-western of the plateau of Iran, is Archaeologically very important because of its location between Mesopotamia, Shoushan Plain and Central Zagros Mountains in the north. Firstly, the French Archeologists, Gautier and Lampre excavated some sites in the region in 1903. After a long gap, Braidwood visited the region and lastly his colleagues and students systematically surveyed the region under the supervision of Frank Hole. He excavated sites such as Ali Kosh, Chagha Sefid, Musiyan, Sabz, etc. Then, in 1968-69, James Neely systematically surveyed the watering and canalling system in the region. This research ended in recognizing and investigating about 330 archaeological places. Recently, civil and watering projects in Deh Luran Plain provided a chance to archaeologically investigate the region once more. Hence, the Plain surveyed in three months and concluded in valuable results. In this research, sites related to Mid-Palaeolithic period were discovered. Meanwhile, surrounding northern plains, which are less important, there were discovered sites related to the later second and third millennium, which are important in the settlement patterns during Elam. Lastly, most of the sites in the mentioned plain are damaged because of the Iran-Iraq war, farming and civil activities.

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**ZINGARELLO**, Melania  
Université de Strasbourg

## **Ceramic Grave Goods from Late Third Millennium BC Mesopotamia: A Fresh Look at the So-Called “Four-Part Sets”**

In the archaeological literature, the term “four-part set” has been introduced for the first time in the preliminary reports of the excavations at Abu Salabikh in Central Iraq to refer to groups of vessels,

apparently connected in terms of function, found among the grave goods of some intramural graves of the Main Mound buildings. The set is composed by a large bowl or vat, a perforated cylindrical stand, a strainer and a small beaker, each vessel usually placed one in the other, and it is thought to be used in the production of beverages between the end of the Early Dynastic and the Akkadian period.

This paper presents a thorough examination of these sets, retrieved among grave goods at different sites in Central Southern Mesopotamia up to Tell Hariri, ancient Mari, where they appear in the pottery assemblage of the “maquettes architecturales”, in apparently non-funerary contexts. The analysis of the sets and their archaeological context will be conducted from a functional perspective in order to reconstruct the supposed use of these sets and their connection with the preparation of beer. Furthermore, the sets will be discussed within the framework of the material connections and mobility of goods, practices and ideas of the ancient Mesopotamian society in the third quarter of the 3rd Millennium BC.

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**ZWICKEL**, Wolfgang  
University Mainz

### **Roads around the Sea of Galilee from the Neolithic to the Persian period**

Unter Berücksichtigung der siedlungsgeschichtlich belegten Ortslagen in einem Umkreis von etwa 10 km um den See Gennesaret zeichnen sich sehr unterschiedliche Straßenverläufe in dieser Region im Verlauf der Geschichte ab. In manchen Epochen gab es hier überregional bedeutsame Straßen, in anderen Zeiten dagegen nur regional bedeutsame Straßenverläufe. Dies ist einerseits durch die ökonomischen und politischen Verhältnisse in einer bestimmten Zeitepoche bestimmt, wirkt sich aber andererseits auch wieder auf die ökonomischen Rahmenbedingungen aus. Siedlungsgeschichte und Straßenverläufe sind somit auch ein Spiegel der wirtschaftlichen Verhältnisse einer Zeitepoche.





ALACHKAR, Sawssan

### **Craft production as evidence for mobility in the Early Bronze Age of Northern Mesopotamia**

The appearance in the Jezirah of high quality pottery made from particular clay sources located some distance to the north, in south-eastern Anatolia, provides evidence for the movement of people between these two regions in the first half of the third millennium BC. The technological know-how behind this pottery production has been plausibly linked to the early development of Bronze metallurgy in Anatolia. One possible scenario for the spread of the high quality pottery southwards is the movement of craft specialists from Anatolia into the Jezirah in context of emerging urbanisation in the latter region.

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ALASAAD, Jumana

Ruprecht Karls Universität Heidelberg

### **Pottery with incised decorations from the middle Euphrates**

During the second half of the third millennium B.C, the middle Euphrates witnessed the raise of many settlements. Tell Bi'a was a huge settlement, where layers dated to the third and second millennium have been discovered. The ceramic assemblage in Tell Bi'a was significant and included a characteristic kind with incised decorations. The incised decorations represent geometric designs, animals, plants, human and objects. Moreover, these decorations are implemented on pots, bowls, dishes, cups and vessels. Sherds with incised decorations were found in palaces and temples.

This pattern of decorations were not only found at Tell Bi'a, but also in many other sites in the middle Euphrates and were in particular characteristic and a traditional feature for the second half of the third millennium on the middle Euphrates .

This poster will present this traditional type of pottery with incised decorations and show the most popular incised designs from Tell Bi'a. Moreover, it will include a comparative study with incised decorations from several sites.

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AL-HUSSAINY, Abbas – FILIS, Ali – FLAIH, Ahmed – KASIM, Saffaa – HADI, Hussam – TAHER, Haneen

### **Fourth and Third millennium BC settlements and materials from the 2016-2017 Mi-Enlil-Arakhtum survey**

The “Mi-Enlil-Arakhtum”, named after the two ancient branches of the Euphrates, is a 2016-2020 survey project carried out in the area north of Diwaneyah, in the two districts of Sumer and Dagharah.

During the first two seasons (2016-2017) some large fourth and third millennium BC sites, Tell Abu Taruf, Tell el-Hora and Lejjet Abu Salabikh, have been discovered or newly documented. An integrated approach has been applied including high resolution topographic mapping using satellite imagery and UAVs together with intensive survey through materials collection and soundings.

In this poster we present the results of the researches at the three sites and their relevance for the fourth and third millennium BC settlement pattern in Central and Southern Mesopotamia.

### **Parthian and Sasanian settlements and materials north of Diwaneyah: new data from the 2016-2017 Mi-Enlil-Arakhtum survey**

The “Mi-Enlil-Arakhtum”, named after the two ancient branches of the Euphrates is a 2016-2020 survey project carried out in the area north of Diwaneyah, in the two districts of Sumer and Dagharah. During the first two seasons (2016-2017) we surveyed almost one hundreds new mounds dating to the Parthian and Sasanian periods. The majority of them are large settlements spread through the entire survey area. Intensive survey, including pottery and small finds collection, has been carried out at all sites allowing to provide a preliminary functional interpretation of the different areas. In addition several soundings have been opened in selected sites in order to obtain a detailed chronological sequence. In this poster we present the preliminary results from the researches on the Parthian and Sasanian settlements documented in the frame of the 2016-2017 Mi-Enlil-Arakhtum survey.

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**ALMOUSTAFA**, Hilin  
University of Sapienza

### **How to rebuild a third Millennium House: (example from Jazierh region)**

Whereas houses are found in almost every excavation the question is how does a ‘household’ finds itself in the archaeological record?

This poster aims to present the aspects we need to apply to establish dwelling characteristics of the area by understanding the processes, through which, ancient people created and modified the built environment. to better understand the way ancient people used the dwellings, how they arranged activities and spaces within them, and how the features of the dwellings shaped these patterns.

Moreover, focusing on several patterns in the production of space in Upper Mesopotamia households to conclude if these patterns were an effort by residents and city planners, to define urban space by markers, that indicate ownership and privacy seeking. Based on the evidences had been found, whether the use of space was part of the original city plan, or it may has represented the activities of residents creating new space function to meet their own needs. Or it could be a combined need for security and efficient infrastructure. Attempting by that to link socio-political system to spatial configuration.

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**BERTOLDI**, Francesca  
Laboratorio di Antropologia Fisica, Dipartimento di Studi Umanistici, Università Ca'Foscari Venezia, Italia

**BITADZE**, Liana  
Tbilisi State University, Georgia

**LALIASHVILI**, Shorena  
Tbilisi State University, Georgia

**RASIA**, Piera Allegra  
Laboratorio di Antropologia Fisica, Dipartimento di Studi Umanistici, Università Ca'Foscari Venezia, Italia

### **Anthropological study of a Bronze Age skeletal sample from Doghlauri cemetery (Shida Kartli region, Georgia)**

The salvage archaeological investigations headed by I. Gagoshidze of the Georgian National Museum at the site of Doghauri in the Georgian Shida Kartli region allowed the partial excavation of a wide burial area. During the 2012 field campaign 152 tombs have been brought to light, even if not all of them contained human skeletal remains. Human remains from 64 of these have been analysed in 2017 in the framework of the joint "Georgian-Italian Shida Kartli Archeological project", and their data will increase those obtained during the 2015 excavation season, previously studied by one of the present Authors. The burials date from two distinct chronological phases: the Kura-Araxes period is represented by more than 20 graves, while the Late Bronze Age by around 40 graves. In 16 cases we faced the presence of more than one subject in a single grave: this is most probably due to the fact that burials were often re-opened and used for a long span of time, a habit apparently more common in the Kura-Araxes than in the later phases. Although bones are usually friable and fragmented and almost all the skeletons are incomplete, it has been possible to diagnose sex and age at death for most of them and to record extremely useful data for the reconstruction of health and lifestyle, with the aim of a better anthropological and archaeological knowledge of the populations that inhabited the same geographical environment in two different periods of time.

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**BUCCI, Ilaria**  
University of Turin

#### **Poster proposal: GRAFFITI FROM HATRA**

Graffiti have been brought to light since the first Iraqi excavations at Hatra led by the Directorate General of Antiquities of Iraq, with images and texts scratched and painted onto the walls of private houses, fortifications, and temples; their extensive distribution in the city reveals a widespread practice, at least in the late period (i.e. the first half of the 3<sup>rd</sup> century AD). The documentation consists of drawings, pictures, and hand-written notes made by the archaeologists of the Directorate General of Antiquities and the Italian Archaeological Expedition at Hatra during the excavations and surveys on the site, and it remains largely unpublished.

Graffiti vary considerably in size and quality and can be considered as spontaneous expressions, not restricted to official paradigms. Moreover, since it appears that the authors drew inspiration mainly from their own world, graffiti are an outstanding source of information about the art, language, and – on a wider scale – life in Hatra in the 3<sup>rd</sup> century AD. They are also a precious tool in exploring the ambivalent boundaries between formal and informal writing, and private and public spaces.

Pictorial graffiti notably offer a much more varied repertoire than official art and reveal themes and iconographies otherwise little represented or even completely missing, e.g. from sculpture and painting. These depictions are particularly interesting as they evoke comparisons not only with models coming from Parthian Mesopotamia and Iran, but also extensively with Hellenistic and Roman models from Roman Syria (especially from Dura-Europos and Palmyra), as well as the Roman world in general. As such, they greatly enrich our perspective, confirming that contacts and cross-cultural influences characterized the artistic production of Hatra at various levels.

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**CAVRIANI, M. – PIZZIMENTI, S.**

#### **The Bronze and Iron Ages Stratigraphic Sequence in Area P at Karkemish**

The 2014-2017 excavations in area P West by the Turco-Italian Archaeological Expedition to Karkemish, under the direction of Nicolò Marchetti of the University of Bologna, were focused on Woolley's North-West Fort, located at the westernmost edge of the northern fortification system of the ancient city. Five main structural phases dating between the Late Bronze II and the Iron II period have been detected. Through a detailed stratigraphic and architectural analysis together with associated materials (of which many of an administrative nature), the development and transformation of the area between the late 2nd and the early 1st millennium BCE are presented in this poster.

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**CHICA-LEFORT**, Tiphanie

Paris 1 Panthéon-Sorbonne, France

**SHARON**, Gonen

Tel Hai College, Israel

### **Prehistory of wood at Nahal Mahanayem Outlet (Israel)**

Wood remains have rarely been reported from Near Eastern Middle Palaeolithic sites. Preservation conditions in most sites prevent the survival of botanic remains. Furthermore, evidences for human utilization of wood during the Middle Paleolithic in this area was never reported.

The site of Nahal Mahanayem Outlet (NMO), located on the east bank of the Upper Jordan River and OSL dated to around 65,000 BP, is defined as a short-term hunting locality (terminology after Binford, 1980). It was excavated during eight field seasons by a team from the Hebrew University and the Tel Hai College (Israel) under the direction of Prof. Gonen Sharon. The site has yielded a unique collection of botanical remains including woods, barks, seeds and fruits. The site sediments were waterlogged and their accumulation created particular conditions of anaerobic environment that enabled the exceptional preservation of these remains in the dry Levant. The botanical remains from NMO provide a unique opportunity to explore the association between prehistoric human activities and wood elements.

Before exploring the prehistoric utilization techniques applied for wood, taphonomic agents must be considered and rule out as the cause of the morphology and micro and macro traces on wood remains. To date, no un-doubtful evidence for wood utilization was found at NMO. And a new methodology is tested to allow us to distinguish natural and artificial traces on the rich wood assemblage from the site. Experimental works enable us to establish a referential collection of wood natural fracturations patterns and modification marks resulting from stone tool application by humans. In addition we test the verity of traces resulting from different wood working techniques. The primary goal of these experiments is to create a collection of intentional and controlled marks on the same wood species excavated at NMO, which allow us to compare the archaeological and experimental remains and elaborate a methodology which can distinct human modification and uncertain natural or non-intentional alterations.

Nahal Mahanayem Outlet is a fundamental site to achieve a new approach to wood analysis based on the remains in context with no evidences of woodworking and use.

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**CONATI BARBARO**, C.

Department of Antiquities, Sapienza University of Rome

**MOSCONE**, D.

Department of Antiquities, Sapienza University of Rome

**ACQUAFREDDA**, P.

Department of Earth Sciences, University of Bari

**PALLARA, M.**

Department of Earth Sciences, University of Bari

**MUNTONI, I.**

Italian Ministry of Cultural Heritage and Activities

**IAMONI, M.**

Department of Humanities, University of Udine

**SIMI, F.**

Department of Humanities, University Ca' Foscari of Venice

**VACCA, A.**

Department of Antiquities, Sapienza University of Rome

**PEYRONEL, L.**

Department of Humanities, University of Milan-IULM

**MORANDI BONACOSSI, D.**

Department of Humanities, University of Udine

### **Across The Northern Zagros And The Tigris Plain: First Insights On The Provenance Of The Obsidians From Iraqi Kurdistan**

Mobility patterns can be inferred from different archaeological indicators. The provenance analysis of raw materials is one of the most useful indirect evidence of movement and interaction between prehistoric human communities. Obsidian artifacts can be characterized geochemically and referred to geological sources. We present the preliminary results of the provenance analysis of 57 obsidian artifacts from some Pottery Neolithic to Late Chalcolithic sites, located in the concession areas of the Land of Nineveh Archaeological Project (LoNAP) of the Udine University and the Italian Archaeological Expedition in the Erbil Plain (MAIPE) of the Milan-IULM University, in collaboration with Sapienza University of Rome.

Non-destructive SEM-EDX and WD-XRF methods have been applied. Our results represent one of the largest characterization dataset for this region, where different sources are attested. Chronocultural factors and socio-economic organization might have determined the use of one source instead of another. What was the role of transhumant pastoral groups? Can we recognize preferential routes (least-cost paths) across the Zagros mountains? We discuss these questions from a diachronic perspective aiming to reconstruct the dynamics of interaction on medium and long distance.

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**CORSI, Andrea Luigi**

Sapienza University of Rome

### **New Considerations on the Stucco Panels of the First Abbasid Friday Mosque of Isfahan**

This poster deals with the stucco panels found in situ on the qiblī wall and mihrāb from the first Abbasid Friday Mosque of Isfahan (767) by the Italian Archaeological Mission of IsMEO (1972-1978).

Several differences that occur between the qiblī wall and mihrāb panels have been noted since the first publications. It seems questionable that such different types of stucco decorations were part of the same ornamental project: I propose that two different phases may be identified.

The first part of the poster will focus on the acknowledged differences, showing comparisons with examples from other sites. The qiblī wall decoration (Fig. 1) shows some late-Sasanian–Umayyad features together with early-Abbasid elements like the large vine leaves with drilled holes, similar to those found in Hira, Raqqa and Samarkand. The mihrāb stuccowork (Fig. 2) presents the typical Abbasid small vine leaves enclosed in geometric patterns which fill the entire surface.

The second part will focus on the chronological attributions of the two proposed phases, enlightening the dating elements.

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**DI CRISTINA, Silvia – GALLERANI, Valentina**  
University of Bologna, Department of History and Cultures

### **After Karkemish: Topographical and Archaeological Evidence of Classical Europos**

If the “Karkemish of the Hittites” is now largely known, the same cannot be said regarding the fate of the site in later times. Classical and Late Antique literary sources, mainly geographical and of itinerary nature, mention the Seleucid colony called Europos, the location of which was debated since the 18th century. It is now epigraphically proved that it should be identified with the descendant of Karkemish. The site still shows on the surface the remains of the monumental city from the Hellenistic, Roman and Byzantine periods: the agorà/forum, a colonnaded street, a segment of an aqueduct and many scattered architectural and sculpted fragments. Aerial and ground surveys allow us to grasp the overall plan of the settlement, while the recent revision of unpublished data collected by the British Museum expedition from the 1910s filled some gaps in our knowledge of buildings that are now lost. The newest and most reliable data are nonetheless the excavations since 2011 by the Turco-Italian Archaeological Expedition at Karkemish led by Prof. Nicolò Marchetti, which allowed us to build on local stratigraphic sequences. Combining these different sets of information, we obtain a picture of Europos as a long-lasting, monumental and prosperous settlement during the Classical period.

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**DIACO, Maddalena**

### **New approach in the pottery study: A comparative research between texts and archeological finds**

Up until the Ubaid period the majority of vessel types are open forms and have rarely appendages. Although the bowls still represent most of the containers in the Uruk period, the production of closed vessels with the presence of appendages indicates the modification of dietary practices. The pots with this closed form, especially those with narrow neck, were suitable for handling and storage of liquids and semi-liquids. There are numerous signs within the proto-cuneiform writing that appear to have this elongated shape (including KISIM, LAHTAN<sub>2</sub>) with narrow neck, which prevents leakage during movement and transport of the contents and having a pointed shape as final part, which could highlight the use of this type of container for the preservation of goods (Wagensonner: 2016). Therefore, the above-mentioned signs seem to be the pictographic transposition of pots and containers really existed. The lexical lists of vessels which includes 100 specimens, is one of the best in archaic lexical compositions. It contains three sections: in the first one there are the denominations of vases or containers, in the second one there are combined signs representing prepared foods including soups and cheeses, and in the third one there are, probably, textiles (Englund: 1998). Their importance is reflected, in particular, within the administrative tablets of the IV millennium BC. These texts contain all accounting procedures concerning the rations attributed to workers and officials, the collection and distribution of grain, the stock of milk fats stored in vessels of specific dimensions, etc. Through the comparative study of archaeological remains and texts covering about a millennium, it could rediscover the evolution/change of ceramic production, its use and its form, which product is contained within each vessel, if these vessels forms respond to standardization of rations, etc. Therefore, this paper wants to lay the foundation of a new approach about pottery study.

## **Archaeological Discoveries from the Chalcolithic Period in Excavations in Gharbalbiz in Yazd Province**

Yazd Province is situated in the center of Iran between the provinces of Semnan, Isfahan, Fars, Kerman, and Khorassan. Yazd Province has big stone and metal mines. One of the two important springs of Yazd Province is located in Gharbalbiz and the soil in this area is quite fertile. This province is also famous for its architects and unique and valuable mud-brick remains from the Islamic Era. These excavations are the first that provide information about the pre-Islamic era in Yazd Province.

The excavations in Gharbalbiz began in the year 2000 in the remains of an ancient building in the Southern part of the area and continued until 2005. The discovered evidence and the plan of the building show that it belongs to the late Achaemenian and Parthian periods. However, the discovery of several pottery whorls and a small clay tablet around the building which are comparable to objects discovered in Tall-i Bakun A has engendered the hypothesis that a pre-historic settlement existed in this area. Continuing the excavations, we discovered a cemetery from the Chalcolithic and early Bronze Ages. The Chalcolithic potteries are all comparable to those found in the Fars Plain, especially Nurabad and Bakun. Most of this pottery is buff-colored with dark brown or black geometric and animal designs and sometimes red with black geometric designs. In this article for the Berlin Conference I will describe the burials and the pottery and other discovered objects from the 5th millennium B.C. (Bakun A) in the Gharbalbiz area.

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FOIETTA, Enrico

## **Hatra and its Landscape during the 2<sup>nd</sup> and 3<sup>rd</sup> cent. AD**

The ancient site of Hatra is placed in the Iraqi Jazirah, 85 km southeast from the modern city of Mossul. The centre grew in importance as a religious centre during the 2<sup>nd</sup> and 3<sup>rd</sup> cent. AD, becoming the capital of a powerful buffer state allied with the Parthians. During this lapse of time, Roman troops attacked Hatra three times (Trajan's siege AD 117; and Septimius Severus' sieges AD 197, 199) but they never conquered the city. After the defeat of the Parthians (AD 226), Hatra was destroyed in AD 241 by the Sasanian army, ruled by Shapur I.

The aim of this poster regards the study of Hatra historical, political and economical landscape for the discussed period. To achieve this purpose, during the years of my Phd project a Regional GIS (HatraGIS) has been created, including all the raster and vector data recovered. Numerous layers compose HatraGIS: satellite images (CORONA), a regional digital Elevation model (DEM), hydrological and geological maps and the digitalised information of the 80s archaeological survey Iraqi Expedition, published entirely by Jaber Ibrahim in 1986 (Pre-Islamic settlements of the Jazirah). The placement of the sites on the Iraqi maps has been verified employing remote sensing techniques on CORONA images, georeferenced and processed by the Corona Atlas Project.

This work have allowed a better comprehension of the ancient landscape of Hatra, defining different settlement pattern zones, according to different and specific landscape features. The area close to Hatra is characterised by particular hydrologic and geologic features, allowing the settlement here of the hugest city of the region (about 300 ha) and, close to it, of different small villages. The Tigris river area is characterised by a vast impact of the large river on the settlement pattern, with the presence of the important city of Ashur, as main site of the zone in the Parthian period. The northern fringe of the region close to the Sinjar Mountains corresponded to the hostile boarder with the Roman Empire during the 2<sup>nd</sup> cent. AD and also to some of the richest land for agriculture. The west area up to the Euphrates shows the



presence of very few settlements and is considered a territory devoted exclusively to nomads, which were linked directly to Hatra as testified by many inscriptions discovered at the site. The attempt of defining historical and political boundaries during the 2<sup>nd</sup> and 3<sup>rd</sup> cent. AD has taken in account also the well-known historical Roman sources (Cassius Dio and Herodian) and the spread of Hatrene inscriptions in the lands. All these data considered together has furnish a complex but also intriguing frame for Hatra's Kingdom during its apogee.

The Italian Archaeological Expedition at Hatra, directed by R. Ricciardi Venco, hopes to return to work as soon as possible at Hatra and on its territory, now that the site is free from ISIS/DAESH yoke.

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**GALLERANI, Valentina – LUGLIO, Giampaolo – MARCHETTI, Nicolò – VALERI, Marco**  
University of Bologna, Department of History and Cultures

### **Tell Jidr: A Late Antique Megacity in Central Mesopotamia**

Located between Zabalam and Adab, Tell Jidr is one of the largest ruins in the QADIS Survey area, in Central Mesopotamia and it lies on the eastern branch of the Euphrates. The morphology of the site suggests that it may have been two settlements initially, later coalescing into one. Throughout the previous survey, conducted by R.Mc. Adams in the early 1970s, Tell Jidr was classified as a Parthian-Sasanian city with a presumed extension of more than 200 hectares. According to the field data collected during the QADIS survey project, its settled area in late antique times proved to be 618 hectares. The Preclassical name of this megacity was Karkara, as the recent finding of an inscribed brick proved, but nothing can yet be said about the late antique toponym.

A preliminary analysis of the pottery assemblage confirms an intense Parthian and Sasanian occupation, both in the lower city and on the acropolis, which continued until the early Islamic period: we have mapped with an extraordinary detail several lines of fortifications with towers of different shapes, public buildings, residencies, houses and hydraulic works, which allow us to grasp the urban layout of a forgotten capital city of the mid-first millennium CE.

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**GIBBON, Elizabeth**

### **Large Scale vs. Small Scale: Comparing the Ego-Networks of the Wadi Rabah Period sites of Hagoshrim and Tabaqat al-Bûma**

The purpose of this project is to compare the interaction networks of two contemporary Wadi Rabah period (5746 – 5118 cal. BC) settlements in order to investigate the relationship between site size, location and social network connectivity during this period. The comparison focuses on exploring the ego-networks of the large settlement site of Hagoshrim (5494 – 5313 cal. BC) located in the Hula basin of northern Israel, and the small hamlet of Tabaqat al-Bûma (5706 – 5287 cal. BC) located in the Wadi Ziqlab of northern Jordan. Social network analysis techniques (e.g. clustering, centrality, density) are applied to these ego networks to assess the nature of the primary site's relationship to its surrounding interaction partners. This allows for a direct comparison between the network connectivity of large and small sites to investigate how site characteristics such as size and location affect the ability to interact within the social network as a whole. Specifically, analysis of Wadi Rabah ego networks allows for the examination of the density of connections each site maintains within the network, the strength of the connections, the relations of power between interaction partners, as well as the distance over which these connections are maintained. Such analysis suggest that Wadi Rabah period social networks are characterized by a diverse array of

relationships, combining localized and long-distance interaction to create a regionally focused network with significant focus on global interaction.

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**GRIES, Helen – KATZY, Elisabeth**  
Vorderasiatisches Museum, Berlin

### **A new approach on the Achaemenid period in the Khabur region (Northeast Syria)**

The poster focuses on the Achaemenid period in the Khabur region (East Syria), and in particular considers most recent results, gained from excavations at site Tell Halaf (2006-2010). With regard to the end of 6th and 4th century BC, only little is known from this region. Therefore, the diachronic study of the material culture of the Achaemenid and Hellenistic period relies very much on local Mesopotamian traditions, but not on the Achaemenid patterns. In particular during those periods the continuation of local traditions can well be observed on basis of the archaeological finds. The examination of different groups of finds, such as clay figurines, jewellery, pottery, armour scales (?), fibula etc. however shows closer parallels to the past periods, especially the Iron Age II in Khabur region, as to the Achaemenid prototypes. Thus, it is apparent that the Achaemenid influence on the material culture of the Khabur Region is marginal, and is therefore often not recognized.

New excavations (Tell Halaf, Tell Bari, Tell Schech Hamad) in the Khabur region indeed indicate the existence of stylistic differences and the emergence of new artefacts in the Achaemenid period. The aim of this poster is to identify the characteristic finds for this region, and to bring them in regional and cultural historic context.

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**HANDZIUK, Natalia M.**  
University of Toronto

### **Ceramic Anatomy of a Bronze Age Olive Press**

Olive oil was a significant component of the commodity driven economy in the Southern Levant during the Early Bronze Age. The site of Tell Rakân II, located in the Wadi Ziqlab in the Northern Jordanian Highlands, is a large-scale Early Bronze I (c.3500 – 3000 BCE) olive press which appears to have been constructed exclusively to produce olive oil. Therefore, the in-situ ceramic vessels that were uncovered at Tell Rakân II, along with the bedrock cut features on the site, facilitate a unique insight into the process of olive oil production during the Early Bronze Age. This poster presents a synthesis of the ceramic vessels recovered from Tell Rakân II, including analysis of the form, physical attributes, and volume of each vessel. Additionally, the in-situ vessels are spatially plotted across the olive press. The morphological and spatial analysis of these ceramic vessels contributes to an accurate reconstruction of the sequence of production (chaîne opératoire) of olive oil at Tell Rakân II. This analysis also facilitates broader inferences into the function(s) of specific vessels in Early Bronze Age olive oil production.

Ultimately, the olive press and associated vessels at Tell Rakân II strongly suggest that a significant volume of olive oil was being produced in rural Northern Jordan during the Early Bronze I and further reinforces the importance of olive oil in both local and regional economies during the Early Bronze Age.

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**HUBER, Barbara – HAUSLEITER, Arnulf**  
German Archaeological Institute, Orient Department

**DINIES, Michele**

German Archaeological Institute, Scientific Division at the Head Office

**SÄUMEL, Ina – Thi Lam Huong PHAM**

Technical University Berlin, Department of Ecology

### **The archaeology of odours. Chemical evidence of ancient aromatics at the oasis of Tayma, NW Arabia**

Most steps of archaeological work depend on the sense of sight. Yet, smell and other senses seem to play pivotal roles in ancient peoples lives too, according to historical texts describing for instance the high number of aromatics being transported in Antiquity. It remains, however, difficult to explore phenomena which usually do not leave behind traces. Nevertheless, resins such as frankincense or myrrh are among the organic materials that are particularly well preserved in the archaeological record.

A multidisciplinary study of 59 incense burners from stratified contexts (Bronze Age to Late Antiquity) at the oasis of Tayma combines residue analysis to identify the nature of resins with archaeobotanical research for reconstructing regional vegetation and the use of crop plants in antiquity. The oasis, currently being investigated by a Saudi-German collaborative project, mainly funded by the German Research Foundation (DFG), is located on one of the major branches of the “Incense Road”. Investigating the samples from Tayma by means of LC-ESI-MS/MS techniques, the characteristic profile of secondary metabolites of resins of *Boswellia* and *Pistacia* spp. were detected. By identifying resins burnt at Tayma as well as regional sources of resin, it is possible to trace continuity and change of trading patterns within the socio-cultural context. The preliminary results indicate at least three different resins with varying proportions and fields of use through time, suggesting that olfactory perception played a crucial part at the ancient oasis.

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**INTAGLIATA, Emanuele E. – ZUHUR-ADI, Ghali**

### **New evidence of early Islamic inscriptions from Palmyra. Inscribed potsherds from the Sanctuary of Baalshamin**

The following contribution aims to present the preliminary epigraphic and historical analysis of two inscribed pots from the Sanctuary of Baalshamin, Palmyra. The two sets of inscriptions were photographed and documented by P. Collart during the excavations of the sanctuary in the late 1950s but have never been published. The photographs are now kept in the Fonds d’Archives Paul Collart, Université de Lausanne. The first text lists a series of personal names (probably debtors), each with a corresponding monetary value. The second, written in an elegant calligraphic hand, has a section taken from the famous Quranic verse – ‘ayat al-kursī. The stratigraphic proximity of the pots’ site to an earlier Roman period, along with the texts’ consistent orthography and palaeography, provides evidence that shed further light on the economic and religious history of Palmyra in early Islam.

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**JABBOUR, Ali**

### **Defensive Elements in Syrian Jazirah during the Early Bronze Age**

The poster presents the evolution of defensive elements in the Syrian Jazirah, in particular how they changed during the Early Bronze Age, taking into account building techniques, raw materials, dimensions of defensive elements and their diversity.

The study is part of my PhD research I am carrying on at Sapienza University of Rome and it aims at showing the differences of choice in defensive elements in each settlement.

Several economic factors (such as agriculture, craftsmanship, and trade) interacted each other, thus stimulating further economic growth, which led to development of fortified city-states with complex defensive system and administrative centre during the third millennium BC in the Levant and Syrian Jazirah.

The defensive system was an important part of the city structure, as it consists of different elements such as fortification wall built of mudbrick upon stone foundation, sometimes reinforced by towers and buttresses; some cities also had moat, glacis, and massive earthen rampart.

These defensive elements and their dimensions, general layout, and building materials were different from one city to another according to the economic, geographic and environmental factors, as well as the political power of each city.

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**KATZY, Elisabeth**

Vorderasiatisches Museum, Berlin

### **Keramik hellenistischer Zeit am Tel Halaf**

Das Augenmerk des Posters liegt auf der Keramik der hellenistischen Epoche am Tell Halaf. Dieser Fundplatz stellt einen wichtigen Referenzort im Khabur-Gebiet nicht nur für die Halafzeit und die Eisenzeit, sondern auch für die hellenistische Zeit. Zu Beginn dieser Periode sind am Tell Halaf zwei größere hellenistische Hausanlagen mit vier Unterphasen (Ende 4. Jh. – 1. Jh. v. Chr.) und reichem hellenistischen Material belegt. Dabei handelt es sich einerseits vereinzelt um Importe aus der griechisch-hellenistischen Welt wie schwarz-engobierte Ware mit ihren typischen Formen der griechischen Welt (Fischteller, Echinuschalen oder Knickwandschalen etc.), andererseits kommen die Waren und Formen mit stark in der lokalen Tradition des Ortes stehenden Merkmalen, in allen erfassten Unterphasen der hellenistischen Siedlung am Tell Halaf sehr zahlreich vor. Sie stellen den größten Teil des Materials dar. Charakteristisch sind die in großer Zahl vorkommenden Flaschen, Vorratsgefäße und kleine Schalen mit Flachboden. Sie lassen sich am Tell Halaf vom Ende 4. Jh. Bis ins 1. Jh. v. Chr. nachweisen.

Im Laufe des 3. Jh. v. Chr. kann nun in der lokalen Keramikproduktion die Adaption der Schwarzfirnisware beobachtet werden. Allerdings fanden nur ausgewählte griechisch-hellenistische Formen wie z.B. die sog. Fischteller, Echinuschalen oder Knickwandschalen Eingang in die lokale Keramikproduktion. Hierbei konnte ein kontinuierlicher Qualitätsverlust in der Herstellung der Gefäße dokumentiert werden, insbesondere bei der Engobe, mit einem unregelmäßig dickem aufgetragenem schwarz-braunen Tropfüberzug auf der Gefäßoberfläche.

Im Laufe des 2. Jh. v. Chr. verändert sich das rot engobierte Keramikrepertoire aufgrund der Erweiterung von lokalen Formen zunehmend. Inbegriffen sind beispielsweise Becher, die in der sog. Eggshell Ware mit rotem Überzug hergestellt werden und somit neuassyrische Becher der Palastware imitieren.

Vergleichbare Entwicklungen des keramischen Materials finden sich in Nachbarsiedlungen, insbesondere am Tell Arbid und in Tell Schech Hamed. Das Ziel des Posters ist sowohl den starken regionalen Einfluss auf die Keramik der hellenistischen Zeit am Tell Halaf und in der Khabur-Region zu präsentieren als auch die Orientierung an den griechisch-hellenistischen Vorbildern.

LEWIS, Michael – QUINN, Patrick – WENGROW, David  
University College London

### **Ceramic Production during the Late Chalcolithic 4 at Gurga Çiya, Iraqi Kurdistan: A Technological and Compositional Study**

Pottery production is a social act, intrinsically linked to technologies and economic activity, and through detailed analysis of the *chaîne opératoire*, alongside material sourcing, it is viable to study ceramic manufacture, and form an understanding of social or political entities behind its production.

Gurga Çiya is a small multi period site located in the far south-east of the Shahrizor Plain, Iraqi Kurdistan, near to the modern town of Halabja. The Late Chalcolithic 4 (LC) strata feature pyrotechnical installations including a probable ceramic kiln, alongside a dense deposit of Middle Uruk ceramics.

This poster will present the final results of detailed archaeometric and geochemical research into a selection of the LC 4 (mid 4<sup>th</sup> millennium BCE) ceramics from Gurga Çiya. New findings regarding the LC ceramic *chaîne opératoire*, mass production, ceramic standardisation and raw material procurement at a small, LC rural site in the Shahrizor Plain, Iraqi Kurdistan will be assessed and final results of the current MSc research will be presented.

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LUGLIO, Giampaolo – ZAINA, Federico

### **New data on the Outer Town at Karkemish**

Investigations in the Outer Town at ancient Karkemish have been conducted at different times and with diverse methodologies. After the first explorations carried out by British Museum in 1914 and 1920, another British survey expedition (2009-2010) and the Turco-Italian excavation project (2011-ongoing) provided extensive information on the extension, urban layout and chronological development of this part of the city. In this poster we present the results of the Turco-Italian investigations in the Outer Town at Karkemish which provided fresh data on the Iron Age city wall system, the general stratigraphy of the area as well as the urban layout during the Iron Age III. To do so, we applied an integrated methodology including archaeological excavation and aerial photogrammetry. Excavations in areas E and F West provided evidence of two stretches of the massive mudbrick city walls, while in area F East we exposed part of the Iron Age III urban layout and we understood the earliest occupation of the Outer Town through a sounding which exposed four Iron II building phases before virgin soil was encountered. In addition, aerial photogrammetry revealed traces of roadways and houses seemingly associated with the top ones exposed in area F East.

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MAINI, Elena – CURCI, Antonio

ArcheoLaBio, Research Centre for Bioarchaeology, Department of History and Cultures, University of Bologna

GIACOSA, Gabriele

Department of History and Cultures, University of Bologna

### **The Last Elephants of the Euphrates. Elephant bones with cut marks from Early Iron Age levels at Karkemish, Turkey**

The poster presents the preliminary zooarchaeological analysis of four elephant bones with anthropogenic modifications found at Karkemish in 2016 by the Turco-Italian Expedition at Karkemish, Gaziantep – Turkey, under the direction of Prof. Nicolò Marchetti. Elephant bone remains were found in a side room from the latest phase of a storage complex in Area S (King’s Gate), which dates to Iron Age I according to pottery evidence (12<sup>th</sup> -10<sup>th</sup> centuries BCE). This exceptional discovery gains further importance in consideration of the lively debate about the existence in the Near East of a species called Syrian or Western Asiatic elephant (*Elephas maximus asurus*), which went extinct before the mid-first millennium BCE. Textual and iconographic evidence from Egypt and Assyria, supported by the discovery of several elephant remains (teeth, tusks and post-cranial bones) at various sites in Northern Levant, shows royal hunts, capture and display of living elephants in the region. The elephant bones found at Karkemish might therefore throw light on the last phase of elephant’s presence in the Near East. Moreover, the cut marks detected on the Karkemish finds provide additional information on the exploitation modes of this versatile mammal.

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**MARCANTONINI, Marzia**  
Naples University “L’Orientale”

### **Transformation of the landscape from the beginning of the Early Bronze Age to the Byzantine Period in the Al-Korah District, Jordan**

The poster presents the preliminary results of an archaeological study about the use of the landscape in the Al-Korah District, in Northern Jordan. This region is particularly interesting for the presence of natural and water resources permitting the exploitation of the land all the year long. This has promoted the continuous human occupation of this rich grazing area. In the research, the distribution of the settlements and the necropolis, the architectural features of the sites and the organization of the urban spaces, from the Early Bronze Age I to the Roman and Byzantine periods, have been analyzed. The research considered data coming from past and recent surveys in the region. The methodologies of Landscape Archeology have been used to investigate the many aspects of the territory, and the use of satellite images has allowed to delimit the sites in various areas, each with its own characteristics. The aim of the poster is to delineate the evolution of the agricultural and pastoral communities in the region, in particular concerning the impact that the settlements have had on the landscape, through the change of the land exploitation techniques and the development of the ancient cities policies and needs, from the IV millennium BC to the VII century AD.

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**MARCHETTI, Nicolò – BITELLI, Gabriele – FRANCI, Francesca – ZAINA, Federico**  
University of Bologna

### **Flooded Heritage. A Multitemporal Analysis Of The Water Reservoirs In South-Eastern Turkey And Their Impact On The Cultural Heritage**

The EU-funded JPI project “HeAT. Heritage and Threat” (2015-2018, coordinated by Ingolf Thuesen) aims at systematically analyzing selected threats towards as well as perceived from the cultural heritage and at developing tools and strategies for confronting them. The scientific unit from the University of Bologna (coord. by N. Marchetti) deals with the major threat to the cultural heritage which is represented by the construction of dams in the Near East. In this poster we consider the case study of the Upper and Middle

Euphrates valley in south-eastern Turkey. Indeed, since the end of the 1970s, economic development strategies promoted by the Turkish Government including the construction of dams provided substantial short and medium-term improvements in that previously low productive region. However, the massive modifications, occurring to the riverbeds and the surrounding areas involved, deeply affected the natural and cultural landscape of this region. Our aim is to provide a detailed assessment of the impact of the three dams of Atatürk, Birecik and Karkamış, in the Euphrates river valley, on the cultural heritage. To do so, different spatial datasets and sources have been used including multitemporal Landsat satellite imagery (1984-2016), declassified CORONA, the geographical data provided by the DSI and FAO organizations, archaeological survey databases and excavation reports. The methodology applied to these case studies allowed to analyze in an unprecedented overview almost 150 archaeological sites flooded or partially damaged by the three dams, more than 400 ha of archaeological heritage lost and approximately 600 km of the Euphrates paleochannel disappeared under the water reservoirs, highlighting at the same time changes in the vegetational patterns of surrounding areas.

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**MARCHETTI, Nicolò – JOTHERI, Jaafar – VALERI, Marco – ZAINA, Federico**

### **Preliminary Analysis of the Historical Hydraulic Landscape in the QADIS Survey Area (Iraq)**

Intensive land use carried out in early Mesopotamia over several millennia generated a complex landscape characterized by numerous channels and irrigated areas. Recent developments in the study of ancient hydraulic landscapes has opened a new season in the study of the relation between settlement patterns and agricultural practices. In this poster we present the methodological approach and the first results of the 2016 and 2017 survey seasons of Iraqi-Italian QADIS project in the south-eastern Qadisiyah region (Iraq). Previous data resulting from the researches carried out by Adams during the 1960s early 1970s have been integrated with a detailed remote sensing analysis through the use of modern methodologies and techniques, such as aerial photogrammetry, the combined use of different spatial datasets including historical and modern satellite imagery, high-resolution pictures taken by UAV's, archaeological ground survey and geoarchaeological researches through boreholes in selected areas. To date, more than 700 paleochannels, 5 ancient cultivated field areas and some potential riverine ports have been identified using this comprehensive approach, providing a preliminary updated diachronic reconstruction of the hydraulic landscape and its relation with the settlements in southern Mesopotamia.

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**MASSAFRA, Angela**  
University of Glasgow

### **A hybridized feast? Pottery as an insight into Egyptian imperialism in the Southern Levant.**

Traditional studies on early empires have often considered the Southern Levant of the Late Bronze Age to experience a process of “Egyptianization”. The analysis of the archaeological evidence, especially of sites in the southern part of the region, the so-called Wadi Gaza area, has therefore been biased by this kind of approach. This unilateral and rigid framework has tended to stress the presence of Egyptian features in Palestinian settlements of the period, without taking into consideration the agency of the local culture. A more balanced approach, focused on the materiality of the cultural encounter between the two cultures, can provide new insights into their relationship. My study focuses on pottery consumption patterns from

sites in the Wadi Gaza area. These display a mutual adoption and resistance to each other's cultural practices and traditions, disclosing a process of hybridization between the Southern Levant and Egypt.

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**MERLONGHI MIANI, Marzia**

University of Udine

**CIOÈ, Francesca**

University of Udine

### **The Crisis Areas Archaeological Database (CAAD)**

The current political instability in the Middle East is at the heart of complex issues of safeguard and protection of archaeological heritage: although it constitutes a well-known problem inside the international community, a uniform, overall and coherent report on damage is still missing.

In this poster we aim to present our project for monitoring and safeguarding archaeological heritage using mainly on field data: the Crisis Areas Archaeological Database (CAAD) aims to create an online open source webGIS. Main goal is collecting data relating archaeological heritage in Near Eastern conflict areas, monitoring their status in real time and documenting the extent of the damage using hotos, maps and comparison with existing archaeological documentation. The data collected will be accessible through a dynamic, searchable and interactive on line map, which, if properly consulted, will allow access to several information as name, geographical references, date of survey, presence of regular excavations/restorations, type of damage, date of damage, and eventual multimedia contents of the site.

At present, a preliminary database regarding archaeological heritage of southern Levant (based on data collected by Marzia Merlonghi Miani for her PhD project about damages to pre-classical sites in Palestine and Israel) is under construction.

A further purpose of the present project is allowing the CAAD available and updatable by all the scholars who, in their work, come across damage to the archaeological heritage of the area and in all the Near East.

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**MOLAIE ,Mariam – ZARINKUH, Mozaffar – MOLLAIE, Manijeh**

### **Bridge As A Communication Node. The Case of a Safavid Bridge in Karaj, Near Tehran**

The Shah Abbasi Bridge on the Karaj River was built by the Safavid king to connect Karaj to the Caspian littoral. This highway also connected the Caspian to the points on the famous Silk Road and as such was of utmost strategic importance. Shah Abbas was a great builder and had a large number of Caravanserais, Mosques and bridges built in Iran.

The Karaj Bridge did not just have a functional purpose. In the old days, people usually travelled some 35 kilometers before they stopped for the night. The first stop was of paramount importance because it was at this stage that whatever and whoever was left inadvertently behind, could easily join the caravan. Because of this exigency, the environ of the bridge developed into a mini-caravanserai with a small mosque, a bath house, a tea house, groom hands, and vendors who sold all manners of things.

These features made the Karaj Bridge not just an easy passage over the river, but an environment in which people of all sorts of life came together for at least a night or two to interact and exchange crucial information or even idle talk, and as such, bridges of this nature became a node of communication for many people. It was also economically a source of revenue not only for the vendors, but also for the government that taxed the vendors, and therefore, controlled the traffic.



This paper, using formal accounts of the Safavid period as well as travelers diaries, will examine the social and economic importance of this and similar bridges in Iran.

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**MONTERO FENOLLÓS**, Juan Luis  
University of Coruña, Spain

### **Metallurgy, trade and first cities in Mesopotamia: Mari (2900-2250 BC).**

Mari was founded “ex novo” in the Syrian Middle Euphrates valley and designed as an important urban agglomeration c. 2900 BC. Due to its strategic position, Mari underwent a key role in the development of production and metal commerce, being able to control the commercial routes.

The present project intends demonstrating the connection between urban phenomenon and the metallurgical technology in the syro-mesopotamian basin through the study of ancient city of Mari. The data indicate that Mari was pioneering in the introduction of alloy of bronze at the beginning of 3th millennium BC in the Near East. In fact, metal commerce and its transformation is one of the main reasons (perhaps the most important) for the creation and vigour of this great city on a subdesert region lacking all kind of raw materials.

The aim of this project is to identify and to define the importance and evolution of city I (2900-2550 BC) and city II (2550-2250 BC) of Mari as a metallurgical and commercial urban center. In order to accomplish that objective, there is the intention to produce an interdisciplinary study of all the archaeological documentation related to mariote metallurgy, preserved today in the Archive of the French archaeological mission of Tell Hariri-Mari and the Département des Antiquités Orientales from Louvre Museum.

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**MONTERO FENOLLÓS**, Juan Luis  
University of Coruña

**CARAMELO**, Francisco  
Nova University of Lisbon

**YASIN**, Jihad  
Ministry of Tourism and Antiquities of Palestine

### **A New Archaeological Project in Tell el-Far’a (Palestine): 2017 Season**

Tell el-Far’a, situated near Nablus, is one of the most relevant archaeological sites in Palestine. The site is well-known by the historiography, partially excavated between 1946 and 1960 by one of the most important archaeologists and biblical scholars of the twentieth century, the French Dominican Roland de Vaux, director of the French Biblical and Archaeological School in Jerusalem. According to his research, Tell el-Far’a was occupied since the Pre-Pottery Neolithic Period till Iron Age (ca. 8500-600 BC). Several researchers defend that this historical site might correspond to the ancient city of Tirzah, mentioned several times in the Old Testament.

In October 2017, a new archaeological project was born in Tell el-Far’a, due to cooperation between University of Coruña, NOVA University of Lisbon and the Ministry of Tourism and Antiquities of Palestine, aiming to recover this important site which was suffering a severe process of deterioration after almost sixty years of abandonment.

The archaeological works in the field, during the first season, have consisted on: a new topographic plan of the site, made with the help of a drone; the evaluation of the conservation state of the ruins, excavated

by the French archaeologists on the fifties; and the archaeological *sondage*, where were identified pottery and walls associated with buildings dated from the Iron Age II.

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**MONTORFANI, Maria – ROMANO, Licia – LEMORINI, Cristina**

### **Unbe-weave-able Sumer. Study on vegetable plaiting materials from Abu Tbeirah**

The poster will expose a study based on plaiting materials from Abu Tbeirah, with a particular attention on baskets and reed mats. The study focuses on the various raw materials used, on diverse plating techniques and tries to understand possible uses of these artifacts in their context. The research has been developed with an experimental approach, based on archaeological and ethnographic sources.

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**MOSCA, Fabio – PUPPO, Paola**

### **Historical Sources And Reconstruction Of Ancient Landscapes: The Northwest Portal Of Nea Paphos (Cyprus) And Its Fortification**

The city of Nea Paphos in Cyprus island, mentioned by Ovid for the scent of myrtle trees that grew there around, was built in 320 BC when the ancient city, Palaipaphos, which housed the cult of Aphrodite (of which Herodotus describes the dramatic phases of the Persian siege in 498 a. C.), was moved a few miles to the west because of the irreversible silting of the harbor.

The new city, founded by King Nikokles, is built on a limestone promontory, compact but easy to work, and cutting this rock the workers have gained both a good part of the city wall and the square blocks with which were made the main urban buildings.

As evidence of this, is still sufficiently preserved the city gate that opens in the north - west of the wall, facing the sea: a bridge carved into the rock, which rises to a height of six meters, allows the entrance in the city; flanked the gate two towers, the northern one obtained through a vertical cut of the bedrock, the southern one built from scratch with mighty limestone blocks. Between it and the bridge (which still bears the marks of the wagons that crossed it to enter the city), it also opens a postern that rises up to the level of the city: it has a low width to allow entry to a single person at a time, and it's open at the top.

The findings of the current state and the graphic reconstructions allow you to grasp the design and functionality of the structure, analyzing the obscure points as the probable existence of another access ramp and the presence of graves in that ramp and also immediately behind the north side of the city walls.

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**MUNIZ, Juan Ramon**

Pontifica Facultad San Esteban

**POLCARO, Andrea**

Perugia University

**CASADEI, Eloisa – CASELLI, Alessandra**

Rome Sapienza University

**ALVAREZ, Valentin**

**DEL RIO, Joaquín Garcia**

### **Preliminary results of a typological and chronological study on the pottery and lithic materials from the Temple of the Serpents, Jebel al-Mutawwaq, Jordan**

Jebel al Mutawwaq is a IV Millennium BC site in the Wadi az-Zarqa Valley, Jordan. The site flourished during the Early Bronze Age I and, with its 18 hectares, it is one of the most largest site of the period in Transjordan. During the last five years, in addition to the excavation campaigns, the Spanish-Italian Archaeological Expedition at Jebel al-Mutawwaq, focused the research on the study of the materials coming from the sacred area of the settlement, the Temple of the Serpents. The area was investigated between 2003 and 2005 by the expedition of Oviedo University, led by J.A. Fernandez-Tresguerres Velasco. It consists of a courtyard, enclosed by a *temenos*, in which a main building (H. 76) and a characteristic multi-room structure were found. The study of the materials coming from the area, and in particular pottery and lithic, has a key- role to reconstruct the ancient use of each room of the complex. The poster will present the preliminary results of this study, with the aim of delineate the typological characteristics and the chronological framework of the materials coming from the temple.

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**MYNÁŘOVÁ, Jana – ZEMÁNEK, Petr**  
Faculty of Arts, Charles University, Prague

### **The Prague Old Assyrian Tablet Collection. An Update on a Project**

In 2016 a new research project entitled “Analysis, description and archivation of aggregate information on properties of cultural heritage artefacts and usage of such data in restoration, conservation and research” (DG16Po2M022) started at the Faculty of Arts (Charles University), the National Museum, and the Institute of Theoretical and Applied Mechanics of the Academy of Sciences, Czech Republic, sponsored by the Ministry of Culture of the Czech Republic. By using a complex system, combining and integrating several domains of information, obtained via a series of analyses (high resolution computer tomography, spectrometry, X-ray fluorescence and colorimetrics, as well as linguistic and sociocultural analyses), the collection of ca. 400 Old Assyrian tablets, linked to the archaeological activities of B. Hrozný at the site of Kültepe (anc. Kanesh, Turkey) in 1925, will be made available to scholars by means of a virtual collection in the form of a multi-layered open-source tool. It is the aim of the poster to present the methodologies, techniques, and possible results of our research in the third year of the still ongoing project.

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**NELSON, Thaddeus**

### **Systems for Producing Economic Crafts in the Iron Age Levant: A new study of textile labor and royal wealth**

The Iron Age II kingdoms of the Levant (c. 1000-538 BCE) maintained their political power by the creation and collection of wealth. In order to obtain this wealth, kings reorganized existing household systems of production and trade. Agro-pastoral labor was restructured in order to form royal industries that produced commodities for exchange and tribute payments. Technological changes in textile production, including increased use of warp-weighted looms, suggest that textiles are an example of a restructured industry. Spinners and weavers turned linen from the fields and wool from sheep into high value fabrics that filled royal and international demand. Yet, there has not yet been a systematic study of textile production that addresses the entire region over which changes in weaving are archaeological visible. As a result, reconstructions of Iron Age II textile production give different weight to the roles of royal influence and of household labor. This poster initiates a new study that will use experimental approaches to develop and use novel methods to analyze textile tools with the goal of reconstructing labor organization in the Iron

Age II Levant. The results of this study will expand both our ability to interpret tools used in textile production and our knowledge of the household/industrial divide in the royal industries of the Iron Age.

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**PIGNATTINI, Martina**  
Perugia University

### **The Kings and The Gods: Statuary in art and literature during the Old Babylonian Period.**

There is little documentation regarding the official Mesopotamian statuary during the Old Babylonian Period, especially as far as archaeological sources are concerned. In fact, mostly fragments of royal and divine statues have been recovered in the archaeological sites, often not in situ. In the Royal List, statues commissioned by the kings are quoted, probably representing the client himself or a worshipped divinity, in a static position or when he is performing an action. The research presented in the poster aims to identify figurative representations of statuary in the contemporary art of the II millennium BC between Southern and Northern Mesopotamia, taking into consideration in particular the figurative scenes on cylinder seals and paintings. The identified subjects or patterns are then compared with the available stone and clay statues of the period, in order to understand better the role and the typologies of the official statuary in the Old Babylonian culture and society.

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**POLCARO, Andrea**  
Perugia University

**MUNIZ, Juan Ramon**

Pontificia Facultad San Esteban

**PANICUCCI, Chiara – CILLI, Elisabetta – SERVENTI, Patrizia – GRUPPIONI, Giorgio**

Laboratories of Physical Anthropology and Ancient DNA, Department of Cultural Heritage, University of Bologna

### **The Early Bronze Age I Necropolis and Dolmen Field of Jebel al Mutawwaq, Jordan: Results of Ancient DNA analysis and anthropological studies on human remains**

The Necropolis of Jebel al-Mutawwaq consists in a large dolmen field, surrounding and partially overlapping a settlement of the Early Bronze Age I. The two chronological phases of the megalithic necropolis (EB IA and EB IB-II) were recently investigated, during five years of excavations campaigns (2012-2016), by a Spanish-Italian Archaeological Expedition, directed by Pontificia Facultad San Esteban of Salamanca and Perugia University. In these years, eight dolmens have been excavated, discovering in their inner megalithic chambers several human bones, in some case more preserved than others, with also the burial assemblages in situ. In particular the burial chambers of two dolmens were recovered well preserved: the one of the extramural Dolmen 317, dated to the EB IA, and the one of the intramural Dolmen 534, dated to the EB IB-II. The human remains coming from these and other dolmens excavated by the Spanish-Italian Archaeological Expedition have been analyzed in the laboratory of ancient DNA of the Department of Cultural Heritage, University of Bologna, Campus of Ravenna (Italy). Teeth and petrous bones have been selected as the samples of choice for the ancient DNA analysis. DNA was extracted from a first set of samples and sequenced for the first hypervariable region (HVR1) of the mitochondrial DNA (mtDNA). The poster presents the preliminary results of these analyses and anthropological studies on human remains from the Jebel al-Mutawwaq Necropolis and their meaning in the historical framework of the IV millennium BC Southern Levant.

**PROSERPIO, Licia – SCAZZOSI, Giulia**

### **Linking Land and Heritage: The Role of Rural Communities in Preserving Archaeological Sites in Southern Iraq**

This poster presents the preliminary results of an ethno-archaeological survey carried out in the region of Kufa (southern Iraq) in the framework of the EU-funded project “EDUU – Education and Cultural Heritage Enhancement for Social Cohesion in Iraq.” The ethnographic research is conducted by combining immersive observation and direct one-on-one interviews, mostly focusing on an audience composed of different families living near archaeological sites. The research question of this survey focuses on an important issue related to the preservation of archaeological sites and cultural heritage in Iraq: the aim is that of investigating the possible role of modern rural settlements very close or directly set on archaeological sites, in order to ascertain at which extent this proximity has contributed in preserving the heritage of the region. Looting is, in fact, generally more intense in depopulated areas, while the archaeological sites located next to inhabited and/or cultivated areas tend to be much more protected through their neighbors. The question is whether this fact can be due to the instinct of the communities of preserving their livelihood or if there is an agency which actively leads people to protect sites. Furthermore, the preservation of the land means the preservation of the past, in front of the unavoidable process of modernization.

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**RÖSSNER, Corinna**

### **Macroremains from Hittite Oymağaç Höyük, Northern Anatolia**

The site Oymağaç Höyük (probably Hittite Nerik) provides, with a continuous settlement from the Early Bronze Age up to the Iron Age, an important key place in the middle Black Sea coast area. According to today's research, the site is located on the edge of the Hittite core area in a landscape already inhabited since the early Chalcolithic period. Agriculture is the basis for the development and prosperity of the Hittites. Through the archaeobotanical sampling of the entire settlement period, an insight into Hittite agriculture from the early Bronze Age to the middle Iron Age and still further is given. The aim is to compare the different time settings within the reference site and on a regional basis with the few archaeobotanically examined sites. Thus, Oymağaç Höyük provides an important contribution to the development of Hittite agricultural production and natural development.

From the excavation campaigns 2007-2011, 225 samples are available of which 16 samples can be dated to the Early Bronze Age, 79 samples to the Late Bronze Age, and 130 samples to the Iron Age. The samples were processed on site using a flotation machine and the flotation extracts were examined for charred plant residues. A total of 114 taxa and 57062 botanical remains could be determined.

Einkorn (*Triticum monococcum*) and Emmer (*Triticum dicoccum*) played an important role in the diet of the early Bronze Age and were replaced by barley (*Hordeum vulgare*) in the late Bronze Age. The Iron Age species spectrum is strongly influenced by barley (*Hordeum vulgare*). Naked wheat (*Triticum aestivum*) and pulses also played a greater role than before. Thus, the cultivation spectrum of Oymağaç Höyük fits well into previous research from the Near East, and less in the area of the Aegean Sea, where einkorn (*Triticum monococcum*) is still strongly present in the Iron Age.

SCAZZOSI, Giulia

### **Storage and Cooking Practices at Karkemish during the Iron Age**

Since 2011 the Turco-Italian Archaeological Expedition at Karkemish, under the direction of Prof. Nicolò Marchetti, aims at reconstructing in detail the history and the urban layout of this capital city. The poster aims at illustrating food-related practices and diet at Karkemish during the Iron Age, by taking some excavation areas as case studies. All kinds of processes will be investigated considering the entire chaîne opératoire, with a specific focus on the storage facilities and the food processing techniques. A short catalogue of the main fire installations found at the site, together with an overview of the pottery assemblages will be presented. The zooarchaeological and palaeobotanical data will be integrated into the analysis, in order to complete the reconstruction of Iron Age diet at Karkemish.

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SEABROOK, Melina – TWISS, Katheryn C.

### **Spatial Variation in Ur Faunal Remains**

The power of faunal remains to shed light on urban socioeconomic distinctions is well established. However, we know little about how animal exploitation and consumption varied within Mesopotamian cities. We therefore examine faunal assemblages from two Old Babylonian areas inside the ancient city of Ur. Excavators identified the relevant deposits as refuse, probably deriving from households rather than temples or other communal organizations. Unlike most published Mesopotamian fauna, these were recovered using dry-sieving and flotation. We compare and contrast the two assemblages, focusing on their taxonomic proportions, skeletal element distributions, and taphonomic signatures. We then use our results to discuss suggested economic and status differentiation in Old Babylonian Ur.

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SIMI, Francesca

Università Ca' Foscari Venezia – Eberhard Karls Universität Tübingen

TAMBONE, Fulvia

Ricicla Group Labs - Dipartimento di Scienze Agrarie e Ambientali – Soil and Environment Lab. -  
Università degli Studi di Milano

BEDUSSI, Floriana

Ricicla Group Labs - Dipartimento di Scienze Agrarie e Ambientali – Soil and Environment Lab. -  
Università degli Studi di Milano

ZERBONI, Andrea

Dipartimento di Scienze della Terra “A. Desio”, Università degli Studi di Milano

MORANDI BONACOSSI, Daniele

Dipartimento di Studi Umanistici e del Patrimonio Culturale, Università degli Studi di Udine

### **Detecting Manuring Practices And Site Boundaries Through Soil Phosphorus Analysis: New Evidence From The Tell Gomel Archaeological Survey (Iraqi Kurdistan)**

Phosphorus in surface and buried soil horizons is a good anthropogenic marker and its variability could be investigated in a wide range of natural and archaeological settings. P concentration in soils is, indeed, a good proxy for manuring activities and to reconstruct the limits of an archaeological site.

This contribution presents the first results of P determination on a large set of samples (102), collected during a campaign of soils sampling carried out in summer 2016 as part of the Tell Gomel Archaeological Survey (TGAS). The latter project has its origins in the framework of the wider Land of Nineveh Archaeological Project, which was established in 2012 by the University of Udine in the northern region of Iraqi Kurdistan.

The main aim of the TGAS project is the systematic and intensive survey of the area surrounding the archaeological site of Tell Gomel, located in the Navkur Plain, with a special emphasis on the study of the off site evidence and the reconstruction of ancient land-use. After the high resolution archaeological survey of the area, a grid was elaborate in GIS system, including metadata illustrating the size and importance of archaeological features; on this layout, sampling spots for phosphorus analyses have been selected, being representative of different type of archaeological features; moreover, a more accurate and dense sampling was carried out in correspondence of Tell Gomel. Phosphorus analysis results permit to determine with more accuracy the site boundaries of the site of Tell Gomel and shed new light on the relationship between the occurrence of sherds scatters on the extant land surface and ancient manuring activities.

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**SOLTANMORADI, Zohreh**

Department of Archaeology, Faculty of Art & Architecture, Bu-Ali Sina University of Hamedan

**TAHERI, Sadreddin**

Department of Art Studies, Faculty of Research Excellence in Art and Entrepreneurship,  
Art University of Isfahan

### **The Dawn of Anthropomorphic and Animal Figurines in the Fertile Crescent**

This poster is trying to have a look at the dawn of Anthropomorphic and animal figurines in the ancient sites of Fertile Crescent (Western Iran, Anatolia, Mesopotamia and Levant). Today countries include: Palestine, Lebanon, some parts of Jordan and Syria, Iraq, south east of Turkey, west and south west of Iran.

It has four basic purposes:

1. Brief review of interpretative theories about the Neolithic figurines.
2. To depict a practical map of the Fertile Crescent, with locations of sites, figurines pictures and related references.
3. Search for reasons to build figurines, based on changes in the economic context of the area.

We are looking to build a vast vision of Neolithic sites in Western Asia and their figurines, in this poster. This may help scholars to follow the timeline and compare the artifacts. The date range of museum artifacts in this case study is from the end of Epipaleolithic and the beginning of Proto Neolithic to the end of Neolithic. We have gathered the data from a library and museum survey. With a comparative analysis we hope to find other evidences about cultural relationships between these cultures. People of the Fertile Crescent achieved the domestication of animals (in Anatolia and western Iran) and plants (in Levant) near 11000 years before present in PPNA period (Pre Pottery Neolithic A). With these two momentous revolutions, they could proceed from dependency on hunting and food collecting, to an economic situation based on agriculture and shepherding. As the agricultural villages spread the area, they started to build human figurines (especially female figurines), simultaneously.

The first evidences about agriculture belong to east coast of Mediterranean Sea (Levant), almost 9000 years BC. It was because of warming of weather, that they could seed the first domesticated grains and cereals. That process occurred in western Iran nearly 8000 years BC. The same difference can be seen between the appearance of primary anthropomorphic figurines in west and east side of the area. The first animal figurines appeared near 11000 years before present in Anatolia and western Iran, concurrent domestication of animals. We believe that these figurines were used as ritual objects related to farming

and sheepherding, in a primary collection of religious beliefs about a divine power that control fertility of earth and also reproduction of mankind and their animals. These figurines may have been used as some kind of non-bloody sacrifice to earth.

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**SZYMCZAK**, Agnieszka

Polish Centre of Mediterranean Archaeology, University of Warsaw

### **Objects of unbaked clay from Tell Arbid**

Small objects of unbaked clay are ubiquitous at sites throughout Mesopotamia and Northern Syria in the Bronze Age. This is also the case at Tell Arbid in Northeastern Syria, halfway between the modern towns of Qamishli and Hassake, in the vicinity of the prominent sites of Tell Brak and Tell Barri. Fifteen seasons of excavations at the site revealed a variety of such objects from strata dated from the Ninevite 5 till the Khabur ware period (Early Jazirah I – Old Jazirah III). The multitude of their forms, lack of apparent standardization and, in most cases, the fact they were found in secondary contexts preclude easy insights into the objects' meanings and functions. This often results in their omission from publications and site reports. Nonetheless, the only way towards their interpretation is through the publication of the available collections, detailing the contexts and finds they were associated with. Comparing these data with information from well-stratified and more easily interpretable contexts may shed some light on the function of these objects in the respective regions and periods. Thus, this poster will offer a contribution to this discussion by presenting examples of variously shaped crude clay objects from Tell Arbid.

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**THUESEN**, Mette Bangsborg – **RICHTER**, Tobias

University of Copenhagen

### **Stone Bead production in the Late Epipalaeolithic and Early Neolithic at Shubayqa 1 & Shubayqa 6**

In the Upper Palaeolithic period bead and personal ornaments were mainly made of shell, bone, and other kinds of material, but rarely of stone. Specialised production of stone beads has previously been assumed to start in the PPNB (Bar-Yosef Mayer & Porat 2008; Wright & Garrard 2003; Wright et al. 2008). Recent excavations in the northeast Jordanian basalt desert challenge this view. A substantial assemblage of finished stone beads, roughouts and production waste allows for the reconstruction of the entire chaîne opératoire has been recovered from Shubayqa 1 and 6, which date from the Late Epipalaeolithic to the PPNA periods. The material recovered suggests that specialised production may have started as early as the PPNA at Shubayqa 6.

The poster will present the results of the analysis of this assemblage and discusses the use of personal ornamentation in the early Neolithic and whether the stone bead production at the two sites can be characterised as early evidence of craft specialisation. The project also examines how these changes in the production of personal ornamentations connect to broader processes during the Neolithic, such as the beginning of plant cultivation, increasing social complexity and sedentism.



TITOLO, Andrea  
Sapienza University of Rome

### **Settlements Patterns, Models of Occupation and Assyrian Presence in the West. Case Studies from the Middle Euphrates Region**

Archaeological and epigraphical data concerning the Iron Age and, in particular, the Neo-Assyrian Period (X-VII cent. B.C), show that in the regions under the dominion of the Assyrian empire, settlements disposition and hierarchy changed – in different time and ways - as regions were conquered and integrated in the imperial provincial system. Those changes seem to be related to the function of the territory in the empire and to the empire's needs as well. Most of the data regarding these phenomena come from the Khabur, Upper Tigris and Central Assyria regions, while on the other hand they are less visible in the west of the empire's core. It seems that, as a matter of fact, moving on from the centre of the empire to the west, the changes to the settlement pattern in relation to the Assyrian presence appear to be more feasible, notwithstanding the presence of sites like Karkemish or Tell Ahmar that were reutilised as Assyrian capitals. Both settlements were also part of a settlement pattern that spread along and nearby the Euphrates river, a natural feature that had certainly influenced settlements disposition in the landscape.

It is interesting, to better understand if the presence of the river in these regions as a common feature involved similar response, and if the presence of the Assyrian empire could have modified the settlement pattern and hierarchy in similar ways, to include and compare the regions between Deir ez-Zor and Haditha dam (modern Syria and Iraq) and the region between al-Najaf and Diwanye, further south in the modern Iraq. All these regions were the target of military conquest of the Assyrian empire and are known by historical sources of the IX to VII century B.C. The preliminary study through GIS, satellite images, material culture and the comparison between spatial and settlement data pertaining those areas, different but again with the Euphrates and Assyrian presence as a common shared feature, could certainly provide very interesting data regarding settlements dynamics in the Iron Age. This could be useful to better comprehend if and how the presence of the river and of the Assyrians could have altered the settlements disposition, hierarchy and function in relation to the landscape, in ways and means known already from the other regions of the empire. Moreover, in one of the region under examination, the ancient region of Suhu, it is possible to suggest a more multifaceted nature of the occupation of the territory, which turned from frontier into empire province between IX and VII century B.C.

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TONOIKE, Yukiko  
Department of Anthropology, Yale University

### **Preliminary Analysis of the Ceramics from the Yale University Khabur Basin Survey (Syria)**

The semi-arid steppe of the Lower Khabur Basin of northeastern Syria is a climatically marginal zone for agriculture, yet there have been episodes of settlement over the past 9000 years. Archaeological surveys have recorded more than 300 sites whose age, type, and distribution on the landscape are reflections of changing socio-natural systems. The region is particularly suitable for detecting changes in both environmental and socio-political spheres because of its environmental marginality, yet centrality to the political needs of states and empires. In this paper, preliminary results of stylistic and technical materials analyses (mainly ceramic petrography) of selected ceramics from the Yale University Khabur Basin Survey Project and related excavations will be presented as the first step in understanding the changes in the settlement landscape and interaction patterns, as well as the nature of the sites and their distribution on the landscape.

**ULLRICH**, Burkart  
Eastern Atlas, Berlin  
**GUSSONE**, Martin  
Historische Bauforschung, TU Berlin  
**MÜLLER-WIENER**, Martina  
Universität Frankfurt  
**NOORDA**, Nikolaas  
Groningen Institute of Archaeology  
**SALMAN**, Ibrahim  
DAI - Orient Department  
**ZOELLNER**, Henning  
Eastern Atlas, Berlin

### **Large scale magnetometer surveys in al-Hira (Iraq)**

The presentation focuses on the challenges and practical solutions of large-scale magnetometer survey in the area of historical al-Hira (Iraq). The magnetometer survey was part of a multidisciplinary approach involving geophysics, remote sensing and archaeological field surveys in the precincts of al Najaf International Airport. An efficient high resolution geophysical survey of the planned landing strip, stretching over 3.2 km in East-West direction and more than 500 m North-South direction, requires a mobile multi sensor, GPS controlled device. Main challenges for a large-scale magnetic survey are the different surface conditions, which comprise open areas, bush savannah, mounds and spoil heaps of former excavations and building material. We faced these challenges using the ultra light and flexible magnetic survey system LEA MAX (Eastern Atlas). The device can be easily transported as standard air luggage and assembled in the field in short time. Surveying the large open areas, the device was used as a mobile 10 sensor system pulled by an ATV and it was modified to a system pulled by hand for additional surveys between the heaps and on exposed ridges. The exceptional results of the large scale magnetometer surveys allow both – a concept of different zones of archaeological potential varying from almost no archaeological remains to very densely built urban areas at one hand and a very distinct interpretation of the high resolution magnetic data on the other hand. The poster will present the unique survey approach and few of the impressive results in detail.

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**VOLPI**, Luca  
Sapienza University of Rome

### **Filling the Gap in the Late 3rd Millennium BC Southern Mesopotamia: the Case-Study of Ur**

Ur is one of the most exciting sites of the Ancient Near East. Excavated by Sir L. Woolley from 1922 to 1934, the site performed a leading-role under the Sargonic Dynasty and the function of “capital city” in the period of the Third Dynasty of Ur, 2112 – 2004 BC (according to the Middle Chronology). However, data coming from the excavations are lacking, especially for this time span. The only contexts surely dated to the Ur III period are that of the “Royal Mausoleums”, which provided very sparse data about the material culture of the period. Moreover, the burials from the “Royal Cemetery” of Ur were differently assigned to a period or another by scholars: L. Woolley first suggested a dating to the “Second Dynasty” and the “Sargonid” phases; more recently B. Buchanan, H. J. Nissen and S. Pollock proposed a different chronology, pointing out, however, the existence of a late phase of use of the Cemetery, dating to the last centuries of the 3rd Millennium BC. A re-evaluation of some burials from the “Royal Cemetery” can partially fill the gap in the late 3rd Millennium BC documentation, from the so-called “post-Akkadian” to

the Neo-Sumerian phase. Based on the analysis of a group of selected graves it is possible to compare the material culture (pottery, metals and seals) with data from recently excavated sites and to discuss the evidence from Ur in the context of late 3rd Millennium BC Southern Mesopotamia.

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**ZINGALE, Romano**

**(Be)Ware of Sumer! Preliminary Studies on the Technology of Abu Tbeirah's Pottery**

This poster will present the preliminary results of the ongoing studies on Abu Tbeirah pottery's technology. Our research is aimed at: reconstructing the different actions of the potter, from the exploitation and choice of the raw materials to the manufacturing techniques and firing.



### 1. Bronze Age burial practices on the Arabian Peninsula: Interdisciplinary perspectives on cultural contacts and exchange

Recent results from archaeological investigations on the Arabian Peninsula stimulated the debate on cultural transfer and mobility in the context of apparently wide spread burial practices. Focusing on the Bronze Age (EBA, MBA) in a transregional perspective, burial practices will be discussed by archaeologists, historians, and bioarchaeologists. In the light of Amorite burials in Bahrain and the evidence for status burials (‘warrior graves’) in Northwest Arabian oases, the definition and permeability of cultural borders needs to be reviewed. Although the bridging of long-distances is not much surprising in the Bronze Age, the wide-spread distribution of certain communal practices needs to be explained. What can be defined local, regional, supra-regional in terms of identities? What is the impact from “abroad”? Are there certain patterns of transfer? In the workshop a number of case studies from the region will be discussed, presenting new materials from a large geographical region belonging to the Bronze Age contact zone. A further aim is to highlight the contribution of bioarchaeological approaches for the future study of burial contexts.

#### Organizers

<b>HAUSLEITER, Arnulf</b>	<b>LAURSEN, Steffen Terp</b>
Institute for the Study of the Ancient World, New York University German Archaeological Institute, Orient Department	Moesgaard Museum, Oriental Department

#### Participants (in alphabetical order)

<b>ABU-AZIZEH, Wael</b> Université de Lyon	<b>HOFSTETTER, Tobias</b> University of Geneva, Laboratory of Prehistoric Archeology and Anthropology, Department F.-A. Forel of environmental sciences and water
<b>AL-DUWEISH, Sultan</b> وزارة التراث والثقافة في الكويت, Kuwait	<b>LAURSEN, Steffen Terp</b> Moesgaard Museum and Aarhus Universitet
<b>AL-MAQDISSI, Michel</b> Musée du Louvre	<b>LUCIANI, Marta</b> Universität Wien, Institut für Orientalistik
<b>BESSE, Marie</b> University of Geneva, Laboratory of Prehistoric Archeology and Anthropology, Department F.-A. Forel of environmental sciences and water	<b>MARCHESI, Gianni</b> Università di Bologna “Alma Mater Studiorum”
<b>BINDER, Michaela</b> Österreichisches Archäologisches Institut, Österreichische Akademie der Wissenschaften	<b>PETITI, Emmanuele</b> Freie Universität Berlin, Institut für Vorderasiatische Archäologie
<b>CHEVALIER, Anaïs</b> Université Paris 1 Panthéon-Sorbonne	<b>STEIMER-HERBET, Tara</b> University of Geneva, Laboratory of Prehistoric Archeology and Anthropology, Department F.-A. Forel of environmental sciences and water
<b>GERNEZ, Guillaume</b> Université Paris 1, Panthéon Sorbonne	<b>ZARINS, Juris</b> Missouri State University
<b>HAUSLEITER, Arnulf</b> New York University – German Archaeological Institute	<b>ZUR, Alina</b> Deutsches Archäologisches Institut, Orient-Abteilung

## List of Lectures

	Lecturer	Title
9:00	Arnulf Hausleiter Steffen Terp Laursen	At the crossroads? Investigating burial practices on the Arabian Peninsula
9:30	Juris Zarins	North Arabian Pastoral Nomads of the Early Bronze Age: Their relationship to the Frontier Cities of western Southern Mesopotamia
10:00	Emmanuele Petiti	Going global. Negotiating Identities in the Bronze Near East: Bioarchaeological case studies
10:30	Anaïs Chevalier	Spatial analysis and burial practices: new insights regarding protohistoric tombs in central and western Arabia
11:00		Coffee Break
11:30	T. Steimer-Herbet T. Hofstetter S. al-Duweish M. Besse	Small-scale stone monuments on the Arabian coastline during the Bronze Age
12:00	Steffen Terp Laursen	The Royal Mound of A'ali, and the burial custom of Amorite/Dilmunites in Bahrain
12:30	Gianni Marchesi	"Arabian" Amorites and Amorite burial customs: The textual evidence
13:00		Lunch break
14:00	Michel al-Maqdissi	From Ras Shamra-Ugarit to Amrith: Funeral structures on the Syrian coastal region in the Middle Bronze Age
14:30	Wael Abu-Azizeh	Research on cairns and tumuli at Mada'in Salih: Identifying a late 3 <sup>rd</sup> – early 2 <sup>nd</sup> millennium hitherto unknown funerary tradition of northwestern Arabia
15:00	Alina Zur	Bronze Age Burials at Tayma, NW Arabia: Defining the local
15:30	Michaela Binder Marta Luciani	The funerary structures at Qurayyah, Saudi Arabia – Bioarchaeological approaches to life and death in Bronze Age Northern Arabia
16:00		Coffee break
16:30	Guillaume Gernez	Bronze Age 'warrior burials' through the Near East and Arabia
17:00		Discussion: Perspectives on the future of burial archaeology on the Arabian Peninsula

## Abstracts

**ABU-AZIZEH, Wael**  
Université de Lyon

### **Research on cairns and tumuli at Madâ'in Sâlih: Identifying a late 3<sup>rd</sup>- early 2<sup>nd</sup> mill. hitherto unknown funerary tradition of north-western Arabia**

Preliminary explorations undertaken during the first research programme at Madâ'in Sâlih (between 2002 and 2005) had already recognized the presence, mainly in the western part of the site, of several hundreds of cairns or *tumuli*. Apart from the chronological information provided by a Nabataean quarry, the

exploitation of which destroyed several cairns, no clear dating evidence was available for these structures. A study programme of the cairns was therefore initiated in order to date them and to determine both their plan(s) and function(s).

The study included the detailed re-examination of a total number of over 270 cairn structures in a defined area of Jabal al-Khramat outcrops (1.3 x 0.7 km), allowing to highlight the diversity of structures in presence, as well as the recurrence of some very specific types of constructions. Tower-tombs, proved to be a widespread type of structure, with sub-types according to their shape and the presence/absence of an outer ring of stones. Two of these remarkable features were excavated. One of them was associated to an unusual feature of wall with internal, faced compartments, another recurrent feature type identified in the study area. The latter type of structures showed to be particularly interesting, because of their specific and unusual character, and their association to a very distinctive material culture. The excavation undertaken in the framework of this research program lead to the identification of a remarkable and hitherto unknown funerary tradition of the northwestern Arabian Peninsula, dating back to the end of the third millennium cal BC.

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**AL-MAQDISSI, Michel**  
Musée du Louvre

### **From Ras Shamra-Ugarit to ‘Amrith: Funerary structures on the Syrian coastal region in the Middle Bronze Age (2000-1600 B.C.)**

The excavations carried out since 1929 on the Syrian coast have provided rich documentation of burial structures dating from the Middle Bronze Age I and II (2000-1600 B.C.).

This presentation proposes to analyze the tombs found in a vast region from the plain of Latakia in the North to the plain of ‘Akkar in the South.

Funerary structures in the sites studied fall into several categories:

- Ras Shamra-Ugarit with simple (often individual) graves of the Middle Bronze I and II and the collective (constructed) graves dating from the Middle Bronze Age II;
- Plain of Jableh (Tell Tueini and Tell Iris) with collective graves built or carved in the rock of the Middle Bronze II and of a tomb -silo of the beginning of the Middle Bronze II;
- Plain of ‘Akkar with the ‘Amrith tombs - silos of the Middle Bronze I and the simple (often individual) tombs of the Middle Bronze Age II in ‘Amrith and Tell ‘Arqa.

The funerary furniture is often composed of pottery vases, bronze objects (Axes, pins ...) and small objects (beads, scarabs, rarely figurines ...).

We note that the first vases imported from Cyprus date from the early Middle Bronze II and that imports from the Aegean world are practically non-existent.

The typology of the different types will give clear indications that the funerary structures on the Syrian coast respect a Levantine tradition which is attested in Inner Syria (Tell Mardikh, Mishirfeh, Hama ...) or in Lebanon (Beirut, Sidon and Its region, Sin el-Fil, Magdalun ...).

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**BINDER, Michaela**  
Österreichisches Archäologisches Institut, Österreichische Akademie der Wissenschaften  
**LUCIANI, Marta**  
Universität Wien, Institut für Orientalistik

## **The funerary structures at Qurayyah, Saudi Arabia – Bioarchaeological approaches to life and death in Bronze Age Northern Arabia**

Renewed fieldwork by the Saudi-Austrian (SCTH and University of Vienna) team at the settlement of Qurayyah in northern Saudi Arabia has recently revealed two substantial Early to Middle Bronze Age funerary structures as well as a site of formal disposal of the dead dating to the late Bronze Age. The skeletal human remains recovered from these structures form the basis of a bioarchaeological research project integrated within the comprehensive set of archaeological and paleoenvironmental studies at Qurayyah in order to elucidate aspects of agency behind the genesis of the so-called ‘urban’ oases and the development and living conditions of the population in the desert environment. Applying a bio-cultural approach the skeletal collection is analysed for markers of malnutrition, disease and markers of environmental stress. This paper will present first results of the bioarchaeological analysis which imply a population under a considerable degree of negative environmental influences, including markers such as a high degree of childhood mortality, evidence for malnutrition, a large degree of physical activity and high frequencies of skeletal trauma. It will further demonstrate how these results can be used within the wider historical, environmental and archaeological context in order to contribute to the range of research questions regarding the development of the settlement as well as population dynamics within the Qurayyah project. In addition, it will address the difficulties of bioarchaeological analysis posed by the considerable degree of fragmentation and commingling of the skeletal human remains caused by the funerary rituals as well as discuss strategies to overcome this problem often encountered in Arabian bioarchaeology.

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**CHEVALIER, Anaïs**

Université Paris 1 Panthéon-Sorbonne

## **Spatial analysis and burial practices: new insight regarding protohistoric tombs in central and western Arabia**

Thousands of dry stone tombs are scattered in the landscape of Saudi Arabia. Until today, these funerary monuments are one of the most important archaeological evidence known from the protohistoric periods of this country. While they have been noticed in the landscape since a long time, the development of the research regarding this topic is very recent. That’s why the burial practices associated and the cultural development(s) occurring during the Bronze Age are still badly-known.

Thus, along with the multiplication of the fieldworks, a new approach has been tested in the context of the author’s PhD thesis, in order to find new keys to improve our understanding of these funerary monuments. Using remote sensing technics and data from field investigations, the aim of this approach is to do spatial analysis of the graves recorded. On the one hand, regional studies consist in the comparison of the tombs spatial distribution through several factors (typology of burial monuments, topography, geology, geomorphology, hydrography, chronological data, research of visibility, etc.). On the other hand, this experimental approach is extended to seven regions of Saudi Arabia (Dûmat al-Jandal, Mada’in Sâlih, Khaybar, Al-Kharj, Harrat Rahat, Al-Faw and Bi’r Himà/An Halkan). Inter-regional studies of these graves have also been undertaken to identify regional specificities and/or communal burial practices shared through the vast territory of Saudi Arabia.

This paper will describe the method and some preliminary results of this approach. It will show how, considering the spatial distribution of the protohistoric tombs, this approach provides various elements of reflections about the place of tombs in the environment of these protohistoric societies (way of appropriation of land? symbolic and identity aspects of the necropolises? sign of a cultural identity through the time and the space? etc.).



**GERNEZ, Guillaume**  
Université Paris 1, Panthéon Sorbonne

### **Bronze Age “warrior burials” through the Near East and Arabia**

The concept of “warrior burials”, discussed for a long time in Near Eastern archaeology, could be one key to access social and cultural similarities, influences and transfers in a very wide area. Dealing with types of tombs and their content, and based on an analysis of weapons sets and types from the Early to the Late Bronze Age, this paper is an attempt to qualify and quantify the connexions between the Levant and Eastern Arabia, and their evolution through time.

Even if only few evidences can be mentioned for the 3<sup>rd</sup> millennium BCE, some strong similarities are known from the beginning of the 2<sup>nd</sup> millennium BCE (Middle Bronze Age). Evidences from old and new excavations including Tell el-Dab’a (Egypt), Sidon (Lebanon), Gesher (Israel), Baghouz (Syria), Tayma (Saudi Arabia), Asimah (E.A.U.), Buhais-18 (E.A.U), Samad (Oman), Adam North (Oman) and others are presented and discussed.

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**LAURSEN, Steffen Terp**  
Moesgaard Museum and Aarhus Universitet

### **The Royal Mound of A’ali and Amorite/Dilmunite burial customs**

The burial mounds of Bahrain (Dilmun) offer a completely unique archaeological perspective from which to study the super-regional developments in burial custom during the period from c. 2200 to 1700/1600 BC. A substantial archaeological record of originally more than 76.000 burial mounds with an excavated sample numbering in the thousands, provides detailed insight at an unprecedented level of representatively. In contrast to the eastern collective grave custom practiced on the neighboring Oman peninsula (Magan), the Dilmunites practiced a western single inhumation burial mound tradition with occasional subsidiary graves for sub-adults outside the ring wall. The intimate association between the entombed individual and chamber form, monument size and funerary goods has allowed the conclusion that mound burials reflect a wide social segment spanning first (2200-2050 BC) from “commoners” to “chiefs” and later (2050-1700 BC) from “commoner” to “kings”. The burial architecture – specifically the chamber shapes - is exceptionally structured in terms of symbolism related to social rank or class. Particularly instructive is the circumstance that chambers appear in four discreet status-relative variants with none, one, two or four alcoves, respectively.

The above-mentioned chamber system and other architectural details observed exclusively at The Royal Mounds of A’ali, suggest a relationship and partial origin of the Dilmunite tradition in western (Amorite) lands far removed from Bahrain. The sites outside Bahrain yielding support for this hypothesis among others count burial mounds with distinct chamber layouts recently excavated by German-Saudi team at Tayma (Al-Nasim) in KSA and comparable structures from Jebel Bishri (Syria) investigated by Finish and Japanese teams. This Amorite-Dilmun relation in death rituals and the long-held assumption of a major Amorite speaking segment in the Dilmunite population has most recently found conclusive support in the discovery in a Dilmunite royal tomb of inscriptions on sherds mentioning two Dilmunite kings with Amorite names (see the contribution by G. Marchesi).

**MARCHESI, Gianni**  
Università di Bologna “Alma Mater Studiorum”

### **“Arabian” Amorites and Amorite burial customs: The textual evidence.**

The recent discovery of inscribed vessels in one of the tombs of the kings of Tilmun in the royal cemetery of A’ali (Bahrain) added to the evidence for the presence of Amorite peoples on the Arabian Peninsula in the Middle Bronze age. The inscriptions in question revealed the existence of an Amorite dynasty who ruled over Tilmun in the first half of the second millennium BC. In fact, Amorites appear to have been more widely established and more deeply rooted in the Gulf region than has been hitherto suspected. Their presence in that area is already attested several centuries earlier and as far south as in Oman.

The first part of this paper offers an assessment of the textual evidence on these “Arabian” Amorites. Then the information on the Amorite funerary practices that is supplied by the written sources in cuneiform writing from Mesopotamia and Syria is examined and compared with the archaeological finds of the royal tombs of A’ali.

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**PETITI, Emmanuele**

Freie Universität Berlin, Institut für Vorderasiatische Archäologie

### **Going global: Negotiating Identities in the Bronze Age Near East – three bioarchaeological case studies**

This contribution will present first-hand data from the Bronze Age burial records from Iraq, the Emirates and Saudi Arabia. Its main aims are:

1. Confronting the methodological tools of the bioarchaeological research with the specific needs raised by the arid environments of the Arabian Peninsula.
2. Opening an interdisciplinary debate on how new data from bioarchaeological studies can help to address new questions on burial practices and subsistence strategies.

The presented datasets are the latest outcome of the 2015–2018 bioarchaeological investigations carried out by the Orient Department of the German Archaeological Institute in Uruk (Iraq), Fujairah (United Arab Emirates) and Tayma (Saudi Arabia). All of the three above mentioned sites feature large bone assemblages dating back from the 3<sup>rd</sup> to 2<sup>nd</sup> mill. BC and, while Uruk is located at a focal point of Mesopotamia, Fujairah and Tayma are respectively at the North-western and South-eastern corners of Arabian Peninsula.

Therefore, both the large scale perspective resulting from the geographical distribution of the sites and the focus on the human bones as primary source of information about the ancient groups are critical to the global approach of this presentation.

The results presented here will cover a range of interdisciplinary issues, from the collection of taphonomic data in arid and hyper-arid environments and its site-scale impact on the wider archaeological interpretation, to the identification of deviant burial practices by increasing direct and specialised in field analyses.

Finally, taphonomic data on how the individuals from the three sites were buried, together with those about their life-style and diseases, suggest larger dynamics of environmental adaptation, which show a highly innovative potential for an interdisciplinary debate.

**STEIMER-HERBET, Tara – HOFSTETTER, Tobias**

University of Geneva, Laboratory of Prehistoric Archeology and Anthropology, Department F.-A. Forel of environmental sciences and water

**AL-DUWEISH, Sultan**

وزارة التراث والثقافة في الكويت, Kuwait

**BESSE, Marie**

University of Geneva, Laboratory of Prehistoric Archeology and Anthropology, Department F.-A. Forel of environmental sciences and water

### **Small-scale stone monuments on the Arabian coastline during the Bronze Age**

Surveying activities carried out by different archaeological missions along the Yemenite, Omani and Kuwaiti coastline led to the discovery of numerous small-scale monuments, such as graves, platforms or erected stones. Even though they span over a large geographical area, their chronological frame appears as more limited. Therefore, it is possible to define the social structures and economic strategies that sparked this transregional architectural phenomenon. According to radiocarbon dating and to the chronotology of grave goods found within these structures, one can advance to say that the construction of dry stone tombs began in the second half of the 4<sup>th</sup> millennium BC, i.e. during the Bronze Age. We present four contemporary case studies (Hadramawt (Mukallah-Raydah, Yemen), Dhofar (Salalah-Muday, Oman), Fujairah (Dibba, UAE) and Sabiyah (Mudeirah, Kuwait)). For each case, we describe dry stone architecture, individual or collective graves and topographic location. In short, these features reflect social and cultural values, ethnicity, land possession or territorial appropriation. As such, they offer an exceptional panel of different forms of social organization, geopolitical power expression and ultimately chiefdom implementation.

As anthropological studies in Southern Asia revealed, societies separated by thousands of kilometers and centuries in time, happen to develop almost identical ideas and solutions to commemorate places of great symbolic value, worship ancestors, delimitate territories and convey cultural values from one generation to the next. Furthermore, the grave goods unearthed in such monuments indicate that Bronze Age societies lived in close contact with state like entities, which provided them with prestige goods. Concordantly, it appears that the constructors of small-scale stone monuments on the Arabian coastline were part of well-organized chiefdom-type society.

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**ZARINS, Juris**

Missouri State University

### **North Arabian Pastoral Nomads of the Early Bronze Age: Their Relationship to the Frontier Cities of western Southern Mesopotamia**

The pioneering work of H. Field, Garrod, Maitland, Glueck and Poidebard in discovering “the Old Men of Arabia” lay largely dormant for over 50 years and seemed to be unconnected to G. Buccellati’s textual work of 1966 describing the same “westerners” centering on the Ur III period. Archaeological work beginning in the early 1970’s in Syria, eastern Jordan, north Saudi Arabia and western Iraq until the present has shed considerable light on the entire pastoral nomadic complex which originated by the mid-sixth millennium BCE. The emphasis here is a description of what defines this region from a human settlement point of view for the mid to late third millennium BC tied particularly to Sargonic, Ur III and Isin-Larsa sources from the southern alluvium. Particularly important is the relationship of some of these groups to a number of western frontier towns fronting Arabia – Kazallu, Girtab, Apiak, Bar(sippa), Dilbat, Murum, Marad and

Isin. A brief geographical and geological examination of the Arabian peninsula in relationship to Mesopotamia and the Gulf reveals that Southern Mesopotamia experienced direct relations to only the northern part of Arabia north of the Nafud desert. For this region then in the fourth and third millennia, an examination of the over-all and local geomorphology, climatic conditions, a changing lifestyle, the domesticants, settlements, religious practices, rock art and burial types is paramount. Of particular interest are the two Ur III fortification systems built in the vicinity of Kazallu and Girtab and their antecedents as well as the discovery of the Syrian system between Palmyra and Homs. From a theoretical basis, the question of suggested larger relationships for these northern Arabian groups to central Arabia and the Dilmun complex as well as Southern Arabia (including Yemen and the Rub al Khali) to the Magan settlements of Oman is of fundamental interest.

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**ZUR, Alina**

Deutsches Archäologisches Institut, Orient-Abteilung

### **Bronze Age burials at Tayma, NW Arabia: Defining the local**

The archaeological data from excavations of Bronze Age cemeteries at Tayma from the 1980s onwards, i.e. Sana'iye, Rujum Sa'sa, Tal'a, and al-Nasim, will form the basis of this consideration. Architecture and objects, including pottery and animal remains show the strongest local signature within the funerary assemblages. Yet, influences of a regional level and beyond are visible in the material from these sites.

In this context it is necessary to reflect on the nature and meaning of the concepts of "grave" and "funerary tradition" as well as on the questions which can be addressed towards grave contexts; where are e.g. the limits considering their intentional arrangement?

With this in mind, the archaeological evidence will be reviewed and the process of deposition, the social status of the buried and funerary rituals of the Bronze Age population at Tayma will be discussed. The archaeological record from these graves points to an exchange of knowledge and shared symbols or values over distant regions. What symbols are used in the funerary contexts and (how) do they differ from those used in contexts not related to the funerary sphere. Were there different understandings of apparently "similar" communal burial practices or the shared use of symbols? What kind rituals and social concepts are mirrored in them? Are these developments independent from regional chronological changes? Are they a product of the increasing contact due to material exchange in the frame of metal trade and climatic change?

## 2. New and old multidisciplinary researches at Shahr-i Sokhta in a historical perspective

The workshop explores the economical and societal transformations in eastern Iran from the end of IV to the beginning of the II millennium BC using a multidisciplinary and interdisciplinary approach to the new and old Shahr-i Sokhta excavations (Sistan-va-Baluchistan, Eastern Iran). The discoveries made by the historical Iranian expedition since 1997 and the new multidisciplinary project started in 2017 at Shahr-i Sokhta will be the subject of the workshop mainly focused to update our knowledge on the Bronze Age Iran. In details, the archaeological data will be corroborated by preliminary archaeometric and laboratory analysis, bio-archaeological and palaeo-environmental studies, settlement researches, geo-magnetic surveys, petrographic and paleoparasitological studies in a wider historical perspective focused to the investigation of social and economic processes at Shahr-i Sokhta from its formation to the collapse (ca. 3200-1800 BC).

### Organizers

**ASCALONE, Enrico**    **SAJJADI, Seyyed Mansur Seyyed**  
 University of Göttingen    Iranian Center for Archaeological Research (= ICAR)

### Participants (in alphabetical order)

<b>ASCALONE, Enrico</b> University of Göttingen	<b>MOLWAVI, Gholamreza</b> School of Public Health, Tehran University of Medical Sciences
<b>BEHESHTI, Iraj</b> Research Center for Conservation of Cultural Relics (= RCCCR)	<b>MORADI, Hossein</b> University of Tehran
<b>CERAUDO, Giuseppe</b> University of Salento	<b>RAMEZANI, Marzam</b> Iranian Center for Archaeological Research (= ICAR)
<b>FESTUCCIA, Silvia</b> University Suor Orsola Benincasa of Naples	<b>SAJJADI, Seyyed Mansur Seyyed</b> Iranian Center for Archaeological Research (= ICAR)
<b>MAKKI, Mahasadat</b> Tehran University of Medical Sciences.	<b>SCHOLZ, Tobyas</b> University of Goettingen
<b>MINNITI, Claudia</b> University of Salento	<b>SARHADDI DADIAN, Hossein</b> University of Zabol
<b>MOHAMMADKHANI, Kourosh</b> University of Shahid Beheshti	<b>SHADMEHR, Abdolkarim</b> Iranian Center for Archaeological Research (= ICAR)

## List of Lectures

	Lecturer	Title
9:00	<b>SAJJADI</b> , Seyyed Mansur Seyyed	Summaries of Sixteen Archaeological Campaigns at Shahr-i Sokhta (1997-2016) and the New Archaeological Investigations in 2017.
9:30	<b>ASCALONE</b> , Enrico	Results of Excavation and Researches in 2017 Season in Area 33 at Shahr-i Sokhta.
10:00	<b>MORADI</b> , Hossein <b>SAJJADI</b> , Seyyed Mansur Seyyed	Revising Shahr-i Sokhta Period IV.
10:30	<b>BEHESHTI</b> , Iraj <b>SAJJADI</b> , Seyyed Mansur Seyyed (Y. Sedghi - E. Ameri)	Study of Semi-precious Stone in South East Iran. The Case Study of Shahr-e Sukhteh.
11:00		Coffee Break
11:30	<b>FESTUCCIA</b> , Silvia	Alabaster Vessels from Building 33: Typology and Petrographic Analysis.
12:00	<b>MINNITI</b> , Claudia	Preliminary Results from the Study of Animal Remains at Shahr-i Sokhta: New Researches.
12:30	<b>RAMEZANI</b> , Marzam <b>SAJJADI</b> , Seyyed Mansur Seyyed (M. Tavallaei - A. Mohammadi - M. Naderi)	Capacity of Genetics Studies in Shahr-i Sokhta Skeletal Remains, 3 <sup>th</sup> Millennium BC.
13:00		Lunch Break
14:00	<b>MOLWAVI</b> , Gholamreza <b>MAKKI</b> , Mahasadat <b>SAJJADI</b> , Seyyed Mansur Seyyed	The Status of Human and Animal Parasitic Infections in the Shahr-e Sukhteh Archeological Site (3200-1800 BC): First Phase of Study.
14:30	<b>CERAUDO</b> , Giuseppe (V. Ferrari – P. Guacci – R. Montanaro)	Remote and Proximal Sensing at Shahr-e Sokhta. Interim Report.
15:00	<b>MOHAMMADKHANI</b> , Kouros	Geo-magnetic survey at Shahr-i Sokhta.
15:30	<b>SCHOLZ</b> , Tobias	Geo-magnetic survey at Shahr-i Sokhta in 2017 Season.
16:00		Coffee Break
16:30	<b>SARHADDI DADIAN</b> , Hossein <b>SHADMEHR</b> , Abdolkarim	New Data-Base Management System in Shahr-i Sokhta.

## Abstracts

**ASCALONE**, Enrico  
University of Göttingen

### Results of Excavation and Researches in 2017 Season in Area 33 at Shahr-i Sokhta

According to the agreement signed between the *Research Institute of Cultural Heritage and Tourism of the Islamic Republic of Iran* (RICHT) and the *University of Salento*, supported by Iranian Center for Archaeological Research, a new Italian project, directed by the author and hosted by Iranian archaeological expedition directed by S.M.S. Sajjadi, is started in 2017. The project will explore the economical and

societal transformations in eastern Iran, Central Asia and the Indus valley from the end of IV to the beginning of the II millennium BC using a multidisciplinary and interdisciplinary approach to the Shahr-i Sokhta archaeological researches (Sistan-va-Baluchistan, eastern Iran). In this perspective the new researches on this UNESCO site will be supported by archaeometric and laboratory analysis, including analyses of carbon, nitrogen and oxygen stable isotopes of plant, human and animal remains, strontium stable isotopes and DNA. Further bio-archaeological, anthropological, topographic and palaeo-environmental studies, and settlement researches will be evaluated together with the results of archaeological and geo-physical investigations to test new models for the emergence of complex societies in the Middle East, and Central and South Asia during the III millennium BC. The massive amount of information already obtained from excavations, survey, bio-archaeological and archaeometric analysis will be combined with new data in order to build a pattern which can be applied to other early state formations of the ancient Near East. One of the aims of this paper will be focused to present the new excavations in Area 33, in which a meaningful building (“Building 33”) has been brought to light for 300 m<sup>2</sup>. According to the preliminary analysis of pottery assemblage, the building has to be dated to the end of Shahr-i Sokhta III period (Phase 3-2), ca. 2350-2200 BC, with an earlier phase dated to the beginning of Shahr-i Sokhta III (Phase 4-3), ca. 2500-2350 BC, allowing to identify, at least, three main and different sectors on the basis of contextual and functional analysis. The above articulated and massive excavated building seems to be part of a wider architectural complex, particularly meaningful for its historical, social and economical implications.

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**BEHESHTI**, Iraj  
Research Center for Conservation of Cultural Relics  
**SAJJADI**, Seyyed Mansur Seyyed  
Iranian Center for Archaeological Research  
**SEDGHI**, Y. – **AMERI**, E.

### **Study of Semi-precious Stone in South-East Iran. The Case Study of Shahr-i Sokhta**

Shahr-i Sokhta (Sistan base) is one of the most important archaeological site in south-east Iran. The first installations of site were began at the end of IV millennium BC. Shahr-i Sokhta has three major sectors, the Central area, the Industrial zone and the Cemetery, which consists in 120 hectares remains of architectural structure and cultural material. The results of various excavations indicate that this area include four cultural periods (I-IV) divided into eleven phases of occupation. The archaeological evidences in this site suggest that the civilization of Shahr-i Sokhta had been in communication with the other civilizations of the eastern, western, and northern regions. A lot objects and cultural materials were discovered over the years; one of these cultural materials were imported semi-precious stones, widely diffuse at Shahr-i Sokhta and in the satellite sites, where evidences of industrial workshops cutting stones, such as cutting tools, raw rocks and finished and unfinished beads, were identified. In the recent studies on 324 samples, coming from excavations, stone analysis on finished beads and raw materials, were carried out by the authors. In this perspective, SEM, XRD, petrography and non-destructive methods have been used for analysis of lapis lazuli, agate (blue agate, red agate, yellow agate, smoky agate, banded and colorless agate), chlorite, turquoise (blue and green), calcite, jasper, marble (calcite and aragonite), quartz, green tuff; same scientific approach has been used for single beads in gold, glazed terracotta, glass and gold plated stones.

CERAUDO, Giuseppe  
University of Salento

FERRARI, V. – GUACCI, P. – MONTANARO, R.

### **Remote and Proximal Sensing at Shahr-i Sokhta. Interim Report of 2017 Season**

The team of the LabTAF of the University of Salento carry out its activities at Shahr-i Sokhta during 2017 seasons by integrating all traditional and innovative technologies for the detection, interpretation, mapping and management of archaeological data, such as aerial photography and aerial images from different sensors, Lidar, UAV, geophysical (magnetometry; ground penetrating radar, electrical resistivity tomography), analytical and digital photogrammetry, photogrammetry semiautomatic Airborne and drone, 3D modelling and augmented reality. In a wider perspective, the main research goals are focused to the topographical survey in order to identify and exactly locate the ancient site, an archaeological survey in order to reconstruct the ancient landscape (water sources, channels, ancient river beds, etc.), an archaeological exploration through systematic field and aerial survey, a survey to identify grid points already used in general topographic plan, a topographical relief according to grid points already known, the new grid points, to localize excavation areas. At the same time, the topographical work has been focused to study of UAV imagery photo-interpretation, management of data from field activities, improvement of a GIS platform for a systematic use of the archaeological data (topography, architecture, Stratigraphy, materials), post-processing of aerial imagery using some photographic filters (infrared; Contrast colour range; solarisation), vectorization of archaeological traces from zenital imageries, vectorization of excavation plans.

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FESTUCCIA, Silvia  
University Suor Orsola Benincasa of Naples

### **Alabaster Vessels from Building 33: Typology and Petrographic Analysis**

The new excavations of the Multidisciplinary Archaeological Italian Project at Shahr-i Sokhta (Iran), led by E. Ascalone, brought to light part of a building located in the monumental area of the site, Area 33. The most numerous kind of artefacts, following the pottery, were fragments of alabaster vessels found both on the surface and in the layers of the excavated area. The discovery of vessel fragments in a certain archaeological context, gave us the possibility of dating the period of use. The study of the material aims to the identification of the typology of vessels and their use, the working process for their manufacture and the petrographic analysis. The latter are included in a larger project devoted to the identification of calcite extraction quarries near Shahr-i Sokhta and satellite settlements, in which alabaster processing waste was widely found.

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MINNITI, Claudia  
University of Salento

### **Preliminary Results from the Study of Animal Remains at Shahr-i- Sokhta: New Researches in 2017 Season**



The zooarchaeological study of MAIPS is designed to develop the study of animal assemblages that were found at Shahr-i Sokhta and collected in new archaeological excavations. The aim of this talk is to investigate on animal exploitation at the site during the IV-II millennium BC throughout the analysis of new material in view of contributing to better understanding of husbandry and the role of the main domestic and wild species at Shahr-i Sokhta. The animal remains from building no. 1, that is located in the so-called Monumental trench of the site, were identified as a suitable first assemblage for achieving the research objectives, because of its continuous occupation from the second period (SIS II) to the third period (SIS III) and for the large quantity of animal remains that was uncovered. More than 1,200 remains have been recorded at this first phase of work. The interesting discovery of an articulated skeleton of rhesus macaque monkey in the necropolis will be also presented in this talk.

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**MOHAMMADKHANI**, Kourosh  
University of Shahid Beheshti

### **Geo-magnetic survey at Shahr-i Sokhta**

For magnetic survey in Shahr-e Sukhteh, we selected an area of 13 hectares divided into two sectors. In the first one is located to the west of the eastern residential area and the second one in the central part of the site between the monumental area and Graveyard. The survey was completed with a cesium gradiometer, G-858 Geometrics. The magnetogram results show very concentrated sectors with a dense and planned organization to the south of the central area, whereas the eastern sector revealed a more isolated monumental building (38 x 31 m), composed by a central courtyard surrounded by rectangular rooms. In the central area, the planned organization is mostly orthogonal and composed by buildings and streets following an almost North-South orientation. Local variations in this orientation can be identified in western area where a highly dense settlement, composed by small cells, could be linked to the graveyard area, located 100 m to the west. Finally, a huge building (at least 60 m side), “disconnected” from the planned organization, has been also identified in the southern part of the central area.

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**MOLWAVI**, Gholamreza  
School of Public Health, Tehran University of Medical Sciences  
**MAKKI**, Mahsasadat  
Tehran University of Medical Sciences.  
**SAJJADI**, Seyyed Mansur Seyyed  
Iranian Center for Archaeological Research

### **The Status of Human and Animal Parasitic Infections in the Shahr-i Sokhta Archeological Site (3200-1800 BC): First Phase of Study**

Paleoparasitological investigations reveal the possible occurrence of parasitic infections among the humans and animals in the far past. Identification of certain parasitic particles, demonstrate the existence of their lifecycles in the past, which can describe the cultural behavior, diets, occupations, proximity of domestic animals with human residing areas, and environmental condition in the given time and region. Shahr-i Sokhta archaeological site, with the extension of about 151 hectares including three distinct parts (Residential area, Industrial area and Cemetery), is located in the south east of the Iranian plateau. Its value to support the interdisciplinary researches in the country has been known as unique. Since the beginning of the present line of research in Iran, studying parasites in Shahr-i Sokhta was the only

systematic work in this regard. In this study several human and animal biological remains were analysed. Soil samples attached to the pelvic and sacral bones of excavated human and animal skeletons were collected. Conventional rehydration techniques were performed for the entire samples. Out of 320 human burial soils, only one individual was found parasitized. *Physaloptera* spp. eggs, which are nowadays regarded as one of the rarest helminth parasites that can be happened in humans, were surprisingly identified. In animal coprolites however, eggs of *Dicrocoelium dendriticum*, *Capillaria* sp., and *Taenia* sp. have been retrieved. Finding of few eggs amongst a large number of human burials has been appeared debatable. The mentioned issue, led us to consider the possible role of nematophagous fungi in destroying the helminth eggs. Further studies and the results obtained from the subsequent experiments, have supported the recent claim.

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**MORADI**, Hossein  
University of Tehran  
**SAJJADI**, Seyyed Mansur Seyyed  
Iranian Center for Archaeological Research

### **Revising Shahr-i Sokhta Period IV**

Shahr-i Sokhta is one of the largest Bronze Age sites in all over of Iranian Plateau. Based on the excavations at Shahr-i Sokhta since 1968, the cultural sequences are divided in four periods. Some archaeologists believe that during the last period of the settlement (IV period, ca. 2000-1800 BC), the area of Shahr-i Sokhta decreased to a limited area in the south-eastern part of the city, in which the so-called “Burnt Building” is located; some scholars suggest that this drastic reduction would be due to the collapse process of the Helmand civilization, due to some changes in environmental conditions, started at the end of this period until to the abandonment and the destruction of the city at the beginning of Second millennium BC. However, the recent excavations at Shahr-i Sokhta, leaded by Iranian mission after Islamic revolution (directed by S.M.S. Sajjadi), have revealed that, despite of previous opinions about the fall of Helmand civilization, the constructions activities of this period increased and the area of the city shifted towards the central and northern part of Shahr-i Sokhta, covering many parts of residential area, well known by some huge buildings with related material of IV period. The buildings no. 1, 5 and 20, in the northern and north western part of the mound, and the building no. 26 and 28, in the central quarter, remark the architectural remains of this period in all over the site, now not only known in the Burnt Building, placed in south-eastern part of the mound. These recent evidences of period IV at Shahr-i Sokhta can support new suggestions about the diffusion of IV period into many parts of the Residential and Industrial area, allowing us new socio-economic evaluations on the last years of Shahr-i Sokhta.

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**RAMEZANI**, Marzam  
Iranian Center for Archaeological Research  
**SAJJADI**, Seyyed Mansur Seyyed  
Iranian Center for Archaeological Research  
**TAVALLAEI**, M. – **MOHAMMADI**, A. – **NADERI**, M.

### **Capacity of Genetics Studies in Shahr-i Sokhta Skeletal Remains, 3<sup>th</sup> Millennium BC**

Archaeogenetics, a nascent and emerging science, is based on a combination of biology and genetics which has a high potential in discovering the untold facts about livelihood and culture of ancient times, such as

modern human origins and diets evolutionary trend. This area of biology, also focus on migration and geographical distribution of humans and genetic variation in ancient DNA samples around the world in comparison to modern humans. Highly polymorphic DNA regions like SNP found on the autosomal chromosome in nucleus and mitochondrial (mt) DNA are used in archaeogenetics to study genetic variation within a target population. mtDNA analysis is a field of research in genetics and molecular archaeology that its efficiency improves in some conditions such as biological degradation of materials. mtDNA not only is a molecule with high-copy-number, but it can also greatly be extracted from very decayed biological specimens. mtDNA D-loop region is very polymorphic, that consists of two hyper variable regions including HVI and HVII with a large variety in different human populations. Analysis on these regions of mtDNA, using ancient excavated human bones, will be leaded to determine the genetic composition of human mtDNA known as haplogroups. This kind of analysis can be used to identify the ancient ethnic groups, trace descendants of ancestors and their migration trails. Shahr-i Sokhta is one of the oldest and most advanced civilisations in its time on the Iranian plateau. We do not still know correctly the origin of the people of this civilization, the cause of their disappearance or their possible migration from this city; until now, no genetic studies have been performed on the skeletal remains of Shahr-i Sokhta. Our researches are focused to carry out genetic studies on skeletal remains, mainly mtDNA, in order to obtain the origin of the people living in this city and their convergence and relationships with the surrounding ancient civilizations. In order to achieve these goals, ancient DNA has been extracted from 5 excavated human bones, and performed PCR amplifications for HVI, HVII and HVIII regions of the mtDNA, followed by sequencing with the genetic analyser (ABI), have been collected.

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**SAJJADI**, Seyyed Mansur Seyyed  
Iranian Center for Archaeological Research

### **Summaries of Sixteen Archaeological Campaigns at Shahr-i Sokhta (1997-2016) and the New Archaeological Investigations in 2017**

In fall of 1997 and after a break of almost 18 years, the new series of archaeological research began at graveyard of Shahr-i Sokhta. During these years research activities of the Iranian archaeological expedition concentrated on the following points, based on studies and fieldwork.

1. Geomagnetic survey
2. Excavations Residential and Artesian Areas
3. Excavations at the Graveyard
4. Anthropological studies
5. Bio-archaeological and Paleo environmental studies
6. Paleo parasitology studies
7. extensive site survey
8. Restoration
9. Preparing a new database system for the registration of the cultural material and later and during last campaign with collaborations of Italian and German colleagues these studies extended to other multidisciplinary studies.

During last 16 campaigns of archaeological investigations, the main excavations took place in two distinguished section of the site namely: Graveyard and Residential area. New archaeological surveys show that some 37500 graves distributed in an area of almost 20-25 ha. of the site. This is the largest known graveyard of southwest Asia for the entire proto-historical period, however we do not know if any other graveyard lies in the vicinity of the natural hills that surrounded the main site. Up to day some 1120 graves

has been excavated (220 by Italian colleagues) showing 10 different types of grave structure, bringing to light more than 1400 human skeletons and thousands of grave goods of very different materials. In 1999 we extended our investigations to the residential area. Our work in this area was concentrated in 3 different sections: buildings no 1, 20 and since 2015 into Central residential area. Building no 1 is a large structure with tens of rooms/spaces and 6 structural levels of periods II and III with level A as the oldest structural level of this building. Next building no. 20 lies northwest of building no 1. The complex has 12 spaces disposed in north-south direction with a coherent architecture of mud bricks. Rooms have right angles and walls approximately 70-80 cm thick. The main entrance of building was painted by two layers of red and white plaster. According to the very few materials, mainly pottery fragments, this building can be attributed to the period IV. In 2015 we moved our area of activities into Central residential area with excavations in trenches 26-34. An archaeological survey around the site, accomplished during the last four excavation campaigns aimed to prepare an archaeological map of Area surrounded the main site, showed that the site is surrounded by at least 730 smaller settlements of 1 to 3 ha. In size, dated to the second half of the 3<sup>rd</sup> millennium BC. It must be mentioned that during these years several goods have been studied, repaired and restored, including: pottery fragments, stone objects, textiles, clay statuettes and metal items. Details of field works on each single subject will be discussed widely by my colleagues in this workshop. The excavations in the Central Residential Area were carried out in 5 different excavation unites (26, 30, 31, 32 and 33), but the main excavations were concentrated in workshop No. 26. This one was selected on the basis of geo-archaeological studies and a short archaeological survey carried out on the surface, in which several architectural remains, including wide walls and traces of large rooms and several other structures have been found. During these surveys, the pottery assemblage included fragments of grey ware pottery, comparable with those from Period VI of Bampur, and mainly kitchen ware, well known in Period IV of Shahr-i Sokhta. The main goal of the excavations in this workshop was focused to the understanding of the last period of site occupation. In the unit 30, located in the so-called Craftsmen Area (in western side of Shahr-i Sokhta), 8 simple rooms with two cultural layers have been found. Unpainted, painted buff ware pottery and few samples of grey ware fragments found in this section were attributed to the period III of occupation of the site. Excavation unites 31 and 32 are located in the northern section of the site and they consist in mud-brick walls divided into 3 layers and composed by 16 rooms all attributed to the period IV of the site. In the same 2017 campaign, new excavations were carried out in the Necropolis area (a total of 275 sq. m.) where tree trenches have been excavated, yielding 66 graves. Excavated graves merely belong to two different types of simple pits and bipartite pits. In some cases, the concentration of graves in one trench is very high and even (trench NFA) reaches 56 graves for each 100 sq.m. On the basis of the concentration and density of the graves, including the new excavated graves in 2017, has been possible to estimate one grave for each 12 sq.m., for a total amount of 37.500-40.000 graves.

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**SARHADDI DADIAN**, Hossein

University of Zabol

**SHADMEHR**, Abdolkarim

Iranian Center for Archaeological Research

**New Data-Base Management System at Shahr-i Sokhta**

The article tries to provide for the first time a database system at Shahr-i Sokhta, which has a very beneficial effect in the field of documenting cultural materials, allowing a constructive role in the management of research in the field of archaeological studies. The second round of exploration of the “Burned City”, after the Iranian Revolution since 1997, has brought a huge amount of information, data and cultural material from the underground. These objects are found in a wide variety such as mud objects, wooden objects, bone objects, metal objects, stone objects and other items that have been explored continuously throughout fourteen seasons of excavations in different parts of the site. Part of these objects,

due to their characteristics, is delivered to the relevant museums and institutions for preservation of works, and a large part of these objects, known as objects of study, are kept in the depots of the base and its various departments. Although these objects are not worthy of display in the museums, they are not worthy of value in understanding cultural processes of the city, rebuilding the lives of people living in the area, better understanding the methods of making tools and objects, recognizing their sources of raw materials and other sciences related to different disciplines of archaeology and interdisciplinary science is very useful. Other usefulness in connection with the comprehensive study and national research that will be organized by them includes the provision of experimental studies and the provision of necessary statistical analysis, as well as the prevention of possible attacks and the destruction of this category from the objects. Based on the analysis of the information structure of various types of cultural material, the design of the conceptual model of data and then the creation of information databases has been implemented to implement the database management system under MYSQL with the PHP programming language. Accordingly, in the form of two plans of documentary design and updating systems, 19.000 cultural materials, 4.000 rocky and mud materials, 550 human skeletons, 350 plant specimens, 400 specimens of animal bones, 300 specimens and 13.400 pieces of pottery has been registered. One of the important features of this system is the ability to define the exploration staff in a different chapter and the availability of various restrictions and limitations based on the roles and responsibilities of the users.

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**SCHOLZ, Tobyas**  
University of Goettingen

### **Geo-magnetic survey at Shahr-i Sokhta in 2017 Season**

As part of the Multidisciplinary Archaeological Italian Project at Shahr-i Sokhta of the University of Salento led by E. Ascalone, the Iranian Archaeological Mission led by S.M.S. Sajjadi and the Iranian Center for Archaeological Research, the Department of Prehistorical History of the Georg-August-University Göttingen was able to provide a geomagnetic survey on the site. The survey has allowed to create a total of 23 geomagnetic measuring fields on three different locations on the UNESCO world heritage site Shahr-i Sokhta, thereby covering an examination area of 31.663 sqm (3,17 ha). Location 1: the northern part of the graveyard area has showed two large areas with honeycomb structure like anomalies. These were first interpreted as graves, but the weak signal of the over 1,0 m deep lying graves could be covered by geological structures, it is therefore recommended to clarify these anomalies with a small excavation trench. In the west of the image could be some linear anomalies identified and a clear Building consisting of two ca. 5 x 5 m rooms to the northwest of a fulfilled excavation trench. The missing corner of this building was found during this excavation. Location 2. The area around Workshop 33 is characterized by large erosion gullies and small hills along the edges of the dried out inner lake. Although, the magnetogram is showing the same structures, as seen in the aerial photography of this area in the west of the central spared out excavation, none of these building are directly connected to the excavated workshop 33. Location 3. The best results were acquired at building No. 20. The whole magnetogram from this year's excavation to the north edge of the plateau shows building complexes, freestanding single buildings and yet uncounted linear structures close together with only a few free spaces between them. Disadvantageous are the few deep N-S oriented erosion gullies that disturb the geomagnetic field. The aim of this paper is focused to give new data about the topographical planning of Shahr-i Sokhta and its urban and architectural development, using the ground penetrating radar (GPR) and electrical resistivity tomography (ERT), one of the main geophysical non-destructive prospecting methods.

### 3. Bronze Age Cyprus: Regionalism versus Interculturalism

Due to its central position in eastern Mediterranean Cyprus has played a pivotal role as a hub for international trade during the Bronze Age. Trade networks started to develop in the Early Bronze Age and were most intense in the Late Bronze Age, i.e. in the second half of the second millennium BCE. At the same time, the island kept its very distinct insular character and material culture with some strong regional characteristics.

The aim of this workshop is to approach questions and problems related to the local and eastern Mediterranean economy. Another is the mobility of people and connected issues such as seafaring, the transformation of ideas and material culture, foreign influences and cultural synchronisations.

According to textual sources and the archaeological evidence supported by scientific analyses, the export of copper was the main economical factor that led to the prosperity of the island. From the second half of the second millennium BCE on, Cypriot pottery was one of the most coveted and spread single products in the entire Mediterranean area and beyond. Consequently, Cypriot pottery together with Mycenaean are our foremost tools for cultural synchronisation and relative chronology. Today, our knowledge concerning the relations between contemporaneous urban centres on Cyprus and their intra-island trade patterns is quite limited. Were these urban centres rivals or did they cooperate in order to develop the economy and political power of the island?

The focus of this workshop lies on the results of recent research and ongoing projects.

#### Organizers

**Fischer**, Peter M.    **Bürge**, Teresa

Department of Historical Studies, University of Gothenburg

Institute for Oriental and European Archaeology, Austrian Academy of Sciences

#### Participants (in alphabetical order)

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**BOMBARDIERI**, Luca

Dipartimento Studi Umanistici, Università di Torino

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**BÜRGE**, Teresa

Institute for Oriental and European Archaeology, Austrian Academy of Sciences

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**FISCHER**, Peter M.

University of Gothenburg  
Swedish Academy of Sciences

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**MAZZOTTA**, Lorenzo

University of Pisa, Department of Civilizations and Shapes of Knowledge

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**PILIDES**, Despina

Department of Antiquities, Cyprus

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**RECHT**, Laerke

University of Cambridge, McDonald Institute for Archaeological Research

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**WAIMAN-BARAK**, Paula

University of Haifa, Department of Maritime Civilizations

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## List of Lectures

	Lecturer	Title
9:00	<b>BOMBARDIERI</b> , Luca	Broadening the circle. Community, industry and intra-island mobility in Middle Bronze Age Cyprus
9:30	<b>FISCHER</b> , Peter M.	The Late Bronze Age harbour city of Hala Sultan Tekke: Economy and intercultural
10:00	<b>BÜRGE</b> , Teresa	Intra-island relations reflected in the local pottery of Hala Sultan Tekke, Cyprus
10:30	<b>MAZZOTTA</b> , Lorenzo <b>RECHT</b> , Laerke	Imported Aegean pottery at Late Bronze Age Hala Sultan Tekke, Cyprus
11:00		Coffee Break
11:30	<b>WAIMAN-BARAK</b> , Paula <b>BÜRGE</b> , Teresa <b>FISCHER</b> , Peter M.	Provenance Analysis of Late Bronze Age Ceramics from Hala-Sultan Tekke
12:00	<b>PILIDES</b> , Despina	Inland Cyprus in the Late Bronze Age: Regional or intercultural? Evidence from the region of Agios Sozomenos
12:30	<b>RECHT</b> , Laerke	Mycenaean ‘Chariot Kraters’ in Cyprus and the Eastern Mediterranean in the LBA

## Abstracts

**BOMBARDIERI**, Luca

Dipartimento Studi Umanistici, Università di Torino

### **Broadening the circle. Community, industry and intra-island mobility in Middle Bronze Age Cyprus**

A long standing scholarly tradition in Cypriot archaeology has confirmed that the economy of Chalcolithic to Early Bronze Age rural communities provides important evidence of subsistence production and consumption, basically restricted to immediate household members. More recent archaeological evidence suggests that during the Middle Bronze Age, and primarily in its later phases, two parallel new processes of increasing ‘industrialisation’ and intra-island mobility are evident at several Cypriot sites. The overall archaeological dataset from Philia and Early Bronze Age Marki *Alonia* and Sotira *Kaminoudhia* reveals that the lived space develops within a kin-based, household framework, where the residential units maintain a domestic function and no systemic differences in household function can be identified.

Something, then, appears to gradually change during the Middle Bronze Age. At Ambelikou *Aletri* several areas of an industrial settlement dating to MC I–II were cleared, with evidence of ceramic production and metallurgical industry at supra-household level, possibly involving an extended regional and inter-regional trade network. Parallel evidence of contemporary formalized industrial compounds is documented at Politiko *Troullia*, Alambra *Mouttes*, Pyrgos *Mavroraki* and – especially- at Kissonerga *Skalia*, where a large structure was interpreted as a supra-household beer-producing installation.

New results from the ongoing systematic investigation of the MC settlement at *Erimi Laonin tou Porakou* contributes in shading a new light on this complex phenomenon.

The evidence allows us to outline the presence of an extended regional and inter-regional exchange network, in which Erimi was involved during the expansive phase of its economic growth in the MC period. The inner web of regional exchanges includes three major areas in the Kouris Valley, while at a wider

regional scale, the MC community of *Laonin tou Porakou* may have had contacts with contemporary sites from the extended area surrounding Limassol (Kalavassos, Pyrgos, Limassol *Katholiki* and Ayios Athanasios), along with a further series of contemporary and possibly connected sites were located within the Avdimou and Paramali river valleys.

The evidence of imported materials suggests that Erimi was also involved in a systematic inter-regional exchange network. Imported RP III vessels attest to contacts with the north and centre of the island from the earliest phases of the MC. As to the late MC, it has been argued that the DP assemblage at Erimi (like that at Pyrgos and Episkopi) included local imitations and imports from western Cyprus. Evidence for external contacts is also indirectly suggested by the palaeodietary reconstruction. If confirmed, it would provide significant evidence for patterns of migration and mobility within the community.

Along with the wide range of inter-regional contacts and the increasing degree of social differentiation, evidence for internal conflicts or social tensions can also be considered among the expected consequences of the expansive economy at Erimi.

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**BÜRGE, Teresa**

Institute for Oriental and European Archaeology, Austrian Academy of Sciences

### **Intra-island relations reflected in the local pottery of Hala Sultan Tekke, Cyprus**

Although most of the Late Cypriot pottery wares are frequent in all parts of the island, there are differences in distribution, typology, development and decoration between various sites. There is plenty of local pottery of diverse types from the eight campaigns of the renewed excavations at Hala Sultan Tekke which can be used to provide information on the intra-island relations, trade and economic contacts. How close was the interaction of Hala Sultan Tekke with the urban centres nearby, for instance, Kition, Kalavassos, Maroni or Pyla? How were the connections to settlements farther away? And how did these connections transform over time?

The pottery from the recently excavated settlement mainly dates from the Late Cypriot IIC–IIIA period and comes from secure stratigraphic contexts, which allows good typology sequences and synchronisations with pottery from other sites. As the results of petrographic studies will be presented in another paper and NAA-analyses are in process, the focus of this paper will lie on variations in typology, technology and decoration of the local LC IIC–IIIA pottery.

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**FISCHER, Peter M.**

University of Gothenburg – Swedish Academy of Sciences

### **The Late Bronze Age harbour city of Hala Sultan Tekke: Economy and intercultural relations**

Hala Sultan Tekke is a large Bronze Age harbour city close to the famous homonymous mosque near the international airport of Larnaca on the south coast of Cyprus. Previous research demonstrated that the city flourished mainly in the later part of the Late Bronze Age, viz. during the 13<sup>th</sup> and 12<sup>th</sup> centuries B.C.E, but recent excavations confirmed that the city was occupied from as early on as the transitional Middle/Late Cypriot period around 1600 B.C.E.

The people of Late Bronze Age Hala Sultan Tekke imported numerous objects of luxury. These include a considerable number of items of high artistic value from a vast area of the Eastern Mediterranean



encompassing the Mycenaean sphere of culture including Crete, the Levant, Egypt and possibly Anatolia, all of which mirror the wealth of this city.

In this paper, the background of the economy of the city and its intercultural relations will be presented.

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**MAZZOTTA**, Lorenzo

University of Pisa, Department of Civilizations and Shapes of Knowledge

**RECHT**, Laerke

University of Cambridge, McDonald Institute for Archaeological Research

### **Imported Aegean pottery at Late Bronze Age Hala Sultan Tekke, Cyprus**

Pottery found at the site of Hala Sultan Tekke includes sherds and complete vessels imported from the Aegean. This paper presents preliminary results of the analysis of this pottery from the New Swedish Expedition (2013–2017) and the implications for the site within Cyprus and the broader Eastern Mediterranean context in the Late Bronze Age.

Mycenaean and other Aegean pottery can be used not only for cultural synchronisation and tentative dating, but also suggests trade connections and cultural interaction from at least as early as LH II and continuing through to the LH IIIC period, with the greatest contraction belonging to LH IIIA2–B. Variations in trade trajectories can be detected in the range of origins of the pottery within the Aegean, for example the Greek Mainland, Crete and the southeastern Aegean islands.

We can also see that certain shapes were particularly popular with the Cypriots and that specific selection of shapes occurred in different social contexts. Adaptation (or imitation) of popular Aegean shapes occurred in the local White Painted Wheelmade III ware, including small-medium stirrup jars and deep and shallow bowls. The imported Aegean pottery appears in higher concentrations in the area of Hala Sultan Tekke where tombs have been found ('Area A'). Here it may have had a special social significance and value, since larger amounts of pictorial pieces and kraters occur, both of which have a strong association with funerary assemblages in Cyprus and play a role in the creations and negotiation of identity.

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**PILIDES**, Despina

Department of Antiquities, Cyprus

### **Inland Cyprus in the Late Bronze Age: Regional or intercultural? Evidence from the region of Agios Sozomenos**

The project of survey and targeted excavation in the region of Agios Sozomenos (Agios Sozomenos Excavations and Survey Project, ASESP) aims at re-assessing the extent and density of habitation, the chronological overlaps and synergies between sites and the role of the "forts" on the plateau of Agios Sozomenos, in relation to the emerging pattern of settlement. The survey was completed in 2016, having taken into account and having re-evaluated previous work in the Yialias/Alikos river valleys. Excavations at the forts of *Barsak* and *Nikolidhes* have revealed the chronological range of their lifespan and are expected to illuminate the nature of their function as well as the political/social organization relating to the exploitation of local resources of the region at the time. Excavations at *Tzirpoulos*, at the foot of the plateau have revealed part of a large building with intense workshop activities, with at least two phases of use from the beginning of the LCI to LCII. An overview of the results of the excavations and survey will be attempted with relation to a preliminary assessment of regional and intercultural connections.

**RECHT, Laerke**

University of Cambridge, McDonald Institute for Archaeological Research

### **Mycenaean ‘Chariot Kraters’ in Cyprus and the Eastern Mediterranean in the LBA**

Starting some time in the Late Helladic IIIA period and through to Late Helladic IIIC, a special kind of vessel emerged in Mycenaean Greece which depict one or more chariots drawn by horses. These vessels are typically known as ‘Chariot kraters’. The scenes become quite standardised, but differences in detail and combinations with other motifs demonstrate that no two kraters are exactly identical. Most interestingly, although the kraters appear to have mostly been produced on the Greek Mainland, they are widely distributed throughout the Eastern Mediterranean and in particular appear in mortuary contexts in Cyprus.

The central motif of the kraters is part of a broader Aegean and Near Eastern increased engagement with both horses and chariots in the Late Bronze Age. Horse-drawn chariots attain a greater role to play in battle, as is perhaps most famously evidenced by the Amarna Letters and the grand iconography of Rameses II and III. The chariot kraters add another side to the story, where chariots and horses were associated not only with military operations, but also play a part in more peaceful settings that involve both men and women in procession-like compositions.

The kraters thus have implications both for our understanding of ancient relations between humans and animals (in this case horses) and for trade, cultural connections and adaptation during this crucial period of the Late Bronze Age.

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**WAIMAN-BARAK, Paula**

University of Haifa, Department of Maritime Civilizations

**BÜRGE, Teresa**

Institute for Oriental and European Archaeology, Austrian Academy of Sciences

**FISCHER, Peter M.**

University of Gothenburg – Swedish Academy of Sciences

### **Provenance Analysis of Late Bronze Age Ceramics from Hala-Sultan Tekke**

Research of trade networks in the eastern Mediterranean using provenance analysis of archaeological ceramics proved to be effective in the past. The method of Ceramic petrography enables the characterisation of raw material and offers a glimpse to the ancient environment of the production centers. Hala-Sultan Tekke (HST) is located at the foothills of the Troodos ophiolite complex, on the shore of the Aliko Salt Lake in the Larnaca Bay, East Cyprus. Minerals common to this environment are typically found in the local ceramics and serve as tell-tale signs to the local production centers.

As a first step, 152 samples of LBA ceramics from HST were subjected to petrographic analysis at the Analytical Laboratory for Archaeological Materials, University of Haifa. This sizable assemblage includes Cypriot wares as well as imports from the Aegean and the Levantine Coast. The Cypriot wares include: Plain, White Painted Wheel Made, White Shaved, Red Lustrous Wheel Made, White Slip and Base Ring. Preliminary results show that LBA potters in HST produced a variety of wares in different shapes. Some wares were imported from elsewhere on the island and brought to HST, for example: Red Lustrous Wheel Made, White Slip and Base Ring. Imports from outside the Island include Mycenaean fine and coarse wares, and Levantine imports, mainly from the coast of Northern Syria. These include “Canaanite” jars, cooking pots and even torches. When completed, this research will present a comprehensive insight to regional and interregional trade networks and consumption patterns.

#### **4. Late Bronze Age Painted Pottery Traditions at the Margins of the Hittite State**

The late 2nd Millennium BC in the Ancient Near East is marked by the spread of plain pottery wares. This is especially evident when looking at the Anatolian territory. Here, the presence of simple undecorated ceramics is considered as the main distinguishing trait of the Hittite imperial expansion. Nevertheless, at the margin of the Hittite State, especially in southern and south-eastern as well as northern Anatolia, painted ceramics are largely attested.

These Late Bronze Age painted pottery traditions are characterized by mere geometric motives mostly with red-brown colours, whose simplicity and general lack of sophistication unequivocally recall each other. Although they have been in recent years a matter of discussion among scholars, a supra-regional analysis and accurate comparison has not yet been accomplished, leaving some main research questions unanswered: are we dealing with different and independent local traditions or is there at any extent a common root? can we connect the appearance of this trend to specific exchange of ideas, mobility and movement of material and people?

To understand this, it is necessary to approach the topic from two perspectives. Chronologically identifying what characterized each region before and after the appearance of this phenomenon, and geographically distinguishing regional borders as well as potentials of contacts and interactions.

To be able to draw such a complete picture, each local tradition has to be analyzed separately, inspecting their decorations, as well as associated forms, fabrics and main contexts of discovery. This could be also complemented by multi-disciplinary approaches involving chemical-physical analyses, so as to evaluate cultural relations and possible origins in the Early or Middle Bronze Age as well as aspects of continuity and discontinuity into the Early Iron Age.

The aim of the proposed workshop is the reconstruction of a comprehensive scenario concerning the appearance, development and related historical meaning of the “Late Bronze Age Painted Pottery Traditions at the Margin of the Hittite State” in the framework of the conference theme “Mobility in the Ancient Near East”. This shall be achieved by assembling and comparing all the available data, in order to provide a final explanation to this significant phenomenon.

#### **Organizers**

**MANUELLI, Federico**   **MIELKE, Dirk Paul**

Institute for Ancient Near Eastern Studies, Freie Universität Berlin

[federico.manuelli@fu-berlin.de](mailto:federico.manuelli@fu-berlin.de)   [dirk.mielke@fu-berlin.de](mailto:dirk.mielke@fu-berlin.de)

## Participants (in alphabetical order)

Dr. Atakan **AKÇAY**

Department of Archaeology, Gazi University  
[atakanakcay@gazi.edu.tr](mailto:atakanakcay@gazi.edu.tr)

Prof. Dr. Şevket **DÖNMEZ**

Department of Proto-history and Near Eastern Archaeology,  
Istanbul University  
[donmezsevket@gmail.com](mailto:donmezsevket@gmail.com)

Doç. Dr. Atilla **ENGİN**

Department of Archaeology, Sivas Cumhuriyet University  
[enginatilla@hotmail.com](mailto:enginatilla@hotmail.com)

Gabriele **GIACOSA**, MA.

Department of History and Cultures, Università di Bologna  
[gabri.giac@gmail.com](mailto:gabri.giac@gmail.com)

Dr. Mara T. **HOROWITZ**

Department of Humanities,  
Purchase College State University of New York  
[mara.horowitz@purchase.edu](mailto:mara.horowitz@purchase.edu)

Yrd. Doç. Dr. Éric **JEAN**

Department of Archaeology, Hitit University  
[ericjaeni@yahoo.de](mailto:ericjaeni@yahoo.de)

Doç. Dr. Ekin **KOZAL**

Institute of Archaeology, Çanakkale Onsekiz Mart University  
[ekoza108@gmail.com](mailto:ekoza108@gmail.com)

Dr. Federico **MANUELLI**

Institute for Ancient Near Eastern Studies,  
Freie Universität Berlin  
[federico.manuelli@fu-berlin.de](mailto:federico.manuelli@fu-berlin.de)

Dr. Alvi Se **MATESSI**

Department of Humanities, Università di Pavia  
[alvise.matessi@yahoo.com](mailto:alvise.matessi@yahoo.com)

Priv.-Doz. Dr. Dirk Paul **MIELKE**

Institute for Ancient Near Eastern Studies,  
Freie Universität Berlin  
[dirk.mielke@fu-berlin.de](mailto:dirk.mielke@fu-berlin.de)

Dr. Valentina **ORSI**

Department of History and Cultural Heritage,  
Università di Siena  
[valentina.orsi@unifi.it](mailto:valentina.orsi@unifi.it)

Prof. Dr. S. Yücel **ŞENYURT**

Department of Archaeology, Gazi University  
[senyurt@gazi.edu.tr](mailto:senyurt@gazi.edu.tr)

Ass. Prof. Dr. Elif **ÜNLÜ**

Department of History, Boğaziçi University  
[elif.unlu@boun.edu.tr](mailto:elif.unlu@boun.edu.tr)

## List of Lectures

	Lecturer	Title
9:00	<b>MANUELLI</b> , Federico <b>MIELKE</b> , Dirk Paul	Pottery Traditions in Late Bronze Age Anatolia: an Introduction
9:30	<b>ŞENYURT</b> , S. Yüncel <b>AKÇAY</b> , Atakan	Late Bronze Age Painted Pottery and Its Contextual Relationship to the Hittite Levels at Ovaören
10:00	<b>MIELKE</b> , Dirk Paul	Geometric Painted Pottery of the Second Millennium BC in the Central Black Sea Region
10:30	<b>DÖNMEZ</b> , Şevket	Painted Pottery from 7B Architectural Layer in Oluz Höyük: New Evidence and Thoughts on the Late Bronze Age in North-Central Anatolia
11:00 Coffee Break		
11:30	<b>MANUELLI</b> , Federico	Just a Matter of Style? Late Bronze Age Painted Pottery Traditions in the Upper Euphrates Region: Origins and Significance
12:00	<b>MATESSI</b> , Alvise	Between Centre and Periphery: the (Low) Incidence of Painted Pottery in LBA Assemblages from Inland Southern Anatolia
12:30	<b>ÜNLÜ</b> , Elif	Style as Representation of Political Hegemony? A View from the Edge of the Hittite Kingdom
13:00 Lunch Break		
14:00	<b>JEAN</b> , Éric	Late Bronze Age Painted Pottery Traditions at Mersin
14:30	<b>KOZAL</b> , Ekin	Painted Pottery Traditions in Sirkeli Höyük in the 2nd Millennium BC

15:00	<b>ENGİN, Atila</b>	The Northern Syria Painted Pottery Traditions in the 2nd Millennium BC in the Light of Oylum Höyük Finds
15:30	<b>GIACOSA, Gabriele</b> <b>ORSI, Valentina</b>	Late Bronze Age Ceramic Traditions in the Islahiye Valley (SouthEastern Turkey). The Combined Evidence from TaşlıGeçit Höyük and Tilmen Höyük
16:00 Coffee Break		
16:30	<b>HOROWITZ, Mara T.</b>	Painted Pottery Traditions of Late Bronze Alalakh
17:00 Final Discussion		

## Abstracts

**DÖNMEZ, Şevket**

Department of Proto-history and Near Eastern Archaeology, Istanbul University

### **Painted Pottery from 7B Architectural Layer in Oluz Höyük: New Evidence and Thoughts on the Late Bronze Age in North-Central Anatolia**

A new architectural layer in Oluz Höyük (North-Central Anatolia), which we thought belonging to the “Dark Age” shows us that the Hittite collapse in the lands of Hakmiş in the Iris Basin (Kummeşmaha), which is the border of the Sarazzi Utne (Upper Land), has not ended with a violent destruction. In 7B Architectural Layer (end of the 13th – beginning of 12th century BC), on the floor of a simple courtyard made of pressed earth, painted pottery fragments realized with reddish buff clay, mineral and plant tempers, medium fired and coated in the color of their clay, have been found together with Hittite pottery. The two different types of pottery discovered on the 7B Architectural Layer dated to the last years of the Hittite Kingdom should be evaluated as the reflection of cultural changes. The discovery of the pottery from the old and new traditions together, and the finding of no traces of fire destruction, point out that this architectural layer has continued and ended peacefully. The painted ware of 7B Architectural Layer, which we can define specifically in Oluz Höyük as “Hittite Collapse Period Pottery”, is an indication which proves the importance of this period in the central and northern regions of the Halys Basin.

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**ENGİN, Atila**

Department of Archaeology, Sivas Cumhuriyet University

### **The Northern Syria Painted Pottery Traditions in the 2nd Millennium BC in the Light of Oylum Höyük Finds**

Standard monochrome wares are dominant in the 2nd Millennium BC layers of Oylum Höyük. However, painted potteries were used throughout the 2nd Millennium BC. In the first half of the 2nd millennium BC, a painted ware, referred to in the literature as "Amuq-Cilician Painted Ware" or "Syro-Cilician Painted Ware", is common in northwestern Syria, extending from the Balih region to the Cilicia plain. Syro-Cilician painted potteries are decorated with geometric motifs in red, brown or black on a light colored surface. There are also examples of plants and animals, such as water birds and goats in the Amuq region. The effects of this painted ware tradition in terms of production techniques, the sense of decoration and pottery forms continue to be seen on the painted potteries in the Late Bronze Age and Iron Age in the

region. In the Late Bronze Age layers of Oylum Höyük, usually red and brown banded paint decorations are seen. In this painted ware group, the geometric motifs prevailing in the Syro-Cilician Painted Ware are less used. The paint decorations were applied to the rims, necks and shoulders of wheel-made vessels. The Late Bronze Age Painted Ware has spread to a very wide geography in the Northern Syria and the Eastern Mediterranean.

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**GIACOSA, Gabriele**

Department of History and Cultures, Università di Bologna

**ORSI, Valentina**

Department of History and Cultural Heritage, Università di Siena

### **Late Bronze Age Ceramic Traditions in the Islahiye Valley (South-Eastern Turkey). The Combined Evidence from TaşlıGeçit Höyük and Tilmen Höyük**

Closed in by the Amanus Mountains and the Kurt Mountains, the narrow valley of Islahiye (Gaziantep Province, South-Eastern Turkey) held a highly strategic significance, over time, for the connections between Upper Mesopotamian and the Levantine lowlands on the one hand, and the Anatolian highlands on the other. A joint Turco-Italian team by the Universities of Bologna and Istanbul – directed by N. Marchetti – focused, between 2003 and 2010, on two sites of the MBA and LBA, TaşlıGeçit Höyük and Tilmen Höyük. Connections with Anatolian, Inner Syrian and Middle Euphrates cultural traditions are evident from several traits of the local material culture. As far as the LBA ceramic inventory is concerned, plain wares represented the largest majority of the ceramic assemblages, while painted wares embodied a minor component of the corpus. Nevertheless, their presence seems to be the trace of further superregional processes. In a diachronic perspective, the integrated analysis of the ceramic sequences and contexts of retrieval from the two sites provides further insights into the regional ceramic tradition, allowing to better delineate and evaluate the nature and significance of the external traits and influences.

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**HOROWITZ, Mara T.**

Department of Humanities, Purchase College State University of New York

### **Painted Pottery Traditions of Late Bronze Alalakh**

The painted pottery traditions of Alalakh in the Late Bronze Age reveal much about cultural change, interregional connectivity, and political orientation. The Middle Bronze 'Syro-Cilician' painted tradition abruptly ceases in the transition from Alalakh 7 to 6, ending centuries of stylistic connectivity between Amuq and Cilicia. In its place, a major new stylistic connection forms with the Mitanni heartland in the Khabur. This connection is augmented in the 14th century with a local industry in Nuzi Ware, even under Hittite rule. Based on these trends, we can see the material correlates of the known emigration of ethnic Hurrians into the Amuq beginning already in Period 7 as documented in texts and seals. Against this backdrop, there is a thread of primitive geometric decoration painted in shades of red and brown that endures throughout the Late Bronze Age and relates to a local painted Iron Age ware. This paper will explore whether this geometric tradition emerges from the background of Syro-Cilician ware and what it might reveal about the indigenous populations of southern Anatolia in the borderlands between the Hittite, Hurrian, and Semitic worlds.

**JEAN, Éric**

Department of Archaeology, Hitit University

### **Late Bronze Age Painted Pottery Traditions at Mersin**

During the late 2nd Millennium BC, the main pottery produced in Southern Turkey (Classical Cilicia) consists of plain ware whose forms relate to the Hittite repertoire of Central Anatolia. In various Cilician sites, some other finds, such as bronze weapons and hieroglyphic seals, seem to be also markers of the Hittite culture, usually understood as signs of the Hittite political expansion. However, that overview must be relativized, as the plain ware repertoires do not show a homogeneous distribution. On the other hand, in western Cilicia, local painted ware appears in Late Bronze Age contexts at Soli Höyük, Kilise Tepe and Yumuktepe.

It consists especially of medium-sized jars with squared rims, and cross-hatching decor on the exterior and slashes around the rim. Among other wares, that production suggests micro-regional interactions in which Soli and Yumuktepe seem to share a cultural or trade space with Kilise. In order to understand the development process of those painted pottery traditions, I will present the samples from Yumuktepe, their forms, fabrics, decorations and contexts of discovery. Then, I will compare them to other repertoires, especially those of Soli and Kilise Tepe, and, on the other side, to earlier and later painted pottery repertoires known at Yumuktepe and dating to the Early Bronze Age, Middle Bronze Age and Iron Age.

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**KOZAL, Ekin**

Institute of Archaeology, Çanakkale Onsekiz Mart University

### **Painted Pottery Traditions in Sirkeli Höyük in the 2nd Millennium BC**

Sirkeli Höyük is one of the largest 2nd and 1st Millennium BC sites in eastern Plain Cilicia, that yielded an uninterrupted chronological sequence throughout these periods. In Sirkeli Höyük painted pottery tradition appears first in the Middle Bronze Age alongside with the plain pottery. Middle Bronze Age painted ware is characterized by the Syro-Cilician (also called Amuq-Cilician) painted ware with geometric and rarely figural motives. This ware is a very distinct type of pottery and has a wide distribution from northern Syria to Cilicia, showing the connections between the two geographically and culturally separated regions. Beginning of Late Bronze is defined by the disappearance of the Syro-Cilician painted ware and the appearance of Central Anatolian affiliated pottery, which mainly consists of unpainted plain wares but also includes wares decorated with painted bands. Around Late Bronze Age II a new painted type of pottery shows up, which is crudely made and painted, where the surface of the vessel is covered by cross-hatching. Cross-hatched pottery continued to exist into the early stages of the Iron Age. Iron Age is a period in Sirkeli Höyük, in which a great variety in painted wares associated with Cyprus dominate (e.g. White Painted, Bichrome, Black-on-Red), whereas plain and red slip wares continue from the Late Bronze Age. Appearance and disappearances of painted pottery traditions at Sirkeli Höyük should be investigated in a broader geographical context, as the pottery points to the ties of Plain Cilicia with other regions. In addition, historical documents provide also information about the political hegemonies over Plain Cilicia (Kizzuwatna), which for instance it was a Hittite vassal-state at the beginning of the 14th century BC and then came under direct Hittite control at the end of 14th century BC.

MANUELLI, Federico

Institute for Ancient Near Eastern Studies, Freie Universität Berlin

### **Just a Matter of Style? Late Bronze Age Painted Pottery Traditions in the Upper Euphrates Region: Origins and Significance**

Painted pottery assemblages are significantly attested in the main LBA excavated sites of the Upper Euphrates valley. They have been usually recognized as long-lasting reminiscences of local traditions, stemming from the early-2nd Millennium BC connection that the area had with Northern Mesopotamia and Northern Syria. Nonetheless, analyses conducted on settlements located between the Malatya plain and the Keban area mostly focused on inspecting the weight that the north-central Anatolian plain wares played in the development of the pottery repertoire of this peripheral region under the Hittite sphere of influence, often leaving aside the importance and endurance of the local traits. The aim of this presentation is to contextualize and compare the LBA painted pottery assemblages brought to light in the main sites of the Upper Euphrates valley. Painted pottery found at Arslantepe, the most extensively investigated site of the area, will be presented and its origin and development observed within a wider regional perspective. Comparisons will be extended to other areas at the margin of the Hittite State, providing insights into the emergence and importance of extra-regional connections.

Archaeometric analyses will be also considered in order to better inspect local development and possible movement of people and objects. The purpose is to define the geographical border of this phenomenon and to understand to which extent similarities in styles might reflect common origins or shared tastes.

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MATESSI, Alvisè

Department of Humanities, Università di Pavia

### **Between Centre and Periphery: the (Low) Incidence of Painted Pottery in LBA Assemblages from Inland Southern Anatolia**

This contribution will focus on Southern Cappadocia and the Konya plain, regions that during the LBA defined a semi-periphery of the Hittite domain, being subjected to intense Hittite hegemony and, at the same time, constituting a frontier zone with foreign neighbors and subordinate polities. Archaeologically, in Southern Cappadocia the LBA is especially known from excavated strata at Porsuk and, to a lesser extent, Kınık Höyük, while regional surveys have produced abundant data for the Konya plain. In this contribution, I will provide a critical synthesis of stratigraphic and overall cultural issues relevant to the LBA developments in the addressed regions, also in relation to earlier and later periods. Then, I will survey local LBA ceramic repertoires and evaluate the relative incidence thereon of locally produced painted pottery. This latter will be shown to be quite low, in striking contrast with neighboring areas, especially Cilicia. In the concluding discussion, I will attempt to make sense of this negative evidence in the light of the socio-political situation of the addressed regions in the 14th-13th centuries BC as well as of their position in the central Anatolian communication network.

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MIELKE, Dirk Paul

Institute for Ancient Near Eastern Studies, Freie Universität Berlin

### **Geometric Painted Pottery of the Second Millennium BC in the Central Black Sea Region**



Based on written sources the political history of the northern periphery of the Hittite Empire can be described in broader terms. In contrast, archaeological information about the Central Black Sea Region in the second millennium BC was quite limited over long time due to the lack of substantial and long-lasting excavations. But in the last years recent research activities brought new important discoveries to light and the archaeological picture in this region begins to change. Especially the excavations at Oymaağaç Höyük (Vezirköprü/Samsun), identified as the Hittite city of Nerik, are here to be mentioned. Next to the dominant Hittite plain pottery, a previously unknown geometric painted pottery category of the Late Bronze Age was discovered. This kind of pottery continues with some modifications into the Early Iron Age. The geometric painted pottery of the second millennium BC in the Central Black Sea Region is of great importance because it can be connected with the so-called Kaška people, a group of tribes who lived at the northern edge of the Hittite Empire and spread southwards after the collapse of the Hittite State. The contribution will present a detailed overview about this pottery and its historical significance.

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ŞENURT, S. Yüncel

Department of Archaeology, Gazi University

AKÇAY, Atakan

Department of Archaeology, Gazi University

### **Late Bronze Age Painted Pottery and Its Contextual Relationship to the Hittite Levels at Ovaören**

Ovaören, located 25 km south of Halys within the boundaries of Nevşehir province, is one of the most important archaeological sites of the region with its approximate dimensions of 40 hectares. It consists of two archaeological units Yassihöyük and Topakhöyük located almost 300 meters apart. Topakhöyük and its large terrace were continuously inhabited during the Early Bronze Age and the Middle Bronze Age, while Yassihöyük were settled continuously during the Late Bronze Age (Ovaören V) and Iron Age (Ovaören IV-II). The fortified Late Bronze Age settlement at Ovaören Yas sıhöyük covers an area of approximately 17 hectares. In the four architectural layers dating to the Hittite period at Ovaören-Yassihöyük, the most intensive finds are various pottery groups. The "Painted Ceramics" uncovered in the Late Bronze Age layers at Ovaören-Yassihöyük (YH 9-10) can be classified in terms of their fabrics and decorations. The "hatched decorated" pottery discovered at Ovaören represent a remarkable group for the chronology of Hittite period. The closest parallels of Ovaören examples were found in the layers dating to the Late Bronze Age levels of Tarsus Gözlükule (LBII), Yumuktepe (VII-V), Kilise Tepe (IIa-c), Oluz Höyük (7B), Soli and Nerik. Together with all archaeological data, the "hatched decorated" ceramics revealed at Ovaören will shed light on the debate about its chronology, origins and distributions in the Hittite painted pottery traditions.

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ÜNLÜ, Elif

Department of History, Boğaziçi University

### **Style as Representation of Political Hegemony? A View from the Edge of the Hittite Kingdom**

The so-called 'Hittite' pottery known from the Hittite centers in Central Anatolia dominates the local pottery repertoire of the regions outside of this heartland, like the plains of Cilicia and Amuq which are the focus of this talk. 'Hittite' pottery is easily distinguishable by its shape repertoire, but also by the fact that

it is mostly plain. This is in contrast to the earlier Middle Bronze Age pottery tradition in these two regions where painted decoration was used quite frequently.

However, in contrast to this general trend, in Cilicia one can observe painted decoration being used on vessels with typical 'Hittite' shapes, albeit in much smaller numbers and very restricted motives. This continues after the disintegration of the Hittite political territory, a period well attested both in the settlements of Tarsus-Gözlükule and Tell Tayinat. Pottery from these strata further capture the dynamic shifts in demographic makeup of these Mediterranean settlements with new and sudden appearance of the LH III C type pottery, representing a drastically different understanding of proper tableware both in form and surface treatment. This talk aims to investigate the shifts in pottery production traditions with ideas and technology transferred by movement of people creating a complex process of acculturation and imitation.

## 5. Middle Bronze Age tombs and their funerary environment from Syria to Egypt

The transfer of values and ideas and in rare cases even of people can be seen best in funerary traditions. During the Middle Bronze Age we can detect the transfer of ideas and beliefs manifested in the arrangements of the cemeteries, tomb architecture and burial customs. This workshop wants to shed more light on the similarities and differences of spatial organisations (intra vs. extra-mural) and layouts of cemeteries, on the types of tombs used in various regions and the burial customs and rituals during and after the entombment of the deceased over a wider geographical region from Northern Syria down to Egypt. In recent years the focus of funerary archaeology has shifted from concentrating solemnly on the tomb and its content to the whole ritual life circle of a cemetery by thoroughly investigating and incorporating its environment and the activities that have taken place around the tombs (e.g. feasting as commemoration). While many of these activities were of local importance, there are several evidences of supra-regional similarities. The way how an individual was buried (in single or collective tombs) defines its relationship to a group and in a further step the structure of a community. Not only similar burial goods found over a wider geographical region define the mobility of ideas and beliefs, but also their combination and the way they were deposited inside the tombs underline common traditions. In this workshop we would like to stress the local and the foreign elements found in cemeteries along the Levantine coast.

### Organizers

<b>KOPZTSKY, Karin</b> Austrian Academy of Sciences	<b>WYGNANSKA, Zuzanna</b> University of Warsaw, Polish Centre of Mediterranean Archaeology
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### Participants (in alphabetical order)

<b>ANDREOU, Panayiotis</b> Eberhard Karls Universität Tübingen	<b>KOPETZKY, Karin</b> Austrian Academy of Sciences, Institute for Oriental and European Archaeology
<b>BOURKE, Stephen J.</b> University of Sydney	<b>PHILLIPS, Paula</b> University of Melbourne, School of Historical and Philosophical Studies
<b>COHEN, Susan</b> Montana State University	<b>POLCARO, Andrea</b> Perugia University
<b>DOUMET-SERHAL, Claude</b> British Museum	<b>SPARKS, Rachael</b> Institute of Archaeology, University College London
<b>FETNER, Rafał A.</b> University of Warsaw, Department of Bioarchaeology	<b>WYGNANSKA, Zuzanna</b> University of Warsaw, Polish Centre of Mediterranean Archaeology
<b>KLETTER, Raz</b> University of Helsinki	

## List of Lectures

	Lecturer	Title
9:00	<b>Rafal A. Fetner</b>	What bones can tell us about the Middle Bronze Age burial rite: case study from Bakr Awa (Iraqi Kurdistan)
9:30	<b>Zuzanna Wagnanska</b>	An ideal Amorite burial? The Middle Bronze Age burial customs from a Mesopotamian perspective
10:00	<b>Andrea Polcaro</b>	The Ideology of Death in Ebla during the Old Syrian Period: Exclusive and Inclusive Funerary Traditions and Beliefs in Tell Mardikh during the Middle Bronze Age
10:30	<b>Panayiotis Andreou</b>	When the lights went out, did they always close the door behind them? A discussion of results derived by comparative analysis of ritual activities in funerary deposits across Syria/North Palestine during the Middle Bronze Age
11:00 Coffee Break		
11:30	<b>Claude Doumet-Serhal</b>	Mortuary practices and feasting activities on Sidon's College site
12:00	<b>Stephen Bourke</b>	BA Tombs at Pella in Jordan: The Intramural Graves and the Extramural Cemetery
12:30	<b>Raz Kletter</b>	Rishon le Zion: a "Central Place" Cemetery?
13:00 Lunch Break		
14:00	<b>Susan Cohen</b>	Transfer and continuity in the Middle Bronze Age tombs at Gesher
14:30	<b>Rachel Sparks</b>	The Necessities of Death? Funerary patterns and Practice in the Bronze Age Intramural burials of Tell el-'Ajjul Area G
15:00	<b>Paula Phillips</b>	The Cemetery 1000 at Tell Fara South
15:30	<b>Karin Kopetzky</b>	Buried in Avaris – a fusion of Egyptian and Near Eastern Funerary Customs

## Abstracts

**ANDREOU, Panayiotis**  
Eberhard Karls Universität Tübingen

### **When the lights went out, did they always close the door behind them? A discussion of results derived by comparative analysis of ritual activities in funerary deposits across Syria/North Palestine during the Middle Bronze Age**

This paper presents the final results of a research project on mortuary behaviour during the 2<sup>nd</sup> Millennium in the Levant. It begins by raising macroscopic questions relating to conventional variables of tomb location and type, before it introduces the new abstract construct of 'tomb concepts' and explains the way it reshuffles our main categories of classification. With the help of these it proceeds to take a closer look at tomb inventories with special attention to the human body, the materials or leftovers of ritual behaviour, their spatial association within the tomb and the distribution of such patterns over the Levantine map. One of the greater challenges in the comparative research of MBA mortuary remains is indeed to separate the idiosyncratic from the conventional since many tombs and burials demonstrate a relative homogeneity in their overall appearance. Nonetheless – as is always the case - on closer examination, the discerned differences in the patterns of occurrence and/or use of burial practices and materials are such, that need to

be addressed to in a systematic way, so that in the end we produce a better understanding of the people and societies behind this complex phenomenon. This might even challenge some of our own ideas and concepts about this part of ancient culture, where tombs might have stood open much longer after burial, than we might ever have expected.

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**BOURKE, Stephen J.**  
University of Sydney

### **MBA Tombs at Pella in Jordan: The Intramural Graves and the Extramural Cemetery**

The presentation will describe major intramural cist, pit and chamber graves from the MB I-II settlement of Khirbet Fahl (ancient Pella), and comment on burial custom, grave goods and social status. This material will then be compared and contrasted with remains from a series of MB II chamber tombs excavated from an extramural cemetery spread across the north face of nearby Tell Husn, facing the settlement across the wadi.

The different burial customs revealed in these two broadly contemporary assemblages will be explored, with context, status, chronology and foreign relations all of relevance when seeking explanations for the differences observed.

Final comments will concern the 'large tomb phenomenon' at the end of the MBA and its relationship to the demise of the Hyksos imperium, and the much-discussed 'tell prohibition' on burials in the LBA (*sensu* Gonen), and its possible relationship to the rise of the Egyptian New Kingdom empire after the time of Thutmosis III.

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**COHEN, Susan**  
Montana State University

### **Transfer and continuity in the Middle Bronze Age tombs at Gesher**

The small cemetery site of Gesher, located in the central Jordan Valley in the southern Levant, provides a window into burial traditions and rituals of the rural population in the early Middle Bronze Age (ca. 2000/1950 – 1800 BC). Although not to date associated with any settlement, analysis of the burials found at Gesher reveals information regarding the values and practices of the community that used the cemetery, and provides insights into ways in which beliefs and customs reflect elements of continuity with other populations throughout the southern Levant. When viewed as part of the larger corpus of known Middle Bronze Age cemeteries in the Levant, the burials in the Gesher cemetery help to inform current understandings of the transfer and transmission of ritual, values, and belief in the southern Levant. This paper will present the data from Gesher, and discuss the ways in which the ritual, custom, and organization revealed in these simple burials reflect both transfer and continuity of tradition and belief in the Levant.

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**DOUMET-SERHAL, Claude**  
British Museum

### **Mortuary practices and feasting activities on Sidon's College site**

Food and feasting played an enormous part on College site where 164 burials have been found to date. The most interesting aspect is the evolution of the funerary ritual which goes through “fashions”. The ties created through these funerary practices functioned on two levels: that of the surviving community and thus a feast for the living and that of the more difficult to define relationship between this world and the next. The Sidon excavation is proving to be a corner stone in the understanding of the dynamics of Canaanite society.

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**FETNER, Rafał A.**

Department of Bioarchaeology, University of Warsaw

### **What bones can tell us about the Middle Bronze Age burial rite: case study from Bakr Awa (Iraqi Kurdistan)**

Transfer of ideas can be read from artefacts, but also from practices we can track on the archaeological site. Analysis of post-depositional history of human body can highlight such practices and, together with the grave objects, complete the picture of funeral rite. Aim of the presentation is to show patterns in the bone treatment in the Middle Bronze Age tombs from Bakr Awa, Iraqi Kurdistan. Distribution of identified bones, anatomical order between them and completeness was used in order to reconstruct history of the commingled deposit and therefore funeral practices of that culture. In the studied tombs, bodies were placed, usually, along the longer wall of the construction, one on the top of another, in such a way that about half of the floor remain empty. Bone admixtures indicate that the tombs were cleaned and re-used.

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**KLETTER, Raz**

University of Helsinki

Rishon le Zion: a “Central Place” Cemetery?

The Rishon le-Zion MBII cemeteries, excavated by Y. Levy on behalf of the IAA in 1991-1998, consists of more than 200 tombs with c. 600 burials in five excavation areas, mostly dated to the transitional MBIIA-MBIIA and MBIIIB periods. It is being prepared now for final publication, which will hopefully appear soon. The site shows two types of tombs: pit tombs with 1-4 burials and more complex shaft tombs with several different burial zones or niches and phases of burial. Unlike other contemporary sites, the pit tombs at Rishon le-Zion show almost only primary burials. The shaft tombs show both primary and secondary burials (the latter were not placed in this condition in the tomb, but primary burials pushed aside to make place for newer burials).

The tombs were rich in finds, mainly pottery vessels (more than 3000 baskets), but also bronze weapons, pins and rings; bronze belts; 154 scarabs; sheep/goat bones; a few equid burials; and various finds (bone inlay, silver and gold items, seals, etc.). The preservation of the skeletons was usually bad and the pottery often extremely fragmented.

In the present lecture I will present some of the tombs and the finds, and discuss various aspects, such as the positions of finds in the tombs and the issue of a “burial kit”. A difficult question concerns the origin of the Rishon le-Zion population. In view of what know about the cemetery and surrounding sites, could this be a “central place”?

**KOPETZKY, Karin**

### **Buried in Avaris – a fusion of Egyptian and Near Eastern funerary customs**

The site of Tell el-Daba in the north-eastern Nile delta is known to be as a place where the cultures of Egypt and the Near Eastern met and were merged to what became later known as the Hyksos culture. This lecture likes to illustrate how far local Egyptian and imported Near Eastern burial traditions and their concepts of the afterlife influenced the funerary concept and traditions of the inhabitants of Tell el-Daba over time. It will look into the layout of the cemeteries, the reasons and changes behind their locations as well as the ones of the tombs. More than 900 tombs have been excavated in different areas of the city covering a time span of nearly three centuries. Associated with the various types of tombs installations were discovered, which are closely connected to funerary and cultic rituals that were performed in and around the tombs. While during this long period on one hand conservatism is clearly visible in the funerary traditions, on the other hand several new impulses are detectable that found their way into the funerary traditions over time. Changes in the layout of the cemeteries, in the architecture of tombs, in the numbers of burials inside the tombs etc. are all indicators for a shift in the religious perception of the inhabitants of Avaris.

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**PHILLIPS, Paula**

School of Historical and Philosophical Studies, University of Melbourne

### **The Cemetery 1000 at Tell Fara South**

The Cemetery 1000 at Tell Fara South is one of eight cemeteries, along with a small section of the tell, excavated from 1928-1930, by the British School of Archaeology in Egypt, under the direction of Sir Flinders Petrie. It contained twenty-five tombs and was assigned by Petrie, based on the scarab finds, to the Hyksos Period/ Middle Bronze, along with forty-three from the Cemetery 500 and several tombs from the 600 and 700 cemeteries. The tomb assemblages contained pottery and stone vessels, scarab seal/ amulets, a selection of metal weapons, toggle pins and rings, various types of beads and several ostrich eggs. The lowest occupation level identified on the tell was also dated to the Middle Bronze. Excavation reports covering two seasons were published in 1930 and 1932.

With the exception however, of the 1977 catalogue of Cemetery 500 Middle Bronze tombs by David Price-Williams, the inclusion of the scarab finds in the studies of Tufnell and Ward, and several articles discussing the architectural styles and origins of a selection of bilobate tombs in the Cemetery 1000, the tomb assemblages and tell finds from the Middle Bronze Period have received little attention. This situation is interesting, given much of the material is still housed in the Institute of Archaeology in London, the Rockefeller Museum in Jerusalem and several other collections in the UK, Poland and Japan, and considering our understanding of the Middle Bronze into the early Late Bronze Periods, and the interactions and events that shaped them, is still somewhat problematic in certain areas. Thus, this paper will provide some background to a new project, aimed at re-examining the tomb assemblages from the Cemetery 1000 and ideally, placing these tombs in their correct chronological context within the southern Levant and the broader Eastern Mediterranean world at the time.

**POLCARO, Andrea**  
Perugia University

### **The Ideology of Death in Ebla during the Old Syrian Period: Exclusive and Inclusive Funerary Traditions and Beliefs in Tell Mardikh during the Middle Bronze Age**

The flourishing Eblaite dynasty, probably established by king Igrish-Kheb and his son Ibbit-Lim at Ebla at the beginning of the Middle Bronze Age (2000-1950 BC), produced a strong effect on the urban landscape of the city. The large public architectural program carried on by the Old Syrian kings included a new fortification system, as well as palaces and sacred buildings, evidence of the power of the dynasty. Furthermore, the new dynasty also established a new religious thinking, involving official cults and public rituals, that completely changed the mythological and ritual apparatus of the Eblaite society. Part of this innovative religious program was a new ideology of death, shown by the strong link between the landscape of the living and the landscape of the dead. It is from the 2nd millennium BC onwards, that several pit burials, as well as shaft tombs and more monumental royal graves, were built inside the settlement walls. These new funerary architectural features may reflect a new vision of the underworld, probably linked to a new organization of the society. This paper will analyze the different funerary attestations of Middle Bronze Age Ebla, considering their location, funerary architecture, burial assemblages and typology of interments, with the aim to reconstruct the complex of mythological beliefs, ritual systems, social and political needs which shaped the Old Syrian Eblaite ideology of death.

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**SPARKS, Rachael**  
Institute of Archaeology, University College London

### **The Necessities of Death? Funerary patterns and Practice in the Bronze Age Intramural burials of Tell el-‘Ajjul Area G**

Tell el-‘Ajjul was an important Canaanite city, located near the mouth of the Wadi Ghazze in the southern coastal Levant. It was fortified, cosmopolitan, and comparatively wealthy, with its artefactual assemblages attesting to particularly close links with Cyprus and Egypt. The site was excavated by Flinders Petrie in the 1930s, exposing considerable areas of domestic housing on the tell, along with over 1500 burials. The latter were arranged in formal cemeteries on the flat ground outside the city walls, and in various spaces within the existing city, and provide a rich dataset with which to explore the nature of funerary practice at the site.

This paper will focus on material from Area G, one of the intramural burial grounds, which was converted to funerary use after the destruction of housing here at the end of city III. Using data from both the published record and unpublished archival resources, I will attempt to define the specific characteristics of these burials, including their stratigraphic relationship to the architecture and landscape around them, and to assess the funerary assemblages within them. As the majority of burials feature single interments in simple pit graves, this dataset is highly suited to explore another question that has been raised in relation to Bronze Age Canaanite practice; whether there is such a thing as a standardised ‘funeral kit’. I will therefore be looking for patterns of association within this material, to test the frequency with which certain objects and object sets appear together, and to explore what role these items may have played in a specifically funerary setting. Finally, I will contextualise the Area G burials in relation to wider MB burial practice at the site, to see if there may be demographic or other differences evident, as well as to customs in a wider regional landscape. Do the Area G burials reflect purely local practices and beliefs, or are they part of a wider Canaanite system?



**WYGNAŃSKA, Zuzanna**

Polish Centre of Mediterranean Archaeology, University of Warsaw

### **An ideal Amorite burial? The Middle Bronze Age burial customs from a Mesopotamian perspective**

Phenomena, such as broadly distributed mudbrick chamber tombs, preference for intramural burial location, human bones' manipulation and evidence of ancestor cult, as well as accompanying equid burials are characteristic features of burial customs in the first half of the second millennium BC in Mesopotamia. Such a "bundle" of funerary characteristics occurred at some sites in southern (e.g. Ur, Tell ed-Der) and northern Mesopotamia (e.g. Tell Arbid, Tell Mozan, Ashur). It has also been recorded outside this region, in the Nile Delta (at Tell Daba'a), where it is associated with Hyksos presence (yet it is not obviously visible in the intervening area of the Levant). Introduction and formation of this new funerary behavior is a hallmark of the Middle Bronze Age in Mesopotamia. Significantly, it accompanied political changes linked with the establishment of Amorite rule in the region. In view of all this, it would seem credible that the changes in burial customs were associated with a sedentarisation process of West Semitic tribes, the Amorites, in Mesopotamia.

However, several elements do not fit into this seemingly coherent picture of a simultaneous occurrence of Amorite kingdoms and new burials customs. For example, none of the above-mentioned "typical Amorite" burial features has been recorded in certain areas with a confirmed Amorite presence: at Mari, Baghuoz, or in the Jebel Bishri region. Regardless the observed customs' ethnic affiliation, the paper will focus on analyzing the diversity of funerary customs attested in MBA Mesopotamia, and it will address questions of their common and/or distinctive characteristics.

## 6. Achaemenid Residences in Context

It will be the aim of the workshop to situate the centres of power of the Achaemenid Empire within their wider historical, social or spatial environment. While certain aspects of palatial architecture (such as the paradeisoi) were modelled on Persian prototypes, it is certain that such central places had various configurations and functions according to the local settings. The goal of this workshop will be to converge experiences and thoughts to build a common framework for future reflexion.

The net of topics is cast wide intentionally, and we have encouraged approaches from the perspectives of philology, archaeology and the natural sciences to consider topics such as the evolution, structuring principles, administration, natural or social setting of these nodes of power.

### Organizers

<b>KANIUTH, Kai</b>	<b>GONDET, Sébastien</b>
Ludwig-Maximilians-Universität München Schellingstr. 12 / Raum 420 80539 München <a href="mailto:kaniuth@vaa.fak12.uni-muenchen.de">kaniuth@vaa.fak12.uni-muenchen.de</a>	UMR 5133 - Archéorient Maison de l'Orient et de la Méditerranée 7, rue Raulin, F-69365 Lyon cedex 07 <a href="mailto:sebastien.gondet@laposte.net">sebastien.gondet@laposte.net</a> <a href="mailto:sebastien.gondet@mom.fr">sebastien.gondet@mom.fr</a>

### Participants (in alphabetical order)

<b>ASKARI CHAVERDI</b> , Alireza Shiraz University	<b>HENKELMANN</b> , Wouter École Pratique des Hautes Études, Paris
<b>BENECH</b> , Christophe	<b>HUFF</b> , Dietrich German Archaeological Institute, Berlin
<b>BOUCHARLAT</b> , Rémy CNRS, Lyon	<b>IBNOERRIDA</b> , Nabil Naples University
<b>BRIANT</b> , Pierre Collège de France, Paris	<b>KANIUTH</b> , Kai LMU Munich
<b>CALLIERI</b> , Pierfrancesco Bologna University	<b>KNAUß</b> , Florian Staatliche Antikensammlungen und Glyptothek, Munich
<b>CHAMBRADÉ</b> , Marie-Laure CNRS, Lyon	<b>METZ</b> , Stephanie Göttingen University
<b>DUSTING</b> , Amanda University of Sydney	<b>MOHAMMADKHANI</b> , Kouros Shahid Beheshti University, Tehran
<b>FABBINDER</b> , Jörg LMU Munich	<b>ROAF</b> , Michael LMU Munich
<b>GONDET</b> , Sébastien CNRS, Lyon	<b>TUPLIN</b> , Christopher Liverpool University
<b>GOPNIK</b> , Hilary Monash University, Melbourne	
<b>GRUBER</b> , Martin LMU Munich	
<b>HELD</b> , Winfried Marburg University	

## List of Lectures

09:00	Wouter Henkelmann	Palaces and residences in the Achaemenid institutional network
09:30	Christopher Tuplin	“By appointment to the king.” Royal labels in the Achaemenid landscape
10:00	Rémy Boucharlat	Achaemenid pavilions and find spots of Achaemenid-style column bases: distribution, definition and functions
10:30	Nabil Ibnoerrida	The “pavilions” as elements of an Achaemenid urban planning/settlement system
11:00 Coffee break		
11:30	Sébastien Gondet Kourosch Mohammedkhani	Pasargadae: Report on the recent archaeological activities (2015–2017)
12:00	Martin Gruber Jörg Faßbinder	Archaeological survey and geophysical prospection in the surroundings of the Achaemenid residence at Karacamirli (Azerbaijan)
12:30	Marie-Laure Chambrade Stephanie Metz	Achaemenid residences in their landscape: a cross study between Pasargadae and Karacamirli
13:00 Lunch break		
14:00	Winfried Held	Die Residenz eines persischen Satrapen in Meydancikkale, Kilikien
14:30	Alireza Askari Chaverdi Pierfrancesco Callieri	The Monumental Gate at Tol-e Ajori: a new evidence of an imperial architectural presence in the Persepolis plain
15:00	Dietrich Huff	Persepolis: Ritual or secular?
15:30	Amanda Dusting	Qal’eh Kali. Achaemenid residence?
16:00 Coffee break		
16:30	Hilary Gopnik	Betwixt and Between: The unfinished palace of Oğlanqala Period III

## Abstracts

**ASKARI CHAVERDI, Alireza – CALLIERI, Pierfrancesco**

### **The Monumental Gate at Tol-e Ajori: a new evidence of an imperial architectural presence in the Persepolis plain**

The Iranian-Italian joint excavations carried out since 2011 in the area of Bagh-e Firuzi (central Fars) have identified new evidence of monumental buildings in the Persepolis plain, among which the Gate of Tol-e Ajori appears as a key to approach the subject of Achaemenid architectural undertaking in the Persepolis plain anew. This gate, which in plan and decoration appears as a copy of the Ishtar Gate of Babylon, is built according to a Mesopotamian architectural tradition and represents another "face" of the architecture of imperial Persia, completely different from our paradigm based on the buildings of Pasargadae and Persepolis. Together with the adjacent large complex of Firuzi 5, this Gate is so badly preserved that, regardless of the bricks pillage detected by excavations, its completion cannot be considered certain. It nevertheless seems to witness a project of imperial architectural presence in the Persepolis plain different in place and time from the Terrace created by Darius I, which obliges us to reappraise the current interpretation of the area of Firuzi.

**BENECH, Christophe**

### **Let's walk in Paradise! Paths and pathways in the royal park of Pasargadae**

The spatial organization of ancient gardens is generally studied through the few archaeological remains that have come to us: the buildings make it possible to identify places of residence or for a stay in the garden, also possible symbolic or religious spaces; the canals and basins tell us about the practical organization of the irrigation of the garden and the location of privileged places where the presence of the water brings some freshness. Unfortunately, the paths and paths that allow to walk in the gardens, but also to open viewpoints in the vegetation, have generally left little traces in the memory of the soil. However, the geophysical surveys carried out on the royal park of Pasargades have revealed fragments of roads: although it remains difficult to follow them along their entire route, they nevertheless show different modes of circulation within the park. This talk aims to present the identification theses different paths and pathways and attempt to propose a more accurate organization of the land division.

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**BOUCHARLAT, Rémy**

### **Achaemenid pavilions and find spots of Achaemenid-style column bases: distribution, definition and functions**

The inventory of sites in Iran including Achaemenid pavilions or at least some Achaemenid-style some column bases is growing every year thanks to excavations, surveys and chance discoveries. The random distribution of these architectural remains is likely linked with the intensity of the archaeological research, but the importance of Fars and to a lesser extent in the Central Zagros should not be overestimated, since there are some occurrences elsewhere, as the new Achaemenid stone bases found in Kerman province or Caucasus. The function often attributed to these remains is they correspond to stations on the Royal Road(s). Because of their architecture on the one hand and the location of some of them on the other hand, when it is known, they may correspond to the location of Royal and élite residences, though not excluding a relationship with a road station. In this respect, these architectural remains — to be better defined and sometimes more securely dated — may contribute to establish a socio-economic map of the Achaemenid provinces in Iran.

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**CHAMBRADÉ, Marie-Laure – METZ, Stephi**

### **Achaemenid residences in their landscape: a cross study between Pasargadae and Karacamirli**

The spatial organisation of Achaemenid residences, developed as mixed territories comprising both urban and rural elements, are in essence complex and wide landscape components. Moreover, they might have been part of regional management plans of their territories, probably in proportion to their area of influence. In this paper, we will compare two cases study: Pasargadae (Fars Province, Iran) and Karacamirli (Shamkir Province, Azerbaijan). The residences are investigated as spatial objects, integrated in their respective environment, and we will underline the possibilities and the constraints of a landscape study in two very different contexts. A special focus will be made on water use and hydro-agricultural development and the perspectives offered by spatial and geoarchaeological studies.

DUSTING, Amanda

### ***Qal'eh Kali, Achaemenid residence?***

The Achaemenid building at Qal'eh Kali in the Fahlian region of Fars Province Iran has bell shaped column bases larger than those from the ancillary palaces/residences off the main terrace at Takht-i Jamshid and the mound at Susa. These bases are so far unique in decorative motif and dimensions. The quality of carving of the bases and the stone used suggest they were produced at an imperial workshop, likely to be at Persepolis, carved by a court trained mason. The size of the bases is significant as is the size of the overall structure and its likely position within a complex of other buildings. The siting of the building in the cultural landscape, close to the Elamite rock relief of Kurangun is also likely to be significant as noted by Potts (2008). These factors point to the elite nature of the building. However, there may be other markers of that elite status such as, the presence of stone merlons and stairs, and the small finds of fine stone tableware, fragments of rare colourless glass and a tiny relief fragment. This paper will present the various architectural and artefactual elements found at Qal'eh Kali and discuss their relevance in the context of working towards an identification of Achaemenid building function.

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GONDET, Sébastien – MOHAMMEDKHANI, Kourosh

### **Pasargadae: report on the recent archaeological activities (2015–2017)**

In 2015 the Franco-Iranian project has resumed its archaeological work on the World Heritage site of Pasargadae. Three campaigns of fieldwork (2015–2017) have been implemented at Pasargadae and over its surrounding territory. By combining complementary survey methods, the main aim of this project is to reconstruct the past landscape of the site and its surrounding territory. We intend to approach the Achaemenid period by resituating it in its long-term settlement and environmental dynamics. The present project is jointly carried out by the University of Shahid Beheshti of Tehran and the Archéorient team of the CNRS/Lyon 2 University, with the support of Iranian (Iran Cultural Heritage Handcraft and Tourism Organization, Research Institute of Cultural Heritage and Tourism, Iranian Center for Archaeological Research, Pasargadae World Heritage Site) and French institutions (Ministry of Foreign Affairs, French National Research Agency since 2017, French Research Institute in Iran).

The first 1999–2009 phase of the Franco-Iranian project at Pasargadae brought to light a new picture of Pasargadae, confirmed and broadened by our recent works. Beyond loosely distributed monuments known from the old excavations, it was demonstrated that at the very least 300 ha of the site were landscaped. The first center of power built by the Achaemenid rulers was conceived following an open layout where garden areas took a prominent place. The whole elements of the site were certainly encompassed within a wide park area. New data coming from Persepolis, where archaeological works west of the Terrace started in 2005, confirmed this new Persian way to conceived centers of power as green and open cityscapes. This “model” for conceiving capitals seemed restricted to the province of Persia, the cradle of the Achaemenid dynasty. Beginning in the middle of the 2000s, the Azerbaijani-German archaeological project at Karaçamirli challenged this observation. Fieldwork there brought to light a complex made of buildings showing for some of them strong Persian architectural influences, and developed following a comparable pattern. The buildings shaping the site, obviously an elite residence as well as a regional center of power for the satrapy, were also distributed over an area of several square kilometers. These close common characteristics led us to develop a converging research program on both sites and to build the ANR-DFG PARADISE project.

Our talk will focus on the impact of this project on the research implemented in the Pasargadae region. Based on a presentation of the results obtained during the 2015–2016 campaigns, we will introduce the new topics and methods integrated since 2017 and present preliminary results of our collaborative work on the site. The particular shape of these centers loosely built and developed on wide areas over territories presently intensively farmed leads us to conceive together new and adapted ways for approaching these sites. At Pasargadae, the project aims to support combined geoarchaeological and geophysical approaches, some still pioneering, at the same time as a continuation of our “classical” mapping and survey work started in 1999 and resumed in 2015. The mapping of Pasargadae fomented new hypotheses on the Achaemenid site development and its later occupation phases, especially a sprawling of the site towards the east as well as a complex settlement history around the hill crowned by the Tol-e Takht monumental stone platform. The works implemented since 2017 in the frame of the project will help us to investigate these research directions and provide new insights on Pasargadae to be compared with Karačamirli and other Caucasian sites in order to stress if a new Persian way of conceiving regional centers was diffused through the Empire.

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**GOPNIK, Hilary**

### **Betwixt and Between: The unfinished palace of Oğlanqala Period III**

The past 20 years has seen a redefinition of the architectural history of Achaemenid Persia with the discovery in the Trans Caucasus of numerous examples of seemingly imperial architectural forms, most notably bell-shaped column bases. The columned hall at Karačamirli at the northern extremity of the empire, for example, forced scholarship to reexamine the function and role of the monumental buildings at the imperial centers of Pasargadae and Persepolis. The unfinished building at Oğlanqala in the Şərur valley of Naxçıvan, Azerbaijan likewise challenges definitions of what palatial looked like at the periphery of empire. Unlike Karačamirli, Oğlanqala does not belong firmly within the Achaemenid architectural tradition, and may in fact be immediately post-Achaemenid in date, yet it uses many of the characteristic elements of Achaemenid imperial architecture including bell-shaped bases and columned entrance ways. Although unfinished, it is clear that this building was intended not only for display but as a residence as well as a defensive structure. Perched on top of a high hill such that the walls on three sides reach the cliff edge, its placement in the landscape is also very different from the classic Achaemenid garden-enhanced palace plan. How can we fit Oğlanqala into a political model of how monumentality operated in this region? Does the presence of a truly hybrid monument force us to re-evaluate the more mimetic versions of imperial production found at Karačamirli, Gumbati, and Sari Tepe?

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**GRUBER, Martin – FABBINDER, Jörg**

### **Archaeological survey and geophysical prospection in the surroundings of the Achaemenid residence at Karacamirli (Azerbaijan)**

The Achaemenid administrative complex excavated in the past decade by a joint German-Azerbaijani team near Karacamirli consists of a large residence and subsidiary buildings in its immediate vicinity. Since 2013 a team from Munich University is investigating the surrounding area of this complex to better understand the spatial organisation and its impact on the landscape. A combination of archaeological survey, geophysical prospection and test trenching was used to gain spatial data on both surface pottery and subsurface remains. The present paper aims to give a short summary of the archaeological and geophysical results.

HELD, Winfried

### **Die Residenz eines persischen Satrapen in Meydancikkale, Kilikien**

Bei den französischen Grabungen im kilikischen Meydancikkale 1971-1982 wurde ein großes, als „Bâtiment A“, bezeichnetes Gebäude ausgegraben, dessen ausführliche Publikation noch aussteht. Die Ausgräber interpretierten es als hellenistisches Gebäude über den Grundmauern eines achämenidischen Vorgängerbaus aus dem 5. oder 4. Jh. v. Chr., die Thesen zu Rekonstruktion und Deutung sind bisher jedoch widersprüchlich. A. Davesne schlägt für die hellenistische Phase eine Deutung als Prytaneion vor. O. Casabonne sieht darin ein multifunktionales Gebäude, das nur im Sommer genutzt werden konnte, da der große Hof im Winter wegen des starken Schneefalls eine Nutzung unmöglich machte. In der Nähe des Gebäudes wurden Relieffragmente im achämenidischen Hofstil gefunden. Sie stellen zwei Wächter in einem Tordurchgang dar sowie Personen in persischem Hofgewand, die Geschenke bringen und auf das Tor zugehen. Davesne und Casabonne wiesen diese Reliefs bereits der achämenidischen Phase des Gebäudes zu; Casabonne sieht darin für die achämenidische Phase ein Palastgebäude als Teil eines größeren Palastareals und vergleicht die Anlage mit dem Palast von Vouni in Zypern. Deniz Kaplan und der Autor hatten bereits im Jahr 2015 einen Aufsatz dazu verfasst und dabei eine neue Rekonstruktion vorgeschlagen, die einer vereinfachten Version des Darius-Palasts in Persepolis entspricht. Entsprechend wurde das Gebäude als Residenz eines persischen Satrapen gedeutet. Neue Beobachtungen bei einem Besuch der Ruine im Sommer 2015 zeigten jedoch, dass die von Casabonne beobachtete Trennung in zwei Phasen – einen Hauptbau und seine seitliche Erweiterung – nicht zutrifft, und der Bau vielmehr vier Phasen aufweist. Auf dieser Grundlage wird eine revidierte Rekonstruktion des Gebäudes vorgestellt.

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HENKELMAN, Wouter

### **Palaces and residences in the Achaemenid institutional network**

Greek sources commenting on the Persian empire, notably Arrian, regularly refer to *basileion/basileia*, usually translated as "royal residence(s)," in the Achaemenid satrapies. One may wonder if this suggests not too much of a passive state at times the King of Kings was not touring that particular part the Empire. Indeed, primary sources increasingly confirm the idea of a hierarchy of satrapies within a well-organised network. The central nodes in this system were satrapal and sub-satrapal or 'provincial' centres that housed the administrative apparatus, itself heading a branched organisation managing a local network of craft centres, granaries, estates, etc. In this view, which is strongly informed by the Persepolis Fortification Archive, *basileion/basileia* requires re-interpretation as a central locus where royal power is made manifest (by means of architecture, representatives of the crown) and state control tangible (in the form of a local section of the empire-wide administrative network, deploying modes of operation, hierarchies and structures in part answering to a repeating template).

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HUFF, Dietrich

### **Persepolis: Ritual or secular?**

This contribution aims at limiting the over-interpretations of Persepolis as a mainly ritual place, and it brings forward arguments for an interpretation as a basically normal royal residence. Its unique architectural and artistic qualities, as well as the fact, that only here and at Pasargadae we find the burial

places of the kings together with the still enigmatic tower buildings may be sufficiently explained by the proud tradition of both places as the homeland of the dynasty and the origin of the empire. The analysis of the carefully excavated Apadana of Persepolis and Palace P at Pasargadae lead to the reconstruction of buildings composed of high columnar halls with multi-storied side tracts, the latter clearly used as living areas. With the function as the true house of the royal family, the Apadana must be understood not only as a throne hall, but as the actual palace of the residence. Studying the squeezed layout around the Apadana a well-planned system of separated and interconnected areas becomes evident, which was classified into ranks by strictly organized access. Some of the areas are more or less explained, others completely unclear. In spite of scores of open questions, Persepolis can offer a rather realistic model of an Iranian royal residence and is of major value for the understanding of even much later royal sites like Parthian Staraya Nisa/Mithridatkert.

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**IBNOERRIDA, Nabil**

### **The “pavilions” as elements of an Achaemenid urban planning/settlement system**

The first archeologist who used the term “pavilion”, was Herzfeld during the first investigations in Pasargadae. Stronach in his publication has maintained this nomenclature, highlighting the function of two pavilions connected with the “Royal Garden”. What are these buildings? Why are they defined in various publications as pavilions?

My paper will try to analyze and propose a new vision of these "pavilions", including Karačamirli (Azerbaijan), the Borazjan area, Qaleh Kali, Pasargade/Tang-e Bolaghi, Persepolis (area), in connection with the landscape and why these buildings are located near the water sources (rivers, spring water, canal etc. etc.). Finally, my paper will try to understand the connection between the “Royal Garden” - pavilions (A, B) and the palaces S and P.

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**TUPLIN, Christopher**

### **“By appointment to the king.” Royal labels in the Achaemenid landscape**

This paper, which is a by-product of continuing work on a commentary on Xenophon’s *Anabasis*, starts as an investigation of the term *basileia* (neuter plural, not feminine singular) in that text in the light of general Greek usage. More broadly it seeks to assess how much weight attaches to the specifically royal content of such terminology in Xenophon, other Greek authors and non-Greek texts, in reference both to literal landscapes (hence residences or buildings of various sorts) and more metaphorical ones. If everything is the king’s, are some things more his than others? Is there any consistent reflection of this in verbal capture of the Achaemenid world?



## **7. The Late Chalcolithic of Upper Mesopotamia and the interaction with Southern Uruk communities: new data and interpretations for a better understanding of the early urban world**

Between the 5<sup>th</sup> and 4<sup>th</sup> millennia BC, Mesopotamia witnessed major changes leading ultimately to the emergence of the first proto-urban and urban experiences. In the last decades, surveys and excavations have fashioned an overall picture in which social complexity and urbanisation processes took place independently in North and South Mesopotamia. Also, the Uruk “colonial” expansion, implying different modalities of culture-contact between north- and south-Mesopotamia continues to be a main topic of archaeological research.

Now in the 2010s, survey and excavation in Iraqi Kurdistan further challenge our knowledge of local Late Chalcolithic developments and the modes and outcomes of north-south interaction. On the one hand, the general evolutionary panorama of the first complex societies remains valid, but, on the other hand, ideas about chronology and cultural dynamics within the Mesopotamian world are being questioned by new data. In particular, proto-urban Mesopotamia appears to be characterised by a multifaceted landscape of regions where north-south interaction may have (or may have not) affected the development of local socio-economic dynamics. Mobility of people, objects and ideas, as well as the role of long-distance exchanges and contacts/interactions between southern Mesopotamian/Uruk and northern Mesopotamia communities (from Anatolia to the Iranian northern plateau) have to be re-assessed in the light of recent research.

The purpose of this workshop is to discuss this mosaic of contacts/interactions, with the goal of evaluating the role of material and social mobility in the emergence of the first Mesopotamian complex societies and cities.

In this regard, we will welcome papers on the following topics: [re-order from general large scale to specific]

- The role of natural resources in the formation of new contacts and economic dynamics
- Tigris vs Euphrates: regional (diverging?) patterns in the emergence of north-south contact routes
- Contrasting socio-cultural entities (with peculiar architectural traditions or social practices) at the macro-regional scale
- Changes in the settlement pattern as a consequence of social stresses (e.g. demographic pressures) as well as of new stimuli (e.g. new subsistence strategies)
- Mesopotamian artifact technology, production systems, technology and modalities of circulation (of individuals, objects and/or ideas)
- Material culture, traditions and Mesopotamian proto-urban social identities, including the discussion of regional and supra regional chronologies

The aim of the workshop is not to offer a radically new image of Late Chalcolithic Mesopotamia, but rather to test schematic ideas and suggest new research topics. Is the rigid division between north- and south-Mesopotamian evolutionary paths still valid? How can we enhance the heuristic value of the recent surveys and excavations?

Contributors will be asked to place their case study in a broad regional and supra-regional context, whether as far as chronological aspects, production systems, cultural identity of the producers, or the interpretation of ancient technology, social practices and cultural change.

## Organizers

<b>BALDI</b> , Johnny Samuele Institut français du Proche-Orient, Beirut	<b>PEYRONEL</b> , Luca International University of Languages and Media University of Milan
<b>IAMONI</b> , Marco University of Udine	<b>SCONZO</b> , Paola University of Tubingen

## Participants (in alphabetical order)

<b>BALDI</b> , Johnny Samuele Ifpo – Beirut	<b>MOSCONE</b> , Daniele Department of Classics, Sapienza University of Rome
<b>BALOSSI RESTELLI</b> , Francesca Sapienza University of Rome	<b>MÜHL</b> , Simone Ludwig-Maximilians-Universität Munich
<b>COLANTONI</b> , Carlo University of Leicester	<b>PEYRONEL</b> , Luca IULM University of Milan
<b>D'ANNA</b> , Maria Bianca Freie Universität Berlin	<b>SCONZO</b> , Paola University of Tubingen
<b>IAMONI</b> , Marco University of Udine	<b>SKULDBØL</b> , Tim Boaz Bruun University of Copenhagen
<b>LEWIS</b> , Michael Cambridge University	<b>THOMALSKY</b> , Judith German Archaeological Institute, Eurasia Department
<b>MARRO</b> , Catherine CNRS - UMR 5133 Archéorient- Environnements et Sociétés de l'Orient Ancien, Lyon, France	<b>VACCA</b> , Agnese Sapienza University of Rome
<b>MCMAHON</b> , Augusta Cambridge University	

## List of Lectures

	<b>Lecturer</b>	<b>Title</b>
		1. Ecology, Economy and Settlement Patterns
9:30	Tim Boaz Bruun Skuldbøl Carlo Colantoni	Unravelling early urbanism and the dynamics of cultural encounters in Late Chalcolithic Mesopotamia. New insights from the Danish Archaeological Expedition to Iraq (DAEI)
10:00	Paola Sconzo Marco Iamoni	The Uruk presence in the Upper Tigris of Iraqi Kurdistan and the interaction with local LC societies
10:30	Maria Bianca D'Anna	Un air de famille. Preliminary notes on the Late Chalcolithic period in the Shahrizor Plain (Slemani, Kurdistan)
		11:00 Coffee break
		2. Techniques, Production Systems and Social Organization
11:30	Judith Thomalsky	Lithics as interacting entities – or - how to define an urban lithic industry?
12:00	Daniele Moscone	Current Research on Chipped Stone Artifacts from Tell Helawa (Iraqi Kurdistan)
12:30	Michael Lewis	Social Transformations and Modes of Ceramic Production during the Late Chalcolithic in the Shahrizor Plain, Iraqi Kurdistan: A Geochemical and Petrographic Study
		13:00 Lunch break

14:00	Agnese Vacca Luca Peyronel	Household Economy and Labour Organisation: Pottery Production and the Emergence of Social Complexity at the Late Chalcolithic site of Tell Helawa, Iraqi Kurdistan
14:30	Johnny Samuele Baldi	Bits of Uruk before and outside the Uruk colonial sphere. The Qara Dagh area and some early thoughts on a reassessment of the Uruk expansion
3. Complexities in Contact		
15:00	Augusta McMahon	Resourcing the City: Tell Brak LC 2-3 Container Sealings
15:30	Catherine Marro	Beyond the Great Mountains: the integration of Late Chalcolithic Caucasian Communities into Middle-Eastern dynamics
16:00 Coffee break		
16:30	Francesca Balossi Restelli	What complexity? Late Chalcolithic developments at the site of Arslantepe in the Upper Euphrates region
17:00 Discussion		

## Abstracts

**BALDI, Johnny Samuele**  
Ifpo – Beirut

### **Bits of Uruk before and outside the Uruk colonial sphere. The Qara Dagh area and some early thoughts on a reassessment of the Uruk expansion**

Recent data from the sites of Gird-i Qala and Logardan (Sulaymaniyah Province, Iraqi Kurdistan) are starting to change the picture of Uruk culture expansion. In the central Zagros piedmont, this expansion began as early as the south-Mesopotamian Early Uruk (local Late Chalcolithic 2). At Gird-i Qalaa, the Uruk presence is documented by several firing structures which show that Uruk pottery was made on-site by resident craftsmen. At Logardan, different architectural phases of a large monumental complex have been identified on a wide mud-brick terrace in a dominant position, on the edge of the natural hill. Both the craft area and the monumental constructions date back to the beginning of the 4<sup>th</sup> millennium BC, as demonstrated by the pottery assemblage, closely similar to the Early Uruk repertoire from Eridu or Susa. Nevertheless, the technical analysis of the sherds clearly shows that “local” Late Chalcolithic ceramics and “foreign” south-Mesopotamian ones share the same *chaînes opératoires* and belong to the same technical traditions. These discoveries lead us to revise traditional conceptions of the Uruk expansion, based on the simplistic dichotomy between local populations and Uruk settlers. It is a first step to reassess the actual forms of intercultural exchange that took place over an unexpectedly long period of time.

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**BALOSS RESTELLI, Francesca**  
Sapienza University of Roma

### **What complexity? Late Chalcolithic developments at the site of Arslantepe in the Upper Euphrates region**

The Late Chalcolithic 1-4 sequence (4200-3500 BCE) at the site of Arslantepe will be discussed with the aim of enquiring issues of increasing complexity in a selection of spheres of the settlement's life: exploitation of natural resources, organization of the primary economy (agriculture and herding) and of craftwork, and daily practices. Purpose of this is to provide data for a debate on the contemporary

developments of the overall Upper Mesopotamian regions (Tigris and Euphrates) and a comparison with the Uruk world of southern Mesopotamia.

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**D'ANNA**, Maria Bianca

Freie Universität Berlin

**MÜHL**, Simone

Ludwig-Maximilians-Universität Munich

### ***Un air de famille. Preliminary notes on the Late Chalcolithic period in the Shahrizor Plain (Sleman, Kurdistan)***

Largely based on the analysis of ceramics' distribution and settlement pattern, the current narrative on Late Chalcolithic (LC) Mesopotamia tells about a trajectory that starts with the Ubaid homogeneity to then go through a process of regionalization and eventually reach again a new and more complex 'urukized' unity. Zooming in for a close up of 'peripheries', ecologically marginal areas, or small-scale sites offers a great potential to gain a more nuanced picture of mid-5<sup>th</sup> to 4<sup>th</sup> millennium BCE Mesopotamia.

In this paper we focus on the Shahrizor Plain at the southeastern fringe of Iraqi Kurdistan. We present an assessment of the LC finds of the Shahrizor Survey Project as well as of soundings at Gird-i Shamlu and Begum. We focus in particular on elements of communalities with better-known Mesopotamian regions as well as on what seem local peculiarities of this fertile inter-mountainous valley possibly only shared with strictly neighboring areas. We also present Uruk or Uruk-inspired ceramics, which appear to be relatively rare finds and often show local technological features.

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**LEWIS**, Michael

Cambridge University

### **Social Transformations and Modes of Ceramic Production during the Late Chalcolithic in the Shahrizor Plain, Iraqi Kurdistan: A Geochemical and Petrographic Study**

The Late Chalcolithic (LC) in Northern Mesopotamia signifies a formative period in the history of the ancient Near East. The LC is synonymous with great socio-economic change, particularly the development of long distance trade and exchange and the growth of urban societies.

Perhaps the most important and divisive aspect of the LC in the archaeology of Mesopotamia, the Uruk Phenomenon, is still hotly contested and debated to this day. Arguably representing the world's first economic expansion, the Uruk Phenomenon saw large scale, and long-distance movement of material culture. Yet recent studies have shown very little movement of ceramics; an apparent contradiction given the known movement of other commodities at this time.

The Shahrizor is a wide, fertile, alluvial plain located in south-eastern Iraqi Kurdistan. Interestingly, large scale, urban settlement appears to be conspicuously absent across the Shahrizor. So, how then does the Shahrizor fit into the wider context of the Northern Mesopotamian Late Chalcolithic? This presentation is based on recent, newly acquired data collected from multiple sites across the Shahrizor. Through a multidisciplinary approach utilising thin section ceramic petrography, macroscopic inspection and geochemical analysis, this paper will discuss ceramic manufacture and production during the LC3-4 in the Shahrizor. It also raises important issues regarding mass production, identity and ethnicity as well as local relationships between the communities of the Shahrizor during the LC3-4. Finally, it is hoped to begin to place the Shahrizor and its communities within the wider context of the LC Near East.

**MARRO**, Catherine

CNRS – UMR 5133 – Archéorient- Environnements et Sociétés de l'Orient Ancien – Lyon, France

### **Beyond the Great Mountains: the integration of Late Chalcolithic Caucasian Communities into Middle-Eastern dynamics**

During the Neolithic and Early Chalcolithic (ca. 6200-4500 BCE), South Caucasian economies basically developed within a fairly secluded environment that allowed only limited relationships with Syrian or Mesopotamian communities. However, a change in interregional dynamics occurred in the course of the 5<sup>th</sup> millennium, which led to the progressive integration of the South Caucasus into a wider region that included western Iran, eastern Anatolia, the northern Levant, Syria and Mesopotamia. This shift resulted into the development of a new interaction sphere that we have called the “Chaff-Faced Ware oikumenè”. Our current hypothesis aiming to explain this shift in interregional dynamics draws on a large body of evidence, which suggests that the South Caucasus and probably Eastern Anatolia had become an economic hub by the end of the 5<sup>th</sup> millennium, at the core of which lay the exploitation of mineral resources (especially copper), and the practice of extractive metallurgy by highland communities: as shown by recent data, the practice of metallurgy in the Araxes basin had indeed started some 500 years earlier than in the South. It will be argued in this paper that the integration of the South Caucasus into the Syro-Mesopotamian sphere during the 5<sup>th</sup> and 4<sup>th</sup> millennia is probably linked to the development of technical innovations in the highlands (copper metallurgy, woollen textiles, possibly the domestication of equids) as much as to their wealth in natural resources. In any case, this shift should be regarded as reflecting simultaneous change in lowland and highland communities, brought about by constant interactions, rather than by Mesopotamian migrations or Mesopotamian influence over the Anatolian and Caucasian highlands.

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**MCMAHON**, Augusta  
Cambridge University

### **Resourcing the City: Tell Brak LC 2-3 Container Sealings**

Tell Brak became a city in the mid-4<sup>th</sup> millennium BC, as indicated by its size, complexity of economic behaviours and twin religious and secular institutions. This paper will explore the regional connections represented in the LC 2-3 container sealings from a variety of contexts at Tell Brak. It will also examine their implications for resource acquisition and the sustainability of Brak as a new urban settlement.

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**MOSCONE**, Daniele  
Sapienza University of Rome, Department of Classics

### **Current Research on Chipped Stone Artifacts from Tell Helawa (Iraqi Kurdistan)**

The aim of this paper is to present preliminary data coming from the ongoing analysis of the chipped stone artifacts from the Late Chalcolithic layers of Tell Helawa site (Erbil Governorate of Iraqi Kurdistan). Lithic materials, if investigated by means of a “global approach” – from the source to the artifact – can offer an important view of the organization of the technology. In particular, the dynamics related to raw materials supply and circulation as raw blocks or semi/finished products, the distance between the

geological sources and the settlement and the technological choices related to different classes of artifacts can reflect particular aspects of the social organization of a given community. The analytical protocol adopted in this study includes the lithic raw materials sampling and characterization – both on chert and obsidian – in combination with the technological study of chipped stone artefacts following a chaîne opératoire approach.

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**SCONZO, Paola**  
University of Tübingen  
**IAMONI, Marco**  
University of Udine

### **The Uruk presence in the Upper Tigris of Iraqi Kurdistan and the interaction with local LC societies**

This joint paper aims at analysing the presence of Uruk communities in the Upper Tigris in the light of data retrieved in the frame of two neighbouring survey projects currently in progress in the northernmost region of Iraqi Kurdistan, the province of Dohuk, at the very off-shoot of the Zagros system: namely, the Eastern Ḥabur Archaeological Survey (EHAS) of the Tubingen University and the Land of Nineveh Archaeological Project of the University of Udine.

Those which can be considered the major traits characterising the Uruk in the north (types and distribution of settlements, material culture, etc..) will be examined here, with the final goal of exploring forms and modalities at the basis of the Uruk presence (or absence) in the region. At the same time, the cross-analysis of the settlement patterns independently achieved by the two surveys will be used to verify and comment the level of interaction between Uruk and local Late Chalcolithic communities of this this mountainous and riverine region.

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**SKULDBØL, Tim Boaz Bruun**  
University of Copenhagen  
**COLANTONI, Carlo**  
University of Leicester

### **Unravelling early urbanism and the dynamics of cultural encounters in Late Chalcolithic Mesopotamia. New insights from the Danish Archaeological Expedition to Iraq (DAEI)**

Recent archaeological research in northern Iraq has led to a renewed interest in two important Late Chalcolithic period (5-4th mill. BC) developments: the emergence of urban communities across Mesopotamia in the first half of the Late Chalcolithic (LC) period and the expansion of southern Mesopotamian Uruk cultural influence upon surrounding societies in the second half of the LC period. This contribution considers how and why these two phases of developments are interconnected. Supporting this is a discussion of the challenges faced in explaining the dynamics of urbanism and cultural interaction in LC period Mesopotamia. It draws on insights from previous and recent research in Mesopotamia, with an emphasis on the Zagros foothills and the results of the DAEI's six seasons of work on the Rania Plain, northern Iraq. This project is investigating early urbanism and the dynamics of cultural encounters in the Zagros foothills. As loci for settlement concentration, political authority and regional economic systems, the plains of the Zagros foothills appear to have acted as hubs of interaction and urban

development. DAEI's research suggests that urban formation in Mesopotamia during the LC period was dramatic and consisted of rapid societal transformations. This urban process was complex and there were diverse regional expressions of urban form with settlements shaped by localised social and economic forces. Many of the forms do not fit easily into traditional models of urban trajectories. Nevertheless, the urban process was comparative in nature and developed simultaneously. DAEI proposes that the explanation for the coincidence in urban formation visible across Mesopotamia is connected to the extensive cross-regional interaction network that was at play during the LC period. This interaction network is fundamental in the discourse concerning the manner in which urbanism unfolded in Mesopotamia during the LC period. It not only facilitated the exchange of goods and knowledge, but also stimulated regional integration and comparative developments.

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**THOMALSKY, Judith**  
German Archaeological Institute, Eurasia Department

### **Lithics as interacting entities – or - how to define an urban lithic industry?**

Lithic tool production can obviously determine socio-technological networks even on a very local scale. A tool's morphology as well as a whole lithic inventory of an archaeological context were generated by distinctive methods in a sense of technological grammar, respectively the "hand writing" of a social entity. This includes raw material exploitation, flaking method, tools final shape and its function; all related to social organization, firstly in the sense of economy, consumption and mobility of the community. All these parameters give us a specific tool to describe socio-technological entities (on both, on an economical and territorial level), their degree of innovation, technological developments and finally their interactions with "other" socio-technological entities.

Several local lithic technological networks are existent in Northern Mesopotamia during the late 5<sup>th</sup> to 4<sup>th</sup> millennium that will be described in this contribution. We will discuss how "local", "regional" and "supra regional" technologies are interacting on different levels, if we can determine technological routes (by following the North – and South-Mesopotamian debate) and finally, if we can find an "urban spirit" in lithic technology at the dawn of the Early Urban World.

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**VACCA, Agnese**  
Sapienza University of Rome  
**PEYRONEL, Luca**  
IULM University of Milan

### **Household Economy and Labour Organisation: Pottery Production and the Emergence of Social Complexity at the Late Chalcolithic site of Tell Helawa, Iraqi Kurdistan**

This paper aims at investigating the societal transformations occurring in the small-scale communities of the Iraqi Kurdistan during the Late Chalcolithic 1–3 (5<sup>th</sup>–4<sup>th</sup> millennium BC), focusing on the case-study of Tell Helawa, a 10-ha site located in the Erbil Plain. Excavations at Tell Helawa revealed a thick stratified sequence of well-preserved domestic structures (some of which were burned down in a fire) with a rich in situ inventory, which allows us to perform contextual analysis of the archaeological record and to analyse the function of LC households.

The analysis will start from the spatial patterning of materials, in order to reconstruct the activities performed within a domestic space. Subsequently, specific focus will be given to the analysis of pottery, which will be examined through a multi-disciplinary approach (petrographic analyses, combined with the functional and morphological classification of the ceramic repertoire) with the aim of identifying the patterns of raw material procurement, the level of complexity of the production modes, the nature of interactions between households within the very site of Helawa and between communities in the Erbil plain, and more broadly in Northern Mesopotamia. A focus on production systems and ceramic technology will be adopted, in order to detect modes of manufacture and circulation of artefacts within households and at intra- and inter-site level. In particular, the issue of craft specialisation will be addressed, testing the hypothesis of ceramic standardisation during the critical period of LC 1–3, which is supposed to be a time of major changes in socio-economic structures, accompanied by a high degree of economic integration and the introduction of technological innovations. The widely observed trend towards the disappearance of painted productions from the Late Ubaid period, and the widespread use of chaff-tempered pastes, alongside the introduction of mass-produced vessels, visible at several LC 2 urban sites in the Jezirah area, are also detectable at Tell Helawa and at other settlements in the Kurdistan region; this entails the active involvement of those sites in larger networks of exchange, movement of people and ideas, during a period of intense regional and interregional connectivity.

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## **Discussion**

On the basis of recent and still ongoing surveys and excavations, the debate will focus on differences and regularities in the relationships between proto-urban northern and southern Mesopotamia. Their respective organizational modalities, some specific cultural traits, as well as their contact trajectories (both in an evolutionary and physical sense, along the Tigris and Euphrates routes) will be discussed among the participants, but interventions from the public will also be welcome.



## 8. Palaeogenetics and Cultural Archaeological Perspectives on the Eastern Mediterranean Bronze and Early Iron Age

The last few years have seen an enormous acceleration of the scale and possibilities of scientific analyses – especially in the field of palaeogenetics – that obtain the power to challenge or confirm traditional archaeological interpretation. Next Generation Sequencing and refined sampling techniques are producing a continuously growing corpus of palaeogenetic data from key sites all over the Eastern Mediterranean Bronze and Early Iron Age. Now, it is time to bring scientists and archaeologists into a fruitful dialogue about the evaluation of these results. Our workshop will present the results of these dialogues by consisting of pairs of presentations on archaeological phenomena (the “Mycenaean”, the “Minoans” and the “Philistines”) and/or key sites (e.g. Arslan Tepe, Alalakh, Ashkelon, Tell es-Safi). Each pair of presenters (one archaeologist and a scientist) will present the relevant archaeological and scientific data as well as the results of their joint evaluation – first from a scientific and afterwards from an archaeological perspective. The results of these dialogues will enable ground-breaking insights into social, cultural vs. genetic diversity, human mobility and biological relationships of Bronze and Early Iron Age populations.

### Organizers

**STOCKHAMMER, Philipp W.**      **MILEVSKI, Ianir**

Ludwig-Maximilians-Universität Munich  
Max-Planck-Institut Jena

Israel Antiquities Authority – Ministerio de Ciencia Tecnología  
e Innovación Productiva, Argentina

### Participants (in alphabetical order)

**ARNOTT, Robert**

**EISENMANN, S.**

MPI Jena

**FELDMAN, Michal**

Max Planck Institute for the Science of Human History, Jena

**FOX, Sherry C.**

Arizona State University

**FRANGIPANE, Marcella**

University Rome

**HORWITZ, Liora K.**

The Hebrew University of Jerusalem

**KONSOLAKI-YANNOPOULOU, Eleni**

**KORRES, George**

**KRAUSE, Johannes**

**LAZARIDIS, Iosif**

**INGMAN, T.**

University of Chicago, Koc University

**MARAN, Joseph**

University Heidelberg

**MAEIR, Aren**

Bar Ilan University

**MARTLEW, Holley**

**NAGAR, Yossi**

Israel Antiquities Authority

**ÖZSAIT, Mehmet**

**ÖZSAIT, Nesrin**

**PAPATHANASIOU, Anastasia**

**PATTERSON, Nick**

**PINHASI, Ron**

**REICH, David**

**RICHARDS, Michael**

**ROODENBERG, Songül Alpaslan**

**SELIM, Erdal Yilmaz**

Department of Anthropology, Hacettepe University, Ankara

**SHAFIQ, R. S.**

Independent

**SKOURTANIOTI, Eirini**

Max Planck Institute for the Science of Human History, Jena

**SMITH, Patricia**

The Hebrew University of Jerusalem

**STAMATOYANNOPOULOS, George**

**STOCKHAMMER, Philipp W.**

Ludwig-Maximilians-Universität Munich/MPI Jena

**MASTER**, Daniel M.  
Wheaton College

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**MCGEORGE**, P.J.P.

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**MICHALODIMITRAKIS**, Manolis

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**MILEVSKI**, Ianir  
Israel Antiquities Authority – Ministerio de Ciencia  
Tecnología e Innovación Productiva, Argentina

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**MITTNIK**, Alissa

---

**TALIS**, Svetlana  
Israel Antiquities Authority

---

**TZEDAKIS**, Yannis

---

**VASILAKIS**, Andonis

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**YEGOROV**, Dmitry  
Israel Antiquities Authority

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**YENER**, K. A.  
University of Chicago, Koc University

## List of Lectures

	<b>Lecturer</b>	<b>Title</b>
9:00	<b>MILEVSKI</b> , I. <b>STOCKHAMMER</b> , Philipp W.	Introduction to the topic & proposing new paths of integrating archaeology and palaeogenetics
	<b>KRAUSE</b> , Johannes	Introducing the Max Planck Harvard Research Center for the Archaeoscience of the Ancient Mediterranean
		Topic I: Arslantepe (Chair: Johannes Krause)
9:30	<b>FRANGIPANE</b> , Marcella	Population Dynamics at late Chalcolithic and Early Bronze Age Arslantepe from an archaeological perspective
10:00	<b>SKOURTANIOTI</b> , Eirini <b>Selim</b> , Erdal Yilmaz	Palaeogenetic and Anthropological Perspectives on late Chalcolithic and Early Bronze Age Arslantepe
		Topic II: Alalakh (Chair: Marcella Frangipane)
10:30	<b>YENER</b> , K. A. <b>INGMAN</b> , T.	Archaeological Analysis of the Bronze Age Burials from Alalakh
		11:00–11:30 Coffee Break
11:30	<b>SHAFIQ</b> , R. S. <b>EISENMANN</b> , S.	Bioarchaeological Perspectives on Middle and Late Bronze Age Burials from Alalakh
		Topic III: “Mycenaeans” vs “Minoans” (Chair: A. Yener)
12:00	<b>MARAN</b> , Joseph	Questioning “Mycenaeans” and “Minoans” from an archaeological perspective
12:30	<b>MITTNIK</b> , Alissa et al.	Genetic Origins of the “Mycenaeans” and the “Minoans”
		13:00–14:00 Lunch Break
		Topic IV: “Philistines” (Chair: Joseph Maran)
14:00	<b>MAEIR</b> , Aren <b>STOCKHAMMER</b> , Philipp W.	Current archaeological approaches to the Philistines
14:30	<b>MASTER</b> , Daniel M. <b>FOX</b> , Sherry C.	The Philistine Cemetery at Ashkelon
15:00	<b>MILEVSKI</b> , Ianir <b>YEGOROV</b> , Dmitry <b>TALIS</b> , Svetlana <b>NAGAR</b> , Yossi <b>SMITH</b> , Patricia <b>HORWITZ</b> , Liora K.	The Iron Age Cemetery of Tel Erani, Socio-Cultural Diversity in the Southern Levantine Coastal Plain?
15:30	<b>FELDMAN</b> , Michal	A genetic study of Bronze and Iron Age populations from present-day Israel
		16:00–16:30 Coffee Break
		16:30–17:30 Final Discussion

## Abstracts

**FELDMAN, Michal**

Max Planck Institute for the Science of Human History, Jena

### **A genetic study of Bronze and Iron Age populations from present-day Israel**

Past human migrations have long been traced by archaeologists based on shared and distinct features of material culture. However, in cases where foreign features are adopted by a local population, it is often difficult to determine whether they were brought by a large-scale migration of people or by diffusion of ideas. Recent advances in ancient DNA research such as next-generation sequencing and new capture and sampling techniques have enabled the retrieval of genomic information from ancient individuals, even from regions previously known to have poor conditions for DNA preservation, such as the Eastern Mediterranean. Archaeological evidence outlines the end of the second millennium BCE as a time of dramatic changes in material culture in the coastal plain of what is present-day Israel. However, the demographic structure spanning this time of transition in the region is so far unknown. Here, we present initial results from the genetic investigation of Bronze and Iron Age skeletal remains excavated at present-day Israel, aimed at characterizing the genetic makeup of populations across this time transect, possibly shedding light on past migrations in this region.

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**FRANGIPANE, Marcella**

University Rome

### **Population Dynamics at Late Chalcolithic and Early Bronze Age Arslantepe from an archaeological perspective**

Arslantepe is a mound with a long millenarian sequence of settlements located in the Upper Euphrates valley, in a cultural and geographical border between Central Anatolia, Caucasus and Mesopotamia. The long-term excavation has investigated stratigraphically and over wide extensions most of the superimposed levels forming the mound, evidencing (1) the central role of the site in its area during most of its history, and (2) abrupt and radical changes in its cultural development in the course of time, related to changing external relations. In some cases the changes are so radical that also suggest possible changes in population components and mixture. The paper will present the main characteristics of the Late Chalcolithic developments, when the site became a powerful political and economic centre, and the subsequent abrupt changes in the following phases of the Early Bronze Age.

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**MARAN, Joseph**

University Heidelberg

### **Questioning “Mycenaeans” and “Minoans” from an archaeological perspective**

After the 2<sup>nd</sup> World War primordialist understandings of ethnicity that rest on the proof of a direct and unbroken line of descent from ancient populations, have for good reasons been abandoned by the humanities and social sciences. They were replaced by constructivist views that regard ethnicity as rooted in how groups think about themselves in specific social and historical contexts. By contrast, the “cultures”

defined by archaeology usually constitute mere inventions by scholarship without any linkage to self-perceptions of past societies. In the case of 2<sup>nd</sup> millennium BCE Greece the discoveries of Heinrich Schliemann in Mycenae and Tiryns and Sir Arthur Evans in Knossos have led to the definition of two cultures, called Minoan and Mycenaean, that were thought to be distinct from each other and geographically distributed on the central and southern parts of the Greek Mainland and Crete respectively. Besides creating the impression of a long-term continuity and homogeneity in the respective geographical zones, the practice of differentiating between Minoan and Mycenaean culture also implies that societies in Crete and the Greek Mainland remained different for many centuries. The most problematic effect of defining archaeological cultures, however, is reflected in the habit of imbuing such mere constructs of archaeology with an ‘ethnic significance’ by employing their names as substitutes for ethnic designations and speaking of “Mycenaeans” and “Minoans”. By applying such fake ethnicities that were never used by people to designate themselves or others, the impression is created that such collective identities are clean-cut, supraregionally and diachronically stable and mutually exclusive, not unlike modern nationalities, after which primordialist ethnicities have been modelled in the 19<sup>th</sup> cent. The alleged connection of “Minoans” and “Mycenaeans” to certain genetic patterns may then be taken as a justification for linking ethnicities to blood-ties. Scholars interpreting the results of aDNA should therefore be careful not to unwittingly give credence to outdated views equating ethnicity with the pureness of descent lines from ancient populations.

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**MAEIR, Aren**

Bar Ilan University

**STOCKHAMMER, Philipp W.**

Ludwig-Maximilians-Universität Munich/MPI Jena

### **Current archaeological approaches to the Philistines**

For a long time, the Philistines have been envisaged as a large group of foreigners to arrive at the Southern Levant around 1200 BCE, bringing with them their own, particular material culture, social practices and world views. Meanwhile, it has become clear that Philistine material culture and practices have to be understood as transcultural entanglements which integrate local and foreign aspects and create something new. However, several major issues are still awaiting further discussion, including: 1) can we speak of a Philistine identity or identities; 2) if so, when and how did such an identity (or identities) form within the cultural encounters and conflicts, perhaps already in the 13<sup>th</sup>, but for sure in the 12<sup>th</sup> and 11<sup>th</sup> centuries BCE Southern Levant; 3) how homogenous are material culture and social practices in the five settlements (Ashkelon, Ashdod, Gaza, Ekron, Tell es-Safi/Gath) associated with the “Philistines”? 3). In our paper, we will present the current state of discussion and define future perspective for the study of the “Philistines”.

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**MASTER, Daniel M.**

Wheaton College

**FOX, Sherry C.**

Arizona State University

### **The Philistine Cemetery at Ashkelon**

From 2013 to 2016, the Leon Levy Expedition to Ashkelon excavated an Iron Age IIA cemetery immediately adjacent to the ancient city. This research uncovered over 200 individuals buried in simple

pits, built tombs, and cremation jars. The discovery represents a fundamental contribution to the history of the Philistines, as it demonstrates, for the first time, a typical burial practice for Philistine adults in the Iron Age. As such, it becomes a type-site against which other southern Levantine discoveries can be compared and provides new information about Iron Age death and burial in the eastern Mediterranean.

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**MILEVSKI, Ianir**

Israel Antiquities Authority – Ministerio de Ciencia Tecnología e Innovación Productiva, Argentina

**YEGOROV, Dmitry – TALIS, Svetlana – NAGAR, Yossi**

Israel Antiquities Authority

**SMITH, Patricia – HORWITZ, Liora K.**

The Hebrew University of Jerusalem

### **The Iron Age Cemetery of Tel Erani, Socio-Cultural Diversity in the Southern Levantine Coastal Plain?**

Salvage excavations at Tel Erani, located in the border between the easternmost part of the Mediterranean coastal plain of Israel and the foothills (Shephelah), unearthed a cemetery dated to the end of the Iron Age IB. The cemetery, located in the southern slopes of the tell, contained 50 burials including remains of males, females as well as adults, children and infants. All were primary, extended burials that had been placed in rectangular, trough-like, unlined pits, but some were cist burials lined with mudbricks. Four phases of the cemetery were discerned. In all phases, most of the interred were found in a supine position, but exceptionally, two individuals were buried on their sides. The teeth of several individuals were removed for isotope analysis and petrous bones were selected for aDNA studies., the results of which will be the subject of another lecture in this workshop.

Burial offerings are primarily pottery vessels, bowls, jugs and juglets, flasks and bottles. A large number of storage jars, in pairs, were found adjacent to the burials. The opening of one was covered by an upside-down bowl while in several cases, these jars contained dipper juglets. To date nearly 80 jars were recovered from the cemetery.

All the pottery from the site is similar to pottery typical of types from the coastal plain of a transitional phase dated between the end of the Iron Age IB and the very beginning of the Iron Age IIA. Two flint artifacts, amongst them a geometric sickle blade characteristic of Iron Age flint knapping technology, were found in association with two burials..

In a few cases, when the interred was an infant, some jewelry such as beads, scarabs, and “eyes of Horus” amulets was placed within graves. Several metallic bracelets and rings were found adjacent to or on the hands of females in the cemetery. In two instances, faunal remains placed inside bowls were found associated with the burials.

On the basis of the cemetery of Tel Erani and other sites of the region this lecture will explore the socio-cultural aspects of the populations living in the Mediterranean coastal plain and the foothills during the end of the Iron Age I in the southern Levant.

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**MITTNIK, Alissa – LAZARIDIS, Iosif – PATTERSON, Nick – VASILAKIS, Andonis – MCGEORGE, P.J.P. – KONSOLAKI-YANNOPOULOU, Eleni – KORRES, George – MARTLEW, Holley – MICHALODIMITRAKIS, Manolis – ÖZSAIT, Mehmet – ÖZSAIT, Nesrin – PAPATHANASIOU, Anastasia – RICHARDS, Michael – ROODENBERG, Songül Alpaslan – TZEDAKIS, Yannis – ARNOTT, Robert – STOCKHAMMER, Philipp – PINHASI, Ron – REICH, David – KRAUSE, Johannes – STAMATOYANNOPOULOS, George**

## **The genetic origins of the “Minoans” and “Mycenaeans”**

The Bronze Age archaeological culture of the island of Crete, labelled ‘Minoan’ by Arthur Evans, was Europe’s first literate culture (ca. 3100 BCE to 1050 BCE). The Minoans used two as of yet undeciphered scripts: the Linear A syllabic ideographic and Cretan hieroglyphic. As these scripts could not be definitively linked to languages spoken outside Crete, a vivid scholarly dispute persists as to the origin of the Minoan culture.

In the 15<sup>th</sup> century BCE, it is believed that much of Crete was occupied by populations from mainland Greece, which replaced the Minoans as the dominant force in the Aegean. These peoples are commonly grouped in the ‘Mycenaean’ archaeological culture (ca. 1700 to 1050 BCE) and represent the first advanced civilization on mainland Europe. Their deciphered script, Linear B, which was also later used in Crete, proved that Mycenaeans spoke an early form of the Greek language.

Here we present genome-wide data from nineteen ancient individuals, including Minoans from the island of Crete, Mycenaeans from mainland Greece, and their eastern neighbours from southwestern Anatolia. We show that the Minoans and Mycenaeans were genetically highly similar, each tracing at least three quarters of their ancestry from the first farmers of the western Anatolian and Aegean regions, and most of their remaining ancestry from ancient west Asian populations related to those of the Caucasus, Iran, and Armenia. However, the Mycenaeans were genetically distinct from the Minoans in deriving ~13-18% additional ancestry from a source related to Bronze Age inhabitants of the steppe. We present possibilities for the ancestral groups and routes of migrations that could account for the distinct genetic profiles observed in these Bronze Age Aegeans.

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SHAFIQ, R. S. – EISENMANN, S.

## **Bioarchaeological Perspectives on Middle and Late Bronze Age Burials from Alalakh**

The large number of human remains uncovered at Tell Atchana (Alalakh) makes them in combination with their good preservation and excellent documentation a coherent dataset seemingly destined for bioarchaeological investigations. With the application of dental morphology, ancient DNA and isotopic (Strontium and Oxygen) analyses this study aims at gaining multifaceted insights into the population structure of this Bronze Age urban center.

Biodistance study based on dental non-metric traits, uses features present in tooth crowns and roots that are expressed in varying degrees between populations. Populations living in different geographical locations exhibit sets of dental traits which differentiate them from other regions. The accumulative frequencies of dental non-metric traits, which are heavily regulated by genetic coding, can help to determine the biological affinities of the populations which once inhabited Alalakh, using the methodology known as (ASUDAS).

The genetic makeup of everybody is determined by her/his ancestors. DNA extracted from skeletal material can thus be used to differentiate geographically driven genetic patterns amongst groups of people as well as to determine population changes over time. In contrast to the inheritance of genetic traits, strontium isotopes accumulate in tooth enamel during its formation at certain stages of a person’s lifetime. The strontium ratios (<sup>87</sup>SR/<sup>86</sup>SR) in tooth enamel are symptomatic for the underlying geology and enable to distinguish “locals” from “immigrants”. Both methods, DNA and strontium isotope analyses can therefore be used to investigate human mobility, but shed light on this topic from different angles. Their combination may enable us to write detailed mobility biographies of single individuals as well as groups. This paper represents the state and perspectives of an ongoing research from a selected number of individuals.

**SKOURTANIOTI**, Eirini

Max Planck Institute for the Science of Human History, Jena

**SELIM**, Erdal Yilmaz

Department of Anthropology, Hacettepe University, Ankara

### **Palaeogenetic and Anthropological Perspectives on late Chalcolithic and Early Bronze Age Arslantepe**

While Anatolia was highlighted as the genetic origin of early Neolithic European farmers, the genetic substructure in Anatolia itself as well as the demographic and cultural changes remain unclear. In eastern Anatolia, the archaeological record reflects influences from North-Central Anatolia, the northeastern sectors of Fertile Crescent and the Caucasus, and suggests that some of these were brought along with the movement of people. Central to this question is the archaeological site of Arslantepe (6<sup>th</sup>-1<sup>st</sup> millennium BC), strategically located at the Upper Euphrates, the nexus of all three regions. Arslantepe also developed one of the first state societies of Anatolia along with advanced metal-technologies. Archaeological research suggests that conflicts with surrounding groups of pastoralists affiliated to the Caucasus might have contributed to the collapse of its palatial system at the end of the Chalcolithic period (4<sup>th</sup> millennium BC). To test if these developments were accompanied by genetic changes, we generated genome-wide data from 18 ancient individuals spanning from the Late Chalcolithic period to the Early Bronze Age of Arslantepe. Our results show no evidence for a major genetic shift between the two time periods. However, we observe that individuals from Arslantepe are very heterogeneous and differentiated from other ancient western and central Anatolians in that they have more Iran/Caucasus related ancestry. Our data also show evidence for an ongoing but also recent confluence of Anatolian/Levantine and Caucasus/Iranian ancestries, highlighting the complexity of the Chalcolithic and Bronze Age periods in this region.

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**YENER, K. A. – INGMAN, T.**

University of Chicago, Koc University

### **Archaeological Analysis of the Bronze Age Burials from Alalakh**

Tell Atchana (Alalakh) has one of the largest recorded burial records of the second millennium BC in the region of northern Syria/southeastern Anatolia with over 300 graves documented to date. A comprehensive analysis of the graves, therefore, provides insight into the funerary practices at Alalakh and reveals mortuary trends and preferences in the Middle and Late Bronze Ages. These can then be linked to ritual practices and attitudes, as well as cultural affiliations and influences, particularly with the insights gained from bioarchaeological and genetic studies, as explored in this workshop. This paper focuses on an archaeological analysis of the Tell Atchana burials, presenting them in their contexts, both in terms of the site history and of the grave corpus as a whole. A three-dimensional GIS model of the cemetery area of Tell Atchana which was created to facilitate the analysis of the graves is highlighted here, along with the observed burial practices that have been identified. Insights and preliminary interpretations of these trends are discussed, particularly the dramatic changes in burial practices that occur halfway through the Late Bronze Age, a period at the site that is also associated with the transition from Mitannian to Hittite hegemony, and possible links between the changing mortuary practices and political circumstances are explored.

## 9. “Dark Ages”? Identifying Markers of Transition in Mesopotamia and the Near East on a Diachronic Scale

Chronological interstices and transitional periods pose multiple questions to the reconstruction of the ancient world history. The lack of recognizable data influences our understanding of these specific phases, and as consequence scholars tend to label these as *pre-* or *post-*something. This is particularly evident in Mesopotamia and the Near East where the abundance of multi-period sites has inevitably led to underestimate the relevance of somewhat archaeologically less-evident periods. Yet, these so-called *transitional phases*, when properly determined, show both traces of continuity with earlier periods and indications of later developments. Also, these periods offer unique insights into ideas of culture and community as people adjust their individual and group identities to change. This is particularly crucial for those periods that witnessed a strong relationship between different cultures manifested through the evidence of material culture hybridization and memory preservation. Thus, pairing causes of changes to archaeological markers of variation might help to determine the importance of these *dark ages* on the *longue durée*. The workshop aims to discuss the topic with a particular interest to the diachronic approach from the Bronze Age to the Islamic period through variations in settlement patterns, resource exploitation, material culture, and mostly in relation to social and political changes. We particularly welcome papers offering a case-study perspective, but also theoretical studies and new research trajectories.

### Organizers

<b>PAPPALARDO</b> , Raffaella	<b>COPPINI</b> , Costanza	<b>PIEROBON-BENOIT</b> , Raffaella
University of Naples, Federico II	Freie Universität Berlin	University of Naples, Federico II

### Participants (in alphabetical order)

<b>BONATZ</b> , Dominik Freie Universität Berlin	<b>PAPPALARDO</b> , Raffaella University of Naples, Federico II
<b>HADLER</b> , Sebastian University of Innsbruck	<b>PAPPI</b> , Cinzia University Innsbruck
<b>KÖHLER</b> , Johannes Freie Universität Berlin	<b>PIEROBON</b> , Raffaella University of Naples, Federico II
<b>NOVÁČEK</b> , Karel Palacký University Olomouc	<b>VEZZOLI</b> , Valentina University of Venice Ca' Foscari



## List of Lectures

	Lecturer	Title
9.15	<b>Raffaella Pierobon Benoit</b>	Introduction
9.30	<b>Costanza Coppini</b>	Introduction to the problematic of transitions in the Second and First Millennium BC in the history of studies
10.00	<b>Dominik Bonatz</b>	Tell Fekheriye in the Late Bronze Age: Markers of Cultural Demarcation and Social Identification During Periods of Change
10.30	<b>Sebastian Haidler – Cinzia Pappi</b>	Between Assyria and Adiabene: Cultural Transitions in the Valley of the Lower Zab
		11.00 Coffee break
11.30	<b>Raffaella Pierobon</b>	Settlement changes in Tell Barri (VI-IV century B.C.)
12.00	<b>Johannes Köhler</b>	De-marginalising Seleucid populace: Towards an archaeology of consumption
		12.30 Discussion
		13.00 Lunch break
14.00	<b>Raffaella Pappalardo</b>	Transition or not transition? Identifying the early Islamic pottery assemblage in Northern Mesopotamia. An overview from Tell Barri (Syria)
14.30	<b>Valentina Vezzoli</b>	The Early Islamic Period in Kurdistan/Iraq: clues and limitations in ceramic analysis
15.00	<b>Karel Nováček</b>	A pottery stasis within a social transformation? A case of the early-Islamic-period ceramics in North-eastern Mesopotamia
		15.30 Final Discussion and Concluding Remarks

## Abstracts

**BONATZ, Dominik**  
Freie Universität Berlin

### **Tell Fekheriye in the Late Bronze Age: Markers of Cultural Demarcation and Social Identification During Periods of Change**

The site of Tell Fekheriye in northeast Syria is supposed to bear the remains of the late Mittani capital Washshukanni and its successor in Middle Assyrian times, the district capital Ashshukanni. Despite the still lacking verification of this identification, excavations at Tell Fekheriye yielded a continuous architectural and stratigraphic sequence from the Mittani to the post-Middle Assyrian period. The associated finds indicate an at least important administrative and economic center for these periods. Reviewing all the archaeological evidences so far to hand, it can be emphasized that the site holds valuable information on two crucial transitions in the history of northern Mesopotamia. One is the shift from the federative structure of the Mittani state to the centralized system of the Middle Assyrian state, the other is the decentralization and fragmentation of one of the leading Late Bronze Age political powers at the advent of the so-called Dark Age.

The paper focuses on the materializations of rising and declining hegemonies in Tell Fekheriye. They will be contrasted to each other asking how far material culture reflects strategies of cultural demarcation and social identification. In this respect, Tell Fekheriye is not taken as case study for generalizing the effects of so-called transition periods in the ancient Near East but as quite a particular case which can be confronted to a variety of differently proceeding transitions during the Late Bronze Age.

**Haidler, Sebastian – Pappi, Cinzia**  
University of Innsbruck

### **Between Assyria and Adiabene: Cultural Transitions in the Valley of the Lower Zab**

The expansional policy of Assyria has been mainly focused, during its early stages, on the border with Babylonia along the valley of the Lower Zab. The physical transfer of the royal capitals, combined with new political and economic interests, shifted the focus on the regions included between the Upper Tigris and Upper Zab Valleys, and, later, to the western provinces. The 7th century BCE, sees the Assyrian core territories, consisting mainly of the regions of Nineveh, Erbil, and a small part of the hinterland of Assur, going through a flourishing period, characterized by infrastructural improvements related to the productivity and super-regional connectivity. However, the region of the Lower Zab, not directly connected to the border with Urartu and Mannea, became a large internal periphery, characterised by an small range agricultural economy, which persisted for centuries also after the collapse of Assyria in 612 BCE, as shown by the archaeological investigations conducted at Satu Qala and in its surroundings. Recent typological analysis, conducted on the ceramic collections, combined with the radiocarbon data, confirmed the resilience of Assyrian production, noted already somewhere else, but revealed also some possible indicators for this transitional phase, to be applied in a regional context. This paper is aimed to discuss the the stratified Late Assyrian, Post Assyrian/Achaemenid, and Hellenistic results of Satu Qala, contextualized in their wider political and economic developments.

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**Köhler, Johannes**  
Freie Universität Berlin

### **De-marginalising Seleucid populace: Towards an archaeology of consumption**

In the recent past, the resurgence of archaeological fieldwork in a hitherto archaeologically ‘unexplored’ region, at least from a ‘western perspective’, in Northern Iraq in the Kurdish Regional Government, encourages new strategies of inquiry. This is particularly true for the Seleucid period, a field of research best encapsulated by a cobweb that connects disciplinary fields, while its existence is also largely ignored. It is an array of different research trajectories motivated by each of the hosting disciplines circling a common goal, only to convene at very few nodes and then of contention, rather than co-operation. A creation of parallel structures from the friction between the archaeologies and histories are the result of a tacit agreement, in favour of overcoming the structural self-identification of scholars through their respective institutions. This lies at the core of a seeming inability of Seleucid archaeology to move from its existence as a cobweb to a truly interdisciplinary beacon of research. The resurging interest in Antiquity also calls for a revision of legacy data, to synthesise old and new research and allow for a more in-depth assessment of today’s basis of inquiry.

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**Nováček, Karel**  
Palacký University Olomouc

### **A pottery stasis within a social transformation? A case of the early-Islamic-period ceramics in North-eastern Mesopotamia**

As well as recently in the Eastern Mediterranean, a crucial revision of ceramic chronology of the 'early Islamic' period in NE Mesopotamia is to be expected, with all consequences for the explanation of historical processes which took place in this transitional era. It is, however, obviously premature to herald that revolution, since the stratified, reliably dated assemblages are completely absent in this region as yet. The meagre evidence stemmed from surface collections does indicate a long continuity of regional ceramic traditions only marginally confronted with a complex of technological and stylistical changes known as 'Samarra horizon'. This picture is well reflected in the social development of NE Mesopotamia in the Umayyad and Abbasid periods.

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**PAPPALARDO**, Raffaella

University of Naples, Federico II

### **Transition or not transition? Identifying the early Islamic pottery assemblage in Northern Mesopotamia. An overview from Tell Barri (Syria)**

The Islamic ceramic assemblage is well known in Tell Barri, thanks to the pottery found in almost every excavation area and, in particular, in the area L and R where different domestic structures have been discovered. This is particularly true for the pottery from the 11th to the 14th which is easily recognisable in all the contexts, but is still blurred for the early Islamic vessels especially related to the "transitional phases", for instance from the late Sasanian to the Umayyad period or to the late Umayyad to the early Abbasid period.

How much is really possible to identify the "transitional shapes", especially in the common ware which is always the most attested in the archaeological context?

This paper aims to open a wider discussion about this topic, in order to pinpoint, as far as possible, the ceramic markers of the early Islamic period in Northern Mesopotamia.

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**PIEROBON**, Raffaella

University of Naples, Federico II

### **Settlement changes in Tell Barri (VI-IV century B.C.)**

The excavations carried out at Tell Barri since 1980 allowed the reconstruction of a long settlement sequence on the site. The analysis of the exposed structures and the study of the various artifacts showed major phases of occupation, separated by less readable periods, roughly corresponding to the so-called Dark Ages known in general in the region.

For these periods, in the absence, in particular, of literary documentation to complete the vacuum, the problem therefore arises of the recognition of the structural and cultural elements useful to classify them as moments of transition, or, on the contrary, as phases of re-settlement corresponding to new political and administrative relations.

To deal with these problems increasing attention is necessary to the methodological aspects, irresolvable, however, without the accurate examination of the available data.

In particular, the review of excavation data and materials is highlighting the centuries of the Achaemenid occupation - in general not very well documented in the region - as crucial in the history of Tell Barri, in relation to the last verified presences of the late VII / VI century BC, and on the other side of the sequence, in relation to the effects of Alexander's victorious expedition.

The paper therefore proposes to present the available data, to evaluate their reliability as markers of precise chronological and cultural phases, and, as such, useful for confirming the reconstruction proposed for the site's history.

We will focus on the structural changes of the settlement, excavated in particular on the western side of the Tell; on the study of materials as well, identifying possible assemblages typical for single microphases; the presence of imported objects will allow, to suggest the role of the site and its political and cultural integration in the region.

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**VEZZOLI, Valentina**  
University of Venice Ca' Foscari

### **The Early Islamic Period in Kurdistan/Iraq: clues and limitations in ceramic analysis**

Archeological data regarding human occupation in the region of Northern Iraq during the Islamic period are still fragmentary. In particular, rural areas have remained largely unexplored and the settlement history of these lands during the very first phase of the Islamic period is scarcely recorded by archaeological evidence. Nevertheless, a new season of archaeological investigations in the region (mostly survey projects) has provided a huge quantity of data, and material evidence, that can provide further elements of interpretation. This documentation, especially as regards the so-called “*transitional phase*” (before and after the Arab conquest of the area), is not always easy to understand or to identify, since archaeologists lack of well-dated comparison assemblages.

This paper aims at discussing data issued from archaeological investigations carried out in the region of Dohuk, for the Land of Ninive Archaeological Project, and at questioning ceramic evidence attributed to the Early Islamic Period. What are the diagnostics that can help archaeologists to identify this period? When dealing with ceramics from survey, missing diagnostics can also provide cause for reflection. Does the picture issued from this analysis provide information regarding the “*transitional phase*”? What should we expect when looking for ceramic productions of “*transitional periods*”? This paper constitutes an open discussion regarding challenges, clues and limitations in identifying and interpreting material evidence.

## 10. After the Harvest. Storage strategies and food processing in Bronze Age Mesopotamia

The reliance on agricultural production defined multiple aspects of the Mesopotamian society and identity. Agriculture cycle scanned everyday rhythm as much as the idea of grain abundance or shortage scanned historical moments in literary fictions and royal chronicles. From North to South, agriculture was one of the core units of the Mesopotamian economy, despite the environmental challenge or the risks it entailed. Among its by-products, grain represented the greatest cultural unifier of this society: unlike fish or meat, grain and vegetables were staple foods on every Mesopotamian tables regardless the social milieu. Apart from constituting an essential food and drink source, grain was indeed associated to a large set of meanings and practices: means of exchange, marker of power, and even political tool. Grain and vegetables were cultivated, collected, directly consumed or processed in a wide variety of secondary products, both in a collective effort and on a domestic scale. While production and redistribution systems have been so far extensively investigated, far less has been outlined about storage practices and processing methods.

This workshop aims at investigating these two specific steps of the agricultural *chaîne opératoire* during the Bronze Age. Storage practices and food processing will be equally explored through written sources and archaeological evidence, in the attempt to understand these dynamics both at a macro and micro-economic level, and to highlight aspects of continuity and change between North and South. The debate on this topic among scholars coming from complimentary lines of inquiry (i.e. archaeology and philology) will help to bridge the difference in the available documentation and to integrate data within the larger quest of “vegetable economy” in Mesopotamia.

Contributions may focus on:

- case-study analyses at any managerial or administrative level (including connections with the territory; micro and macro-level impact)
- discussions of lexical, archaeological and/or bioarchaeological evidence of material culture (studies on pottery, tools, textual documents dealing with storage and food-processing, or palaeobotanical remains in contexts related to food storage or production).

Archaeological, philological, historical, or other interdisciplinary approaches are all welcome with the aim to embed the presented data in the historical perspective of the Bronze Age.

### Organizers

**BORRELLI, Noemi**   **SCAZZOSI, Giulia**

Università degli Studi di Napoli “L’Orientale”   Università degli Studi di Pavia

## Participants (in alphabetical order)

**BACKHAUS, Henrike**  
Universität zu Köln

**BORRELLI, Noemi**  
Università degli Studi di Napoli “L’Orientale”

**BRAMANTI, Armando**  
Sapienza University of Roma,  
CCHS – CSIC Madrid

**DEVECCHI, Elena**  
Università degli Studi di Torino

**DORNAUER, Aron**  
Ludwig-Maximilians-Universität Munich

**GLATZ, Claudia**  
School of Humanities, University of Glasgow

**PAULETTE, Tate**  
North Carolina State University

**PERRUCHINI, Elsa**  
School of Humanities, University of Glasgow –  
Biomarkers for Environmental and Climate Science (BECS)  
research group, University of Glasgow

**PRUB, Alexander**  
Institut für Altertumswissenschaften – Johannes Gutenberg  
Universität Mainz

**SCAZZOSI, Giulia**  
Università degli Studi di Pavia

**SOLTYSIAK, Arkadiusz**  
Department of Bioarchaeology, Institute of Archaeology -  
University of Warsaw

**TONEY, Jaime L.**  
School of Geographical and Earth Sciences, University of  
Glasgow – Biomarkers for Environmental and Climate  
Science (BECS) research group, University of Glasgow,  
Glasgow, G12 8QQ, UK

**WAGENSONNER, Klaus**  
Yale University

## List of Lectures

9.15 – 9.30 Introduction		
9.30	Klaus Wagensonner	Grain, sheep, and fish: Insights into methods of food processing and storing based on the early textual evidence
10.00	Alexander Pruss	Grain storage and grain distribution in the 3rd millennium BC Upper Mesopotamia
10.30	Armando Bramanti	Before the Harvest? Land-grain Accounts in Early Dynastic Umma
11.00 – 11.30 Coffee break		
11.30	Henrike Backhaus	De-centralized storage facilities in the residential quarters at Early Bronze Age Tell Chuera
12.00	Noemi Borrelli	In and Out: Institutional storage and control network in the Ur III province of Lagaš
12.30	Tate Paulette	It’s all about the ingredients: Archaeological perspectives on beer and brewing in Mesopotamia
13.00 – 14.00 Lunch break		
14.00	Arkadiusz Sołtysiak	Bioarchaeological evidence of grain import to the area of Terqa during the Bronze Age
14.30	Aron Dornauer	Tasty intermediates – Prepared instant intermediates for the Mesopotamian food and beer production
15.00	Giulia Scazzosi	“Eat the Bread, Enkidu”: Bread-baking and the role of bakeries in late 3rd-early 2nd millennium BC Mesopotamia
15.30	Elena Devecchi	Granaries and the management of stored crops in Kassite Babylonia
16.00 – 16.30 Coffee Break		
16.30	Elsa Perruchini, Claudia Glatz, Jaime L. Toney	Beer production and consumption in the Kassite period: An interdisciplinary study of second millennium BC drinking vessels from the Sirwan/Upper Diyala Region
17.00 – 17.30 Final Discussion		

## Abstracts

**BACKHAUS, Henrike**  
Universität zu Köln

### **De-centralized storage facilities in the residential quarters at Early Bronze Age Tell Chuera**

During the third millennium BCE, large nucleated settlements emerged in northern Mesopotamia forming a network of city states. The economy of these early cities was based on agricultural production and pastoralism. The residents of mid-third millennium Tell Chuera in Northern Syria were likewise engaged in agricultural production, as shown by the widespread distribution of harvesting tools among almost all houses. Until today, it remains unclear how and where the agricultural produce was stored at Chuera: While the excavations of the temples and the palace brought to light numerous *pithoi* commonly associated with long-term storage of grain, they do not have the capacity to feed the city's estimated 8.000-15.000 inhabitants. Current work on the excavation documentation of Chuera's residential quarters however has brought to light new evidence of de-centralized storage facilities. In this paper, I will quantify the volumes of these storage facilities and the daily rations contained in them to establish a basis for a model of how Chuera's residents organized agricultural production as well as the distribution and storage of staples.

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**BORRELLI, Noemi**  
Università degli Studi di Napoli "L'Orientale"

### **In and Out: Institutional storage and control network in the Ur III province of Lagaš**

The multifunctional use of grain in ancient Mesopotamia, and especially within the institutional economy of the Ur III period, has largely been acknowledged. From economic buffer to redistributive means, grain acquisition mobilized diverse segments of the society both at a manual and a managerial level. But how grain moved, physically and administratively, from fields to storage facilities and among people, was less explored despite the references in the cuneiform record.

Moving from the textual evidence available for the Ur III province of Lagaš, this paper will investigate the connection between the distribution of storage facilities over the territory and the authority network which presided over it. Through the study of the administrative geography of the province, particularly in regards to the prosopographic evidence of the delivering parties and the institutional officials in charge of the withdrawals, the extent of the storage management will be discussed.

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**BRAMANTI, Armando**  
Sapienza – Università di Roma, CCHS – CSIC Madrid

### **Before the Harvest? Land-grain Accounts in Early Dynastic Umma**

Agricultural activities constitute the most important sector of the ancient Mesopotamian economy. They are largely represented in the cuneiform sources, and the Early Dynastic Umma corpus is no exception. Within this corpus, barley accounts are the most attested textual category with several hundred texts. The typology of these accounts is multifarious and includes, among others, rations, deliveries, regular offers, loans, payments, and animal fodder.

Thirty-one of these accounts exceptionally associate field plots with amounts of barley and can be grouped under the modern category of “land-grain texts”, whereas ancient scribes rather referred to them as *niĝ<sub>2</sub>-ka<sub>9</sub>*, “balanced accounts”. Most of them deal with expended (*e<sub>3</sub>-a*), measured out (*aĝ<sub>2</sub>-ĝa<sub>2</sub>*), or left over (*la<sub>2</sub>-u<sub>x</sub>*) barley and are attested in two well-defined archives.

The results of the analysis of this remarkable corpus will shed new light on cereal growing and distribution in EBA Southern Mesopotamia, and provide a better understanding of the *chaîne opératoire* of food production and administration.

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**DEVECCHI, Elena**

Università degli Studi di Torino

### **Granaries and the management of stored crops in Kassite Babylonia**

A consistent part of the written documentation stemming from institutional archives of Kassite Babylonia deals with the income of agricultural products in the form of revenues, with their storage and their disbursement for various purposes.

This paper will discuss the evidence provided by such texts on the presence of granaries (*GUR<sub>7</sub>/karû*) and other storage facilities at different locations, as well as on the complex accounting techniques developed by the administration in order to keep track of the income and outflow of goods, in particular cereals and sesame.

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**DORNAUER, Aron**

Ludwig-Maximilians-Universität München

### **Tasty intermediates – Prepared instant intermediates for the Mesopotamian food and beer production**

In this study, I do research on some ingredients – *qayyātu*, *billātu*, *ṭabātu*, *samīdu* – which were used as adjuncts in Ancient Mesopotamian food and beer production. Against the background of administrative documents, Old Babylonian recipes show that these ingredients were intermediates. These are prepared and reusable groats, doughs and mashes consisting of a flavour carrier – exclusively barley – and an eponymous adjunct which gave the intermediate a specific flavour. These intermediate foodstuffs were already prepared before they were delivered to the kitchen or delivered as travel provision. Thus, we are dealing with different types of ancient stock cubes.

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**PAULETTE, Tate**

North Carolina State University

### **It's all about the ingredients: Archaeological perspectives on beer and brewing in Mesopotamia**

Despite a long history of research, many basic questions about the beers of Mesopotamia remain unanswered (or only partially or tentatively answered). What did these beers taste like? How potent were they? What was their effect on imbibers? What role did beer play in the political economy, the household



economy, and the social world more broadly? As any beer lover will tell you, it's all about the ingredients – where they came from, how they were grown, processed, and stored, and how they were brought together and transformed during the brewing process. This exploratory paper aims to take stock of the question of brewing ingredients in Mesopotamia. The goal is to develop a clear sense for what we do and do not know about the nature of these ingredients, the processes and equipment needed to produce them, their role in the brewing process, and their impact on the finished product. Particular emphasis will be placed on the archaeological dimensions of the problem, that is, on the issue of how archaeologists might hope to identify physical traces of brewing ingredients, the equipment used to process these ingredients, the spaces where they were stored, and their use in the brewing of beer.

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**PERRUCHINI, E.**

School of Humanities, University of Glasgow – Biomarkers for Environmental and Climate Science (BECS) research group, University of Glasgow

**GLATZ, C.**

School of Humanities, University of Glasgow

**TONEY, J. L.**

School of Geographical and Earth Sciences, University of Glasgow – Biomarkers for Environmental and Climate Science (BECS) research group, University of Glasgow, Glasgow, G12 8QQ, UK

### **Beer production and consumption in the Kassite period: An interdisciplinary study of second millennium BC drinking vessels from the Sirwan/Upper Diyala Region**

Numerous ceramic vessels were discovered during recent excavations at the Late Bronze Age site of Khani Masi in the Sirwan/Upper Diyala region of Iraqi Kurdistan. Rooms inside the extensive monumental complex, whose destruction was radiocarbon dated after the late 13th century BC, revealed a large *namzitu* or fermenting vat used for beer brewing as well as large quantities of varyingly sized drinking vessels. This includes a collection of the iconic solid-footed or 'Kassite' goblet, which is traditionally treated as a material trait of Kassite imperialism, although we know very little about both its function(s) and socio-cultural significance(s).

One of the aims of this project was to shed light on the contents of these vessels using organic residue analysis in concert with textual and iconography sources and in doing so to begin to build an understanding of consumption practices, cultural traditions and socio-political organisation in this so far archaeologically little-known region during the Kassite Period (c. 1500-1100 BCE)

In this paper, we present our first results, which pointed to the production and consumption of different varieties of beer at Khani Masi.

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**PRUB, Alexander**

Institut für Altertumswissenschaften – Johannes Gutenberg Universität Mainz

### **Grain storage and grain distribution in the 3rd millennium BC Upper Mesopotamia**

The finds from Tell Beydar/Nabada provide information on several stages of grain procession, storage, and delivery within a Mid-3rd millennium town. One can observe centralized granaries, private and official storage facilities, the expenditure of (grain) rations and grain processing facilities which were all in use at the same time. This site allows thus a detailed analysis of the flow of grain within a single settlement. The

contribution will attempt to track similar traces at other roughly contemporary sites from Upper Mesopotamia and will try to investigate if the Beydar model can be transferred to other sites or not.

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**SCAZZOSI, Giulia**  
Università degli Studi di Pavia

### **“Eat the Bread, Enkidu” - Bread-baking and the Role of Bakeries in Late 3rd-early 2nd Millennium BC Mesopotamia**

Grain was the crucial product stored and processed in 3rd and 2nd millennium BC Mesopotamian households. Among the products obtained by cereal-processing, bread was the most consumed foodstuff and several types are well-known from the epigraphic sources. However, the different types of bread-production areas, in particular the bakeries, have been rarely investigated in a systematic way.

The aim of this paper is that of exploring the concept of bakery between Early and Middle Bronze Age, taking some selected case studies both from northern and southern Mesopotamia as exemplifying. Different types of bakeries, placed in different settings and with different commercial purposes, will be presented, shedding light on the equipment and fire installations: from large-scale “industrial” complexes supplying palaces and temples with bread (and sometimes beer), to small-scale bakeries within private houses, possibly provided with a shop for retail, for serving the daily needs of the surrounding small households, or supplying large institutions. The activity of bread-baking is here investigated with a focus on the management of these economic activities and on the late 3rd-early 2nd millennium BC Mesopotamian society in general.

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**SOŁTYSIAK, Arkadiusz**  
Department of Bioarchaeology, Institute of Archaeology - University of Warsaw

### **Bioarchaeological evidence of grain import to the area of Terqa during the Bronze Age**

In the lower middle Euphrates valley (south to Deir ez-Zor) dry farming is not possible due to low average annual rainfall, and there are three possible sources of cereals in this region: (1) intensive farming of floodplains, (2) artificial irrigation, (3) grain import, most likely from the north, using Euphrates and/or Khabur for transportation. It is not clear in which periods and to which extent grain was imported to the area of Terqa and to answer this question, bioarchaeological evidence from multi-phase cemeteries at Tell Ashara and Tell Masiakh has been gathered. Available data include  $\delta^{15}\text{N}$  values for collagen extracted from human dentin,  $^{87}\text{Sr}/^{86}\text{Sr}$  values in human enamel and Sr/Ca ratios in enamel.  $\delta^{15}\text{N}$  values are negatively correlated with annual precipitation and positively with intensity of manuring,  $^{87}\text{Sr}/^{86}\text{Sr}$  values reflect local geological formations and Sr/Ca ratios reflect Sr abundances in the local environment. During the Bronze Age (Shakkannakku and Old Babylonian periods)  $\delta^{15}\text{N}$  values were higher on average than in later periods due to intensive manuring, but in a few individuals, they were much lower than the average. Also, Sr/Ca ratios during the Bronze Age were lower than in later periods. On the other hand,  $^{87}\text{Sr}/^{86}\text{Sr}$  values for individuals with both high and low  $\delta^{15}\text{N}$  values were similar and clustered around a local isotopic signature. All this evidence suggests that some individuals buried at Tell Ashara during the Bronze Age consumed relatively high quantities of grain from the dry farming area, most likely Jasirah, which was differentiated from local crops by lower  $\delta^{15}\text{N}$  values due to much higher precipitation and more extensive farming and also by much lower concentration of strontium in the soil. However, these individuals were local and did not immigrated from the north.

**WAGENSONNER, Klaus**  
Yale University

**Grain, sheep, and fish: Insights into methods of food processing and storing based on the early textual evidence**

Animal husbandry and the recording of processing and storing food reaches back to the emergence of writing in southern Mesopotamia and adjacent Iran. The sign repertory of the textual record (both Proto-Cuneiform and Proto-Elamite) dating to the end of the 4<sup>th</sup> and early 3<sup>rd</sup> millennia BCE already contains a substantial amount of (1) graphemes denoting the sources of sustenance (both raw and processed), but also (2) graphemes, which allow glimpses into the methods of storing food (e.g., types of containers). The paper will discuss the textual evidence and therefore intends to focus on earlier and more elusive periods in southern Mesopotamia.

## 11. Mobility in the Arabian Peninsula

From the earliest human migrations through seasonal subsistence patterns and long-distance trade routes (Magee 2014), different types of mobility have characterized human occupation in the Arabian Peninsula throughout the ages.

The workshop explores the dual concepts of mobility and connectivity (Luciani 2016) linking the vast expanses of Arabia by discussing several distinctive study-cases and current fieldwork from the southeastern tip to the northeast and northwest of the Peninsula and spanning diachronically the multiple millennia from the Neolithic to the Islamic Period.

### Organizer

**LUCIANI, Marta**

University of Vienna

### Participants (in alphabetical order)

<b>ALASMARI, Khalid</b> University of York	<b>INTILIA, Andrea</b> Deutsches Archäologisches Institut
<b>AL-JAHWARI, Nasser</b> Sultan Qaboos University	<b>LORETO, Romolo</b> „L’Orientale“, Naples
<b>AL-JALLAD, Ahmad</b> CNRS, France University of Leiden	<b>LUCIANI, Marta</b> University of Vienna
<b>AVANZINI, Alessandra</b> University of Pisa	<b>MACHEL, Laura</b> University of Vienna
<b>BERARDINO, Simona</b> Istituto Universitario „L’Orientale“, Naples	<b>NEEF, Reinder</b> Freie Univesität Berlin - Deutsches Archäologisches Institut
<b>CHARLOUX, Gauillaume</b> CNRS	<b>ROHMER, Jérôme</b> CNRS University of Leiden
<b>DINIES, Michèle</b> Freie Univesität Berlin - Deutsches Archäologisches Institut	<b>SCHIETTECATTE, Jérémie</b> CNRS
<b>DOUGLAS, Khalid</b> Sultan Qaboos University	<b>TAGLIAMONTE, Enrica</b> University of Pisa
<b>DURAND, Caroline</b> Research Associate, CNRS, UMR 5189-HiSoMA, Lyon	<b>TOURTET, Francelin</b> Deutsches Archäologisches Institut
<b>FIEMA, Zbiniew</b> University of Helsinki	<b>WILLIAMS, Kimberly D.</b> Sultan Qaboos University
<b>FUJII, Sumio</b> Institute of Human and Social Sciences	

## List of Lectures

	<b>Lecturer</b>	<b>Title</b>
9:00-9:30	Alasmari, Khalid	AlUyanah: Neolithic site, In the northwest of the Kingdom of Saudi Arabia
9:30-10:00	Fujii, Sumio et al.	Post-Neolithic Cultural Sequence in NW Arabia: New Perspective from Wadi Sharma sites
10:00-10:30	Dinies, Michèle – Neef, Reinder, et al.	The Economy of Oases: a View from Botany
10:30-11:00	Luciani, Marta	Mobility and the genesis of oasis settlement
Coffee break		
11:30-12:00	Douglas, Khalid – Al-Jahwari, Nasser – Williams, Kimberly D.	The Early Bronze Age Umm an-Nar community in Dahwa (DH1) mobility and exchange between Magan and Indus on the Batinah Coast, northern Oman
12:00-12:30	Avanzini, Alessandra – Tagliamonte, Enrica	Long distance routes and contacts in Salut through the millennia
12:30-13:00	Williams, Kimberly D. – Al-Jahwari, Nasser – Douglas, Khalid	Umm an-Nar Burial Rituals at Dahwa, Northern Oman
Lunch break		
14:00-14:30	Machel, Laura	Qurayyah Painted Ware – an “interconnected” pottery of the 2 <sup>nd</sup> millennium BCE
14:30-15:00	Intilia, Andrea – Tourtet, Francelin	Area O, Tayma, Saudi Arabia
15:00-15:30	Fiema, Zbigniew	Al-Qusayr And The Hijazi Trade Routes
15:30-16:00	Rohmer, Jérôme – Al-Jallad, Ahmad	Thāj, a commercial and cultural crossroads in Eastern Arabia
Coffee Break		
16:30-17:00	Durand, Caroline	Comparing the trade networks of Northwest and Eastern Pre-Islamic Arabia: recent data from Hegra and Thaj
17:00-17:30	CNRS, France	Aspects of Mobility in Dūmat al-Jandal (Northwestern Arabia)
17:30-18:00	Schiettecatte, Jérémie	Out of Arabia. When trade and diplomacy made Southerners cross the desert
18:00-18:30	Loreto, Romolo – Berardino, Simona	The Islamic ware from Dumat al-Jandal. An outline of the VII-XVI cent. oasis trade system

## Abstracts

**ALASMARI, Khalid**  
University of York

### **AlUyanah: Neolithic site, In the northwest of the Kingdom of Saudi Arabia**

This project aims to date the start and end of occupation at a key pre-pottery Neolithic site, AlUyanah, in the northwest of the Kingdom of Saudi Arabia.

The Saudi Archaeological Agency first published the preliminary notes of its archaeological survey in 1981. The current paper is the result of second season of the site where sensory sections are assigned at different places, and excavations are then carried out therein. All assemblies of stone-tools are analysed and methodically categorized. Architectural structures are carefully studied; their characteristics are recorded along with all relevant features that identify their outlines. Special attention has been paid for recording of subsequent occupations of this site as well as the changing architectural layout through time. The archaeological materials from the site shed a new light of the Neolithic of Saudi Arabia as well as its internal chronology.

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**AVANZINI, Alessandra – TAGLIAMONTE, Enrica**  
University of Pisa

### **Long distance routes and contacts in Salut through the millennia**

The Persian Gulf, at the center of a heterogeneous ensemble of developing cultures and later on real states, has been one of the most important cultural and commercial link between Arabia and its bordering areas since the fifth millennium.

The complementarity of resources in the Near-Eastern landscape and the increasing demand of raw materials not available on site are the core of the development of a multilevel, regional and interregional, trade network. Moreover, these routes are exploited for the trade of manufactured products which combine specialized workforces and new developing technologies.

Despite the distance from the sea and its location in central Oman, Salut seems to be part of this complex trading system integrating the network in the inner area of the Arabic peninsula. The evidence found during the excavations of the Bronze Age tower, carried out by the Italian Mission to Oman since 2010, has revealed the presence of connections, mainly evident in pottery and in other elements of the material culture, with Mesopotamia and India. These links formed the basis for what, through modifications and evolutions, became the trade network of the site and lasted until the Islamic period.

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**CHARLOUX, Guillaume**

### **Aspects of Mobility in Dûmat al-Jandal (Northwestern Arabia): the « Camel site » question**

Among the new results of our joint archaeological project in Dûmat al-Jandal, we will present and discuss in details an exceptional rock-cut site named "*Camel Site*" which exhibits traits of figurative monumental art carved in low- and high-relief on bedrock.

This paper will describe the environmental context of the site and will analyse and compare the 12 life-sized animal reliefs. The illustrated animal figures are exclusively mammals, either camelids or equids. The dimensions of the anatomical parts (around 1.10 m for the legs of adult camels) correspond to life-sized animals, adults as well as juveniles. This atypical site seems to be an emblematic place of transit, easily spotted in the landscape, which indicates a route to follow or the beginning of a long desert crossing. Recently published in the journal *Antiquity* (Feb. 2018), this discovery surely deserves deepened discussion about its tentative dating and function.

**DINIES, Michèle – NEEF, Reinder**  
Freie Universität Berlin – Deutsches Archäologisches Institut

### **Oasis economy in Arabia – insights from botanical remains**

Oasis agriculture is a livelihood system that is best adapted to arid environments of the Arabian Peninsula. It is characterized by cultivation of various fruit trees, with date palm being the economically most important crop plant today. However, for NW Arabia and adjacent regions, the beginnings and early developments of oasis agriculture are largely unknown.

We compiled data on published botanical remains from the Levant, Arabia and NE Africa (pollen diagrams as continuous records, and seeds and fruits as well as wood fragments out of archaeological contexts). These data, complemented by results of our own investigations, indicate rather low-diverse crop-plant spectra at the beginnings of oasis cultivation during the 5th millennium BCE. The high agro-biodiversity of current traditional oasis horticulture seems to have evolved during the following millennia. Comparison of the beginnings of fruit tree growing in the Near East and the Mediterranean Basin show similarities, partly offering explanations for developments in oasis economy.

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**DOUGLAS, Khaled – AL-JAHWARI, Nasser**  
Department of Archaeology, Sultan Qaboos University

**WILLIAMS, Kimberly**  
Department of Anthropology, Temple University

### **The Early Bronze Age Umm an-Nar community in Dahwa (DH1) mobility and exchange between Magan and Indus on the Batinah Coast, northern Oman**

Excavations at the Early Bronze Age site of Dahwa (DH1) in the northern Al-Batina region in northern Oman between 2014 and 2017 produced very clear evidence of an intensive connection with the inland of Indus Valley during the second half of the third millennium BC. Indus black-slipped jars together with some other typical Indus pottery types (e.g., perforated vessels and cooking pots) found at the settlement of DH1 were transported from their place of origin from the inland of Indus Valley (Mohenjodaro), along the Indus River to the northern coast of Arabian Sea, and then shipped to the northern coast of the Oman. From there they have been transported again ca. 24km to the site of DH1 at the foothills of Al-Hajar Mountains. Such determined movement of goods to and/or by the community of DH1 continued for the last five centuries of the third millennium BC before it stopped suddenly and ceased without return. The dynamics of mobility of the inhabitants of southeast Arabia and Indus Valley as evidenced by the ceramics assemblage will be the main focus of the presentation.

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**DURAND, Caroline**  
CNRS, UMR 5189-HiSoMA, Lyon

### **Comparing the trade networks of Northwest and Eastern Pre-Islamic Arabia: recent data from Hegra and Thaj**

The aim of this paper is to compare the trade connections of two important and contemporary Pre-Islamic cities: Hegra, in the Hejaz area (Northwest Arabia) and Thaj, in al-Hasa region (Eastern Arabia). Through a compared analysis of archaeological artefacts, especially pottery material, coming from recent excavations undergoing on these sites, we will present the specificities of these two different commercial

networks. The city of Hegra is strongly related to the Levantine area, to the Mediterranean and to the Red Sea, while Thaj is more closely linked to the Mesopotamian area and to the Western Indian Ocean. We will also raise the issue of potential contacts between North-West Arabia and Eastern Arabia during the Pre-Islamic period, reflected in particular by the circulation of Green Glazed pottery and by possible influences between fine ware productions from both regions.

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**FIEMA**, Zbigniew T.  
University of Helsinki

### **Al-Qusayr and the Hijazi Trade Routes. The al-‘Ulā – al-Wajh Survey Project**

The al-‘Ulā – al-Wajh Survey Project is the archaeological investigation of potential ancient trade and communication routes and associated archaeological sites between the ancient settlements of al-‘Ulā and Madā’ in Ṣāliḥ (ancient Hegra) and the Red Sea littoral in the area of al-Wajh. This investigation is related to the economics of long distance maritime and caravan trade and the utilization of the so-called "Incense Route" during the Hellenistic and Roman periods. The Project is also concerned with the localization of potential Nabataean seaports on the Red Sea coast, such as Leuke Kome and Egra Kome, mentioned in ancient sources. The presentation will include the results of two fieldwork seasons (2013, 2016), concentrating on the potential caravan route along the Wādī al-Ḥamḍ, leading to Hegra. Among the highlighted sites is the Nabataean al-Qusayr. The finds from that site clearly indicate a significant participation in the long-distance trade between the Mediterranean, Egypt and the Red Sea region. The presentation will conclude with the reassessment of the Red Sea trade, sites and communication routes.

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**FUJII**, Sumio  
Institute of Human and Social Sciences, Kanazawa University

### **Post-Neolithic Cultural Sequence in NW Arabia: New Perspective from Wadi Sharma sites**

After the excavations at the Late PPNB settlement of Wadi Sharma 1, our efforts have been focused on the issue of the post-Neolithic cultural sequence in area. Although no Late Neolithic sites were located, the sequence turned out to date back to Wadi Sharma 2, a Middle Chalcolithic hamlet with two beehive-like structural complexes. Though much more ephemeral in character, the existence of such a habitation site suggests that settlement life barely continued in the area after the PPNB onward. However, it completely disappeared thereafter, and the archaeological footprints of local population groups became limited to ritual or funerary sites only. First appeared a niched enclosure found at al-Barqa 1, which was probably used for some communal ritual of a late Chalcolithic high-mobility population group. The subsequent Early Bronze Age witnessed the appearance and diffusion of tower tombs and platforms. Several dozen examples have been found at Wadi Sharma 2, al-Barqa 1, and Umm Qurnayn 1. The replacement of habitation sites with such open sanctuaries and burial fields suggests that the land use in the Wadi Sharma area shifted from village-based pastoralism to full-fledged pastoral nomadism during the 4<sup>th</sup> millennium B.C. There is little doubt that the drastic socio-cultural change in the arid periphery was linked to the urbanization in the sedentary cultural sphere to the north. This paper reviews the results of the investigations at the Wadi Sharma sites and discusses the post-Neolithic cultural sequence in the NW Arabia in a broader context.



INTILIA, Andrea – TOURTET, Francelin  
German Archaeological Institute, Orient Department

### **An Early Iron Age complex at Tayma: Area O**

Excavations at Tayma, carried out by the Saudi Commission for Tourism and National Heritage (SCTH) and the Orient Department of the German Archaeological Institute (DAI) and funded by the German Research Foundation (DFG), exposed a large (1300 m<sup>2</sup>), well-preserved architectural complex dating to the Early Iron Age (11<sup>th</sup>–9<sup>th</sup> centuries BCE). Defined by a massive, rectangular (38 x 35 m) enclosure wall, it comprises a main building (Building O-b1), a number of other rooms north and east of it, as well as two large, open courtyards, a cistern fed by an underground canal originating outside the complex and a large silo cut into the bedrock. Materials recovered from floors include beads and pendants of various materials, stone vessels, tokens and combs made of ivory, Egyptian figurines, vessels, and amulets made of faïence, bone inlays, carbonised remains of engraved wooden furniture as well as bronze, iron and gold artefacts. The extremely homogeneous pottery assemblage defines a very distinctive ware with vessels both plain and painted, thus far attested only at the site of Tayma. Thus, Area O offers a unique glimpse of the material culture of North-West Arabia during the Early Iron Age in the context of ‘international’ connections and mobility. The general layout of the complex, the presence of luxury items, the absence of tools of any kind and the fact that the pottery record consists overwhelmingly of small and medium-sized open vessels with no cooking pots or large storage vessels suggest, together, that Building O-b1 was an important, most likely public structure, possibly with a ritual function.

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LORETO, Romolo  
Università degli Studi di Napoli “L’Orientale”

### **The pottery productions from Dūmat al-Jandal. An outline from the Assyrian to the Islamic era**

In the framework of the *2010-2017 Saudi-Italian-French archaeological project* at Dūmat al-Jandal, a first typological sketch of the *corpora* of the pottery productions from the historical core of the oasis will be introduced. The *corpora* took shape on the basis of the pottery collected from the excavation of the urban area carried out by the Italian archaeological mission in Saudi Arabia, mainly from trench 1, the wider ancient urban sector; the Marid castle; and the Hay ad-Dira’ excavation outside the ‘Umar ibn al-Khattab mosque.

The analysis, which offers a wide field of investigation, helps us to better understand a site of strategic importance and, thanks to the discovery of the Assyrian occupational phase, to define a stratigraphy that covers almost the entire 1<sup>st</sup> millennium BC up to the whole Islamic era. The proposed interpretation of the ceramic data helps to provide a key to the definition of the history of the oasis within the Ancient Near East context, with particular attention to the Assyrian, Nabataean and the early centuries of the Caliphate.

A particular *focus* will be devoted to the definition of the locally made classes as well as to the identification of the imported items, in order to understand the socio-economic context of the oasis and to plan the future archaeological investigations inside the historical core of Dūmat al-Jandal.

LUCIANI, Marta  
University of Vienna

### **Mobility and the genesis of oasis settlement**

On the basis of the evidence from the new joint interdisciplinary Austrian-Saudi project at Qurayyah, NW Arabia, I will discuss the role of mobility, connectivity and metallurgy in the transformation of a favorable desert patch in a human-made oasis, favoring permanent settlement, water harvesting strategies, extensive agriculture, metallurgical and pottery production and monumental architecture.

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MACHEL, Laura  
University of Vienna

### **Qurayyah Painted Ware – an “interconnected” pottery of the 2<sup>nd</sup> millennium BCE**

‘Qurayyah Painted Ware’, a decorated pottery produced during the Late Bronze Age in the Northern Hijāz, is known to be attested in the centre of the Arabian Peninsula (Khuraybah/Dedan) and throughout the Levant up to Amman (Jordan). While there are indications that QPW has been produced at different sites, find circumstances at most sites point to it being either an export good or an otherwise foreign element – how exactly the distribution did function, however, is poorly understood to this date.

Former research has both suggested that the decorative patterns are likely influenced either by contemporary foreign pottery traditions, namely Aegean, Levantine or Egyptian, or derived, on the contrary, mainly from local traditions. Recent finds from the name-giving site Qurayyah have shed new light on those theories, showing both a clear continuity between QPW and the preceding wares, as well as a strong integration within the LBA tradition of the adjacent regions.

This presentation aims at summarising results acquired from former researches and broadening our knowledge by evaluating the evidence from the excavations of the University of Vienna at Qurayyah.

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ROHMER, Jérôme  
CNRS, UMR 7041

AL-JALLAD, Ahmad

Assistant Professor of Ancient Arabia and Arabic and Semitic Linguistics, Leiden University

### **Thāj, a commercial and cultural crossroads in Eastern Arabia.**

Located 90km inland from the Gulf coast, west of modern al-Jubail, Thāj is the largest ancient site known in Eastern Arabia. It was a major hub of long-distance trade from the “Hellenistic” to the Early Sassanian period (4<sup>th</sup>/3<sup>rd</sup> c. BC – 3<sup>rd</sup>/4<sup>th</sup> c. AD). It has been known to western scholarship since the beginning of the 20<sup>th</sup> century, but only limited surveys and excavations have been carried out at the site so far. In 2016, an international archaeological project led by the Saudi Commission for Tourism and National Heritage (SCTH), the CNRS (France) and Leiden University (Netherlands) was launched in order to conduct a comprehensive archaeological exploration of the site, including large-scale excavations and a wide array of specialized studies. This paper will present the results of the first and second field seasons (2017/2018) of this project, with particular emphasis on the role played by Thāj in the movement of people, goods and cultures in Eastern Arabia, the Gulf and beyond.

### **Out of Arabia. When trade and diplomacy made Southerners cross the desert**

South Arabian inscriptions reveal different motives for people to set out on the long and perilous journey across the Peninsula. Until the turn of the Christian era, aromatic trade was the driving force behind these ventures. Long-distance travels were carried out as far as Mesopotamia, Southern Levant, Egypt and the Mediterranean region. From the turn of the Christian era onwards, new motives appear in both classical sources and epigraphic material. Beyond foreign trade, diplomatic missions developed and increased dramatically. This phenomenon is a pointer to the progressive integration of the kingdoms of Saba', Ḥaḍramawt, and Ḥimyar within the broader political landscape of the early Christian era. These remote realms had then become full actors of the political stage. And when the rulers of Ḥimyar started to conquer the *Arabia Deserta*, both the Roman Empire and the Sasanian Persia tried to make an ally of them. Therefore, the study of the written travel testimonies reveals individual experiences, economic and political motives but also shows how the Late Antique World became increasingly connected, to such an extent that no kingdom was left aside.

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**WILLIAMS**, Kimberly D.

Department of Anthropology, Temple University

**AL-JAHWARI**, Nasser – **DOUGLAS**, Khaled

Department of Archaeology, Sultan Qaboos University

### **Umm an-Nar Burial Rituals at Dahwa, Northern Oman**

Umm an-Nar burial rituals have received a good deal of attention throughout the Oman Peninsula. Communal tombs and associated burial pits are known from both coastal and island sites, as well as small and large Umm an-Nar settlements. The Umm an-Nar tomb and associated bone pit at the settlement at Dahwa constitute an exceptional case because of the significant evidence of interregional exchange between Indus and Magan on the north Batinah Coast at this site. Specifically, a large amount of both Indus and Indus-inspired ceramics were found in both settlement (DH1) and mortuary contexts at the Dahwa sites. There is strong evidence for interaction and movement between these two ancient cultures, likely centering on the industrial copper smelting at the site. This leads us to suggest that people at this site not only received traded Indus goods like many other sites on the Oman Peninsula, but instead operated an important regional center. This also leads to question of the identity of the people living and working at Dahwa, and explore the potential for exchange not just of goods, but of people and ideas. This large tomb and bone pit, therefore, provides an important avenue to explore if and how mortuary rituals were affected by these intensive interactions. We have documented how the material culture in the settlement strongly suggests the presence of Indus people or at the very least, Indus ideas. Evidence will be presented from both the well-stratified bone pit and the Umm an-Nar tomb itself. This paper will explore the mortuary ritual and material culture assemblage from this tomb, and consider how these lines of inquiry inform the broader concepts of exchange and mobility across the Sea of Oman during the Bronze Age.

## 12. Archaeometrical Studies in Iran: State of Research and Perspectives

A long-lasting, still ongoing critical examination of the different applications for more than 75 years – since Libby developed the method of radiocarbon dating in 1946 – lead to the establishment of archaeometry as a practically self-contained science, representing a huge spectrum of distinctive methods and approaches. Beyond this, archaeometry also has pushed archaeological sciences to new perspectives for understanding and solving questions such as how ancient societies developed technologies on a minute scale; what did they eat or used and from where their resources came from. Especially in such a resource-rich country like Iran, archaeometric studies can reveal numerous aspects of the evolution of ancient technologies as well as the patterns of ancient trades and connections between societies.

During the last decade, studies on archaeometry in, throughout and alongside Iran have provided fruitful, new approaches and results. Comprehensive projects on traces of ancient mining, earthquakes, investigations on ancient ecology and climate, as well as the analyses of ancient technologies (e.g. glazed and enameled ancient materials). A larger part of these researches were run more or less independently or focused singular questions apart from comprehensive perspectives. It is worth emphasizing, that Iranian archaeometry is equally facing common global problems such as the comparativeness of valuable data references and standards by using different applications, methods and laboratories. Considerable lacks of data in special fields such as dendrochronology or isotopic studies should be filled in order to provide basic frameworks. It is therefore also necessary to determine standards of education, equipment and facilities for archaeometric departments in universities.

This requested workshop will invite scholars of different archaeometrical and archaeological disciplines from Iran and other countries, in order to establish a scientific network that will cooperate in archaeometrical researches in Iran. We will gather and review actual data; will discuss necessities, problems in applications, data gaps, and aim to bind the loose ties of facilities and capacities for future researches.

### Organizers

<b>KASIRI, Masoud – AJORLOO, Bahram</b>	<b>THOMALSKY, Judith – MISHMASTNEHI, Moslem</b>
Department of Archaeology and Archaeometry, Tabriz Islamic Art University	German Archaeological Institute, Eurasia Department, Tehran Branch

### Participants (in alphabetical order)

<b>ABEDI, Akbar</b> Tabriz Islamic Art University	<b>Marro, Catherine</b>
<b>AHMADI, Kamran</b> Research Center for Conservation of Cultural Relics, Tehran	<b>MARTINEZ FERRERAS, Verónica</b> University of Barcelona
<b>AJORLOO, Bahram</b> Tabriz Islamic Art University	<b>MATTHEWS, Wendy</b> Reading University
<b>AALI, A.</b> Archaeological Museum of Zanjan	<b>MOMENZADEH, Morteza</b> Zarneh Research Group, Tehran
<b>AVANESOVA, Nona</b> Samarkand State University	<b>MUSTAFAKULOV, Samariddin</b> Afrasiab Museum, Samarkand
<b>BAKSHALIYEV, Veli</b>	

<b>BAUVAIS</b> , Sylvain Commissariat à l'Énergie Atomique Saclay	<b>NAGEL</b> , Alexander Museum of natural history, Smithsonian Institution, Washington DC
<b>BENDEZU-SARMIENTO</b> , Julio CNRS UMR 7041	<b>NASHLI</b> , Hassan Fazeli University of Tehran
<b>BERTHON</b> , Rémi	<b>NEZAFATI</b> , Nima Islamic Azad University
<b>BODE</b> , Michael Deutsches Bergbau-Museum, Bochum	<b>ORANGE</b> , Marie LabEx LaScArBx, Bordeaux Montaigne University
<b>BOROFFKA</b> , Nikolaus German Archaeological Institute	<b>PERNICKA</b> , Ernst Curt-Engelhorn-Zentrum Archäometrie, Mannheim – Institut für Geowissenschaften, Universität Heidelberg
<b>BRÄUNING</b> , Achim Friedrich-Alexander-University of Erlangen-Nürnberg	<b>PIDAEV</b> , Shakir Institute of Fine Arts, Academy of Sciences of Uzbekistan, Tashkent
<b>CLOQUET</b> , Christophe Centre de Recherches Pétrographiques et Géochimiques, CNRS UMR 7358 - Service d'Analyses des Roches et des Minéraux	<b>POURTAHMASI</b> , Kambiz University of Tehran
<b>EMAMI</b> , Mohammadamin Art University of Isfahan	<b>RAZANI</b> , Mehdi Tabriz Islamic Art University
<b>ESPARRAGUERA</b> , Josep M. Gurt University of Barcelona	<b>RIEHL</b> , Simone Universität Tübingen – Senckenberg Center for Human Evolution and Palaeo- environment, Frankfurt
<b>FAZELINASHLI</b> , Hasan Department of Archaeology, University of Tehran, Iran	<b>SEDGHI</b> , Yassin Tabriz Islamic Art University
<b>FOROOZAN</b> , Zeynab Friedrich-Alexander-University of -Erlangen-Nürnberg	<b>STEININGER</b> , Daniel German Archaeological Institute
<b>GAILHARD</b> , Nicolas CNRS Sorbonne University, Paris	<b>SVERCHKOV</b> , Leonid Academy of Sciences of Uzbekistan, Tashkent
<b>GHOORBANI</b> , Negar Tabriz Islamic Art University	<b>THOMALSKY</b> , Judith
<b>GIL</b> , Enrique Arino Department of Prehistory, Ancient History and Archaeology, Salamanca	<b>STÖLLNER</b> , Thomas Deutsches Bergbau-Museum, Bochum
<b>GREGG</b> , Michael W. St. Francis Xavier University, Antigonish	
<b>KASIRI</b> , Masood B. Department of Archaeometry, Faculty of Applied Arts, Tabriz Islamic Art University	
<b>LE BOURDONNEC</b> , François-Xavier	
<b>LUNEAU</b> , Élise CNRS UMR 8215	

## List of Lectures

	<b>Lecturer</b>	<b>Title</b>
9:00	E. Pernicka	Archaeometallurgical researches in central Iran
9:30	N. Nezafati M. Momenzadeh K. Ahmadi	A Road Map for the Ancient Mining and Metallurgical Studies in Iran
10:00	M. B. Kasiri	Relative Dating of Chehrabad (Iran) Salt Mine Mummies on the Basis of Fluorine, Uranium, and Nitrogen content
10:30	Z. Foroozan A. Bräuning K. Pourtahmasi	The Potential of Tree Rings for Reconstructing Climate History in Northern Iran
11:00 Coffee break		

11:30	H. Fazelinashli M. W. Gregg	Agricultural Societies at the Intersection of the Southern Coastal Plain of the Caspian Sea and Foothills of the Alborz Mountains in Northern Iran
12:00	S. Riehl	Addressing the role of environmental fluctuations in ancient resource management by plant remains and stable carbon isotope measurements (Chogha Golan)
12:30	W. Matthews	High-resolution analyses of early agricultural built environments in the Zagros: integrating archaeobotany, micromorphology and geochemistry
13:00 Lunch break		
14:00	A. Nagel	Elamite Polychromies: New Research on Pigment-Stratigraphy from Chogha Zanbil and Susa
14:30	V. Martinez Ferreras E. Luneau	New Pottery Analyses from southern Uzbekistan: a trans-chronological Perspective
15:00	M. Razani B. Ajourloo	The experimental archaeology of Islamic potteries from Qaradagh, Azerbaijan, NW Iran
15:30	M. Emami Y. Sedghi	Set on the Fire over 4th millennium BC: Preliminary Multi-Analytical Approach to the Ceramic Production Technology in Tal-i Eblis
16:00 Coffee break		
16:30	N. Gailhard M. Bode	The Copper Mines of Nakhchivan: an archeometallurgical and archaeometry
17:00	A. Aal T. Stöllner	The salt-mine and salt-mummy project of Chehrabad (Iran): Recent interdisciplinary research
17:30	M. Orange F.-X. Le Bourdonnec R. Berthon V. Bakhshaliyev C. Marro	Looking north: first insights into the consumption of obsidian from the Neolithic to the Bronze Age in Nakhchivan

## Abstracts

**ABEDI, Akbar**

Department of Archaeometry, Faculty of Applied Arts, Tabriz Islamic Art University

**STEININGER, Daniel**

German Archaeological Institute, Eurasian department

### **Obsidian Studies In Iram, New Research On Provenance Of Prehistoric Obsidian Artifacts**

Obsidian is a raw material frequently used for artifacts in prehistory and found widely in archaeological sites of Iran. Related provenance studies have been an issue of intense research and debate between archaeologists and geologists. Since first studies were carried out from the 1960s up to recent times between Anatolia and the Caucasus, obsidian studies in Iran are at a very early stage: Iran can be considered as terra incognita. Recent research on obsidian sources in Iran accompanied by geochemical provenance studies give the opportunity to get a clearer insight into the matter and to establish a database that helps to outline new perspectives for obsidian studies in Iran. After a brief introduction of obsidian studies in Anatolia and the Caucasus, the paper addresses recent research in Iran with surveys of obsidian sources and geochemical analyses on artifacts from sites like Kul Tepe Hadishah, Dava Göz Khoy, East Chia Sabz, Choga Gholan, Tepe Boinou and surveyed sites East of the Lake Urmia as e.g. Yanik, Hasanlu, Pisdeli. The recent research proved that most of the analyzed obsidian artifacts of Iranian archaeological sites were imported from Caucasus and Anatolia in line with long-term inter-regional trade networks, although a handful of obsidian sources have been brought to light in NW Iran that could be considered as

second part of the raw material supply, which met the demands of local and indigenous communities of prehistoric Iran. The data recently collected from the obsidian source of Tajarag near the Bozghoosh Mountain at Miyaneh have cast new light on the prehistoric exploitation of local obsidian sources in NW Iran. Various implications of the findings will be discussed along with methodical limitations and future research perspectives.

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**EMAMI, Mohammadamin**

Department of Conservation, Art University of Isfahan, Iran

**SEDGHI, Yassin**

Department of Archaeometry, Faculty of Applied Arts, Tabriz Islamic Art University, Tabriz, Iran

### **Set On The Fire Over 4th Millennium BC: Preliminary Multi Analytical Approach To The Ceramic Production In Tal-I Eblis**

Tal-i Iblis is one of the most important archaeological sites in Kerman province, south-east of Iran. In contrast to other intensively explored districts of Iran, the south-east has observed through a relatively limited diversity of investigations. Archaeological expeditions had very long and continuously active traditions in this region which goes back to Aurel Stein's preliminary expedition in 1937 followed by Joseph R. Caldwell in 1967. This region was probably considered as one of the birth places of the beginning and used of copper smelting and alloying in south Iranian plateau. Indeed, pyrotechnological proficiency was raised and developed in this region continuously during the 4th millennium BC.

Ten pieces of ceramic sherds from Caldwell collection (1964) in National Museum of Iran with stylistic features of Tal-i Iblis tradition have been scientifically studied in order to clarify ceramic manufacturing process in this area. The samples are investigated chemically by means of XRF and XRD for determining the bulk chemical- and crystalline phase composition. Petrological and thermo analytical analyses have been suggested detailed mineralogical data for reconstructing and clustering the ceramic manufacturing process in Tal-i Iblis.

Ceramics from Tal-i Iblis were made by local raw materials and exemplify high quality of know-how regarding to the processing of clay, firing temperature and kind of additives. Mineralogical data clarified that ceramics were classified as high calcareous raw materials with basaltic rock fragments as additives within their texture. Firing temperature of the ceramics is estimated to be 800-950°C.

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**FOROOZAN, Zeynab – BRÄUNING, Achim**

Institute of Geography, Friedrich-Alexander-University of Erlangen-Nürnberg

**POURTAHMASI, Kambiz**

Department of Wood and Paper Science & Technology, Faculty of Natural Resources, University of Tehran

### **The Potential of Tree Rings for Reconstructing Climate History in Northern Iran**

Dendrochronology provides an extraordinary opportunity for paleoenvironmental and paleoclimatic studies. Tree rings present a continuous, high-resolution and precisely datable archive of past growing conditions and environmental changes. Among all tree-ring parameters, stable isotope variations have been proven as reliable recorders of former climate conditions and have been widely studied to reconstruct past environmental changes. Tree ring isotope chronologies composed of living trees and subfossil trees extend from several centuries or even millennia into the past and are an extremely valuable archive for investigating climate variability and reconstructions of past climates. In Iran, long-living junipers growing

in the northern and northeastern parts of the country have the potential for the efficiency of dendrochronology in climatology. We present the first stable isotope analysis ( $\delta^{18}\text{O}$ ) in tree-ring cellulose on Iranian forest tree species, the evergreen conifer *Juniperus polycarpus* from Chaharbagh Gorgan forest in northern Iran, on the south-facing slope of the Alborz Mountains. We found significant relationships between tree-ring cellulose  $\delta^{18}\text{O}$  variations in juniper tree rings and temperature and precipitation, suggesting a great potential of  $\delta^{18}\text{O}$  records as a proxy for the reconstruction of environmental changes. In the following, we envisage the construction of a multi century stable isotope chronology from living juniper trees and archaeological woods to enable the reconstruction of hydrological changes and moisture variations during different seasons for the last 500 years in the mountain areas of northern Iran.

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**GAILHARD**, Nicolas

Department National Center for Scientific Research (CNRS) Sorbonne University, Paris

**BODE**, Michael

Deutsches Bergbau-Museum, Bochum

### **The Copper Mines Of Nakhchivan: An Archaeometallurgical And Archaeometry Study**

Recent works in ancient copper production and consumption have led to a re-examination of the extensive mining region of Transcaucasia. The periods of copper mining in South Caucasus (Nakhchivan) correlate with dates (Chalcolithic and Bronze Age) from gold mines in Georgia, copper mines in neighbouring countries, and with other archaeological evidence that shows farming communities in Transcaucasia utilized and profited from local copper resources.

This presentation aims at better understanding the relationship between the copper mines of Nakhchivan and the archaeological settlements where metallurgy is attested during the Chalcolithic Period and the Bronze Age.

A large survey of the ore deposits located in eastern Nakhchivan was carried out in 2016, during which 18 deposits could be sampled. Once these samples have been processed through chemical and lead isotopic analyses, their composition will be compared with the available results obtained in 2014-2016 from the copper ores of central Nakhchivan, as well as from the artefacts of Ovçular Tepesi, a Chalcolithic village excavated in 2006-2013 in western Nakhchivan. Through the study of the chemical elements and the lead isotopes of copper or polymetallic ores from Eastern Nakhchivan, our hope is to obtain new information on the technical processes used for the crafting of metal objects during the Chalcolithic and the Bronze Age, on their provenance and on the organization of ore circulation networks in the Caucasus at large.

We will try to provide a different perspective at copper-working to answers some questions like: How to understand the organization of the first copper metalworkers in Nakhchivan? Where are the places of extraction, transformation? What are the connections between these places of production? And what are the exchange networks developed by these early metalworkers? It may be hypothesized that the appearance of copper in the Nakhchivan context is everything except a surprise in view of the perfect knowledge of natural resources. In addition, we will attempt to show that the development of techniques of copper mining and bronze smelting could be done only by a précis organization of work. This organization is built between the places of extractions with small workshop's settlements, where bronze objects are produced and then distributed through a short or long-distance exchange network. Expected results will also help to feed the copper ore database of the region and thus will be of crucial importance for later work on Caucasian, Eastern Anatolian, North-western Iranian metallurgy, and archaeology.



**GHORBANI**, Negar – **AJORLOO**, Bahram – **KASIRI**, Masood B.  
Department of Archaeometry, Faculty of Applied Arts, Tabriz Islamic Art University  
**STEINIGER**, Daniel  
German Archaeological Institute, Eurasian department

### **The Archaeo-Metallographic Analysis Of Metal Objects, By The Method Of P-XRF: Recorded From An Excavated Iron Age II Grave In The River Valley Of Araxes; NW Iranian Plateau**

The usage of smelted copper-base alloys in the northwest of Iranian plateau, particularly in the northern part of Qaradagh highlands, such as Araxes river valley, has not been well studied. This is an important subject which helps understanding the development of metallurgy in this region and its relationship with the southern Caucasia and the northwest of the Iranian plateau. This article explores the recent archaeo-metallographic study on the application of portable XRF (p-XRF) for the chemical characterization of eight metal artifacts, excavated from a Kurgan-shape grave close to the southern bank of Araxes River, at Tepe Boynoo of Khoda'afarin area.

Typologically, according to the stratified pottery shreds, excavated from the site in 2008, and the comparative studies with familiar sites, excavated in the northern bank of Araxes River, the grave can be relatively dated to the Iron Age II, around 1200-900 B.C., so-called Khwadjeh Ali- Gadae Beyg culture. This collection contains a dagger, three dome-shaped buttons, a spiral ring, and a snake-head shape ring, two other rings, four large and ten small bottoms. The surface of the artifacts was covered by Cu corrosion layers, so the best point with no corrosion layer for analysis were chosen under the metallographic microscope. The preliminary results show that metal artifacts from Tepe Boynoo are made of copper-smelting ores containing important elements such as arsenic, tin, antimony, lead. The dagger contained 93% Cu with As content of 5 wt%. The dome-shaped button contains 94% Cu and with Sn content of 3.5%. Other objects contain 85-98% Cu, up to 5.6 % Fe and minor elements such as Pb, Zn, Sb. The XRF results show that bronze objects from the burial context are made of both tin copper and arsenic-copper alloys in this collection. In addition, among this objects, the occurrence of metallic iron, contained 1.4-5.6%, can be an indicator for high temperature achievement by the Iron Age metalworkers in their smelting furnaces. The aim of this paper is to find out the ancient metallurgical relationship between the pastoralism cultures from the northern Qaradagh, northwest Iranian plateau, and the southern Caucasus and even East Anatolia.

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**MARTINEZ FERRERAS**, Verónica

ERAAUB, Department of History and Archaeology, University of Barcelona

**LUNEAU**, Élise

CNRS UMR 8215, Maison de l'Archéologie et l'Ethnologie

**ESPARRAGUERA**, Josep M. Gurt

ERAAUB, Department of History and Archaeology, University of Barcelona

**CLOQUET**, Christophe

Centre de Recherches Pétrographiques et Géochimiques, CNRS UMR 7358 - Service d'Analyses des Roches et des Minéraux

**BAUVAIS**, Sylvain

Commissariat à l'Énergie Atomique Saclay

**GIL**, Enrique Arino

Department of Prehistory, Ancient History and Archaeology, Salamanca

**PIDAEV**, Shakir

Institute of Fine Arts, Academy of Sciences of Uzbekistan, Tashkent, Uzbekistan

**BOROFFKA, Nikolaus**

German Archaeological Institute - Eurasia Department

**SVERCHKOV, Leonid**

Institute of Fine Arts, Academy of Sciences of Uzbekistan, Tashkent, Uzbekistan

**AVANESOVA, Nona**

Samarkand State University

**BENDEZU-SARMIENTO, Julio**

10CNRS UMR 7041, Maison de l'Archéologie et l'Ethnologie

**MUSTAFAKULOV, Samariddin**

Afrasiab Museum, Samarkand

### **New Pottery Analyses From Southern Uzbekistan: A Trans-Chronological Perspective**

Recent physical and chemical analyses on ancient pottery from Central Asia have been carried in the framework of two research projects, the current CERAC Project (University of Barcelona) and the Roxiana Project (CNRS and German Archaeological Institute - Eurasia Department).

This paper presents the characterization of pottery sherds from diverse sites in southern Uzbekistan (administrative region of Surkhan-Darya) related to several periods (from the Bronze Age to the Kushano-Sasanian period). The chemical, mineralogical and petrographic composition of the pottery sherds was examined by X-Ray Fluorescence (XRF), X-Ray Diffraction (XRD), Inductively Coupled Plasma Mass Spectrometry (ICP-MS), lead isotopes and thin section optical microscopy (OM) respectively.

The identification of the composition of the pastes enable us to assess the provenance and to determine the main technological processes involved in the pottery manufacture (raw materials procurement and processing, forming, surface treatment, and firing). The study also aims to assess, on a long-term perspective, the technological evolution in pottery manufacture and the interaction processes that occurred over time in this specific area of southern Central Asia.

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**MATTHEWS, Wendy**

Department of Archaeology, Reading University

### **High-Resolution Analyses of Early Neolithic Built Environment Design and Use in the Zagros: Integration Archaeology, Micromorphology and Geochemistry**

This paper examines how living space design and use impact social relations and health in early sedentary agricultural communities in the Central Zagros of Iran and Iraq. The archaeometrical analyses include high-resolution geo-spatial, archaeobotanical, micromorphological and biomolecular analyses of architectural materials and design and accumulated occupation residues. The case-studies are drawn from Sheikh-e Abad and Jani in the high Zagros of Iran, with comparison to the site of Bestansur in the lower Zagros, Iraq, 10,000-7,000 BCE, to study local and regional variation in health and the built environment. Results demonstrate remarkable knowledge of the diverse properties of a range of earthen materials and provide insight into how earthen built environments can shape and enhance past, present and future living space.

**NAGEL**, Alexander

Museum of natural history, Smithsonian Institution, Washington DC

### **Elamite Polychromies: New Research on Pigment-Stratigraphy from Chogha Zanbil and Susa**

Archaeometry and research on pigments on sites in Iran has a long history. Early on, Eastern and Western travelers documented upon the origin and fabrication of pigments, and experiments were conducted on pigments found on reliefs at Persepolis and elsewhere. In the twentieth century, research by Japanese, American, French and Italian teams continued to investigate pigments from Elam and Fars and new research went into understanding the polychromies of the glazed bricks from Elamite and Achaemenid Khuzestan. In 2017, the Smithsonian Institution began a new project investigating glazed materials from Khuzestan.

Chogha Zanbil and Susa, both centres of manufacture and lavish display of glazed materials are the focus of this project. The materials, donated by archaeologist Roman Ghirshman were investigated in terms of material composition and decay. This paper will introduce the preliminary results and contextualize the ongoing studies in contemporary research on ancient Iranian and Mesopotamian polychromies.

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**NASHLI**, Hassan Fazeli

Department of Archaeology, University of Tehran, Tehran

**GREGG**, Michael W.

Department of Anthropology, St. Francis Xavier University, Antigonish

### **The Emergence of Agricultural Societies at the Intersection of the Southern Coastal Plain of the Caspian Sea and Foothills of the Alborz Mountains in Northern Iran**

The emergence of food-producing societies the Middle East is thought to have originated in the Levantine corridor, before spreading throughout the Fertile Crescent and adjacent regions. Unlike well-chronicled transitions from hunting and gathering to food-producing ways of life in the Levant and hilly flanks of the Taurus and Zagros mountains, little archaeological evidence informs our understanding of processes giving rise to the herding of animals and cultivation of cereals in the northern-most region of Iran. Multiple late Neolithic tells and Epipaleolithic cave sites have been discovered on or adjacent to the southern coastal plain of the Caspian Sea, but no site containing well stratified Epipalaeolithic and Pre-Pottery Neolithic occupations has been confidently identified north of the Alborz Mountains.

Our excavation in Komishani Tepe exposed stratified Epipalaeolithic, Pre-Pottery Neolithic, Chalcolithic and Bronze Age horizons. Gravel and pebble layers above and below the Pre-Pottery Neolithic occupation in TR1 were likely transported from upland areas during periods of warm and wet climatic conditions and suggest occupational hiatuses rather than continuity between sequences. This contribution will give an intensive overview about our work, first results, and perspectives in the issue of tracing early agricultural societies in NE-Iran.

**NEZAFATI**, Nima

Islamic Azad University, Science and Research Branch, Department of Geology, Tehran

**MOMENZADEH**, Morteza

Zarneh Research Group, Tehran

**AHMADI**, Kamran

Research Center for Conservation of Cultural Relics (RCCCR), Tehran

### **A Road Map for the Ancient Mining and Metallurgical Studies in Iran**

Iran is rich in ancient mining and metallurgical relics. Nevertheless, the studies on these relics have rarely been systematic. This road map that was originally prepared for the Research Center for Conservation of Cultural Relics of Iran (RCCCR) introduces a systematic multidisciplinary action plan for ancient mining and archaeometallurgical studies of Iran in the future. In this regard, the problems and challenges concerning the ancient relics of mining and metallurgy have been addressed and accordingly a plan for future studies in different aspects of ancient mining and metallurgy has been proposed.

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**ORANGE**, Marie

LabEx LaScArBx, Bordeaux Montaigne University

**LE BOURDONNEC**, François-Xavier – **THOMALSKY**, Judith – **BERTHON**, Rémi – **BAKSHALIYEV**, Veli – **MARRO**, Catherine

### **Looking North: First Insights Into The Consumption Of Obsidian From The Neolithic To The Bronze Age In Nakhchivan**

As part of the PAST-OBS research project (a research program supported by the ANR [ANR-10-LABX-52]), which aims to investigate the complex relationships between the exploitation of natural resources, technological innovations, and nomadic pastoralists in the Urmiah (northern Iran) and Sirab (Nakhchivan) regions between the 6th and the 3rd millennium B.C., more than 1500 obsidian artefacts have so far been geochemically characterized. These results were obtained thanks to an analytical strategy that was specifically adapted to these assemblages: it relies on several analytical methods, mainly a portable XRF (pXRF; used both in the field and in the lab), and the use of the Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS; complementary to pXRF). These artefacts originate from no less than nine archaeological sites that are all located in Nakhchivan (Azerbaijan): the excavated settlements of Kültepe I, Nakhchivan Tepe, Ovçular Tepesi, Uçan Agil, and Sorşu, as well as the surveyed sites of Bûlôv qayasi, Çay Ağzi, Kolani, and Mesmeliagil. Altogether, these assemblages cover a long period of time - from the Neolithic to the Bronze Age (Kura-Araxes), which makes possible synchronic and diachronic comparisons: an overview of the obsidian economies of these regions and their evolution through time is now available. This paper will be an opportunity for us to present the first results of the PAST-OBS research project, and to discuss further possible research prospects.

**PERNICKA, Ernst**

Curt-Engelhorn-Zentrum Archäometrie, Mannheim – Institut für Geowissenschaften, Universität Heidelberg

### **Archaeometallurgical Researches in Central Iran**

Arsenical copper is an important alloy in the development of copper metallurgy, typically occurring in a transition period between the uses of unalloyed copper and tin bronze. In the Old World, Iran is exceptional in its long-lasting preference for arsenical copper at a time when most surrounding regions had already switched to tin bronze. Because the concentrations of arsenic in this type of copper is usually quite variable between ca. 0.5 and 5%, it was assumed that it does not represent an intentional alloy but rather indicates the use of copper ores that contain arsenic minerals as a minor component. More recently, it was proposed that an artificial iron-arsenic alloy, called speiss, was produced in Early Bronze Age Tepe Hissar, North Iran, presumably to be added to copper metal for the production of arsenical copper. This study was based on only a small number of finds from an urban workshop. Recent excavations by the German Archaeological Institute at the EBA metallurgical site of Arisman in Western Iran have uncovered large quantities of slag derived from the routine production of speiss as a material in its own right in the context of arsenical copper production, but in an independent smelting operation leaving behind slag in the order of several tons.

The presentation will report on analyses of different slag types found at the Early Bronze Age site of Arisman in North-West Iran. Here, an estimated 20 tons of slag provide evidence of sustained and large-scale production of metal, using both furnaces and crucibles. The results show that both speiss, an iron-arsenic alloy, and arsenical copper were produced, apparently side-by-side at the same site but using different ores and processes.

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**RAZANI, Mehdi – AJORLOO, Bahram**

Department of Archaeometry, Faculty of Applied Arts, Tabriz Islamic Art University

### **The Experimental Archaeology of Islamic Potteries from Qaradagh, Azerbaijan, NW Iran, by Means of Archaeo-Petrographic Analyses**

The study of Iranian tradition of pottery production during the Middle Age, so-called Islamic era, is limited to archaeological excavations at Jorjan, Ray, Nishapur and Abonahr palace. Azerbaijan and the N.W of Iranian plateau has been neglected among scientific research on historical potteries, despite the remarkable historical records from this period and just few researches have been accomplished only in some famous sites such as: Ardebil Mosque, Sheykh Teppe of Urmia, Sultaniyya, Takht-e Suleymān and Oltānghāsi. Unfortunately, the history of Islamic pottery traditions in other areas in Azerbaijan, particularly in Qaradagh, still problematic. This article focused on the Ilkhanid era because the properties of Qaradagh Islamic pottery demonstrate a unique style from this period. The aim of the present paper is to characterize and figure out the technology of Qaradagh glazed pottery that excavated from a site so-called Nowduz Fort in Qaradagh.

For this purpose, X-ray powder diffraction, Differential Thermal Analysis (DTA-TG) and SEM-edx were applied. The results show most of these shreds have a good quality in their biscuits that is related to an appropriate firing process. According to our results these potteries were fired with in oxidation condition of a kiln in a thermal range of 850-1050 °C. The glaze of these potteries is alkaline-lead that is fired in reduction and oxidation condition with copper and iron metal oxides.

**RIEHL, Simone**

Institut für Naturwissenschaftliche Archäologie, Universität Tübingen – Senckenberg Center for Human Evolution and Palaeoenvironment, Frankfurt

**Addressing the Role of Environmental Fluctuations in Ancient Resource Management by Plant Remains and Stable Carbon isotope Measurements**

This contribution provides an overview on the state of the art in stable isotope applications on plant remains from Near Eastern archaeological sites, for answering questions on ancient environmental conditions (e.g. climate and moisture availability) and anthropogenic factors that determined the development of ancient agriculture (e.g. the position of crop fields in the landscape).

The majority of data available for the western and northern part of the Fertile Crescent are prospective for answering a variety of research questions in Iranian archaeology, as will be emphasized by a case study of the materials from Aceramic Neolithic Chogha Golan, addressing aspects such as long-term landscape and resource development.

### 13. Redefining Interaction and Mobility in Prehistoric Southern Central Asian Archaeology

In comparison with the better-known Eurasian steppe, prehistoric mobility in the southern part of Central Asia (Turkmenistan, Uzbekistan, Tajikistan, Afghanistan, and northern Iran) has hardly been studied. Focus on mobile populations has increased over the past decade, but inconsistencies are still present in how we define who is moving (nomads, itinerant traders or craftsmen, exogamy, etc.), and how mobility shaped specific social behaviours, subsistence economy or cultural features in this area. Moreover, the specific ecological setting of southern Central Asia, consisting of a unique assortment of desert, steppe, and mountains is still poorly explored in terms of human social-ecological adaptation in local contexts. Specifically, how did localized ecological exploitation shape mobility in southern Central Asia in prehistory?

No doubt, inconsistencies in research on mobility and the environment in southern Central Asia can sharply impact how different researchers conceive of the interactions both between different mobile communities as well as with local sedentary groups. The question remains: is ‘mobility’ an explanation for how things, techniques, practices, and ideas moved? Or do we need to better attend to the nature, intensity, and duration of interactions, as Irene Good urged us to do several years ago, to push forward our understanding of prehistoric transfers in people, goods and ideas?

The objective of this session is to bring together a group of researchers currently working on intersecting issues related to the exchange of people, things, and ideas that shifted Central Asian history. Comparatives between periods and sub-regions will be discussed thematically. Utilizing the most contemporary datasets and analyses from multi-disciplinary methods to support the discussion, we aim to update the way we think about mobility and interaction in southern Central Asia.

#### Organizers

LUNEAU, Élise ROUSE, Lynne M.

Deutsches Archäologisches Institut, Eurasien Abteilung

#### Participants (in alphabetical order)

<b>AMIRI</b> , Sarieh	<b>FORNI</b> , Luca
<b>ARCIERO</b> , Roberto	Università di Bologna
Universiteit Leiden	<b>KROLL</b> , Sonja
<b>BENDEZU SARMIENTO</b> , Julio	Bern University
<b>BON</b> , Céline	<b>LHULLIER</b> , Johanna
<b>BONORA</b> , Gian Luca	LUNEAU, Élise
International Association of Studies on the Mediterranean and the Orient, Ferrara	<b>MASHKOUR</b> , Marjan
<b>BRITE</b> , Elizabeth Baker	<b>OLSON</b> , Kyle
Purdue University, West Lafayette	University of Pennsylvania
<b>CERASETTI</b> , Barbara	<b>POLLOCK</b> , Susan
Università di Bologna	Freie Universität, Berlin
<b>DAUJAT</b> , Julie	<b>ROUSE</b> , Lynne M.
<b>DUFOUR</b> , Élise	<b>SHEIKHI</b> , Shiva
<b>EGER</b> , Jana	<b>SPENGLER</b> , Robert
Freie Universität, Berlin	Max Planck Institute for the Science of Human History, Jena
<b>FIORILLO</b> , Denis	<b>TENGBERG</b> , Margareta

## List of Lectures

	<b>Lecturer</b>	<b>Title</b>
9:00 - 9:30	Luneau, Élise Rouse, Lynne M.	Introduction: Arenas of Mobility and Interaction in Prehistoric Southern Central Asia, with an example from Bronze Age Ceramic Traditions
Section 1. Defining Mobility in the Central Asian Environment		
9:30 - 10:00	Arciero, Roberto	Water and Mobility: How different communities in prehistoric southern Turkmenistan viewed and managed the same water resources
10:00 - 10:30	Pollock, Susan Eger, Jana	Mobility in Early Village Societies: Monjukli Depe and southern Turkmenistan in the Early Aeneolithic
10:30 - 11:00	Mashkour, Marjan Daujat, Julie Sheikhi, Shiva Kroll, Sonja Fiorillo, Denis Amiri, Sarieh Tengberg, Margareta Lhuillier, Johanna Bendezu-Sarmiento, Julio	Pastoralism and Animal Management at Ulug Depe during the Bronze and Iron Ages
11:00 - 11:30 Coffee		
11:30 - 12:00	Spengler, Robert	Bearing Fruit in Archaeobotanical Studies of the Prehistoric Silk Road
12:00 - 12:30	Cerasetti, Barbara	Who Interacted With Whom? Redefining mobility in Bronze Age southern Turkmenistan
12:30 - 13:00 Discussion (section 1)		
13:00 - 14:00 Lunch		
Section 2. Mobility of People: Movement and Pathways		
14:00 - 14:30	Kroll, Sonja Mashkour, Marjan Dufour, Élise Fiorillo, Denis Bendezu Sarmiento, Julio Lhuillier, Johanna Bon, Céline	Where did they come from and where did they go? Stable isotope analyses of Bronze Age societies in Central Asia and Iran.
14:30 - 15:00	Bonora, Gian Luca	Nomadic Pastoralists and Traders along the Lapis Lazuli and Turquoise Routes
15:00 - 15:30	Olson, Kyle G.	FETE-LCA: Supercomputer simulations of trade routes in the ancient Near East
15:30 - 16:00	Rouse, Lynne M.	Space Invaders: New insights on long-term sedentary-mobile interactions in prehistory from recent research in southern Turkmenistan
16:00 - 16:30 Coffee		
Section 3. Interaction(s) through Material Culture		
16:30 - 17:00	Brite, Elizabeth	Were Khorezmian Potters Nomadic? Pottery production in the Khorezm Oasis as an indicator of syncretic culture, 1 <sup>st</sup> millennium B.C. – 1 <sup>st</sup> millennium A.D.
17:00 - 17:30	Forni, Luca	Religion and Spiritual Life in the Bronze Age: New evidence of interactions between mobile pastoralists and sedentary farmers in the Murghab region (southern Turkmenistan)
17:30 - 18:00 Discussion (sections 2 and 3)		



## Abstracts

**ARCIERO**, Roberto  
Universiteit Leiden

### **Water and Mobility: How different communities in prehistoric southern Turkmenistan viewed and managed the same water resources**

The relation between the environment, water resources, and human beings was and is a matter of great debate among scholars. Society and water exploitation have led to the construction of different theoretical models in the recent past. Although with many criticisms, K. Wittfogel's hypothesis represents the first effort to connect water, hydraulic engineering, labor forces, surplus production and imperial power into one single model. According to Wittfogel, if the production of agricultural surplus required a strong central power able to build dams, and new artificial canals to bring water to the fields, it was equally possible - as demonstrated by T. J. Wilkinson - that single communities could create hydraulic infrastructures without any imperial authority. Moreover, as recently argued by M. Ertsen, it was difficult for the State to have an "uniform control" over all the irrigation systems, since hydraulic infrastructures required a daily management that could easily overcome the central control.

In the harsh environment of the Karakum Desert, in the Murghab inner delta of Southern Turkmenistan, scarce water resources were certainly a driving factor in mobility and interaction, both for mobile pastoralists and sedentary farmers. Local communities were able to build elaborate irrigation systems since the Bronze Age, and their extent and management are still subject of numerous and extensive researches. In the past as in the present, the landscape was not a passive receptor to human actions; the scarce available water resources interfered with human decisions on the regulation of water, and therefore on the settlement pattern distribution. The current research presents the preliminary results of the analysis of the irrigation systems adopted in Ojakly and Togolok areas. Ojakly is one of the only two mobile pastoral sites excavated in the Murghab region, meanwhile Togolok 1 is one of the largest Late Bronze Age sedentary sites. This project investigates the strategies adopted by sedentary farmers and mobile pastoralists to control, manage and exploit the same water resources in one of the harshest deserts of Central Asia.

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**BONORA**, Gian Luca

International Association of Studies on the Mediterranean and the Orient, Ferrara

### **Nomadic Pastoralists and Traders along the Lapis Lazuli and Turquoise Routes**

The overall organisation of the lapis lazuli and other semiprecious stones industry at Shahr-i Sokhta seems to be compatible with well organised pastoral transhumance patterns from mining areas in the Badakshan area and Elborz Mountain to the market and workshops of Shahr-i Sokhta. To this regard, it is no coincidence that a link between the offering of kids and lambs and large amount of lapis lazuli and turquoise beads in the graves of nomadic pastoralists-and-traders was recognised. The craftsmen may have worked as mobile pastoralists, extraneous to the city, for most of the year. While working as beadmakers and stonecutters in spring, they most likely supplemented their food by fishing, hunting birds and collecting eggs. The discovery of cane segments as containers for semi-precious stones attested by the hoards discovered by M. Tosi in 1968 is suggestive proof for this interpretation.

Besides of Shahr-i Sokhta, this work highlights evidences in terms of mobility and cultural interactions provided by other large Bronze Age burial grounds of southern Central Asia - such as Altyn-depe and Parkhay II in southern Turkmenistan, Mundigak in central Afghanistan and Shahdad in central, south-

eastern Iran - where are documented bi-univocal correspondences between semi-precious stone beads and the offering of a lamb or kid in the same graves, suggesting moreover that these burials belonged to a wealthy class.

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**BRITE**, Elizabeth Baker  
Purdue University, West Lafayette

### **Were Khorezmian Potters Nomadic? Pottery production in the Khorezm Oasis as an indicator of syncretic culture, 1st millennium B.C. – 1st millennium A.D.**

The Khorezm oasis holds an unusual cultural and geographic position in Central Asia, as it is neither clearly part of the Eurasian steppe world or part of the chain of southern oases that lies to its south. Situated in a latitudinal band of desert steppe in between these two zones, Khorezm's prehistory indicates a mediated position, with a distinctive local culture that integrated steppe and oasis elements in a semi-sedentary/semi-mobile system that is not easily classified. Archaeological research in the 21<sup>st</sup> century has documented this Khorezmian syncretism in art, architecture, ritual, politics, and the agricultural economy from the 1<sup>st</sup> millennium B.C. onward. In this paper, I explore whether it might also be seen in Khorezm's craft production landscape. Utilizing a model recently developed for the ceramic assemblages of mobile societies, I present a new analysis of Khorezmian ceramic technology and production facilities of the 1<sup>st</sup> millennium B.C. through 1<sup>st</sup> millennium A.D. Studies to date have interpreted expedient forms in these assemblages as evidence of cultural divisions between sedentary and nomadic groups, or as evidence of agrarian collapse. Based in part on greater attention to the landscape of production, this paper instead argues that these assemblages reflect integrations of mobile and sedentary lifeways through time in the oasis.

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**CERASETTI**, Barbara  
Università di Bologna

### **Who Interacted With Whom? Redefining mobility in Bronze Age southern Turkmenistan**

In recent years the interest of numerous researchers working in Central Asia and, more specifically, in the region of the internal delta of the Murghab River in Southern Turkmenistan, is increasingly focusing on understanding what was the relationship between nomadic and sedentary cultures during the Bronze Age, especially what was the 'final product' that originated from that relationship. In the alluvial fan of the river, especially between the second half of the Middle Bronze Age and the beginning of the Iron Age, this phenomenon was the hub around which social patterns and settlement processes of later historical periods modelled their final shape. Finally focusing on this phenomenon, and do not consider it anymore at best as a fringe element than the more studied culture of sedentary farmers, has finally clarified many features so far remained obscure.

As specialists in mobile-pastoralists in the region of the present alluvial fan of the Murghab River, where many studies are lately focusing and carrying out on issues of interchange and integration between agricultural and pastoral cultures, we are used to 'think' to two peoples, each with their own lifestyle, ideas and material culture.... why not the same population with an internal differentiation for what concerns, for example, the job role? Why not, indeed, the same individuals within the same ethnic group who alternate in rotation for a predetermined amount of time, a week or a month, in the role of farmer or shepherd to ensure agricultural and pastoral activities according to the needs of an entire community?

The study of different archaeological contexts in the Murghab region safely allows us to say that the scenario is still so complex that we cannot take a final position. Surely, there are within this community of shepherds groups of different ethnic background, with a more or less regular or seasonal mobility, with a minor or major agricultural knowledge or craft specialization. We can call them 'agropastoralists'? What we are trying to give is a supposed answer, but what we want to raise is a discussion, more heated than the argument requires.

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**FORNI, Luca**  
Università di Bologna

### **Religion and Spiritual Life in the Bronze Age: New evidence of interactions between mobile pastoralists and sedentary farmers in the Murghab region (southern Turkmenistan)**

Since 2009 the Italian-American-Turkmen Archaeological Mission has conducted numerous projects in Southern Turkmenistan, as stratigraphic excavations and surface survey, mainly in order to understand how mobile peoples integrated in the broad social arena of the vast open pasturelands and in the sedentary contexts of the Murghab alluvial fan. This region was doubtlessly a strategic location for interactions between sedentary farmers and mobile pastoralists in the Bronze Age (Middle and Late Bronze Age - 2400-1300 B.C.). The investigation of sedentary villages and mobile campsites from the Bronze Age has allowed a better understanding about what customs and traditions mobile pastoralists may have borrowed from their sedentary contemporaries and how at the same time they kept intact their own traditions.

However, numerous doubts still remain about what kind of interaction occurred between the spiritual life and belief system of each group. Few data regarding this matter were drawn from the excavations of the semi-nomadic sites. On the contrary, artefacts as terracotta figurines, seals and ceremonial vessels detected during the investigations of the Namazga V sites showed how sedentary populations had their own complex belief system. Considered all the shared elements of sedentary and mobile pastoral lifestyles, especially in the material culture, can we hypothesize an interaction in the spiritual sphere between the two cultures? And if this happened, how mobile pastoralists 'reinterpreted' and adapted sedentary customs to their own spiritual life? What were the artifacts linked to beliefs attributed to the sedentary culture that nomad pastoralists decided to take with them during their seasonal mobility?

About these questions, recent discoveries carried out between 2014 and 2015 at the sedentary site of Togolok 1 can offer new important answers. The researches led to the identification of three phases of occupation attributed to groups of nomadic pastoralists after the abandonment of the sedentary farming site or at least in a final stage of its life during the Late Bronze Age. An in-depth analysis of the findings documented in these layers will allow a better understanding regarding the everyday and spiritual life of people who lived in one of the most important regions of Central Asia.

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**KROLL, Sonja**  
Bern University

**MASHKOUR, Marjan – DUFOUR, Élise – FIORILLO, Denis – BENDEZU SARMIENTO, Julio – LHUILLIER, Johanna – BON, Céline**

### **Where did they come from and where did they go? Stable isotope analyses of Bronze Age societies in Central Asia and Iran**

With the beginning of the 3rd millennium the emergence of complex societies in Central Asia are observed next to the great cultures of Mesopotamia, Elam and Indus. Archaeological evidence point at the existence of an important communication network long before the famous Silk Road. The rising occurrence of various raw materials just as analogues of pottery, use of patterns and manufacturing technologies in contemporaneous sites in Iran show dynamic interactions to human communities in Central Asia.

Iran and Central Asia are located in a geographic zone with contrasted environments. This has an impact on the adaptability of human communities to climatic constraints that models the way of life and residency. Stable isotopes analyses of human remains indicate the composition of populations respectively the origin of individuals. The results provide information about the sedentism or mobility of human and animals in these pastoral societies. Based on the origin of individuals the intensity of migration and therefore the external cultural influences can be reconstructed.

The talk will present stable isotope analyses from several sites from the Iranian Central Plateau and the foothills of Kopet Dagh and Pamir Mountains. Focus are the Bronze Age human communities of Tepe Sialk in Iran, Ulug Depe in Turkmenistan and Dzharkutan in Uzbekistan.

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LUNEAU, Élise – ROUSE, Lynne M.

Deutsches Archäologisches Institut, Eurasien Abteilung

### **Introduction: Arenas of Mobility and Interaction in Prehistoric Southern Central Asia, with an example from Bronze Age Ceramic Traditions**

We introduce this session on mobility in the archaeology of Central Asia by focusing on three inter-related scales. At the broadest, we will discuss a general framework for identifying and interpreting mobility through archaeological remains, and how this leads us to think about the patterns of intra- and inter-group relationships and the co-interaction between human and environmental factors. This discussion bears on an important aim of the session, which is to explore ‘mobility models’ for the advancing research in this region and period.

At the middle scale, we develop these questions with a specific focus on the Bronze Age, where mobility appears critical to understanding the myriad social, political, and environmental shifts that define this period. We provide some background on the way concepts of mobility (and non-mobility) have impinged on interpretations of the sociocultural evolution in the Bronze Age, with an emphasis on the complex relationships between diverse communities traditionally labeled as either “mobile” (the so-called Andronovo pastoralists and related groups) or “sedentary” (farming communities of the Oxus Civilization). Throughout, we discuss the most updated research on the numerous and nuanced ways these groups interacted.

Lastly, as a specific example for illustrating the value of thinking through mobility in prehistoric Central Asia, we discuss the ceramic traditions related to different human groups here. Evidence mainly points to the use of distinct material culture assemblages. Traditional interpretations associate the pottery of the sedentary populations of the Oxus civilization with well-made vessels in fine ware, whereas by contrast, the production of the mobile people is described as coarse and handmade with geometrical ornament. Our ongoing research on both ceramic traditions focuses first, on the various patterns of ceramic production as specific expressions of cultures and identities. We can bring out that the dichotomy previously assessed does not actually provide a comprehensive view of the relation between Bronze Age potters and consumers in one hand and their pots on the other hand. Secondly, this research investigates the way we identify and define interactions through material culture. We use ceramics as one material index of intercultural interaction, which provides different lines of investigation that together allow us to assess the various scales of interconnectedness between individuals, groups, and the natural environment.

**MASHKOUR, Marjan**  
CNRS – UMR 7209, Paris

**DAUJAT, Julie – SHEIKHI, Shiva – KROLL, Sonja – FIORILLO, Denis – AMIRI, Sariah – TENGBERG, Margareta – LHUILLIER, Johanna – BENDEZU-SARMIENTO, Julio**

### **Pastoralism and Animal Management at Ulug Depe during the Bronze and Iron Ages**

Over the past decades, the faunal studies of several prehistoric sites from southern Turkmenistan provided valuable information on pastoral practices in the southern steppes and oases of Central Asia. Sheep and goat are by far the two most exploited animals, although a recent review of the animal exploitation in southern Central Asia has revealed the existence of a complex pattern in relation to environmental constraints in various ecotones of this wide region. In our paper, we would like to focus on a single site, Ulug Depe, a large multi-period settlement located in the Kopet Dagh piedmont. The study of the bioarchaeological material (botanical and faunal) together with the analysis of other archaeological remains indicates a sedentary way of life due to the presence of irrigation systems and the importance of agriculture. However, for a better understanding of the agropastoral interactions we initiated a stable isotope analysis (carbon and oxygen) on sheep/goat remains from Bronze Age and Iron Age tooth remains in order to examine this question from the animal side. The intra-tooth analysis of the few selected animals from the two periods will provide a clearer view on the presence or absence of herd mobility and by extension a more nuanced perspective on agropastoral practices in this region and their evolution from the 3<sup>rd</sup> millennium to the 1<sup>st</sup> millennium.

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**OLSON, Kyle**  
University of Pennsylvania

### **FETE-LCA: Supercomputer simulations of trade routes in the ancient Near East**

One of the greatest challenges facing scholars of ancient Near Eastern trade is the question of how past people transported commodities and raw materials over great distances. In attempts to understand the flows of people and goods across the ancient Near East, scholars have previously focused on, inter alia, the textual attestation of inter-regional exchanges, iconographic depictions of trade activities, chemical analysis of artifacts themselves, and the scraps of evidence that might point to who the people were that traveled and connected the far-flung Bronze Age civilizations together. This paper considers the reconstruction of the location of the routes by which these people and goods traveled, through simulations of trade route networks (i.e. From-Everywhere-To-Everywhere Least Cost Analysis, or FETE-LCA). These simulations can be used to test both the effects of different conditions (e.g. climate, locomotion dynamics) on the structure of these networks, but also the relationship of these simulated routes to archaeologically known distributions of sites and the traces of trade activity. In this paper, the basics of FETE-LCA will be presented, along with the results of a case-study that demonstrate how different conditions can affect the simulated route networks. Critical reflections on the method will also be presented, with special focus on what the simulations can and cannot tell us about past movement of people, and what future directions in this field of research might be.

**POLLOCK, Susan – EGER, Jana**  
Freie Universität, Berlin

### **Mobility in Early Village Societies: Monjukli Depe and southern Turkmenistan in the Early Aeneolithic**

Archaeologists have long assumed that early village societies, with their substantial architecture and evidence for agriculture and the raising of animals, represent a quasi-permanent sedentarization. But in recent years, as archaeologists have turned increasingly to investigations on smaller scales, it has become clear that this picture is too simple. Rather, early villagers often combined mobilities of various forms, spatial and temporal degrees with a partially sedentary way of life.

Excavations at the Neolithic and early Aeneolithic (Chalcolithic) site of Monjukli Depe in the Kopet Dag foothills of southern Turkmenistan contributes to our understanding of mobility in the early villages of this region in a number of ways. A substantial corpus of faunal remains allows evaluation of the composition of the animals raised and tended by the villagers. Isotopic analyses open a window into the study of degrees of herd mobility and thereby also of their human accompaniments. The kinds of raw materials and finished objects acquired and used by the inhabitants of villages such as Monjukli Depe offer further insight into the connections and patterns of mobility of the early farmers and herders in the region and potentially beyond.

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**ROUSE, Lynne M.**

Deutsches Archäologisches Institut, Eurasien Abteilung, Berlin

### **Space Invaders: New insights on long-term sedentary-mobile interactions in prehistory from recent research in southern Turkmenistan**

Central Asian prehistory is defined by an incongruent variety of material, technological, and social exchanges that cannot be explained by simplistic scenarios of “steppe vs. sown”, with their implications of economic dependency and/or socio-cultural diffusion. Long-standing concepts of ‘farmer’ and ‘nomad’ are being re-mapped by much current research that demonstrates how communities adjusted their practices or emphasized different cultural expressions across multiple geographic and temporal scales. In instances of inter-cultural contact, local communities were (and are) presented with opportunities to engage or disengage with new traditions, rules, and social logics, and their decisions have both ideological and material consequences. In this talk, I offer details about the variability in the materials and ideas pastoralists used to negotiate the overlapping social worlds they encountered in the Bronze Age Murghab through an examination of four recently excavated sites. The results indicate the idea of ‘being’ a pastoralist was signaled by a specific set of materials and practices across hundreds of years – a cultural ideal worth preserving even as these communities adapted along the spectrum of mixed agropastoralism and experimented with new materials and ideas. Rather than ending at explanations of cultural hybridity or symbiotic relationships, by focusing on the ways shifting everyday behavior reconstituted social boundaries we move closer toward a conceptual understanding of the malleability that defined Central Asian prehistory and the contours of the region today.

**SPENGLER, Robert**

Max Planck Institute for the Science of Human History, Jena

### **Bearing Fruit in Archaeobotanical Studies of the Prehistoric Silk Road**

The mountain foothills of Central Asia and western China are marked by an ecologically rich mosaic of environments, which have fostered an equally diverse array of human cultural traits. As far back as the third millennium B.C., people were transporting items, ideas, technology, and genes along this trans-Eurasian mountainous corridor, spanning from the Kopet Dag to the Tien Shan and reaching into China. In this talk, I will focus on the dispersal of cultural traits through the southern branches of these mountains, including the Kopet Dag, Pamir, and Hindu Kush, looking at the movement of agricultural goods. The prehistoric cultural diffusion through these mountains played a significant role in shaping human developments across the Old World. By the late first millennium B.C., the historically documented exchange relied on established vectors of interaction, and fostered the spread of many of our most familiar fruits, nuts, grains, and legumes. Looking at new archaeobotanical data from several sites, I will talk about the spread of these crops, and trace the path that plants followed on their long journey across the Old World, ultimately reaching our dinner plates today.

## 14. The Enigma of the Hyksos

The exact geographical origin of the Hyksos, ruling the north of Egypt in the Second Intermediate Period, the process of their coming into power and their role in history still remains an enigma, as the period is poorly represented in texts. Nevertheless, the Hyksos phenomenon has thus far mainly been studied by text-based Egyptology, ignoring other possible sources, like archaeological remains, burial customs, settlement patterns, comparative architectural studies or biological data. In the last decades excavations in Egypt's eastern Delta have produced new information and one can now, together with finds stored in museums all over the world, resort on huge quantities of objects reflecting the material culture attributed to the carriers of the Hyksos rule as well as related physical remains. These materials were thus far largely left aside in the scientific discussion, but can be used as first class historical sources.

The workshop's aim is to shed new light on recent research like archaeological and architectural analyses, cultural interference studies, new onomastic studies as well as DNA analyses and other scientific methods. Based on the ongoing investigations of the team of the ERC Advanced Grant "The Enigma of the Hyksos" first results will be presented and the discussion and exchange with other specialized scholars is going to result into a closer approach to the origin of this western Asiatic population, their dialogue with the host country, the impact on the culture of Egypt and finally their heritage.

### Organizers

**PRELL, Silvia**      **BIETAK, Manfred**

Austrian Academy of Sciences

### Participants (in alphabetical order)

**BIETAK, Manfred**  
Austrian Academy of Sciences

**CATELOY, Cydrisse**  
Panthéon Sorbonne University – UMR 7041 – VEPMO

**D'ANDREA, Marta**  
Sapienza Università di Roma

**GOMEZ SENOVILLA, Silvia**  
Austrian Academy of Sciences

**HUDEC, Jozef**  
Slovak Academy of Sciences

**MAARANEN, Nina**  
Bournemouth University

**MOURAD, Anna-Latifa**  
Austrian Academy of Sciences

**PRELL, Silvia**  
Austrian Academy of Sciences

**PRIGLINGER, Elisa**  
Austrian Academy of Sciences

**SACCO, Arianna**  
Leiden University

**SCHNEIDER, Thomas**  
University of British Columbia

**SCHUTKOWSKI, Holger**  
Bournemouth University

**STANTIS, Christina**  
Bournemouth University

**VILAIN, Sarah**  
Austrian Academy of Sciences

**WODZIŃSKA, Anna**  
University of Warsaw



## List of Lectures

	Lecturer	Title
9:00	Marta D'Andrea	Before the Cultural Koiné: Contextualizing Interculturality in the "Greater Levant" during the Late Early Bronze Age and the Early Middle Bronze Age
9:30	Manfred Bietak	Tracing the Origins of the Hyksos Elite of Egypt as seen from a Comparative Study of Sacred and Palatial Architecture
10:00	Silvia Prell	So-called "Warrior Burials" in the Fertile Crescent
10:30	Silvia Gomez Senovilla	Urban Morphology and Urban Syntax at Tell el-Dab'a
11:00 Coffee break		
11:30	Anna Wodzińska	Tell el-Retaba during Second Intermediate Period. Pottery and People
12:00	Sarah Vilain	Is Imitation the Sincerest Form of Flattery? New Light on Local Productions Inspired by Cypriot Wares at Tell el-Dab'a during the Second Intermediate Period
12:30	Cydrisse Cateloy	Imported Levantine Amphorae at Tell el-Dab'a: A Volumetric Approach to Reconsider the Maritime Trade in the Eastern Mediterranean
13:00 Lunch break		
14:00	Christina Stantis Holger Schutkowski	Bioarchaeological Investigations of Hyksos Identity and Origins
14:30	Nina Maaranen	Hidden in Bones - Tracking the Hyksos across the Levant
15:00	Jozef Hudec	The Second Intermediate Period Cemetery at Tell el-Retaba
15:30	Arianna Sacco	Connecting the Dots: Using Network Analysis to Examine the Second Intermediate Period
16:00 Coffee break		
16:30	Anna-Latifa Mourad	The Transformation of the Egyptian Storm God in the Second Millennium BC
17:00	Elisa Priglinger	"One ticket to Egypt please!" – Possible Reasons for Human Migration during the First Half of the Second Millennium BC

## Abstracts

**BIETAK, Manfred**  
Austrian Academy of Sciences

### **Tracing the Origins of the Hyksos Elite of Egypt as seen from a Comparative Study of Sacred and Palatial Architecture**

Within the ERC Advanced Grant "The Hyksos Enigma" comparative architectural studies in search for parallels of temple- and palatial architecture at Tell el-Dab'a reveals that the decision makers of the Hyksos elite surprisingly did not draw their concepts from the coastal Levant. Most of the parallels cluster in northernmost Syria and Mesopotamia. Especially the region northeast of the Euphrates River comes more and more into focus. This brings about considerations that the leading class may have come from a different region than the ordinary bulk of people of Western Asiatic origin in Avaris which all together caused the Hyksos rule in Egypt, as their material culture seems more aligned with the middle coastal Levant.

### **Imported Levantine Amphorae at Tell el-Dab'a: A Volumetric Approach to Reconsider the Maritime Trade in the Eastern Mediterranean**

During the Middle Bronze Age, a new class of ceramic transport container appeared in the Levant: the so-called 'Canaanite jar'. This innovating shape is seen as one of the first amphorae ever traded through the Mediterranean Sea. It derived from Early Bronze Age Levantine combed jars, with ovoid body and flat base, that were already imported into Egypt, but were not yet really well-fit for maritime transportation. By the time Tell el-Dab'a became a main port entry for Levantine goods, the morphology of this ceramic container has evolved and a great number were imported to Egypt.

The Levantine amphorae development is closely related to maritime trade and the intensification of Mediterranean exchanges served to shape the container outlines to better suit the cargo holds of merchant ships. Given that the morphology of a ceramic type, such as amphorae, may be somehow inherent to economic change, it may be enlightening to reconsider studying certain aspects of this material – as for instance its capacity – to reassess our general knowledge about commercial networks and trade modalities. Indeed, although it is a central feature that allows to appreciate the merchantable quantity of the goods stored inside, the inner volume of amphorae has been hardly examined so far.

At Tell el-Dab'a, the assemblage of Levantine amphorae is one of the greatest and well-documented collections available. Besides, several vessels are fully restored and numerous still have a complete profile that facilitates volume estimation. Therefore, a volumetric approach on this unique material will enable some relevant re-evaluations about ancient trade.

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**D'ANDREA, Marta**

Sapienza Università di Roma

### **Before the Cultural *Koiné*: Contextualizing Interculturality in the “Greater Levant” during the Late Early Bronze Age and the Early Middle Bronze Age**

The relation between the socio-cultural complexes of the 3<sup>rd</sup> and 2<sup>nd</sup> millennia BC in the Near East is of great importance for understanding the formation of the Middle Bronze Age society. Although a uniform socio-cultural scenario – generally connected with the formation of Amorite kingdoms – would appear in the Near East only from the 19<sup>th</sup> century BC, there is a growing body of evidence for inter-regional connections across the entire Near East already during Early Bronze IV and the early Middle Bronze I, that is, several centuries before the so-called “Amorite *koiné*.” Moreover, scholarly consensus is growing that increased human mobility across the Levant fostered interaction between different areas already during the late Early Bronze Age and the early Middle Bronze Age.

In this paper, taking the view from the Levant, it will be argued that, in several regional areas, the ancestry of some elements of the material culture that would typify the fully developed Middle Bronze Age later on can be tracked in features and practices that appeared for the first time during Early Bronze IV and early Middle Bronze I. Subsequently, socio-economic and socio-cultural factors leading to increased inter-regional interactions and cross-regional mobility will be analysed. This way, it will be possible to eventually propose some hypotheses on mechanisms influencing the formation of a common socio-cultural language in the “Greater Levant” in the following, more developed phases of the Middle Bronze Age.

**GOMEZ SENOVILLA, Silvia**  
Austrian Academy of Sciences

### **Urban Morphology and Urban Syntax at Tell el-Dab'a**

The study of houses and households is not anymore in its infancy in Near Eastern and Egyptian archaeology, but the internal disposition of unearthened sites or the lack of enough excavated surface makes the identification of individual house units and clusters a challenging task. Notwithstanding some difficulties, the study of morphological categories of the compounds combined with a proper analysis of the internal disposition and the density of streets and houses can help to observe internal variability and unit division.

The approach envisaged for this study encompasses a morphological analysis of the street network and houses at Tell el Dab'a over its different periods. The examination of the street pattern and the disposition of the physical features of clusters and compounds can guide our understanding of internal divisions and potential neighbourhoods. Next to urban morphology, that can provide the first step towards the study of the use of space at Tell el-Dab'a, a spatial approach is also indispensable. Spatial analysis can shed light into the internal organization and division of the settlement, as well as proxemics, the human use of space. The lack of public connections, the presence of *cul de sacs*, winding lanes, specific orientations or the placement of burials next or within the compounds can offer an idea about the intra-settlement organization, opening the gate for connecting this variability with wider social, political and economic processes in Egypt and the Near East.

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**HUDEC, Jozef**  
Slovak Academy of Sciences

### **The Second Intermediate Period Cemetery at Tell el-Retaba**

The Polish-Slovak research in Tell el-Retaba started in 2007. By then, the tell was known as a site of New Kingdom forts and Third Intermediate Period settlements, which have allegedly alternated a settlement at Tell el-Maskhuta in a period of local hiatus. Recent excavations have significantly changed and expanded the view on historical development at Tell el-Retaba and beyond. In the years 2010 to 2017, almost 45 Second Intermediate Period tombs have been discovered on site by the Polish, Slovak and Egyptian excavations. These tombs are dating to a broad timespan from the very late 13<sup>th</sup> dynasty to the very beginning of the 18<sup>th</sup> dynasty and thus, can be divided into several phases. Due to time and working constraints, not all of the discovered graves have been examined and documented so far; likewise not all the skeletons of buried individuals have been documented.

Anthropological examinations have been completed so far on a group of more than 30 individuals. The majority of these individuals were adults. In the group of adults, a majority of male individuals stands out, however, some individuals had to be labelled as inconclusive. In the group of deceased men, there is a slight predominance of younger individuals, while, on the other hand, there is a higher number of older women in the female group. The majority of the children died at the age of four years and below.

A set of incomplete anthropometric data has been obtained. However, the skull dimensions could be measured only with a fraction of the individuals, therefore, the results cannot be generalized. Despite the relatively poor condition of skeletal remains, nevertheless some conclusions about their appearance and way of life were possible.

**MAARANEN, Nina**  
Bournemouth University

### **Hidden in Bones - Tracking the Hyksos across the Levant**

Though the term Hyksos commonly refers to the rulers of the Egyptian Second Intermediate Period, it is also used to describe the larger population from which these rulers rose from. Archaeological, artistic and textual sources suggest a Levantine origin to the ‘Hyksos people’, however, whether this was a single homogenous group or several groups from a wider area, has remained uncertain.

Nonmetric traits, also called epigenetic or quasi-continuous traits, are normal variation of the human skeleton that remain hidden during life. The traits, though seemingly random in a single person, often have a genetic component that links biologically closely related people together, enabling an exploration of biological affiliations not only within, but also between populations.

As a non-invasive method, nonmetric trait analysis can be used to study biological closeness when there is no wish or possibility to use DNA analysis. An increasing number of nonmetric trait analyses are being conducted to skeletal human remains, creating trait distribution maps for a wider exploration of biological closeness. As part of the Hyksos Enigma project, nonmetric traits from skeletal human remains from Tell el-Dab’a, the ancient Hyksos capital of Avaris, are recorded. The results help to understand familial relationships within the site but also compare the site and its subgroups to Levantine sites, potentially offering new insight into the Hyksos origin and the wider migration of people in the Levantine area.

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**MOURAD, Anna-Latifa**  
Austrian Academy of Sciences

### **The Transformation of the Egyptian Storm God in the Second Millennium BC**

The dynamic network of interlinked trading powers and agents of the Middle and Late Bronze Age Near East featured not only the complex interactions of people and groups, but also of concepts and ideologies. Among the most prominent were those related to storm deities, whose roles included the control over weather phenomena and the sea, as well as links to kingship and diplomacy. As the paper discusses, the increasing Egyptian encounters with these concepts during the Middle and New Kingdoms evidently led to the transformation of the Egyptian storm god. Through the progression of cultural, social, and political events from Dynasties 12 to 19, certain elements in the conceptualisation of Seth were influenced and inspired by Near Eastern perceptions of the storm deity, the reasons for which are explored in the talk. Those of the late Twelfth to Fifteenth Dynasty were particularly instrumental in this transformation, with evidence indicating that the process of Seth’s syncretisation with a Near Eastern storm god had already initiated before the New Kingdom.

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**PRELL, Silvia**  
Austrian Academy of Sciences

### **So-called “Warrior Burials” in the Fertile Crescent**

So-called “warrior tombs” are burials including one or more metal weapon, which can be accompanied by other grave goods like personal items and pottery. The earliest examples are known from Early Bronze Age southeastern Anatolia from where the habit spreads via Northern Syria into Mesopotamia and the Levant. Often laid down as single burial they become quite common in the Middle Bronze Age in the Levant as well

as in the Eastern Delta of Egypt. Common weapons occurring in tombs are daggers, axes and spearheads; within the enclosed sets regional and chronological diversity is distinguishable. Despite the local deviation an overall concept seems to underlie this custom, which unifies the different regions for which this practice can be documented. In turn, in the Late Bronze Age the occurrence of this custom became limited to sites in the Southern Levant, before the practice was abdicated. Understanding the function and context of the interment of weapons as an ethnic marker and their cultic, ritualistic and religious associations might, together with a plot of their occurrences through time and space, help understand migration patterns and ethnicity of the people performing this kind of funerary custom.

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**PRIGLINGER, Elisa**  
Austrian Academy of Sciences

### **“One ticket to Egypt please!” – Possible Reasons for Human Migration during the First Half of the Second Millennium BC**

Human mobility has always been an integral part of a society. There are many reasons to leave a place and at least as many to settle in a particular other one. For a better understanding of this phenomenon, it is necessary to investigate the different possible push and pull factors and, most notably, their mutual interaction. Not every movement equals migration, and not all who have sought a new home have come to stay forever. These are aspects that we also need to look at, if we want to get closer to questions of ancient mobility. This contribution will present as a case study the influential dynamics leading to migration towards Egypt during the first half of the Second Millennium BC. Its interdisciplinary approach considers climate and environmental studies as well as theoretical reflections on identity and ethnicity. It also raises the question of how long one is regarded as "foreign" and when an individual is considered one of them. Last but not least, the question must also be discussed to what extent such movements can be detected in material culture, exploring the analysis of archaeological remains for the study of human migration in the past.

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**SACCO, Arianna**  
Leiden University

### **Connecting the Dots: Using Network Analysis to Examine the Second Intermediate Period**

The Second Intermediate Period is a part of Egyptian history during which Egypt was divided politically and culturally, with groups of foreigners playing a crucial role. The Hyksos Dynasty, of Levantine origins, ruled the north, while in the south archaeological evidence suggests the presence of Nubians (i.e. the Pan-grave culture).

There is still much debate regarding the definition of different regions and how they interacted with each other. How did these regions influence one another? How did their relationships evolve from the end of the Middle Kingdom to the beginning of the Second Intermediate Period? What were the contributions of foreigners to the culture of Egypt during this period?

In this paper, I focus on the methodology that I use to investigate these issues in my PhD research. I will show how examining the material culture of the Second Intermediate Period through network analysis can contribute to further understanding of this period. For this paper, I will illustrate my methods using an analysis of stone vessels and beads.

STANTIS, Christina – SCHUTKOWSKI, Holger  
Bournemouth University

### **Bioarchaeological Investigations of Hyksos Identity and Origins**

Research track 7 of the Hyksos Enigma project focuses on characterizing the Hyksos in comparison with other Egyptian and Near Eastern populations through the study of their skeletal remains. With collaboration from universities and museums worldwide, RT7 seeks to integrate paleopathology, ancient DNA, stable isotopes, and morphological studies on the human remains from Tell el-Dab'a and other Levantine sites to pinpoint similarities (and differences) across the region.

This presentation highlights the aims of this research track and the preliminary work that has been carried out by those on the RT7 team, with a special focus on stable isotope analyses. Strontium ( $^{87}\text{Sr}/^{86}\text{Sr}$ ) and oxygen ( $\delta^{18}\text{O}$ ) analyses will elucidate childhood residence of individuals, while carbon, nitrogen, and sulfur ( $\delta^{13}\text{C}$ ,  $\delta^{15}\text{N}$ ,  $\delta^{34}\text{S}$ ) will provide clues about cultural groupings related to diet and socially- and ecologically-mediated food access. Though isotope analyses on this scale will take time to provide statistically meaningful insights, we discuss our experiences of baseline collection, initial collection endeavors, and research expectations to set the stage for what evidence we might provide regarding “the Hyksos Enigma”.

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VILAIN, Sarah  
Austrian Academy of Sciences

### **Is Imitation the Sincerest Form of Flattery? New Light on Local Productions Inspired by Cypriot Wares at Tell el-Dab'a during the Second Intermediate Period**

The excavations at Tell el-Dab'a, led from 1966 onwards, showed that ancient Avaris was a major harbour town and a trading centre of international importance. As a testimony of extended connections with the Eastern Mediterranean, the site has produced the largest collection of Middle Cypriot pottery in Egypt. However, apart from genuine imports, the excavations also yielded an unequalled assemblage of local vessels imitating Cypriot prototypes or inspired by them. Whereas Cypriot imports at Tell el-Dab'a are attested from Phase G onwards, these local productions have their own independent development within the site's stratigraphy. In this paper, we will explore the concept of imitation as well as its economical and socio-cultural implications. The specific characteristics of locally produced vessels will be enlightened, with peculiar attention to manufacturing processes and decoration painting techniques. Through the example of a group of local jugs painted according to the Cypriot *Pendent Line Style*, it will be argued that the increase of local productions in Phase E/3 should be perceived as a sign of a crisis that then affects trading connections at Tell el-Dab'a.

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WODZIŃSKA, Anna  
Institute of Archaeology, University of Warsaw

### **Tell el-Retaba during Second Intermediate Period. Pottery and People**

Tell el-Retaba is located in the middle of Wadi Tumilat in the eastern Nile Delta, approx. 35 km west of the modern town Ismailia. Based on recent work of the Polish-Slovak Archeological Mission we know that the site was occupied during the Second Intermediate Period, especially in its very early stage, which means the early 15<sup>th</sup> Dynasty. Large fragments of a cemetery and adjacent domestic dwellings dating to the 15<sup>th</sup>

Dynasty were discovered. Pottery taken as evidence proves that the Second Intermediate Period settlement was occupied until the beginning of the 18<sup>th</sup> Dynasty.

The pottery from Tell el-Retaba is a very good material for dating and it can tell us more about the people who used it. It seems that ceramic vessels were mostly produced locally according to the local tradition associated with the Hyksos. The material shows a variety of forms, but in comparison to the corpus found in Tell el-Dab'a is rather less prominent.

It is interesting to note that the pottery from Tell el-Retaba dramatically changes at the beginning of the New Kingdom. The change can be clearly associated with the new political situation. However, it seems that the pottery was still used by the same local community.

## 15. Phoenicians in Phoenicia: New Directions and Recent Discoveries

This workshop explores ongoing and rapidly increasing archaeological research in the Phoenician Levantine homeland, geographically spanning the coastal regions of the modern states of Syria, Lebanon, and northern Israel. This new evidence is reshaping our understanding of Phoenician religion, daily life, industries, commerce, economy, history, and culture during the Iron Age through the Persian period (ca. 1000 – 300 BCE). Papers will focus on the ways in which new discoveries are transforming the conventional academic picture of Phoenicia and will highlight areas where methods or research questions can be productively redirected. The workshop will comprise two sections: The first session will focus on archaeological and synthetic work from the Northern Levant (Lebanon and Syria), while the second session will address Phoenician sites in the Southern Levant (Israel). While the aims of the sessions are to share recent and especially yet-unpublished findings and researches, the ultimate goal of the workshop is to integrate ongoing work from the entire Phoenician coast to reconstruct a trans-regional holistic picture, with implications for the archaeology, history and, religion of the wider eastern Mediterranean.

### Organizers

**CHARAF, Hanan**  
Lebanese University

**DIXON, Helen M.**  
Wofford College

**KILLEBREW, Ann**  
Pennsylvania  
State University

### Participants (in alphabetical order) List of Lectures Abstracts

**ARTZY, Michal**  
Hatter Laboratory, Recanati Institute for Maritime Studies,  
University of Haifa

**AUBET, Maria-Eugenia**  
Universidad Pompeu Fabra

**AZNAR SANCHEZ, Carolina**  
Saint Louis University, Madrid

**BRODY, Aaron**  
Pacific School of Religion

**CHARAF, Hanan**  
Lebanese University

**DIXON, Helen**  
Wofford College

**GILBOA, Ayelet**  
University of Haifa

**JASMIN, Michael**  
Orient et Méditerranée, URM 8167, Centre National de la  
Recherche Scientifique

**KILLEBREW, Ann E.**  
The Pennsylvania State University and Recanati Institute for  
Maritime Studies, University of Haifa

**LEHMANN, Gunnar**  
Ben Gurion University

**SHARON, Ilan**  
Hebrew University of Jerusalem

**OGGIANO, Ida**  
Consiglio Nazionale delle Ricerche, Istituto di Studi sul  
Mediterraneo Antico

**PEDRAZZI, Tatiana**  
Istituto di Studi sul Mediterraneo Antico

**SADER, Hélène**  
American University of Beirut

**SCHMITT, Aaron**  
Johannes Gutenberg-Universität Mainz

**THAREANI, Yifat**  
Nelson Glueck School of Biblical Archaeology, Hebrew Union  
College



## List of Lectures

### Northern Levant session Chairs: Hanan Charaf – Helen Dixon

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09:30	Helen Dixon	Digitally Reconstructing Phoenician Sacred Space in the Northern Levant
10:00	Maria-Eugenia Aubet	Excavations at Tyre
10:30	Ida Oggiano	Excavations at the Site of Jemjim, Southern Lebanon
11:00 Coffee break		
11:30	Tatiana Pedrazzi	Phoenician Storage Jars from the Site of Jemjim, Southern Lebanon
12:00	Hélène Sader	Excavations at Tell Burak
12:30	Aaron Schmitt	Results from the Survey in Southern Lebanon
13:00 Lunch break		
<b>Southern Levant session</b> Chair: Ann Killebrew		
14:00	Ayelet Gilboa Ilan Sharon	Dor and the Definition of Early Phoenicianism
14:30	Carolina Aznar Sanchez	Phoenicians in the Southern Akko Plain: Recent Discoveries
15:00:	Michael Jasmin Yifat Thareani	Aspects of the Phoenician Religion: Clay Cultic and Mortuary Masks
15:30	Ann Killebrew	Reconstructing Phoenician Iron Production at Tel Akko, Israel
16:00 Coffee break		
16:30	Michal Artzy	Searching for Tel Akko Phoenician Anchorage/Harbor
17:00	Aaron Brody	Iron IIA/IIB Ceramics from Tel Akko's Area H: Typological Conclusions and Phoenician Connections

## Abstracts

**ARTZY, Michal**

Hatter Laboratory, Recanati Institute for Maritime Studies, University of Haifa

### Searching for Tel Akko Phoenician Anchorage/Harbor

The history and habitation of Tel Akko, Akko/Acre is intertwined with the bay, the coastline and the River Belos/Na'aman. As Akko is one of the oldest continuously inhabited maritime cities in the world, these were the factors contributing to its position as focus of terrestrial and maritime crossroads, north south and east west. Periodic geomorphological changes, including the coastline and the river course, affected anchorage positioning and habitation patterns. Over the last four thousand and more years, since the earliest habitation in the area of Akko, many changes have occurred, thus today's landscape is different from those of the past. During 2<sup>nd</sup> and 1<sup>st</sup> half of the 1<sup>st</sup> millennia BCE, the anchorages were likely located near and south of the ancient mound of Tel Akko and the estuary of the Na'aman River. It was only in the Hellenistic period, that an artificial harbor was constructed in the Bay of Akko.

Literary and archaeological sources support our hypothesis that an active Phoenician harbor was maintained in Akko, which in turn served the Persian army in its quest for the conquest of Egypt. The question we ask is where that anchorage/harbor was located. In the past, A. Raban and M. Dothan positioned that harbor in the present bay, with a construction, named: The 'Tower of the Flies' still visible today, being a part of it. Underwater excavation and a present survey of published salvage excavations in and around the geographical area bordering the modern harbor, 'Acre's Old City', have not revealed any remains from the Persian period. On the tell, material goods dating to that period abound. Taking into consideration the changes in the coastline over time and its relation to the tell and the river, examined by means of non-destructive methods, such as GPR, ERT, cores, C<sup>14</sup>, micro faunal and other analyses together with limited excavations, we, as part of the Tel Akko Total Archaeology Project, propose that the anchorages/proto-harbors, including the one serving the 'Phoenicians', were positioned below the southern foothill of the of the tell.

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**AZNAR SANCHEZ**, Carolina  
Saint Louis University, Madrid Campus

### **The Phoenicians in the Southern Plain of Akko**

The Southern Plain of Akko Project, a joint project of the Madrid Campus of Saint Louis University and the Leon Recanati Institute for Maritime Studies of the University of Haifa, is providing new information on the history of the region around the lower Kishon River and its subsidiaries. A regional survey and excavations at the site of Tel Regev (Tel Harbaj in Arabic), a site located next to the entrance to Jezreel Valley, have yielded Phoenician remains of the Iron Age II and of the Persian Period that reveal the interest the Phoenicians had in the area during those periods. In this paper we will discuss some of the Phoenician materials retrieved as well as their historical significance.

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**BRODY**, Aaron  
Pacific School of Religion

### **Iron IIA/IIB Ceramics from Tel Akko's Area H: Typological Conclusions and Phoenician Connections**

The repertoire of Iron II ceramics excavated during the Dothan project in Area H at Tel Akko is quite rich. The best remains are limited to the southeastern corner of Area H, suggesting that the city is concentrated around the acropolis in this phase. The abundant variety of Iron II ceramics is attested in the 66 types we have established. Each one of these categories has a temporal range determined based on comparative evidence, since the sequence in Area H is not continuous. Out of these 66 ceramic categories, only 3 do not occur in Iron IIA or Iron IIB levels at sites in Phoenicia and the southern Levant. This confirms a date for this phase to the transition period between Iron IIA /Iron IIB. The ceramics show characteristics related to both northern Palestine and southern Lebanon, suggesting the role of the Akko Plain as a transitional region between northern Israel and the heartland of Phoenicia. There are a few ceramics from southern Palestine, as well as pottery imported from Cyprus, Lebanon, East Greece, and Egypt, attesting to Akko's trade networks and importance as a port city in the late Iron Age.

**GILBOA, Ayelet**  
University of Haifa  
**SHARON, Ilan**  
Hebrew University of Jerusalem

### **Dor and the Definition of Early Phoenicianism**

It is no news that the use of Greek Φοινίκη and its derivatives for the Levantine Iron Age is anachronistic. Yet we all keep using the term, for reasons that are usually not made explicit. Nevertheless, we favor the Phoenician epithet to characterize Dor, especially in the early Iron Age (12<sup>th</sup> – mid 9<sup>th</sup> centuries). This use conveys our conviction that culturally and economically, the site should be clustered with regions to its north – the Akko plain and south Lebanon, and divorced from its commonplace association with Philistia – the “Sea Peoples” territory to its south.

During this period, after the Late Bronze Age collapse, one can follow at Dor phenomena such as the endurance of maritime traditions; commercial entrepreneurship; extensive and bi-directional contacts with Egypt and Cyprus, as well as the endurance of arts and knowhow that were “lost” at the end of the Bronze Age and “born again” in the 9<sup>th</sup> – 8<sup>th</sup> centuries BCE. Indeed, at the current state of research, Dor is the prime example of these processes at that age, more so than at any other site in the Levant. It is exactly these phenomena, which, we claim, define Phoenicianism; and were prerequisite for the far-flung endeavors in the later Iron Age. Eventually, however, Phoenician maritime expansion was spearheaded by Tyre and Sidon and not by Dor or Akko. This is a development that we are still trying to explain.

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**JASMIN, Michael**  
Orient et Méditerranée, URM 8167, Centre National de la Recherche Scientifique  
**THAREANI, Yifat**  
Nelson Glueck School of Biblical Archaeology, Hebrew Union College

### **Aspects of Phoenician Religion: Clay Cultic and Mortuary Masks**

What are the ritual and mortuary practices related to the numerous clay masks found in tombs and on sites in the Levant? What were their uses and function? This presentation will focus on the 2016 discovery at Tel Achziv of a clay mask mold from an Iron IIA *in situ* context. This unique object was associated with an assemblage of complete vessels including bowls, jars, chalices, and goblets), which also served a specific role. The cultural aspects related to this mask mold will be examined together with the 2017 discovery of a Phoenician tomb at Tel Achzib.

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**KILLEBREW, Ann E.**  
The Pennsylvania State University and Recanati Institute for Maritime Studies, University of Haifa

### **Reconstructing Phoenician Iron Production at Tel Akko, Israel**

The 22-hectare maritime harbor settlement of Tel Akko has dominated the Plain of Akko’s ancient landscape for millennia. First inhabited in the Early Bronze Age, Tel Akko served as a major urban center for most of the second and first millennia BCE. Current excavations of the Tel Akko Total Archaeology Project, directed by A.E. Killebrew and M. Artzy under the auspices of the University of Haifa and the Pennsylvania State University, focus on the late Iron Age and Persian Period (ca. 8<sup>th</sup> – early 4<sup>th</sup> centuries

BCE) Phoenician city in Area A, located at the summit of the mound. Here huge quantities of iron slag and remnants of iron working spanning the 7<sup>th</sup> – 4<sup>th</sup> centuries BCE have been uncovered. This mid-first millennium smithy, the only known iron working facility in the Levant dating to the Late Iron and Persian periods, provides an unparalleled opportunity to explore iron production at a Phoenician maritime center. This paper presents the preliminary results of eight seasons of excavation at Tel Akko of this largescale iron industrial area, including sources of iron ore, modes of production and remains of possible ritual practices. The significance of iron production at Tel Akko is contextualized in its Phoenician cultural milieu and its role within the Neo-Assyrian and Persian empires.

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**LEHMANN, Gunnar**  
Ben Gurion University

### **Phoenicians in the Akko Plain**

The paper discusses the expansion of the city-state of Tyre into the Akko plain. The region is considered to be part of "Southern Phoenicia" and the discussion focuses on the political economy and Phoenician involvement in the area during the Iron Age. Historical and archaeological sources are investigated with an emphasis on settlement pattern, architecture and ceramics.

## 16. Reconstructing Destruction: New Trajectories in the Macro- and Micro-Archaeological Research of Destruction Layers in the Ancient Near East

This workshop aims at presenting new perspectives in the study of destruction layers and the destruction process of structures in the Near East. The destruction of a building or a city is one of the most visible events in the archaeological record, usually characterized by floors covered by a thick layer of ash, charcoal, broken pottery and artifacts, thick accumulations of mud brick collapse and sometimes skeletal remains of trapped victims. Due to the wealth of finds, and the assumed rapidity of the process, these layers play a prominent role in establishing chronologies, in the study of household and daily life, and in attempting to correlate events known from literary sources such as natural disasters and military campaigns with the archaeological evidence. Furthermore, when the destruction of a city was premeditated, the destruction layer may allow a glimpse into the decision-making processes of the destroyers.

In recent years more studies concentrate on the examination of the spread and duration of fire, the collapse of structures, intentional (or unintentional) breakage of pottery and other artifacts and the identification of crisis that took place before the destruction. These are complex processes that require a multidisciplinary approach. One of the greatest stimulants of this wave of studies is the advancement in the field of archaeological sciences that offers new lines of evidence related to the identification of materials, the temperatures they were exposed to and the understanding of formation processes.

In this workshop, we wish to bring together scholars who explore various topics related to destruction events in the ancient Near East. This will enable to critically review and discuss new results and techniques and their potential implications to the study of the topic. Hopefully, this will facilitate a fruitful dialogue that will boost the study of these terminal events.

### Organizers

**KREIMERMAN, Igor**    **SHAHACK-GROSS, Ruth**

The Hebrew University of Jerusalem, Israel    University of Haifa, Israel

### Participants (in alphabetical order)

**AGNON, Amotz**  
The Hebrew University of Jerusalem

**DAGAN, Amit**  
Bar Ilan University

**EBERT, Yael**  
The Hebrew University of Jerusalem

**FINKELSTEIN, Israel**  
Tel Aviv University

**FORGET, Mathilde**  
Weizmann Institute

**GADOT, Yuval**  
Tel Aviv University

**GARFINKEL, Yosef**  
The Hebrew University of Jerusalem

**HASSUL, Erez**  
The Hebrew University of Jerusalem

**KLEIMAN, Sabine**  
Tel Aviv University

**KREIMERMAN, Igor**  
The Hebrew University of Jerusalem

**LIPSCHITS, Oded**  
Tel Aviv University

**MARCO, Shmuel**  
Tel Aviv University

**NOWACZYK, Norbert**  
Potsdam

**ORTIZ, Steven**  
Tandy Institute for Archaeology,  
Southwestern Baptist Theological Seminary

**SANDHAUS, Dèbora**  
Tel Aviv University

**HELMS, Tobias**  
Johannes Gutenberg Universität, Mainz

**HOMSHER, Robert**  
Center for Geographic Analysis, Harvard University

**SHAAR, Ron**  
The Hebrew University of Jerusalem

**SHAHACK-GROSS, Ruth**  
University of Haifa

## List of Lectures

	<b>Lecturer</b>	<b>Title</b>
9:55	Igor Kreimerman Ruth Shahack-Gross	Introduction
10:00	Steven Ortiz	Gezer Destructions: A Case Study of a Border City
10:30	Tobias Helms	Killing in the Name of – the destruction of Tell Chuera’s main ceremonial complex in the EJ 3a-period
11:00	<b>Coffee Break</b>	
11:30	Dèbora Sandhaus	Nysa-Scythopolis: Test Case for Destruction and Abandonment Processes
12:00	Sabine Kleiman Yuval Gadot Oded Lipschits	Disaster in context – investigating a Late Bronze destruction layer at Tel Azekah
12:30	Amit Dagan	At the foot of the mound and along the river bank ... preservation of the destruction layer of the lower city of Biblical Gath
13:00	<b>Lunch Break</b>	
14:00	Igor Kreimerman, Ruth Shahack Gross Yosef Garfinkel	Understanding Conflagration of Mud-Brick Structures at Tel Lachish: Integrating Macro- and Micro-Archaeology
14:30	Ruth Shahack-Gross Mathilde Forget Ron Shaar Robert Homsher Erez Hassul Yael Ebert Shmuel Marco Norbert Nowaczyk Israel Finkelstein Amotz Agnon	Destruction by Fire: The Importance of Understanding Construction Methods and the Effect of Heat on Mud Bricks
15:00	<b>Discussion</b>	

## Abstracts

**DAGAN, Amit**  
Bar Ilan University

### **At the foot of the mound and along the river bank ... preservation of the destruction layer of the lower city of Biblical Gath**

In this lecture, I will present the findings of the excavations of the lower city of the Biblical Gat, Tel es-Safi/Gath. Twelve seasons of excavation uncovered remains of residential buildings, ritual and industrial structures and various installations. The location of the lower city at the foot of the mound on its northern side sheds light on the various forms of life and building techniques used in the city. Despite the proximity of the finds to the surface, the level of preservation is extremely high. The high level of preservation of the

finds at the site raises several questions that deal with the influence of erosion on the level of preservation of the finds, the various construction techniques and their durability against external conditions, the impact of conflagration on archaeological finds and later human activities at the site.

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**HELMS, Tobias**  
Johannes Gutenberg Universität, Mainz

### **Killing in the Name of – the destruction of Tell Chuera’s main ceremonial complex in the EJ 3a-period**

Around the mid of the 25th century BCE, the main ceremonial complex of the site of Tell Chuera (North Syria) was destroyed in a violent event, when parts of the building complex were set ablaze. Many areas around the temple district excavated between 1959 and 2009 yielded the mortal remains of people – adults as well as children – who most probably met a violent death and whose bodies remained unburied. The paper reevaluates published as well as unpublished excavation data that can be related to this destruction context. It aims to reconstruct the violent event by drawing on a “criminological” reading of the finds and a GIS-based mapping of the available contextual and skeletal data. In a next step, the traces from the temple will be compared to contemporaneous destruction contexts discovered in other parts of the site. To conclude with, several scenarios will be presented that might explain why and in the name of whom the violence erupted. Instead of taking a historicizing view on the destruction events, it will be attempted to interpret the archaeological data in the light of recent reconstructions of the sociopolitical organization of the Early Bronze Age. Such an approach must include a perspective that integrates the possibility of inner-societal conflict and the consequences of social and economic contradiction arising during a period characterized by the formation and interaction of North Mesopotamia’s early city-states.

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**KLEIMAN, Sabine – GADOT, Yuval – LIPSCHITS, Oded**  
Tel Aviv University

### **Disaster in context – investigating a Late Bronze destruction layer at Tel Azekah**

During the excavation of the Lautenschläger Azekah Expedition, a destruction layer was unearthed at Tel Azekah, Israel. Remnants of this destruction are found in almost all of the excavation areas, meaning this was a wholesale destruction of the city. In Area T2, located at the summit of the tell, an enormous number of ceramic and a multitude of small finds were found in the context of a violently destroyed building, which could be dated to the final years of the Late Bronze Age. Several individuals, including three adolescent woman and a young man, were found trapped under the debris, probably due to the sudden and unexpected nature of the catastrophe.

These context provides an excellent opportunity to combine traditional archeological approaches and modern scientific methods for the investigation of ancient human behavior before and during the catastrophe and the surrounding historical events. In the lecture we will present the field method applied during this study, starting with the registration in the field and up to the different post-excavation inquires, such as spatial study of activity areas, ceramic typology, residue analysis, and physical anthropology studies. In the presentation will stress the importance of site formation analysis on a macro level for achieving an accurate interpretation of the archaeological evidence.

**KREIMERMAN, Igor**  
The Hebrew University of Jerusalem  
**SHAHACK-GROSS, Ruth**  
University of Haifa  
**GARFINKEL, Yosef**  
The Hebrew University of Jerusalem

### **Understanding Conflagration of Mud-Brick Structures at Tel Lachish: Integrating Macro- and Micro-Archaeology**

During the Fourth Expedition to Lachish in 2014–2017 several Bronze Age destruction layers have been excavated, including evidence for burning. Macroscopic observations coupled with mineralogical analyses highlighted a few observations that were difficult to explain – some walls ca. 1.5 meters thick were burnt through, other walls showed that the upper courses were exposed to higher temperatures than lower courses. In one structure only mud-bricks of internal walls were preserved in-situ, while all evidence showed that also the external walls had a mud-brick superstructure. To explain these observations a series of experimental burnings of miniature mudbrick structures was carried out. Measurements conducted during and following the burning experiments produced a few repeatable patterns that can serve as models for archaeological interpretation. We will present these models and apply them to explain some of the phenomena observed at Tel Lachish, and when possible reconstruct destruction processes of entire buildings.

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**ORTIZ, Steven**  
Tandy Institute for Archaeology, Southwestern Baptist Theological Seminary

### **Gezer Destructions: A Case Study of a Border City**

The Tandy Excavations, under the direction of Steve Ortiz and Sam Wolff have just concluded 10 seasons of excavations. This project has excavated five major destructions from the LBIII to IA IIB (13th-8th century BCE). These destructions have been associated with military campaigns from outside (Egyptian, Aramean, and Assyrian). This paper will present an overview of the nature these destructions, the preservation of the archaeological record, and possible historical reconstructions (e.g. military campaigns or earthquakes). The paper will be programmatic and attempt to isolate the variables associated with archaeological destructions in the reconstruction of past events. Emphasis will be placed on a contextual approach to the identification of destructions in the archaeological record within the framework of a behavioral archaeology model.

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**SANDHAUS, Dèbora**  
Tel Aviv University

### **Nysa-Scythopolis: Test Case for Destruction and Abandonment Processes**

The renewed excavations by the Israel Antiquities Authority were conducted in Beth She'an, Tel Husan and Tel Iztaba. The results of the excavations indicate that the Hellenistic city, identified as Nysa-Scythopolis, flourished and expanded during the second century BCE.



A fierce destruction layer was discovered in a domestic quarter in the city (Area XK). This destruction was represented by a thick layer of burnt debris and an assemblage of finds in situ. Inside the houses, two different floors were identified. The upper one included finds and pottery vessels that were scattered among the mud-bricks collapse, above the remains of the first floor ceiling. The lower floor included finds and pottery vessels lying on the floor within a thick debris level.

This lecture aims to confront the archaeological picture with the literary sources that describe a "peaceful" surrender (e.g. Josephus XII, 10, 3). Can we talk about a slow and complex pre-planned abandonment process? Or was it a quick and surprising, unplanned abandonment?

In order to tackle these questions the spatial distribution of the assemblage found inside one of the houses would be examined. In this manner, the processes of abandonment and destruction involved in the anticipation to- and the final invasion of the Hasmonean army would be evaluated.

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**SHAHACK-GROSS**, Ruth

University of Haifa

**FORGET**, Mathilde

Weizmann Institute

**SHAAR**, Ron

The Hebrew University of Jerusalem

**HOMSHER**, Robert

Center for Geographic Analysis, Harvard University

**HASSUL**, Erez – Ebert, Yael

The Hebrew University of Jerusalem

**MARCO**, Shmuel

Tel Aviv University

**NOWACZYK**, Norbert

Potsdam

**FINKELSTEIN**, Israel

Tel Aviv University

**AGNON**, Amotz

The Hebrew University of Jerusalem

### **Destruction by Fire: The Importance of Understanding Construction Methods and the Effect of Heat on Mud Bricks**

Destruction by fire is a globally-known archaeological phenomenon with various manifestations in the Ancient Near East. A recent project conducted at Tel Megiddo (2012-2016) focused on the study of a massive destruction event (Stratum VIA of the late Iron Age I; ca. 1000 BCE) using a geoarchaeological approach. FTIR spectroscopy analyses conducted during the 2012 season indicated that mud bricks found at the destruction level are homogeneously heated to about 600°C. This observation posed the question whether the site was constructed from sun-dried or pre-fired mud bricks. An archaeomagnetic study of burned mud brick wall segments provides an answer, suggesting that construction in the past was done with sun-dried mud bricks and that wall segments burned intact, sometimes remaining in situ and sometimes collapsing before, during, or after burning. To understand the manner in which sun-dried mud bricks behave during a conflagration event, we conducted several sets of laboratory-based experiments using model bricks that were fired under different conditions. Using this variety of geoarchaeological methods we show how the Stratum VIA destruction event can be untangled to components such as spatial temperature patterns and directions of architectural collapse, and propose areas of ignition and fire path spread.

## 17. Glazed Brick Decoration in the Ancient Near East

During the last decade a number of excavations yielded new evidence for glazed bricks and its decoration in the Iron Age public architecture of the Ancient Near East, and also the work on glazed bricks excavated around a hundred years ago, nowadays stored in various museum collections was revived.

One main topic will be the use of glazed bricks and their positioning in the decoration of public buildings of the 1st millennium BC. The spectrum of the varied imagery of glazed brick façades and panels in temples and palaces shall be presented and compared, in order to better understand the underlying visual concepts. The workshop “Glazed Brick Decoration in the Ancient Near East” furthermore aims to establish a network for researchers working on glazed bricks in order to exchange information and experience on scientific analysis methods, appropriate conservation measures, optical imaging and visualisation techniques. The focus will be laid on the development of glazing technologies from the early Neo-Assyrian time onwards. The brick manufacturing processes, the use and variety of fitter’s marks, epigraphic and figural stamp impressions and other auxiliary marks could be discussed. Another possible area to focus on could be the interconnection between the availability of the glaze ingredients, the state of the glazing technology and the development of the color range through time.

### Organizers

**GRIES, Helen FÜGERT, Anja**

Vorderasiatisches Museum Berlin

### Participants (in alphabetical order)

**ABDALI, Negar**  
University of Heidelberg

**FÜGERT, Anja**  
Vorderasiatisches Museum Berlin

**GRIES, Helen**  
Vorderasiatisches Museum Berlin

**HOLAKOOEI, Parviz**

**LEHMANN, Manuela**  
British Museum London

**PEDERSÉN, Olof**  
Uppsala University

**SCHMIDT, Katharina**  
Deutsches Evangelisches Institut für Altertumswissenschaft,  
Amman

**SOLDI, Sebastiano**  
National Archaeological Museum, Florence – University of  
Tübingen

**TALLIS, Nigel**  
British Museum London

**THOMAS, Ariane**  
Louvre Paris

## List of Lectures

	Lecturer	Title
9:00	Anja Fügert Helen Gries	Introduction
<b>Glaze Technology</b>		
9:30	Parviz Holakoei	Glaze Technology in the Iron Age Iran and Iraq: An Overview
10:00	Katharina Schmidt	Iron Age Mesopotamian Glass Technology
<b>Glazed Bricks from Assyria</b>		
10:30	Manuela Lehmann Nigel Tallis	Glazed Tiles From Nimrud And The Visual Narrative Of Esarhadon's Egyptian Campaign
11:00 Coffee break		
11:30	Ariane Thomas	Glazed Bricks from Khorsabad
12:00	Anja Fügert Helen Gries	The Reconstruction of the Glazed Brick Facades from Ashur in the Vorderasiatisches Museum (GLAssur-Project)
12:30	Sebastiano Soldi	Glazed Architectural Ceramics in the Iron Age Northern Levant: Two Case Studies from Zincirli and Tell Afis
13:00 Lunch break		
<b>Glazed Bricks from Iran and Babylonia</b>		
14:00	Negar Abdali	An Introduction to the Technical Analysis of Iranian Glazes from the Middle Elamite to the Achaemenid Period. Case Study: The Turquoise Glaze from Qalaichi
14:30	Olof Pedersén	Glazed Brick Decoration in Babylon

## Abstracts

**ABDALI, Negar**  
University of Heidelberg

### **An Introduction to the Technical Analysis of Iranian Glazes from the Middle Elamite to the Achaemenid Period. Case Study: The Turquoise Glaze from Qalaichi**

In addition to the archaeological study of Iranian glazed objects, samples of glazed bricks became available through official channels for petrological and microprobe analyses in the Steinmann Institute of Bonn University.

To illuminate the technology of manufacture, including the methods of production, the use of colorant agents and flux and the fabrication of the terra cotta and to also identify raw and batch materials we applied physical analysis of the ancient glazes in Iran for the time-span 1450–330 BCE.

In addition to interpreting the manufacturing technology, the analytical results also serve to compare the industries which produced glazes from Middle Elamite to Achaemenid period with the vitreous material

industries of the Iron Age NW-Iran. The results of these analyses are to be compared with the iconographic studies of the glazed images found on the objects.

For the archaeometric collaborative study high-quality polished thin sections of 21 glazed artefacts from West Azerbaijan and Kurdistan Provinces / Iran (Qalaichi, Rabat, Hasanlu and Ziwiye) and 24 samples from SW-Iran (Chogha Zanbil, Susa and Persepolis) were prepared. The Urmia Museum, the Susa Museum, the Persepolis Museum, the National Museum of Iran in Tehran, the Louvre in Paris and the Vorderasiatisches Museum in Berlin kindly cooperated with us.

In addition to introducing the petrographic and microscopic analysis the results of one of the samples of turquoise glaze from Qalaichi will be explained briefly.

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**FÜGERT, Anja – GRIES, Helen**  
Vorderasiatisches Museum Berlin

### **The Reconstruction of the Glazed Brick Facades from Ashur in the Vorderasiatisches Museum (GAssur-Project)**

The aim of this paper is to present the glazed brick material from Ashur and to discuss appropriate research strategies. Around 3000 glazed bricks and brick fragments from the Temple of Ashur in Ashur are kept in the Vorderasiatisches Museum in Berlin. Most of these hitherto unpublished bricks were originally part of huge panoramas which decorated the Temple of Ashur in Ashur, the principal sanctuary of Assyria. They date from 8<sup>th</sup> and 7<sup>th</sup> cent. BC.

The glazed brick panoramas show a very diverse range of themes that includes warfare scenes and the conquest of several cities by the Assyrian army as well as the deportation of noble families of the conquered regions and cities. Further bricks and brick fragments proof that other parts of the temple bore a purely ornamental decoration and that also gods, genies and religious scenes were shown on the temple walls.

The positioning of the glazed brick panoramas will be discussed and compared to the glazed brick decoration found in other public buildings of the period. Their different dates of origin and stratigraphical contexts as well as the variety of the numerous fitters' marks and stamp impressions will be presented. Insights gained about the brick manufacture process, formats and the applied building procedures will be offered. Planned scientific analyses that shall provide information on the composition of the glazes and the use of opacifiers and colouring agents will be discussed.

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**HOLAKOOEI, Parviz**

### **Glaze Technology in the Iron Age Iran and Iraq: An Overview**

The glaze industry in Mesopotamia emerged in the Late Bronze Age and experienced a major change during the Iron Age (IA). The IA in Mesopotamia coincides with important advances in pyrotechnology. Not only was there a shift from bronze to iron but major changes occurred in other industries including glass and glaze technologies. Various colours and opacifiers were introduced to the glaze industry and a variety of glazed materials was used as tableware, architectural decorations and decorative and ritual objects. The core data of this paper are acquired through the previous scientific studies of the author on the IA glazed materials from Susa, Persepolis, Tepe Rabat, Hasanlu, Nimrud and Borsippa, and the scientific data published on the IA glaze technology of Mesopotamia. This article discusses the use of alkali glazes and the probable source of alkalis used as flux in the IA glazes in Iran and Iraq. Moreover, a discussion on the opacifiers (including antimonates, stannates and sulphides) used in the glazes and the

effect of the surrounding glaze matrix on their formation is provided. Moreover, the occurrence of sodium antimonate (brizziite,  $\text{NaSbO}_3$ ) in the antimony-incorporated alkali glazes and the simultaneous occurrence of various antimonates (sodium, calcium and lead antimonates) in a single glaze are evidenced. Furthermore, interchanged characteristics of glaze manufacturing, glass production and the influence of metallurgical advances on the glaze industry of this period in Mesopotamia are highlighted.

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**LEHMANN, Manuela – TALLIS, Nigel**  
British Museum London

### **Glazed Tiles From Nimrud And The Visual Narrative Of Esarhaddon's Egyptian Campaign**

In 2016, the authors undertook the first comprehensive study of a group of polychrome glazed tile fragments excavated at Nimrud in December 1849 during the second excavation campaign in Assyria of Austen Henry Layard (1817-1894) from September 1849 to May 1851.

While Layard's work at Nimrud is now most closely associated with excavations at the North-West Palace, this material was from the vicinity of what later became known as Fort Shalmaneser and most probably dates from the refurbishment of this area by Esarhaddon in the 7th century BC. Almost uniquely for Assyrian art, the decoration of the tiles clearly depicted scenes in Egypt, but despite the fact that the nature and narrative content of the tile fragments was recognised as unusual and significant even at the time of discovery, and have since attracted much attention among scholars, no proper description or study in combination with complete drawings to scale and colour photographs of all known fragments had ever been produced or published.

During the course of our work a number of hitherto unknown fragments were located and for the first time many crucial new joins were identified. This substantially transforms our understanding of this material, further reinforcing its unrecognised importance in the development of Assyrian art, both as a record of cultural exchange in a key moment of close Assyrio-Egyptian interaction and in the use of glazed tile for innovative monumental narrative schemes otherwise known mainly in stone or wall painting.

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**PEDERSÉN, Olof**  
Uppsala University

### **Glazed Brick Decoration in Babylon**

Short overview of the use of glazed brick as decoration in Babylon. The two main types of glazed brick, the chronological distribution of the different types of glazed bricks in Babylon, the use of glazed bricks in different buildings in the city, flat and relief glazed brick decoration, unglazed brick decoration before the glazed brick decoration, and inscribed glazed bricks.

**SCHMIDT, Katharina**

Deutsches Evangelisches Institut für Altertumswissenschaft, Amman

### **Iron Age Mesopotamian Glass Technology**

This paper discusses glass objects of the little known Iron Age period in Mesopotamia and contributes to the history of glass by bridging the gap between the Late Bronze Age and the Hellenistic periods, both of which periods have been relatively well studied.

The paper considers archaeological, philological, archaeometrical and experimental sources, and aims to focus on significant developments in the history of glass, including technological (manufacturing techniques) as well as chemical (composition of the glass) aspects. The major focus will be drawn to the group of so-called “cast and cut” vessels and inlays made of monochrome translucent and decolorized glass, as they not only epitomize chemical changes in their compositions, but also vary from earlier Late Bronze Age examples with regard to the manufacturing technique applied. In this regard, the question of how technological knowledge was shared, and what role other materials, such as faience or Egyptian blue played will be discussed.

Apart from technological questions, a major theme to be investigated is how glass was valued in the Iron Age Period. Inlays and attachments of Mesopotamian composite statues made of glass, faience, and lapis lazuli will therefore serve as an example to show another concept of value, which derives from the visual qualities of these materials.

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**SOLDI, Sebastiano**

National Archaeological Museum, Florence – University of Tübingen

### **Glazed Architectural Ceramics in the Iron Age Northern Levant: Two Case Studies from Zincirli and Tell Afis**

The aim of this paper is to discuss the employment of glazed ceramics in the architecture of the Northern Levant in the Iron Age. Materials and contexts from Zincirli (ancient Sam'al, in southeastern Turkey) and Tell Afis (ancient Hazrek, in northwestern Syria) will be presented and discussed in order to provide evidence to the use, until now very poorly recognized, of coloured glazed ceramics in the architecture of ancient buildings.

Both in Afis and Zincirli several fragments of glazed rings of blue and green colour have been found in their stratigraphic contexts: in Afis their association with the large Iron Age Temple shows the possible employment of glazed architectural devices within the brickwork; in Zincirli the documentation provided by older German excavations can now be integrated with new data coming from the renewed excavations by the Chicago-Tübingen joint project.

Zincirli has not only provided a number of glazed rings but also glazed hands and stepped pinnacles, most likely part of the decoration of facades of monumental buildings on the citadel.

These objects do not represent isolated cases, but find connections with Assyrian cities, where the employment of glazed bricks, tiles and hands play a major role in the decoration of temples and palaces.

In this paper we will address the issue of identifying uses and parallels between different areas through the analysis of materials and their contexts, and relying on the available visual sources which can help in reconstructing the use of such materials in their original location.

**THOMAS, Ariane**  
Louvre Paris

### **Glazed Bricks from Khorsabad**

Excavators of the Assyrian city of Khorsabad in the middle of the XIX<sup>th</sup> century, Paul-Emile Botta and Victor Place, report about the large amount of glazed bricks they found in many spots of the site. But they also regret to find these bricks in quite a big mess and in a poor state of conservation, except for an arch from the city gate 3, tragically lost in the Tigris river. Consequently the glazed bricks which arrived in Paris were always seen as individual samples for study. Thus, aside a few examples shown separately in the galleries, most of these bricks were not exhibited but kept in stores. Nevertheless, a recent study of the various bricks from Khorsabad currently preserved in Louvre museum allowed to exhibit almost all of them together in a reconstructed monumental panel. This paper will present this study and its various results. It will also deal with the recent reconstruction project and the multiple questions it raised.



## 18. Movement and Mobility between Egypt and the Levant in the Second Millennium BC

Egyptian-Levantine interactions and connections, encompassing the movement of peoples, objects, and ideas, existed throughout the history of both regions, varying in scope and intensity in different eras. New material from excavation, new interpretative and analytical methods, and especially changing chronological considerations, have resulted in ongoing discussion and debate regarding these connections, and their significance for understanding the historical development of both regions, and particularly so for these relationships in the late second millennium BCE.

This workshop will explore the means, methods, and motives for mobility of peoples, animals, objects, and ideas between the Levant and Egypt in the late second millennium BCE, corresponding roughly to the Egyptian New Kingdom and the Middle Bronze Age – Late Bronze Age transition in the Levant. Papers will present evidence for these movements, and will examine these data to evaluate both the short and long term consequences of them for indigenous social and economic structure and organization, settlement, and other aspects of Levantine development. Together, these papers will address the need to evaluate connections and movements between Egypt and the Levant in light of new chronology that changes previously understood synchronisms and links between archaeological strata and historical events in both Egypt and the Levant, to gain better understanding of the histories and developments of both regions.

### Organizers

**COHEN, Susan**   **ADAMS, Matthew J.**

Montana State University   W.F. Albright Institute for  
Archaeological Research

### Participants (in alphabetical order)

Matthew J. **ADAMS**  
W.F. Albright Institute for Archaeological Research

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Vanessa **BECKER**  
University of Vienna

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Aaron A. **BURKE**  
University of California, Los Angeles

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Susan **COHEN**  
Montana State University

Felix **HÖFLMAYER**  
Austrian Academy

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Ann-Kathrin **JESKE**  
University of Vienna

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Katharina **STREIT**  
Hebrew University of Jerusalem

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Lyndelle **WEBSTER**  
Austrian Academy



## List of Lectures

	<b>Lecturer</b>	<b>Title</b>
9:00	Susan Cohen	Introduction to Movement and Mobility
9:30	Felix Höflmayer	Assessing the Egyptian Activity in the Southern Levant during the Early 18th Dynasty: A Minimalist View
10:00	Lyndelle Webster	Levantine Late Bronze Age Chronology and Egyptian interactions from a Radiocarbon Perspective
10:30	Vanessa Becker	A Re-evaluation of Scarabs during the MB-LB Transition in the Levant: A new approach
11:00 Coffee break		
11:30	Ann-Kathrin Jeske	Can the archeological record reveal the nature of Egyptian soldier and official activity?
12:00	Katharina Streit	Assessing the Egyptian influence and the potential of Egyptian presence at Tel Lachish during the Late Bronze Age
12:30	Aaron A. Burke	Amorites in the Eastern Delta: Reconstructing Interactions in the Early Middle Bronze Age
13:00 Lunch break		
14:00	Matthew J. Adams	Thutmose III's Battle of Megiddo: History, Chronology, and the Landscape of Movement

## Abstracts

**ADAMS, Matthew J.**

W.F. Albright Institute of Archaeological Research

### **Thutmose III's Battle of Megiddo: History, Chronology, and the Landscape of Movement**

The portion of the Karnak annals of Thutmose III chronicling the Battle of Megiddo preserves the account of the king's conference with his military advisors at Yehem. Therein, the king and his men deliberate three routes to Megiddo through the Manasseh Hills. The first is a direct "road which grows progressively narrower". The second road enters the valley south of Megiddo and "debouches at Taanach". The third road "leads to the northern road of Djefty," north of Megiddo. Traditionally, these three roads have been identified as the Aruna pass, leading to Megiddo via the Wadi Qena, the southern pass through the plain of Dothan, and the northern pass at Yoqneam. These traditionally accepted routes, however, do not fit well the strategic considerations of Thutmose's council, nor existing landscapes of movement into the Jezreel Valley. This paper reconsiders these traditional attributions within the context of the landscape of the Manasseh Hills and provides additional consideration of the landscape and stratigraphy of Tell Megiddo.

**BECKER, Vanessa**  
University of Vienna

### **A Re-evaluation of Scarabs during the MB-LB Transition in the Levant: A new approach**

As Egyptian and Levantine scarabs are key-objects in the material culture of the Middle and Late Bronze Ages, they play a key role in retracing the movement of goods and people in this time period. Previous scarab research focused mainly on typological and chronological issues and only to a lesser extent on how scarab research can be used to reconstruct the movement and/or adoption of techniques in the changing political landscape of the southern Levant. Therefore, the impact of the incipient changes relating to the expulsion of the Hyksos and the growing power of the early New Kingdom on scarab production will be re-examined.

This paper presents a new approach to scarab research of the Middle and Late Bronze Ages in the southern Levant with a special focus on assessing the chronological value of archaeological contexts in which scarabs were found. A second focus is the study of the used raw materials as well as their origins, and the application of correspondence analysis for differentiating spatial (and chronological) clusters.

With this new look on scarabs found in the Levant, the dynamic encounter of Egypt and the Levant at the transition from the Middle to the Late Bronze Age and related issues will be highlighted.

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**BURKE, Aaron A.**  
University of California

### **Amorites in the Eastern Delta: Reconstructing Interactions in the Early Middle Bronze Age**

Fifty years of pioneering excavations at Tell ed-Dab'a (ancient Avaris) have yielded a trove of data concerning the presence of Asiatics at the site, and make it possible to explore the question of cultural exchanges with Asiatics within Egypt. Numerous types of material culture and their hybrid forms exist from which to suggest the character of interactions between Egyptian, Amorite and, possibly, Hurrian communities at the site. Still, more can be done to clarify the nature of interactions at the site by drawing up on a wealth of comparative material, both textual and archaeological, from a number of Middle Bronze Age sites in Southwest Asia. Within the frameworks of entanglement, long-distance exchange, and the emergence of an Amorite koiné, these interactions are reconsidered, placing emphasis not on individual strands of material evidence but rather on models through which the material culture can be interpreted.

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**COHEN, Susan**  
Montana State University

### **Introduction to Movement and Mobility between Egypt and the Levant: some considerations**

Egyptian-Levantine interactions and connections, encompassing the movement of peoples, objects, and ideas, existed throughout the history of both regions, varying in scope and intensity in different eras. The examination of these relations plays an important role in understanding the development of the Levant in these periods, and informs current perspectives on the histories of the region overall. However, recent shifts in the chronological synchronisms between these regions, most notably in the second millennium BC, have necessitated a re-examination of these connections, and accordingly, renewed analysis of the

means to examine them. While individual papers in this workshop focus on specific items, issues, and problems, this introduction will discuss the implications of these shifting chronologies and their ramifications for examining connections, relationships, and interactions between Egypt and the Levant, and analyses of the movement of goods, peoples, and ideas that illustrate them.

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**HÖFLMAYER, Felix**  
Austrian Academy of Sciences

### **Assessing the Egyptian Activity in the Southern Levant during the Early 18<sup>th</sup> Dynasty: A Minimalist View**

The Late Bronze Age of the Southern Levant is often regarded as being subject to Egyptian imperial control. While textual and archaeological sources for the Ramesside period support such a notion, the actual evidence for the earlier Late Bronze Age, corresponding approximately to the early 18<sup>th</sup> Dynasty up to the Thutmosid period, is ambiguous. While several scholars have followed a maximalist view that Egypt either took over administration in the southern Levant early in the 18<sup>th</sup> Dynasty or at least followed a trajectory towards territorial control, others have emphasized the limited evidence to support such a view. Recent studies on imported and locally produced Egyptian and/or Egyptian-style material seem to support a minimalist view of Egyptian involvement in Canaan during the early 18<sup>th</sup> Dynasty. In this paper, the textual evidence will be discussed in light of recent archaeological studies, and a new model of incipient Egyptian involvement in the southern Levant will be presented.

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**JESKE, Ann-Kathrin**  
University of Vienna

### **Can the archeological record reveal the nature of activity of Egyptian soldiers and officials?**

Egyptian artifacts found in the southern Levant are proof of a general interaction between the two regions. But how much detail do those objects offer in the reconstruction of the activities of Egyptian individuals, in particular if one does not use the archeological material to support “common knowledge” within research community raised by written sources?

To examine the activities of Egyptian soldiers and officials, I created an approach to approximately identify those objects imported by these two groups of people, or those that they dealt with, in the southern Levant. This approach is based on the combination of three theories used within material culture studies: object itinerary/biography, affordance and cultural appropriation.

To reveal the intentions and function of members of the Egyptian institutions present in the southern Levant during the Late Bronze Age, or more precisely during the 18<sup>th</sup> dynasty, the distribution patterns of items belonging to the military and administrative sphere, as well as the composition of those corpora at every site, will be examined. These preliminary results will be compared with the picture derived from Egyptian written documents to check for matches and to identify discrepancies between the archaeological and the epigraphic record.

**STREIT, Katharina**  
Hebrew University of Jerusalem

### **Assessing the Egyptian influence and the potential of Egyptian presence at Tel Lachish during the Late Bronze Age**

Late Bronze Age relations between Lachish and the Nile Valley have been known for a long time from textual and archaeological sources. Ermitage Papyrus 1116A mentions allocations from Egyptian officials to Canaanite cities, among them Lachish, and Lachish figures prominently in the Amarna correspondence. Archaeological features and finds at Lachish proper were also linked to Egyptian influence and/or presence. Fosse Temple II and III were associated to typical floor plans of New Kingdom Egyptian domestic houses. Egyptian influence was also traced at the Acropolis temple of Level VI, not only in terms of Egyptian-style objects, but also in terms of architectural features, such as octagonal columns and a mud-brick floor. Anthropoid clay coffins (slipper coffins) have been uncovered by the British team in the 1930ies in burial cave 570 in cemetery 500. There are also several hieratic inscriptions on bowls found in the constructional fills of the Judean palace/fort. For the 12<sup>th</sup> century, it was proposed that Lachish was part of the Egyptian empire and that a governor house should be expected, similar to Beth Shean. However, a recent analysis of the Egyptian and Egyptian-type pottery is in contrast to the proposed strong Egyptian involvement at Lachish. This paper summarizes the archaeological evidence for Egyptian presence at the site and presents a new assessment of potential Egyptian activity at the site in the Late Bronze Age.

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**WEBSTER, Lyndelle**  
Austrian Academy of Sciences

### **Levantine Late Bronze Age Chronology and Egyptian interactions from a Radiocarbon Perspective**

Understanding developments in Egyptian-Levantine interactions during the Late Bronze Age requires a robust chronological framework. Levantine chronology in this period has long been strongly based upon Egypt. While the Egyptian historical chronology is now well-supported by radiocarbon dating, the need for independent, robust radiocarbon chronologies at Levantine sites is clear. Removing the dependence will facilitate more objective assessments of the timing and trends in Egyptian-Levantine interactions through the Late Bronze Age. Previously there has been little emphasis on radiocarbon dating at Levantine sites for this period. Efforts are currently underway to expand this data significantly, with particular emphasis on the most poorly understood or controversial portions of the Late Bronze Age – namely the beginning and close of the period.

This paper will review the state of Late Bronze Age chronology from a radiocarbon perspective, focusing in particular on the Southern Levant. New data will be presented, alongside the existing body of data. Key historical implications will be discussed, and important remaining gaps in the radiocarbon data highlighted.

## 19. Water Studies within Archaeology: towards a synthesis in Archaeohydrology?

In recent years, with particular importance for studies on Near Eastern (arid) environments, its ancient cities and civilizations, archaeological studies on water in many forms have grown in number and thematic richness. Many of these studies have been published in *Water History*, journal of the International Water History Association. Within Germany, successful cooperation within Research Cluster 2 of the German Archaeological Institute has built further understanding on archaeological approaches to hydrological and hydraulic features. This growing attention and growing number of publications enables and provokes a closer study of methodological issues related to water studies in archaeology. For example, how to relate archaeological work on cultures existing in arid or irrigated lands with hydroengineering and hydrological disciplines? On the other hand, how to ensure that experts from these backgrounds understand the cultural backgrounds of archaeological projects and sites? The main aim of the workshop is to explore how water studies within archaeology could be developed along similar or different lines as vegetation or animal studies. What does a disciplinary concept of archaeohydrology mean when comparing it with archaeobotany or zooarchaeology? The workshop discusses methodological characteristics of the subject and aims to identify the basics for an applied archaeohydrology in terms of using its results for a present-day sustainable use of water and heritage education and protection.

### Organizers

<b>WELLBROCK, Kai</b> Fachhochschule Lübeck	<b>CHARBONNIER, Julien</b> CEPAM Nice	<b>ERTSEN, Maurits W.</b> Delft University of Technology
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### Participants (in alphabetical order)

<b>CHARBONNIER, Julien</b> CEPAM-CNRS Nice	<b>STRAUSS, Martin</b> Fachhochschule Lübeck, Labor für Siedlungswasserwirtschaft
<b>ERTSEN, Maurits W.</b> Delft University of Technology	<b>TRÜMPER, Monika</b> Freie Universität Berlin, Institut für Klassische Archäologie
<b>GEBEL, Hans Georg K.</b> Freie Universität Berlin, Institut für Vorderasiatische Archäologie	<b>WELLBROCK, Kai</b> Fachhochschule Lübeck, Fachbereich Bauwesen, Labor für Siedlungswasserwirtschaft
<b>KÜLLS, Christoph</b> Fachhochschule Lübeck, Labor für Siedlungswasserwirtschaft	

## List of Lectures

	<b>Lecturer</b>	<b>Title</b>
9:00–9:10	Maurits W. Ertsen	Welcome
9:10–9:30	Maurits W. Ertsen	Introducing Archaeohydrology
9:30–10:15	Hans Georg K. Gebel	Early human water ethology and commodification as fields of archaeohydrology, explained by early-mid Holocene findings from the Near East
10:15–11:00	Julien Charbonnier	Long term evolution of water supply in the oasis of Masafi (UAE): an archaeohydrological approach
11:00–11:30	<b>Coffee break</b>	
11:30–12:15	Christoph Külls	Combining hydrology and archaeology – research perspectives
12:15–13:00	Monika Trümper	Archaeohydrology and ancient cities: state of research and perspectives
13:00–14:00	<b>Lunch break</b>	
14:00–14:45	Martin Strauss	Tayma Oasis (KSA): Analysis of used methods to answer archaeohydrological key questions and their prospects for future projects
14:45–15:30	Maurits Ertsen	Theories and methods in water and archaeology
15:30–16:00	Julien Charbonnier	Introduction for the discussion
16:00–16:30	<b>Coffee break</b>	
16:30	Discussion	
18:00	<b>End</b>	

## Abstracts

**CHARBONNIER, Julien**

CEPAM, Université Nice Sophia Antipolis

**CRÉPY, Maël**

Archéorient

**COSTA, Sophie**

CEPAM, Université Nice Sophia Antipolis

**RÉGAGNON, Emmanuelle**

Archéorient

**CALASTRENC, Carine**

TRACES, Université Toulouse

**SAGORY, Thomas**

Musée d'Archéologie Nationale - Domaine National de Saint-Germain-en-Laye

**BAILIFF, Ian – SNAPE-KENNEDY, Lisa**

Durham University - Department of Archaeology

**PURDUE, Louise**

CEPAM, Université Nice Sophia Antipolis

**Long term evolution of water supply in the oasis of Masafi (UAE): an archaeohydrological approach**

Since 2006, the work of the French Archaeological in the UAE has revealed that the area of Masafi (Fujairah), in the northern part of the Hajar mountains, had been settled from the 2nd millennium BC (Wadi Suq period, 2000-1600 BC) onwards. In particular, the valley was densely populated during the Iron Age II (1100-600 BC) and during the Late Islamic period (after 1500 AD). In parallel, a paleo-environmental program has been set up since 2011 in order to retrace the history of the oasis and understand the respective role of social and environmental factors in its development. This program is now funded by the Agence Nationale de la Recherche (project OASIWAT, dir. L. Purdue). The present paper aims at addressing the specific question of the evolution of water supply on the long term, and its impact on settlement pattern in Masafi, as well as to discuss our multidisciplinary approach combining archaeology, geoarchaeology, geomorphology, geomatics, ethnography and absolute dating. Today, the oasis is mainly fed by drilled wells and water resources are located deep below the ground. Several abandoned hydraulic structures (wells, tanks and canals) were identified both on the surface and in test pits dug in the current palm grove and near the Iron Age site of Masafi-1. This approach has allowed us to put forward the evolution of water technology in Masafi over the last 3000 years. While both runoffs and groundwater, with the help of wells, were used to irrigate the fields during Protohistory, only the aquifers have been exploited during later periods: wells, springs and a qanat being attested during the Islamic period. Furthermore, our program has identified artesian conditions in the past, related to a specific geological setting. The ethnographic study has confirmed that these conditions maintained until the end of the 20th Century AD.

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**ERTSEN, Maurits W.**  
Delft University of Technology

### **Introducing Archaeohydrology**

In recent years, with particular importance for studies on Near Eastern (arid) environments, its ancient cities and civilizations, archaeological studies on water in many forms have grown in number and thematic richness. Many of these studies have been published in *Water History*, journal of the International Water History Association. Within Germany, successful cooperation within Research Cluster 2 of the German Archaeological Institute has built further understanding on archaeological approaches to hydrological and hydraulic features. This growing attention and growing number of publications enables and provokes a closer study of methodological issues related to water studies in archaeology. For example, how to relate archaeological work on cultures existing in arid or irrigated lands with hydro-engineering and hydrological disciplines? On the other hand, how to ensure that experts from these backgrounds understand the cultural backgrounds of archaeological projects and sites? The main aim of the workshop is to explore how water studies within archaeology could be developed along similar or different lines as vegetation or animal studies. What does a disciplinary concept of archaeohydrology mean when comparing it with archaeobotany or zooarchaeology? The workshop discusses methodological characteristics of the subject and aims to identify the basics for an applied archaeohydrology in terms of using its results for a present-day sustainable use of water and heritage education and protection.

**ERTSEN, Maurits W.**  
Delft University of Technology

### **Theories and methods in water and archaeology**

Water has been a key concern to human societies throughout history, whether used for domestic, economic, or spiritual purposes. As a result of this material and spiritual dependence on water, the ways that human societies harness, access, and use water have significant implications for their organization. Whatever the concept applied, human-water relations also have implications for the ways that humans in societies make meaning out of water. The study of water history can enhance our understanding of the nexus between the human and physical worlds. It is obvious that water has been quite essential in developing human communities throughout the world. Water history as such contributes to our understanding of economic, political, social, and environmental history, the history of science, medicine, technology, environmental sciences, and geography. Scholars from the humanities, social sciences, sciences, and engineering disciplines have all contributed to the field of water history. The coherence of water history as a subfield comes from its commitment to the disciplinary characteristics of history. Through their formulation of research questions, theoretical approaches, analytical methods, and use of sources, water historians can transcend disciplinary boundaries precisely when they remain true to the discipline of history. What I will argue is that all societies may know spirituality, liberty, rationality, history, many of which relate to water, but that these values, their shapes, and their relations show many different ways that are continuously negotiated and contested over time. As such, all water histories are local and constructed, crafted in response to the changing relationships between people and water. Consequently, this requires closer methodological attention to the agency of historical actors and to the specificity of the historical and environmental contexts.

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**GEBEL, Hans Georg K.**  
Freie Universität Berlin, Institut für Vorderasiatische Archäologie

### **Early human water ethology and commodification as fields of archaeohydrology, explained by early-mid Holocene findings from the Near East**

In the Near East's Holocene prehistory, water was decisive for major macrohistoric developments. All great achievements – such as earliest water storage and well building, alluvial land irrigation, oasis water management – were ruled by changing dispositions in human water ethology and developments in related ideological value systems. To understand hydraulic features and (tangible) water management, archaeohydrological research has to cover the socio-hydrological and cognitive background of human water dependency, procurement and consumption. Fields of these intangible water spheres are human water behavior, human water territoriality, human water commodification/ value systems, all of them representing needed research in “hydro-ethology”: As a key agent of vulnerability in technological, socio-economic and cultural development, water and water management cannot be studied without approaching and considering these fundamental intangible contexts. From Neolithic times onwards, water took on a number of key functions in the establishment, flourishing and decline of producing societies and their economies, and their innovative, symbolic and other ideological milieus. From the earliest evidence of well building (9th mill. BCE) via the use of cisterns (8th mill.), slope terrace irrigation (7th mill.), alluvial land irrigation (6th mill.) to proto-oases and oases life (5-4th. mill.), water management was the key element of sustainable productivity and development of sedentary and pastoral life in the Near East. Climatic oscillations, afflicting all from the individual daily water need via the survival of habitats to population dynamics, disturbed positively or negatively this sustainability, even in the moderate and water-rich



regions of the Near East. Adaptivity to water deficits, surpluses and especially unpredictability have promoted foresightful productive water behavior and related environmental knowledge/ competency, employing complex risk-buffering strategies. Examples will illustrate these ethological and value-giving foundations of water and life in Near East's Holocene prehistory.

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**KÜLLS, Christoph – WELLBROCK, Kai**  
Fachhochschule Lübeck, Labor für Siedlungswasserwirtschaft

### **Combining hydrology and archaeology – research perspectives**

The combination of archeology and hydrology involves an integration of two disciplines that are already highly interdisciplinary. Cooperation between archeologists and hydrologists along common research questions therefore seems to be a promising approach. Several foci and research areas are proposed. Since the 1960ies hydrological sciences have evolved from a collection of applicable water engineering techniques to a science-based empirical discipline of the hydrological cycle. Hydrology has integrated methods from meteorology, agronomy- and forestry-related soil science, civil and hydraulic engineering, limnology and hydrogeology into water cycle science, drawing on methodological input from mathematics, physics, chemistry, biology and recently informatics. Hydrological sciences have also embraced historical sciences in several ways in the last decades: Paleohydrology (Baker, 2014) has become a tool for the reconstruction of historical flood events. Isotope methods in hydrology have allowed to reconstruct past hydrological conditions from information contained in groundwater with high residence times (Aeschbach-Hertig et al. 2000). The combination of archeology with hydrological sciences offers promising research opportunities in this aspect: Archeological sites are very well documented in terms of stratigraphy and chronology. The combination of paleo-hydrological sediment records and geomorphological evidence with the chronology of archeological excavations will improve both archeological knowledge and paleo-hydrological dating and stratification. In addition, archeological sites were often chosen because of their specific hydrological suitability for reliable supply. Although hydraulic structures, wells and other evidence of water-related civil engineering structures are found, a quantitative analysis of the hydrological basin, aquifer and boundary conditions or phenomena such as drought and flood often remains qualitative and non-conclusive. A major field of archeo-hydrological research can therefore be the quantitative reconstruction of the hydrological environment and water resources being used based on water-related civil engineering structures or hydrological conditions. In combination with historical data obtained from archeological studies, the response of a society to climate events, hydrological extremes and environmental change can be studied in more detail. This research field touches on major questions related to potential adaptation to climate change and can offer a rich and diverse spectrum of new information on how societies and their infrastructures are at risk from environmental change based on archeological evidence of collapse or successful adaptation.

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**STRAUSS, Martin**  
Fachhochschule Lübeck, Labor für Siedlungswasserwirtschaft

### **Tayma Oasis (KSA): Analysis of used methods to answer archaeohydrological key questions and their prospects for future projects**

The oasis of Tayma is an ideal hydrogeological spot near the sand desert Nefud in the northwest of Saudi Arabia. Almost unperturbed by climate changes, respectively aridification during the Holocene, the

hydrogeological setting always provided perennial access to fresh water i.e. shallow groundwater, at least since the early Bronze Age until today. After all, not surprisingly people settled at this place ever since. During several research campaigns in Tayma from 2007-2015, we attempted various methods to answer different archaeohydrological question. One of the main goals was to understand the present-day natural hydrological system, which is always the basis for understanding ancient water management systems including for example former man-made hydraulic structures or even environmental differences. Another key question is the influence of hydrological conditions and water management strategies on human, cultural and urban development. Particularly in (hyper-) arid environments, water accessibility and water management are the most important factors for early settlement in the Near East and used to play a vital role in the daily ancient life. Furthermore, information by other sciences are essential to answer hydrologic questions and to understand the aftermath of environmental changes. Therefore, to answer archaeohydrological questions entirely, interdisciplinary research should be obligatory.

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**TRÜMPER, Monika**  
Freie Universität Berlin, Institut für Klassische Archäologie

### **Archaeohydrology and Ancient Cities: State of Research and Perspectives**

Water management is central to the functioning of ancient cities. This has long been recognized in scholarship, and the topic has received significant attention. A closer look reveals, however, that many questions remain open, even for major sites, which have been extensively excavated and investigated. This paper presents three such Graeco-Roman sites from the perspective of an archaeologist, namely Delos, Morgantina, and Pompeii. The aim is to critically discuss whether and how archaeohydrology – as a discipline or at least as a network of specialists – would contribute to solving open questions and to approaching future research on water in an innovative holistic manner. Each case-study includes discussion of three aspects. First, specific problems of water management, which came up in my own fieldwork, are presented. This is followed by a brief assessment of the state of research, focusing on questions, methods, and results as well as disciplines engaged in research on water management. Finally, central gaps in research and open questions are identified. The concluding comparative assessment of the three different sites comes back to the question whether and why we need archaeohydrology.





