

**8 ICAANE**



**WARSAW 2012**

# 8th International Congress on the Archaeology of the Ancient Near East

April 30 – May 4, 2012

University of Warsaw

## abstracts





8th International Congress  
on the Archaeology  
of the Ancient Near East

# abstracts

The Abstracts have been printed in the form submitted by their authors, with just the most necessary corrections or abbreviations. "Country" in the affiliations refers to the institution to which an ICAANE participant is affiliated, not to his or her nationality or citizenship.

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## PLENARY OPENING SESSION

APRIL 30TH, MONDAY

### MORNING SESSION

Hour	NAME	TITLE
9.30-9.40	WŁODZIMIERZ LENGAUER	ADDRESS ON BEHALF OF THE RECTOR OF THE WARSAW UNIVERSITY
9.40-9.45		A WELCOME LETTER FROM MR. BRONISŁAW KOMOROWSKI, PRESIDENT OF THE REPUBLIC OF POLAND
9.45-9.55	KAZIMIERZ LEWARTOWSKI	THE INSTITUTE OF ARCHAEOLOGY
9.55-10.05	PIOTR BIELIŃSKI	THE ORGANIZING COMMITTEE OF THE 8TH ICAANE
10.05-10.15	PAOLO MATTHIAE	THE INTERNATIONAL COMMITTEE OF ICAANE
10.15-10.30	OSKAR KÄLIN	2014 - 9TH ICAANE IN BASEL, SWITZERLAND

### 10.30-11.00 COFFEE BREAK

### MIDDAY SESSION : KEY-NOTE LECTURES

Hour	NAME	TITLE
11.00-11.30	PETER PFÄLZNER	introducing theme 1: ATTRACTING PEOPLE: A STUDY ON THE RELATION OF CITIES AND HINTERLANDS IN THE 3RD MILLENNIUM BC
11.30-12.00	HOLLY PITTMAN	introducing theme 3: CULTURES IN CONTACT: INTERACTION THROUGH IMAGERY ON THE IRANIAN PLATEAU IN THE BRONZE AGE
12.00-12.30	RÉMY BOUCHARLAT	introducing theme 4: FIRE IN RITUAL: FIRE ALTARS AND FIRE TEMPLES IN THE 1ST MILLENNIUM BC AND AD IN THE IRANIAN WORLD
12.30-13.00	THEYA MOLLESON	introducing theme 6: "THE WAY BACK". BIOARCHAEOLOGISTS CAN TACKLE ARCHAEOLOGICAL QUESTIONS

## **FIRE IN RITUAL:**

### **FIRE ALTARS AND FIRE TEMPLES IN THE 1ST MILLENNIUM BC AND AD IN THE IRANIAN WORLD**

Fire structures for pottery or used for metallurgical activities are generally easily recognizable in excavations. When dealing with fireplaces and hearths in houses or palaces or in open air, archaeologists are deeply influenced by the cultural context of the site. They usually interpret them as a domestic (for heat and cooking) fire in the earlier periods, but sometimes as a 'ritual fire', a function which is hardly obvious from the location, devices and related installations; more often than not, this function is the archaeologists' interpretation.

Both series of functions are well represented in the papers presented in this theme 'Archaeology of fire'. My note belongs to the second group of fire, the 'ritual fire'. The case-study considers fire installations in the late prehistoric and historical times (1st mill. BC – first half of 1st mill. AD) in the Iranian world. In that area, many excavated fireplaces and hearths are interpreted as sacred fires, therefore considering the building in which they are sheltered as Zoroastrian/Mazdean temples. Some isolated large stone 'altars' without traces of fire in open areas are considered as fire altars.

Until the beginning of that century less than half dozen of actual "fire-temples" were known in Sasanian Iran while in Central Asia several older buildings have been labelled pre-Zoroastrian or Zoroastrian (fire) temples. Today there is a larger series of excavated buildings which evidence that the fire was in the central place of the building, therefore of primary importance for the cult. Very often, if not always, there is a stand —with or without ashes— in the centre of a square room or a four-pillared building (called by archaeologists *chahar taq* 'four arches'). This is not the unique form of a fire temple. Conversely, buildings with special layout, and especially the *chahar taq* buildings which are not excavated or does not yield a stand or a fireplace have long been interpreted as fire temples, without considering other possible functions such as kiosk or pavilion. Maybe the same cautious attitude should be considered for some cases of 'ritual fires' elsewhere in the Near East during the previous millennia.

## **THEYA MOLLESON**

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### **"THE WAY BACK". BIOARCHAEOLOGISTS CAN TACKLE ARCHAEOLOGICAL QUESTIONS**

Each archaeological site is unique, in place at least and has its own identity, as did the community that lived there. To reconstruct the past the bioarchaeologist needs to address archaeological questions. However, the archaeologist doesn't always know what can be done with the range of excavated material beyond the number count and the occasional case of pathology to keep the media happy. Yet bioarchaeologists can address some profound questions. Advances firstly in the standards of excavation, in imaging, statistical awareness and attention to comparative reference sources are enhancing results at many levels. The impacts of plant and animal domestication can be followed at sites like Abu Hureyra where there are long sequences. We can follow them from the human viewpoint at three levels of identity: the individual, the group and the community.

Increases in the consumption of cereals in early Pre-Pottery Neolithic at Tell Abu Hureyra in 2A times are imprinted first on the dentitions, later on the human bones, when solutions had been developed to ameliorate the painful consequences of chewing whole grain; solutions that became role based. Animal domestication in 2B times could have developed in the aftermath of following migrating gazelle across the Syrian Desert as far as the Euphrates River. Over-production of young, which resulted once domestication was under control, was too good to waste and must soon have been exploited by exchange of surplus animals on the hoof and of animal products. Direct material evidence does not often survive but the fact of exchange created the need for specialist technology that was supplied by the arrival of a distinctive group of basket makers from across the Syrian Desert.

Excavated bone does not travel well. The archaeologist should have a rapid response for ongoing field studies. Field recording is the most rewarding in terms of data and is the most cost effective, while inferences can be tested in subsequent analytical and molecular studies.

## **PETER PFÄLZNER**

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## **ATTRACTING PEOPLE:**

### **A STUDY ON THE RELATION OF CITIES AND HINTERLANDS IN THE 3RD MILLENNIUM B.C.**

As has been documented in the Uruk Countryside survey by McAdams and Nissen the rise of the urban centres in the Early Dynastic city states in Southern Mesopotamia was characterized by a dramatic decrease in the number of towns and villages in the surroundings of the cities. The centres extracted population from the surrounding countryside and incorporated them into the growing agglomerations. It will be investigated whether the same kind of

population trend existed in the north of Mesopotamia, particularly in the Syrian Jezireh. Obviously, different models of urban growth and population concentration can be observed in this region. A particular case is the expansion of the Kranzhügel-type of settlements into regions without a larger pre-existing agrarian population of towns and villages. Special measures were necessary in order to attract population to these new centres. The hinterlands of several Kranzhügel centres in the steppe region south of the Jebel Abd el-Aziz are explored through the study and interpretation of satellite images carried out by Luciano Giliberto at the University of Tübingen.

**HOLLY PITTMAN**

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### **CULTURES IN CONTACT: INTERACTION THROUGH IMAGERY ON THE IRANIAN PLATEAU IN THE BRONZE AGE**

Among the minor arts in the ancient Near East, glyptic is closely associated with personal or corporate identity expressed through iconography and style. In settings where administrators from different communities interact, glyptic art can be a particularly sensitive marker of cultural identity when other evidence, textual or ceramic, is absent. This feature of glyptic makes it especially useful as window into cultural interaction during the 3rd millennium Early Bronze Age when the ancient world from the Euphrates to the Indus was linked together through a vast network of exchange and interaction along which merchants, craftsmen, emissaries and later soldiers and diplomats passed. While the Mesopotamian cuneiform texts provide us with hints of this interaction, we can evaluate it directly through the material traces left of the minor arts, especially the administrative residue of glyptic art. This talk will illustrate through the rich and varied finds from the recent excavations at Konar Sandal South in the Halil River valley of Kerman province in southeastern Iran the evidence for this cultural contact. Among them are impressions of imported seals, local seals, hybrid seals that merge traits of various cultural styles reflecting the cultural identities of the merchants and officials who interacted at the heart of mercantile interaction sphere. Through this residue we can imagine who the players were and how they were affected by their interlocutors.



# 1. TOWNSHIPS AND VILLAGES

**SUPERVISOR: PIOTR BIELIŃSKI**

<b>AUTHOR(S)</b>	<b>TITLE</b>	<b>DAY, HOUR</b>
ANACLETO D'AGOSTINO, COSTANZA COPPINI	LIFE AT THE EDGE OF THE SETTLEMENT: THE MBA-LBA TRANSITION AT THE NORTHERN AND SOUTHERN SLOPE OF TELL BARRI (NE SYRIA)	THU, 12.30
CORRADO ALVARO	THE ARCHITECTURAL SEQUENCE AT MALATYA DURING THE HITTITE AND NEO-HITTITE PERIODS: A PROPOSAL	TUE, 14.30
SHAHMARDAN AMIROV	LIFE AND DEATH OF TELL HAZNA I SETTLEMENT IN THE HABUR STEPPE OF NORTH-EAST SYRIA	THU, 10.15
ALI ASADI	SASANIAN SETTLEMENT PATTERNS IN NORTHERN PERSIAN GULF BASED ON BASTAK DISTRICT SURVEY (HORMOZGAN PROVINCE)	WED, 10.15
CIGDEM ATAKUMAN	PLACE, PRESTIGE AND SOCIAL CHANGE: SYMBOLIC RELATIONS BETWEEN THE RITUAL AND DOMESTIC BUILDINGS DURING THE EARLY NEOLITHIC OF THE NEAR EAST	MON, 14.55
SIMONE BONZANO	THE KINGDOM OF BIANILI: PERSPECTIVE ON THE RELATIONSHIP BETWEEN RURAL NETWORKING AND STATE BUILDING PROCESSES	TUE, 15.20
FRANCESCO DEL BRAVO	TELL AL-RAQAI AND KHAFAJE: TWO OPPOSITE IDEOLOGIES OF ECONOMIC EXPLOITATION. TERRITORIAL NETWORK CONTROL, INTERNAL SUBSISTENCE AND URBAN SYSTEMS	THU, 12.05
FEDERICO BUCCELLATI	DIACHRONIC DEVELOPMENTS AT THE CENTRAL MONUMENTAL COMPLEX OF ANCIENT URKESH (TELL MOZAN)	THU, 9.50
PATRIZIA CAMATTA	HIGH TEMPLES IN THE NORTHERN MESOPOTAMIAN URBAN LANDSCAPE	THU, 14.30
MEREDITH S. CHESSON	LEARNING TO BE URBAN: STORING SENSIBILITIES AND SENSUOUS HUMAN PRACTICE ON THE SOUTHEASTERN DEAD SEA PLAIN, JORDAN	MON, 17.10
SUSAN COHEN	RURAL-URBAN RELATIONS BETWEEN TEL ZAHARA AND BETH SHEAN IN THE ROMAN AND HELLENISTIC PERIODS	WED, 9.25
CONSTANTINOS CONSTANTINOU	ARCHITECTURE AND MATERIAL CULTURE DISTRIBUTION ANALYSIS: A STUDY OF SOCIO-ECONOMIC RELATIONSHIP AMONG LATE NEOLITHIC VILLAGES OF WESTERN NEAR EAST	MON, 14.30
HÉLÈNE CRIAUD	A RURAL CULTURE IN THE LEJA (SOUTH SYRIA) DURING THE MIDDLE BRONZE AGE	TUE, 17.10
MARTA DANDREA	TOWNSHIPS OR VILLAGES? REMARKS ON THE MIDDLE BRONZE IA PERIOD IN THE SOUTHERN LEVANT	TUE, 17.35
BERNADETTE DRABSCH	A PROCESSION OF CHALCOLITHIC VILLAGERS: RECONSIDERING HENNESSY'S 'PROCESSION' WALL PAINTING FROM TELEILAT GHASSUL, JORDAN	MON, 15.45
ALEJANDRO GALLEG0	SEALING POTS IN UPPER MESOPOTAMIA IN THE LATE 3RD MILLENNIUM. MORE EVIDENCE FROM THE KHABOUR REGION	THU, 9.00
GUIDO GUARDUCCI	LINKING THE MOUNTAINS TO THE PLAINS. MATERIAL CULTURE AND LIFESTYLE OF THE LOCAL COMMUNITIES IN SOUTH-EASTERN ANATOLIA DURING THE IRON AGE	TUE, 9.00
FRÉDÉRIC GUYOT	SUBTERRANEAN HOUSES AT BIR ES-SAFADI (4TH MILLENNIUM BC, ISRAEL): AN UPDATE	MON, 16.45
MANUELA HEIL	BECOMING CONNECTED – INTERACTION NETWORKS DURING THE EARLY DYNASTIC PERIOD	THU, 11.40

TOBIAS BODO HEYE HELMS	EXPLORING THE OUTER CITY OF A MAJOR EBA CENTRE - RECENT EXCAVATIONS IN THE EASTERN EXTENT OF TELL CHUERA'S LOWER TOWN	WED, 18.00
KRZYSZTOF JAKUBIAK	WAS HATRA THE SECOND BABYLON? SOME REMARKS ON THE NORTHERN MESOPOTAMIAN CITY RELIGIOUS LIFE	WED, 11.15
HANNAH JOHNSON	THE GRANARY AT UR: A STUDY OF THE NEO-SUMERIAN TEXTUAL EVIDENCE	THU, 16.45
MELISSA KENNEDY	THE DEVELOPMENT OF SOUTH/CENTRAL SYRIA IN THE EB IVB: THE TELL NEBI MEND PERSPECTIVE	TUE, 16.45
MOHAMMED AL-KHALED	FORMS OF URBAN SETTLEMENTS. DIFFERENCES AND ELABORATIONS OF URBAN SETTLEMENTS IN THE MIDDLE EUPHRATES VALLEY	WED, 17.10
HARTMUT KÜHNE, ANJA FÜGERT, FLORIAN JANOSCHA KREPPNER, JENS ROHDE	EARLY NEO-ASSYRIAN DUR-KATLIMMU	WED, 14.55
GUNNAR LEHMANN	QUBUR EL-WALAYDAH: VILLAGE ARCHAEOLOGY IN THE LAND OF THE PHILISTINES	WED, 9.00
JULIA LINKE	TRANSFERRING CHAOS INTO ORDER IN THE URARTIAN KINGDOM	TUE, 14.55
DOROTA ŁAWECKA	EARLY DYNASTIC KISH – CITY STATE OR TERRITORIAL STATE?	THU, 15.45
MACIEJ MAKOWSKI	THE ROAD TO THE CITADEL OF KANESH. URBAN STRUCTURE AND SPATIAL ORGANIZATION OF THE CITY DURING THE ASSYRIAN COLONY PERIOD	TUE, 9.50
SIMONE MANTELLINI	TELL MUMBATAH AREA AND THE EASTERN LIMIT OF THE TERRITORY OF EBLA	TUE, 18.00
JEAN-CLAUDE MARGUERON	LE PREMIER URBANISME (PROCHE-ORIENT, IV <sup>E</sup> -IER MILLENAIRE AV. J.-C.)	THU, 11.15
JULIETTE MAS	BRONZE AGE DOMESTIC ARCHITECTURE IN EASTERN SYRIA: FAMILIAR, SOCIAL AND ECONOMIC IMPLICATIONS	WED, 16.45
TIMOTHY MATNEY	EARLY IRON AGE TOWN AND VILLAGE LIFE IN THE UPPER TIGRIS RIVER VALLEY OF SOUTHEASTERN TURKEY	WED, 15.20
BERNADETTE MCCALL	HISTORICAL AND ARCHAEOLOGICAL APPROACHES TO SETTLEMENT DATA: A CASE STUDY FROM IRAN	MON, 18.00
LUCIA MORI	DON'T CULTIVATE THAT FIELD! THE DIFFICULT INTERACTION BETWEEN VILLAGE COMMUNITIES AND CENTRAL PALACES IN THE SUMMER PLANTING OF SESAME IN THE EUPHRATES VALLEY DURING THE MIDDLE BRONZE AGE	WED, 17.35
NOOR MULDER-HYMANS	AN AGRICULTURAL NABATAEAN SITE AT KHIRBET AL-MUDAYNA	WED, 12.30
TAKAHIRO ODAKA	THE WESTERN VARIETY OF SAMARRA POTTERY AND THE COLLECTION IN THE NATIONAL MUSEUM OF ALEPPO, SYRIA	THU, 17.35
ADELHEID OTTO	HISTORISCHE GEOGRAPHIE OBERMESOPOTAMIENS: DAS DEUTSCH-FRANZÖSISCHE PROJEKT HIGEOMES	THU, 18.00
ALESSIO PALMISANO	GEO-POLITICS AND TRADE IN CENTRAL ANATOLIA IN THE MIDDLE BRONZE AGE	TUE, 9.25
LUCAS PETIT	WHAT WOULD THE EGYPTIAN PHARAOH SHOSHENQ I HAVE SEEN, IF HE HAD VISITED THE CENTRAL JORDAN VALLEY?	TUE, 15.45
KRISTINA PFEIFFER	THE LATE NEOLITHIC VILLAGE OF SHIR: LIVING WITH THE DEAD	MON, 15.20
MARINA PUCCI	THE SITE OF CHATAL HÖYÜK: A TOWNSHIP IN THE AMUQ	WED, 14.30
STEVE RENETTE	THE FUNCTION OF SEAL-IMPRESSED JARS IN THE HAMRIN VALLEY, CENTRAL IRAQ	THU, 9.25
CLAUDIO RUBINI	MEDIEVAL TRANSFORMATIONS OF ROMAN URBAN FABRIC IN ANTIOCH. STUDY FOR AN ACTIVE HISTORY OF THE CITY	WED, 12.05

TIM SKULDBØL, METTE MARIE HALD, AUGUSTA McMAHON	MAKING BRICKS AND MANAGING RUBBISH. RECENT INVESTIGATIONS IN THE IMMEDIATE SURROUNDINGS OF TELL BRAK, AN EARLY URBAN SETTLEMENT IN NORTHERN MESOPOTAMIA	WED, 15.45
PIOTR STEINKELLER	RESIDENCE PATTERNS IN THE CITY OF UMMU AT CA. 2000 BC	THU, 15.20
JASON UR	THE COMPARATIVE MORPHOLOGY OF NEO-ASSYRIAN CITIES	THU, 17.10
RALF VANDAM	EVERYBODY NEEDS GOOD NEIGHBOURS	MON, 17.35
PETRUS VERMAAK	THE LAGAŠ HINTERLAND IN SOUTHEASTERN MESOPOTAMIA	THU, 14.55
REMZI YAĞCI	HARBOUR CITIES AND FORTIFICATION WALLS IN THE HITTITE IMPERIAL PERIOD	TUE, 10.15
DIANNE VAN DE ZANDE	SOCIAL STRATIFICATION IN THE RURAL SETTLEMENTS OF ROMAN NORTHWEST SYRIA	WED, 11.40

#### **ANACLETO D'AGOSTINO (1), COSTANZA COPPINI (2)**

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#### **LIFE AT THE EDGE OF THE SETTLEMENT: THE MBA-LBA TRANSITION AT THE NORTHERN AND SOUTHERN SLOPE OF TELL BARRI (NE SYRIA)**

The very sparse archaeological evidence and the limited amount of textual data concerning the final phase of the MBA and the beginning of the LBA constitutes a serious obstacle in reconstructing the development of settlement patterns and cultural traditions in the Upper Khabur valley, the center of the Mittani state. In this respect the analysis of domestic dwellings and work areas more than public and representative buildings may help us in reconstructing the processes leading to the transformation of the settlement of Tell Barri and its archaeological profile.

The contribution of the excavations carried out at Tell Barri, which exposed peripheral quarters of the ancient settlement dating to this period, lies in emphasizing elements of continuity and change throughout time. The stratified layers exposed in old and recent trenches provide an opportunity to examine evidence from a continuously inhabited settlement, where changes can be evaluated based on modifications in the material assemblages of the site and in its architecture. Examining the development of spatial organization and changes in the pottery assemblage, in order to outline these changes in the architectural remains as well as to identify both conservative and innovative traits in ceramic production, issues about cultural traditions, regional links and chronology will be treated in an attempt to better understand the nature and meaning of the MBA-LBA transition as well as the changing status of the site during this obscure phase of its history.

In this analysis, the nature and meaning of the MBA-LBA transition as well as the changing status of the site during this obscure phase of its history will be treated in an attempt to better understand cultural traditions, regional links and chronology.

#### **CORRADO ALVARO**

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#### **THE ARCHITECTURAL SEQUENCE AT MALATYA DURING THE HITTITE AND NEO-HITTITE PERIODS: A PROPOSAL**

The site of Arslantepe is located in the south eastern province of Malatya, in Turkey and since 1961 has been excavated by the Italian Archaeological Mission in Eastern Anatolia.

During the 1960s the Italian archaeological mission under the directorship of Prof. S. M. Puglisi focused on the excavation of the northern area of the mound at Arslantepe, in the same area where L. Delaporte had brought to light in the 1930s the famous Lions' Gate. Since 2006 the Italian team of the University in Rome under the directorship of M. Frangipane restarted archaeological investigations in this area and they have brought to light not only important structures connected to the Lions' Gate but also several older building phases.

Main aim of this research is to connect the two building sequences excavated at two different moment and reconstruct a general sequence of phases of use for this area. Goal of this paper is to present the architectural sequence of this area, which spans over a period from Arslantepe period VB-IV (approx. between the 18th and the 13th century BC) to Arslantepe periods II-III (between the 11th and the end of the 8th century BC).

## **LIFE AND DEATH OF TELL HAZNA I SETTLEMENT IN THE HABUR STEPPE OF NORTH-EAST SYRIA**

- 1) Tell Hazna I settlement is located in the lower stream of wadi Hanzir river. Tell Hazna area is placed in the middle part of the zone of not guaranteed dry farming agriculture, hardly dependent of climate fluctuations.
- 2) Archaeological survey conducted along lower part of wadi Hanzir stream allowed to distinguish periods of sedentary occupation of the region, as well as to mark out three dimension rank groups sites for the Ninevie 5 period, that could show a kind of the settlement hierarchy, and origins of administrative organization during the first half of 3rd mill. BC.
- 3) In this context Tell Hazna community could be characterized as indigenous population, occupied region from the beginning of 4th mill. BC. Economic activity of the site was based exclusively on the local agricultural resources. To the end of the 4th mill. BC. Tell Hazna community has reached sufficiently high level of social organization and administration that is evident in monumental public architecture and organization of public crop storage under the control of community elite.
- 4) The central part of Tell Hazna settlement consists of close oval of huge massive constructions of public-religious purpose. The architecture of enclosed area and its function as a single whole system is dated to the end of 4th mill. BC., beginning of system destruction of the complex is dated to early ED I period. Generally, Tell Hazna I temple complex was used till the middle of ED I period.
- 5) Redistribution storage system of public products as the rise of civilization appeared in the Habur steppe in the second half of the 3rd mill. BC. Tell Hazna I data indicate that there were two periods of social proto-state consolidation in the Habur steppe area. The first of them is dated to the turn of 4th and 3rd mill. BC. Signs of social complication could be recorded not only in the proto-urban centers as Tell Brak, but also in rural settlements as Tell Hazna I.
- 6) Process of economic and social development in the second half of 4th mill. BC took place owing to the extremely favorable climate conditions. It allowed inhabitants of the "Habur Triangle" to spend great piece of socially useful work to monumental public building efforts. In spite of noted features of early state consolidation, the process of state formation had no continuation, due to the beginning of another cycle of climate aridisation. The deterioration of climate conditions resulted in the decline of prosperity of the community and destruction of its social organization. Finally, inhabitants left the settlement around 2700 BC, in the end of ED I period, when climate aridisation eliminated the possibility for rainfed agriculture.

### **ALI ASADI**

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## **SASANIAN SETTLEMENT PATTERNS IN NORTHERN PERSIAN GULF BASED ON BASTAK DISTRICT SURVEY (HORMOZGAN PROVINCE)**

Up to now, research on ancient Persia during the Sasanian period has focused on the bas reliefs, famous sites, or the remains of isolated palaces. In comparison, the study of settlement patterns has not been so important. In recent years, as a result of new archaeological surveys, this situation has changed. Today it is possible to make a general reconstruction of Sasanian settlement patterns in modern Hormozgan Province (part of ancient Persia), located near the Persian Gulf coast. Of particular importance is Bastak District in northwestern Hormozgan Province, where more than 200 ancient sites and structures were found. From this sample, 70 mounds, cemeteries, and castles were discovered; the rest was related to the management of water.

The initial study reveals that before the Sasanian period, the exploitation of the valley was largely in harmony with the existing pattern of ecological resources. For example, up until the Parthian period, the settlement pattern in the Bastak region was based in the area with the sweet water springs. In comparison, Sasanian canals were many kilometers long and they transferred water from remote and narrow gorges to previously under-utilized areas of the plain, so that settlements were less dependent on the original location of water sources.

This expansion of agricultural capacity developed in tandem with an increase in the settled population and an increasing interest in actively controlling the local residents. During the Sasanian period, the number of settlements suddenly increased to even more than double number of Parthian settlements. Most of the Sasanian settlements were newly established; of these, many are more than 10 hectares, suggesting a deliberate urbanization of the population. There was also greater attention paid to security concerns with the creation of a system of castles. In general, near every site or two there is a castle that can be related to these sites. The castles are similar to each other, when comparing the shape, dimensions, and location; which suggests that they all belong to one period of construction. Because there is no major trade road through Bastak or other viable explanation, one must presume that these castles functioned to control and manage the local area. The collective result of these activities was the deliberate settlement of people as farmers in a marginal agricultural region and the centralization of control under the Sasanian government.

## **PLACE, PRESTIGE AND SOCIAL CHANGE: SYMBOLIC RELATIONS BETWEEN THE RITUAL AND DOMESTIC BUILDINGS DURING THE EARLY NEOLITHIC OF THE NEAR EAST**

Whereas the intensification of ritual activity during the early Neolithic of the Near East may be explained by social challenges brought about by inter-related processes of domestication, population stress and territorial conflict, a closer look at the symbolic world of the early Neolithic hunter-gatherers would reveal a particular concern with group structure and gender identity. This concern was often expressed in a context that made appeals to “ancestors” both in the “domestic” and “ritual” practices. In this synthesis, I argue that the Neolithic transformation was a process steered by the tensions of contested interpretations of group identity and gender relations within a context where competitive displays of “belonging” and “resource control” became the overriding sources of status and prestige which restructured the existing social hierarchies.

By focusing on the changing contexts of symbolism through time in the Taurus-Zagros region, I attempt to demonstrate that the rise in the frequency and elaboration of ritual practices during the mid PPNA through mid PPNB period in the region can be best understood in their relation to the increasing importance of particular locations on the landscape which were to become long-term settlements. As settlements were becoming new mediums of social and economic capital accumulation and symbolic expression during this time period, other locations of the hunting-gathering social life were gradually losing their importance. It was during this transformative process that the “domestic” and “ritual” places became contesting mediums of symbolic expression through which gender roles and group identity were appropriated in alternative ways.

Ultimately, the early rise of ritual architecture can only be very skeptically attributed to an early rise of “civilization” or “religion”, problematic concepts in many senses. Instead, the Neolithic can be conceptualized as a process that restructured the social group and its constituents within the “settlement” and in particular the “house” as these structures gradually became the primary means of displaying group identity, territorial control and transmission of rights above all other significant places scattered on the landscape. Although it may be considered premature to make any comments on the nature of gender inequality at this time, research on figurines demonstrate that separation of “male” and “female” gender identities became much less ambiguous by the end of the PPNB period. I believe that this change can be attributed to a gender conflict regarding the control and transmission of symbolic and economic capital accumulation within the “house-based” cooperation. Such a conflict may well be related to the increasing importance of ritual authority in inter-community events, which possibly favored male individuals.

### **SIMONE BONZANO**

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## **THE KINGDOM OF BIANILI: PERSPECTIVE ON THE RELATIONSHIP BETWEEN RURAL NETWORKING AND STATE BUILDING PROCESSES**

The subject Bianili, common known also as Urartu, is rather still mysterious among Near East history even regarding the long history of Urartian research and the very recent researches of scholars like Cilingeroglu, Marro, Sagona, Smith, Stone and Zimansky.

Although it was famous as the ‘enemy of Assyria’ with the name of Urartu, archaeologists, philologists and historians have uncovered very little about the rise and fall of this highland state, that agglomerated a very peculiar set of characteristics as a loose scattered central control, a high relevance of proto-feudal provincial governance though a strong resilience and a rather extraordinary five century long success.

One of the most targeted aspects of Bianili’s history has been the real structure of the state, how it emerged, developed and pivoted itself on the landscape that still lays hidden in the heterogeneous archaeological palimpsest and in the many gaps of regional history. Many very recent definitions have been tried, as Highland Archipelago or Fragmentary State, all pointing to the particular mix of ‘Assyrian’ central kingship and the peculiar assessment of a highland region made local networks and rural villages laying over the 1600 m asl.

Regarding this specific subject, in my recently finished PhD I have accomplished a deep landscape analysis of the ‘Urtäische Heimat’, the Lake Van region in Eastern Anatolia mixing landscape methodology (GIS and spatial analysis) and sociological approach (study of social agencies). Aimed have been the relationships between Urartian fortresses, and their lower stable settlements of farmers, and rural areas, the ‘Yaylasi’ (grazing fields) pointed by seasonal villages and inhabited by semi-nomadic livestock herders.

The resulting relationship lays on the state-building processes of Bianili and directly determined the shape of the central government, its success to create a regional agglomerate but even its historical failure.



## **TELL AL-RAQAI AND KHAFAJE: TWO OPPOSITE IDEOLOGIES OF ECONOMIC EXPLOITATION. TERRITORIAL NETWORK CONTROL, INTERNAL SUBSISTENCE AND URBAN SYSTEMS**

The relations between a 'core center' and his hinterland (or periphery) have always played a central role in the development of major urban centers with centralized activities connected to production and redistribution. In this paper are under analysis the different ways in which two centers like Tell al-Raqai and Khafaje had managed their relations with the environmental network of sites around; and the economic factors which had shaped their societies, their urban structures and their subsistence. It is in fact undeniable how different was the exploitation of resources and the building up of connections of power with their region, within these two central settlements. But the religious ideology underneath and the economic way they subsisted their own, have to be considered as well as elements which have played a substantial role in shaping the essence of these opposite central sites.

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## **DIACHRONIC DEVELOPMENTS AT THE CENTRAL MONUMENTAL COMPLEX OF ANCIENT URKESH (TELL MOZAN)**

The recent seasons of excavations at Tell Mozan (ancient Urkesh) have considerably broadened our understanding of its stratigraphic history. The earliest levels containing architecture in the chronological sequence now date to the Late Chalcolithic 3 period, and from the fact that this architecture lies at one of the highest points on the tell we can infer that there was an extended settlement already in the proto-historic periods. The presence of this earlier mound also conditioned the configuration of the temple terrace when it was rebuilt in Early Dynastic times. The ED III terrace was modified almost immediately due to the danger posed by heavy rainfall, but it then remained basically unaltered in this configuration until the middle of the Mittani period, when, during the single final century of Urkesh's history, it underwent a major reorganization.

The long gap from ED III to Mittani is by no means due to abandonment, because the sequence is filled in by a continuous depositional history in the area of the royal palace, immediately to the west of the Temple complex. Recent work done on the Tupkish Palace has lead to a broader understanding of the architecture and methods of construction of this monumental structure. By using local construction methods as an ethnographic metaphor, a hypothetical operational analysis of construction techniques is possible. This analysis allows for a deeper understanding of both the life of the building in its physical aspect as well as the role it played in shaping the social framework of the society. By carefully interdigitating the two series of strata in the adjacent areas of Temple and Palace, the paper will highlight this diachronic aspect of the complex Mozan stratigraphy, as it emerges from the latest excavation results.

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## **HIGH TEMPLES IN THE NORTHERN MESOPOTAMIAN URBAN LANDSCAPE**

Constructing a temple on a raised position was a common practice in ancient Syro-Mesopotamia, at least from the 4th Millennium B.C. onward. A main temple located on top of a 5 to 10 m high mud brick platform often characterized the urban landscape of southern Mesopotamian cities (Uruk, Eridu, Uquair, Susa, just to mention a few example). However, free standing platforms were not common in northern Mesopotamia (few examples are Tell Brak, Tell Halawa B, Mari). Instead of constructing huge platforms, temples were erected on top of artificial mounds often enclosed by temenos walls in the center of the settlement, thus in a prominent position (Tell Chuera, Tell es-Sweyhat, Jebel Aruda, Tell Mozan, Tell Arbid).

On the base of comparative study, a consistent definition of 'platform', 'terrace', and 'temple foundation' will be advanced and a typological classification of 'High Temples' will be presented in this paper. The analysis of Tell Mozan Temple Terrace will be integrated in this framework. Finally the perception of 'High Temples' will be analyzed within the urban and surrounding landscape.



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## **LEARNING TO BE URBAN: STORING SENSIBILITIES AND SENSUOUS HUMAN PRACTICE ON THE SOUTHEASTERN DEAD SEA PLAIN, JORDAN**

Citing Geertz' (1973: 45) insight that "we all begin with the natural equipment to live a thousand kinds of life, but end ... having lived only one" Kus (1997) urges anthropologists to explore how people learn their culture with and through the body in what she calls sensuous human practice. The framework of sensuous human practice grounds this presentation on the advent of small-scale urbanism in the southern Levant during the Early Bronze Age (EBA). With the invention of cities and walled towns, how did EBA people learn to live in cities and towns? They faced many new challenges with urban life, and the invention of small-scale cities corresponded to transformations of mortuary practices and an intensification of agricultural and pastoral practices, including storage (Chesson 2007; Chesson and Philip 2003; Greenberg 2007; Philip 2008). I argue that learning how to store their food and their dead was a crucial element in being a fully-competent and fully-cultured urban person, and archaeologically the results of that learning is very visible: the archaeological record abounds with evidence for EBA storage of food and dead people especially at the sites of Bab adh-Dhra' and Numayra on the southeastern Dead Sea Plain of Jordan.

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## **RURAL-URBAN RELATIONS BETWEEN TEL ZAHARA AND BETH SHEAN IN THE ROMAN AND HELLENISTIC PERIODS**

Urban centers are, by definition, not self-sufficient; they must rely on the surrounding countryside for resources and supplies necessary for their continued support and maintenance. Concurrently, smaller sites in the countryside also rely on the urban center for services, protection, markets for produce and goods, and other support. As such, urbanized systems develop a mutually symbiotic relationship in which each element of the system – urban city and rural village – sustain and support each other and become linked together in their ensuing developmental trajectory. The excavations of Roman and Hellenistic remains at Tel Zahara, Israel, located 5 km west of the large urban site of Beth Shean, have provided data concerning the relationship between this small, rural site (.25 ha.), its history of occupation, and its probable interaction within the social and economic systems focused on the urban center in these eras. This paper discusses the settlement and local changes in subsistence patterns at Tel Zahara as they are linked with contemporary developments at Beth Shean, thereby illustrating the mutual relationship that exists between town and countryside.

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## **ARCHITECTURE AND MATERIAL CULTURE DISTRIBUTION ANALYSIS: A STUDY OF SOCIO-ECONOMIC RELATIONSHIP AMONG LATE NEOLITHIC VILLAGES OF WESTERN NEAR EAST**

This paper is part of a wider PhD research which seeks to identify socio-economic relationships between communities from Cyprus and the North Levant (particularly Syria) during the Late Neolithic (circa 7000 to 4000 BC), after the 9th and 8th millennia BC colonization episodes affecting the island of Cyprus. Although much more archaeological data will to be examined in order to give an answer to this issue, in this paper I intend to present only some preliminary results deriving from: a. The architectural analysis of the built landscape regarding building materials, methods and techniques of construction, the physical characteristics of buildings and segmentation/arrangement of building and village space; b. The spatial distribution of material culture associated with socio-economic activities, such as pottery, stone vessels, chipped stone tools, groundstones, floor installations and zoological and botanical remains. Doing so, a considerable amount of past socio-economic life-style from several Neolithic villages of the Eastern Mediterranean will be reconstructed and then studied cross-culturally in order to identify similar or different socio-economic processes and developments during the Late Neolithic.

Indeed, an overall study of the built landscape is of primary concern, since the very nature of the archaeological data provides much in such a research. Certainly, in a given building, an archaeologist is able to trace both economic and social production and reproduction, as a result of a series of cultural-economic-social behaviours (activity systems), which proffer to determine social and economic organization, segmentation and differentiation both at a village and at a regional scale.

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## **A RURAL CULTURE IN THE LEJA (SOUTH SYRIA) DURING THE MIDDLE BRONZE AGE**

Between 2003 and 2007 in South Syria, a French-Syrian archaeological mission surveyed the Leja, a basaltic region 50 km south of Damascus. Due to a specific and quite unique state of preservation of the archaeological remains we discovered in 954 km<sup>2</sup> area more than 540 sites. 116 of them are dated to the Middle Bronze Age. This high number of sites and a good quality of conservation of the archaeological remains still yet unpublished allow us to comprehensively plan several of them. These different elements have been integrated in GIS. Their description allows us to identify several categories of sites for the Middle Bronze period: fortified settlements, open agglomerations, isolated farms and one network of fortified towers. We will present several examples of such villages completely map (like Masseij, Sawwan, Tineh, etc.). Then we will discuss a relatively complete and precise land use mode of Leja during this period to conclude with an attempt of characterization of this regional rural culture of Southern Levant.

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## **TOWNSHIPS OR VILLAGES?**

### **REMARKS ON THE MIDDLE BRONZE IA PERIOD IN THE SOUTHERN LEVANT**

The transition from the Early Bronze IVB to the Middle Bronze I period in central inner Syria is marked by a deep change in the material culture. Violent destructions of some major sites marked the collapse of the EB IV society in the region, and new fortified centres were quickly reconstructed at the very beginning of the 2nd millennium BC, showing a completely different cultural horizon.

Though it has long been retained that the 'second urbanization' took place rapidly also in the Southern Levant at the beginning of the 2nd millennium BC under a strong Syrian influx, recent analyses underline a major continuity between the EB IV and the MB IA. The paper discusses this formative phase, focusing particularly upon those sites which show elements of discontinuity, such as fortifications, palaces and temples. The aim is to investigate whether these sites can be already regarded as urban realities in formation, how did they develop from and interact with the network of rural villages filling up the region, and how did they relate to the Syrian urban centers northward.

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## **A PROCESSION OF CHALCOLITHIC VILLAGERS:**

### **RECONSIDERING HENNESSY'S 'PROCESSION' WALL PAINTING FROM TELEILAT GHASSUL, JORDAN**

Despite ongoing archaeological interest little is known about the customs of the Ghassulian Chalcolithic villagers of the Southern Levant. To add to the unfolding discussion, re-examination of the wall painting from Hennessy's Sydney University excavations at Teleilat Ghassul was recently undertaken, using a fresh visual approach. This has provided intriguing glimpses into the lives of an artistic and ritualised society and promises to shed new light on these still mysterious people.

This paper will present findings from the detailed re-evaluation of the 'Hennessy's Procession' wall painting, uncovered in 1977. Over the past two years the author has studied the excavator's sketches, field plans, conservation records and the conserved mural held in the Citadel Museum, Amman. A new digital methodology, built up from high resolution scans of the original wall painting fragments, was employed to assemble the reconstructed mural. This has revealed many features that had previously been overlooked.

The 'Procession' depicts a line of masked figures wearing colourful and elaborately tasseled robes, carrying a variety of intriguing objects. They walk in file towards what appears to be a walled enclosure. This reconstructed scene reveals insights into the artistic traditions and cultic/ritual practices of south Levantine Chalcolithic village life, with relevance to the ongoing debate on Ghassulian social hierarchy.

## **SEALING POTS IN UPPER MESOPOTAMIA IN THE LATE 3RD MILLENNIUM. MORE EVIDENCE FROM THE KHABOUR REGION**

Although the practice of sealing is well attested in Mesopotamia due to the numerous finds of cylinder seals, clay sealings and bullae, when considering sealing impressions on pots the scope of this study dwindles remarkably. Within the last two decades Near Eastern archaeology has paid much more interest to this kind of impressions, specifically in the area of the Khabour basin, where archaeological sites such as Tell Beydar, Tell Arbid and Tell Brak have provided us with good samples of how this administrative device was used.

The analysis of typology and the context of the pottery and its respective sealing will help us better understand the administrative schemes in Upper Mesopotamia during the Late 3rd Millennium, and whether Southern Mesopotamia influence is visible in local styles and shapes. Bearing this goal in mind we will reconsider some singular sealed pots from Tell Brak.

The comparison of these new samples with the ones previously studied from this and other sites of the same region will shed more light on the role of this practice in the administrative system of the Late 3rd Millennium in Upper Mesopotamia.

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## **LINKING THE MOUNTAINS TO THE PLAINS. MATERIAL CULTURE AND LIFESTYLE OF THE LOCAL COMMUNITIES IN SOUTH-EASTERN ANATOLIA DURING THE IRON AGE**

In recent years, following the construction of the Ilisu dam project, South-eastern Anatolia has been yielding new data inherent to its Late Bronze-Iron Age periods (13th - 7th BCE). Starting from a small indigenous context such as Hirbemerdon Tepe (Diyarbakır) within the Upper Tigris region, and a comparison with other similar neighboring areas, it was possible to achieve important information regarding the Assyrian empire and its borderland landscape interaction. Moreover, the material culture discovered in this and other similar sites is revealing new socio-economic patterns among the local communities and their connections with northern (Transcaucasia) and southern (Assyria) cultures. In fact, by considering the ceramic production, the strategy and dynamics of inhabitancy, among other factors, it is possible to advance the hypothesis of a dimorphic-like kind of society subdivided in different types of communities between state and tribal spheres of influence connoted by a strong nomadic tradition of northern origin. Investigating these 'minor' sites within a network of interaction and a holistic perspective of the playing elements, has revealed their importance in moving the first steps in defying the local communities of Eastern Anatolia, the Nairi, and the cultural affiliation that for very long bound these lands.

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## **SUBTERRANEAN HOUSES AT BIR ES-SAFADI (4TH MILLENNIUM BC, ISRAEL): AN UPDATE**

Bir es-Safadi in the northern Negev (Israel) was settled by a small community of agro-pastoralists at the turn of the 5th and 4th millennia BC. The site is one of many small villages scattered along Wadi Beersheba, founded by semi-nomadic populations from the coastal plain. As they came to these semi-arid margins and even though they had been using stone architecture for several millennia, these populations investigated new types of dwellings by burying their houses, perhaps in order to seek better adaption to the environment. These subterranean houses little by little became more complex as they evolved from rectangular shallow monocellular spaces into subterranean compounds made of a sequence of deeply buried small ovoid rooms. Subterranean compounds were rapidly abandoned in favor of a return to traditional stone architecture at the outset of the 4th millennium. This evolution can be traced in all sites of the region, from large centres like Shiqmim to smaller settlements like Bir es-Safadi.

Extensive excavations at Bir es-Safadi in the 1950s have revealed the most important concentration of subterranean houses. The comprehensive publication of the houses, soon to come out, gives me an opportunity to present previously unpublished data that will help understand how these subterranean compounds evolved, how they were distributed, what they were meant for, and what factors contributed to their development followed by abandonment. Furthermore, regional scale studies will enable to distinguish differences in settlement patterns and evolution dynamics of diverse populations, according to size and type of subsistence economy.

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## **BECOMING CONNECTED – INTERACTION NETWORKS DURING THE EARLY DYNASTIC PERIOD**

In the early 3rd Millennium B.C. central Mesopotamia formed a heterogeneous cultural landscape, which can be divided into various regional units. It is within this cultural area that the painted pottery tradition of Scarlet Ware spread.

The differences in urbanisation between regions and the reconstruction of distribution patterns of ceramics, and material culture in general, is still strongly biased towards core-periphery explanations. Such approaches are ill-equipped to deal with the complex interactions that characterised the cultures where Scarlet Ware existed. The distribution of Scarlet Ware coincides with the formation of a complex transregional network, in which reciprocal effects manifest themselves throughout all aspects of material culture. The formation of this network and the direction, intensity and dynamics of its connections are still poorly understood.

Based upon social network research, this paper aims to examine the distribution of traditions of painted ceramics within the complex cultural networks of the early Third Millennium B.C. Such methodologies allow us to reconstruct a more detailed chronological framework, resulting in a new picture of the cultural landscape of the period.

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## **EXPLORING THE OUTER CITY OF A MAJOR EBA CENTRE - RECENT EXCAVATIONS IN THE EASTERN EXTENT OF TELL CHUERA'S LOWER TOWN**

Tell Chuera represents the largest exponent of the so called "Kranzhügel"-group. Until recently archaeological explorations focused on the site's upper town, while structures found between the concentric rings of the outer and lower fortifications had only been examined to a limited extent. As a result of a newly outlined research strategy based on geomagnetic prospection that came to cover the entire site, we conducted extensive excavations in Chuera's lower town between 2005-10. Our research objective was to obtain information about structure and function; the excavations yielded evidence for workshop areas, domestic architecture and shed light on important structural components of the EBA townscape. A major result of our field research was an extensive exploration of the outer city's mid/late 3rd millennium defence works. My paper will summarize our latest results and reflect on the socio-economic implications of the archaeological record. Since lower towns have not received the same attention as topographically more central parts of currently excavated sites, our results reach beyond the local sequence and contribute to our understanding of the relationship between public institutions, urban defensive structures and city planning. Furthermore, this research contributes to the wider discussion of urban expansion within the EBA in Syro-Mesopotamia.

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## **WAS HATRA THE SECOND BABYLON? SOME REMARKS ON THE NORTHERN MESOPOTAMIAN CITY RELIGIOUS LIFE**

The significant role of Hatra among the urban centers of the Middle East is not questionable. This city was famous not only thanks to its monumental architecture, but also because of a unique position between the Middle Eastern religious centers. The city development flourished in the beginnings of the 2nd century A.D. It was the time when Hatra begun to play a special role in the religious life of the Aramaic speaking tribes settled in the Northern Mesopotamia. One of the questions asked in the proposed paper, is if Hatra religious phenomenon, was built up on the older Mesopotamian, especially Babylonian tradition. We have at our disposal several factors and evidences which seem to support the above hypothesis.

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## **THE GRANARY AT UR: A STUDY OF THE NEO-SUMERIAN TEXTUAL EVIDENCE**

The Ur III period saw the concentration of agricultural lands into the hands of the state, with large quantities of grain moving from towns and villages into the granaries of the big cities. The processes of storage and the quantities

available to those in charge of the granaries are difficult to determine from the archaeological evidence, as there have been no discoveries of Ur III granaries at any site in Mesopotamia. The use of textual evidence, therefore, will help to enlighten us on the subject of grain quantities and the management of grain movement in this period of Near Eastern history. This paper examines the texts concerning the granary in the city of Ur, using seal impressions to determine which individuals had access to and control of grain transactions connected with the granary. The texts themselves give details of the amounts of grain involved in these transactions, as well as descriptions of how it was disbursed and under whose authority.

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## **THE DEVELOPMENT OF SOUTH/CENTRAL SYRIA IN THE EB IVB: THE TELL NEBI MEND PERSPECTIVE**

This presentation will explore the changing socio-economic and political landscape that developed in south/central Syria in the final centuries of the Third Millennium BCE, after the destruction of the Kingdom of Ebla at the end of the EB IVA. By contrasting changing patterns of ceramic association between key Syrian settlements and their hinterland regions, we shall outline the sharply changing landscape of the EB IVB. Focusing upon the EBA strata of Tell Nebi Mend (ancient Qadesh on the Orontes), it will be argued that profound changes in economic activity, political alliance and social structure in central/southern Syria were catalysed by this event.

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## **FORMS OF URBAN SETTLEMENTS. DIFFERENCES AND ELABORATIONS OF URBAN SETTLEMENTS IN THE MIDDLE EUPHRATES VALLEY**

During the early 3rd Millennium BC urbanization started to develop along the Euphrates valley, creating a large number of new urban sites, in particular in the middle Euphrates area. People of different identities and cultures inhabited these sites, leading to the elaboration of a variety of architectural styles and forms of the sites themselves, even in this relatively small area. The paper will focus on the first urbanization, trying to illustrate the origins of these inhabitants, in the middle Euphrates valley, with special concern for the Tabqa Dam and Tishrin Dam areas. Differences and similarities in settlement shapes and architectural types will be dealt with, for the largest settlements of the area – namely Tell Banat, Tell Jarablus Tahtani, Tell Ahmar, Tell Hadidi among others - illustrating the relationship between these sites and contemporary civilizations of neighboring areas.

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## **EARLY NEO-ASSYRIAN DUR-KATLIMMU**

In earlier publications it has been maintained, that the Lower Town II of the Neo-Assyrian provincial centre of Dur-Katlimmu was a short lived establishment covering only the late Neo-Assyrian period after about 720 BCE. Excavations during the 1990's in the Central Lower Town II established a sequence that was extending from a level earlier than the main building, the so called "Neo-Assyrian Residences" of the 8th and 7th centuries to the Post-Assyrian period of the 6th century. In 2003 an inscribed cylinder seal impression from a stratified deposit of the otherwise poorly preserved earlier level provided a terminus post quem for the erecting of the "Residences" by the association of the seal-owner Ishme-ilu with Nergal-eresh, governor of the province of Rasappa, to the first quarter of the 8th century BCE.

By excavations in 2008 and 2010 a town canal was verified that crossed the Lower Town II in east-west direction. The stratigraphic record left no doubt that the canal went out of use before the erecting of the "Residences". Thus, the latest utilization of the canal must be associated with the preceding building level of the time of Nergal-eresh or earlier, i.e. 9th century BCE, while the construction of the canal might date to an even earlier period.

In this paper the authors wish to exemplify the archaeological record of the canal as well as the pottery and the seal impressions discovered in the fill of it to evaluate their significance with regard to the history of Dur-Katlimmu and to early Neo-Assyrian culture.

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## **QUBUR EL-WALAYDAH: VILLAGE ARCHAEOLOGY IN THE LAND OF THE PHILISTINES**

Since 2007 a joint mission of the Ben-Gurion University (Israel), the University of Rostock and the University of Leipzig (Germany) are investigating Qubur el-Walaydah, an ancient village site located on the Nahal Besor (Wadi Ghazze), Israel. Settlement levels from the 13th through 7th century BCE were exposed here. The oldest settlement was an Egyptian rural estate of the 13th and 12th centuries BCE with massive mudbrick architecture and epigraphical finds in Hieratic and Canaanite. After the abandonment of the Egyptian estate, a small village with “Philistine” material culture of the 11th century BCE was founded here. This village continued until the 7th century BCE and was excavated in several levels. The paper discusses the character of rural settlement in the urban imperial Egypt and “Philistine” hinterland.

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## **TRANSFERRING CHAOS INTO ORDER IN THE URARTIAN KINGDOM**

In the royal ideology of the Urartian kingdom the most prominent aspect is that of the king as a constructor. According to their inscriptions the Urartian kings built not only palaces and temples but also whole cities, agricultural structures and canals. It happens only through these building activities in before “barren land”, that areas get capable of being inhabited.

The king shows himself as the constructor of his state, his buildings projects almost exclusively take place for the honor and due to the strength of the Urartian national god Haldi. Because of the close relation of building activities and religion, all the building projects are connected to the charisma of the king, a kind of “tectonic charisma” like it is called by Adam T. Smith. Creating order and defending this order from foreign attacks play a major role in this charismatic leadership and the inscriptions often stress the contrast between built environment and uncultivated lands. Thus the legitimacy of the Urartian king develops from his power to civilize the chaos that lies in the wilderness and from his power to create order by his building activities.

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## **EARLY DYNASTIC KISH – CITY STATE OR TERRITORIAL STATE?**

Although Early Dynastic Kish is usually considered one of several south Mesopotamian city-states, there are some arguments against such a notion. While in Sumer there were many large cities of similar size, in the north there is only one – namely Kish. As shown by Elisabeth Stone, the settlement patterns differ significantly. In the north, second-rank cities/towns were found, markedly underrepresented in southern city-states. Such a pattern finds close parallels in the state of Nagar, as known from Eblaite texts and results of surveys. Very rough estimations of Kish state’s area (at the beginning of ED IIIa) suggest that it was at that time probably at least the size of later Nagar, and much bigger than Sumerian city-states. Apart from environmental differences between southern and northern Babylonia, this discrepancy probably was also the result of a distinct, more coercive structure of the Kishite power system. Such a difference is noticeable also in archaeological remains, since at Tell Ingharra palace “A” was built close by the main temple precinct, and the two complexes only in more recent times were separated by a gully or wadi. The proximity of the two institutions is paralleled in Mari and Tell Beidar in the Jazirah region. Summing up, the Kish state better fits the northern, semitic model of territorial state than that of a southern city-state.

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## **THE ROAD TO THE CITADEL OF KANESH. URBAN STRUCTURE AND SPATIAL ORGANIZATION OF THE CITY DURING THE ASSYRIAN COLONY PERIOD**

Long term archaeological excavations conducted at the site of Kültepe have provided abundant data on public buildings and residential districts in ancient Kanesh during the first three centuries of the 2nd millennium B.C. Nevertheless, our understanding of the spatial organization of this city is limited due to the scattering of the excavation results between many articles and publications. This papers aims at compiling and thoroughly analyzing all the available sources, both



archaeological and textual, concerning the urban structure of Kanesh. The main goals of this research are to renew the interpretation of architectural remains unearthed at the center of the site and to reconstruct the streets' layout, in particular of the main urban artery leading to the citadel. These reassembled data contribute to the study of the rise and development of cities in central Anatolia, as well as formation of local canons of monumental architecture.

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## **TELL MUMBATAH AREA AND THE EASTERN LIMIT OF THE TERRITORY OF EBLA**

In the frame of the Ebla-Chora Project (2010-2014), funded by the European Research Council, a survey of the territory and landscape of Ebla in the 3rd millennium has been scheduled and partially undertaken. A preliminary report of the first activities in the Eastern sector of the supposed Chora of Ebla centred in Tell Mumbatah will be presented by means of the combination of archaeological, geographical and territorial data.

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## **LE PREMIER URBANISME (PROCHE-ORIENT, IV<sup>E</sup>-III<sup>E</sup> MILLENAIRE AV. J.-C.)**

L'émergence des premières villes de l'histoire en Mésopotamie, au IV<sup>e</sup> millénaire, s'est immédiatement accompagnée, de la part des constructeurs fondateurs, de la prise de conscience que le nouveau cadre de vie exigeait une préparation et une organisation destinées à assurer à la fois la longévité et l'harmonie de la construction urbaine.

Un véritable urbanisme, totalement différent de celui des cités grecques, a alors été, à l'aube de l'histoire, systématiquement mis en place pour parer à deux dangers majeurs :

- la vulnérabilité de l'architecture de terre (briques crues) à l'eau, moins rare qu'on ne le croit dans ce domaine aride, qu'elle soit à fleur de sol (fleuves et canaux), souterraine (nappe phréatique) ou venue du ciel sous forme de pluies, peu fréquentes, mais d'une grande violence ;
- l'instabilité des sols, constitués essentiellement de limons et très hétérogènes et par conséquent impropres à supporter les charges de bâtiments de deux niveaux ou plus.

Les solutions apportées, qui mettent en évidence une exceptionnelle inventivité et une étonnante compréhension du milieu, ont été de deux ordres :

- l'adoption pour les villes de plans géométriques, très souvent circulaires, parfois orthogonaux, voire même triangulaires, en tous cas toujours parfaitement adaptés au terrain, de façon à éliminer le plus rapidement possible les eaux de pluie, soit par une diffusion grâce aux voies radiales dans le cas des villes circulaires, soit par récupération dans des canaux intérieurs ou périphériques dans le cas de villes orthogonales, et par l'installation de chaussées absorbantes (les premières de l'histoire) ;
- l'aménagement d'une infrastructure sous forme d'un réseau de fondations de 1,50 à 2 m de hauteur qui assure toute l'organisation de la ville et de sa voirie et qui a pour but d'éloigner le niveau d'occupation de la nappe phréatique et de stabiliser de façon homogène l'ensemble du bâti.

La conséquence première de ces choix est, impérativement, la pratique systématique de la création artificielle des villes, c'est-à-dire de la fondation de villes neuves, qui ont été entretenues et réaménagées selon le même principe pour assurer leur pérennité. Certaines d'entre elles fondées au III<sup>e</sup> millénaire, comme Babylone, étaient toujours actives deux mille ans plus tard.

Ces concepts extraordinairement modernes n'ont jamais été consignés, dans l'Antiquité, par des écrits théoriques : seule l'archéologie a pu les mettre en évidence par une confrontation systématique d'un certain nombre de sites.

**JULIETTE MAS**

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## **BRONZE AGE DOMESTIC ARCHITECTURE IN EASTERN SYRIA: FAMILIAR, SOCIAL AND ECONOMIC IMPLICATIONS**

We propose to expose the results of a PhD project carried out during the last years in Lyon 2 University. The aim of this research was to constitute a wide catalogue of dwellings excavated in Syrian Euphrates and Jezirah dated to the whole Bronze Age. We decided to study these houses exhaustively in their globality focusing on all their characteristics, concentrating on their technical aspects, layout, installations and the material found in situ.

The study was extended to a wide geographical context in order to have a large amount of data at our disposal, thus enabling us to classify them into series. The historical context has allowed us to situate these series within the general historical framework of the region. We compared the layouts, installations and socio-economic status deduced from

the recovered material with the regional political and economic features. Furthermore, we drew comparisons with the types of settlement and their governing authority, either directional or administrative, analyzing them from both a synchronic and a diachronic perspective. This approach yielded very interesting results with the opportunity to get new data on the daily life of Syro-Mesopotamian households, the possibility of categorizing the types of dwellings by their inhabitants' means of subsistence and the ability to recognize the evolution of existing links between these buildings and the particularities of the households who occupied them.

**TIMOTHY MATNEY**

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## **EARLY IRON AGE TOWN AND VILLAGE LIFE IN THE UPPER TIGRIS RIVER VALLEY OF SOUTH-EASTERN TURKEY**

This paper examines the towns and villages of Iron Age communities living along the upper Tigris River valley during the Middle and Late Assyrian periods, and during the interim period from the mid-11th through early 9th centuries BC when Assyrian control over the region was lost. Given a wealth of new data from the Ilisu Dam Salvage excavations undertaken in this region over the past decade, it is now possible to begin to model the relationships between indigenous Tigridian populations and the imperial Assyrian colonists, as well as between the large urban Assyrian centers, their dependent towns and villages along the Bismil-Batman stretch of the Tigris River, and the small settlements of the indigenes. Of particular interest is the nature of the Early Iron Age settlements spanning the interim period, when much of the valley appears to have been used by indigenes for agriculture and herding, but with little evidence of permanent habitation prior to the return of Assyrian imperial forces in the early 9th century BC.

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## **HISTORICAL AND ARCHAEOLOGICAL APPROACHES TO SETTLEMENT DATA: A CASE STUDY FROM IRAN**

Archaeological surveys in south-western Iran have demonstrated the existence of widespread regional populations throughout the Zagros mountains which managed to maintain political, social and cultural ties over vast areas for millennia. Although the exact nature of the resulting networks and the mechanisms that drove them did not remain static, a common characteristic of the more enduring settlement systems in this area was their basic structural framework. Hierarchical settlement systems of varying complexity have been identified in the Zagros highlands of Fars province, ordered by site sizes and by inferred relationships to other sites or resources within the surrounding landscape. This paper aims to extend the interpretation of settlement data from the Mamasani district of Fars to include available textual sources from the Elamite and Achaemenid periods, a time of considerable political and cultural transitions. By examining the archaeological surface collections more closely, in conjunction with the textual evidence from the large regional centres of Tal-e Malyan and Persepolis, this paper will investigate the function and organisation of key towns and villages within their broader regional hinterland.

**LUCIA MORI**

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## **DON'T CULTIVATE THAT FIELD! THE DIFFICULT INTERACTION BETWEEN VILLAGE COMMUNITIES AND CENTRAL PALACES IN THE SUMMER PLANTING OF SESAME IN THE EUPHRATES VALLEY DURING THE MIDDLE BRONZE AGE**

The control of rural land and agricultural production is a vital element for the subsistence of both cities, with their central administrations, and village communities and represents also the main field of economic interaction in the form of revenues and labour due to the cities in exchange of specialized services managed by the great organisations which involved also rural areas. But in a region where land suitable for a stable agricultural production is limited, as the middle Euphrates valley, the control of the best rural areas was extremely important both for the palace and for the villages and was certainly not an easy interaction, as the texts from the region show.

The present paper aims at presenting the specific case of sesame. The plant, extremely important for the cities' central administration for the production a stable vegetal oil, was a summer cultivation and thus interfered with the opportunity of village communities to use these lands for summer pasture and ad hoc cultivation. Strategies of control undertaken by the palaces and ways of escaping those limitations will be analysed and inserted in the wider frame of the socio-economic relation between cities and villages.

## **AN AGRICULTURAL NABATAEAN SITE AT KHIRBET AL-MUDAYNA**

An agricultural Nabataean site at Khirbet al Mudayna in Wadi ath-Thamad has been excavated in the last twelve years. A reservoir, water walls, a small building and a farmhouse were discovered. The farmhouse consisted of two parts, one: a well constructed building with a staircase leading to a second floor, and two: a couple of rooms around a courtyard. The reservoir was remodeled for domestic use in a second phase. An oven was found with cooking pots and other pottery next to it. All the buildings were connected by water walls, which prevented the flooding of the agricultural fields and protected the buildings against perennial rains. This paper will present the last update and interpretations of this unique agricultural compound.

## **TAKAHIRO ODAKA**

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## **THE WESTERN VARIETY OF SAMARRA POTTERY AND THE COLLECTION IN THE NATIONAL MUSEUM OF ALEPPO, SYRIA**

Recent excavations in Syria have revealed rich assemblages of Samarra pottery, in which unique regional attributes can be seen. These assemblages can be distinguished from 'classic' Samarra pottery in Iraq and may be identified as a 'western variety' of Samarra pottery.

However, an examination of the 'western' Samarra pottery from the collection in the National Museum of Aleppo and from several excavated sites has demonstrated that 'western' Samarra assemblages from different sites do not always share particular attributes and the 'western' traits are observed randomly among them. Also, Samarra pottery is quite rare among the pottery assemblage at sites in the 'west', except for Tell Sabi Abyad I.

This suggests two hypotheses: 1) The 'western variety' of Samarra pottery was produced at a limited number of production centers, such as Tell Sabi Abyad I, and unique local traits were individually developed at each of these centers. The 'western' traits of Samarra pottery should therefore be regarded as an aggregate of this varied local development; 2) Furthermore, inhabitants of other 'western' sites imported Samarra pottery from more than one production center, which resulted in the uneven occurrence of the 'western' traits within the small quantities of Samarra pottery at these sites.

## **ADELHEID OTTO**

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## **HISTORISCHE GEOGRAPHIE OBERMESOPOTAMIENS: DAS DEUTSCH-FRANZÖSISCHE PROJEKT HIGEOMES**

Die Beziehungen zwischen städtischen Zentren, kleineren, teilweise abhängigen Siedlungen, Dörfern und Weilern können – im optimalen Fall – für eine bestimmte Periode in einem fest definierten Raum anhand von archäologisch manifesten Siedlungen in Kombination mit zeitgenössischen Texten rekonstruiert werden. Das interdisziplinäre, französisch-deutsche ANR/DFG-Projekt HIGEOMES widmet sich dieser Aufgabe für Obermesopotamien im 2. Jahrtausend, wobei die Daten der Mari-Texte und der mittellassyrischen Texte mit den Fundstätten Obermesopotamiens in Beziehung gesetzt werden. In diesem ersten Bericht werden Strategien, grundsätzliche Probleme und erste Ergebnisse des Projektes vorgestellt.

## **ALESSIO PALMISANO**

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## **GEO-POLITICS AND TRADE IN CENTRAL ANATOLIA IN THE MIDDLE BRONZE AGE**

The information provided by the written sources allows us to conclude that during the early Middle Bronze Age Central Anatolia was politically fragmented, with various kingdoms in competition with each other for territory and profitable natural resources. Nevertheless, our knowledge of Anatolian cities, town and villages is biased because the written sources, coming mainly from karum Kanesh level II, provide us a restricted situation regarding only the towns either directly involved in the Old Assyrian trade system or having commercial relationships with the Assyrian colonies. Therefore, delineating the political geography of Central Anatolia in the Middle Bronze Age is important for a series of practical implications such as the determination of which local administration had the jurisdiction over a specific territory and how the geo-political situation framed the trade system set up by the Assyrians.

Despite the recent disciplinary impact and the increase of archaeological and textual data, the understanding of the political and economic geography of this area has been limited both spatially and contextually. At this point, I will combine textual, archaeological and spatial data with a landscape-scale, spatial approach in order to tackle some past misconceptions about the political and economic situation in Central Anatolia in the early 2nd millennium BC.

**LUCAS PETIT**

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## **WHAT WOULD THE EGYPTIAN PHARAOH SHOSHENQ I HAVE SEEN, IF HE HAD VISITED THE CENTRAL JORDAN VALLEY?**

Combined archaeological data from the Central Jordan Valley indicates that small agricultural villages were occupying the area during the first half of the 10th century BC, all grouped along well-organized irrigation systems. A regional conflagration ended the occupation around 950 BC after which most of the Central Jordan Valley was deserted for approximately one century. According to the topographical list of Shoshenq I, there existed at least four settlements in the Central Jordan Valley: Adamah, Succoth, Penuel and Mahanaim. Those places were around 925 BC apparently important enough for the Egyptians to neutralize. But where are the remains of those settlements? This paper deals with an interesting disjunction between archaeological and textual evidence.

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## **THE LATE NEOLITHIC VILLAGE OF SHIR: LIVING WITH THE DEAD**

The Late Neolithic village of Shir (ca. 7000 – 6100 BCE) is located in Northwest Syria, about 12 km NW from the modern city of Hama. With the aim to investigate the layout of the site, the subsistence strategies and technological development it has been excavated since 2006 under the auspices of the German Archaeological Institute and the Syrian DGAMS. Three main excavation areas were opened up in Shir, a Southern Area that contained the complete 6 m sequence all the way down to the bedrock, and the trenches in the Central and Northern part with the focus on the settlement layout and the investigation of two large storage buildings.

In the Southern Area the stratigraphical studies and a wide range of radiocarbon dates yielded a sequence of nine layers of continuous settlement activities, dating between 7000 and 6500 BCE. The earliest phases (Phases 0-3) in the deep sounding show storage installations, remains of lime floors and several single walls. The upper layers (Phases 4-6b) were excavated over a large area and show single domestic houses with massive lime floors, well built walls of pisé, mudbricks and stones and several domestic areas. Furthermore, excavations revealed several massive stone walls that functioned as fixed frames and were used by the different buildings of the different phases. The majority of buildings reveals a regular NW-SE direction, with the exception of one rectangular house in the area L8W. In terms of its building style, axis and interior features containing more than 10 burials it has no parallel within the site and indicates being a non-standard building amongst the village. Up to now, Shir is the only Late Neolithic site in the Orontes region (West Syria) which has been excavated with such a large extension. Both the layout of the houses and the village are unique yet and can hardly be compared with other contemporary sites.

**MARINA PUCCI**

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## **THE SITE OF CHATAL HÖYÜK: A TOWNSHIP IN THE AMUQ**

The excavations on Chatal Höyük (Turkey) brought to light a sequence of architectural occupations from the Late Bronze Age to the Iron Age III. The size of the structures, the building techniques, the urban organization and the inventories indicate on the one hand a lack of clearly representative secular and/or religious public structures, and on the other the ongoing life of a large settlement with the various internal urban and material changes that took place during its history. This township was located in a territory which, according to documents, underwent several substantial political and social changes: to begin with it was part of a large Empire (the Hittite Kingdom) under the jurisdiction of Karkemish, subsequently the core of a new political entity (Padasatini?), after which it was the territory of a small regional centre, with Khunlulua as its political hub. Lastly, it was again part of a large Empire (the Assyrian Empire), whose collapse it survived.

In this paper the author presents an overview of the urban history of this township, highlighting how a centre which was not politically relevant absorbed or rejected “foreign” cultural traits, following a pattern that was different to that of a major urban centre.

**THE FUNCTION OF SEAL-IMPRESSED JARS IN THE HAMRIN VALLEY, CENTRAL IRAQ**

Our understanding of the administrative use of seals and their impressions has improved significantly over the past decades. However, certain practices remain unexplained. Archaeologists have discovered jars with a seal impression applied on the rim or neck before firing at several Early Bronze Age sites in various regions, including western Syria, the southern Levant, Anatolia, and Central Iraq. The application of seal impressions directly on jars does not fit the standard model of sealing practices to secure the content, so a different explanation is necessary. S. Mazzone and D. Matthews have both developed interpretative models to make sense of the seal-impressed jars from Ebla and its political territory. While maintaining different hypotheses regarding the practical use of these seal-impressed jars, both attempted to understand these vessels as fulfilling a specific function within the redistributive state economy of Ebla. Most recently, S. Graff came to the conclusion that the practice of applying seal impressions directly on jars functioned outside the scope of the centralized economy based on her in-depth study of the economy of northwestern Syria during the 3rd millennium BCE. Instead she suggested that these vessels were cooking pots with a specialized function, indicated by the seals impressed on them, which were produced and traded by local potters.

While these different hypothetical models all seem convincing when applied to the evidence of Ebla and its surrounding political territory, they fail to explain the seal-impressed jars from the Hamrin valley in central Iraq. The sites of the Hamrin valley that have yielded similar seal-impressed jars were located far away from western Syria, they functioned within a very different political and social context, and they were several centuries older dating to the first half of the 3rd millennium BCE. In this paper we will contrast the available evidence from the Hamrin valley with the material from western Syria in order to assess whether the practice of impressing seals on jars is a reflection of shared customs. Agreeing with Graff, I will suggest that this alternative use of seals was part of a local economy outside the reaches of centralized polities. However, in order to understand the seal-impressed jars from the Hamrin valley, a different explanation is required that fits the distinct rural and social setting of the Trans-Tigridian Corridor during the early 3rd millennium BCE.

**CLAUDIO RUBINI**

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**MEDIEVAL TRANSFORMATIONS OF ROMAN URBAN FABRIC IN ANTIOCH.  
STUDY FOR AN ACTIVE HISTORY OF THE CITY**

Traces of the Hellenistic-Roman substratum in Antioch testify to the existence of a planned layout just outside the medieval nucleus of the present old city. Despite the scarcity of archaeological evidences related to the Roman structure within the body of the medieval urban fabric, reading the present urban organism has led to the formulation of a working hypothesis of an actus Roman grid influencing the transformations of the Ottoman urban structure. The study is based on the 30's French cadastral map, the assumption that a gradual and spontaneous process of transformations has generated the present status of the forma urbis and on a non intrusive morpho-typological analysis of the transformation processes deforming the ancient classical layout still persisting despite the continuous erosion of the history. We have studied the Hellenistic fabric orientation within the medieval city, identifying plots and blocks settled according to the main axis, the present Kurtulus Caddesi, i.e. the ancient Roman via colonnata. An actus based grid fits on the medieval layout of the city suggesting the limits of the Roman substratum. Rhythmic variation of the blocks between the conjectural Roman perimeter and the Ottoman neighbourhood on the Hellenistic layout echoes a public structure to have been settled in the area of the Kocaabdi mahalla: Şeyh Ali Camii and Habibi Neccar Camii support this hypothesis as non residential building settled on a public areas gradually occupied by housing and commercial activities. A curvilinear street connecting the mahalla with the ford on the Orontes river becomes matrix for a commercial urban fabric with khans and caravanserais. Irregularity on urban fabric layout in Gazi Paşa mahalla supports the hypothesis of non residential ancient structures on the peripheral areas of the inner Roman nucleus, gradually transformed in residential neighbourhoods in medieval time.

The medieval town introduces a pronounced specialization of the urban structures, clearly identifying trade, politics, religion and private life spaces according to a progressive consumption of the ancient substrata; private buildings take space away from public roads, such as the colonnaded street, and the introduction of a more introverted aggregation with the introduction of the cul de sac, show the final maturation of a city reflecting social changing over time.



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## **MAKING BRICKS AND MANAGING RUBBISH. RECENT INVESTIGATIONS IN THE IMMEDIATE SURROUNDINGS OF TELL BRAK, AN EARLY URBAN SETTLEMENT IN NORTHERN MESOPOTAMIA**

Recent archaeological investigations at Tell Brak, an early 4th millennium BC city in northern Mesopotamia, demonstrate that early urban growth resulted in the transformation of the surroundings of the settlement from farmland to a zone of mud quarry pits, rubbish dumps and industrial workshops, throwing new light on the earliest urbanization processes in the Near East.

It is often assumed that the occupied space in early cities in the Near East had well-defined boundaries. Our recent archaeological investigations at Tell Brak compel a reassessment of recent models of urban growth and urban space creation and the social and economic organization of early cities. We will show that around the city mud quarry pits were dug for the extraction of building materials, and beyond these pits, extensive rubbish dumps and industrial workshops were created. We argue that these developments may represent a reorganization of urban space by a central authority. We explore this new vision of city layout by underlining the importance of treating garbage as an crucial element in ancient daily life and a raw material for urban landscape creation, as well as a major element in modern excavations. The accumulation of garbage in ancient cities needs to be taken into careful account, and garbage needs to be treated as an important archaeological deposit in its own right.

**PIOTR STEINKELLER**

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## **RESIDENCE PATTERNS IN THE CITY OF UMMAT AT CA. 2000 BC**

A group of Ur III administrative documents from Umma (modern Tell Jokha) in southern Babylonia offers information about the patterns of residence in the city of Umma at ca. 2000 BC. Two of those sources survey the dwelling quarters situated in the central and most densely populated section of the city. A total of 103 houses, occupying an area of over 9.400 m<sup>2</sup>, are identified and described therein. The descriptions specify the sizes of individual houses, the names and occupations of their owners, and the topographic information about particular neighborhoods.

Another group of texts, two of which are accompanied by actual topographic plans, describes a different type of an Umma neighborhood. The structures surveyed there are considerably larger than those listed in the earlier group of documents. Since most of them had industrial uses, it appears that the neighborhood in question was located in the outskirts of the city.

The paper will study these two sets of data, reaching conclusions about the space-organization and space-use in the city of Umma. An estimate of Umma's population will also be offered.

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## **THE COMPARATIVE MORPHOLOGY OF NEO-ASSYRIAN CITIES**

The capitals of the Neo-Assyrian empire appear to be firm examples of cities created as acts of political will, via top-down centralized planning, and with little or no input from their more humble inhabitants. This presentation will argue for a more flexible model that recognizes variability in top-down and bottom-up processes among the Assyrian capitals. Two sources enable a critical assessment. Recent research on provincial capitals has adopted a holistic approach that includes geophysical prospection and the targeting of non-elite residential areas. Satellite-based remote sensing has also opened windows into urban structure. Assyrian cities were highly variable in their morphologies, and these differences can be used to investigate their divergent origins and developmental trajectories. This presentation will review the form and structure of imperial and provincial capitals, with particular emphasis on satellite remote sensing of Nimrud and new topographic data for Qasr Shemamok (the provincial capital Kilizu), now being excavated by the Mission Archéologique Française à Erbil under the direction of Oliver Rouault and Maria Grazia Masetti-Rouault.



**RALF VANDAM**

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## **EVERYBODY NEEDS GOOD NEIGHBOURS**

The Burdur plain in the southwest Turkey is one of the regions in West Anatolia where the Late Prehistory has been systematically investigated. This is mainly due to the excavations of Hacilar (by J. Mellaart) and Kuruçay Höyük (by R. Duru). However, still little is known about the relation between these large sites and their surroundings. Several extensive surveys in this area have been conducted by the University of Istanbul under direction of M. Özait and by the Sagalassos Archaeological Research Project under supervision of M. Waelkens. Because these surveys were non-intensive in nature they revealed mainly the most visible and large settlements in the region but no smaller or more “hidden” sites were found. To remedy this the Sagalassos Archaeological Research Project started in 2010 a series of intensive survey seasons in the Burdur plain which resulted in the discovery of numerous small hamlets and farmsteads from Late Prehistoric times onwards. In this paper these survey results will be discussed and compared to the known large settlements. In this way a new and complete image of the settlement pattern during the Late Neolithic (6500–5600 B.C.) to Early Bronze Age (3100–2000 B.C.) is created. Subsequently, the relationship between these settlements will be elucidated through petrographic fabric characterisation and will be attempted to reconstruct systems of social interaction in the Burdur Plain in order to detect and explain changes that occurred within the time span from the Neolithic until the Early Bronze Age.

**PETRUS VERMAAK**

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## **THE LAGAŠ HINTERLAND IN SOUTHEASTERN MESOPOTAMIA**

The ancient province of Lagaš with its major towns/cities Lagaš, Girsu and Nina had an extensive supporting hinterland with several smaller connecting villages. This region had a major impact on the formation of ancient cultures in southern Mesopotamia. The paper will address these ancient societies which are identified in the texts and archaeology from the pre-Sargonic to the Ur III period. The focus will be on three areas of specialization applied to the regions of the Lagaš province during the 3rd millennium BCE, namely ethnic syncretism, linguistic syncretism and religious syncretism. The issue will be engaged inter alia with the so-called “Sumerian problem” and its possible sub-stratum and will address mainly the position emerging from infiltration of foreign groups into the southeastern corner of Mesopotamia, namely the so-called foreign triangle of Lagaš.

**REMZI YAĞCI**

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## **HARBOUR CITIES AND FORTIFICATION WALLS IN CILICIA IN THE HITTITE IMPERIAL PERIOD**

Written documents (treaties) and archaeological inspections have revealed that the defensive systems were especially important in Kizzuwatna in the 2nd millennium BC. The Kizzuwatna region which became an incorporated part of Hatti land under the reign of Tudhaliya II was described twice by the verb *vetenun* that means “I built” or “I fortified” in the joint Annals of Tudhaliya II and Arnuwanda I (KUB 23.21 obv. 2-11). According to Sunassura treaty, moreover, while the Kizzuwatna King Sunassura and the Hittite King were dividing the territory, the issue of fortification of the cities such as Lamiya, Pitura and Aruna was given special importance. It is possible to assert that the above mentioned cities were harbour cities due to their location and the fact that the harbour cities which were located on land and sea routes were fortified in the Hittite period highlights the crucial position of these cities (such as Ura). Archaeological evidence seems to be in parallelism with the written one. Yumuktepe and Soli, 11 km apart from each other, and their casemate walls excavated in Yumuktepe (VII-V) and Soli (15) levels, may be cited as two examples illustrating fortified harbour cities in Kizzuwatna in the Hittite Imperial period. These walls suggest that Soli and Yumuktepe were among the cities that were fortified in the 15th century BC. This paper will investigate the harbour cities and fortification systems located within the Hittite geography during the Imperial period.

**DIANNE VAN DE ZANDE**

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## **SOCIAL STRATIFICATION IN THE RURAL SETTLEMENTS OF ROMAN NORTHWEST SYRIA**

The limestone hills of northwest Syria comprise a region that in the Roman period saw a development of rural life and an expansion in settlement which has been primarily explained in economic terms. The region has mainly been perceived

as an economic entity serving regional and urban demands. The rural population, simultaneously, has alternately been interpreted in terms of dependency and tenancy to landowners, as well as consisting of independent peasantry. The aspect of social dynamics within these rural communities has remained a considerably less addressed issue. This presentation aims to regard this question of social dynamics, through an investigation of the built environment. It is suggested that the villages' architecture is indicative of not only a regional economic system, but also of a social organization that was played out in agricultural and economic enterprises. The spatial organization of these rural settlements reinforces this suggestion, and furthermore displays elements of social differentiation on a local scale.

## 2. EXCAVATION REPORTS AND SUMMARIES

SUPERVISOR: BARBARA KAIM

AUTHOR(S)	TITLE	DAY, HOUR	HALL
AKBAR ABEDI	A REPORT ON THE FIRST SEASON OF PREHISTORIC ARCHAEOLOGICAL PROJECT OF KULTEPE, NW IRAN	THU, 10.15	111
Wael Abu-Azizeh	URBAN NETWORK AND TOPOGRAPHY OF MARI: PRELIMINARY RESULTS OF THE 2007-2010 EXCAVATIONS IN THE 'EAST CITY'	TUE, 9.50	111
BAYRAM AGHALARY, AYLAR ABDOLLAHZADEH	NEW FINDINGS OF CIRCULAR ARCHITECTURE IN NORTHWESTERN IRAN	THU, 9.25	111
FRANCO D'AGOSTINO	ABU TBEIRAH - SOUTHERN IRAQ	TUE, 18.00	111
ALEXANDER AHRENS	NEW LIGHT ON THE AMARNA PERIOD FROM THE NORTHERN LEVANT – A CLAY SEALING WITH THE THRONE NAME OF AMENHOTEP IV/AKHENATEN FROM THE ROYAL PALACE AT TALL MIŠRIFE/QATNA	MON, 15.20	111
SAJJAD ALIBAIGI, KAMAL-ALDIN NIKNAMI, SHOKOUH KHOSRAVI, MEISAM NIKZAD, MOHSEN HEYDARI, MOHSEN ZAINIVAND	ARCHAEOLOGICAL SURVEY IN KURAN BUZAN VALLEY – HULAILAN, WEST CENTRAL ZAGROS, IRAN	WED, 17.10	116
ENRICO ASCALONE	A NECROPOLIS IN INNER SYRIA. NEW ARCHAEOLOGICAL DISCOVERIES AT TELL TUQAN, SYRIA	WED, 9.50	111
BEHZAD BALMAKI	THE EVIDENCE OF CULTURAL INFLUENCES OF HASSUNA DURING TRANSITIONAL CHALCOLITHIC PERIOD IN MESOPOTAMIA AND CENTRAL EASTERN ZAGROS REGION, IRAN	WED, 12.05	116
HAKIMEH BARGAHI	SYSTEMATIC ARCHAEOLOGICAL SURVEY OF GENAVEH'S CHAHAR ROUSTAEI SITE IN IRAN	WED, 17.35	116
KHADIJEH BASERI	ACHAEMENID COINS	THU, 9.25	111
LEIGH-ANN BEDAL	SECULAR-SACRED: THE FUNCTION OF SPACE IN THE PETRA GARDEN AND POOL COMPLEX	THU, 17.35	116
EREZ BEN-YOSEF	A NEW CHRONOLOGICAL FRAMEWORK FOR IRON AGE COPPER PRODUCTION IN THE SOUTHERN ARABAH: RESULTS OF THE NEW EXCAVATIONS AT TIMNA VALLEY (ISRAEL)	FRI, 11.15	116
PIOTR BIELIŃSKI	UBAID CULTURE RELATED SITE ON KUWAITI DESERT	MON, 18.00	116
MANFRED BIETAK	THE SYRIAN TYPE PALACE OF THE HYKSOS KHAYAN IN AVARIS AND THE ARCHAEOLOGY OF THE "GOLD OF VALOUR"	FRI, 9.50	116
ELISABETA BOARETTO, ELENA ROVA, GIOVANNI BOSCHIAN	INTEGRATING CONTEXTS, SITE-FORMATION PROCESSES AND CHRONOLOGY FOR IMPROVING EARLY BRONZE AGE RADIOCARBON DATES FROM CAUCASUS	THU, 11.15	116
STEPHEN BOURKE	EXCAVATIONS AT PELLA IN JORDAN: THE 2011 FIELD SEASON	THU, 17.10	116
PASCAL BUTTERLIN	THE MASSIF ROUGE AT MARI: NEW EVIDENCE ON THE HISTORY OF ZIGGURATS	TUE, 9.00	111
RICARDO CABRAL	TELL BEYDAR (SYRIA) IN THE CLASSICAL JEZIRAH PERIOD: NEW DATA FROM RECENT EXCAVATIONS	MON, 18.00	111
MARCO CAPARDONI, ANNA LANARO, ALVISE MATESSI	EXCAVATIONS AT KINIK HÖYÜK: A PRELIMINARY REPORT ON THE FIRST CAMPAIGN (AUG.–OCT. 2011)	THU, 9.25	116

MICHELLE CASANOVA	THE NABIALLA PROJECT (THE NECROPOLISES OF AZERBAIJAN DURING THE BRONZE AND IRON AGES IN THE LENKORAN AND THE LERIK AREAS)	MON, 15.45	116
BARBARA CERASETTI	NOMAD-SEDENTARY INTERACTION IN THE ANCIENT MURGHAB ALLUVIAL FAN (TURKMENISTAN): PRELIMINARY EXCAVATION REPORT OF A NOMADIC SITE	FRI, 11.15	111
JOANNE CLARKE	RAPID CLIMATE CHANGE AT THE BEGINNING OF THE 4TH MILLENNIUM BC: A VIEW FROM KALAVASOS-KOKKINOIA, CYPRUS	THU, 14.55	116
JOAQUÍN CORDOBA	TWO CONCLUSIVE SEASONS AT AL MADAM (SHARJAH, UAE). NEW PERSPECTIVES ABOUT IRON AGE AND THE OASIS CULTURE	MON, 17.35	116
DAVOUD DAVOUDI, TAYEBEH HATMI NASARI	THE RECENT ARCHAEOLOGICAL SURVEY IN SHIRWAN-CHARDAWOL, WEST IRAN	WED, 16.45	116
ZEINAB DEGHANI	ARCHAEOLOGICAL SURVEY OF PREHISTORIC SITES (NEOLITHIC TO BRONZE PERIOD) IN KAZEROUN PLAIN, IRAN	WED, 15.20	116
STEPHANIE DÖPPER	ON THE REUSE OF EARLY BRONZE AGE TOMBS: THE EXCAVATIONS AT BAT AND AL-AYN, SULTANATE OF OMAN	MON, 16.45	116
KHALED DOUGLAS	JNENEH: IRON AGE TOWN IN THE UPPER WADI AL-ZARQA: NEW DISCOVERY	THU, 15.45	116
NADEZHDA DUBOVA	GONUR EXCAVATIONS IN 2000-2010	FRI, 11.10	111
BERTHOLD EINWAG	DER TEMPEL VON TALL BAZI UND SEINE NUTZUNG	WED, 11.15	111
AZARMIDOKHT ALIMOHAMAD ESFANDIARI	RESULT OF EXCAVATIONS IN THE ANCIENT CEMETERY OF GHARBAL BIZ IN YAZD PROVINCE AND A DESCRIPTION OF BRONZE AGE OBJECTS FROM THE CEMETERY	THU, 15.45	111
NASIR ESKANDARI	BRONZE AGE SETTLEMENT PATTERNS AND SITE DISTRIBUTION IN HALIL RIVER BASIN, SOUTHEASTERN IRAN	WED, 17.35	111
MAHSA FAIZI	ARCHAEOLOGICAL SURVEY IN THE REGION OF THE ĀZĀD DAM, KURDESTĀN, WESTERN IRAN	WED, 18.00	116
GIOACCHINO FALSONE	THE ITALIAN EXCAVATIONS AT TELL SHIYUKH TAHTANI, NORTH SYRIA. NEW LIGHT ON THE BRONZE AGE SEQUENCE	WED, 11.40	111
SAMAN FARZIN	A NEW DATING OF THE STONE GRAVES IN BALUCHISTAN REGION OF IRAN	THU, 15.20	111
MOHAMMAD GHAMARI FATIDEH	AN ARCHAEOLOGICAL EXAMINATION AND ANALYSIS ON SETTLEMENT PATTERN CHANGES DURING THE TRANSITION FROM BRONZE AGE TO THE IRON AGE IN THE NORTHERN SLOPE OF CENTRAL ALBORZ	WED, 18.00	111
AVRAHAM FAUST	THE FIRST SIX SEASONS OF EXCAVATIONS AT TEL 'ETON, ISRAEL	FRI, 12.55	116
SUMIO FUJII	PPNB BARRAGE SYSTEMS IN THE JAFR BASIN, SOUTHERN JORDAN: NEW EVIDENCE FOR WATER EXPLOITATION STRATEGY OF INITIAL PASTORAL TRANSUMANCE	WED, 9.50	116
KATIA GAVAGNIN JULIETTE MAS	EARLY JEZIRAH POTTERY FROM TELL BEYDAR, SYRIA	MON, 17.35	111
MATHILDE GELIN	NEW FRENCH-KUWAITI RESEARCH IN THE HELLENISTIC FORTRESS OF FAÏLAKA-IKAROS	MON, 17.35	116
GUILLAUME GERNEZ	EXCEPTIONAL METAL HOARDS DISCOVERED AT TELL MABTOUH (SYRIA)	WED, 15.45	111
LILLY GERSHUNY	A MIDDLE BRONZE II VILLAGE/TRADE CENTER IN THE SHARON PLAIN	FRI, 12.30	116

MOHSEN GHASEMI	THE STUDY OF PARTHIAN STUCCO FROM QALEH ZAHAK IN AZERBAIJAN, IRAN	THU, 17.35	111
FARHAD GULIYEV, YOSHIHIRO NISHIAKI	GOYTEPE (AZERBAIJAN): RESULTS OF THE EXCAVATIONS 2010-2011	MON, 14.55	116
ARNULF HAUSLEITER	IRAQI-KURDISH/GERMAN EXCAVATIONS AT ARBIL 2009-2011	TUE, 17.35	111
SANDRA HEINSCH	ARCHAEOLOGICAL RESULTS OF THE GEORGIAN-AUSTRIAN JOINT EXPEDITION AT KHOVLE GORA	MON, 15.20	116
BARBARA HELWING, TEVEKKÜL ALIYEV	A MONUMENTAL NEOLITHIC: NEW RESULTS OF THE ONGOING AZERBAIJAN-GERMAN INVESTIGATIONS IN THE MIL STEPPE, AZERBAIJAN	WED, 14.30	116
FELIX HÖFLMAYER	RADIOCARBON DATING THE BRONZE AGE OF THE SOUTHERN LEVANT: NEW RESULTS AND IMPLICATIONS FOR MIDDLE BRONZE AGE CHRONOLOGY AND SYNCHRONISMS	FRI, 9.25	116
MARCO IAMONI	THE MIDDLE BRONZE AGE III IN THE NORTHERN LEVANT: A RE-APPRAISAL TO 2ND MILLENNIUM RELATIVE CHRONOLOGY	WED, 12.30	111
ELMIRA IBRAGIMOVA	CHIPPED STONE INDUSTRY OF TELL KHAZNA I: TRANSFORMATION FROM EARLY URUK TO LATE ED I PERIOD	WED, 15.20	111
KAAN İREN	NEW DISCOVERIES AT THE ANCIENT PERSIAN SATRAPAL CENTRE DASKYLEION	THU, 15.20	116
MOHAMAD JAVAD JAFARI	ARCHAEOLOGICAL REPORT OF THIRD SEASON OF EXCAVATION IN LAMA CEMETERY	THU, 14.55	111
ARDESHIR JAVANMARDZADEH	ARCHAEOLOGICAL PROJECT OF THE MEHRÂN PLAIN (A.P.M.P.)	WED, 17.10	111
CHRISTINE KEPINSKI	RECHERCHES DANS LA PROVINCE DE SOULEYMANIEH (IRAK, KURDISTAN)	TUE, 15.45	111
SUSANNE KERNER	THE DESERT AND THE SOWN IN NORTHERN JORDAN	FRI, 9.00	116
MORTEZA KHANIPOOR, VAHED JOULAEI	PRELIMINARY REPORT OF THE SOUNDING AT SITE OF QAREH QOZLOU, SOUTH OF LAKE URMIAH, NORTHWESTERN IRAN	THU, 9.00	111
JAFAR MEHR KIAN	BARD-E GOWRI, HISTORICAL ROCK CHAMBERS IN THE ELYMAIS, ANCIENT BAKHTYARI LAND	THU, 18.00	111
ANN E. KILLEBREW, MICHAL ARTZY	TEL AKKO TOTAL ARCHAEOLOGY PROJECT: THE 2010 AND 2011 SEASONS	FRI, 12.05	116
KONSTANTINOS KOPANIAS, CLAUDIA BEUGER, SHERRY FOX, ANGELOS HADJIKOUMIS, ALEXANDRA LIVARDA	PRELIMINARY RESULTS FROM THE EXCAVATION AT TELL NADER IN THE KURDISTAN REGION OF IRAQ	TUE, 16.45	111
MOHSEN ZEIDI KULEHPARCHEH, SIMONE RIEHL, NICOLAS CONRAD	NEW EXCAVATION RESULTS FROM CHOGHA GOLAN: A PPN SITE IN THE ZAGROS REGION OF WESTERN IRAN	WED, 9.00	116
NICOLA LANERI	THE HIRBEMERDON TEPE ARCHAEOLOGICAL PROJECT 2003-2011	THU, 9.50	116
JOHANNA LHUILLIER	EXCAVATION IN DZHARKUTAN (UZBEKISTAN): SOME NEW ELEMENTS ABOUT EARLY IRON AGE IN CENTRAL ASIA	FRI, 12.30	111
MARTA LUCIANI	ARCHAEOLOGY IN THE REGION OF SULAIMANIYAH, IRAQ	TUE, 15.20	111

ELISE LUNEAU, JULIO BENDEZÚ-SARMIENTO	CERAMIC PRODUCTION OF THE NECROPOLIS 3 OF DZHARKUTAN (SURKHAN-SARYA, UZBEKISTAN, 2100-1500 B.C.): NEW ARCHAEOLOGICAL DATA ABOUT THE CHRONOLOGY AND THE EVOLUTION OF THE SAPALLI CULTURE (BRONZE AGE, CENTRAL ASIA).	FRI, 12.55	111
BERTILLE LYONNET	THE 3RD MILLENNIUM OCCUPATION AT MENTESH-TEPE, MIDDLE KURA VALLEY (AZERBAIJAN)	MON, 14.30	116
JOHN MACGINNIS	ZIYARET TEPE: OPERATIONS IN THE LOWER TOWN 2010-2011	THU, 10.15	116
ALI MAHFROUZI	ARCHAEOLOGICAL EXCAVATION AT TEPE SAD IN NORTHERN IRAN	THU, 14.30	111
NICOLÓ MARCHETTI	THE JOINT TURCO-ITALIAN 2011 EXCAVATIONS AT KARKEMISH	MON, 14.30	111
MARIA-GRAZIA MASETTI-ROUAULT, OLIVIER ROUAULT	RESEARCHES IN QASR SHEMAMOK/KILIZU (IRAQI KURDISTAN): AN ASSYRIAN TOWN?	TUE, 14.55	111
CATHERINE MASSEREY	VANI (COLCHIS, WESTERN GEORGIA) STRATIGRAPHY AND MULTIDISCIPLINARY STUDIES, 2011 SWISS-GEORGIAN EXPEDITION	THU, 12.05	116
VALÉRIE MATOĀN	RECENT EXCAVATIONS AT RAS SHAMRA/ UGARIT	THU, 12.30	116
ROGER MATTHEWS, WENDY MATTHEWS	CURRENT RESEARCH ON THE NEOLITHIC OF THE CENTRAL ZAGROS OF IRAN AND IRAQ	WED, 11.15	116
AMIHAI MAZAR	COLLAPSE OR CONTINUITY? COMMENTS ON THE END OF THE BRONZE AGE IN THE SOUTHERN LEVANT	FRI, 10.15	116
RYSZARD F. MAZUROWSKI	QARAMELIAN - THE NEW CULTURAL TRADITION IN THE PRE-POTTERY NEOLITHIC OF NORTHERN LEVANT	WED, 9.25	116
STEFANIA MAZZONI, ANACLETO D'AGOSTINO, VALENTINA ORSI	THE UŞAKLI HÖYÜK ARCHAEOLOGICAL SURVEY 2008-2011: THE RESULTS OF THE ITALIAN RESEARCH IN THE YOZGAT PROVINCE (CENTRAL ANATOLIAN PLATEAU, TURKEY)	THU, 9.00	116
JOLANTA MŁYNARCZYK	DISCOVERY OF THE NORTH-WEST CHURCH COMPOUND IN HIPPOS (SUSITA) ON THE SEA OF GALILEE: A FINAL REPORT	THU, 16.45	116
YAGUB MOHAMADIFAR	PRELIMINARY REPORT OF 16TH SEASON OF EXCAVATIONS IN TEPE HEGMATANEH; HAMADAN	FRI, 10.15	111
DANIELE MORANDI BONACOSI	RECENT ITALIAN EXCAVATIONS AT MISHRIFEH/QATNA: THE EASTERN AND THE LOWER CITY PALACES	MON, 15.45	111
AMIR SAED MUCHESHI, ALI AZARSHAB, ZAHED KARIMI	THE REPORT ON THE STRATIGRAPHY OF KALANAN SITE IN BIJAR COUNTY, KURDISTAN PROVINCE, IRAN	THU, 11.15	111
BÉATRICE MULLER- MARGUERON	"MAQUETTES ARCHITECTURALES" DU PROCHE-ORIENT ET DE LA MEDITERRANEE ORIENTALE : APPROCHE D'ENSEMBLE	THU, 18.00	116
HAMED VAHDATI NASAB	LATE NEOLITHIC SITE OF RASHAK III ROCK SHELTER, MAZANDARAN, IRAN	WED, 12.30	116
HASSAN FAZELI NASHLI, MOHAMMAD HOSSEIN AZIZI KHARANAGHI, Javad HO- SEINZADEH SADATI, HOSSEIN DAVOUDI, REZA NASERI	TEPE ZAGHEH: RESULTS OF THE 2011 SEASON OF EXCAVATION	THU, 17.35	111
LILY NIAKAN	RELATIONSHIP BETWEEN IRAN AND MESOPOTAMIA IN THE URUK PERIOD, BASED ON ARCHAEOLOGICAL EXCAVATIONS IN MARGIN OF THE SEYMAREH RIVER OF ZAGROS	WED, 14.55	116
MEISAM NIKZAD	CHIATORKANEH, A SETTLEMENT OF PRE-POTTERY NEOLITHIC PERIOD IN NOURABAD PLAIN, PISHKOUH OF CENTRAL ZAGROS	WED, 10.15	116



ELEONORA PAPPALARDO, VITO MESSINA	IMAGES AND MEANINGS. THE IVORY RHYTA FROM OLD NISA AND THE DIFFUSION OF MODELS IN HELLENIZED ASIA	THU, 16.45	111
DOMINIQUE PARAYRE, MICHEL AL-MAQDISSI	TELL AL-NASRIYAH SUR LA RIVE DROITE DU MOYEN ORONTE, SYRIE (BA IV-FER II)	WED, 9.25	111
TATIANA PEDRAZZI, BARBARA CHITI	TELL KAZEL (SYRIA), AREA II. NEW EVIDENCE FROM A LATE BRONZE/IRON AGE QUARTER	WED, 10.15	111
PETER PFÄLZNER	ROYAL FUNERARY PRACTICES AND INTER-REGIONAL RELATIONS IN THE MIDDLE BRONZE AGE LEVANT: NEW EVIDENCE FROM QATNA	MON, 14.55	111
RAFFAELLA PIEROBON BENOIT	TELL BARRI (SYRIA). THE SETTLEMENT AND ITS CHANGES: NEW DEVELOPMENTS.	MON, 16.45	111
HOLLY PITTMAN	THE GLYPHTIC AND ADMINISTRATIVE MATERIALS FROM CHOGAH MARAN CA. 2500 BCE	THU, 12.30	111
ALEXANDER PRUSS	THE EASTERN PALACE OF TELL BEYDAR	MON, 17.10	111
PHILIPPE QUENET	PRELIMINARY RESULTS OF THE KHIRBET MALHAT SURVEY, NORTH SYRIA	TUE, 10.15	111
LORENZ RAHMSTORF	BALANCE WEIGHTS IN THE 3RD MILLENNIUM BC: RESULTS OF A RECENT COMPREHENSIVE STUDY	THU, 14.30	116
NOROOZ RAJABI	EXCAVATION AT TOL-E - KHOSROOW, WESTERN OF ZAGROS IN IRAN	THU, 11.40	111
CLEMENS REICHEL	HAMOUKAR EXCAVATIONS 2010: NEW INSIGHTS INTO NORTHERN SYRIAN URBANISM DURING THE LATE CHALCOLITHIC AND EARLY BRONZE AGE PERIOD	TUE, 14.30	111
SÉBASTIEN REY	THE FORTIFICATIONS OF MARI: PRELIMINARY RESULTS OF THE 2006-2010 EXCAVATIONS IN THE 'EAST CITY'	TUE, 9.25	111
ABBAS REZAEENIA	A PRELIMINARY REPORT OF SOUNDING FOR DETERMINING AREA AND LIMITS OF GHALEH GABRI HISTORICAL SITE IN SARPOL ZAHAB, IRAN	FRI, 9.00	111
MOHAMMAD HOSSEIN REZAEI	SETTLEMENT PATTERNS DURING THE CHALCOLITHIC PERIOD IN THE KAZEROUN PLAIN, IRAN	WED, 14.30	116
GARY ROLLEFSON, YORKE ROWAN, MEGAN PERRY	BUT IT'S A DRY HEAT. REALLY? RECENT RESEARCH INTO THE LATE NEOLITHIC EXPLOITATION OF THE BADIA IN EASTERN JORDAN	WED, 11.40	116
KOUROSH ROUSTAEI	ARCHAEOLOGICAL SURVEY OF KOURANG AREA, BAKHTIARI HIGHLANDS, IRAN	THU, 12.05	111
ELENA ROVA	NEW RESEARCH ON THE 3RD MILLENNIUM CULTURES OF TRANSCAUCASIA: THE 2010 AND 2011 CAMPAIGNS OF THE GEORGIAN-ITALIAN SHIDA KARTLI ARCHAEOLOGICAL PROJECT	THU, 11.40	116
SADI SAEEDYAN	ZARBOLAGH: A MEDIAN SITE IN CENTRAL IRAN	FRI, 9.50	111
GLENN SCHWARTZ	A TALE OF HUMAN SACRIFICE: UMM EL-MARRA 2010 3RD-2ND MILLENNIUM BC RESULTS	WED, 12.05	111
MAHNAZ SHARIFI	THE ARCHAEOLOGICAL EXCAVATIONS OF KHESHT DASHT TEPE, DAMGHAN, NORTHEAST OF IRAN	WED, 16.45	111
UWE SIEVERTSEN	NEW FINDS OF IRON AGE POTTERY FROM TELL HALAF (2008-2010)	WED, 14.55	111
LYNN SWARTZ DODD	THE NORTHERN AMUQ VALLEY SURVEYS IN 2010 AND 2011	WED, 9.00	111
REGIS VALLET	TELL FERES AL SHARKI 2010: RECENT DISCOVERIES ON THE UBAID AND LATE CHALCOLITHIC IN NORTH SYRIA	WED, 14.30	111
DANIEL VARGA	A MULTIPERIOD SITE AT AMATZIA NEAR LACHISH	FRI, 11.10	116
MARCIN WAGNER	YAZ II PERIOD ON THE TOPAZ GALA DEPE, SOUTHERN TURKMENISTAN	FRI, 12.05	111

ARNE WOSSINK	EXCAVATIONS AT SATU QALA, ERBIL PROVINCE, IRAQ	TUE, 17.10	111
MOHSEN ZEINIVAND	REPORT OF EXCAVATIONS AND STRATIGRAPHY OF SAR-ASIAB ZONE, SARPOL-E ZOHAB, KERMANSHAH, IRAN	FRI, 9.25	111

#### **AKBAR ABEDI**

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### **A REPORT ON THE FIRST SEASON OF PREHISTORIC ARCHAEOLOGICAL PROJECT OF KULTEPE, NW IRAN**

Kul Tepe, located in the city of Jolfa, is a tell about 6 ha in extent and currently rises 19 m above the surrounding land. In summer 2010, a scientific excavation was carried out by author in this site. The main aims of the project were examining cultural horizon of prehistoric archaeology of the NW Iran and Caucasus regions. In this regard, three-years Kul Tepe Archaeological Project was planned. At this site, the first season of archeological excavation primarily aimed to respond some of the fundamental questions such as the process of transition from Late Chalcolithic to Early Bronze Age, identifying different cultural horizon including Kura-Araxes Culture I and also outlining cultural condition of the region during prehistoric and historic periods. Based on the results of the first season of excavation, it was established that Kul Tepe contains cultural material from Late Chalcolithic, Early, Middle, Late Bronze Age, Iron III (Uartian) and Achaemenid period. As a result of excavation of 24 m deposits in Trenches II and III, it was found out that 3.5-4 m deposit belongs to Late Chalcolithic, 3.5 – 3 m to Proto and Kura-Araxes I, 13.5-13m to Kura-Araxes II and III, 1m to the Middle and Late Bronze Age with typical Urmia Ware, and 1.5m contains Iron III materials (Uartian) and finally Achaemenid.

#### **WAEEL ABU-AZIZEH**

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### **URBAN NETWORK AND TOPOGRAPHY OF MARI: PRELIMINARY RESULTS OF THE 2007-2010 EXCAVATIONS IN THE 'EAST CITY'**

Four excavation seasons were conducted since 2007 in "Area V1", located in the eastern side of the site of Mari, on the erosion cut by the Euphrates floods. The objective of these excavations which took place in the frame of the new research program led by P. Butterlin since 2005 ("Mari and its near-periphery"), was to take advantage of the natural section produced by the erosion, in order to establish the complete stratigraphic sequence of this unexplored part of the site. The excavation of the stratigraphic step trench allowed identifying the succession of nine archaeological levels of which a synthetic description will be presented. This overview of the new data provide new information, especially concerning our understanding of the urban network and the topography of the city of Mari since its first establishment (City I), until it last times (City III). The identification of some significant events within the stratigraphy allows us to insert these results in the general historical frame of the city's development. One of the main issues emphasized will concern the evolution rhythms of the city, and its urban network organization. This will be considered notably through the study of the street layout, as the new data presented will give the opportunity to update and discuss the previous hypotheses concerning the radioconcentric organization of the city. Besides this aspect, the identification in "Area V1" of an important erosion phase during a late stage of the city's life, combined with the discovery of a massive retaining or terrace wall, sheds new light on the questions of topography and insertion of the derivation canal of the Euphrates into the urban infrastructure, critical issues which will be finally discussed in this paper.

#### **BAYRAM AGHALARY, AYLA ABDOLLAHZADEH**

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### **NEW FINDINGS OF CIRCULAR ARCHITECTURE IN NORTHWESTERN IRAN**

Kohne Pasgah Tepesi is an ancient mound site in the Araxes (Aras) River valley between Iran and Azerbaijan. This mound was excavated in two seasons as part of the Khoda Afarin dam project. The existence of cultural layers related to the Early Bronze Age (Kura-Araxes, Early Transcaucasian culture, ETC) along with circular architecture and also the discovery of many major architectural findings of the Parthian period, and Chalcolithic pottery, paved the way for finding more clues and more authentic evidences in the direction of researching and doing more investigations for

proving the existence of the cultural transmission from the late Chalcolithic through to the Early Bronze Age in north-west Iran. This paper will make great strides in presenting the comparative typology of pottery and architecture found in the second season of excavations with its adjacent sites located in northwest Iran, particularly with sites, such as Yanik Tepe, Haftvan Tepe VIII and Goy Tepe "K" period and also we can compare it with sites that located beyond the borders of Iran, like Kul Tepe II of Nakhjavan and Aratashan of Armenia.

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## **ABU TBEIRAH - SOUTHERN IRAQ**

A joint Iraqi-Italian team has obtained the permit of excavations in the site of Abu Tbeirah, Southern Iraq (Nasiriyah), directed by Franco D'Agostino. The site, which does not present traces of looting, has never been digged nor has it been scientifically described in the surveys of the 70s and 80s. A preliminary topographical survey has been carried out in March 2011 and the excavations will start at the end of January 2012. The paper will show the results of the first digging campaign.

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## **NEW LIGHT ON THE AMARNA PERIOD FROM THE NORTHERN LEVANT – A CLAY SEALING WITH THE THRONE NAME OF AMENHOTEP IV/AKHENATEN FROM THE ROYAL PALACE AT TALL MIŠRIFE/QATNA**

During the recent excavations of the Syrian-German Archaeological Mission at Tall Mišrife/Qatna, one clay sealing with the impression of the throne name (prenomen) of the Egyptian Pharaoh Amenhotep IV/Akhenaten (18th Dynasty) was discovered in Room DK of the Bronze Age royal palace. The sealing was found among a large number of both scarab and cylinder seal impressions that were discarded in this room. However, among the glyptic material found in Room DK, the clay sealing with the throne name of Amenhotep IV/Akhenaten is only attested once. Moreover, it is the only impression of a seal of Pharaoh Akhenaten found in the Levant to date. Thus, it is a discovery of peculiar importance for the understanding of the relations between Egypt and the northern Levant during the 18th Dynasty and for the chronology of the eastern Mediterranean in the second half of the 2nd millennium B.C. Several of these aspects will be discussed in the paper.

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## **ARCHAEOLOGICAL SURVEY IN KURAN BUZAN VALLEY – HULAILAN, WEST CENTRAL ZAGROS, IRAN**

The archaeological survey of the basin of Kuran Buzan dam was carried out by Sajjad Alibaigi in 2010 under the command of Iranian Centre for Archaeological Research. This research was planned in aim to study the sites from the Paleolithic period up to now and to provide a knowledge of human activities in this region. Due to the richness of the region and its important geographic location in Central Zagros the area was surveyed intensively on foot.

As a result, after a 35 day of intensive walking by a group of eight members on an area about 71 square kilometers, we could find a significant number of 122 ancient sites from the oldest human settlements up to the present. These sites mostly (110 sites) belong to the Paleolithic period and only 2 sites belong to Neolithic period, 1 site belongs to Chalcolithic, 6 sites belong to historical period and 3 sites belong to Islamic Era.

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## **A NECROPOLIS IN INNER SYRIA. NEW ARCHAEOLOGICAL DISCOVERIES AT TELL TUQAN, SYRIA**

The archaeological excavations carried out at Tell Tuqan (2007-2010) in Area N have allowed to recognize the wide occupation of the city during the Middle Bronze Age. In particular, according to the previous campaigns and their stratigraphic sequences, the latest investigations have permitted us to reconstruct the Middle Bronze sequence in order to have more data on the site during the first half of the 2nd and the last century of 3rd millennium BC. Seven

archaeological phases have been identified from the Early Bronze IVB period to the Islamic Era. In particular the phase 5 was characterized by a wide necropolis identified in the eastern half of the area. Several different types of graves were identified in three different chronological sub-phases dating to the Middle Bronze IB period; all the graves have shown a funerary equipments strongly homogeneous, principally consisting of carinated bowls, collared jars, Syrian bottles and handled jars with some morphological variability within the corpus.

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## **THE EVIDENCE OF CULTURAL INFLUENCES OF HASSUNA DURING TRANSITIONAL CHALCOLITHIC PERIOD IN MESOPOTAMIA AND CENTRAL EASTERN ZAGROS REGION, IRAN**

Archaeological investigation conducted in central-eastern Zagros region during the summer 2006 and autumn 2007 has revealed several permanent and temporal settlements of the 5th millennium B.C. The presence of husking trays fragments among the pottery sherds collected during the archaeological surveys links the region to early Hassuna sites known from Mesopotamia.

The paper will discuss collected material as well as cross-cultural contacts of the region with settlements in the Zagros valleys as well as with sites farther west.

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## **SYSTEMATIC ARCHEOLOGICAL SURVEY OF GENAVEH'S CHAHAR ROUSTAEI SITE IN IRAN**

Genaveh County, with an area of about 1,837 km<sup>2</sup> and 165 kilometers northwest from Bushehr, is located on the north coast of the Persian Gulf. Our data about the prehistoric period of the coastal province of Bushehr are very scanty. A few studies that have been done in this area have not been systematic and did not follow a particular purpose. Therefore, our systematic site study in this region is intended to identify the cultural position of this zone. Chahar Roostayi archaeological sites with E 47° 68' 34" longitude and 32° 69' 57" N latitude and altitude of 87 meters above sea level, is located 5 km west of Shoor River.

Due to the importance of tale Chahar Roostayi for understanding the regional exchanges, in order to clarify the cultural sequence of the region, study and analysis of cultural material obtained from a systematic study of this site was on the agenda. After mapping and 10×10 m square division of the site, sampling was conducted alternatively in half of the squares (207 km<sup>2</sup>). Pottery finds and stone artefacts of the site showed that this site has been settled from the late Neolithic period to the end of Chalcolithic period.

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## **ACHAEMENID COINS**

In ancient times before introducing of coins, trading was done by exchanging of goods. Several stories exist about the invention of coins. Herodotus states that the first people, who minted coins, were the Lydians. Croesus, the Lydian king, (561-546 B.C.) minted coins named Croesite. These coins were of gold and silver. On the obverse was the image of a lion and bull in combat and on the reverse there was the impression of several squares.

There is also an opinion that invention of coins took place at some time slightly before or after 700 B.C. on Aegine Island. The first Achaemenid coins were minted during the reign of Darius I. These coins were of gold and silver and they were named Daric and Siglos. The coinage of the Achaemenid Empire was a continuation of the coinage of Lydia. Achaemenid coins were minted in official imperial mints, as well as in satrapal mints.

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## **SECULAR-SACRED: THE FUNCTION OF SPACE IN THE PETRA GARDEN AND POOL COMPLEX**

Since 1998, excavations in the Petra Garden and Pool Complex have revealed an extravagant use of architecture, vegetation and water within the capital of the Nabataean kingdom. Despite a severe shortage of water resources in the desert environment of southern Jordan, the Nabataeans created a garden paradise. The monumental scale and central location of the garden-pool complex suggest that it was part of the ceremonial, economic and

political functions of the city, and therefore must have been important to the structure and organization of Petra. The comparison of the Petra Garden and Pool Complex with contemporary parallels found in the Hellenistic and Roman palace complexes—most specifically the Hasmonean and Herodian palaces in neighboring Judaea—has led this author to interpret the site as a component of a larger royal complex and to focus on its secular function as a place of relaxation, dining and recreation. In this context, the ornamental garden serves as a vehicle of political metaphor. The combination of grandiose architecture with constructed views, cultivation and impressive displays of water are symbols of wealth, power and prestige.

This primarily secular role as a metaphoric playground for the elite, does not discount the sacred significance of the garden-pool complex. For the Nabataeans, like any desert peoples, springs and pools are endowed with sacred meaning and are sites of ritual activity associated with the Nabataean fertility goddess, Al-'Uzza. Additionally, tree groves, date clusters, and caves, all features of the garden-pool complex and well-established symbols of fertility in the religions of the Ancient Near Eastern and Mediterranean regions, support the likelihood of the site's religious connotations. This paper will explore the syncretism of secular and sacred functions within the Petra Garden and Pool Complex.

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### **A NEW CHRONOLOGICAL FRAMEWORK FOR IRON AGE COPPER PRODUCTION IN THE SOUTHERN ARABAH: RESULTS OF THE NEW EXCAVATIONS AT TIMNA VALLEY (ISRAEL)**

The research of the main smelting and mining sites at Timna was renewed in 2009 by a collaborative project of the Hebrew University and the University of California, San Diego. Metallurgical deposits were excavated at Site 30 and were dated for the first time by archaeometric techniques (radiocarbon and archaeomagnetism). The new dates change the accepted chronological framework of the main copper production sites in the region, fixing it to the 11th – 9th centuries BCE. In light of the new dates, the socio-cultural and historic context of the copper production enterprise was re-evaluated. Some of the new insights include (1) the role of New Kingdom Egypt in the region was limited than previously believed; (2) the industry was tightly connected with the contemporary copper exploitation in Faynan (Jordan); (3) the control and main labor force was based on local societies; and (4) some geopolitical changes and regional military conflicts had a great impact on the Iron Age copper production industry, most probably including the campaign of Shoshenq I.

The new chronological framework was tested in several other sites, including mine shafts previously believed to represent Egyptian activity (under Tel Aviv University). Although new archaeometric dates are still not available, several observations (e.g., lack of New Kingdom ceramics) and comparison to the well-dated material culture sequence of Faynan support the broad application of the new chronology.

The development of Iron Age copper production in the southern Levant is related to global processes that took place in the wake of widespread civilization collapse, when new socio-economic opportunities became available to local societies (such as Biblical Israel and Edom). High resolution and accurate dating of the archaeological record is fundamental for assessing these processes and their impact on local economies and social development. The renewed research at Timna demonstrates above all the strength of high precision archaeometric dating techniques in establishing a firm chronological framework for sites with poor or problematic material culture typologies, such as the metallurgical sites in the southern Levant.

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### **UBAID CULTURE RELATED SITE ON KUWAITI DESERT**

Since 2009 a Kuwaiti-Polish archaeological team is exploring remains of a prehistoric settlement named Bahra 1 which is situated on As-Sabbiya desert about 7 km off the modern shore-line of the Kuwait Bay. Preliminary results of intensive surface scraping of the site and excavations in one selected sector suggest that the settlement was at least ca 180 m long and 60 m wide. It was occupying a terrace at the base of a chain of low rocky hills and part of one of them. It was composed of at least 7 rectilinear multi-roomed houses, some of which have plans resembling typical Ubaidian "tripartite" plan. On the western side of the settlement there was uncovered a concentration of different domestic installations including numerous fire places. The ceramic material collected there represents imported Ubaid vessels of 2/3 phases and local red coarse ware. The chipped stone industry made in large part of local quartzite contains numerous borers which were used for production of beads made of sea shells. The Bahra 1 settlement seems to be chronologically closely related to another Ubaidian site located on the sea coast nearby. This site labeled as "H3" is much smaller and was excavated some years ago by British archaeologists. It is interesting to note that despite numerous similarities between both sites (mostly in pottery findings) there are also clear differences suggesting different role of both settlements.



## **THE SYRIAN TYPE OF PALACE OF THE HYKSOS KHAYAN IN AVARIS AND THE ARCHAEOLOGY OF THE “GOLD OF VALOUR”**

Four seasons of excavations in 2006, 2008, 2009 and 2011 by the Austrian Archaeological Institute Cairo in collaboration with the Austrian Academy of Sciences revealed two thirds of a palace precinct of total ca. 10.500 m<sup>2</sup>. Its plan bears no resemblance to Egyptian palaces but shows distinct features of palaces in Syria what may shed light on the origin of the 15th Dynasty. Of special interest is a series of pits with cut off human right hands in front of the palace façade which remind us of the practice of soldiers presenting such trophies to get the “gold of valour”.

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## **INTEGRATING CONTEXTS, SITE-FORMATION PROCESSES AND CHRONOLOGY FOR IMPROVING EARLY BRONZE AGE RADIOCARBON DATES FROM THE CAUCASUS**

Early Bronze Age Chronology in the Caucasus region is of major importance to understand connections and spread of ideas and technologies in southern direction as far as the Southern Levant. The absence of a large number of radiocarbon dates and the lack of good relation between the few existing 14C dates and the archaeological context is holding back the understanding of the archaeological record in this period. The reliability of a radiocarbon date depends, primarily, on the degree of precision and accuracy of the measurement. While precision can be achieved through a thorough cleaning procedure, accuracy lies also in the attribution of the sample to a specific material culture or event of the past, a step that is often questionable when based only on archaeological criteria. As a consequence of inaccuracy, it is very difficult to obtain clear-cut transitions within specific periods. A new approach in radiocarbon dating that start from the field and integrates micro-archaeological methods (e.g. analysis of sediments by means of FTIR spectroscopy, soil micro-morphology) in the field and in the lab is applied to renewed excavation in Georgia (Natsargora Okherakhevi). Results of dating kurgan remains and settlement are presented here as part of ongoing project that aims to characterize archaeological context and to identify those contexts that are suitable for dating, in order to increase the accuracy of radiocarbon dates.

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## **EXCAVATIONS AT PELLA IN JORDAN: THE 2011 FIELD SEASON**

The 2011 field season at Pella in Jordan explored EBA fortifications (ca. 3100-2900 BCE) on Tell Husn, and a monumental Civic structure of the MB-LB period (ca. 1500-1300 BCE) on the main mound.

On Husn, work concentrated on the monumental stone and mud-brick fortification complex on the north and eastern summit edge, dating to the Early Bronze Age (ca. 3100-2900 BCE). This featured two phases (EB IB/II and EB II) of direct access stone-paved gateway, built over an earlier (EB IB period) semi-circular round tower, built as part of an earlier fortification. The main EB II fortification wall itself consisted of a series of large stone platforms (between 15 x 25 m in size), linked together by stretches of a 3.2 m wide mud-brick on stone trace wall.

The MB/LB period Civic structure on the main mound is directly associated with the six-phase Fortress temple complex excavated previously, and is similarly monumental in scale. A series of large plaster-floored courtyard complexes with smaller boundary rooms were uncovered, as well as a line of stone-lined water management installations in the south. This MB/LB period phase lay below a paved stone plaza, associated with a less monumental rebuild of the original complex. In turn this was sealed by a thick walled stone-paved squarish structure of the LB/El period, very probably a ‘Governors Residency’ building, given the associated Aegyptiaca.

The lecture will present the major finds, and place them in the Jordan valley and nearby architectural and cultural context.

## **THE MASSIF ROUGE AT MARI: NEW EVIDENCE ON THE HISTORY OF ZIGGURATS**

Since 2006, excavations have resumed at the “massif rouge” in Mari, under the author’s direction. They are part of a wider program on Mari and its periphery. From 2006 to 2010, intensive fieldwork carried on the massif itself and around the massif have permitted to redefine the history of the building identified and partly excavated by Parrot in the 50’s. The study of the monument itself and the discovery of new foundation deposits has permitted to precise the history of a monumental complex: the massif was initially a stepped terrace, one of the oldest of its kind. It was associated to a low temple, where we discovered in 2009 a new cachette of statues, giving the name of the god worshipped there. This monumental centre has been completely reorganized after the destruction of the city by the Akkad kings and we can present the different steps of this great urban operation. All those discoveries give new insights on the evolution of the monumental centres of the great city-states of Mesopotamia, especially on the terraces and ziggurats and their environment from the 4th to the 2nd millennium BC.

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## **TELL BEYDAR (SYRIA) IN THE CLASSICAL JEZIRAH PERIOD: NEW DATA FROM RECENT EXCAVATIONS**

Tell Beydar, mostly known for its 3rd Millennium town, was also the site where a significant community settled during Classical Antiquity. Since 2009, within the scope of the Euro-Syrian Archaeological Mission at Tell Beydar, the University of Coimbra (Portugal) launched a project to research the occupation of the site during the Seleucid-Parthian influence, a period still largely obscure in the Syrian Jezirah.

Recent archaeological campaigns have exposed a great variety of structures, ranging from a complex palatial building, characterized by fine mud-brick architecture, decorated with buttresses and strongly reminiscent of the ancient Mesopotamian tradition, to small but sometimes densely arranged architectural units that seem to have been mostly used as workshops. By connecting all the contemporary levels excavated in other areas of the site we are now able, for the first time, to have a broad picture of the two major architectural phases of occupation that have been identified throughout the settlement. This paper aims to present the preliminary results of the 2009 and 2010 excavation seasons.

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## **EXCAVATIONS AT KINIK HÖYÜK: A PRELIMINARY REPORT ON THE FIRST CAMPAIGN (AUG.–OCT. 2011)**

In 2011 the University of Pavia, together with the Institute for the Study of the Ancient World (NYU), started excavations at Kinik Höyük. The site lies at the feet of the Melendiz Dağları, along the modern road connecting Aksaray and the central Anatolian plateau to Bor and, then, through the Cilician Gates, Adana and Syria. According to the results of previous surveys on the site, the höyük (“mound”), the terrace on which it rises and the “lower city” cover together an area of 24 ha, promoting Kinik as one of the most promising unexcavated sites in southern Cappadocia. During the first campaign, the excavation was organized in three operations, called A, B and C. Operation A was opened on the northern slopes of the höyük and revealed a massive fortification wall more than 4 m large, covered by accumulations with Iron Age material. Probably, the southern part of the same wall was uncovered on the opposite side of the höyük, in area C, thus providing additional data about the stratigraphic context of this structure. Finally, the later phases were investigated on the top of the höyük, in area B, exposing Seljukid domestic structures and reaching the top of a Hellenistic phase.

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**THE NABIALLA PROJECT (THE NECROPOLISES OF AZERBAIJAN DURING THE BRONZE AND IRON AGES IN THE LENKORAN AND THE LERIK AREAS)**

The National Museum of Archaeology (MAN, Saint-Germain-en-Laye, France) keeps in its Comparative Archeology Department, a large archaeological collection (consisting of stone implements, ceramics and metallic weapons, ornaments and figurines) as outcome of the excavations conducted in Lenkoran (Azerbaijan) by Jacques and Henry Morgan in 1890's.

This collection has been only scarcely published and several past studies go back to a time when current techniques of observation and analysis have not yet been in use. The MAN's collection began to be checked, sorted and restored. An on-line computerized registration and photographs of items, yet very partial, exists on the national database Joconde.

The NABIALLA project (The Necropolises of Azerbaijan during the Bronze and Iron Ages in the Lenkoran and the Lerik Areas) aims to study again the material brought back by the Morgan brothers in order to improve the understanding of the chrono-cultural context and to be at last published extensively.

Artefacts discovered in the cemeteries of the Lerik and Lenkoran districts, including the following locations: Djönu, Aspa-Hiz, Tulu, Hovil, Raaz Goour, Veri, Mistail, Hamarat, Kraveladi, Djuodji Kach, Mistan will be studied in comparison with the material discovered during current excavations in Azerbaijan to improve the knowledge about ancient Bronze and Iron Age human occupations in this part of the Caucasian area. New excavations have been more recently carried out in the Geranboy district (Ilanlıtepe, Muncujuglutepe) and in Nakhichevan (Koulani, Khaj Bolagh, Minageh Chaour, Sari Darreh, Ghizil Boroun et Kul Tepe) in Azerbaijan.

The project NABIALLA aims to achieve the stratigraphy and chronology of the Lenkoran and to interpret data on burial practices, but also to understand the exploitation, production and circulation of local resources in order to highlight the mutual influences exerted between Caucasus, Iran and Anatolia.

The presentation will try to display the methods involved, to check the work already achieved and the perspectives of scientific and cultural cooperation between French and Azerbaijanese specialists who take part in this project.

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**NOMAD-SEDENTARY INTERACTION IN THE ANCIENT MURGHAB ALLUVIAL FAN (TURKMENISTAN): PRELIMINARY EXCAVATION REPORT OF A NOMADIC SITE**

The dynamic nature and multiple scales of nomad-sedentary interaction are best examined through a two-fold research strategy that includes both broad-scale survey and detailed excavation. To address the latter, in 2010 we carried out excavations at a seasonally inhabited pastoral nomadic site dated to the Bronze Age (Site No. 1744). Located in the NE region of the Murghab alluvial fan, among the Bronze Age sites of Gonur and Auchin, the Site No. 1744 provides important new data about nomad occupation for comparison with the data coming from large, well-studied, agrarian sites like Gonur. From observations and preliminary analyses, it is clear that Site No. 1744 represents a multi-function, multi-phase use of the area by nomadic groups during the Bronze Age. As a whole, the archaeological remains from our excavations suggest that nomadic groups were utilizing Site No. 1744 on a regular, possibly seasonal, basis, and that they produced and traded products with local sedentary communities. This information implies fairly intense and direct contact between nomadic and sedentary groups in the Murghab alluvial fan during the Bronze Age.

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**RAPID CLIMATE CHANGE AT THE BEGINNING OF THE 4TH MILLENNIUM BC: A VIEW FROM KALAVASOS-KOKKINOGIA, CYPRUS**

Kalavasos-Kokkinogia belongs to a cluster of prehistoric sites situated in the lower Vasilikos valley in the coastal lowlands of south-central Cyprus. Kokkinogia is characterised by a series of underground features, including a chamber and tunnel complex, individual pits and chambers, a semi-subterranean structure and at least one burial. The site appears to have been utilised for an indeterminate period of time during the late 5th and early 4th millennium cal. BC, with no discernable break in occupation. It therefore seems that Kokkinogia represents the activities of people who lived in south-central Cyprus around the time of the abandonment of the Late Neolithic settlements. Whether or not Kokkinogia was a 'genuine' settlement is not clear and further work needs to be carried out in order to clarify this vexing issue. What is clear is that the subterranean features at Kokkinogia coincide with a global climate shift

that is bracketed by episodes of abrupt climate change around ~4000-3800 cal. BC and ~3300-3100 cal. BC and mark a period of profound social change throughout much of the Near East and North Africa. This paper provides a view of these events from Cyprus.

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## **TWO CONCLUSIVE SEASONS AT AL MADAM (SHARJAH, UAE). NEW PERSPECTIVES ABOUT IRON AGE AND THE OASIS CULTURE**

In the course of the last two seasons of work (2010-2011 and 2011-12) at al Madam site (AM 1 and AM2) the Spanish archaeological team working in Sharjah since 1994, has got unexpected results concerning to the economy and culture of the Iron Age villages, that we just knew. For example, we can study the use of the environment in order to collect building materials or the nature of farmlands. Before the provisional closure of our work in al Madam, we find some news aspects about Iron Age communities in the Oman Peninsula.

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## **THE RECENT ARCHAEOLOGICAL SURVEY IN SHIRWAN-CHARDAWOL REGION , WEST IRAN**

The Shirwan-Chardawol region is located in the north-east of Ilam province, west Iran. In March 2011, the northern part of Shirwan-Chardawol valley has been surveyed by the authors of the paper. The investigation was supported by the Cultural Heritage, Tourism and Handicraft Organization of Ilam province. About 33 archaeological sites were identified on the area covered by the survey (about 200 km<sup>2</sup>). All the cultural material, mostly the pottery fragments, is presently kept in the office of the Cultural Heritage, Tourism and Handicraft Organization of Ilam province.

Generally the sites can be divided as follows: 1 - caves and rock shelters 2 - ancient mounds and sites 3 - channels to supply water 4 - cemeteries 5 - forts and defensive walls. Ceramic material collected during our investigation spans over several millennia from the Epipaleolithic to the Islamic era.

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## **ARCHAEOLOGICAL SURVEY OF PREHISTORIC SITES (NEOLITHIC TO BRONZE PERIOD) IN KAZEROUN PLAIN, IRAN**

Kazeroun plain, despite being located in Fars province and the special attention of archaeologists to this region with its appropriate position for habitats and cultural settlements, has not been so far noted by archaeologists. On the other hand, the majority of studies have been conducted on typical and evident structures and vestiges especially from the historical and Islamic periods. Therefore, archaeological study of prehistoric sites of Kazeroun plain, one of the most little-known archaeological areas of Southern Iran in Fars province, is very important.

Survey of central Kazeroun plain was performed in spring 2010 in the form of a project with the aim of identification and recording of archaeological sites, archaeological mapping and assessment of distribution pattern and location of human settlements in different periods.

This survey was done based on topographic maps with 1:50000 scale, observation of the sites and sampling of surface finds using simple random method. In the studied area, 24 prehistoric sites were identified. The oldest identified site was related to the Neolithic period and the most recent was dated to the mid 2nd millennium B.C.

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## **ON THE REUSE OF EARLY BRONZE AGE TOMBS : THE EXCAVATIONS AT BAT AND AL-AYN, SULTANATE OF OMAN**

In 2010 a new archaeological research project started at two neighbouring sites, Bat and Al-Ayn in the Sultanate of Oman. The project is under the direction of Dr. Conrad Schmidt, University of Tübingen, Germany. Both sites are located to the west of the Jebel al-Akhdar mountain range and belong to the UNESCO World Heritage. In this paper the results of the past two years will be presented. At Bat research concentrated on the necropolis of the Hafit

(3100–2700 BC) and Umm an-Nar (2700–2000 BC) periods in the northwest of the site, where one of the large multi-chambered tombs of the Umm an-Nar period (tomb 156) and the burial pits surrounding it were excavated. At Al-Ayn, two of the 19 well preserved beehive tombs of the Hafit period, lined up on a mountain ridge above Wadi al-Ayn, were investigated. Interestingly, at both sites the tombs were reused in the 2nd and 1st millennium BC. This shows that the function of these buildings as burial places was maintained over a long time.

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**JNEHEH: IRON AGE TOWN IN THE UPPER WADI AL-ZARQA: NEW DISCOVERY**

Jneneh is an Iron Age I-II town built on the ruins of an Early Bronze Age I settlement. It is located in the northern side of the modern City of Zarqa in the north central part of Jordan. The site is situated directly on the western bank of the Zarqa River and covers ca. 4-5 ha. It was excavated for the first time in April-May 2011 by The Hashemite University under the supervision of the author and the Department of Antiquities.

Excavations have concentrated on the upper part of the site where several Iron Age building complexes have been uncovered. Approximately 2 m wide fortification wall was excavated. It is surrounding a large area on top of the site which looks like a fort. A two floors building with pillar bases situated between an L-form room with a stone platform covered with plaster and a building composed of a large room with a small store room were excavated on the inner side of the wide wall. The geographical location of the site enhances its importance since it is located on the edge of the desert to the east and represents a gate leading to the west through Wadi Al-Zarqa. The Iron Age town of Jneneh might played an important role for the major city in the region, Rabbat Ammon, in Amman that is located less than 30 km way from it.

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**GONUR EXCAVATIONS IN 2000-2010**

The excavations of Gonur Depe – the Bronze Age (2300-1600 BC) site in the southern Turkmenistan in Karakum desert – have begun in 1972. To the end of 1990's the monumental Kremlin with the palace in the center and Fire Temple to the east from it (Gonur 1 or North Gonur), great temenos (South Gonur) and around 3000 tombs on the Large Gonur necropolis were found. It was clear that Gonur is a typical site of the Bactria-Margiana archaeological complex (BMAC). During 2000's Margiana archaeological expedition continued digging the areas around Kremlin and to the south from it. Close to all sides of Kremlin there were temples: Fire Temple to the east, Complex of communal eating to the north and Temple of Sacrificing to the west and south. All temples were surrounded by the rectangular wall with rectangular towers. The earliest Soma-Haoma Temple was built to the south-east of the center of Gonur and the second one – to the south-west. Temple of water can be seen on the south and north banks of the large southern water pool. More smaller pools were made in front of northern and western entrances to the complex. The unique ritual animal burial was a center of a complex on the right bank of ancient Murgab river – to the south-west from main part, just facing to the east end of the Large Gonur necropolis.

Very important royal cemetery was found in 2004 on the eastern bank of the large southern pool. It includes eight royal sepulchres of Hypogeum type (five as an underground house with a yard in front of it and three complicated underground houses without yards) and three huge pits. In every one many slaves (or serves) were buried together with their majors. Three full and remains of two more four-wheeled wagons, complete animal skeletons (camels, dogs, horse) and treasures of gold, silver and valuable bronze artifacts including vessels and jewelry as well as unique mosaics compositions were found there. These finding have many parallels in architecture, in subjects of seals decoration, in pottery types, in mosaics technique, etc. with Syrian (on one hand) and Indus civilization (on other hand) culture. Akkadian inscription as well as Harappan seal were found at Gonur. The considerable number of the facts confirm the existence in Margiana of the complicated religious system, that finds parallels with modern Zoroastrianism.

All these materials received during last ten years prove that here in Karakum desert in the end of the 3rd mill. B.C. a center of ancient civilization has been formed. Craniological material shows that variety of modern Turkmen people begun to develop in that time and it support idea of moving of some Near Eastern tribes which have included aboriginal population of the Kopet Dag foothills to this territory. Some genetic flow between Margiana and Indus valley can be seen. Only one problem till now stays without answer: what language did they speak and either did they have writing system or not.



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**DER TEMPEL VON TALL BAZI UND SEINE NUTZUNG**

Der Tempel auf der Zitadelle von Bazi, der in der Mittleren und Späten Bronzezeit existierte, stellt einen der wenigen Tempel dar, dessen Inventar der letzten Nutzungsphase zumindest teilweise erhalten blieb. Durch die kürzlich erfolgte Restaurierung hunderter Objekte, vor allem von Gefäßen, sowie durch deren Inhaltsuntersuchungen lässt sich nun (mit aller Vorsicht) ein Bild von bestimmten rituellen Vorgängen im Tempelinnenraum gewinnen.

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**RESULTS OF EXCAVATIONS IN THE ANCIENT CEMETERY OF GHARBAL BIZ IN YAZD PROVINCE AND A DESCRIPTION OF BRONZE AGE OBJECTS FROM THE CEMETERY**

The ancient site of Gharbal Biz is located in the south of Yazd province in the center of Iran. It is about 52 acres. The author supervised archaeological excavations at this site during the years 2000-20004. The discoveries are: architectural remains from the late Achaemenian and early Parthian period in the south of the area; a small brick structure from the Safavid period in the northwest, and an ancient cemetery from the Bronze Age in the north-east part of the area. Information about the architectural structures has been published. Here we will discuss the results of excavations in the ancient cemetery of Gharbal Biz during the years 2003 and 2004. We present comparative chronology of the pottery, stone and bronze objects with respect to the Tal-i Bakun A period, Nur Abad, Tol-e Spid in Fars province and Shahdad in Kerman province. Analysis of the graves shows that this area was inhabited for a long period of time. Metal and stone mines and evidence of ancient mining and metal works show that this area was an important industrial site.

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**BRONZE AGE SETTLEMENT PATTERNS AND SITE DISTRIBUTION IN HALIL RIVER BASIN, SOUTH-EASTERN IRAN**

This paper presents the study of settlement patterns of Bronze Age sites and their distribution in Halil River Basin in Kerman province, southeastern Iran. During the several surveys conducted recently by members of ICHTO in Halil river basin, 65 Bronze Age sites were identified that were distributed in Halil River Basin. In this paper, for the first time, Bronze Age sites of the region were classified into three sub-periods and settlement patterns of three different periods of Bronze Age were separately analyzed as well. Chronologically, the study shows, apart from seven Bronze Age sites that are indistinguishable, only one site of Early Bronze Age, 44 sites of Middle Bronze Age and 13 sites of Late Bronze Age. In second half of the 3rd millennium BC there was a sharp increase in number of settlements which was expectable in the region. The paper also includes discussion of urbanism in Halil River Basin in the 3rd millennium BC.

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**ARCHAEOLOGICAL SURVEY IN THE REGION OF THE ĀZĀD DAM, KURDESTĀN, WESTERN IRAN**

Archaeological survey in the region of Āzād Dam located in Kurdestān province between Sanandaj and Marivān, was carried out during the September-October 2007. The survey has revealed 21 multiperiod sites that could be divided into 4 main types: tells, open air sites, cemeteries and architectural structures. The chronology of recorded sites ranges from prehistoric times to the Late Islamic era: one site contains Early Bronze Age material representing Early Transcaucasian horizon, three sites contain Achaemenid material, seventeen - Parthian, five - Sasanian and on four sites the Late Islamic pottery was found.



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## **THE ITALIAN EXCAVATIONS AT TELL SHIYUKH TAHTANI, NORTH SYRIA. NEW LIGHT ON THE BRONZE AGE SEQUENCE**

In the summer 2010 the University of Palermo expedition in North Syria carried out the fourteenth season of excavation at Tell Shiyukh Tahtani, a multi-period site on the Euphrates river banks, south of Carchemish. Fieldwork was concentrated on the eastern slope of the mound where the investigation of Bronze Age levels was continued in two different sectors. In the upper one, halfway the slope, the main operation was focused upon the earliest occupation of the Middle Bronze I: a group of graves was unearthed below some flimsy structures, consisting of adult interments in oval pits and of child pot burials. The most striking finding was the so-called "Spinster's tomb", which provides a unique evidence of spinning activity in the early 2nd millennium BC. The second major operation - located at the base of the East Trench, at the very foot of the upper tell - was devoted to the exploration of an interesting compound, dating back to the very beginning of the Early Bronze Age. Here further remarkable evidence of massive domestic mud-brick architecture in a fine Mesopotamian tradition was unveiled: its associated finds and intra-mural burials suggest that the settlement was an active centre at the time and/or immediately after the Uruk collapse in the Middle Euphrates Valley.

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## **A NEW DATING OF THE STONE GRAVES IN BALUCHISTAN REGION OF IRAN**

Archaeological studies show that the cairn burials were commonly used in south and south-eastern Iran. This type of burial is also known from neighboring countries such as Pakistan or Oman. Usually cairn burials are dated to the Parthian period. The copper coin of Sinatruces, king of Parthia (ca. 77-70 B.C.) found in one of these burials at Damba Koh seems to confirm this date. However the recent archaeological surveys and investigation on this type of the burial practice indicate that it can be dated back to the Bronze Age and was continued to the Islamic period.

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## **AN ARCHAEOLOGICAL EXAMINATION AND ANALYSIS ON SETTLEMENT PATTERN CHANGES DURING THE TRANSITION FROM BRONZE AGE TO THE IRON AGE IN THE NORTHERN SLOPE OF CENTRAL ALBORZ**

There is lack of information concerning Bronze Age in the northern slope of central Alborz Mountain, which covers an area between Ramsar in the west and Nowshahr city in the east. In other words, the area which comprises the political district of Ramsar, Tonekabon, Chalus and Nowshahr cities, with approximately 6044 km<sup>2</sup> in width. Archaeological study of this region was carried out in the summer 2007 by authors, as part of Archaeological Survey Project of Mazandaran province directed by S. M, Mousavi Kouhpar. During the survey of above mentioned area, almost 510 archaeological sites from prehistoric to Islamic period were recognized. Except two sites, Tepe Kelar and Vel-Cheshmeh in Kelardasht region, located in south of Chalous city, which are attributed to the Bronze Age, more than hundred others, categorized in prehistoric period, indicate the Iron Age.

The excavation report of Tepe Kelar, directed by S. M, Mousavi Kouhpar, shows a continuity of settlement in the site at least from Chalcolithic to the late Islamic period. Many sherds were found from the Bronze Age layers of the site. The sherds are in polished black color with engraved motifs filed by a white material which is not seen in the other sites. While, the ceramic of Iron age period are similar in the all sites of the region.

This paper will focus on the Bronze and Iron Age sites and distribution and location of the sites on the regional map. Moreover, it will be discussed the cause of increasing of the sites, settlement pattern changes, the probable reason of change, and livelihoods style in the region.

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## **THE FIRST SIX SEASONS OF EXCAVATIONS AT TEL 'ETON, ISRAEL**

Tel 'Eton, commonly identified as biblical Eglon, is a large site (about 15 acres) located in the trough valley, on the southeastern part of the Judean Shephalah, some 11 km east-southeast of Tel Lachish and about 4 km northeast of

Tell Beit Mirsim. The ancient city is situated near an important junction on the north-south road that meandered along the trough valley connecting the Beersheba valley and the Ayalon valley, and the east-west road that connected the coastal plain and the Shephelah with Hebron. The site's location near large valleys also secured its proximity to fertile soils, increasing its economic importance.

Since the summer of 2006, Bar-Ilan University has been carrying out a large-scale exploration project at the site and its surroundings. The excavations were preceded by a detailed mapping of the site, which was subsequently divided into 39 sub-units. This was followed by survey and shovel tests in each of those units, and by large-scale excavations in four excavation areas. On the basis of the available data from the survey and excavations it appears that the site was first settled in the Early Bronze Age, and again from the Middle Bronze Age to the Iron Age IIB (8th century BCE). Following a settlement gap in the 7th-5th centuries BCE, the site was resettled for a short period in the late Persian or early Hellenistic period.

The earliest remains unearthed so far in the excavations (we did not reach bedrock in any of the areas) are from the Late Bronze Age, and it appears that the site was a large Canaanite city on the border of the Kingdom of Lachish. During the Iron Age I the settlement continued to exist, unlike most other settlements in the Shephelah, and it appears to have been part of a small Canaanite enclave in the trough valley – an enclave that survived the turmoil of this era. During the Iron Age II the site became Judahite, and appeared to have had a central role in Judahite administration, reaching its apex in the 8th century BCE. This city was violently destroyed toward the end of the century, probably by the Assyrian army during Sennacherib's campaign of 701 BCE. The massive destruction layer sealed many houses with their content, including many pottery vessels, metal artifacts, botanical material (some still within the vessels), as well as seal impressions and many additional finds. Although some evidence for attempted reoccupation was unearthed, the site was abandoned for centuries, until the 4th or 3rd century BCE, when a fort was built on the upper part of the mound, and a settlement was established around it. The settlement was short-lived and the site was abandoned in the early Hellenistic period.

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### **PPNB BARRAGE SYSTEMS IN THE JAFR BASIN, SOUTHERN JORDAN: NEW EVIDENCE FOR WATER EXPLOITATION STRATEGY OF INITIAL PASTORAL TRANSHUMANCE**

Our previous investigations at the M-LPPNB agro-pastoral outpost of Wadi Abu Tulayha revealed that the site was equipped with an artificial barrage system as well as a large cistern. Evidence suggests that both of them formed an organic complex together with the neighboring outpost. It is questionable, however, that the barrage supplied drinking water for the outpost, first because it is imperfect in waterproof property, second because it is designed to create a shallow, extensive flooded area, of all locations, on a highly permeable terrain at the edge of a playa, and third because the large cistern coexists with the barrage. Thus it seems more reasonable to assume that the barrage was used as a basin-irrigation facility for tentatively damming up seasonal runoff water and promoting its infiltration into the ground. It would follow, then, that the initial pastoral transhumance in the PPNB Jafr Basin was sustained by small-scale basin-irrigated agriculture within the flooded area of the barrage. Our discovery is still continuing, and similar features known to date in the basin amount to seven. This lecture briefly reviews the investigation results and discusses the date, function, location requirements, and archaeological implications of the Jafr PPNB barrage system.

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### **EARLY JEZIRAH POTTERY FROM TELL BEYDAR, SYRIA**

Tell Beydar, a 28 ha circular mound, is located in the Upper Khabur Region, about 35 km north of the modern city of Hasseke, along the wadi Awaidj, at the crossing point between two important routes: the one which connects the Tigris with the Euphrates and the one which leads to the Diyarbakir plain. The settlement foundation dates back to the first centuries of the 3rd millennium B.C., but its main occupation and growth correspond to the EJ II – EJ IV periods (ca. 2750 - ca. 2100 B.C.). The site was then partially reoccupied during the Hellenistic period. Only few examples of 3rd Millennium pottery from selected contexts from this important site have been published so far, although a presentation of the morphology shape classes and some preliminary remarks about their chronological distribution (Rova 2003) have been available for some years.

During the last years, we undertook a complete re-analysis of the whole ceramic material discovered since the beginning of the Syro-Europaeen excavations in 1992, focusing first of all on entire vessels and complete profiles. In our paper we will expose the results of this work, thus giving, for the first time, a general overview of the ceramic culture of the site during the 3rd millennium, and trying to outline the evolution of both shapes and fabrics during the Early Jezirah Period at Tell Beydar. Furthermore, this project will fill an important gap in the ceramic knowledge between Eastern Khabur and western regions, mostly documented respectively at Tell Brak and Tell Khuera.

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**NEW FRENCH-KUWAITI RESEARCHES IN THE HELLENISTIC FORTRESS OF FAÏLAKA-IKAROS**

The Hellenistic fortress of Ikaros faces the Arabian Gulf, standing on the south beach of Faïlaka Island (Kuwait). It has been built by Antiochos the 1st in the beginning of 3rd century BC. The fortress has known several occupation periods, the most important during 150 years in the Hellenistic times. A special care has been devoted to the fortifications, with many reinforcements, additions and extensions.

The work of the new French-Kuwaiti expedition (French Institute for the Near East – Department of Antiquities and Museums of Kuwait) is concentrated first on the fortifications study, in order to understand the chronology of the fortress. Then the work associates the comprehension of the inside circulation, which seems to be different from the directions given by the main gates.

The new researches reveal that the chronology of the fortifications is much more complicated than what it first looked like; moreover, the discovery of occupations located outside the fortress and linked with the first period could also change the understanding of the whole settlement. It also asks questions about the feared enemies who lead the inhabitants to build such defensive ramparts.

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**EXCEPTIONAL METAL HOARDS DISCOVERED AT TELL MABTOUH (SYRIA)**

During the last campaigns of the Syrian excavations at Tell Mabtouh, under the direction of Dr. Antoine Suleiman (DGAMS Damascus), an exceptional series of two hoards has been discovered in the Temple N. These hoard, dating from Early Dynastic period (EJ IIIa/b, ca. 2500 BC), consist mainly of hundreds of weapons (mainly spearheads) made of copper alloy.

They are the most ancient and spectacular examples of such votive metal hoards (or deposits) found in Syria, and bring new light on the Northern Mesopotamia weaponry during the 3rd millennium BC.

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**A MIDDLE BRONZE II VILLAGE/TRADE CENTER IN THE SHARON PLAIN**

A salvage excavation in May 2010, on the northeastern side of Tel Bahan, revealed an occupation stratum, dating to MB II. Part of a residential quarter was exposed. The single stratum could be divided into three consecutive phases; the initial phase prepared the area for construction. Bedrock needed to be leveled and pockets in the bedrock were filled with small stones and earth, in which potsherds, dating to MB II, were mixed. The main and medial phase consisted of several building units, separated by lanes, whereas in the third and upper phase, alterations were done and renovations were added to the building units.

The building units consisted of several rooms and adjacent courtyards. The courtyards contained various stone objects and installations, which pointed to domestic housework. The rooms were of average size and the floors in some of them were overlain with numerous potsherds. Several jar burials were discovered in the corners of rooms, usually below the floors. The osteological remains belonged to babies and very young infants, yet the burial offerings in some of the jars, consisting of an odd-shaped juglet or a small cooking pot, were not particularly related to very young individuals.

A plethora of finds was recovered from the building units. The majority was composed of pottery vessels and these were mainly store jars and pithoi, as well as open/platter bowls. Some of the ceramic shapes seem to indicate a local manufacture and a regional type, which does not show up in other regions of the country. Other clay finds included a large number of loom weights and even larger numbers of re-shaped potsherds, sometimes known as stoppers.

The special finds posit a conundrum. A few are distinct objects, such as the basalt fenestrated chalice, or the clay chalice, whose foot is perforated with a series of holes. Do these unusual objects indicate that a small sacred edifice was present at the site, or did these belong to the main family/clan that was in charge of this trading post?

## **THE STUDY OF PARTHIAN STUCCO FROM QALEH ZAHAK IN AZERBAIJAN, IRAN**

The site of Qaleh Zahak (the castle of Zahak), Azerbaijan, Iran, is one of the most important sites of the Parthian period. The site was first described Wolfram Kleiss (1970) and investigated by M. J. Qandgar (2000-2007). Qaleh Zahak, one of the largest fortresses in the region, is situated on top of a high mountain. The fortress is composed of two areas: the fort in the south, and the palace in the north side of the mountain. The walls of the buildings are decorated with frescos and stucco reliefs. Fragments of them are still in situ. The decorative motifs can be divided in several groups: geometric, floral, and figural. Very interesting are the motifs of religious meaning, for example: Nike goddess (figure of Greek mythology), an eagle attacking a cow, the head of a lion, and a sunflower with female face in the centre (Mithraic symbols).

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## **GOYTEPE (AZERBAIJAN): RESULTS OF THE EXCAVATIONS 2010-2011**

Goytepe is located in the Ganja-Gazakh region, along the middle reaches of the Kura River. The region corresponds to the heartland of the Shomutepe culture, defined by I. Narimanov on the basis of his excavations of Shomutepe in the 1970's. The Shomutepe culture is known to feature all the aspects of the Neolithic, such as plant cultivation and stock breeding as well as early pottery, and is known as one of the oldest Neolithic entities in Azerbaijan.

The major problem for us is that the Shomutepe culture was defined when the modern excavation techniques such as stratigraphic sampling and radiocarbon dating were not fully available. Therefore, even its detailed cultural assemblage and chronology have been little determined for the modern standards, and its origin and development have also remained unknown. Accordingly, the first target of Azerbaijan-Japan joint project, started in 2008, is to re-define a type assemblage of this culture, and to examine its chronological development at a relevant site. We chose Goytepe for this purpose.

Goytepe is situated at the western edge of the delta of the Zayam River, one of the tributaries to the Kura River. It is approximately 15 km southeast of Shomutepe. The site covers an area with a diameter of 145 m and a height of 8 m. Extensive excavations have been in progress at ten 10 by 10 m squares, and nine smaller test pits have also been opened at the periphery of the mound to define the boundary of the Neolithic settlement.

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## **IRAQI-KURDISH/GERMAN EXCAVATIONS AT ARBIL 2009-2011**

The discovery of a Neo-Assyrian tomb on a mound in the present-day city of Erbil, ancient Arba'īlu/Arbela, Federal Region of Kurdistan, Iraq, led to Kurdish-German excavations (Directorate of Antiquities at Erbil and German Archaeological Institute, Orient-Department) from 2009 onwards. Settlement remains of the later part of the Neo-Assyrian period (8th/7th centuries BC) consist of a vaulted grave chamber and pertaining architecture of domestic character, which were covered by at least two subsequent inhumation cemeteries. Thus, chronostratigraphically (supported by scientific dating), the transition from the Neo-Assyrian to Sassanian periods is covered – for the first time in the area east of the Tigris. Whereas the material culture is closely related to the well studied parts of Assyria, such as, e.g., Ashur and Nimrud and other sites, the context offers new insights into burial customs and connected rituals as well as into the settlement patterns at ancient Arba'īlu during the Iron Age.

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## **ARCHAEOLOGICAL RESULTS OF THE GEORGIAN-AUSTRIAN JOINT EXPEDITION AT KHOVLE GORA**

The paper will present the results of the first excavation campaign conducted at Khovle Gora in 2011. The collaborative project conducted by the University of Innsbruck and the Tbilisi State University addresses the research of the transition period from the Late Bronze to Iron Ages in the Kaspi province and its cultural relation to the areas situated in the regions around the lakes of Sevan, Van and Urmia. The first campaign pointed alongside the archaeological excavation also to the re-evaluation of the findings of the former archaeological investigations conducted in the 50s and 60s of the 20th century. Furthermore the results of the excavation of Khovle Gora will be compared with those of Grakliani.

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## **A MONUMENTAL NEOLITHIC: NEW RESULTS OF THE ONGOING AZERBAIJAN-GERMAN INVESTIGATIONS IN THE MIL STEPPE, AZERBAIJAN**

Intensive surveying and excavation on a series of small sites along a tributary of the Kura River in southern Azerbaijan has led to the discovery of a densely settled Neolithic landscape that has survived almost untouched and provides a horizontal stratigraphy of subsequently settled sites. A detailed sequence for the 6th millennium BCE could be established and allows now to follow the cultural development since early sedentary occupation in a process of secondary neolithization. Material culture indicates correlations with the northwest Iranian Hajji Firuz period.

Throughout the settlements' sequence, construction measures expose a sense of monumentality and community-oriented planning. In the oldest site MPS 4, a system of concentric ditches or caused-way enclosure was discovered. 500 years later, the construction of a huge mudbrick massif in the center of the Kamiltepe site attests to further collaborative building projects possibly related with communal storage concepts. The paper will introduce these new data from four neighboring sites currently under excavation and will discuss the communal building structures as expressions of territoriality and identity building.

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## **RADIOCARBON DATING THE BRONZE AGE OF THE SOUTHERN LEVANT: NEW RESULTS AND IMPLICATIONS FOR MIDDLE BRONZE AGE CHRONOLOGY AND SYNCHRONISMS**

Absolute dates for the Bronze Age Southern Levant are still mainly dependent on archaeological synchronisms with Egypt and the Egyptian historical chronology. The SCIEM 2000 project of the Austrian Academy of Sciences has greatly increased our knowledge of links between Egypt and the Levant, and the Egyptian Chronology Project of the Oxford Radiocarbon Accelerator Unit has provided us with more than 200 new reliable dates for Dynastic Egypt. Furthermore, recent radiocarbon dating activities in the Levant and Egypt offer not only an independent control of absolute dates but allow also to cross-check chronological synchronisms between key-sites in the Levant, Egypt and the Egyptian historical chronology.

This contribution presents new radiocarbon results for MB IIA/B Tell el-Burak (Lebanon), excavated by the University of Tübingen and the American University Beirut, a Bayesian model based on the stratigraphy of the site and archaeological and radiocarbon synchronisms with key-sites of the Southern Levant and Egypt as well as implications on the Middle Bronze Age chronology of the Levant.

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## **THE MIDDLE BRONZE AGE III IN THE NORTHERN LEVANT: A RE-APPRAISAL TO 2ND MILLENNIUM RELATIVE CHRONOLOGY**

Relative chronology plays a crucial role in archaeology since it forms the framework into which archaeologists organize their data. The systems in use need, however, to be constantly updated, as new relevant data come from excavations. The case of the Northern Levant (e.g. Northern Lebanon and Western Syria) is particularly important since a significant amount of information has come out in recent years from a number of excavations. With reference to the 2nd millennium BC, the relative chronology that has reached the largest consensus among archaeologists relies on the subdivision of the MBA and the following LBA into two main phases (MB I-II, LB I-II). This paper aims at re-discussing this system: new archaeological data (in particular concerning pottery evidence) corroborated by C14 datings from the site of Qatna will be presented in order to highlight some inconsistencies that characterize this periodization. In a second step, these data will be combined with the already available evidence from other major key sites like Hama, Ebla, Alalakh and others in order to show how the introduction of a third sub phase in the MBA (similarly to what is in use in the Southern Levant), might better reflect the archaeological evidence of the region and consequently lead to a clearer interpretation of the archaeological evidence.



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**CHIPPED STONE INDUSTRY OF TELL KHAZNA I:  
TRANSFORMATION FROM EARLY URUK TO LATE ED I PERIOD**

The paper deals with chipped stone assemblage from Tell Khazna I site (North Eastern Syria). The site contains cultural deposits dating from 3900 to 2700 BC. It is well stratified, which allows to compare assemblages related to different stages of the local societies development: starting from a small settlement, growing to a flourishing temple center and falling into complete decline. The complex typological and technological analysis of chipped stone industry will provide insight into the evolution of material culture as well as the role of this site in the socio-economic processes in the Northern Mesopotamia.

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**NEW DISCOVERIES AT THE ANCIENT PERSIAN SATRAPAL CENTRE DASKYLEION**

Daskyleion is an ancient city at the coast of Manyas Lake, which is close to modern Ergili village and 40 km to the town of Bandırma in north-western Anatolia. Daskyleion was a settlement serving as the capital of a Persian satrapy which controlled the Hellespontine Phrygia, and also probably Bithynia, Paphlagonia, Phrygia and Cappadocia, in ancient Anatolia. The settlement was additionally important due to its multi-cultural (Phrygian, Lydian, Persian and Greek) society and materials.

First excavations in Daskyleion were realized between 1954 and 1959. After a long break, excavations were restarted in 1988. In recent years, geophysical and geological studies proved that Daskyleion was a peninsula with an inlet at the east side. The newly discovered circuit walls of the acropolis and the Persian main road are related to this inlet and give access to the acropolis. In the last two years, the archaeologists worked in a big tumulus at Daskyleion where they found a grave chamber made from the marvellous prokonnesian marble. There were many important findings belonging to three corpses. However, the most important findings were silver and electron coins, which are dated to the second half of the 5th century BC. Archaeologists assume that the oldest corps inside had a high social status in Daskyleion during the 5th century BC. The most striking surprise was that the geophysical research pointed out that there is an older and smaller tumulus with a still sealed grave inside the big one mentioned above.

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**ARCHAEOLOGICAL REPORT OF THIRD SEASON OF EXCAVATION IN LAMA CEMETERY**

Lama cemetery is located south of Lama village, and 10 km north of Pataveh village and 50 km north west of Zasoj in the Southern Yagros. Beshar river (Tol-e - Khosravi) which is one of the most important Karun river sources, is flow in 200 meter of cemetery south and south west. This cemetery was discovered on Isfahan-Yasoj project in 1999. The first season of excavation was in the same year under direction of Mr. Hasan Rezvani. During the six months of rescue excavation of cemetery 53 graves of stone structure were discovered and documented. Due to importance of Lama cemetery the second season of this research began in 2006. The northern part of cemetery was excavated and 8 other graves were discovered. The third season of excavation of Lama cemetery started from April in 2008 by writer and was continued until the end of May. 13 graves were discovered and documented in an area of 275 m<sup>2</sup> in two main trenches and testing trench. The most frequent items of the graves are pottery vessels and bronze objects. The pottery assemblage of the excavated graves is dominated by jars of different size. There are, however, many other forms including stemmed beakers, goblets, handled vessels, bowls, spouted vessels, miniature vessels. Most jars and stemmed beakers are painted in upper part by geometric designs. Most common are horizontal wavy lines, parallel horizontal lines, and triangles or combination of them.

Based upon cemetery features, the site could be dated to Kaftari-Ghale/Shogha-Teimuran periods in Fars cultural sequence, i.e. late 2nd to early 1st millennium BC.

The most important discovery of the third season of Lama cemetery excavation was one cylindrical clay stamp decorated by human and ostrich figure and cuneiform inscription found in grave No. 69.



### **ARCHAEOLOGICAL PROJECT OF THE MEHRĀN PLAIN (A.P.M.P.)**

Mehrān Plain is a part of southwestern Iran, adjacent to the Deh Lurān plain in the east and Mesopotamia in the west and also is the most northwestern part of Greater Susiana. The extent of the Plain is about 400 km<sup>2</sup> at the variant elevation above sea level between 120 meters in the west and 400 meters in the east. Studying the plain archaeologically, we define the long term project in the March of 2010, during which the plain will be studied more intensively in terms of settlement distribution and identifying any potential natural resources used by ancient people. In the first stage, we actually revised all previous surveys and hopefully identified some 36 prehistoric sites from early Paleolithic to proto-historic times, while the previous survey had led to only 8 prehistoric sites in the entire plain. Among the 36 sites, 22 Paleolithic period sites were recorded, and 14 sites belong to the mid-6th millennium to the early 3rd millennium B.C. In the second stage we had some limited excavation at the site of Choghā Ahowān in November - December 2010. Choghā Ahowān is the largest tell site in the Mehrān plain covering about 25 hectares and rising about 10 meters above the ground surface. We opened two 3x2 m trenches which yielded cultural material of the mid-6th millennium to the early 3rd millennium B.C. The excavation at the trench I revealed cultural deposits related to the Chalcolithic material. In the Trench II, remains of Jamdat Nasr related material mixed with Late Uruk material were discovered within 9 meter of deposits.

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### **RECHERCHES DANS LA PROVINCE DE SOULEYMANIEH (IRAK, KURDISTAN)**

Les piémonts de Zagros bénéficient de conditions environnementales exceptionnelles qui ont très tôt favorisé l'implantation humaine. Plusieurs vallées situées entre le Zab et la Diyala demeurent en grande partie inconnues malgré les fouilles prestigieuses de Jarmo et de la plaine de Rania qui ont documenté essentiellement les périodes du Néolithique et celle du Bronze Moyen. Les sources écrites nous livrent également de nombreuses données. De plus, on note depuis peu de temps le développement de plusieurs activités archéologiques irakiennes, italiennes et allemandes. Notre mission participe à ce déploiement nouveau.

La région est située sur une des routes caravanières la reliant à l'Est à l'Iran et notamment à l'Elam et à l'Ouest au cœur de la Mésopotamie. Elle correspond à une zone frontière de plusieurs grandes puissances et à un lieu de rencontres et d'affrontements entre divers groupes humains. Elle possède intrinsèquement toutes les qualités pour accueillir et révéler les changements brutaux que l'analyse des cultures matérielles révèle et identifie et dont l'archéologie se nourrit.

Nous rendrons compte des résultats d'une prospection menée en collaboration avec le Département des Antiquités de Souleymanieh, à l'automne 2011 à l'aide d'un SIG et le cas échéant, d'une première campagne de fouilles au printemps 2012.

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### **THE DESERT AND THE SOWN IN NORTHERN JORDAN**

In continuation of a project started by the Department of Antiquities and the German Archaeological Institute in 1999, the University of Copenhagen in 2008-2009 carried out a survey in the area between Ramtha and Mafrq. The project was meant to elucidate the role of that step area between the fertile land (further to the west) and the desert (to the east) during the different periods (the survey included all periods). The strategy was to survey some sites very intensively and larger areas in a more systematic manner. The intensively surveyed areas included Tell Khanasry (1999), Hawsha (2008) and Tell Rumeith (2009).

The overwhelming amount of material was from the Palaeolithic period, while the Iron Age and Mamluk/Ottoman periods brought much less material. The time span between the Neolithic and the Bronze Age was nearly completely missing in the material.

The lecture will give an overview of the material found and the development traced during the different periods.

## **PRELIMINARY REPORT OF THE SOUNDING AT SITE OF QAREH QOZLOU, SOUTH OF LAKE URMIA, NORTHWESTERN IRAN**

The Tappeh Qareh Qozlou is located south of lake Urmia, 3 kilometers from the village with the same name, as a part of Miandoab county of West Azerbaijan. The site is 600x500 m in size and 12 m above ground at the 1284 m a. s. l. Sounding at Tappeh Qareh Qozlou was done in late fall of 2011 led to identify cultural remains from Early Bronze Age (Yanik) and Late Bronze Age. In addition to the excavation, the systematic surface survey was also conducted and allowed to identify Iron Age grey wares and Islamic sherds alongside Early and Late Bronze Age. In this paper, the typology of pottery, description and comparison of discovered architecture are discussed. Thus, the Early Bronze Age materials are comparable to published data from Yanik Tepe, Haftvan Tepe and Goy Tepe in Iran as well as Kul-tepe (Nakhichevan) and Arguvan (Armenia) beyond the Iranian borders. Polychrome pottery (Urmia Ware), the main diagnostic pottery of Late Bronze Age, is comparable to published material from Haftvan Tepe, Dinkhah Tepe, Tepe Sagzabad and Qoli Darvish in Iran as well as Nakhichevan, Azerbaijan and Tazeh Kand district in Yerevan regions beyond the borders of Iran.

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## **BARD-E GOWRI, HISTORICAL ROCK CHAMBERS IN ELYMAIS, ANCIENT BAKHTIYARI LAND**

Bard-e Gowri (Tombs of Zoroastrians) are widespread in the Bakhtiyari area, mountainous land of nomads, ancient region of Elymais and nowadays provinces of Iranian Khuzestan, Lurestan, Isfahan, Charmahal and Bakhtiyari, and Kohkiluyeh and Bouyer Ahmad. These structures are usually located along nomadic migration routes leading from the Izeh plane to the Bakhtiyari mountains and from there to the Iranian plateau. Most of these rock chambers are located in quite inaccessible places. In consequence most of them is still unpublished and unknown to scholars.

Usually, a small door of 40x40 cm (38-60x40-60cm) gives access to a 180-200x90 cm and 90-100 cm height chamber, which contains a roughly shaped rock funerary beds. Traces on the door jamb indicate that the tombs were many times reused. Similar rock tombs have also been discovered in the Shoushtar area, in the north of the Susa Plain, and in the Fars province. The present paper focuses on these unpublished rock tombs which shed light on very important aspects of the local burial customs.

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## **TEL AKKO TOTAL ARCHAEOLOGY PROJECT: THE 2010 AND 2011 SEASONS**

For over three millennia, Akko served as the major urban and maritime center of the Plain of Akko. First excavated by Professor Moshe Dothan (1973-1989), the renewed excavations at Tel Akko directed by Professors Ann E. Killebrew (Pennsylvania State University) and Michal Artzy (University of Haifa) incorporate an integrated, “total archaeology” approach to the region’s past and present. Our goals at Tel Akko, today a municipal park, include: (1) an intensive survey of the mound and documentation of previous excavations conducted by Dothan but remain unpublished; (2) the investigation of Bronze and Iron Age Akko in its role as the major Canaanite and Phoenician urban center in the Plain of Akko, including the exploration of its earliest harbor; (3) the development of Akko/Ptolemais during the Persian and Hellenistic periods; (4) a comprehensive archaeological field school and state-of-the-art “3-D” documentation of the site that incorporates survey, GIS, excavation, on-site conservation and community outreach; and (5) the conservation and presentation to the public of mound’s rich archaeological history, in particular the preservation and integration of the deep sondage in the northern part of the site as part of the visitor’s experience to the Tel Akko municipal park. The results of the 2010 pilot project and 2011 survey and excavation season are the focus of this presentation.

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## **PRELIMINARY RESULTS FROM THE EXCAVATION AT TELL NADER IN THE KURDISTAN REGION OF IRAQ**

The University of Athens obtained permission to conduct excavation in Tell Nader, which lies on the outskirts of the city of Erbil (36.173148°, 44.075490°) and was first discovered by Mr. Nader Muhammad, an archaeologist of the General Directorate of Antiquities of Kurdistan. Prior to its discovery a part of it was unfortunately destroyed during construction works. The unauthorized excavation was brought to a halt by the Directorate of Antiquities and this tell was declared an archaeological site. Despite this fact, the site remained under threat because of the very intensive building activity in the area. Thus, conducting a rescue excavation was imperative.

The University of Athens conducted a survey and begun the excavation in April 2011. The surface finds indicate that the site was used from the Hassuna probably until the Neo-Assyrian period. The excavation has so far revealed one main stratigraphic layer. According to the preliminary examination of the pottery, the layer seems to be dated to the Ubaid period. To this layer belong a number of simple clay constructions, and possibly also a grave of an adult woman, which was discovered undisturbed. The excavation produced several animal figurines and small finds, but the great bulk of finds were pottery sherds (18.610 with a total weight of 560 kg) and lithics (2.979 with a total weight of 32 kg). The finds include many cores, flakes, blades and waste, so there is evidence of all stages of the reduction sequence. A sample of the obsidian, analyzed by Dr. Tristan Carter (McMaster University, Canada), originates from Bingöl and Nemrut Dağ or Eastern Turkey.

From all excavated units soil samples have been collected: for archaeobotany and environmental sampling, for mineralogical analysis, and for the identification of insects. In addition, the excavation brought to light a total of 472 animal bones, all of which were examined.

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## **NEW EXCAVATION RESULTS FROM CHOGHA GOLAN: A PPN SITE IN THE ZAGROS REGION OF WESTERN IRAN**

The site of Chogha Golan is a tell with an area of about 3 hectares on the western bank of the Konjan Cham River 30 km north of Mehran in the Ilam Province of Iran. The site is located in the low foothills of the Zagros at an elevation of 485 m a.s.l. The site preserves a stratigraphic sequence of eight meters of PPN cultural deposits dating to the 11th and 10th millennia calibrated radiocarbon years BP. The team of the Tübingen Iranian Stone Age Research Project (TISARP) conducted the excavations at Chogha Golan in 2009 and 2010 in order to shed more light on the neolithisation processes in the foothills of the Zagros Mountains in Iran. The stratigraphy of the site includes 11 major archaeological horizons (AHs) with the basal unit of AH XI directly overlying thick river gravels. The archaeological sequence is separated by multiple painted plastered floors and architectural building phases. Unit XI is the richest of the horizons, but all horizons between AH XI and AH I at the top of the sequence have produced large organic and inorganic materials. The site is very rich in organic remains, and will allow a detailed reconstruction of the regional settlement history, including the domestication process of plants and animals.

**NICOLA LANERI**

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## **THE HIRBEMERDON TEPE ARCHAEOLOGICAL PROJECT 2003-2011**

The Ilisu Dam rescue project along the upper Tigris river valley in southeastern Turkey is bringing forth new archaeological data regarding the ancient societies inhabiting this important rural region within northern Mesopotamia. Among the sites excavated in this region, Hribemerdon Tepe is a multi-phase small-sized site located along the right bank of the Tigris nearby the junction of the Batman Su and the Tigris river. The paper to be presented at this conference will provide a brief summary of the archaeological data uncovered during the first nine seasons of archaeological research with a specific focus on the most important phase of occupation at the site - the Middle Bronze Age (2064-1416 cal BCE). In fact, it is during this period that the site is marked by the presence of a ceremonial architectural complex built in the northern side of the High Mound.

## **EXCAVATION IN DZHARKUTAN (UZBEKISTAN): SOME NEW ELEMENTS ABOUT EARLY IRON AGE IN CENTRAL ASIA**

Thanks to the excavations carried out since 2007 by the Franco-Uzbek Archaeological Expedition – Protohistory (under the direction of J. Bendežú-Sarmiento and S. Mustafakulov), Early Iron Age remains have been discovered in Dzharkutan (southern Uzbekistan). This period (ca. 1500-1000 BC) is poorly known in Central Asia; it is characterized by “handmade painted ware cultures” occupying a vast territory including present republics of Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, northern Afghanistan and north-eastern Iran. The Early Iron Age is in between two better known periods, the Bronze Age Oxus Civilization and the Achaemenid domination of Central Asia.

In Dzharkutan, the recent discovery of what seems to be an Early Iron Age small village brought new elements about settlement and its organization, which is almost unknown in this region. Moreover, thanks to the rich ceramic assemblage the Early Iron Age material complex of the site can be characterized and compared with contemporary Central Asian cultures. The study of this new material should provide information on the transition from Bronze Age to Iron Age, as Dzharkutan is one of the few sites in Central Asia where transition levels are attested. These new data should shed a new light on the origins of these cultures in northern Bactria.

### **MARTA LUCIANI**

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## **ARCHAEOLOGY IN THE REGION OF SULAIMANIYAH, IRAQ**

The south-western folds of the great Zagros chain constitute one of the “strategic peripheries” of central Mesopotamia. Numerous evidences suggest this region controlled the connection from the Tigris plains – i.e., Assyria in the North and Babylonia in the South – with Iran. Several kingdoms, cities and towns, whose identifications are still debated, are probably to be localised here. While geo-morphologically the area is likely to have undergone fewer changes than the southern alluvial plain or the marshlands, increasing human intervention both agricultural and constructional endangers ancient settlements more than ever before.

As the hilly flanks of the Fertile Crescent, this region has been the object of investigations already starting in the 1940's by an American team focusing on unravelling the beginning of farming and sedentary village life. However, large parts still remain virtually unexplored.

The Orient Department of the German Archaeological Institute, Berlin has therefore initiated a new archaeological and geo-morphological survey of three inter-montane valleys South of the Lower Zab and North of Sulaimaniyah to achieve a first reconstruction of the landscape and settlement patterns and fill the significant gaps in the archaeological and historical knowledge of this key peripheral region of the ancient Near East.

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## **CERAMIC PRODUCTION OF THE NECROPOLIS 3 OF DZHARKUTAN (SURKHAN-SARYA, UZBEKISTAN, 2100-1500 B.C.) : NEW ARCHAEOLOGICAL DATA ABOUT THE CHRONOLOGY AND THE EVOLUTION OF THE SAPALLI CULTURE (BRONZE AGE, CENTRAL ASIA)**

The new researches on the necropolis 3 of Dzharkutan led by a French and Uzbek team (MAFOUZ-Protohistoire headed by J. Bendežú-Sarmiento and S. Mustafakulov) bring some new and fundamental data about the pottery production and the chronological evolution of the Sapalli culture.

The ceramics of Dzharkutan is divided into several groups ranged from the fine wheel-made to the coarse hand-made pottery. Five types of decoration and some potter's marks have also been distinguished. The typological analysis of these ceramics reveal the existence of some new shapes for the Sapalli culture production. Some important differences in the production system of pottery and pottery utilization appear in consecutive phases of occupation of this site. The pottery analysis provides also some essential information about the chronological sequence of the site. The researches of the MAFOUZ - Protohistoire validate, on one hand, the periodization previously established by the Russian and Uzbek archaeologists, but, on the other hand, the recent discoveries in Dzharkutan put to light the contemporaneity of two distinct complexes. Three main periods are now proposed : Dzharkutan (ca. 2100-1750 B.C.) in the Middle Bronze Age, Kuzali/Molali (ca. 1750/1650 B.C.) and Bustan (ca. 1650-1500/1450 B.C.) during the Final Bronze Age. These results allow revealing the chronological dynamic of this funeral complex.

### **THE 3RD MILLENNIUM OCCUPATION AT MENTESH-TEPE, MIDDLE KURA VALLEY (AZERBAIJAN)**

Excavations on the site of Mentesh-Tepe (Tovuz district, western Azerbaijan) have started in 2008. The site was completely leveled up in the 1970's but structures of its older periods of occupation are still present under the actual surface. Three main periods have been uncovered, the Early Bronze Age, the Chalcolithic (second half of the 5th mill.), and the Neolithic. Here will be presented only the 3rd millennium occupation.

Two kurgans, two individual tombs, huge pits and a few hearths are related to this period considered as related to the Kura-Araxes Culture, but little other architecture has been evidenced. These different structures as well as the material and the different C14 dates associated with them will be presented.

### **JOHN MACGINNIS**

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### **ZIYARET TEPE: OPERATIONS IN THE LOWER TOWN 2010-2011**

This paper will report on the findings of the 2010 and 2011 field seasons at Ziyaret Tepe, the Neo-Assyrian provincial capital of Tushan in southeastern Turkey. It will concentrate on the work in the lower town, where the 2010 field season saw completion of two areas where we had been working for a number of years and the 2011 season saw the commencement of work in two new areas. Firstly, then, the excavation of the southern city gate was completed, revealing a sequence of architectural phases and occupational layers which must have spanned the entire 270 year Neo-Assyrian occupation of the city; and the work on the monumental administrative complex was also brought to a successful conclusion. These operations were both located in the western part of the lower town. In 2011 we shifted our focus to the eastern part of the lower town and a report will be given on the results of the first season in the new areas opened up there. Finally the paper will report on epigraphic discoveries, particularly on the interpretation of the cuneiform text found in the palace on the high mound in 2009 and the information which this may give on deportation in the Assyrian empire.

### **ALI MAHFROUZI**

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### **ARCHAEOLOGICAL EXCAVATION AT TEPE SAD IN NORTHERN IRAN**

Tepe Sad (site no. 204) is located 4 km of Mohammad Abad village, the center of the Fareim Sahra District, and 60 km south of Sari, somewhere in the middle part of the Mazandaran Province. The site is situated in the intermontane plain of Alborz, 840 m a.s.l. During a surface survey of the site a considerable amount of sherds attributed to late phase of the Cheshmeh Ali period (Neolithic) to the Hesar II period (Chalcolithic) were found. Accordingly, the excavation at the site was fulfilled during autumn of 2011 as part of the comprehensive project of the Prehistory of Southern and Southeastern Coasts of the Caspian Sea. Our major aim in this program was better understanding and establishing the cultural sequence of intermontane plains of the Mazandaran Province since the earliest times to the historic periods. Based on the recovered materials from the excavated trenches, the site has an almost uninterrupted cultural sequence from the classic Cheshmeh Ali Period (very late 6th millennium BC) to the early Hesar III (2nd millennium BC). Hesar sequence materials including Hesar I, Hesar II and probably Hesar III, were found at the very south of the site, but the Cheshmeh Ali materials were recovered at the northern part of the site, some 150 m distance from provenance of the Hesar materials. It seems that at this site, like at the most of the sites of northeastern Iran, the stratigraphic relationship of Cheshmeh Ali deposits with immediately later Hesar I deposits cannot be elucidated.

At southern trenches, where there were found much materials than in the northern ones, in addition to ceramics, we found some remains of kilns. Moreover, large amount of animal bones and lithics were found. Based on our preliminary observations it is fairly evident that the prehistoric cultures of intermontane plains of the Mazandaran Province have close resemblance with well-known prehistoric cultures of the southern flanks of the Alborz Mountains. Although our excavations were rather limited, it would be claimed that future prehistoric investigations of the intermontane plains of the province promise fruitful conclusions in coming years.



## **THE JOINT TURCO-ITALIAN 2011 EXCAVATIONS AT KARKEMISH**

The first campaign of archaeological excavations and restorations at Karkemish (modern Karkamış Höyük, Gaziantep) took place in 2011 under the joint auspices of the Universities of Bologna, Gaziantep and Istanbul and in cooperation with the Turkish Ministry of Culture and Tourism. The aims of the first season were to check the topography and the stratigraphy of the monuments excavated by the British Museum expedition (1911-1914, 1920), to further explore the urban structure of the site and to initiate its systematic survey. Archaeological results have already been significant in this first pilot season. Although not yet open to the public since it lies in a military area, plans for its future touristic accessibility have been finalized and the first steps taken towards the creation of a National Archaeological Park in 2015.

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## **RESEARCHES IN QASR SHEMAMOK/KILIZU (IRAQI KURDISTAN): AN ASSYRIAN TOWN?**

The site of Qasr Shemamok, slightly south-west of Erbil, the main center of the Kurdish autonomous region of Iraq, is well known, and recognized as the ancient Assyrian town of Kilizi/Kakzu, since Layard's first exploration, and the researches of an Italian mission in the 30's. The first season of excavations on this site of a French archaeological mission, during Spring 2011, while confirming the Iron II Assyrian occupation of the site, has already started to reveal a longer, and perhaps more complicated history of the integration of the city, its area and environment - and of the roads crossing them -, into the Assyrian sphere. The paper will be a short summary of the archaeological researches carried out in Qasr Shemamok, presenting some of the new study perspectives now opened in this ancient landscape, possibly leading toward a reconsideration of the expansion structures and dynamics of the Assyrian State.

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## **VANI (COLCHIS, WESTERN GEORGIA) STRATIGRAPHY AND MULTIDISCIPLINARY STUDIES, 2011 SWISS-GEORGIAN EXPEDITION**

Vani is an important archaeological settlement located on the left side of the river Rioni, the old Phasis quoted in written sources of Antiquity. According to Professor O. Lordkipanidze, in 8th-7th centuries BC, Vani was a major cult centre. From 6th till first half of 4th century it seems that it has functioned as a "capital" in the kingdom of Colchis. Then from the second half of the 4th to the first half of the 3rd century Vani rulers gained more independence. In the mid-3rd century Vani becomes a "temple city" till its destruction in the mid-1st century BC.

The presentation will show some results of the 2011 excavation made in a large ancient channel located in the vicinity of the defensive walls of the middle terrace. The channel offers an interesting stratigraphy with occupations between the 6th and the 1st centuries BC. The typological study of the ceramic, based on the local and imported pottery and tiles, allows the fine chronological analysis of the different layers forming its filling. The zoological analysis leads to identify the presence of various animals. The ancient vegetation and the cultivated plants are inferred from the palaeobotanical analysis, mainly based on carbonized seeds (macrorestes).

These researches belongs to an international project of cooperation between University of Lausanne (Switzerland) and the Georgian National Museum (Georgia) and European Archaeological Centre of Mont-Beuvray (France) in the framework of a program of the Swiss National Science Foundation.

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## **RECENT EXCAVATIONS AT RAS SHAMRA/UGARIT**

The main results of the researches undertaken by the Syro-French archaeological Mission of Ras Shamra à Ugarit since 2008 will be presented. They concern both the tell of Ras Shamra and several sites on the Mediterranean coast, within the Kingdom of Ugarit, combining together archaeological, historical, architectural, geophysical and paleoenvironmental approaches. The recent data help to better characterize the urbanism and the history of Ugarit and the ancient harbours and to elucidate the Holocene paleogeography, particularly during the Bronze Age.



## **CURRENT RESEARCH ON THE NEOLITHIC OF THE CENTRAL ZAGROS OF IRAN AND IRAQ**

The importance of the Central Zagros region of western Iran and eastern Iraq in the Neolithic transition from hunter-foraging to village-farming has been well known since Braidwood's pioneering investigations half a century ago. Since then much Neolithic research has focused on the Levant and Anatolia. A range of recent projects, however, are providing new evidence on the nature and significance of Neolithic developments in the eastern Fertile Crescent. The Central Zagros Archaeological Project is investigating Neolithic developments at several sites in Iran and Iraq, spanning the critical centuries from 9800 to 7000 BC. During this time human communities settled in villages and intensified their relationships with plants and animals around them, leading to domestication of a range of species. The paper will consider current theories regarding the Neolithic transition and will explore the value of an integrated, inter-disciplinary approach to a suite of connected issues, including absolute and relative chronology, early sedentarisation and use of space, seasonality and domestication, and inter-community interactions. Above all, the ongoing research demonstrates the diversity of trajectories pursued by human communities as they engaged with their environments in the early millennia of the Holocene.

### **AMIHAI MAZAR**

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## **COLLAPSE OR CONTINUITY?**

### **COMMENTS ON THE END OF THE BRONZE AGE IN THE SOUTHERN LEVANT**

The collapse of the Bronze Age civilization at around ca. 1200 BCE is one of the most cited events in the various published histories of the Ancient Near East. Indeed the collapse of the Mycenaean palace polities, of the Hittite empire and of major cities like Ugarit in Northern Syria around this time are well documented. Yet the situation in the Southern Levant is more complicated. The departure point for this lecture will be the recent excavations at Tel Rehov in the Jordan Valley (Northern Israel) where continuity of urban development is evidenced throughout the 12-11th centuries and well into the 10th and 9th centuries BCE. The lecture will present the evidence from Tel Rehov in comparison to a host of other sites from Israel and Jordan. A complex picture emerges: while certain Bronze Age cities were destroyed along the 13-12th centuries and remained abandoned, others, in particular along the coastal plain, the Jezreel and Beth Shean valleys evidence continuity of urban culture throughout the 12-11th centuries while others were established during this period. This complex picture stands in contrast to the traditional narrative of Bronze Age collapse.

### **RYSZARD F. MAZUROWSKI**

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## **QARAMELIAN – THE NEW CULTURAL TRADITION IN THE PRE-POTTERY NEOLITHIC OF NORTHERN LEVANT**

The excavations in Qaramel, realized since 1999 by the Polish- Syrian Archaeological Mission, co-directed by Prof. dr hab. Ryszard F. Mazurowski and Dr. Yousef Kanjou, has been concentrated on a large (ca. 3,5 ha) settlement that was occupied during Late Epipaleolithic (14th – beginning of 12th millennia B.C. Cal.), Protoneolithic and Early Pre-Pottery Neolithic (PPNA) periods (10.700 and 9.400 B.C. Cal.).

The project is a joint undertaking of the Polish Centre of Mediterranean Archaeology, University of Warsaw and Direction General for Antiquities and Museums of Syria. Field works and laboratory analyses have also a substantial support from the Institute of Archaeology, University of Warsaw.

This site is located in the River Qoueiq basin, about 26 km north of Aleppo and 75 km south of the Syrian-Turkish border and Taurus Mountains, 423,4 m a.s.l.

Discoveries at Qaramel are very important for research on a transformation to traditional Neolithic culture in Northern Levant. First of all professional laboratory analyses do not confirm traces of domestication of plants and animals by Qaramelian people. Their very highly developed culture and standard of live are results of an extremely high advanced specialization in gathering and hunting. In present writer's opinion, according to the several indirect data, in the case of plants domestication only a very initial cultivation for a small scale cannot be excluded. Moreover, Qaramel is located in a new, completely unknown region (center) of so-called "primary neolithization". Author named its culture "Qaramelian" for PPNA stadium and Proto-Qaramelian for Protoneolithic. Its architecture, economy and material culture, including chipped stone industry, represent many differences in comparison to sites known from Middle Euphrates and other regions of the Near East.

Until now, we discovered five world oldest rounded towers and three spectacular sanctuaries. All towers had

a function of common houses and shrines. Also more than 90 circular and oval houses along with accompanying utility constructions divided to five chronological horizons (HO-H4) have been found. In the courtyards, in addition to the houses, we found hearths, storage and waste pits, and hiding places as well as 35 human pit graves with deceased laying in the embryonal position and 3 intentional onager graves, 1 panther and 2 pairs of bulls. The circular, oval or sporadically rectangular houses were partly dug into the ground or most often were built directly on the ground, with walls from irregular blocks or clods of mud mixed with fine stone pebbles, bones and all sorts of other materials present in the surroundings. The mud bricks or limestone brick-like blocks shaped by using of herminettes are completely unknown.

In the chipped stone industry elements typical for the whole Qaramelian culture are as follows: a) brown ("chocolate") flint is prevailing as a raw material in all layers; b) absolutely domination of blade technology and using of 1-polar cores than gradually growing up frequency of bipolar forms; c) in the Protoqaramelian (horizon H1) nearly total lack of microliths and using only El-Khiam points together with Qaramelian points – the first type seems to be earlier than in Southern Levant; d) from horizon H2 (Early PPNA) to H4 absence of navy core and heating technology, herminettes, Jerf el-Ahmar points, Sheikh Hassan points and Mureybet points (except of 2 from surface and 2 from H4 layer), still dominating El-Khiam and Qaramel points are gradually accompanied by Jordan Valley, Helwan and single Nevalı Çori points.

From layers and fills of houses also a very rich and famous collection of about 490 (!) decorated tools, ornaments and objects of art made of stone, bone and sun-dried mud have been obtained.

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## **THE UŞAKLI HÖYÜK ARCHAEOLOGICAL SURVEY 2008-2011: THE RESULTS OF THE ITALIAN RESEARCH IN THE YOZGAT PROVINCE (CENTRAL ANATOLIAN PLATEAU, TURKEY)**

In 2008 the University of Florence began an archaeological survey on the site of Uşaklı Höyük and its adjacent area, north-west of the Kerkenes Dağ. Evidence on the settlement pattern of the surveyed area over a long time span and detailed information on the occupational sequence at the main site of the valley, Uşaklı Höyük, have been collected. The survey gives evidence of a continuous occupation of the area from the 2nd millennium BC to the Medieval period, with a major occupation probably during the Late Roman/Byzantine period. In the course of the 2nd millennium BC, occupation might have been concentrated only in the site of Uşaklı while in the surrounding land it might have been of a rather ephemeral and sparse nature, not easily detected by the survey. The lower terrace of Uşaklı, where geo-magnetic and geo-electric prospections provided evidence for large buildings and city walls, is marked by a settlement of both the Imperial Hittite and the Old Hittite phases covered by a thin deposit belonging mainly to the 'later' periods. The floruit phase of the site was reached in the entire 2nd millennium B.C. The fact that most of the Hittite and even earlier materials dating to the karum period were found on the outskirts of the terrace can substantiate the hypothesis of a significant settlement consisting of a lower town and an acropolis already during this older phase.

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## **DISCOVERY OF THE NORTH-WEST CHURCH COMPOUND IN HIPPOS (SUSITA) ON THE SEA OF GALILEE: A FINAL REPORT**

After ten seasons of field work (2000-2009), the exploration of the so-called North-West Church at Hippos (Susita) by the Polish team has come to an end. The church, one of the four churches so far excavated at the site, was built along with its annexes in the early 6th century AD and destroyed by a mighty earthquake of AD 749, after which the life never came back to Susita again.

The interest of this church testimony is multifold. Obviously, the compound can be investigated as a part of an urban network of Hippos in its historical development from the Byzantine throughout the Umayyad period. On the other hand, due to the violent earthquake of AD 749 and subsequent abandonment of the town, the church floors stayed tightly sealed by collapsed masonry blocks, with just a single case of modern disturbance. The contents of those untouched destruction deposits have made it very clear that in mid-8th century the church compound was still a focus of both religious and economic activity of a local Christian community.

Instead of just providing a technical account of the excavation results, therefore, this paper aims at discussing the North-West Church discovery as mirroring the life of a group of Christians during the final two hundred years of Hippos history. The main topics under consideration will include:

- the choice of the location for the church and the identity of its founder(s),
- architectural modifications of the church in the late 6th or 7th century as an expression of development of the Byzantine liturgy,

- economical role of the North-West Church compound in supporting the local Christian community during the final decades of its existence (specifically, wine and grain processing).

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## **PRELIMINARY REPORT OF 16TH SEASON OF EXCAVATIONS IN TEPE HEGMATANEH, HAMADAN**

The 16th season of excavations in Hegmataneh aimed to explore the architectural structures belonging to the historical periods. Three successive periods of settlement are possible to distinguish according to the data collected during the excavations up to now. The oldest period dates back to the Parthian period and can be divided into several architectural phases. Since cultural deposits of Hegmataneh Tepe are very disturbed due to the continuous settlements, the precise dates of the mud-brick and stone structures are not certain. The third and the last period of habitation on the site belongs to the modern times.

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## **RECENT ITALIAN EXCAVATIONS AT MISHRIFEH/QATNA: THE EASTERN AND THE LOWER CITY PALACES**

This presentation will report on the main results of the 2010 excavation campaign of the joint Italian-Syrian Mission at Mishrifeh/Qatna. It will concentrate on the work conducted in two monumental public buildings: the Middle Bronze Age II Eastern Palace on the upper city and the LBA Lower City Palace at its northern foot.

The Eastern Palace with its typical asymmetrical plan and tripartite reception suite shows the distinctive characteristics of the MBA Western Syrian tradition. The paper will present the most important architectural features of the buildings and the discoveries made in it, amongst which particularly relevant is a metallurgical workshop probably specialized in copper/bronze and silver metallurgy containing furnaces of different type, size and function, tools (e.g. blowpipes, ground stone tools for metal ore grinding), slag, prills and lumps of copper/bronze and silver and a considerable number of finished objects (over a dozen toggle pins).

The 2010 excavation in the Lower City Palace has provided also important new information on the history and chronology of this building, its spatial organization and the function of the various sectors in which the palace was subdivided. The presentation will discuss also the new important findings made in it.

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## **REPORT ON THE STRATIGRAPHY OF KALANAN SITE IN BIJAR REGION, KURDISTAN PROVINCE, IRAN**

This paper will focus on stratigraphy of Tepe Kalanan site located in the Kurdistan province. According to the excavated material, the site dates to the Middle Chalcolithic period. Eleven archaeological layers representing the Dalma and Seh Gabi phase have been recognized during the excavations. Pottery found on Tepe Kalanan suggests cultural interrelations with other Zagros valleys.

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## **"MAQUETTES ARCHITECTURALES" DU PROCHE-ORIENT ET DE LA MEDITERRANEE ORIENTALE : APPROCHE D'ENSEMBLE**

Comment, à travers une pratique commune – la fabrication, le plus souvent en terre cuite, de "maquettes architecturales" –, les civilisations pré-classiques ont-elles diversifié les formes et les usages de tels objets ?

Plutôt qu'une étroite relation avec l'architecture, dont ils rendent compte avec plus ou moins de réalisme, il faut chercher dans ces petits monuments, comme dans toute image, des reconstructions dans lesquelles le symbolisme, en particulier celui de la fertilité et de la fécondité, sous forme végétale, animale ou anthropomorphe (déesse, nue ou vêtue), tient une grande part. Ustensiles indispensables aux libations funéraires dans l'Égypte du Moyen Empire ou au culte domestique sur le Moyen Euphrate syrien du Bronze Récent, tabernacles contenant éventuellement des effigies divines de métal au Levant et en Crète, tables à offrandes ou récipients à libations en Mésopotamie du Nord ou en Anatolie, simples supports fenestrés, ossuaires en Palestine au Chalcolithique..., ces témoins d'un artisanat souvent

populaire, où Chypre a excellé dans l'invention imaginative de scène parfois complexes, peuvent également avoir été enfouis comme dépôts votifs.

Les mises en comparaison permettent de faire ressortir des usages voisins en des lieux ou à des périodes fort éloignés (Mari et Platia Magoula Zarkou, Thessalie), ou au contraire de fortes spécificités locales, et d'éclairer certains aspects de la physionomie particulière d'une culture à une époque donnée.

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### **LATE NEOLITHIC SITE OF RASHAK III ROCK SHELTER, MAZANDARAN, IRAN**

Rashak III rock shelter is the largest site among a cluster of small rock shelters with the same name, located in central Alborz Mountains nearby Kelar Dasht plain. This site was first recorded by the Late Ezatollah Negahban in 1975. Because of its strategic location, and due to its proximity to the well, the name of the site is Tepeh Kelar. Archaeological excavations were conducted outside and inside of the shelter in order to observe the transition from the Paleolithic to the Neolithic period in the region. Ceramic data derived from excavation of one of the inside trenches indicate that the site has witnessed repeated short term occupations since the Late Neolithic and early Chalcolithic period.

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### **TEPE ZAGHEH: RESULTS OF THE 2011 SEASON OF EXCAVATION**

Since the 1970s, Department of Archaeology, University of Tehran is conducting archaeological research at Tepe Zagheh, in the Qazvin plain. Tepe Zagheh is located approximately 60 km south of Qazvin city and 140 km west of Tehran. Twenty seasons of archaeological research on the site provide new information on prehistoric society during the Transitional Chalcolithic period. A significant degree of social differentiation is suggested by architecture and decoration of so-called Painted Building as well as by distribution of the graves and grave goods explored during the previous season. Important result of the 2011 season is the discovery of remains of pottery production as well as about hundred of tokens of different types suggesting a form of administration in the Tepe Zagheh during the Transitional Chalcolithic period. We will present our latest results of excavation in Tepe Zagheh in 2011.

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### **RELATIONSHIP BETWEEN IRAN AND MESOPOTAMIA IN THE URUK PERIOD, BASED ON ARCHAEOLOGICAL EXCAVATIONS IN MARGIN OF THE SEYMAREH RIVER IN ZAGROS**

The intensive interregional contacts in the eastern Mediterranean during the second half of the 4th millennium B.C. resulted in substantial cultural changes. New evidence of trade contacts between Mesopotamia and central Zagros in form of seals, seal impressions, obsidian tools and pottery characteristic for Uruk period were unearthed during the excavations carried out in 2010 at Qhala Piruz Ali and Farash Chahar Ivani. Both sites discussed here are located near Seymareh River, in Lurestan.

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### **CHIATORKANEH, A SETTLEMENT OF PRE-POTTERY NEOLITHIC PERIOD IN NOURABAD PLAIN, PISHKOUH OF CENTRAL ZAGROS**

Pishkouh district of Lorestan, in Central Zagros Mountain chains of Iran, has a high potential in Neolithic studies. Despite previously performed researches, our knowledge on Pre-Pottery period in this area is merely limited to excavations of Tepe Abdul Hosain. Since sites with this date are small and they are located in off the beaten path, such sites have been identified rarely.

Regarding the scarcity of identified sites related to this time, introducing a site from this period seems to be very important. Chiatourkaneh tell was identified during Omran Garajian's investigation in Nourabad district. Chiatour-

kaneh is a relatively small tell and based on surface findings, has settlement remnants of Pre-Pottery Neolithic, Chalcolithic, and historic-Islamic periods. The present paper focuses on presenting this site. Its surface findings will be also analyzed, and finally, its significance in prehistory studies especially the Neolithic period in this district will be demonstrated.

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## **IMAGES AND MEANINGS. THE IVORY RHYTA FROM OLD NISA AND THE DIFFUSION OF MODELS IN HELLENIZED ASIA**

This paper deals with the republication of the 48 ivory rhyta found during the excavations carried out by the JuTAKE expedition at Old Nisa (Turkmenistan) in 1948. The work is the result of a study carried out within a more general project directed by the Centro Ricerche e Scavi per il Medio Oriente e l'Asia of Turin, aimed to analyse all the artefacts found at the Arsacid monumental centre.

The study of the rhyta raised several questions concerning different archaeological and historical aspects. These artefacts share the general technology and arrangement of elements of the horn. They, furthermore, show sometimes iconography so identical, repetitive in particular details, that it is very difficult to place the specimens geographically far from one another. In the meantime, nevertheless, the range of stylistic variation is extremely wide. Several geographic and cultural matrices likely conditioned the production of the ivory corpus.

In this paper, some Hellenistic iconographic models adopted on the rhyta friezes and shared by more or less distant centres of artistic production (both at East and West) will be analysed. It will be stressed how Mediterranean iconographic models travelled in Western and Central Asia after the Alexander's conquests and how they were often adapted to the local communication's needs and specific identities.

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## **TELL AL-NASRIYAH SUR LA RIVE DROITE DU MOYEN ORONTE, SYRIE (BA IV-FER II)**

La « mission archéologique syro-française de l'Oronte » étudie une micro-région, sur la rive droite du fleuve à 15 km en aval de Hama, par le biais de deux sites quadrangulaires : Tell al-Nasriyah et Tell Massin, distants de 10 km.

Paléoenvironnement, mutations naturelles et anthropiques, évolution urbaine, rapport entre nomades et sédentaires sont au centre de la problématique.

Nous avons fait une prospection céramique et un relevé topographique de Tell Massin. Tell al-Nasriyah a fait l'objet de trois campagnes de fouilles de 2008 à 2010. Les ruines d'une ville, active entre le Bronze Ancien et l'âge du Fer, y ont été mises au jour. D'abord circulaire, la ville du Bronze Ancien IV est très étendue (chantier H). Puis elle est intégrée, au Bronze Moyen, dans une vaste levée quadrangulaire : des aménagements monumentaux de pierre sont alors édifiés en bordure de l'Oronte (chantier B). À l'époque araméenne, l'acropole, entourée d'un glacis (chantier C), est occupée par un énorme bâtiment à soubassement de pierres sur la butte sommitale (chantier D), alors qu'en ville basse, une grande résidence a livré un matériel abondant, encore en place (chantier F). La ville disposait enfin de deux aires funéraires distinctes : un cimetière à crémation, entaillé par une occupation ayyoubide-mamelouke (chantier A), et des tumuli extra-muros (Zour al-Nasriyah).

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## **TELL KAZEL (SYRIA), AREA II. NEW EVIDENCE FROM A LATE BRONZE/IRON AGE QUARTER**

This paper presents the results of archaeological investigations carried out in Area II at Tell Kazel (Syria), during the 2002, 2003 and 2008 excavations. New architectural evidence and materials provide further information on the evolution of a quarter of the town, in the transitional period between the Late Bronze and Iron Ages, as well as the cultural and socio-economic features of its inhabitants.



## **ROYAL FUNERARY PRACTICES AND INTER-REGIONAL RELATIONS IN THE MIDDLE BRONZE AGE LEVANT: NEW EVIDENCE FROM QATNA**

In the excavation seasons of 2009 and 2010 at Qatna the Syrian-German Mission excavated Tomb VII below the Royal Palace, dated to the late 17th to mid 16th century BC. This un-looted tomb is extraordinarily rich in human bone material and in objects deposited as grave goods. A quantity of Egyptian objects discovered in the tomb hints at very close ties with the Pharaonic land during the Hyksos and early New Kingdom periods, embedded in an intensive exchange with Egypt. The remains of several wooden coffins, each with the skeletal remains of a number of different individuals, are presenting clear indications of secondary burial practices and large-scale re-depositions of burials. Thus, the tomb offers important insight into funerary practices as well as inter-regional cultural relations during the Middle Bronze Age IIB period in the Levant.

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## **TELL BARRI (SYRIA). THE SETTLEMENT AND ITS CHANGES: NEW DEVELOPMENTS**

The recent excavations, that confirm the continuing site occupation from EJ 0/EBA to Middle Ages, were directed to further investigate some critical aspects of the site history relative to regional developments. We have studied the transition from EBA to MBA, and from MBA to LBA in new areas on the northern and southwestern slopes of the tell; the new findings allowed a better definition of the extension and structural characteristics of the settlement. The most important results were obtained for the Parthian phase (150 B.C.–250 A.C.). The site expands from the acropolis to the lower town, where house buildings are arranged in a seemingly regular pattern. The wealth and variety of finds linking Tell Barri to contemporary sites in Jazirah show the liveliness of this long phase and support the hypothesis of a cultural koiné in north Mesopotamia. The possible connections with farther Middle-Euphrates sites widen the limits of the koiné, suggesting new possible interpretations. In the last time phase (XII-XIV A.D.) we have studied a group of houses on the acropolis and manufacturing areas in the southern part of the tell, obtaining useful data to reconstruct coeval settlement patterns, still largely unknown in the region.

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## **THE GLYPHTIC AND ADMINISTRATIVE MATERIALS FROM CHOGAH MARAN CA. 2500 BCE**

During the 1970's, the Royal Ontario Museum mounted an archaeological expedition to the site of Chogah Maran in the Mahi Dasht valley of the Zagros Mountains. The short single season, the results of which have never been published, revealed through ceramic evidence, the presence of 5th through mid-3rd millennium occupation. This paper focuses on the last phase revealed in a long series of trash lenses that produced within fragmentary architectural remains significant pottery and clay sealings carrying impressions of cylinder seals. Recently Ernie Haerinck has published a study of the 3rd millennium painted pottery of the region, defining regional and chronological styles. This paper presents the glyptic evidence from Chogah Maran which shows strong ties to the Diyala River Valley as well as to Susa among the poorly stratified material and the few finds of glyptic art from controlled context in the Ville Royale. The corpus consists of about 80 fragmentary images carried on jar, bag and other mobile containers. It is clearly a local assemblage that establishes the use of glyptic in administrative practices of Luristan, and allows for the definition of a local iconography and style that can be integrated into the larger world of central Mesopotamia and western Iran during the period of the Dynasty of Awan.

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## **THE EASTERN PALACE OF TELL BEYDAR**

Within the frame of the Euro-Syrian mission at Tell Beydar (Syria), the German team has excavated great parts of a large official building of the Early Jazirah 3b period. It was erected on top of destroyed private houses and served as a representative residence of an elite member (Eastern Palace). After a short use, the palace was transformed into a metal workshop. A closure ritual accompanied the abandonment of the building. Shortly later squatters moved into the ruins. All these changes occurred within a rather short time-span of probably 50-75 years.



The paper will discuss the reasons for this urban dynamic and the single steps of change. The role of the Eastern Palace of Beydar within the development of Upper Mesopotamian palatial and representative architecture will be shown.

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**PRELIMINARY RESULTS OF THE KHIRBET MALHAT SURVEY, NORTH SYRIA**

Within the framework of the Syrian-French-German project “BADIYAH” about circular cities of 3rd millennium BC Syria, a survey programme began in 2010 in the region of Khirbet Malhat (formerly known as Malhat ed-Deru), south of the Jebel Abd al-Aziz in the Der ez-Zor governorate. Although the site has been known for a century it is the first time that an archaeological mission decides to make this region the focus of its research in order to deal specifically with this settlement as well as to survey systematically its surroundings. This paper intends therefore to present the results of the first exploratory season held in August-September 2010.

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**BALANCE WEIGHTS IN THE 3RD MILLENNIUM BC: RESULTS OF A RECENT COMPREHENSIVE STUDY**

Balance weights from the 3rd millennium BC are not well known and published so far. While at several Early Dynastic/Akkadian/Ur III sites in southern Mesopotamia balance weights had been found since the late 19th century, very few have been published adequately (like recently some Late Akkadian weights from Nippur). In Syria the known sample is smaller than in southern Mesopotamia but weights excavated at more and more EBA sites in last decades have been brought to attention. We are especially well informed about the weights from Ebla/Tell Mardikh IIB1. Possible EBA weights from Anatolia and the Aegean were only recently identified and carefully studied. To the east of Mesopotamia in the Persian Gulf and especially in the Indus Valley dozens of sites are known with cubical shaped weights of the Harappan type. In a recent comprehensive and not yet published study the present author has assembled nearly 2000 (possible) balance weights in the ‘Greater Near East’ between the Aegean and the Indus Valley from 160 sites and discussed them under chronological, contextual and metrological aspects. In this contribution the most important results will be presented which shed a new light on cultural relations and trade in the 3rd millennium BC.

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**EXCAVATION AT TOL-E- KHOSROOW, WESTERN ZAGROS, IRAN**

Zagros intermountain valleys have influential role in evolution of prehistoric cultures and formation of states across Iran. Tol-e - Khosrow is located 3 km south of the city of Yasuj in Koliluye and Boyerahmad Province in Southwestern Iran.

Excavations at Tol-e - Khosrow in 2008 exposed a 2 m wide step stratigraphic trench from highest point of the mound with occupational levels dating from 5th millennium to the Safavid period. The virgin soil was reached. Residual sherds in earlier deposits suggested that occupation probably began as early as early Chalcolithic was discovered in the deepest part of the trench, at the depth of 17.50 cm on virgin soil. This surprising result reveals both the extent of alluvial deposit on the plain over time, and the extraordinary longevity of the cultural period occupation. Substantial mudbrick architecture of bricks was found in collapsed contexts and clearly indicates the presence of a substantial mudbrick village at the site during the 5th and early 4th millennium B.C.

One of the highlights of the excavation was the discovery of a grave dug into virgin soil. The grave contains 3 burials with ritual goods such as pottery vessels and prestige objects. The evidences indicates that the burial had secondary function since the earlier bones of two burials were accumulate in one side to make space for the third one. The grave was oriented to the north-south and beside the pottery vessels some goods such as bone-beads necklace and some decorative beads made of turquoise were also found.

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## **HAMOUKAR EXCAVATIONS 2010: NEW INSIGHTS INTO NORTHERN SYRIAN URBANISM DURING THE LATE CHALCOLITHIC AND EARLY BRONZE AGE PERIOD**

Hamoukar, a large site in Northern Syria that has been excavated since 1999 by a joint expedition of the University of Chicago's Oriental Institute and the Syrian Department of Antiquities, has proven to be a site of crucial significance to study for the development of cities in a dry-farming region. Its large Late Early Bronze Age city is preceded by an earlier fortified city dating to Late Chalcolithic 3-4 (3700–3500 BC) and a vast production site for obsidian tools dating to the Late Chalcolithic 1 and 2 periods (4500–3800 BC). The 2010 season specifically addressed the phasing, layout and function of the Late Chalcolithic city, the function and operative modes of its administrative units, and the relation of this city with the Uruk Culture over time. Continued excavations of a vast Early Bronze Age building complex with administrative, industrial, and cultic units in the site's lower town were complemented by a targeted examination of a large Ninevite V forerunner to the later EBA city.

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## **THE FORTIFICATIONS OF MARI: PRELIMINARY RESULTS OF THE 2006-2010 EXCAVATIONS IN THE 'EAST CITY'**

The archaeological exploration of Mari – East City is the second theme of the new research program led by P. Butterlin since 2005: 'Mari and its near-periphery'. My paper focuses on the fields N3, N4 and N5, located at the south east of the site, on the assumed layout of the inner city wall, at the periphery of the upper city – the kirhum of the Amorite texts. The objective of these excavations started in 2006 is twofold: to identify various components in extension of the inner fortifications as well as different elements of domestic architecture of the East kirhum (sectors N3 and N5); to obtain a complete section of the inner rampart (sector N4). Preliminary results of our on-going work have already provided important data related to the defensive topography of Mari – East City. The excavations have indeed uncovered an extended bastion and a residence of the City III and a fortified gate of the City II. They have, moreover, established a chronological sequence of the inner defensive system (City I – City III). We therefore propose an attempt to reconstruct, based on our preliminary conclusions, the main stages in the evolution of the fortifications of Mari.

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## **A PRELIMINARY REPORT OF SOUNDING FOR DETERMINING AREA AND LIMITS OF GHALEH GABRI HISTORICAL SITE IN SARPOL ZAHAB, IRAN**

The archaeological site of Ghaleh Gabri is located in the center of Sarpol Zahab (147 km west of Kermanshah). The site is located on the skirt of Mian Kal, the home of Louloubi and Arsacid rock reliefs. Alvand River, changing its direction in some points and bringing about damages to the site, runs to the west of the area. According to Iranian and Arab historians and geographers, this site is a remnant of the ancient city of Holvan, an important and flourishing city during Arsacid and Sasanian periods and up to Saljuqian period.

Unfortunately, during the years after Iran-Iraq war, especially when Sarpol Zahab was being reconstructed, and due to unsupervised construction projects by public and private entities in this great site, parts of the site were demolished to be used for Kermanshah - Ghasre Shirin Road. Moreover, some educational, military and residential buildings as well as several health services have been built in other parts of the site. Another bad news is that these construction projects are still under way and it is not too far that there would be no remaining of the site. Since there has been no regulations or law to prevent such destructive measures, a site limit sounding project was commissioned in 2008. Based on this project results limits of Holvan historical city were defined. 52 trenches were dug on southeast, south and southwest sides of this historical site. This paper represents a summary of excavations conducted on the site.

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## **SETTLEMENT PATTERNS DURING THE CHALCOLITHIC PERIOD IN THE KAZEROUN PLAIN, IRAN**

In the last stage of Neolithic period, discovery of metals, especially copper, begins a period in human life history called Chalcolithic. In this period, in addition to sedentary village life, the men begun produce food and met their demands

through agriculture and herding. In addition to using copper for making tools, utensils and ornaments, stone was still in use.

This paper reviews the position and properties of Chalcolithic sites, settlement patterns of these sites, the local population fluctuations and changes in long-term, relationship of the sites with the environment and natural resources and identification of important central sites.

Another important point in the study of Chalcolithic settlements in the region is proximity of the settlements to Lake Parishan, Shapur River and agricultural lands. The settlement patterns of Kazeroun plain in this period have been prevalent with simple irrigation practices and the expansion of agriculture, and the number of sites decreased with distance from the lakes and rivers. This pattern is also seen in the Kur River basin region. Distribution pattern of Chalcolithic sites in the central plain is cluster type, and this pattern becomes curve shaped from center to the north of the plain.

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### **BUT IT'S A DRY HEAT. REALLY?**

#### **RECENT RESEARCH INTO THE LATE NEOLITHIC EXPLOITATION OF THE BADIA IN EASTERN JORDAN**

A season of excavation in the summer of 2011 at Wisad Pools, in Jordan's Black Desert, has revealed how inadequate regional paleoclimatic models based on proxies from the western Levant are when it comes to understanding changes in the exploitation potentials at distances far removed from the Mediterranean coastal regimes. The exposure of a Late Neolithic (in this case, ca. 6,500-6,000 calBC) dwelling and its contents reveal an investment of labor that is inconsistent with current views of what constituted local landscapes during the posited 8.2 kya event. In concert with Braemer's work in the Early Bronze Age at Khirbet al-Umbashi in Syria's Black Desert, we suggest that the modern desolation of basalt and barren sandy silts is less the consequence of climatic deterioration than the long-term cumulative effects of overgrazing during and after the Bronze Age. Opportunities for 7th and 6th millennia pastoralist-hunters appear to have been – at times, at least – lucrative enough to establish long-term (though impermanent) occupations in the near vicinity of seasonal water resources such as the pools at Wisad.

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#### **ARCHAEOLOGICAL SURVEY OF KOURANG AREA, BAKHTIARI HIGHLANDS, IRAN**

Kouhrang area is one of the most mountainous parts of the Zagros Mountain range which for millennia has been the homeland of the nomads. The mean altitude of the area is well above 2000 m a.s.l. and the outstanding Zard Kouh Mountains, with several peaks over 4000 m, is the principal physiographic feature of the area. Until 2007 the area has never been surveyed systematically and there were just few known sites in its central and eastern parts. Since then we conducted four seasons of archaeological survey in 2007, 2009, 2010 and 2011. So far altogether more than 760 sites have been identified, which cover a time span from the Middle Palaeolithic to the Qajar Period (19th century). The area is the main summer residence of the Bakhtiari nomads, who pitch their tents here from early April to early November. Unlike most parts of the country where the main archaeological sites are Tappehs or mounds, the sites of Kouhrang area are essentially nomadic in character which well conform to the environment and the specific geography of the area. Of prominent importance among the identified site types are a large number of Palaeolithic open sites which are possibly among the highest known sites of Pleistocene in the Near East.

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#### **NEW RESEARCH ON THE 3RD MILLENNIUM CULTURES OF TRANSCAUCASIA: THE 2010 AND 2011 CAMPAIGNS OF THE GEORGIAN-ITALIAN SHIDA KARTLI ARCHAEOLOGICAL PROJECT**

The paper will present the preliminary results of the second and third field campaigns of the Shida Kartli Archaeological Project carried out by the Ca' Foscari University of Venice in collaboration with the Georgian National Museum and Tbilisi State University. The main focus of research was the site of Nastargora in the Khashuri district, one of the few settlements of the region to have provided evidence of occupation belonging to both the Kura-Araxes and the Early Kurgan (Bedeni) cultures. After completing, during the 2010 season, the study of the unpublished material from the old Georgian excavations on the settlement mound and in the cemetery area, a new excavation was opened, in 2011,

on top of the mound, in order to complete the investigation of the EBA levels there, and thus answer some unsolved questions concerning the site's stratigraphy, which are of crucial importance for clarifying the chronological relation between the two above mentioned cultures.

The main result of the new excavation proved, that, contrary to the opinion of the previous excavator, the lowest levels of the settlement, which were preserved in the W part of the investigated area just under the surface left by the Georgian excavations, contain exclusively Kura-Araxes material, and are therefore contemporary with the EBA graves from the cemetery, which did not yield any Bedeni material, as well. The Kura-Araxes levels were rather poorly preserved due to the presence of a high number of Late Bronze pits cutting them; in spite of this, it was possible to excavate a succession of surfaces of yellowish colour. These yielded a number of small mud-brick structures of sub-circular shape associated with firing installations of different types. Samples for soil micromorphology analysis have been taken from the most promising of these contexts.

In contrast to the results of earlier research, the Bedeni occupation at the site remains until now rather elusive. In the W sector of the new excavation area the relevant levels have presumably been completely removed by the previous excavators. Further east, where the ancient mound's surface was heavily sloping, the EBA levels are still largely covered by the later (LBA) occupation; to judge from a small sounding carried out in this area, however, they seem to mainly contain Kura-Araxes, rather than Bedeni material.

Other activities carried out by the expedition, the results of which will be synthetically presented in the paper, include the excavation, during the 2010 campaign, of two kurgans at Okherakhevi, a program of systematic sampling of contexts of Kura-Araxes and Bedeni periods for 14C dating, a program of pottery and obsidian sampling for archaeometric analyses, and a geo-morphological and archaeological survey of selected sections of the Shida Kartli region.

#### **SADI SAEEDYAN**

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### **ZARBOLAGH: A MEDIAN SITE IN CENTRAL IRAN**

Zarbolagh site is located 50km north of Qom city and 80 km south of Tehran, Central Iran. In the 2006, excavation and systematic sampling survey of the site were carried out under supervision of the present writer. This site is known because of its stone structure which has an oval plan, constructed with splinter rocks and mud mortar that seems to be a sanctuary. What seems to be of high importance is that like the structure of Nush-I Jan, the Zarbolagh structure seems to have been deliberately abandoned and filled with cobbles and splinter rocks up to the top of the walls. Furthermore the structure has been covered with two layers of stone and mud brick. In the result of the work a considerable number of potsherds were collected that belong to buff ware tradition of Iron Age, comparable to the Median fort of Ozbaki, Nush-i Jan I, Godin II and Baba Jan II-III. Based on the archaeological and architectural data, the site can be assigned to the late Iron Age III (700-550 B.C.) and one can suggest that inhabitants of Zarbolagh were a group of, as described in the Neo-Assyrian sources, "the Medes who live near the salt desert".

#### **GLENN SCHWARTZ**

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### **A TALE OF HUMAN SACRIFICE: UMM EL-MARRA 2010 3RD-2ND MILLENNIUM BC RESULTS**

Excavations at Tell Umm el-Marra in the Jabbul Plain east of Aleppo in northern Syria in 2010 have produced new results for understanding ritual, ideological and political developments in the Early and Middle Bronze Age occupations. In the elite mortuary complex of the Early Bronze Age (ca. 2500-2200 BC) on the site acropolis, the excavation of Tomb 11 revealed the latest tomb discovered thus far, dating to Early Bronze IVB. This tomb and its slightly earlier contemporary Tomb 7 demonstrate significant architectural divergences from the earlier tombs in the complex, showing similarities to tombs in the Euphrates Valley that may indicate changing political realities. In addition, new bioarchaeological results have supplied important information on the human occupants of the EB tombs.

After a period of site reduction or abandonment, Middle Bronze Age (ca. 1900-1600 BC) reoccupation centered on a monumental round stone platform (Monument 1) built atop the earlier tomb complex. Excavations of the feature entitled Shaft 1 revealed ten layers of carefully deposited bodies of animals interred above thirteen humans, interpretable as evidence of the sacrifice of humans and animals. Issues raised include the continuity and repositioning of ritual, issues of memory and power, and the interpretation of sacrificial behaviors at Umm el-Marra.

**THE ARCHAEOLOGICAL EXCAVATIONS OF KHESHT DASHT TEPE, DAMGHAN, NORTHEAST IRAN**

As compared with other regions, in the history of archaeological studies the northeast part of Iran has been neglected. However, this region has been the bed of formation of important human settlement from prehistory to the present. Although the region of Damghan has witnessed/experienced several cultural-political events as well as developments during history, we face insufficiency of cultural materials, documents and information for studying and learning more about this region during Parthian time. Therefore, the materials and data obtained from the site excavation of Dibaj in Damghan area would clarify some cultural-material ambiguities and explain the state of cultural interactions of the region.

In the two last decades, limited excavations and field studies have been done in this region, the results of which can elucidate the blind points of the history of Parthian period in northeast Iran; one of these regions is Dibaj, Damghan. The author has attempted to introduce and comparatively study the results related to this region in the Parthian period against the other simultaneous regions, in order to have a quantitative and qualitative study of data and investigate the bilateral communications/interactions between the northeastern parts of Iran and its neighboring regions. The purpose of these two seasons of excavations in the region (carried out in 2008 and 2009) was to understand the settlements sequences, architecture, the settlement pattern and a comparison of cultural materials with those of the probable neighboring sites as well as detecting the settlement contexts in the site of Dibaj. Actually, the role of Dibaj, in Damghan city, and the cultural finds of excavations regarding its cultural communications/interactions with the other regions in northeast part of Iran in Parthian period are of significant importance. In addition, Dibaj Tepe has been located near Hecatompylos (Ghoms), and its special location which was on the “Silk Road” made it to be even much more important.

In this site, after mapping and gridding operations over two seasons of surveying and excavation, thirteen trenches were dug in different dimensions; we will explain the architectural data, pottery and historical influences of the mentioned trenches. Totally, three phases have been distinguished on this site: 1st phase - Islamic cemetery, 2nd phase - stone architecture, 3rd phase - the adobe walls.

**UWE SIEVERTSEN**

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**NEW FINDS OF IRON AGE POTTERY FROM TELL HALAF (2008-2010)**

In 2008, 2009 and 2010 the Staatliche Museen zu Berlin and the Direction Générale des Antiquités et des Musées Damascus continued their excavations at Tell Halaf. As in 2006 and 2007 fieldwork mainly took place on the Iron Age citadel mound. The exposure of the possible elite residence A1 on the large mudbrick platform in the southern part of the citadel and of the Governor's palace C1 in its north-eastern part has been enlarged. Numerous ceramic finds from both buildings, among them inventories of large storage jars as well as thin-walled fine ware dishes, add considerably to our knowledge of pottery typology in the Upper Habur region during the periods of Neo-Assyrian and Neo-Babylonian dominion. Moreover, several examples of pottery with glazed frieze decoration dating to the later days of the Neo-Assyrian Empire came to light. Levels of the earlier phases of the Iron Age have been unearthed in the area of the Western Palace (Hilani) and on the northern slope of the citadel mound. The exact chronological assignment of the diverse pottery assemblages from these contexts has yet to be established.

**LYNN SWARTZ DODD**

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**THE NORTHERN AMUQ VALLEY SURVEYS IN 2010 AND 2011**

The Amuq Valley Regional Project survey in the Hatay province of Turkey builds on research by a University of Chicago team led by Robert Braidwood in the 1930s and by teams of scholars led by Aslihan Yener from the mid-1990s onward. This presentation details the recent results of survey research in the northernmost portion of the Amuq Valley, in an area which has been underexplored by previous survey teams. KH-9 photographic satellite imagery was employed as a tool for site identification in the diverse environments encountered in this portion of the valley, which has extensive volcanic basalt fields and outcrops; complex field systems; and foothills with various cover types. Large numbers of sites were investigated rapidly by surveyors on the ground as a means of testing the validity of remote site identification on the satellite imagery. Sites dating from the Neolithic through Ottoman periods, both major mounded tell sites



and numerous smaller ones, were located and documented. Some monuments were documented using Reflection Transformation Imaging. These survey data provide a contrast to the settlement patterns of the earlier periods and are relevant for understanding the developments and communication systems in this region during the 1st and early 2nd millennia CE.

#### **REGIS VALLET**

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#### **TELL FERES AL SHARKI 2010:**

#### **RECENT DISCOVERIES ON THE UBAID AND LATE CHALCOLITHIC IN NORTH SYRIA**

After five seasons at Tell Feres in the Syrian Jazirah, the site is beginning to shed new light on the evolutionary process of 5th and 4th millennium societies of northern Mesopotamia. In Level 10, the uppermost Ubaid level, we have begun to explore what could be a pottery workshop comprised of several units, all of which display kilns and a tank for preparing clay. In the following Level 9 dated from the Late Chalcolithic 1, several adjoining public buildings now appear to have been but one single compound, surrounded by a ditch. We have worked extensively on Level 6 (Late Chalcolithic 2) and found a tripartite house. The sketch of the site layout especially, demonstrates that there was a planified scheme, with some isolated buildings along a long wall. In Level 2 (Late Chalcolithic 3-4), we completed the excavation of a large dwelling compound built at the top of the site. Besides these architectural discoveries, we now have a complete pottery sequence from the end of the Ubaid until the beginning of Late Chalcolithic

#### **DANIEL VARGA**

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#### **A MULTIPERIOD SITE AT AMATZIA NEAR LACHISH**

The site is located on a moderate hill south of Wadi Lachish. The excavations were conducted by the Israel Antiquities Authority as part of a salvage project over an area of ca. 400 hectares.

The excavated remains revealed the following periods of occupation: Early Bronze Age, Persian, Hellenistic, Early Roman, Byzantine, Late Ottoman and British Mandate.

Early Bronze Age I and IV remains were excavated in Area B. Buildings and installations and a cave, were discovered in the western part, while a complex of several silos was found on the east. On the southern part of the summit, several caves were carved in the Hellenistic period and dozens of oil presses were found there. During the 1st and 2nd centuries AD, these caves were utilized in between the two uprisings against the Romans by the local Jewish population. Then a number of tunnels were dug in the bedrock.

During the Early Roman period, a villa was located in the highest point of the hill. The villa, 60x60 m, includes a rectangular-shaped courtyard with a pool, and a colorful mosaic around it with a meander motif. To the east of the courtyard a bathhouse was encountered.

#### **MARCIN WAGNER**

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#### **YAZ II PERIOD ON THE TOPAZ GALA DEPE, SOUTHERN TURKMENISTAN**

Since 1997, Polish-Turkmen Archaeological Mission has been carrying out archaeological excavations at the site of Topaz Gala depe in the Sarakhs Oasis, in southern Turkmenistan. It is located east of a main road from Sarakhs to Mary (ca. 12 km from Sarakhs). It is a small mound, one of a few mounds in the Sarakhs Oasis (along with e.g. Oyukly depe, Ara depe, Atsyz depe 2, Atsyz depe 3), where Polish archaeologists found pottery dated to the Yaz II horizon.

During three archaeological seasons, five trenches (A, B, C, D and E), measuring 10x10 m were opened. The most interesting are trenches C, D and E, where a square building was excavated, with long, parallel, rectangular rooms. The rooms are connected by double thresholds in the middle of the interior walls. In the central room, a round clay altar was found; it was surrounded by walls made of rectangular mud bricks (30x60 cm).

East of the altar a small, square (1.15x1.15 m) podium was erected.

During the Early Iron Age (Yaz II), a very popular pottery category were carinated bowls and basins, the fragments of which we have found at the site. It seems that the remains of the above mentioned building have analogies not only in Central Asia, but in Media e.g. in Nush-e Jan and Baba Jan.



## **EXCAVATIONS AT SATU QALA, ERBIL PROVINCE, IRAQ**

In 2008, a team from Leiden University visited the site of Satu Qala, a tell on the Little Zab in Erbil Province, Iraq. During this visit, they were shown an inscribed mudbrick identifying the site as Idu, a regional capital already known from various Middle and Neo-Assyrian records. Following this find, regular excavations started in 2010 and were continued in 2011. These excavations were carried out by Leiden University, University of Leipzig and Salaheddin University (Erbil). In 2010, three excavation areas were opened in the northern half of the tell to determine the location of the palace from which the inscribed mudbricks were thought to come. Two of these areas were continued in 2011, and a surface scraping operation was started on the southern slope to gain insight into the older occupation layers at Satu Qala. The preliminary results of these operations will be presented here.

## **MOHSEN ZEINIVAND**

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## **REPORT OF EXCAVATIONS AND STRATIGRAPHY OF SAR-ASIAB ZONE, SARPOL-E ZOHAB, KERMANSHAH, IRAN**

Kermanshah province in the region of Zagros, is a key point in archaeological studies, which has always been under attention up to its natural characteristics, strategic situation, and also being located at the cross of some important junctions. Firmly, Zohab plain could be considered as entrance gate of highland people of Zagros and the people of lowland Mesopotamia. Following the building activities and constructions of dams in Iran, the Ministry of Power has started another project in Tang-e Hammam district of Sarpol-e Zohab of Kermanshah province, in western side of Iranian plateau. Up to predictions, a three-square-kilometers zone would go under water as a result by early 2012. This zone was once surveyed by Abbas Razmpoosh in 2010 and 16 sites have been identified in result, containing material of Early Bronze Age (Jamdat Nasr) continuously up to recent era.

Recent archaeological studies in this zone gathered new information from its past, specifically from the third up to the 1st millennium BC. During summer 2011, Sar-Asiab zone was excavated to identify the amount of cultural deposits and uncover architectural remains. The result of excavations and stratigraphy shows that this zone has been occupied continuously between the 1st millennium BC. and Achaemenid and Parthian periods. They also reveal presence of a nomadic society in the 1st millennium BC., a pattern which could be seen nowadays in the region. Regarding its proximity to lowland Mesopotamia, and also presence of exotic pottery sequence, it would be important to study the area to understand and distinguish regional and foreign influences.

### 3. HIGH AND LOW – MINOR ARTS FOR ELITES AND THE POPULACE

SUPERVISOR: DOROTA ŁAWECKA

AUTHOR(S)	TITLE	DAY, HOUR
FABRICE DE BACKER	CARDIOPHYLAX IN URARTU: A CELTIBERIAN MODEL	TUE, 15.45
LAURA BATTINI	ICONOGRAPHY EXCHANGES BETWEEN "POPULAR" AND "ELITE" 'MINOR ARTS'	MON, 14.55
ALESSANDRA CELLERINO	THE LADY OF THE HAMRIN. OLD BABYLONIAN TERRACOTTA PLAQUES REPRESENTING A GODDESS FROM THE HAMRIN REGION	WED, 12.05
PETR CHARVAT	THE DEEP WELL OF THE PAST: EARLIEST SEAL IMPRESSIONS OF ARCHAIC UR (CA. 3000 BC)	WED, 9.00
P. M. MICHELE DAVIAU	CONSPICUOUS CONSUMPTION AND TRIBUTE: ASSYRIAN GLAZED BOTTLES AND FAIENCE VESSELS AT KHIRBAT AL-MUDAYNA ON WADI ATH-THAMAD	WED, 15.45
LAURA DIETRICH	SOCIAL DIMENSIONS OF NEOLITHIC GREENSTONE AXES FROM THE LEVANT	TUE, 9.50
RITA DOLCE	ON THE WOODEN CARVINGS FROM EBLA: SOME SUGGESTIONS FROM THE WORK IN PROGRESS	WED. 11.15
ANJA FÜGERT	THE NEO-ASSYRIAN AND LATE BABYLONIAN GLYPTIC FROM DUR-KATLIMMU (SYRIA)	WED, 15.20
FABRIZIO GIOVANNETTI	THE DRUM SHAPE FROM BEYCESULTAN LEVELS V AND IVC-A: A TYPICAL PRODUCTION OF AN UNUSUAL OBJECT	TUE, 15.20
DAISY KNOX	DIACHRONIC CHANGE IN THE FIGURINES OF BRONZE AGE CYPRUS	TUE, 16.45
ANGELA MASSAFRA	THE HARPAI IN THE ANCIENT NEAR EAST. A CURVED CEREMONIAL WEAPON BETWEEN 3RD AND 2ND MILLENNIUM B.C.: FROM TYPOLOGY TO USAGE	WED, 14.55
ROBERTA MENEGAZZI	COLOUR AND FIGURINES. ON THE POLYCHROME DECORATION OF THE TERRACOTTAS FROM SELEUCIA ON THE TIGRIS.	WED, 17.35
MARIA GABRIELLA MICALE	THE COROPLASTIC ART OF THE PERSIAN TELL MARDIKH/EBLA: SOME NOTES ON ICONOGRAPHY AND CONTEXT	WED, 17.10
IANIR MILEVSKI BERNARDO GANDULLA	MINOR ART AND SOCIETY IN THE CHALCOLITHIC OF THE SOUTHERN LEVANT	MON, 16.45
DAVIDE NADALI	THE DECLINATION OF IMAGES AND OBJECTS: WHERE AND HOW TO SETTLE ANCIENT ARTIFACTS	MON, 15.20
IDA OGGIANO	IMAGES OF WOMEN AND CHILDREN IN THE HINTERLAND OF TYRE BETWEEN PERSIAN AND HELLENISTIC PERIODS. THE RURAL SHRINE OF KHARAYEB	WED, 18.00
DARNE O'NEILL	A SOUTH ARABIAN MORTUARY MINIATURE CORPUS	TUE, 17.35
ESTELLE ORRELLE	ICONOGRAPHY OF FIGURINES IN THE NEOLITHIC NEAR EAST	TUE, 9.25
SILVANA DI PAOLO	HIGH AND LOW CONCEPTS IN ANCIENT NEAR EASTERN ART THEORY AND METHODOLOGY	MON, 14.30
YITZHAK PAZ	MINIATURE VOTIVE BOWLS AS TOWN PROTECTORS AT LEVIAH, AN EARLY BRONZE AGE FORTIFIED TOWN IN THE SOUTHERN LEVANT	MON, 17.35
LUCA PEYRONEL	TEMPLES AND FIGURINES. THE COROPLASTIC FROM AREA HH AT EBLA (SYRIA) DURING THE EB IVB PERIOD	WED, 9.25
CHRISTIAN KONRAD PILLER, ALI MAHFROOZI, BİRGÜL ÖGÜT	BRONZE AGE ANTHROPOMORPHIC FIGURINES FROM NORTHERN AND NORTHEASTERN IRAN: A REAPPRAISAL IN THE LIGHT OF NEW DISCOVERIES	TUE, 17.10
FRANCES PINNOCK	OF POTS AND DOVES. SOME POSSIBLE EVIDENCE FOR POPULAR CULTS IN THE EBLA PALACES IN MB II	WED, 11.40

PAOLA POLI	BONE FIGURATIVE OBJECTS FROM THE SHAKKANAKKU LEVELS OF TERQA: AN EXAMPLE OF MINOR ART	MON, 15.45
MATTIA RACCIDI	FROM MODELS TO CHARIOT	WED, 10.15
SUZANNE RICHARD	THE FUNCTION AND SYMBOLISM OF MINIATURES IN THE EARLY BRONZE IV COMPLEX AT KHIRBAT ISKANDAR, JORDAN	MON, 18.00
AMY RICHARDSON	THE DEVELOPMENT OF CLAY TECHNOLOGY IN THE CENTRAL ZAGROS: TOKENS AND FIGURINES IN THE EARLY NEOLITHIC	TUE, 9.00
PAOLA SCONZO	ICONOGRAPHY OR ICONIC SIGNS? STYLIZED FIGURES IN THE CORPUS OF POTMARKS FROM THE SYRIAN MIDDLE EUPHRATES	WED, 9.50
DINA SHALEM	WHO WERE THE IMAGES ON THE CHALCOLITHIC OSSUARIES FROM ISRAEL?	MON, 17.10
ANDREA SQUITIERI	THE DIVERSE FUNCTIONS AND MEANINGS OF STONE VESSELS IN THE IRON AGE AND PERSIAN LEVANT	WED, 16.45
LEIGH STORK	IS A PIN MIGHTIER THAN A SWORD? UTILITARIAN ITEMS AS GRAVE GOODS DURING THE EB I AND II IN THE UPPER EUPHRATES VALLEY	MON, 14.30
MARIANO TORRES	SMALL EGYPTIAN SITULAE FROM IRON AGE CONTEXTS OF THE LEVANT AND THE MEDITERRANEAN	WED, 14.30
AKIRA TSUNEKI	THE MEANING OF NEOLITHIC STAMP SEALS	TUE, 10.15
LUIGI TURRI	IVORY INLAIS AT QATNA	WED, 12.30
JESSICA WHALEN	THE PERFORMANCE OF WINE DRINKING DURING THE ANATOLIAN EARLY BRONZE AGE II-III PERIOD	MON. 14.55

#### **FABRICE DE BACKER**

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#### **CARDIOPHYLAX IN URARTU: A CELTIBERIAN MODEL**

Les porteurs de cardiophylax anatoliens représentent une nouvelle classe de guerriers abondamment illustrés sur les monuments visuels proche-orientaux contemporains.

L'armure de ces soldats se distinguent totalement des équipements locaux par l'adoption d'une plaque de poitrine, le cardiophylax, et d'un casque à cimier, doté ou non de paragnathides.

Cette panoplie représente une révolution dans les traditions militaires locales contemporaines, ainsi que dans la composition des élites sociales conséquentes.

Une étude poussée de cette armure révèle le mode de combat pratiqué par ces guerriers, ce qui explique aussi les raisons pour lesquelles les Néo-Assyriens représentèrent longtemps et souvent ces guerriers à leur service.

Les arts mineurs constituent le canal principalement utilisé par les populations du 1er Millénaire avant notre ère au Proche-Orient pour représenter ces guerriers d'un type nouveau. Pour cette raison, et parce que cela ne fut pas encore entrepris auparavant, l'auteur s'attachera à réunir un vaste catalogue de ces supports, afin de pouvoir fournir un maximum d'informations issues d'une grande diversité de régions voisines et de cultures contemporaines.

En comparant les éléments connus sur les porteurs de cardiophylax orientaux avec les données disponibles sur leurs voisins occidentaux, comme les Étrusques, les Samnites et les Celtibères, l'auteur pense pouvoir définir l'identité des anatoliens avec plus de précisions.

#### **LAURA BATTINI**

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#### **ICONOGRAPHY EXCHANGES BETWEEN "POPULAR" AND "ELITE" 'MINOR ARTS'**

What it is now designed as 'minor art' includes different kinds of objects, some of them reserved for what one could call "elite class", others for "non-elite" people. Modern definitions are useful, holding into mind the difficulties to apply them to ancient world. This paper will deal with special cases of 'minor arts' (especially clay figurines, plaquettes, and seals) proving exchanges between "popular" and "elite" iconography in Syro-Mesopotamian region.

### **THE LADY OF THE HAMRIN.**

#### **OLD BABYLONIAN TERRACOTTA PLAQUES REPRESENTING A GODDESS FROM THE HAMRIN REGION**

Among the Old Babylonian terracotta plaques found during several excavations carried out in the region of the Jebel Hamrin in the late 70s, a group that seems to depict the same and unique image stands out: it is a standing naked female figure with clasped hands, which reproduces in general one of the most typical subjects of Mesopotamian terracottas between the end of the 3rd and the first half of the 2nd millennium BC. Notwithstanding, it differs from the common production, for the figure wears a high feathered polos completed by a pair of horns, which seems to argue for a divine or semi-divine status.

This paper focuses on this peculiar iconography, which finds no close comparison with other cult images of the same period in Mesopotamia. Indeed there are clear indications that this divine or semi-divine image must be related with a local cult of the Hamrin region.

### **PETR CHARVÁT**

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### **THE DEEP WELL OF THE PAST: EARLIEST SEAL IMPRESSIONS OF ARCHAIC UR (CA. 3000 BC)**

The SIS material published by Legrain in UE III includes also some finds from archaeological contexts different from these administrative-discard strata. A group of sealings from excavation of what appears to have been a Jemdet Nasr-to-ED I settlement layer merits a particular attention, as it is likely to represent the very earliest sealing materials retrieved from the site of Ur. An analysis of images and inscriptions of sealings found within this context will be presented to the 8th ICAANE participants.

### **P. M. MICHELE DAVIAU**

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### **CONSPICUOUS CONSUMPTION AND TRIBUTE: ASSYRIAN GLAZED BOTTLES AND FAIENCE VESSELS AT KHIRBAT AL-MUDAYNA ON WADI ATH-THAMAD**

Assyrian control of small kingdom in the southern Levant during the Iron Age opened up new trade routes and had an effect on the patterns of exchange. This exchange involved tribute as well as trade. The result for small polities such as Moab was the appearance in small numbers of high status goods with a foreign origin, as well as their imitations produced closer to home. Excavation at the Iron Age site of Khirbat al-Mudayna in northern Moab exposed a series of industrial buildings (B200–210), a compact domestic area (B300–312) near the North Gate (B100), and a sprawling domestic area at the south end of the mound (Complex 400–408). It is here in Building 408 that the greatest number of high status and exotic objects are located. Recognition of the elite character of this complex was first noted in 2004 with the discovery of a Middle Bronze Age 'Anra' scarab in what was otherwise a secure Iron Age II context. More recent finds consist of two glazed bottles and a collection of alabaster, calcite, steatite and faience cosmetic vessels. The focus of this study is on the Assyrian glazed bottles and their distribution in the Assyrian/Babylonian domain.

### **LAURA DIETRICH**

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### **SOCIAL DIMENSIONS OF NEOLITHIC GREENSTONE AXES FROM THE LEVANT**

Axes and adzes form an important category in the spectrum of finds known from Neolithic sites in the Levant. They were produced from flint and stone by knapping and polishing and played an important role in everyday tasks like woodworking, as several studies based on technological and experimental data show. While a wide range of raw materials including flint and several stones with so different properties as limestone and basalt were used to produce axes, a special role can be attributed to specimens made from greenstone, this term in reality summarizing several different sorts of stone.

Analysis of axes and adzes from the Pottery Neolithic settlement of Shir, Syria, proves a differentiated and complex spectrum of tools and raw materials. There are as well big and heavy specimens as small and light ones, the latter comprising nearly all green axes made from stone and silex. Big green axes are nearly absent from the archaeological record. Technical analysis shows that big and small axes were used for the same tasks, the difference being the social roles played by them. While green axes, indifferent of them being made from silex or stone, were kept for a long time

and used until they reached their final, small form, the rest of the axes was disposed in much earlier stage of their lifelines. This discovery leads to the question of the role colour played in the perception of tools and ultimately of the social dimensions of axes made from green stones. Is it possible that these items are markers of a distinct social group which controlled their distribution and used them to show their rank? This will be explored not only for the settlement of Shir, but for the Neolithic Levant in general.

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### **ON THE WOODEN CARVINGS FROM EBLA: SOME SUGGESTIONS FROM THE WORK IN PROGRESS**

The corpus of wooden carvings from Ebla, consisting of over 500 pieces representing human, animal and mythical subjects, is an extraordinary document of the artistic production of furnishings and valuable artefacts in the 3rd millennium Near East.

These works are currently being studied with a view to the complete publication of the documentation, found in a single room (L.2601) of Royal Palace G dating to the Classic Early Syrian period (2400-2300 BC).

The results and theories arising from the analysis of the wooden carvings during the first phase of this study were presented in preliminary form at the 57th RAI held in Rome in July 2011. This presentation focused on the remains of human subjects and on the type of artefacts to which these might have belonged, based partly on the evidence from the texts found in the adjacent room (L.2586) and written sources from other contemporary sites in Mesopotamia and Syria.

This paper will present the results of the ongoing research conducted using the same methodological framework on the carvings representing animals, concentrating on aspects shared with the human subjects, from the different size scales present within individual categories of subjects, to recurring themes and the fact that these carvings were probably ornamental features with considerable symbolic importance belonging to several types of artefacts.

The ongoing reconstruction of the corpus of wooden carvings suggests a need to reconsider the functional interpretation of the North Wing of Royal Palace G, of which the two rooms under consideration form an integral part.

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### **THE NEO-ASSYRIAN AND LATE BABYLONIAN GLYPHIC FROM DUR-KATLIMMU (SYRIA)**

During more than 30 years of excavation several large architectural complexes of the “Lower Town II” of the Assyrian provincial centre were excavated. About 200 sealed written documents, more than 1000 sealed objects - mostly container sealings - and 50 seals were unearthed. These objects originate from stratified deposits of a continuous occupational sequence. A number of seal impressions are dated by the eponym of the tablets or dockets on which they occur. Thus, they cover a time span from at least the late 9th to the 6th century BC.

This archaeological record allows investigating the functional use of seals according to the changing biography of the buildings. Particularly the so called “Red House” is offering exceptionally good pre-conditions for tracking administrative procedures.

A thorough iconographical and stylistic analysis in relation to the stratigraphical record confirms the conventional assumption that cylinder seals were applied more frequently during the 9th and 8th century while stamp seals are dominating the 7th century. However, it is suggested that the cylinder seal is continuously used in documentary contexts while the stamp seal prevails in the household administration. A social differentiation is suggested by both the provenance as well as the iconography; it seems that a small number of seals indicate a continuous personal use. Official seals of the time of Adad-nirari III occur in the early Neo-Assyrian context of pre-residence-level while the later contexts do not provide clear evidence of official seals.

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### **THE DRUM SHAPE FROM BEYCESULTAN LEVELS V AND IVC-A: A TYPICAL PRODUCTION OF AN UNUSUAL OBJECT**

This paper would like to analyze the production of an unusual pottery shape coming from the site of Beycesultan from the Burnt Palace Level V onwards. This is a very particular object made in a very simple ware, whose shape resembles that of a drum, with a closed base, two vertical low handles and protruding knobs at the top of its neck. This shape has been considered as a typical product of the region of Beycesultan and in fact it is only visible of this site, in the period

covered by Levels V and IVc-a. No other objects of that kind have been discovered elsewhere, except for a unique piece coming from the LB I Level at Gözlü Küle/Afrodissias. The aim of this paper is to give a possible explanation of its identity as incense burner, trying to consider its formal and material characteristics and to compare them with other similar pieces coming from the Anatolian region, the Cretan and the Palestinian cultures of Middle and Late Bronze Ages, also in order to better consider its presence in the Burnt Palace of Beycesultan Level V, both in chronological and functional sense.

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**DIACHRONIC CHANGE IN THE FIGURINES OF BRONZE AGE CYPRUS**

Figurines have long proven captivating objects for researchers and those of Cyprus are no exception. For the most part, however, they are taken out of context, admired, or derided, for their unusual forms. Few studies consider the function and significance of figurines within the cultural and historical contexts from which they originated. This paper presents some of the key findings of my doctoral project investigating the figurines in use in Cyprus from the Earliest Bronze Age (ca. 2300 BC) to its transition with the Iron Age (ca. 1050 BC). The thesis employed a comprehensive, systematic and, above all, contextual methodology to explore the ca. 2000 extant figurines representing inanimate objects as well as human and animal forms. This paper will outline some of the most interesting developments in the styles, practical functions and symbolic significances of figurines through the Bronze Age. In addition, it will explore some of the implications of these changing styles and practices for the socio-political nature of Bronze Age Cyprus. The paper aims to demonstrate that a detailed study of figurines can prove enlightening for our understanding not only of the objects themselves but also of the wider society in which they were made.

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**THE HARPAI IN THE ANCIENT NEAR EAST. A CURVED CEREMONIAL WEAPON BETWEEN 3RD AND 2ND MILLENNIUM B.C.: FROM TYPOLOGY TO USAGE**

A noteworthy class of ritual weapons is that of the harpai. These curved weapons are documented for a conspicuous chronological and geographical range, departing from the 3rd millennium B.C. in Mesopotamia, but mostly recorded in the Levant and in Egypt during the 2nd millennium B.C. The study deals with the discrepancy between material and iconographic attestations, the latter being much more recorded. Furthermore, through an analysis of archaeological contexts and iconographical representations, it is possible to infer some hypothesis about the evolution of the typology and the kind of usage for this particular class of ceremonial weapons.

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**COLOUR AND FIGURINES.  
ON THE POLYCHROME DECORATION OF THE TERRACOTTAS FROM SELEUCIA ON THE TIGRIS**

Around 10% of the terracotta figurines from Seleucia on the Tigris preserved in the Kelsey Museum of Archaeology of Ann Arbor still retain visible traces of their original painted surface. The pigments used for the polychrome decoration were analysed in 2011 within the Department of Conservation and Scientific Research at the British Museum. This paper aims to present the archaeological results of these analyses, which offer a new perspective in the observation of the terracottas from Seleucia and broaden our knowledge of their technique of fabrication and finishing. This study is part of a broader project that will lead to the publication of the whole body of the terracotta figurines found during the 20th century excavations of the site, including both the finds of the American expedition of the University of Michigan and the Italian archaeological mission of the Centro Scavi di Torino.



## **THE COROPLASTIC ART OF THE PERSIAN TELL MARDIKH/EBLA: SOME NOTES ON ICONOGRAPHY AND CONTEXT**

The last three seasons of excavation in Tell Mardikh/Ebla (2008-2010), focused on the Acropolis and its complex stratigraphy, provided an opportunity for new investigations into the Persian settlement's levels, that have largely been already brought to light in the early years of excavations in Ebla. Highly representative of the material culture of the period, the clay figurines (the so-called "Persian riders" and the plaques in the shape of women) constitute a great proportion of the findings that can be stratigraphically related to architectural remains, pits and multi-layered deposits.

Contrary to the old and often confusing attempt to interpret the function of this category of objects mainly in the light of the early coroplastic (the political, cultural and social changes occurred in the Near East after the Persian conquest have been usually considered a factor of iconography and shape more than function and significance), a study of this set of recent findings has been undertaken first according to stratigraphical and historical data of the settlement and other similar samples from the same region. Indeed, the analysis of the distribution over different architectural and topographical contexts (from the monumental and administrative building to the small architectural units) seems to help find new categories of interpretation according to which the clay figurines, even though minor art, are not necessarily the product of popular art or the minor version of major art, but the independent artistic expression of the new social, political and territorial arrangement of the region.

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## **MINOR ARTS AND SOCIETY IN THE CHALCOLITHIC OF THE SOUTHERN LEVANT**

This paper studies several anthropomorphic and zoomorphic figurines, crowns and scepters, and other prestige objects of the Chalcolithic (Ghassulian) of the southern Levant (ca. 4500-3700 BC). Although, a regional demarcation will be taken into account for the different cultural and sub-cultural entities (Beersheva, Coastal plain, Transjordan, Judean desert, Golan, etc.) we will try to give a comprehensive picture for the Chalcolithic of the southern Levant. The iconography of those objects will be compared with that of other objects of the same chrono-cultural horizon (ossuaries and pottery vessels, pillar statues, frescoes) in order to understand the social form of art of this horizon, and the place of "non-utilitarian" objects within the craft organization of the epoch. Furthermore, we will interpret the function and symbolism of these minor art objects in order to understand the southern Levantine Chalcolithic society.

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## **THE DECLINATION OF IMAGES AND OBJECTS: WHERE AND HOW TO SETTLE ANCIENT ARTEFACTS**

The paper focuses on terminology used to indicate different artistic experiences and artefacts: mainly, we are used to distinguish high art (produced by artists) from minor production (made by craftsmen). However, can we automatically infer that this category distinction also belongs to ancient people? Or, on the contrary, is it the result of our judgment in establishing boundaries, styles and functions of ancient artefacts?

Examples of analysis of objects and images will be accordingly proposed based on archaeological and historical context.

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## **IMAGES OF WOMEN AND CHILDREN IN THE HINTERLAND OF TYRE BETWEEN PERSIAN AND HELLENISTIC PERIODS. THE RURAL SHRINE OF KHARAYEB**

In the 5th century B.C. a rural shrine was founded in the site of Kharayeb, north-east of Tyre. It remains in use until the 1st century B.C. The sanctuary seems to be isolated, in a poor region in the hilly country. The building is composed of a courtyard flanked by rectangular chambers, surrounded by an external paved area, that has yielded different kinds of materials, and a favissa contained lots of different types of figurines.

The use of the shrine by peasants, strongly rooted in local tradition, is apparently in contrast with the adoption of images shaped in Greek style and with the contextual disappearance of local coroplastic tradition.

Through the study of the votive figurines from Kharayeb, limits and potential of iconographic comparativism will be analyzed in the reconstruction of rituals performed by families, in particular by women, in the rural hinterland of Tyre. Analyzing the phenomenon, the perspective adopted will focus on the active role of local people in the maintenance of Phoenician culture and in the reconceptualisation of images from the Greek world.

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## **A SOUTH ARABIAN MORTUARY MINIATURE CORPUS**

As part of the excavation of the 1st millennium BCE Awam cemetery in Marib, Yemen, the German Archaeological Institute in 1997-2001 unearthed over 3000 Sabaean pottery, stone and bronze miniatures. Even though the technique of miniaturisation is well known in Near Eastern archaeology there has been little focused discussion on understanding and interpreting it. This is perhaps understandable as miniatures are ambiguous and difficult objects to understand whose precise meanings often remain elusive. In the Awam cemetery, miniatures make up nearly 70 percent of all excavated small finds. The paper will explore the context of the repertoire, the forms copied by the Sabaeans into miniature format and possible functions of the mortuary miniatures. Miniatures are typically seen as symbolic objects but they may be more flexible in use than usually thought. Some of the Awam cemetery miniatures, for example, contain residues. Being small miniatures are able to be produced in large quantities making them available to a wide section of the populace. Being portable they are also flexible enough for use in a wide range of contexts.

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## **ICONOGRAPHY OF FIGURINES IN THE NEOLITHIC NEAR EAST**

This paper focuses on the iconography of anthropomorphic figurines found in the Levantine Neolithic which are commonly regarded as 'gods'. These 'gods' while recognisable as anthropomorphic, have extremely unusual traits. This paper asks why they look the way they do and proposes that their particularly strange iconography originates in the predictions of an evolutionary model of the origins of symbolism.

The Female Cosmetic Coalitions model, describing the origins of symbolic behaviour, predicts that the first supernatural symbols signaled by female hominid coalitions in their strategy of obtaining increased male economic investment, would be fused male/female, human/animal and red coloured. It further predicts that early gods will bear these characteristic traits.

The survival of these traits in god images of the Neolithic bears witness to the faithful transmission and extreme longevity of religious symbols.

The model thus provides a blue print for supporting the long-held assumption that these human images are gods, and for recognizing the supernatural cross-culturally in archaeological remains.

I present a brief description of the hypothesis and an analysis of the iconography of figurines from the Neolithic Levant and neighbouring areas. The human-like artifacts of my data reveal genital shapes used metaphorically to portray androgynous images as well as elements of therianthrope imagery and red pigment. The analysis shows that the material images of the Natufian and Neolithic in the Levant fit the evolutionary model closely.

This work contributes to the decipherment of the iconography of this assemblage of human images and has cross cultural implications. It proposes that archaeologists can benefit from cooperation with evolutionary anthropologists, who understand both the ontological nature and extreme conservatism of religious ideas, and their survival over huge time and space scales. The confirmation of figurines as deities contributes to theories of the origins of organized religion and social differentiation in the Levant.

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## **HIGH AND LOW CONCEPTS IN ANCIENT NEAR EASTERN ART THEORY AND METHODOLOGY**

High/Low inside style theories. Debate between formalist and contextualist views. Idea of historical evolution (from High to Low; from Low to High) as explained inside the bipolar structure of formalist theory. Development of confluent, interacting and overlapping High/Low according to new relationships between form and meaning: from the identification of regional styles or local workshops to the new issues of context and audience (polyvalent images in different sub-spheres of society).

**MINIATURE VOTIVE BOWLS AS TOWN PROTECTORS AT LEVIAH, AN EARLY BRONZE AGE FORTIFIED TOWN IN THE SOUTHERN LEVANT**

Ancient miniature objects are often interpreted as children toys, cultic objects or mortuary offerings. It is widely agreed that the exact contexts in which the objects were found are most important for their interpretation.

The Early Bronze Age fortified town of Leviah was destroyed in a violent conflagration that was best manifested in the eastern gate area. Along with massive burnt and collapse remains of the fortifications at this point, hundreds of sling-stones and some mace heads that reflect the ferocious battle that took place there, two dozens miniature bowls were found in clear connection with the fortified gate complex. While quite rare in Southern Levant settlement strata during the Early Bronze, the large number of such vessels at Leviah and above all their secure context, testify on their role as votive objects that may have had an original use and status that were transformed to another sphere and context, when brought to the gate complex of the town. The excavation at the gate complex at Leviah has yielded the notion that the bowls were believed to symbolically support to the town defense just before the town was captured. The current paper explores the technological (typology, petrography) aspects as well as the symbolic and ideological meaning of the miniature votive vessels and their relation to the defense of Leviah in the face of an approaching danger.

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**TEMPLES AND FIGURINES.****THE COROPLASTIC FROM AREA HH AT EBLA (SYRIA) DURING THE EB IVB PERIOD**

More than two hundreds clay figurines have been found in levels dating from Early Bronze IVB (ca. 2300-2000 BC) in Area HH at Tell Mardikh/Ebla. The presence of several architectural phases of superimposed sacred buildings in this area and the chrono-typology of the EB IVB pottery built up at the site allow to recognize the development of the Eblaic coroplastic after the destruction of the Early Syrian town at the end of the XXIV cent. BC. In comparison with the figurines of the previous period (EB IVA, ca. 2400-2300 BC), the EB IVB coroplastic is less standardized, with several clay fabrics and decorations, and with a wider range of types. The human and animals figurines and the chariot models show in most cases features of continuity with the previous EB IVA figurines, but types strongly influenced by the productions of the Euphrates region are quite common and some imports are also attested. New types can be singled out at the end of the period, testifying new trends which reached a full definition only at the beginning of the second millennium BC.

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**BRONZE AGE ANTHROPOMORPHIC FIGURINES FROM NORTHERN AND NORTHEASTERN IRAN: A REAPPRAISAL IN THE LIGHT OF NEW DISCOVERIES**

Anthropomorphic figurines from Northeastern Iran are known since the discovery of the so called “Treasure of Astarabad” in 1842. During the 1930s, 1960s and 1970s, additional material from the excavations at Tepe Hissar, Tureng Tepe and other sites provided some interesting (albeit fragmentary) insights into the imagery of the Bronze Age cultures of Northeastern Iran. In spite of the fact that the above mentioned sites were excavated some decades ago, it has to be stated that the results of these investigations are still not fully published. Furthermore, the find contexts of the figurines (a large number of them came from burials) have never been analyzed in detail. The same is true for typological and chronological questions. Until now, there is no scientific approach to clarify the purpose and signification of these objects.

During a research stay in the National Museum of Teheran in 2009, some hitherto unpublished anthropomorphic figurines from Tureng Tepe and Tepe Hissar came to light. In addition, the new Iranian and joint German-Iranian research projects at Gohar Tepe and other sites in Mazandaran provided further information for a renewed evaluation and interpretation. The main aim of this study is to provide an overview of the corpus of anthropomorphic Bronze Age figurines in the region under consideration (including unpublished and new material) and to suggest possible proposals for some of the above mentioned questions.

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## **OF POTS AND DOVES.**

### **SOME POSSIBLE EVIDENCE FOR POPULAR CULTS IN THE EBLA PALACES IN MB II**

The excavation of the Old Syrian levels of Tell Mardikh/Ebla led to the recovery of quite a large amount of very peculiar figurines, which showed clearly to belong to vases with applied decorations; later on, some complete pots, and several fragments were also found, apparently with an even distribution all over the Old Syrian town. A closer analysis revealed that the small jars with applied figurines mainly belonged to cult and palace areas, while they were nearly absent in private houses. The applied figurines show a clear connection with Ishtar's figure, but the poor quality of their manufacture leads to believe that these peculiar containers were not a high level production, but rather the expression of some popular rite or belief, probably belonging to low level, possibly female, sectors of the palace milieus.

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## **BONE FIGURATIVE OBJECTS FROM THE SHAKKANAKKU LEVELS OF TERQA: AN EXAMPLE OF MINOR ART**

The site of Terqa, modern Tell Ashara, is located on the right bank of the lower Middle Euphrates. Since 1986, it has been excavated by an international team directed by Olivier Rouault (University of Lyon). During the recent archaeological excavations different kinds of bone objects have been found in levels dating back to the so called "Shakkanakku period", at the end of the 3rd millennium BC. The most significant are a little anthropomorphic figurine and a pendent seal with the representation of the banquet scene, a theme which is generally connected with "official objects" with an administrative function. Even though the two kinds of artefacts share similar typologies and features with important finds from other contemporary sites, they reflect, at the same time, original iconographic and stylistic features, typical of local tradition.

Through the presentation and the study of the objects found in Terqa, the paper wants to analyse how particular themes and images, generally represented in official and international figurative documents, can be interpreted in forms of minor art, which are, at the same time, the artistic and figurative expression of the local authorities and elite.

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## **FROM MODELS TO CHARIOT**

Chariot terracotta models represent a peculiar category of the Ancient Near Eastern terracottas, from the beginning of the 3rd to the mid of the 2nd millennium B.C. They are divided at least into six types: two-wheeled platform body; two-wheeled box body; two-wheeled platform body with footboard; four-wheeled platform body; four-wheeled box body; four-wheeled covered vehicle. This study is focused on a main question: at what level are models representations of life-sized chariots? To answer this question and to better understand use and function of terracotta models, it is necessary to compare the different categories of documentation, that provide information on use and types of Mesopotamian chariots, with the six models types. The start point is represented by the study of written sources that provide the vocabulary related to different types of chariots, the terminology related to their parts (wheel, axle, draught pole) and the contexts in which they were used. Moreover, representations of chariots on glyptics and other engraved objects (stelae, plaquettes, standards) provide more information about use contexts and chariots' morphology. The study will be completed with an attempt to compare terracotta models with the rare surviving examples of life-sized chariots.

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## **THE FUNCTION AND SYMBOLISM OF MINIATURES IN THE EARLY BRONZE IV COMPLEX AT KHIRBAT ISKANDAR, JORDAN**

The EBA site of Khirbat Iskandar, Jordan is best known as one of the settlements to continue agricultural life in the post-urban period known as the Early Bronze IV (or Intermediate Bronze Age), ca. 2300-2000 BCE. In an unusual building complex in Area B at the NW corner of the mound, 10 miniature ceramic vessels, along with 150 whole, and many more partial, vessels were discovered in the central room, the bench room, and a pit. Also to be considered in

this study are two miniature objects found in other rooms, a miniature bronze spearhead and a zoological vessel. Miniatures found elsewhere (cemeteries) will also be included in the overall discussion of the topic. This study, as an exploration of meaning in material culture, will consider the artifacts from numerous perspectives, e.g., spatial/temporal context and association; faithfulness (or not) of type to iconic form; frequency of specific small-scale types of vessels vs. unique miniatures; spatial distance of miniatures to their iconic versions; volume; parallels. Presumably the specific choices made by the human agents, when combined with the specific archaeological context, will illuminate the purpose and, hopefully, the meaning and/or symbolism of the miniature objects, beyond whether they are cultic or utilitarian.

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## **THE DEVELOPMENT OF CLAY TECHNOLOGY IN THE CENTRAL ZAGROS: TOKENS AND FIGURINES IN THE EARLY NEOLITHIC**

The advent of clay usage for portable material culture in the Central Zagros is first evidenced by small, unfired tokens from the 10th millennium BC. Over the course of the next three millennia, the production of clay objects proliferated, as this low art permeated symbolic and functional realms. The malleability of clay, the ready availability of the resource and its relative durability opened up the possibility for utilisation by all, with little skill or training, to craft functional and symbolic objects with minimal investment. The earliest tokens of the PPNA, initially rolled balls of clay, were expanded to more varied and complex forms, as clay properties and potentials were explored. The apparent complexity of other symbolic representations also increased and enduring cultural dependencies were forged with clay, in figurines, pottery and architecture. This paper examines the role of clay usage through a series of case studies in the central Zagros and the potential future directions for the study of clay in the Neolithic. The relationship between clay and object are explored using a variety of techniques, including portable XRF, to assess material selection, refinement and manipulation. The concepts represented by these objects are contextualised in contemporary social and economic developments.

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## **ICONOGRAPHY OR ICONIC SIGNS? STYLIZED FIGURES IN THE CORPUS OF POTMARKS FROM THE SYRIAN MIDDLE EUPHRATES**

In the ancient Near East potter's marks are a well-known and widespread phenomenon and have generated a lengthy debate on their meaning and function. Generally defined as isolated signs impressed, painted, incised or excised on a ceramic vessel, they often seem to follow some kind of ordered grouping and, rather than haphazard features, are apparently elements of a more complex system of symbols and carriers of some kind of message for which it is hard sometime to find a feasible explanation.

The present paper deals mainly with the visual impact of such signs and their possible relation with contemporary minor art of the EBA period.

This main issue is based on the close analysis of an extremely rich corpus of potmarks (ca. 1300 items), uncovered by the German excavations (1992-94) at Tell el-Abd. The repertoire spans from simple linear motifs to more elaborate 'iconic' signs (vegetal, animal and even human representations), which show close parallels in other media. These and other similar finds from neighbouring sites of the Tabqa Dam district form one of the richest regional marking systems of the Near East, which was active throughout the 3rd millennium B.C. in the Middle Euphrates valley.

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## **WHO WERE THE IMAGES ON THE CHALCOLITHIC OSSUARIES FROM ISRAEL?**

The excavation of the Late Chalcolithic burial cave in Peqi'in, Upper Galilee, revealed an extraordinarily rich assemblage of a couple of hundred anthropomorphic ossuaries, burial jars and other finds. The sculpted and painted motifs on the ossuaries include facial features – a big nose, eyes with eyelashes, ears, mouth, hair(?) – as well as arms with fingers, female breasts and beards. Other motifs are knobs and various geometric designs, while horns and maces can be seen on ossuaries from other sites. These anthropomorphic ossuaries, provide an opportunity to attempt to answer the question: Who or what are the figures on the well known Chalcolithic ossuaries?

Secondary burial in ossuaries, jars and other vessels is unique to sites in Israel. Therefore the ossuaries found at Peqi'in and other sites, were in this study compared to other artifacts in the Ancient Near East. It is assumed that their cultural



origin, like many other cultural traditions, should be looked for mainly in northern Mesopotamia. It is also suggested that they origin in Neolithic traditions, some related to burials, but many to figurines or other cultic artifacts. Furthermore, when considering both the motifs on the finds and the finds themselves as an assemblage intentionally made and brought to the cave, it is conceivable that some of the motifs as well as some of the finds in the cave may be explained as attributes. Thus, the figures depicted on the ossuaries could represent gods. Their attributes can be found on the burial utensils but also as mace heads and churns. If this possibility is reasonable then these gods should be related to the Netherworld. The well known pair Dumuzi and Inanna is perhaps a plausible suggestion as the churns, mace heads, anthropomorphic features and other motifs may be related to them. Also, the public ritual ceremonies that were probably performed during the second and last burial of the dead family members, may have been related to Dumuzi's descent and ascent to and from the Netherworld.

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## **THE DIVERSE FUNCTIONS AND MEANINGS OF STONE VESSELS IN THE IRON AGE AND PERSIAN LEVANT**

Stone vessels are among the most frequent finds in the archaeological records. The multiplicity of forms they could be shaped in and the variety of materials made them able to meet various needs of past societies. They could hold an utilitarian value for the everyday life's purposes, such as grinding food. However, they were also suitable to meet needs linked to the symbolic aspects of societies. Stone vessels were also used in funerary or palatine contexts to underline the owner's social status, or in sacred contexts, to symbolize purity. Moreover, elaborated vases could travel long distances, acquiring more value as exotic items.

This paper will focus on stone vessels from the Iron Age and Persian period in the Levant, with particular regards to their distribution in funerary, sacred and urban contexts. This analysis of contexts, combined with morphological observations, aims at clarifying the practical functions of particular classes of vessels as well as the social value they hold in Near Eastern societies. The goal is to understand how the social-cultural transformations that affected the Near East in this period changed the way people used and perceived stone vessels and how the latter were adapted to meet people's changing needs.

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## **IS A PIN MIGHTIER THAN A SWORD?**

### **UTILITARIAN ITEMS AS GRAVE GOODS DURING THE EB I AND II IN THE UPPER EUPHRATES VALLEY**

One of the hallmarks of the Early Bronze Age in Upper Mesopotamia is the widespread change in mortuary practices, and we can look to the Upper Euphrates Valley for specific examples. Not only did mortuary architecture change, but also the quantity and type of grave goods deposited alongside of the interred. Grave goods were not restricted only to 'elite' burials but can be found across the socio-economic strata meaning that even the 'poorest' of burials may contain grave goods.

This paper will focus on the social use of metal utilitarian objects, specifically pins and tools, and their transformation from everyday items to objects associated with mortuary contexts. Pins and tools are especially useful for analysis as they are quite numerous and are found in multiple mortuary contexts- elite and plebian alike- throughout the Upper Euphrates Valley during the EB I and II periods. Overall, the increased conspicuous consumption of metal items in burials during this period is hypothesised to reflect the changing nature and representation of status and identity in the Upper Euphrates Valley, and the use of utilitarian items as grave goods may signify that even the most common of items could be used as part of a social display.

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## **SMALL EGYPTIAN SITULAE FROM IRON AGE CONTEXTS OF THE LEVANT AND THE MEDITERRANEAN**

In the Late Period of Ancient Egypt an enormous number of different types of bronze situlae attracts attention in the archaeological record. This picture differs from the previous periods when situlae are much less frequent. In addition, the special type of "small Egyptian bronze situlae" was used in cultic contexts of sanctuaries or as grave goods in the Iron Age communities of the Levant. Furthermore a small scale distribution of this special type can be observed across the Mediterranean and may be linked with a Phoenician influence. In the lecture the significance of these special objects in the Iron age communities of the Levant will be analyzed to see how and to what degree the Levantine societies adapted their original function and symbolism or how they connected the objects with their own, respectively new believes.



## **THE MEANING OF NEOLITHIC STAMP SEALS**

The functions of Neolithic stamp seals from West Asia are considered to include ornaments, amulets, coloring items, and so on. However, after the discovery of hundreds of clay sealings with stamp seal impressions from well-defined contexts in burnt buildings at Tell Sabi Abyad in the early 1990s, archaeologists became convinced that Neolithic stamp seals had been used as stationery in administrative systems for the use and control of goods. Therefore they can be considered economic tools that were used in Neolithic society.

However at Neolithic sites which produced stamp seals, most of them were found in fill and amongst debris and recovery from these contexts has made understanding of their function and meaning difficult. It is still unclear whether they were personal objects or communal items. It is also not clear who shared access to them; the elite or all community members and whether they were only used for economic purposes. Many questions remain about Neolithic stamp seals.

Excavation of Neolithic settlement at Tell el-Kerkh, northwest Syria, has yielded over one hundred and fifty stamp seals so far and it is one of the Neolithic sites in West Asia which has produced a large number of stamp seals. Though the majority of stamp seals were discovered in fill, dozens more were recovered from good contexts, including finds from under floor storerooms and as grave goods in a cemetery. Using these as examples I would like to discuss the basic characteristics of Neolithic stamp seals.

The existence of clay sealings at Tell el-Kerkh indicates that stamp seals were certainly used in the sealing and record keeping of goods and for economic purposes. The stamp seals discovered from under floor storerooms could be attributed to such contexts. They must have been of practical value in economic activities in ordinary life.

Until the 2010 season, fifteen stamp seals were discovered in eleven burials in the Neolithic communal cemetery. The seals were usually found near the individual's hip bone or in one hand. One seal was found near the neck along with four beads and another seal was found in a pot which was dedicated to one of the cremation pits. Most of the seal owners were adults of both sexes however other owners included two juveniles. These contexts indicate that Neolithic stamp seals were personal property and that most community members possessed their own stamp seals. As mentioned above, the stamp seals had economic value but they were sometimes buried with the dead. We can suppose that people buried the dead with his / her valuable objects for praying for his / her peace in the afterlife. In this case stamp seals seemed to have been used for personal identification and as amulets to avert evil.

Based on the archaeological evidence at Tell el-Kerkh, Neolithic stamp seals were used by all members of society not just the elite. They were used not only for economic purposes but also for social and spiritual activities.

## **LUIGI TURRI**

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## **IVORY INLAYS AT QATNA**

Ivory was a material held in great consideration in the Ancient Near East because of its preciousness and the high prestige it conferred to its owner and was used to create both elite art objects and more ordinary ones, as cosmetic boxes, mirror handles etc. Thousands of ivory inlays were discovered together with antler inlays in the Lower City Palace of Qatna, one of the three palaces rising in the city during the Late Bronze Age.

In this building, which had both public and private functions and was residence and working place of some important personality of Qatna, the inlays were widely used to decorate the walls of the palace and/or pieces of valuable furniture. The ivory and antler inlays are mainly geometric in shape and could be used to reproduce motives that are widely common in the Mediterranean region during the so called "International Age". This paper analyzes the materials recovered and tries to establish a connection between the function of the different areas of the palace and the presence or absence in them of durable animal material inlays.

## **JESSICA WHALEN**

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## **THE PERFORMANCE OF WINE DRINKING DURING THE ANATOLIAN EARLY BRONZE AGE II-III PERIOD**

New vessel forms of the Anatolian Early Bronze Age II-III periods (2700-2100 BC) have long been interpreted as for drinking wine (Blegen 1963, 53). Depata and golden beaked pitchers, from the west at Troy to the east at Alacahöyük, comprise the most well-known forms. This list is not, however, exhaustive of new shapes that appear. Small single-handed cups and shallow bowls of precious metal recur within graves and hoards of the east-central plateau. As with depata and pitchers, ceramic imitations, in similar dimensions to their metal prototypes, persist in comparable contexts at sites across the Anatolian plateau.

Uniting these forms is not only drinking, but performance. Single-handed cups and shallow bowls, balanced upon the smallest finger or perched upon fingertips, were designed not for comfort, but for careful manoeuvring. Their single-serving capacity highlights the temporally fleeting context in which they found use. Similar dimensions and design across metal and ceramic suggest these vessels were united in function despite differences in wealth. This function involved the summation of drinking practices, and wine, by specific gestures. These actions are fundamentally related to interpretation of the vessels themselves and provide a social context wherein their function, and thus wine drinking, can be understood.

## 4. ARCHAEOLOGY OF FIRE

**SUPERVISOR: TOMASZ WALISZEWSKI**

<b>AUTHOR(S)</b>	<b>TITLE</b>	<b>DAY, HOUR</b>
JOHNNY SAMUELE BALDI	CERAMIC PRODUCTION AND MANAGEMENT OF THE FIRE BETWEEN LATE UBAID AND LC1. THE POTTER'S KILNS OF TELL FERES AL-SHARQI	THU, 17.10
LINDY CREWE	BEER AND FIRE ON BRONZE AGE CYPRUS	WED, 16.45
SILVIA FESTUCCIA	METALLURGICAL ACTIVITIES AND MOULDS: THE CASE OF EBLA	THU, 14.55
KRISTINA A. FRANKE	THE METALLURGICAL INVENTORY FROM TELL CHUERA (SYRIA) – A DIRECT COMPARISON BETWEEN QUANTITATIVE PXRF AND QUALITATIVE WDS DATA	THU, 15.20
NICOLAS GAILHARD	REFLECTIONS ON EXPERIMENTATION AND INNOVATION PROCESS: ORIGIN OF IRON IN ANATOLIA	THU, 15.45
ELISA GIROTTO	THE PURIFYING VIOLENCE OF FIRE: THE SYMBOLISM OF FIRE IN WAR IN ANCIENT MESOPOTAMIA	THU, 11.40
KATHRYN GROSSMAN	FIRE INSTALLATIONS IN A LATE NINEVITE 5 COMPLEX AT HAMOUKAR, SYRIA	THU, 10.15
ALICE HUNT	THE MASTERY OF FIRE: CERAMIC KILNS AND PYROTECHNOLOGY IN THE NEO-ASSYRIAN PERIOD	THU, 18.00
MARCO IAMONI	METALLURGY AT QATNA: THE PRODUCTION OF BRONZE AND SILVER IN WESTERN SYRIA	WED, 18.00
CAROLIN JAUSS	PLAYING WITH FIRE: COOKING TECHNIQUES IN THE URUK PERIOD	WED, 17.35
FRANCESCO LEPRAI	THE COLLAPSED WOOD ACCUMULATION IN THE WELL-ROOM OF THE ROYAL PALACE OF QATNA. A 3D RECONSTRUCTION	FRI, 9.50
PAOLO MATTHIAE	FIRE AND ARTS. SOME REFLECTIONS ABOUT THE CONSIDERATION OF ART IN ASSYRIA	THU, 12.05
DIRK PAUL MIELKE	BURNING DOWN THE ENEMY – EVIDENCE FOR DESTRUCTIVE WAR STRATEGIES FROM HITTITE ANATOLIA	FRI, 11.15
MARIE LE MIÈRE, SHOGO KUME	EARLY MASTERY OF FIRE: NEAR EASTERN NEOLITHIC LIME, GYPSUM PLASTER AND POTTERY REVISITED	FRI, 9.00
AGNIESZKA PIEŃKOWSKA	THE FIRE AND LIGHT. MESOPOTAMIAN LAMPS FROM POLISH ARCHAEOLOGICAL EXCAVATIONS ON TELL ARBID	THU, 9.00
SARA PIZZIMENTI	A LIGHT IN THE DARKNESS. SOME HINTS ON FIRE PERCEPTION AND RITUALITY AS REPRESENTED IN 2ND MILLENNIUM BC MESOPOTAMIAN GLYPHIC	THU, 11.15
ANDREA POLCARO	FIRE AND DEATH: INCINERATION IN THE LEVANTINE MIDDLE BRONZE AGE CEMETERIES AS MARK OF CULTURAL IDENTITIES, OR AS TECHNICAL INSTRUMENT OF PURIFICATION?	FRI, 9.25
MODWENE POULMARC'H, LAURE PECQUEUR	A STUDY OF THE EFFECTS OF FIRE ON A COLLECTIVE BURIAL IN THE EARLY BRONZE AGE KURGAN OF MENTESH TEPE IN AZERBAIJAN	THU, 16.45
STÉPHANE ROTTIER, ALINE TENU	FIRE IN FUNERAL CONTEXTS: NEW DATA FROM TELL AL-NASRIYAH (SYRIA)	THU, 14.30
EBERHARD SAUER, HAMID OMRANI REKAVANDI	FIRE-HARDENED AND SAFE FROM THE ELEMENTS: THE ROLE OF FIRE IN THE CREATION OF THE ANCIENT NEAR EAST'S MOST ELABORATE FRONTIER WALL	FRI, 10.15
ANNA SMOGORZEWSKA	COOKING, HEATING AND PROCESSING. FIRE INSTALLATIONS IN HOUSEHOLD ACTIVITIES AT TELL ARBID (NE SYRIA)	THU, 9.25
GISELLA SPECIA, STEFANIA PARADISO	THE CULTURAL USE OF FIRE: PRACTICE RELIGIOUS AND UTILITARIAN USE	THU, 12.30

PAULETTE TATE, MICHAEL FISHER	FIRE IN THE BREWHOUSE: TOWARD AN ARCHAEOLOGY OF BEER AND BREWING IN MESOPOTAMIA	WED, 17.10
MONICA TONUSSI	PIERCED ANDIRONS AND VESSEL SUPPORTS FOR FIREPLACES FROM THE CAUCASUS TO THE NEAR EAST IN THE 4TH-3RD MILLENNIUM BC: A WAY TO OPTIMIZE THE HEAT OF FIRE?	THU, 9.50
AGNESE VACCA, LUCA PEYRONEL	FROM CLAY TO POTS: POTTERY PRODUCTION AND WORKPLACES IN SYRIA DURING THE EB III-IV	THU, 17.35

#### **JOHNNY SAMUELE BALDI**

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### **CERAMIC PRODUCTION AND MANAGEMENT OF THE FIRE BETWEEN LATE UBAID AND LC1. THE POTTER'S KILNS OF TELL FERES AL-SHARQI**

The archaeological record of Tell Feres al-Sharqi (a small chalcolithic village in the Hassekeh Province, north-eastern Syria) offers a clear evidence of intensive local ceramic production in level 10 (late Ubaid) and 8 (LC1 period). Various potter's kilns have been identified: a partially isolated and domed fireplace, and several updraft structures. Their comparison indicates the coexistence of different modalities of firing even amongst the updraft kilns, which display some architectural or functional divergences. This paper focuses on a discussion of the different modes of management of the fire in a productive context between late Ubaid and post-Ubaid times. All the characteristics (physical, architectural, thermal, dimensional) of the kilns are taken in account in order to consider their effect on the ceramics, to evaluate the complexity of the technical system (between environmental constraints and cultural arbitrary choices), and, eventually, to point out some evolutionary tendencies and technical changes in post-Ubaid times.

#### **LINDY CREWE**

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### **BEER AND FIRE ON BRONZE AGE CYPRUS**

This paper presents a newly excavated installation and surrounding architecture at the Bronze Age settlement of Kissonerga-Skalia in southwest Cyprus. Whilst it has long been assumed that beer and wine consumption was an important feature of Bronze Age social transactions, previous evidence has been largely in the form of elaborated pottery vessels deposited in tombs and a few ambiguous built features in settlements. Two phases of fire-related activities at Kissonerga-Skalia, interpreted as the malting of grains for making beer, appear to indicate changes through time in the organisation of production. The first phase appears to be an open-air ad hoc facility whilst the later phase indicates formalisation and restriction of access to the space, with the construction of a mud plaster domed oven adjacent to a monumental structure with a plastered floor. The dating of this facility to the transition to the Late Bronze Age (ca. 1650 BC) fits well with the phenomenon seen elsewhere on Cyprus of the first non-domestic structures of the Bronze Age and constitutes the first evidence from this part of the island.

#### **SILVIA FESTUCCIA**

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### **METALLURGICAL ACTIVITIES AND MOULDS: THE CASE OF EBLA**

Aim of the research is the archaeological analysis of a corpus of moulds found at Ebla (Syria), throughout several archaeological campaigns, dating to a chronological period spreading from Middle Bronze I to Middle Bronze II. Particular attention will be given to the typological classification of this kind of lithic item and to the contextualization of the moulds inside the urban landscape of Ebla. When possible, a distributive analysis within the different archaeological areas will be carried out, together with the typological distribution.

This category of finds frequently neglected in comparison to the contemporary metal objects both for its frequent poor state of preservation and for the stratigraphic contexts of the retrieval which is often secondary, altered and difficult to interpret. On the other hand, moulds can provide important data on metal objects, that have never been found and whose typology is known only through its matrix; this is the case of some finds possibly made of precious metals, never retrieved because the raw material was reused. Moulds are furthermore important indicators of the archaeology of fire as metallurgical activity involves "fire" in all its aspects, from the technological ones to those linked to the objects' typologies and use.

## **THE METALLURGICAL INVENTORY FROM TELL CHUERA (SYRIA) - A DIRECT COMPARISON BETWEEN QUANTITATIVE PXRF AND QUALITATIVE WDS DATA**

During the last 30 years a major interest in the archaeology of the Jezirah developed. Among other topics, different aspects of urbanism were examined, increasing our understanding of social development in Upper Mesopotamia during the EBA. However, studies particularly devoted to metallurgical issues are yet rare and still little is known about the metal craft within this region, the different kinds of specific metals in use, their distribution within the archaeological context, certain metallurgical practices undertaken, or the raw material sources supporting metallurgy within the Jezirah. Tell Chuera, as a major site and a long term excavation, offers a wide range of metallurgical material, not only in terms of artefacts but also in terms of different materials. More than one hundred metal artefacts have been studied via on-site pXRF analysis. These analyses help to identify the materials used as well as their specific usage and function within the 3rd millennium society living and ruling at Tell Chuera. A comparison to a limited number of lab-based qualitative WDS analyses of the same sample set allows to point out the advantages and the limitations of both methods and, more importantly, to examine in which ways their support each other in answering archaeological questions. This lecture aims not only to introduce the metallurgical inventory from Tell Chuera, but also, especially in times of a decrease in sponsorship for archaeological work, to introduce the possibilities of different analytical methods for the best choice to understand ancient metallurgy.

### **NICOLAS GAILHARD**

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## **REFLECTIONS ON EXPERIMENTATION AND INNOVATIONS PROCESS: ORIGIN OF IRON IN ANATOLIA**

Technological innovation has an important place when it is to study the beginnings of iron metallurgy. The iron ore is often associated with copper ores in the deposits and the first alloys. It was used for the first time in Anatolia during the 3rd millennium. The new plastic possibilities of iron are not passed unnoticed and the first objects discovered in excavations are decorative or ceremonial. Yet it is around the beginning of the Middle Iron Age that the production becomes important and then replaces the bronze for the manufacture of tools and weapons. This long delay is due to a work more difficult for transform iron compared to make bronze (but exploitation of iron ore is more economic). Indeed, iron is forged while the bronze is cast. This transition period between the first iron objects to that of mass production was therefore an intense testing phase that we will try to trace in the archaeological evidence related to the phenomenon.

We will also explore the historical development of the iron characterized by the emergence of new kingdoms, requiring more and more metal and therefore pushing for innovation and transforming methods of production.

More specifically we will see how the chalcopyrite (copper supplied) rich in iron could be a key element in the development of iron metallurgy. How the technical mastery of the craftsmen working the copper had to be modified to include iron and exploited at its maximum. What could be the transition between poor iron and steel...? For this, different sources will be discussed:

- The archaeological remains show the experimentations and changes taking place in Anatolia during the 3rd and 2nd millennium on the production of iron.
- Archaeological experiments on iron metallurgy, where we understood that technology dealing with such masses of material cannot be individual, but on the contrary the fact of a team whose body language and communication are synchronized by the rhythm of the structure during operation.
- And the contribution of metallographic laboratory studies that led in some cases the detection of experiments in innovation processes like the development of iron metallurgy.

### **ELISA GIROTTO**

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## **THE PURIFYING VIOLENCE OF FIRE: THE SYMBOLISM OF FIRE IN WAR IN ANCIENT MESOPOTAMIA**

The lecture will investigate the symbolism of fire in war, analyzing textual and figurative sources from Mesopotamia dating back from the 4th until the 1st millennium BC. In written sources the destructive power of the gods, kings and armies against their enemies in battle is compared to fire. Furthermore according to mythological and historical conflicts' accounts the fire is employed by them during their struggle. In artworks flames are sometimes represented in battle scenes. The fire will be discussed as an energy element aimed not only at destruction, but also at transformation, purification and regeneration. The fire is at the same time a symbol and a tool of an ambivalent violence, an ideal and real manifestation of a terrible violence destined to restore the order and the peace.



**KATHRYN GROSSMAN**

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## **FIRE INSTALLATIONS IN A LATE NINEVITE 5 COMPLEX AT HAMOUKAR, SYRIA**

In 2010, excavations in the lower town at Hamoukar, in northeastern Syria, revealed an architectural complex that included several large fire installations dating to the late Ninevite 5 period (ca. 2600-2400 BC). The complex was made up of a mixture of large, solidly built walls and less substantial ones, and it was built around an open-air courtyard. Three semicircular fire installations were found in rooms immediately surrounding this courtyard. This paper has two aims, 1) to identify the goods produced in these fire installations and 2) to discuss what these installations can tell us about the administration and organization of food production at Hamoukar during the late Ninevite 5 period. The paper combines a study of the installations themselves (e.g., form, size, and construction) with an analysis of the artifactual assemblage from the building complex (ceramics, faunal remains, glyptic, and small finds).

**ALICE HUNT**

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## **THE MASTERY OF FIRE: CERAMIC KILNS AND PYROTECHNOLOGY IN THE NEO-ASSYRIAN PERIOD**

The glazed bricks of the Ishtar Gate from Babylon and the intricate relief and inlay decoration on the metal vessels from the Queen's Tomb at Nimrud attest the accomplishment of Near Eastern pyrotechnicians. Archaeological enquiry has, for the most part, focused on the artefact, the product of pyrotechnology, rather than the mechanics of producing, handling, and controlling fire itself. This paper explores the construction, thermal efficiency, and fuel consumption of Neo-Assyrian ceramic kilns. Analyses include calculating maximum heat capacity and potential heat loss and absorption for the kiln, determining maximum firing temperature and soak time for the ceramic load, calculating higher heating values for potential fuel sources, and, where possible, identifying phytoliths in the fuel ash from excavated kilns. Neo-Assyrian kilns from Aššur and Nineveh and post-Assyrian kilns from Nimrud and Dūr-Katlimmu are evaluated.

**MARCO IAMONI**

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## **METALLURGY AT QATNA: THE PRODUCTION OF BRONZE AND SILVER IN WESTERN SYRIA**

Metal artefacts are indeed among the most important (and perhaps attractive) finds that can be recovered in archaeological excavations. Their belonging to different spheres of use (from everyday objects to luxury) as well as the metals/alloys they are composed of, makes them an invaluable source of information for trades, contacts, technology and many other issues. It becomes thus clear that the study of their production plays a fundamental role to explore the information preserved in them, in particular with regard to the complete process of smelting of mineral ores and casting of metal artefacts. Unfortunately, this has been particularly difficult to investigate, since well-preserved metallurgical workshops with furnaces still in situ and clear traces of metallurgical activities are very rare to find. However, recent excavations at Qatna offer information concerning this problem. In the area of the so-called Eastern Palace a sector of the palace completely devoted to the production of metal artefacts has been uncovered: two furnaces for smelting copper (and possibly silver) ore have been excavated together with a number of minor furnaces and other installations, all of them connected to metallurgical activity. This paper aims at presenting this evidence showing in detail the features of each excavated metallurgical installation and discussing them in relation to our knowledge of metallurgical production in the Northern Levant.

**CAROLIN JAUSS**

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## **PLAYING WITH FIRE: COOKING TECHNIQUES IN THE URUK PERIOD**

That people ate and drank cooked food is generally assumed. But how was it cooked and who cooked it? This paper will offer a glimpse into the Uruk kitchen. A number of different vessel types were used for cooking on fire in Protoliterate Southwest Iran and Uruk Southern Mesopotamia. An analysis of vessel form characteristics as well as soot traces on exterior vessel walls and carbon deposits on interior walls allows us to understand how these vessels were handled in connection with fire and whether contents were heated, boiled or simmered. Thereby specific cooking techniques can be reconstructed. In conjunction with data on fireplaces and ovens this provides an insight into everyday cooking practice; it lets us infer how many persons were involved in cooking activities, and which gestures they used to cook

on fire.

This paper is the result of an analysis of pottery from several sites in Southern Mesopotamia and Southwest Iran combined with an experimental study of performance characteristics and use wear of vessels used in connection with fire.

**FRANCESCO LEPRAI**

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### **THE COLLAPSED WOOD ACCUMULATION IN THE WELL-ROOM OF THE ROYAL PALACE OF QATNA. A 3D RECONSTRUCTION**

The paper focuses on the outcomes of a project jointly carried out by the IANES (Prof. Pfälzner, Universität Tübingen) and the i3mainz (Prof. Boochs, Fachhochschule Mainz) aiming to produce a three-dimensional documentation of the archaeological context related to the well-room of the Royal Palace of Qatna. Among the debris layers connected with the great fire that caused the final destruction of the palace at the end of the Late Bronze Age, the excavation from 2007-2009 brought to light an immense quantity of waterlogged wood, mainly preserved from the damages of the flames by the wetness of the silt in which it fell after the collapse. The paper presents how the data, obtained through the combination of laser scanning and multi-stereo software, are processed in order to get a virtual model of the whole accumulation of the collapsed timber. At the end, the potential of this method for the understanding of the dynamics of architectural collapses, such as in case of a fire, will be suggested.

**PAOLO MATTHIAE**

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### **FIRE AND ARTS. SOME REFLECTIONS ABOUT THE CONSIDERATION OF ART IN ASSYRIA**

The royal inscriptions of Assyria, of the Middle and Neo-Assyrian periods, though quite short as regards descriptions of art and architecture, include some element, which allow to propose some thought about the relation among who commanded them, production, and fruition of the artifacts in Assyria. Some element allows to understand the hierarchy of arts in the Assyrian world. Unlike what happened in the Western world, and is largely documented in classical Greek and Latin sources and until the Renaissance and the Neo-Classical period, this hierarchy is founded on the technical difficulty of the production, and on the mutation of the original material from which artifacts were made. This is why arts in which fire had a basic role, in order to change the physical reality of materials had a pre-eminent role, which, notwithstanding their extraordinary accomplishments in the palaces and temples of Assyria, neither sculpture nor painting could reach. To fire one can also connect the “esthetic” category of “splendor”, which in a different way than in the archaic Greek world, seems to have been a basic category for the consideration and fruition of artifacts.

**DIRK PAUL MIELKE**

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### **BURNING DOWN THE ENEMY – EVIDENCE FOR DESTRUCTIVE WAR STRATEGIES FROM HITTITE ANATOLIA**

The use of fire to burn down systematically conquered settlements used to be and still is a frequently used strategy of war. First of all it was applied to destroy the enemy's infrastructure but it also served as a kind of symbolic act. The archaeological verification of these acts normally is limited due to the nature of the findings. Although there are numerous settlements in the ancient Near East with layers showing destruction by fire, the link with war activities or even with historically mentioned acts of setting a settlement on fire is often more than speculative. Only rarely findings can be directly connected with war activities. In the lecture, some documents from Hittite Anatolian contexts that show the war strategy of burning down a settlement will be presented. These documents include both, written sources as well as archaeological findings which will be discussed critically in order to demonstrate the socio-political relevance of human destruction strategies in past cultures and also the bad side of use of fire.

**MARIE LE MIÈRE (1), SHOGO KUME (2)**

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## **EARLY MASTERY OF FIRE: NEAR EASTERN NEOLITHIC LIME, GYPSUM PLASTER AND POTTERY REVISITED**

The use of fire to produce useful materials began with the heat treatment of lithics, widely exploited by Palaeolithic knappers to improve the flaking quality of siliceous rocks. Later heat treatment was used to change the appearance of various materials such as bone and stones (agate and cornelian, for example). However, the firing process used to produce lime, gypsum plaster and pottery is essentially different, as the original raw materials are transformed into completely new materials with different properties. These three inventions did not occur at the same moment, but their similarities, both in the firing processes, in their plastic qualities and in the production of vessels, suggest that developments in their fabrication and use were associated during the Neolithic. Research carried out in the last ten years has provided new data which enable reconsideration of these materials in terms of the mastery of fire, technical complexity and specificity of use.

**AGNIESZKA PIENKOWSKA**

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## **THE FIRE AND LIGHT. MESOPOTAMIAN LAMPS FROM POLISH ARCHAEOLOGICAL EXCAVATIONS ON TELL ARBID**

Contribution deals with different sort of ancient lamps (from the 3rd to the mid of the 2nd millennium BC) discovered on Tell Arbid in north-eastern Syria. Relative rarity of this kind of findings on Mesopotamian sites as well from 3rd as from 2nd millennium layers is striking when compared with the abundance of lamps coming from the Hellenistic period. It is problem not only of changes in means used to light ancient houses before and after Alexander as from Syro-Palestinian region we know numerous examples of ceramic lamps which were there in use already since the 4th millennium BC.

**SARA PIZZIMENTI**

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## **A LIGHT IN THE DARKNESS. SOME HINTS ON FIRE PERCEPTION AND RITUALITY AS REPRESENTED IN 2ND MILLENNIUM BC MESOPOTAMIAN GLYPHTIC**

A source of light and heat, a creative and destructive force able to transform the elements, fire played a role also in Mesopotamian religion, finding a correspondence with two different deities: Nusku and Girra and being used in different rituals and activities, as the incantation ritual of the Maqlu or the akitu festival. Despite of its role, evident since the Old Akkadian period and especially in the Kassite culture where the importance of the god Nusku was comparable to Nergal, Ninurta and Ishtar, fire is rarely represented in ancient Mesopotamian art. The aim of this paper is to analyze fire representation in Kassite and Middle Assyrian glyptic, in order to understand the role of fire in ritual and religious feeling of 2nd millennium Mesopotamia.

**ANDREA POLCARO**

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## **FIRE AND DEATH: INCINERATION IN THE LEVANTINE MIDDLE BRONZE AGE CEMETERIES AS MARK OF CULTURAL IDENTITIES, OR AS TECHNICAL INSTRUMENT OF PURIFICATION?**

Since the Early Bronze Age in Southern Levant cemeteries (such as in Tell es-Sultan/Jericho), and in the Northern Levant ones (e.g., in Gedikli in Southern Turkey), incineration and inhumation are both present in burial costumes. The attestation of the use of fire for decomposing bodies in secondary burials is often a second choice respect the typical primary inhumation and the exhumation of the body after the completely decomposition of the flesh. On the other hand, incineration is present also for primary burial in different areas of the Levant during the Middle Bronze Age. This paper points to clarify the reason of the choice of fire as symbolical and/or practical instrument for the trip of the soul and the body through the underworld. In particular we will try to understand if the incineration could denote a cultural identity instead of a useful way to decompose bodies preventing disease or infections.

## **A STUDY OF THE EFFECTS OF FIRE ON A COLLECTIVE BURIAL IN THE EARLY BRONZE AGE KURGAN OF MENTESH TEPE IN AZERBAIJAN**

Recent excavations at Early Bronze Age kurgan of Mentesh Tepe in Azerbaijan brought to light a collective burial of 40 individuals and permitted to recognize intentional fire setting at the time of its abandonment. The aim of this paper is to present the methodology and results of the excavation and analysis of the human remains in the burial. This study is the first of its kind in Azerbaijan. The kurgan is located on a tepe, the upper part of which was destroyed by cultivation activities in the early 70s. The structure, which was covered with pebbles, contains a dromos (corridor) and a chamber, both dug into earlier Chalcolithic levels. The dromos, which is 1 m wide, was situated east of the chamber and lined on both sides with rows of pebbles. The chamber is 5.1x4.3 m. The presence of a wooden construction is indicated by the discovery of post imprints on the walls of the chamber. The method of excavation employed permitted recognition of two main layers in the burial. The upper layer is rubefied with white (calcined) bones. The soil and bones in the lower one are dark brown in color. At the back of the chamber, lightly burnt and non-burnt bones also occur. The presentation of the anthropological study focuses on the effects of fire on the human bones by analyzing their color, deformation, and cracking. An attempt is also made to determine the stage of decomposition of the body during the fire; to localize fireplaces; to evaluate burning temperatures; and to recognize deliberate bone displacement. The application of taphonomic criteria as defined in "Anthropologie de terrain" permits to identify burial practices unsuspected, up to the present time, in the geographical area under study and sets the basis for future anthropological research in Azerbaijan during the Early Bronze Age.

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## **FIRE IN FUNERAL CONTEXTS: NEW DATA FROM TELL AL-NASRIYAH (SYRIA)**

Fire has been rarely used in funeral contexts except in western Syria during Iron Age. In 2008 a new cremation cemetery has been found, on the right bank of the Orontes River, at Tell al-Nasriyah by the Mission syro-française de l'Oronte, directed by D. Parayre and M. al-Maqdissi. The cemetery (Area A), located in the lower city has yielded until now about 50 cinerary urns; it also provided a common fitting a "dalle à cupules". First radiocarbon dates give a time range between the 15th and the 11th century for the cremation graves. They contained human bones usually well burnt, sometimes faunal remains also cremated, and very frequently shapeless residues of melted vitreous material. We also found an ashy layer with an important quantity of burnt bones more recent (11th-9th cent.) and less cremated than those found in the tombs themselves. These new data allow a relevant analysis of the role of fire in the cremation process and of its evolution.

**EBERHARD SAUER (1), HAMID OMRANI REKAVANDI (2)**

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## **FIRE-HARDENED AND SAFE FROM THE ELEMENTS: THE ROLE OF FIRE IN THE CREATION OF THE ANCIENT NEAR EAST'S MOST ELABORATE FRONTIER WALL**

Most structures in the ancient Near East employ sun-dried mud bricks. Firing them required substantial additional efforts, notably gathering fuel and constructing kilns with solid cross-bars capable of supporting stacks of heavy bricks. Production of each load could take two or three weeks. Unless there were good practical reasons for going this extra mile, such efforts were normally avoided.

One of the largest structures in the region to be built of fired bricks is the Gorgan Wall in northern Iran. Dating to the 5th or early 6th century AD, it separated the fertile Gorgan Plain from the steppes of Eurasia. Surveys and excavations carried out by the Iranian Cultural Heritage Handcraft and Tourism Organisation and the Universities of Edinburgh and Durham have shown that there was one kiln every 35-85 m, and kilns at similar distances were found along the contemporary Tammisheh Wall. With the two walls reaching a combined length of over 200km, there must have been thousands of kilns. The paper will explore the colossal efforts involved in producing probably well in excess of 100,000,000 large bricks and why fire was essential in creating the ancient Near East's most monumental defensive barrier and in making it weatherproof and durable.

## **COOKING, HEATING AND PROCESSING. FIRE INSTALLATIONS IN HOUSEHOLD ACTIVITIES AT TELL ARBID (NE SYRIA)**

At Tell Arbid, a site in northeastern Syria, in the Upper Khabur basin, numerous and varied fire installations along with other archaeological sources provide useful data concerning everyday lives of Tell Arbid's inhabitants and their household activities. Ovens, hearths and heating pits, used for cooking, baking, roasting or heating, are the basic types of fire installations attested throughout several periods of settlement at the site. Andirons – clay hearth stands (horseshoe-shaped and curved props) – useful for supporting vessels over the fire are also closely connected with fire installations. Most of the fire installations come from a Late Ninevite 5 dwelling quarter (Area D), although the examples dated back to Akkadian, Khabur ware and Mittani periods are also attested. This analysis of Tell Arbid's fire installations has been based upon various archaeological sources. Factors considered in their description and interpretation were: the installations' type, size and details of construction. For the interpretation of fire installations their localization was considered as well as relevant artifacts (e.g. cooking pots and other pottery vessels, andirons and stone tools) and ecofacts (archaeobotanical remains, e.g. charred grains, and post-consumption animal remains). The results of archaeozoological and archaeobotanical analyses provided information on the subsistence of Tell Arbid's inhabitants, their food preparation methods and patterns of crop processing – all very much relying on the use of fire installations. Ethnoarchaeological observations from modern Tell Arbid village and other places in the Near East have also been considered.

**GISELLA SPECIA, STEFANIA PARADISO**

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## **THE CULTURAL USE OF FIRE: PRACTICE, RELIGIOUS AND UTILITARIAN USE**

In the cultural sphere, fire, as a source of light and heat, plays a fundamental role in the relationship between man and the divine entity: fire illuminates the house of the god, and unlocks the aroma of essences offered to the divinities. Incense burning is a practice strictly associated with rituals, both social and religious, used to enhance and strengthen their significance. Aromatic essences were burned daily in temples or outside sacred spaces, while in domestic spaces incense burning, besides being used for private cult activity, also functioned to cover unpleasant smells and to keep insects at bay. The use of fire within these activities left traces on the surface of the object, which are not always easy to discern nor immediately associate with cultural activities. For example, in the case of traces of burning present on the surface of a vase, these are not necessarily indicative of its use in a cultural sense, seeing that such a vase could have been used as an oil lamp in a room or in a temple, or rather may come from burned stratigraphic levels. Archaeological and epigraphic analyses on the data connected to two types of containers - basins with two depressions and cubical braziers, both types attested to the Late Bronze Age at sites in the Middle Euphrates and in northern Syria - will contribute to an evaluation of the cultural use of fire in religious rites and the incidences of this element in everyday activities of the community.

The two containers co-exist inside habitations as recipients for incense burning, probably because of their use in two different spheres: the cubical brazier for the domestic incense burning with the sole purpose being its utilitarian use, and the basin with two depressions used for ritual incense burning. For a clearer understanding of the functional use of such vessels, archaeological, paleoethnobotanical, and epigraphic data are used to propose a list of possible substances believed to have been used for incense burning.

**PAULETTE TATE, MICHAEL FISHER**

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## **FIRE IN THE BREWHOUSE: TOWARD AN ARCHAEOLOGY OF BEER AND BREWING IN MESOPOTAMIA**

Cuneiform documents and artistic representations indicate that beer was produced and consumed on a massive scale in ancient Mesopotamia. Archaeologists, however, have found it difficult to identify the physical traces of Mesopotamian brewing technologies and techniques. We argue that an approach based on the identification of brewing assemblages – comprising built installations, ceramic vessels, tools, and organic remains – offers a way forward.

In this paper we focus on fire installations, one of the most important components of the brewing assemblage. The cuneiform evidence suggests that at least two types of oven were involved in the brewing process: the oven for baking the beer bread (udun.bappir) and the oven for cooking the mash (udun.titab). Using a contextual analysis that



combines archaeological, written, and ethnographic evidence, we attempt to identify the physical remains of these ovens in the archaeological record. We argue that a more complete knowledge of the material culture of brewing can transform our understanding of the role of beer in Mesopotamia.

**MONICA TONUSSI**

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### **PIERCED ANDIRONS AND VESSEL SUPPORTS FOR FIREPLACES FROM THE CAUCASUS TO THE NEAR EAST IN THE 4TH–3RD MILLENNIUM BC: A WAY TO OPTIMIZE THE HEAT OF FIRE?**

Among the rich corpus of fireplaces' implements, which are attested at several 4th and 3rd millennium BC sites from the Caucasus to Anatolia till the Levantine coast, it is possible to single out some types that are characterized by the presence of a circular hole, which perforates the objects from one side to the other. Besides the well known horseshoe-shaped andirons and the so-called portable hearths of Transcaucasian tradition, there exist a series of small items - normally made of coarse fabric clay – that are supposed to have been used as vessel or spit supports for fireplaces during cooking. These objects were often found, in fact, close to fireplaces and always bare traces of burning on their surface. In general, their shape is truncated pyramidal or conical, but other slightly different morphological variants are also attested. This type of supports includes examples without perforation, and examples with a partial one; thus, even those showing a complete perforation are usually interpreted, in functional terms, in the same way. However, according to parallels from 2nd millennium BC Cyprus, as well as from ethnography, the presence of a drilled through hole on such implements could witness a technological "innovation", that could have permitted to optimize the heat of fire, for both domestic and metal-working activities. The oldest known examples of this type come from the Caucasus, thus suggesting that this new technology originated there and then spread to the South-West, possibly through the movements of Transcaucasian populations.

**AGNESE VACCA (1), LUCA PEYRONEL (2)**

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### **FROM CLAY TO POTS: POTTERY PRODUCTION AND WORKPLACES IN SYRIA DURING THE EB III-IV**

Change and development of pottery production are strictly embedded in the economic processes of the growth of urban societies in Syria and Anatolia during the 3rd millennium BC.

In fact, the archaeological evidences related to working areas and ateliers testify to wide range of installations (kilns, furnaces, platforms, basins, etc.) together with slags and by-products of firing activities showing the presence of specialized areas for pottery productions in the urban centres.

Moreover the high degree of pottery standardization witnesses to the rising of a centralized control of the manufacture between 2600-2200 BC. Data collected from recent excavations in North Inner Syria and in the Euphrates Valley (e.g. Tell Tuqan, Ebla, Umm el Marra, Tell Sweyhat, Tell Banat) are analyzed in order to reconstruct the different steps of the working and firing processes, shedding light on this key-sector of ancient craft production and technology.

## 5. CONSERVATION, PRESERVATION AND SITE MANAGEMENT

SUPERVISOR: **RAFAŁ KOLIŃSKI**

AUTHOR(S)	TITLE	DAY, HOUR
ANNE-MARIE AFEICHE	MUSEOLOGY AND PRESERVATION IN THE NATIONAL MUSEUM OF BEIRUT: SELECTED PROJECTS	TUE, 17.35
MOHAMMAD BEIRAGHI	HERITAGE MANAGEMENT OF ARCHAEOLOGICAL SITES IN OUTLYING AREAS: THE CASE OF IRAN AS A DEVELOPING COUNTRY	TUE, 14.30
EMMA CUNLIFFE	THE SCALE OF THE THREAT: MONITORING SITES AND MODERN TECHNOLOGIES	TUE, 9.00
NORMA FRANKLIN	JEZREEL AND THE FORMULATION OF A STRATEGY FOR COMBINING CULTURAL HERITAGE, EXCAVATION, AND POST EXCAVATION PRESERVATION	TUE, 9.50
ANDREW JAMIESON	SUSTAINABLE MANAGEMENT STRATEGIES FOR NEAR EASTERN ARCHAEOLOGICAL COLLECTIONS	TUE, 9.25
ZEIDAN KAFABI	MODERN HUMAN ACTIVITIES IMPACT ON THE ARCHAEOLOGICAL HERITAGE: AN EXAMPLE FROM THE SITE JEBEL ABU THAWWAB	TUE, 14.55
AHMED KZZO	THE IMAGE OF THE ARABIC MUSEUM. SOME CONSIDERATION ABOUT THE PRESENTATION OF ARABIC MUSEUMS IN INTERNET SITES	TUE, 15.45
JEANINE ABDUL MASSIH	THE ROMAN HOUSE OF CYRRHUS - SYRIA (MOSAICS AND WALL PAINTINGS)	TUE, 10.15
GEORG NEUMANN	THE ANCIENT NEAR EAST MEETS THE INTERNET – ANCIENT NEAR EASTERN STUDIES IN PROPYLAEUM	TUE, 15.20
B. NILGÜN ÖZ	HERITAGE CONSERVATION AT FOREIGN-RUN ARCHAEOLOGICAL EXCAVATIONS IN TURKEY	TUE, 16.45
IMAN SACA	AL ZUBARAH - THE PEARL OF QATAR THROUGH THE EYES OF ITS PEOPLE	TUE, 17.10

### **ANNE-MARIE AFEICHE**

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### **MUSEOLOGY AND PRESERVATION IN THE NATIONAL MUSEUM OF BEIRUT: SELECTED PROJECTS**

Since its official re-opening in 1999, the National Museum of Beirut has been displaying an outstanding collection of the Lebanese archaeological heritage. Some of the exhibition areas are however still closed to the public pending the implementation of a proper Museology program and adequate funding.

My presentation will shed light on a “monument”, the so-called Tomb of Tyre hosted in the National Museum basement since 1939. Major restorations were undertaken during the two past years on this painted tomb dated to the 2nd century AD. I will also outline some of the projects we are planning for the National Museum in the near future.

### **MOHAMMAD BEIRAGHI**

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### **HERITAGE MANAGEMENT OF ARCHAEOLOGICAL SITES IN OUTLYING AREAS: THE CASE OF IRAN AS A DEVELOPING COUNTRY**

Heritage sites and their proper management have been the subject of many projects and studies in many countries and each country has faced its specific means and problems in order to manage the sites. As the core subject here is archaeological sites and beyond that what makes an archaeological site more specific when it is situated in an outbreak area and considering the main needs for their proper management, then there are essential questions that

should be answered:

What are outlying archaeological sites and how could they be specified from other archaeological sites? What do the main causes of their destruction make them different from other kind of heritage sites? What are the means of their proper protection and their sustainable conservation?

There are many factors that help us to define what can be called an outlying archaeological site. The main factors are the extent of a country and geographical features, lesser degree of perceived national importance and the lack of potential to market the sites which all lead the outlying archaeological sites to be ignored and to be destructed. Considering a country like Iran will show us those archaeological sites that are situated near cities or local administrative centers have different conditions in their management process in comparison with those that are situated in far distance from those authorities and suffer more from this detachment. Apart from aging and their exhaustion through long years of their life, we can mention natural agents of deterioration and some physical and chemical causes as well. An added threat is that these sites are deteriorating due to illegal excavations too. Beyond these natural agents there are also some other factors which can prompt these agents to be more destructive. The main reason for outlying archaeological sites is to be situated out of sight, both for physical protection and in decision-making.

With having a look to some Near Eastern countries like Iran and many others everyone will notice that the condition of these countries is quite different from some European countries. Whereas there are many causes of destruction in these Near Eastern countries in management of their outlying archaeological sites then there can be no serious problem for the other group due to many reasons like social and cultural linkage as well as geographical features.

These answers that would help the research to approve this hypothesis about management of outlying archaeological sites that:

"There are natural, social and cultural factors as well as some economical deficiencies that threat archaeological sites and make us to categorize them into two main groups and define a new category called outlying archaeological sites. It's only through a well studied research about these factors and their solutions that would help the achievement of a comprehensive management strategy for the proper protection and conservation of outlying archaeological sites".

**EMMA CUNLIFFE**

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## **THE SCALE OF THE THREAT: MONITORING SITES AND MODERN TECHNOLOGIES**

Satellite imagery is regularly used to conduct qualitative case studies of damage to cultural heritage. However, my research develops quantitative methods of assessing damage at both macro- and micro-scales, varying from individual site features through to relict landscapes and entire archaeological parks. Working in partnership with the Global Heritage Fund, a non-profit organisation dedicated to saving endangered cultural heritage sites, my research analyses peacetime threats to cultural heritage, showing how the results can be applied to similar areas. Using case studies and statistical analysis, this work highlights the scales of threats to small and large sites to achieve a more comprehensive understanding.

The next step is dissemination. The Global Heritage Network is a free web-based platform using Google Earth technology, storing collated information about sites and threats to them, displayed against satellite imagery and terrain maps. Time and geographical scales can be examined in new detail, allowing unparalleled interpretation. Examples from Syria and Iraq are used to show the impact of these different scales of analysis, from individual features to entire landscapes, and of the benefits of tools like the Global Heritage Network.

**NORMA FRANKLIN**

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## **JEZREEL AND THE FORMULATION OF A STRATEGY FOR COMBINING CULTURAL HERITAGE, EXCAVATION, AND POST EXCAVATION PRESERVATION**

The site of Jezreel in northern Israel was occupied from ca 5,000 BCE until 1948 CE.

It comprises a central hilltop site and a smaller site located some 800 meters away at a lower elevation by the spring of Jezreel (also known as Ein el Meita). Jezreel (לַאֲעֵרִי) is mentioned more than thirty times in the Hebrew Bible and the identification of the site is universally accepted. It is the Iron Age settlement, the period of the Hebrew Bible, which has initiated the most interest and led to Jezreel's partial excavation in the 1990s' by David Ussishkin and John Woodhead on behalf of Tel Aviv University and the British School of Archaeology respectively. However there are signs of earlier settlements, as well as very visible later remains from the Hellenistic to the Byzantine period when Jezreel was known as Stradela. Later the village was governed by the Order of the Knights Templar and known as Le Petit Gérin. Nevertheless the ancient name was preserved as Zer'in (זֶרְעִין), the name used throughout the Ottoman period and up until the end of the British Mandate in 1948. The Jezreel Expedition recently commissioned a LiDAR survey of the site of Jezreel and the surrounding area. The LiDAR generated 3-D model is currently being studied, while our

growing collection of digitized historical maps and photographs will be georeferenced with the model this spring. Then with the aid of written records and previous excavated material, especially architectural artifacts, we intend to build a computerized model of the Ottoman/Palestinian village. We believe this approach to be an essential step in the exploration of Jezreel's cultural heritage in the recent past but it is also an important tool for planning future excavation strategy, as well as eventual post excavation preservation and presentation of the site to the public. The complexities of the site, our strategy and preliminary results will be presented for the first time (<http://www.jezreel-expedition.com/>).

**ANDREW JAMIESON**

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## **SUSTAINABLE MANAGEMENT STRATEGIES FOR NEAR EASTERN ARCHAEOLOGICAL COLLECTIONS**

This paper addresses a crucial but often ignored aspect of Near Eastern archaeology: the sustainable long-term care of growing numbers of archaeological collections. To deal with the continuing influx of artefacts into repositories there is a critical need not only to assess the significance of archaeological collections in order to prioritise available resources, but also to develop strategies for sustainably managing and preserving these collections into the future. This paper will consider the following key points: 1) developing criteria for assessing the significance of Near Eastern archaeological collections; 2) delivering a system and standards for preserving and managing Near Eastern archaeological collections, relevant to a Near Eastern context; 3) ensuring access to Near Eastern archaeological collections for the purposes of scholarly research and education; and 4) promoting a better understanding of the value of Near Eastern curated archaeological collections by providing practical engagement and interpretation opportunities at local, national and international levels. It will also examine the introduction of enhanced practices in the creation of archaeological collections through new processes and technologies in action driven research environments that aims to encourage changes in the archaeological collections management culture.

**ZEIDAN KAFABI**

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## **MODERN HUMAN ACTIVITIES IMPACT ON THE ARCHAEOLOGICAL HERITAGE: AN EXAMPLE FROM THE SITE JEBEL ABU THAWWAB**

This paper aims at presenting a story of an archaeological site, namely Jebel Abu Thawwab, which is completely bulldozed by opening the main highway leading from Amman to Jerash. It gives an example of how the archaeological heritage is destroyed by human reasons.

To illustrate what happened to the site, it should be mentioned that it was discovered during the early eighties of the last century. This was followed by rescue excavations during the years 1984, 1985, 1988, 1989 and 1990 by a team from Yarmouk University. The archaeological excavations conducted at the site proved that it was first occupied during the 6th millennium BC, and after a gap of occupation for more than one thousand years it had been reoccupied during the second half of the 4th millennium BC.

Unfortunately, and as a result of widening the main highway leading from Amman to Irbid in 1990, the site has been completely bulldozed. As a result of this the landscape of the site and the surrounding areas has been completely changed. This means that during the last thirty years many constructions have been built all over the area, new farms and new asphalt roads were built.

This study will compare the situation of the site and the surrounding areas during the eighties of the last century with the one in present days. It may be deduced that human activities are more effective in destroying the archaeological cultural heritage rather than the natural reasons. This may invite us to suggest new ideas to the stakeholders how to get benefits of such situation for recording and rescuing the archaeological cultural heritage in Jordan.

**AHMED KZZO**

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## **THE IMAGE OF THE ARABIC MUSEUM. SOME CONSIDERATION ABOUT THE PRESENTATION OF ARABIC MUSEUMS IN INTERNET SITES**

Archaeology of the Near East started nearly 200 years ago with Napoleon's expedition to Egypt, so archaeology was associated with colonial European movements, which usually considered the "Orient" and its civilizations as an alien, vague object. This led to a general definition of the main peculiarities of the "Orient", as a complex of cultures and civilizations totally separate from the "Occident". Now after 200 years of Oriental Archaeology, how do the Arabs or the Near East in general present themselves? Are they still affected from the colonial period, and from the so-called Orien-

talism, or do the new technologies, especially the Internet, provide the opportunity for anyone to present himself as he sees fit? The paper takes into account the presentation of some Arabic museum, and compares it with other museums in the world, focusing on the use of Internet, with an attempt at examining the languages used and the different orientations according the different culture of the recipient, and at highlighting of positive and negative effects on current ways of thinking the "Orient".

**JEANINE ABDUL MASSIH**

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## **THE ROMAN HOUSE OF CYRRHUS - SYRIA (MOSAICS AND WALL PAINTINGS)**

In October 2008, during the excavation campaign of the Syro-Lebanese archaeological team of Cyrrhus (Syria), a looting was perpetuated on site offering us the chance to discover a unique Roman House composed of six rooms. Three rooms were paved with geometric panels and ornamented by wall paintings. The central room was decorated by a geometric band and a figurative central panel representing a theatrical scene inserted in a four seasons decorated strip.

The Roman House is located on the northern part of the site, more precisely on the eastern slope over hanging the Sabun River. This building was discovered in an area where no remains were visible. The Roman House was excavated during the campaigns 2008 and 2009. The plan of the excavated house shows that the northern and western walls were delimited by two streets and that the house was occupying a corner in the grid of the circulation established in this sector. The eastern side was entirely destructed by natural elements due to its position on a slope overhanging the River.

The unearthing of preserved pavements and wall paintings on one unique ensemble in a Roman House is very rare in archaeological discoveries. The analysis of this perfect ensemble enlightened us about the arts, decorations and techniques of the Roman period in this part of the world. The parallels with the pavements and wall paintings of Zeugma, Antioch (Turkey) and Homs made us suggest the end of the 2nd and the beginning of the 3rd century AD as a possible date of occupation of the house.

In 2010, a project of conservation and restoration of the Roman House and its Mosaics and Wall Paintings was launched and realized by the archaeological team (Directorate General of Antiquities and Museums of Syria – Lebanese University). It was funded by the World Monument Fund and the Wilson Foundation and offered us the opportunity to preserve wall paintings and mosaics in situ in a restored building presented as an open area site museum : the Roman House of Cyrrhus.

**GEORG NEUMANN**

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## **THE ANCIENT NEAR EAST MEETS THE INTERNET – ANCIENT NEAR EASTERN STUDIES IN PROPYLAEUM**

The Virtual Library Classical Studies – Propylaeum – is a Co-Operation Project of the Bavarian State Library Munich, the Heidelberg University Library, the Tuebingen University Library (since 2008/09), the German Archaeological Institute Berlin (DAI) and the Institute of Classical Philology at the Humboldt University Berlin. Currently there are the Egyptology, Ancient History, Classical Archaeology and Philology and the Pre- and Early History, Ancient Near Eastern Studies, Byzantine Studies and the Medieval and Neo-Latin Philology hosted.

The Ancient Near Eastern Studies – consisting of the two parts namely Ancient Near Eastern Philology/Assyriology and the Ancient Near Eastern Archaeology – were integrated into Propylaeum in 2009. Besides special online collections and catalogues a free pictorial database with about 6000 pictures was hosted there. Since March 2012 a comprehensive bibliographical database (KeiBi online) is accessible on the website. It is based on the "Keilschriftbibliographie" published in the Journal *Orientalia* with about 80000 bibliographical entries on Ancient Near Eastern Studies – mostly concerning Cuneiform Studies. In addition to that a so-called "Academic and Research Service" was developed which provides information on grants, exhibitions, conferences and job offers. Further features and the way all this can be used will be presented in this lecture.

**B. NILGÜN ÖZ**

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## **HERITAGE CONSERVATION AT FOREIGN-RUN ARCHAEOLOGICAL EXCAVATIONS IN TURKEY**

Archaeological research carried out by foreign teams (i.e. projects led by non-Turkish institutions) is an integral part of archaeology and conservation in Turkey. Understanding their role in the conservation of archaeological sites in Turkey and determining their impacts on and contributions to heritage conservation in Turkey are crucial for the develop-



ment of enhanced strategies.

In that respect, this paper aims to explore heritage conservation approaches of foreign archaeological teams working in Turkey by identifying aspects such as their conservation teams, architectural conservation interventions, site-scale conservation interventions and public outreach activities as well as the problems they encounter and expectations concerning their work. Focusing on the Aegean Region of Turkey as a case-study area and concentrating on archaeological excavations such as Pergamon, Ephesos, Hierapolis, Didyma, the paper examines conservation and management planning practices at these sites and correlates the findings with the wider picture of recent changes in cultural policies in Turkey.

**IMAN SACA**

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## **AL ZUBARAH - THE PEARL OF QATAR THROUGH THE EYES OF ITS PEOPLE**

Among the most significant pearling and trading sites in the 18th - 19th century in the Arabian Gulf, Al Zubarah in Qatar flourished quickly during the 1770s when merchants from different parts of the Gulf settled this town.

Duty-free trade in Al Zubarah offered great economic incentives, and being situated close to the pearl banks around the northern and eastern part of Qatar, Al Zubarah had become the largest pearl trading settlement in the region.

In 2009 Qatar Museum Authority, jointly with the University of Copenhagen, launched the Qatar Islamic Archaeology and Heritage project. This ten year research, conservation and heritage initiative, aims at exploring the Al Zubarah archaeological site, preserving the fragile remains and presenting the site to the public. In this paper I will focus on the Community Archaeology project at the Al Zubarah site.

Community archaeology at the site aims at engaging and involving local communities and stakeholders in safeguarding, interpreting, promoting, as well as benefiting from the archaeological and heritage sites within their communities.

It is through the practice of community archaeology that we as archaeologist and heritage specialists can enrich our research and investigations especially through our collaboration and involvement with local communities, at the same time give the local communities a sense of pride, ownership and identity by exploring their heritage and the heritage on their lands. In today's modern context archaeologists and heritage specialists are realizing, that for both practical and ethical reasons they should reach out and work with local communities, no matter the definition of that community. It is both a professional and an ethical responsibility for community outreach efforts to be an integral part of any archaeological and heritage research project.

In this paper I will explore the four main trajectories of community archaeology at Al Zubarah: 1- Coordinate and cooperate with various governmental and non- governmental institutions and Qatari Universities. 2- Enrich our knowledge of Al Zubarah and the surrounding sites by gathering, incorporating and highlighting the rich oral history, folklore, stories and local traditions of the Northern region and Qatar as a whole. 3- Develop an active comprehensive public awareness and outreach program, to be carried out through various educational and hands-on activities 4- Illuminate how the archaeological heritage of Qatar can serve Qatari society in the fields of education, economy, culture, heritage and national identity.

## 6. BIOARCHAEOLOGY IN THE ANCIENT NEAR EAST

SUPERVISORS: **KIRSI O. LORENTZ**, **ARKADIUSZ SOŁTYSIAK**

AUTHOR(S)	TITLE	DAY, HOUR
CHIE AKASHI	GRAZING AND FODDER GATHERING IN EARLY BRONZE AGE SYRIA: CASE OF TELL GHANEM AL-'ALI	WED, 17.35
EKATERINA ANTIPINA	NORTHERN MESOPOTAMIA: ARCHAEOBIOLOGICAL RESEARCHES ON TELL HAZNA-I	WED, 18.00
ROBIN BENDREY	EVOLVING HUMAN-GOAT RELATIONSHIPS IN THE EASTERN FERTILE CRESCENT: NEW EVIDENCE FROM THE EARLY NEOLITHIC SITE OF SHEIKH-E ABAD, WESTERN IRAN	FRI, 11.15
JEANNETTE BOERTIEN	HEMP AND FLAX IN IRON AGE JORDAN	THU, 15.20
MARIALETIZIA CARRA	BIOARCHAEOLOGICAL ANALYSES IN THE REGION OF GAZIANTEP (S-E TURKEY)	THU, 17.10
CARMEN DEL CERRO	BIOLOGICAL REMAINS AT AL MADAM (SHARJAH UAE). ARCHAEOLOGICAL, ARCHAEOBOTANICAL AND ZOOARCHAEOLOGICAL STUDIES IN IRON AGE FARMING – STOCKBREEDING VILLAGE	FRI, 10.15
SARAH ELLIOTT	HERBIVORE DUNG: LOCATION, IDENTIFICATION AND CONTENTS. AN INTEGRATED APPROACH TO THE IDENTIFICATION OF EARLY ANIMAL MANAGEMENT IN THE CENTRAL ZAGROS	FRI, 12.05
RAFAŁ FETNER	RESULTS OF ANTHROPOLOGICAL RESEARCH OF HUMAN REMAINS FROM OLD BABYLONIAN TOMB FROM BAKR AWA, IRAQ	THU, 9.00
PASCAL FLOHR	RECONSTRUCTING PAST RAINFALL AND IRRIGATION USING PLANT STABLE ISOTOPES: (IM)POSSIBILITIES OF THE METHOD	WED, 14.30
ANNA GRĘZAK	ANIMAL ECONOMY AT TELL MASAikh AND TERQA IN THE MIDDLE EUPHRATES REGION IN SYRIA FROM THE 3RD MILLENNIUM B.C. TO THE ISLAMIC PERIOD	THU, 9.25
JEAN-BERNARD HUCHET	ARCHAEOENTOMOLOGY: A NEW APPROACH TO THE RECONSTRUCTION OF SOME ANCIENT NEAR EAST MORTUARY PRACTICES	WED, 15.20
VLADIMIR KUFTERIN	BIOSOCIAL ADAPTATION OF THE ANCIENT POPULATION OF THE SOUTH OF CENTRAL ASIA	FRI, 9.25
CATHERINE LONGFORD	AGRICULTURE IN THE HIGHLANDS, THE ECONOMY OF SOS HÖYÜK, A KURA-ARAXES VILLAGE	THU, 16.45
KIRSI O. LORENTZ	(RE)INTEGRATING THE BIOLOGICAL AND THE CULTURAL: CONTEXTUAL BIOARCHAEOLOGY OF A BODY MODIFICATION	WED, 15.45
EMMANUELE PETITI	BIOARCHAEOLOGICAL INVESTIGATIONS AT A 4TH-3RD CENTURY BC CEMETERY AT TAYMA	FRI, 9.50
MARTA PORTILLO	PHYTOLITHS AND DUNG SPHERULITES: HOW CAN THEY BE USED FOR RECOGNIZING EARLY FARMING ACTIVITIES? TWO EXAMPLES FROM THE LEVANT	THU, 12.05
KONSTANTIN PUSTOVOYTOV	PLANT BIOGENIC CARBONATE AT ARCHAEOLOGICAL SITES OF THE NEAR EAST AND ITS POTENTIAL AS A PALEOENVIRONMENTAL PROXY	FRI, 9.00
ROBERT SATAEV	RESULTS OF ARCHAEOZOOLOGICAL AND ARCHAEOBOTANICAL RESEARCHES AT THE BRONZE AGE SITE GONUR-DEPE (TURKMENISTAN)	FRI, 9.25
LINDA SCOTT-CUMMINGS, CHAD YOST	DENTAL CALCULUS: EVIDENCE OF PRE-POTTERY NEOLITHIC DIET FROM NEMRIK 9, IRAQ	WED, 17.10
RULA SHAFIQ	EARLY BRONZE IV. EVIDENCE OF STRATIFIED SOCIETY – JERICO CASE	THU, 14.30

ABDEL HALIM SHIYAB, ASMAA AL-BOUN	ANIMAL REMAINS FROM TALL ABU AL-KHARAZ	THU, 14.55
GIOVANNI SIRACUSANO, GIULIO PALUMBI	WHO'D BE HAPPY, LET HIM BE SO: NOTHING'S SURE ABOUT TOMORROW. DISCARDED BONES IN AN EARLY BRONZE I ELITE AREA AT ARSLANTEPE (MALATYA, TURKEY): REMAINS OF BANQUETS?	THU, 12.30
ARKADIUSZ SOŁTYSIAK	TOPOGRAPHY, SUBSISTENCE AND TERRESTRIAL MOBILITY IN ANCIENT HUMAN POPULATIONS OF IRAN AND SYRIA	WED, 16.45
ANNA SPYROU	ANIMAL PROCUREMENT AND PROCESSING IN THE MIDDLE EPIPALEOLITHIC OF SOUTHERN LEVANT: ZOOARCHAEOLOGICAL AND ANTHROPOLOGICAL IMPLICATIONS FOR STORAGE AND SOCIAL ORGANIZATION	THU, 11.40
ANNE-MARIE TILLIER	DIAGNOSIS OF SKELETAL LESIONS WITHIN LEVANTINE UPPER PLEISTOCENE POPULATIONS	THU, 11.15
JACEK TOMCZYK	DENTAL EROSION IN THE MIDDLE EUPHRATES VALLEY (SYRIA)	THU, 9.50
HANDAN ÜSTÜNDAĞ	POROTIC HYPEROSTOSIS AND CRIBRA ORBITALIA IN SKELETONS FROM KÜLTEPE/KANESH, TURKEY	THU, 17.35
JADE WHITLAM	ARCHAEOBOTANY IN THE "HILLY FLANKS": THE POTENTIAL OF RECENT RESEARCH AT EARLY NEOLITHIC SITES IN THE CENTRAL ZAGROS	FRI, 11.40
DIRK WICKE, TINA GREENFIELD	IF THESE WALLS COULD SPEAK ...: INTEGRATION AND INTERPRETATION OF FAUNAL, ARTEFACTUAL AND ARCHITECTURAL REMAINS FROM ANCIENT TUSHAN	THU, 18.00
WIEŁAW WIĘCKOWSKI SUSAN COHEN	THE EXCAVATION AND ANALYSIS OF PORCUPINE DENS AND BURROWING ON ANCIENT FAUNAL AND HUMAN REMAINS AT TEL ZAHARA (ISRAEL)	THU, 15.45
HENRYK WITAS	DNA OF PEOPLE LIVING IN THE MIDDLE EUPHRATES VALLEY 2.5-4.5 KYRS AGO	THU, 10.15

#### CHIE AKASHI

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#### GRAZING AND FODDER GATHERING IN EARLY BRONZE AGE SYRIA: CASE OF TELL GHANEM AL-'ALI

In dry regions of West Asia, animal dung has been traditionally used as important fuel. Tell Ghanem al-'Ali (TGA) is an Early Bronze site located in the middle Euphrates, 50 km east from the modern city of al-Raqqa. The annual precipitation in this region is less than 200mm, indicating the possibility that animal dung had some importance as fuel in this settlement as well.

Some wild taxa were interpreted as derived from dung fuel according to the constituents of some archaeobotanical samples. Fruit of *Prosopis* sp. (Fabaceae) and small seeds of trifoliate like *Trigonella* or *Astragalus* (Fabaceae) are likely to have been eaten by animals. Also *Atriplex* and *Suaeda* (both Chenopodiaceae) were found abundantly in this site. The number and the concentration of these species suggest that the inhabitants of TGA collected them, probably to feed them to domestic animals. Recently some works reevaluated the quality of these two species as fodder in desert area. Only two other sites with such a large amount of Chenopodiaceae are found in West Asia, and TGA is the third one. These finds show us how the inhabitants of TGA made use of the hinterland and the wild plants which grew in it.

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#### NORTHERN MESOPOTAMIA: ARCHAEOBIOLOGICAL RESEARCHES ON TELL HAZNA-I

In history of Northern Mesopotamia the beginning of 3rd millennium BC is characterized as a turning-point. Archaeological demonstrate the increase in number of settlements both rural and protocity. In their background Tell Hazna-I investigated by the Russian archaeologists takes a special place: it is interpreted as a cult temple complex (Munchaev, Merpert, Amirov 2004).

The collecting of archaeobiological materials had held here within 10 years (2000-2010). Owing to methodical innovations on these materials have been fixed not only the standard parameters, but also the information on flotation effectiveness and a saturation of cultural layer by plant macroremains and animal bones. Relative volumes of grain and meat consumption were defined, and main characteristics of archaeobiological materials were analyzed on chronological vector.

The purpose of this paper is to explain, that an archaeological context of concrete finds and archaeological interpretation of a settlement functional status is of the main importance for the analysis of characteristics and specificity of archaeobiological collections.

Results of archaeobiological researches executed on Tell Hazna-I have been compared with information on other chronologically closed settlements of Northern Syria. Firstly, they were separated from data on rural settlements, showing some similarity to the protocity centers. Secondly, they opened a specificity archaeobiological material which testifies not ordinary status of settlement. The archaeobotanical structure demonstrates low share of weed seeds and cultural cereals chaff that means the delivery "pure" grain on Tell Hazna-I. And with it, wheat share is higher on Tell Hazna-I, than on other settlements, it may be indicator of "elite" grain consumption here. In meat consumption there was a prevalence of beef. Meat of sheep and pigs were eaten in less volume. Probably pork was a ritual food. The noticeable number of bones belonged to sacrificial animals among which there were a very large bull, gazelle's males and lion.

All parameters of archaeobiological materials from Tell Hazna-I have explanation exclusively within the limits of archaeological interpretation of this settlement as a temple and administrative complex.

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## **EVOLVING HUMAN-GOAT RELATIONSHIPS IN THE EASTERN FERTILE CRESCENT: NEW EVIDENCE FROM THE EARLY NEOLITHIC SITE OF SHEIKH-E ABAD, WESTERN IRAN**

The domestication of animals, in possibly multiple centres of the 'Fertile Crescent' in the Near East, appears to have developed as a long and gradual process, evolving from hunting strategies and the intensification of relationships between humans and wild animals into the management of, at first, morphologically unchanged animals, generally within their natural habitat. The shift from reliance upon hunted wild populations to the control and exploitation of domestic animals is one of the great step changes in the human past.

The Central Zagros region lies within the natural habitat of wild goats, and is a region of particular interest in the early history of goat management and domestication. Current evidence indicates that goats were first domesticated between around 8700 and 7900 BC in the region stretching from the Zagros mountains, in the eastern Fertile Crescent, to the highlands of southeastern Anatolia.

This paper will discuss new zooarchaeological data from excavations at Early Neolithic Sheikh-e Abad, in western Iran. This site has a long occupation sequence and notably early radiocarbon determinations (ca. 9800–7600 BC). This paper brings important new evidence to our understanding of evolving human-goat relationships in the Early Neolithic of the eastern Fertile Crescent.

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## **HEMP AND FLAX IN IRON AGE JORDAN**

Till recently it was supposed that the Middle East was 'flax territory' and that fiber hemp was characteristic for northeast Europe, the Carpatians and Asia (Barber 1991:11-19, fig.1.8). But a small piece of textile found in Deir 'Alla in the Jordan Valley dated to ca. 800 BC appeared to be made of hemp. This was the first fiber hemp ever found in the Middle East, opening up many questions because at the same site also flax seeds have been found.

An integrated approach to biological remains, textile fragments and artifacts used in textile production tell the story of hemp (*Cannabis Sativa*) and flax (*Linum usitatissimum*) in Iron Age Jordan.

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## **BIOARCHAEOLOGICAL ANALYSES IN THE REGION OF GAZIANTEP (S-E TURKEY)**

The paper presents the results of the archaeobotanical and zooarchaeological studies at three sites located in the region of Gaziantep: Tilmen Höyük, Taşlı Geçit Höyük and Karkemish, excavated by the Department of Archaeology of Bologna University since 2003 in cooperation with the Universities of Gaziantep and Istanbul and with Gaziantep

Museum. Human subsistence strategies during the Bronze and Iron Ages at these three sites have been highlighted by our research. Zooarchaeology aims in fact at the relationship between man and the animal world in past societies and, most important, at the economic aspects of the relationship established by man with it, as well as all the artistic, religious and ritual aspects connected. The aims of the study of botanical remains in archaeological contexts are: the definition of the subsistence strategies based on the number of remains ascribable to wild or cultivated species; the identification of different species in order to evaluate the composition of the diet or other not strictly alimentary uses of the species (textile use, dyeing use, curative, ritual, etc.) and the analysis of the wild component to determine the palaeoenvironment (observation of the autochthonous species and the remains from other vegetation associations).

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### **BIOLOGICAL REMAINS AT AL MADAM (SHARJAH UAE). ARCHAEOLOGICAL, ARCHAEOBOTANICAL AND ZOOARCHAEOLOGICAL STUDIES IN IRON AGE FARMING – STOCKBREEDING VILLAGE**

The Spanish archaeological Mission at al Madam (Sharjah, UAE) has collaborated with an interdisciplinary team from the beginning of our researches at the site. Zooarchaeologists, archaeobotanists and geologists, among others colleagues, have worked in the study of al Madam Area. Thanks to them, biological remains founded at the site have increased our knowledge about the inhabitants of al Madam. During the seventies and eighties the archaeological teams have not recorded bones remains, seeds as well as objects and structures linked to them. We would like to relate biological remains and structures; they can show us together the live of an Iron Age village at the foothills of Oman Mountains.

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### **HERBIVORE DUNG: LOCATION, IDENTIFICATION AND CONTENTS. AN INTEGRATED APPROACH TO THE IDENTIFICATION OF EARLY ANIMAL MANAGEMENT IN THE CENTRAL ZAGROS**

The identification of early animal management is a challenge to archaeological research, particularly as it is now widely recognised that morphological changes in animal skeletons are not leading-edge indicators of domestication (Zeder 2006). The identification of compacted, laminated herbivore dung layers in early Neolithic settlements by micromorphological analysis provides new independent evidence for early animal penning and management from at least ca. 8,000 BC in the Zagros (Matthews 2010).

The Central Zagros is one of the areas where early goat domestication is likely to have occurred, initially in the upland natural habitat of the wild goat, and then transported to lowland areas. A new inter-disciplinary approach is being applied across a transect of early Neolithic sites in the Central Zagros in order to locate early evidence for animal management. During excavation, portable X-Ray Fluorescence is being applied to map phosphorus rich areas that may be indicative of herbivore dung in early animal pens or open areas in order to target subsequent sampling for micromorphological, phytolith and GC-MS analyses. These techniques will enable us identify the presence of dung, and through the analysis of dung contents identify the species using biomolecular markers and study diet, habitat and ecology via phytolith analysis.

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### **RESULTS OF ANTHROPOLOGICAL RESEARCH OF HUMAN REMAINS FROM OLD BABYLONIAN TOMB FROM BAKR AWA, IRAQ**

In year 2010 archaeologists leading by prof. P. Miglus from University of Heidelberg had found Old Babylonian tomb at the Tell of Bakr Awa (Kurdistan, Iraq). During excavations they discovered human remains of 8 individuals separated and laid in many parts on the whole area of tomb.

Anthropological research of preserved bones from this tomb shows that minimal number of individuals (MNI) is at least 6 persons both males and females including 2 children. The youngest person was 6 years old, and the oldest was less than 50 years old.

These people were well situated, but not free from environmental stress. Examination of their teeth shows us traits of caries on the occlusal surface of teeth and hypoplastic changes of enamel tissue. On the postcranial part of skeleton we can see enlarged muscles attachments, especially muscles of legs, pathology and changes of geometry of vertebra column. That can mean that their position in society was paid by hard physical work.

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## **RECONSTRUCTING PAST RAINFALL AND IRRIGATION USING PLANT STABLE ISOTOPES: (IM)POSSIBILITIES OF THE METHOD**

The presence of water is essential for any settlement, and changes in rainfall as well as the development of water management techniques, such as irrigation, can have a large impact on societies. However, evidence for past water availability is often not available. Stable isotope ratios of archaeological plant remains might help in reconstructing it. The use of the method is based on the relationship between plant carbon stable isotopes and water availability as attested in modern crops. Although the method is potentially very valuable, questions about its application in archaeology remain. Therefore, this research seeks to improve the method's empirical basis and test the suitability of archaeological samples. It does this by analysing carbon and nitrogen isotope ratios of experimentally grown cereals, which were grown at five different irrigation regimes at three sites in Jordan. In addition, grains were experimentally charred and buried, in order to assess if either of these processes would change grains isotopic composition.

This paper will argue that, based on the results of these experiments, the method can be applied to archaeological samples, but with limitations. In addition, analyses of cereals at two Jordanian sites, Tell esh-Shuna and Tell es-Sa'idiyyeh, will be presented.

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## **ANIMAL ECONOMY AT TELL MASAikh AND TERQA IN THE MIDDLE EUPHRATES REGION IN SYRIA FROM THE 3RD MILLENNIUM B.C. TO THE ISLAMIC PERIOD**

The aim of this speech is to present some information on animal economy at Terqa and Tell Masaikh sites based on animal bone remains. Terqa site was inhabited from the 3rd millennium BC, throughout the Middle and Late Bronze Age to the 20th century, the settlement of Tell Masaikh was proven for the period from the 2nd millennium BC to the Islamic Period, with intervals of occupation at both sites. On the basis of osteological material it was concluded how the animal economy of the settlements developed. The key source of meat for consumption was animal husbandry, while hunting, fishing and invertebrate collecting were supplementary ones. The wild game included mainly deer, roe-deer, gazelle and sometimes also fallow deer, aurochs and hare. Among the domestic animals sheep, goat and cattle played the main role, with caprines being the majority throughout the whole occupation of the sites. However, both sites display a slight diversion from the basic pattern, with a gradual rise in the percentage of cattle bones at Terqa from the Shakkanaku Period, and with a slight rise in the percentage of cattle bones and appearance of pig remains at Tell Masaikh in the Neo-Assyrian Period. The inhabitants of both settlements used horses, onagers and donkeys throughout the whole occupation and introduced the camel at Terqa in the Islamic Period.

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## **ARCHAEOENTOMOLOGY: A NEW APPROACH TO THE RECONSTRUCTION OF SOME ANCIENT NEAR EAST MORTUARY PRACTICES**

Different taxa of insects intervene significantly in the taphonomic processes of bone degradation. The damage due to these arthropods, most often spectacular, could be sometimes misinterpreted as pathological lesions or even be linked with some specific anthropic interventions.

From the study of different Near Eastern Chalcolithic and Middle Bronze Age sites, we will see how these "traces" left on human bones might constitute an interpretative key to the methods of defleshing the bodies prior to their deposit within ossuaries and to the funerary proceedings that determined the composition of collective burials.

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## **BIOSOCIAL ADAPTATION OF THE ANCIENT POPULATION OF THE SOUTH OF CENTRAL ASIA**

The osteological material (71 skulls and 83 post-cranial skeletons) from the excavation of the burials of the first half - the middle of the 2nd mill. BC at Gonur Depe (Turkmenistan) and those of the complex Buston VI (Uzbekistan, second half of 2nd mill. BC) (96 skulls and 54 post-cranial skeletons) are studied. Gonur Depe - the well-known Bronze Age site, the capital city of ancient Margiana, one of the centers of ancient civilization (Sarianidi, 1990, 2001, 2002, 2005,



2008 and others). It is located in the southeastern Karakum Desert, 85 km to the north from Bairamali city (Mary velayat) and ranked among the most striking sites of the Bactria-Margiana archaeological complex (BMAK). Funerary cult complex Buston VI located in the delta of Sherabaddarya river, 60 km to the north from Termez (Surkhandarya region) is treated as one of the most important sites of the final phase of Sapalli culture (listed by several investigators to BMAK) and the base object in studying of Bactrian cultural genesis (Avanesova, 1995, 2001, 2002, 2003, 2006, 2008 and others). Human skeletal pathologies reflect the characteristics of the biological and social adaptation to the environment and are a valuable source for the reconstruction of the human condition in remote eras. Anthropoecological features of the ancient population of the south of Central Asia show that it is well adapted to a range of local climatic conditions which results in quite favourable to the Bronze Age demographic situation (relatively low infant mortality rate – 22.6% and a relatively high lifespan of the adult population – 36.5 years). Demographic reconstruction bases on representative samples (for Gonur - sex-age definition of more than 4,000 buried; at Buston VI - the remains of 103 individuals) and correlates with the archaeological sources. Wide enough but projected to the ancient-agricultural populations range of diseases is in our opinion not an indicator of dis-adaptation of studied groups. Overestimated the percentage of teeth-jaw apparatus' pathologies (especially at Gonur) and high rates of degenerative diseases likely to be regarded as a form of adaptation to the complex natural and social environmental factors. The main features which result in specific palaeoecological profile of Gonur Depe and Buston VI populations are a predominance in the diet of plant foods and high levels of mechanical stress on the musculoskeletal system. The social atmosphere in both groups can be characterized as quite safe as evidenced by the low in general level of injuries (mainly domestic nature) and favourable demography. Mechanical extrapolation of morbidity without regard to demographic and other characteristics can lead to significant errors in the reconstruction of palaeoecological conditions. In the latter case, apparently it should be carried on so-called «osteological paradox» (White et al., 2006).

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## **AGRICULTURE IN THE HIGHLANDS, THE ECONOMY OF SOS HÖYÜK, A KURA-ARAXES VILLAGE**

In the late 4th millennium BC the Kura-Araxes culture, noted for their metal work and red-black burnished pottery, was based in the Caucasus and the highlands of north-eastern Anatolia. The Kura-Araxes are often interpreted as being semi-nomadic pastoralists with a subsistence economy reliant on goat and sheep herding. Little is known of the plant based subsistence of the Kura-Araxes culture. At the beginning of the 3rd millennium BC Kura-Araxes the cultural horizon rapidly spread from their Caucasian and north-east Anatolian homeland, south into the Upper Euphrates, the Levant and west into Iran. What this expansion represents archaeologically and culturally, whether it was actual Kura-Araxes migration or local adoption of Kura-Araxes material culture, is uncertain. Researchers investigating the Kura-Araxes expansion have noted that a lack of information on the subsistence strategies of the Kura-Araxes in their homeland hampers a full understanding of what caused the changes in the early 3rd millennium BC. This paper will present new findings on the agriculture of Sos Höyük, a Kura-Araxes site in north-eastern Anatolia and, based on the archaeobotanical remains, challenge the traditional interpretation of the Kura-Araxes as semi-nomadic pastoralists. The impact of this more settled lifestyle on models for Kura-Araxes expansion will be discussed.

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## **(RE)INTEGRATING THE BIOLOGICAL AND THE CULTURAL: CONTEXTUAL BIOARCHAEOLOGY OF A BODY MODIFICATION**

The human body forms a current focus of intense research both in the humanities and sciences, and is one of the main preoccupations of contemporary popular culture and social discourse. While the physiology of the body has a long history of research, the focus on cultural construction of bodies is of more recent origin. These lines of enquiry have been followed separately, through highly specialized disciplines. It is time to assess the potential of integrated approaches in throwing light on the past bodies and bodily practices. In specific, this paper focuses on the contextual bioarchaeological investigation of a particular type of body modification – circumferential headshaping (aka cultural cranial modification) – in order to explore the advantages of integrated approaches to the (past) human bodies, as well as the contribution of bioarchaeological approaches to the understanding of periods, cultural complexes, and change. Human skeletal remains dating from the Neolithic to the Iron Age, recovered from an area stretching from Iran and Mesopotamia to the Levantine coast, Cyprus and Anatolia form the materials of this study.

**BIOARCHAEOLOGICAL INVESTIGATIONS AT A 4TH-3RD CENTURY BC CEMETERY AT TAYMA**

Saudi-German excavations at the oasis of Tayma revealed a cemetery near the Inner City Wall of the ancient settlement (Area O), of which nearly 40 graves are presently known. All of them were plundered in the past. The graves were built according to the same scheme and are similar in shape and size, but have different orientations. In each case, the grave pit was deepened into natural bedrock after the removal of all existing deposits, and covered with large stone blocks. So far 23 of the known burials, either single or multiple graves, have been fully investigated. Taphonomic, paleobiological and paleopathological analyses conducted on the recovered human remains revealed important details on the burial practices and on the biological characteristics of this population sample of ancient Tayma. The results of taphonomic analyses in the field led to three case-studies of particular interest: use and re-use of burials; standard vs. particular burial patterns; presence of possible skull burials. The data obtained from the analyses of the human remains from Area O are also significant for the construction of a model of the post-depositional processes which affect human remains in an arid/semi-arid climate.

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**PHYTOLITHS AND DUNG SPHERULITES: HOW CAN THEY BE USED FOR RECOGNIZING EARLY FARMING ACTIVITIES? TWO EXAMPLES FROM THE LEVANT**

It is well established that integrated studies of phytoliths (plant silica cells) and faecal spherulites (calcitic particles produced in the guts of many animals and deposited in dung) may provide useful information regarding vegetal and animal resources in archeological sites. The Pre-Pottery Neolithic B (PPNB) settlements of Ayn Abū Nukhayla (Wadi Rum, Southern Jordan) and Tell Seker al-Aheimar (Upper Khabur, Northeastern Syria), provide a good opportunity to understand the developments of early farming communities using such an integrated archaeobiological approach. The site of Ayn Abū Nukhayla, in Jordan (Middle PPNB, 9,390-9,610 BP cal. BC) is characterized by an inter-connected lattice of oval stone-wall pithouses (loci). Phytoliths and spherulites traced a dual use of these residential shelters in which domestic activities were undertaken (i.e. grinding of cereals), that also involved holding animals.

The Late PPNB occupation at Tell Seker al-Aheimar, Syria (late 8th to early 7th millennium cal. BC) is marked by the emergence of large rectangular buildings with gypsum-plastered floors. Phytolith distributions were indicative of the activities that took place both within and outside buildings. The presence of faecal spherulites in fireplaces suggests the use of livestock dung for fuel purposes. The contribution of studies of modern materials (i.e. plants, soils, agricultural by-products, livestock dung and dung-products) from the top of the tell and the village of Seker al-Aheimar, have also been evaluated using an ethnoarchaeological approach.

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**PLANT BIOGENIC CARBONATE AT ARCHAEOLOGICAL SITES OF THE NEAR EAST AND ITS POTENTIAL AS A PALEOENVIRONMENTAL PROXY**

Fruits of some plants from Boraginaceae (tribe Lithospermeae) and Ulmaceae (genus Celtis) are rich in biogenic carbonate that remains well-preserved in cultural layers of arid regions. Here we present  $^{14}\text{C}$  and stable isotope data on modern and ancient (paleolithic - medieval) calcareous fruits of *Lithospermum*/*Buglossoides* and *Celtis* from a number of locations of the Near East (Turkey, Syria, Libanon, Jordan). Both the radiocarbon ages and  $\delta^{13}\text{C}$  values of inorganic carbon of the fruits suggest that the plants use atmospheric  $\text{CO}_2$  for carbonate synthesis. There is no evidence for re-equilibration in cultural layers for most of the Holocene. Modern  $\delta^{18}\text{O}$  values of fruit carbonate display a distinct correlation with several climatic parameters (amount of precipitation, its oxygen isotope composition and temperature). Plant biogenic carbonate therefore may represent a new source of chronological and paleoenvironmental information in the Near East.

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**RESULTS OF ARCHAEZOLOGICAL AND ARCHAEOBOTANICAL RESEARCHES AT THE BRONZE AGE SITE GONUR-DEPE (TURKMENISTAN)**

Stratigraphy of cultural deposits, remains of animals and plants at the urban settlement Gonur-Depe (2300-1600 B.C.) in 2010-2011 were studied. 437 animal bones from the excavation-area 18 were investigated. Bones of domesticated species – sheep/goats, cattle, pig, camel, donkey, dog are dominated. Among wild mammals gazelles (*Gazella subgutturosa*), brown bear (*Ursus arctos*) (isolated teeth), deer (*Cervus elaphus*) (a cutting horn), hare (*Lepus tolai*), hedgehog (*Erinaceus auritus*) are present. The bones of the goose (*Anser* sp.) and bustards (*Otis tarda*) from birds, turtles (*Agrionemys horsfieldi*) from reptiles and toads (*Bufo viridis*) from amphibians were identified.

In cultural deposits we have found three kinds of wheat seeds (*Triticum monococcum*, *T. dicoccum*, *T. aestivum*), six-row barley (*Hordeum vulgare*), lentils (*Lens esculenta*), chickpeas (*Cicer arietinum*), string bean-mash (*Phaseolus aureus*), grapes (*Vitis vinifera*). Wheat and barley grains have the sizes and proportions, characterized for the cereals cultivated in the conditions of irrigated agriculture.

Ancient population used mainly saxaul (*Haloxylon* sp.), shrub forms of thistle (*Salsola* sp.) and lignified stems camel thorn (*Alhagi persarum*) for fuel. The nature of the studied sediments suggests that the development of land within the excavation began somewhat later formation of the central part of the site. Four main stages of formation of thick cultural horizons can be distinguished. The works were conducted by the RFBR project 10-06-00263.

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**DENTAL CALCULUS: EVIDENCE OF PRE-POTTERY NEOLITHIC DIET FROM NEMRIK 9, IRAQ**

Examination of calculus from teeth from eleven burials at Nemrik 9, a pre-pottery neolithic cemetery located on a terrace of the Tigris River in Iraq provided the opportunity to observe pollen, starch, and phytoliths. Microscopic particles embedded in tooth calculus from these individuals was recovered and identified in search of evidence for agriculture. Only small quantities of dental calculus were observed on teeth of the individuals recovered from the cemetery. Starch, phytoliths, and pollen were recovered from the calculus that indicate consumption of cereals and other foods. Woody fibers also were noted in one context, suggesting using teeth as the “third hand” when making basketry or otherwise working with woody tissues.

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**EARLY BRONZE IV. EVIDENCE OF STRATIFIED SOCIETY – JERICHO CASE**

The large amount of data available on the Early Bronze IV social structure is mostly derived from cemeteries, such as Jericho. Palumbo's (1987) comprehensive research of Jericho's Early Bronze IV burials suggested that the differences found in burial practices were representative of different ethnic distinctions and social stratification within the population. His results supported those of Kenyon's seven types of Early Bronze IV tombs. This study reports on the results of Jericho's Early Bronze IV skeletal collection of 105 individuals.

DISH is a joint disease that is believed to include genetic predisposition, obesity and diabetes. Rogers and Waldron (2001) have proposed that DISH was connected with the monastic way of life, or high status in a society. Two cases of DISH were found in the skeletal remains of adult males dating to the Early Bronze IV period, classified as O1 and P22 - aged between 50 to 60 years. The current study suggests that the two males were probably of high social status. It is also possible to extend this idea and further propose that the 'Outsize type' tombs might be a representation of a different social class of the society, in this case the higher elite class.

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**ANIMAL REMAINS FROM TELL ABU AL-KHARAZ**

We studied the animal bone remains that were gathered from seasons of 1995 to 2010. 10582 fragments of animal bones have been analyzed. We classified those remains chronologically beginning from the Bronze Age and ending with the Iron Age. Concerning the animal bones that belong to the Bronze Age their number was 3501; while 7081 bone fragments are dated to the Iron Age.

Through the study of these remains it appeared that:

1. In the Bronze Age the number of animal bone remains was 1205. This represents 11.81% of overall bones. The animals to which these remains belong were cattle, equids, sheep-goat, gazelle, dogs, foxes, pigs and fish. The majority of the remains of the Bronze Age represents sheep- goats.
2. In the Iron Age 7081 bone fragments were identified, which represent 88.19% of the animal bone remains of Iron Age. Concerning the animals to which these remains belong, they were the same as these found in the Bronze Age. Additionally, the pig bone remains were also identified. Sheep-goats also represented the majority of animals from this period. The bone remains of sheep – goats make up 57.57% of the identified animals bones of Iron Age. From what has been said it appeared that men in the Bronze Age depended primarily on sheep-goats breeding; of second importance was the cattle which men used to get food .Hunting (gazelle, fox) was also practiced in this period. In the Iron Age; pig breeding was of some importance; pigs were higher than that in other periods. However, the animal economy depended primarily on sheep-goats and cattle, as it was observed in the Bronze Age. The existence of some species of animals such as cattle, equids and pigs lead us to assume that Tell Abu al Kharaz in both the Bronze and Iron Ages enjoyed green covers.

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### **WHO'D BE HAPPY, LET HIM BE SO: NOTHING'S SURE ABOUT TOMORROW. DISCARDED BONES IN AN EARLY BRONZE I ELITE AREA AT ARSLANTEPE (MALATYA, TURKEY): REMAINS OF BANQUETS?**

The history of Arslantepe, , highlighted in its composite attributes through many years of excavations and interdisciplinary research, has given a substantial contribution to the knowledge of this crucial cultural landmark region between the Euphrates and the Mesopotamian, Anatolian inland areas and the eastern boundary of the Mediterranean. In the first phase of Early Bronze I (VI B1), after the destruction that ended the first state organization of the Late Chalcolithic (LC5 / Late Uruk), groups of shepherds people, oriented towards the so-called “Kura-Araks” culture and part of the vast system of semi-nomadic cultures in the north-eastern Anatolia and the Transcaucasus, settled on the ruins of the 4th millennium monumental buildings.

In the highest zone of the inhabited area a fence surrounded a large hut with a wide open space. In the latter thousands of animal bones have been found in garbage layers. This situation persists for a short period of time on the same area. The set up of the assemblage and its composition have shown some features that make it different from other findings in the same site and same time. The high degree of slaughtering and the anatomical portions were selected parts with respect to the whole skeleton, and clearly show they were the remains of meals. But what makes us think that these represent the remains of banquets? How archaeological and archaeozoological features represent such a set? What could have been, if it existed, the concept of waste disposal in antiquity? It is generally assumed that the findings of animal remains on the floors or pits (kuyu) represent the accumulated waste in a fairly long time (months, seasons, years). Thus the remains collected there may well give you an idea, a sort of average, of the diet of the population. In the case we present here, several elements suggest abundant, but occasional meat consumption and can help us to give answers to the above addressed questions.

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### **TOPOGRAPHY, SUBSISTENCE AND TERRESTRIAL MOBILITY IN ANCIENT HUMAN POPULATIONS OF IRAN AND SYRIA**

Several studies have shown relation between the level of terrestrial mobility and some parameters of the midshaft femoral and tibial geometry. In short, the more mobile population, the more developed bone shaft in antero-posterior plane as compared to the medio-lateral plane. The present study compare external femoral midshaft shape in ancient human populations from five different locations (Mazandaran province, Iran; Southern Zagros, Iran; Khabur drainage, Syria; Middle Euphrates valley, Syria; Kuwait) differentiated both by topography and by subsistence strategy. Most studied skeletons are dated to the Chalcolithic and the Bronze Age. The results suggest that the topography is an important factor influencing the midshaft femoral and tibial geometry.

**ANIMAL PROCUREMENT AND PROCESSING IN THE MIDDLE EPIPALEOLITHIC OF SOUTHERN LEVANT: ZOOARCHAEOLOGICAL AND ANTHROPOLOGICAL IMPLICATIONS FOR STORAGE AND SOCIAL ORGANIZATION**

The Epipaleolithic period in southern Levantine Prehistory plays a central role for human evolutionary studies as it represents the first true departure from an Upper Palaeolithic way of life followed by significant socioeconomic and cultural transformations. There is a general trend among researchers to focus on the latest phase of the Epipaleolithic, which is synonymous with the Natufian cultural complexity. While there is no doubt that Natufian groups played a crucial role in the articulation of cultural process we are becoming increasingly aware- based on recent fieldwork- that cultural complexity has deeper roots.

This paper focuses on the Middle Epipaleolithic faunal assemblages recovered from Kharaneh IV, a multicomponent open-air site in the Eastern Jordanian desert. Moving away from a species list approach I am trying to address broader archaeological and anthropological questions related with the nature of the Middle Epipaleolithic using direct zooarchaeological evidence and looking at the ethnographic record of mobile people. Questions such as the organization of space, subsistence intensification and risk reducing strategies including also the possibility of storage are some challenging issues that still need to be explored for the Epipaleolithic groups. Also the present study aims to move beyond subsistence and study the whole sequence of carcass processing as a fundamentally social activity, following the concept of chaîne opératoire.

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**DIAGNOSIS OF SKELETAL LESIONS WITHIN LEVANTINE UPPER PLEISTOCENE POPULATIONS**

During the last decades, bio-archaeological studies of Near Eastern past populations have emerged which included pathological insights. Such studies attempt to evaluate the potential for deriving useful information about Paleolithic societies in the Mediterranean Levant, keeping in mind of course that a large number of infectious diseases are undetectable as they leave no stigmata on the skeletal remains. This contribution focuses on Qafzeh Cave (Israel) that contains the largest sample of Middle Paleolithic partial skeletons known from a single site in the Levant.

This sample consists of Mousterian hunter-gatherers dated to  $92 \pm 5$  ka BP that are commonly accepted as early representatives of anatomically modern humans. Although the hominid sample size limits the possibility to carry out a relevant examination of the morbidity of the original population, it provides a modest window into the anomalies, pathological disorders and susceptibility to injury of the human group represented. Furthermore, a majority of individuals failed to attain reproductive adulthood and some of them have survived the insult sufficiently to leave diagnosable lesions. The growth disorders detected are known in extant populations as to be no lethal, but in the absence of adequate treatment and care, they were fatal for the Qafzeh immature individuals.

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**DENTAL EROSION IN THE MIDDLE EUPHRATES VALLEY (SYRIA)**

Much anthropological research focuses on the mechanical dental wear (e.g. abrasion or attrition), but there are not many publications about dental erosion among archaeological populations. Dental erosion is commonly defined as the physical results of a pathologic, chronic, localized loss of hard dental tissue (enamel, dentin, cementum) that is chemically etched away from the tooth surface by acid without bacterial involvement. Chemical erosion of the enamel and dentin is most commonly produced by excessive and frequent intake of an acidic diet and less commonly by the reflux of hydrochloric acid from the stomach. Tooth erosion was described as a condition distinct from caries lesions as early as the 18th century.

Intensive excavations in the Near East, which have been carried out for over one hundred years, show that this land merits to be called a cradle of civilisation. In this light, the region of the Middle Euphrates Valley is considered one of the most interesting places. The research materials presented in this work concerns the population from Tell Ashara (ancient Terqa), situated on the right bank of the Middle Euphrates, around sixty kilometres north of Mari, is known to have been a site already in the 3rd and 2nd millennium BC. At present excavations are being carried out in the area of the Middle Euphrates Valley on the site of Tell Hariri (ancient Mari) and on several sites near the town of Tell Ashara, namely, in Terqa and Tell Masaikh.

The dental erosion can be quite an interesting source of knowledge about the state of health and dietary and hygienic changes. The following five periods are especially interesting: Modern (1850–1950 AD), Islamic (600–1200 AD),



Late Roman (200–500 AD), Neo-Assyrian (900–700 BC), Middle (2200–1700 BC) and Early Bronze (2650–2350 BC). We examined 1176 permanent posterior teeth (molars) from 196 individuals. To find out whether occlusal loss was due to erosion we used Bell's method. Although this method is criticized by some authors, there is not better 'metric method' which can be used in archaeological series. The dental erosion was identified in 42 individuals. The most often chemical lesions are observed in Neo-Assyrian (77%) and Modern (58%) periods. The rarely it was found in the oldest period – Early Bronze (11%). The difference is statistically significant ( $df=5$ ,  $\chi^2=30.2$ ,  $p=0.0000$ ). It means that the diet of Neo-Assyrian and Modern populations had to clench considerable amounts of substances loss of hard dental tissue. It is particularly interesting with reference to the Neo-Assyrian period. As we know some authors believed that the canal called Nahr Dawrin, located on left upper river terraces of lower Khabur and middle Euphrates, was built in this time. The heightened irrigation gave the possibility to cultivate many plants, and changed the economy of the region, which was transferred into the significant frequency of the dental erosion.

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## **POROTIC HYPEROSTOSIS AND CRIBRA ORBITALIA IN SKELETONS FROM KÜLTEPE/KANESH, TURKEY**

Kültepe/Kanesh is situated near the modern city of Kayseri on one of the main east-west routes across central Anatolia. The Assyrian name of the city was Kanesh, while the Hittites knew it as Nesha. The site consists of a mound and a terrace along the eastern side. The mound has evidence of occupation dating from the Early Bronze Age to the Roman period. Cuneiform tablets, which were found in the terrace, showing that a colony (Kârum Kaneš) of Assyrian traders was established there at the beginning of the 2nd millennium BCE. The Kârum Kaneš existed for 250 years at the most. In 2006, 2007 and 2008 seasons several burials were found in the Kârum area in domestic contexts. During the 2007 and 2008 field seasons a variety of burials were discovered in a Hellenistic-Roman cemetery located in the upper level of Karum. There were cist graves, simple inhumations, and terracotta sarcophagi which seem to have been used for a relatively long period from 3rd century BCE and to 5-6th century CE.

The osteological examination of the human skeletal remains from Kültepe/Kanesh showed a common occurrence of porotic hyperostosis (PH) and cribra orbitalia (CO) both in Bronze Age and Hellenistic/Roman samples. PH and CO are pathologic conditions which are seen in the form of porotic appearance on the cranial vault and orbital roofs. These conditions are generally linked to genetic or acquired childhood anemia. Lawrence Angel (1966) suggested that the common appearance of PH was a result of thalassemia in ancient Eastern Mediterranean, where malaria was endemic. Except for genetic anemias, the most supported explanation for common appearance of PH and CO in skeletal populations has been the iron deficiency anemia. However, Walker et al. (2009) opened a discussion by indicating that the most likely cause of PH and CO is megaloblastic anemia due to B12 and/or folate deficiency. It was generally accepted that CO share the same etiology with PH. However, recent literature proposes a diverse explanation on its etiology, including subperiosteal hematomas due to scurvy and rickets (Ortner 2003). The aim of this presentation is to discuss the role of above mentioned reasons for the common occurrence of PH and CO in Kültepe/Kanesh sample.

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## **ARCHAEOBOTANY IN THE "HILLY FLANKS": THE POTENTIAL OF RECENT RESEARCH AT EARLY NEOLITHIC SITES IN THE CENTRAL ZAGROS**

The transition from hunter-gatherer to early farming communities that took place in the Early Neolithic of the Near East is still not fully understood. Recent excavations in the Central Zagros, an area that extends over part of the so-called 'hilly flanks' of the Eastern Fertile Crescent, have successfully recovered plant remains from several Early Neolithic sites (from ca. 9,800 to 7,000 BC) of differing elevation, topography and local environment. This presents a significant opportunity to compare and contrast datasets across an ecological transect as well as addressing existing geographical and chronological gaps in the archaeological record for this region (c.f. Riehl 2011). My research focuses on archaeobotanical evidence from these sites and its potential, as part of a multi-disciplinary approach, to elucidate the variety of available plant-resources and how people used them in the past, including the roles of wild and domesticated plants on site. Particular attention is also paid toward exploring links with animal husbandry in the light of recent studies that emphasize the importance of appreciating the integrated nature of plants and animals in the context of transitions to agriculture (Bogaard 2005; Smith and Miller 2009).



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### **IF THESE WALLS COULD SPEAK ...:**

#### **INTEGRATION AND INTERPRETATION OF FAUNAL, ARTEFACTUAL AND ARCHITECTURAL REMAINS FROM ANCIENT TUSHAN**

The integration of architectural, artefactual and faunal remains can increase our understanding of social and economic activities in archaeological sites in the Near East. This paper presents the results of recent analyses from the excavation of the Late Assyrian palace found in the provincial capital of Tušhan (Ziyaret Tepe) along the upper Tigris River in SE Turkey. At its peak of occupation (ac. 882–611 BC), it was a thriving 32 ha city.

From the inception of the excavations, biological (faunal and botanical remains) data have been integrated into the more conventional methods of excavation and analysis. This has contributed to a better understanding of the use of rooms and the documentation of specific areas of activities within the palace, including food processing, consumption, and disposal.

This paper demonstrates how an integrative approach enhances reconstruction of room function within the Palace by incorporating the analysis of the faunal, architectural and artefactual data.

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#### **THE EXCAVATION AND ANALYSIS OF PORCUPINE DENS AND BURROWING ON ANCIENT FAUNAL AND HUMAN REMAINS AT TEL ZAHARA (ISRAEL)**

The destruction and disturbance of archaeological deposits by burrowing animals (bioturbation), and particularly by rodents (rodenturbation), is well-attested. This attraction of burrowing rodents to archaeological sites exists for the same reason that humans also desire to excavate them: the presence of architectural features, material culture, and other evidence of human activity left behind in the soil. For the human excavator, this presents opportunities to analyze the human past; for the burrowing rodent, the looser soil and other remains provide easier material through which to dig, as well as increased access to biological remains. In particular, cemeteries possess an additional attraction for these rodents, as the presence of human skeletal remains provide increased opportunities for bone-gnawing for the animal population.

The recent excavation of modern Indian porcupine (*Hystrix indica*) activity in a sub-recent Muslim cemetery and in other archaeological remains at Tel Zahara, located in the Central Jordan Valley in Israel, has furnished further data regarding effects of burrowing activity and bone-gnawing on both faunal and human remains.

The results of this excavation and subsequent analysis reveal porcupines as a major taphonomic agent responsible for bone modification at tell sites in Israel, and, by extension, in other regions as well. These results have implications for future study of the role of rodents in the post-depositional modification of both cemeteries and other stratified remains at archaeological sites in Israel and elsewhere.

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#### **DNA OF PEOPLE LIVING IN THE MIDDLE EUPHRATES VALLEY 2.5-4.5 KYRS AGO**

Genetic features of Fertile Crescent populations are still poorly understood since its environment promotes faster and deeper degradation of DNA molecules than in temperate regions resulting in limited number of amplifiable sequences. The access to archaeologically and anthropologically well characterized skeletal material having contact with not more than 3 people involved since unearthing motivated us to undertake the study.

Molecules carrying genetic information have been extracted from teeth of skeletons collected at Tell Misaikh and Terqa archaeological sites at Central Valley of Euphrat (dated from 2500 to 1000 BC depending on the sample). Marker sequences known to undergo rapid selection or characterized by high rate of variation were selected for the analysis, among them alleles of nuclear genes  $\Delta F508$  CFTR (CF) and C/T 13910 of MCM6 (lactase persistence) as well as mitochondrial hypervariable region (HVR). Beside all precautions commonly accepted and necessary when working with aDNA (Cooper and Poinar, 2005) mtDNA haplotypes of all individuals involved in the research were examined to compare with those of the studied samples and confirm authenticity of obtained sequences.

Of 8 skeletal samples analyzed, 4 delivered amplifiable DNA sequences which belonged to people living in different places and time: three from Terqa (S-5 TQ 28F 250/2700-2400 BC, S-6 TQ 28F 256/2200-1900 BC, S-8 TQ 28F 112/2700-2500 BC) and one from Tell Misaikh (S-7 MK 13G 117/400-1000 BC). S-5 has been assigned to haplogroup K which

arouse approx. 30 Kyr ago in the area of Near East and is characteristic for the region. Individuals S-6, S-7 and S-8 represented haplogroup M49 the presence of which at the time suggests a migration from the Indian Peninsula since the haplogroup had arisen there some 30-45 Kyr ago (Soares, 2010). Only two of the studied specimens delivered amplifiable nuclear DNA sequences but none of them was represented by  $\Delta$ F508 or T-13910. Supported by grants no N109 286737 and N N303 319837 from the Ministry of Science and Higher Education.

## 7. ISLAMIC SESSION

**SUPERVISORS: ALISON GASCOIGNE, CRISTINA TONGHINI, ALAN WALMSLEY, DONALD WHITCOMB**

<b>AUTHOR(S)</b>	<b>TITLE</b>	<b>DAY, HOUR</b>
IGNACIO ARCE	AN INTERPRETATION MODEL FOR THE TRANSITIONAL PERIOD FROM LATE ANTIQUITY TILL THE ARRIVAL OF ISLAM	WED, 12.05
SHIRIN ATRIS	THE LEGACY OF ALEXANDRIAN HELLENISTIC COLUMNS IN ISLAMIC ART	TUE, 15.20
MORTEZA ATTAIE	SLIP-PAINTED POTTERY: TYPES, WIDESPREAD, DATING	TUE, 14.55
LOUISE BLANKE	CISTERNS, RESERVOIRS AND FARMING – NEW EVIDENCE FOR URBAN DEVELOPMENT IN JARASH, JORDAN	WED, 12.30
JULIE BONNÉRIC	AN ARCHAEOLOGY OF LIGHT IN CLASSICAL ISLAM: STUDYING AN IMMATERIAL PHENOMENON IN MEDIEVAL MOSQUES	TUE, 17.10
MARYAM DEZHAKHOVY	AN ARCHAEOLOGY OF AN OPPOSITION	MON, 18.00
AMIR GORZALCZANY	A LABORATORY AND INSTRUMENTS RELATED TO CHEMICAL ARTS DATED TO THE EARLY ISLAMIC PERIOD DISCOVERED AT RAMLA, ISRAEL	TUE, 15.45
MAHMOUD HAWARI	HISHAM'S PALACE IN CONTEXT: ARCHAEOLOGICAL LANDSCAPE SURVEY AT HINTERLAND OF KHIRBAT AL-MAFJAR, JERICHO, PALESTINE	WED, 14.55
STEFAN HEIDEMANN	TRANSFORMATION OF THE MATERIAL CULTURE IN SYRIAN CITIES IN THE 12TH CENTURY. "CLASSICAL REVIVAL", "UMAYYAD REVIVAL" OR "SUNNI REVIVAL" - A MULTIDISCIPLINARY APPROACH	TUE, 18.00
LAMIA AL-KHOURI	ARCHAEOLOGICAL EXCAVATIONS AT GADARA (UMM QAIS), 2011 SEASON OF EXCAVATION	MON, 14.55
SOFIA LAPARIDOU	IDENTIFYING CHANGING AGRICULTURAL ECONOMIES AS KEY FACTORS OF SETTLEMENT SHIFTS IN MEDIEVAL ISLAMIC JORDAN: A PHYTOLITH ANALYSIS APPROACH	WED, 9.00
AYALA LESTER	METAL WARE OF THE FATIMID PERIOD – THE STATE OF RESEARCH	TUE, 16.45
STEPHEN MCPHILLIPS	THE UPPER ORONTES VALLEY: NEW EVIDENCE OF A DYNAMIC RURAL ECONOMY IN THE ABBASID AND OTTOMAN ERAS	WED, 9.25
DANIEL MAHONEY	THE ISLAMIC CERAMIC INDUSTRY OF THE DHAMAR BASIN IN THE CENTRAL HIGHLANDS OF YEMEN	TUE, 14.30
ROBERT MASON	CERAMICS TO THE CORINTHIANS: ISLAMIC POTTERY IN MEDIAEVAL CORINTH	TUE, 9.00
RAFFAELLA PAPPALARDO	"WHEEL-FREE": THE ISLAMIC HANDMADE POTTERY FROM TELL BARRI (SYRIA)	TUE, 9.25
ANDREW PETERSEN	RUWAYDA AND THE SEA	WED, 15.20
MARIE-ODILE ROUSSET	THE EARLY ISLAMIC FORTRESS OF QINNASRIN (SYRIA)	MON, 15.20
MOAIN SADEQ	UNPUBLISHED MAMLUK POTTERY AT THE ROM WITHIN ITS HIERARCHIC AND CULTURAL CONTEXTS	MON, 9.50
HAMED SALEM	THE BYZANTINE AND MEDIEVAL VILLAGE AT KH. BIRZEIT IN RAMMALLAH REGION/ PALESTINE	WED, 11.15
ROBERT SCHICK	MADABA, JORDAN IN THE EARLY ISLAMIC PERIOD	WED, 14.30
ULRIKE SIEGEL	AR-RAQQA/AR-RAFIQA (SYRIA) - ARCHITECTURAL CONCEPTS OF THE RESIDENTIAL BUILDINGS OF THE CALIPH HARUN AR-RASHID	TUE, 17.35
MARGREET STEINER	TELL ABU SARBUT: FROM INDUSTRIAL SITE TO RESIDENTIAL VILLAGE	WED, 10.15

EDNA J. STERN	MAMLUK-PERIOD POTTERY: BEYOND TYPOLOGY AND CHRONOLOGY	TUE, 10.15
ABED TAGHAVI, HOSSEIN TAROMIAN	AN ARCHAEOLOGICAL SURVEY OF TOMB TOWERS AND SEPULCHRAL BUILDINGS IN THE CITY SEMIRAN DURING ISLAMIC TIMES	MON, 17.35
MUSTAFA TUPEV	BUKHARA OF THE ABULKHAYRIDS: ARCHITECTURE AND URBANISM	MON, 16.45
BETHANY WALKER	EXERCISING POWER ON THE MAMLUK FRONTIER	MON, 15.45
ALAN WALMSLEY	ISLAMIC ARCHAEOLOGY IN QATAR: AL ZUBARAH AND ITS HINTERLAND(S)	WED, 14.45
DONALD WHITCOMB	KHIRBET AL-MAFJAR OR QASR HISHAM? CHANGING PERCEPTIONS OF A PALESTINIAN MONUMENT	MON, 14.30
PAUL WORDSWORTH	INFRASTRUCTURE AND INTERACTION: APPROACHES TO THE ARCHAEOLOGY OF MEDIEVAL TRAVEL AND TRADE ROUTES IN SOUTHWEST CENTRAL ASIA	MON, 17.10

#### **IGNACIO ARCE**

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#### **AN INTERPRETATION MODEL FOR THE TRANSITIONAL PERIOD FROM LATE ANTIQUITY TILL THE ARRIVAL OF ISLAM**

The comprehensive analysis of the material evidences gathered in the recent research conducted in the Jordanian Badiya on several structures of the Limes Arabicus, reused from the 6th throughout the 8th century AD, has led to the conclusion that the geographic area stretched by the Limes was not only the political border between two mighty empires, but also a social and cultural “internal border” between the deeply Hellenised settled populations living in towns and villages and the semi-nomadic pastoralist population inhabiting the semi-deserted steppe known as the Badiya, a border area into which new groups of Arab tribes migrated from Yemen and the Hijaz during Late Antique period. The interaction of these Arab groups with the divided society that they found in Orient, and the patterns of social relationship they developed, are essential to understand the socio-political context and the period. Besides, they represent a clear antecedent of those developed later in Umayyad period, and as a whole they are essential to understand the changes that occurred in the region from this period onwards, especially those related to its character as “frontier”. The aim of this paper is to present an interpretation model through a broad picture of this context, unfolding the diachronic evolution from the 3rd throughout the 8th century, using as material evidence those provided by our research, presenting the clues to understand many of the changes that will take place in the following centuries.

#### **SHIRIN ATRIS**

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#### **THE LEGACY OF ALEXANDRIAN HELLENISTIC COLUMNS IN ISLAMIC ART**

Among all Greek cities, Alexandria is known to have immensely captured the interest of the ancient and classical worlds. Literary sources account for the greatness and vastness of the city by noting that planners and architects were determined to create a city of dimensions hitherto unknown among Greek and indeed Egyptian cities. Columns and colonnades constituted major and integral components of the Hellenistic architecture in Alexandria and elsewhere, with the style of Hellenistic architecture appearing to have become universal, judging from the surviving examples found in Egypt and elsewhere in the Hellenistic world. The architectural styles of Alexandrian architecture also appear to have triggered significant impact on the architectural and decorative styles of contemporary and consecutive cultures such as Islamic art. This study investigates Alexandrian Hellenistic orders and traces their influence on Islamic art of the early period. The research considers the process of artistic communiqué between Hellenistic and Islamic arts via surveying the historical and cultural interface between both of the respective cultures, assuming artistic representational norms as case study. The basis for the interpretation of artistic dialogue will be the pictorial and three-dimensional material culture attesting for palpable and subtle forms of assimilation of Alexandrian columns and orders into early Islamic architecture.

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## **SLIP-PAINTED POTTERY: TYPES, WIDESPREAD, DATING**

About two centuries after the appearance of Islam, the production of pottery are gradually changing through Islamic world. At eastern parts these changes are taking place coincident with Iranian movements and establish independent dynasties such as Tahirids and Samanids.

The most important contribution of Samanid artists to Islamic pottery-making was the invention and completion of the Slip-painted wares. Samanid potters carried pottery decoration to new heights from technical and so aesthetic point of view in the Muslim East about two centuries before the introduction of alkaline glazes and artificial ceramic bodies by using pigments mixed with a clay-slip upon the surface which is covered with a layer of colored or white slip and than a lead glaze over. Slips are usually applied overall on the inside of the vessel and to a point just above the foot to outside. This method finds the solution for running the colors under the glaze when it was fired in the kiln. This school not only affected from Sasanian art, Chinese and Abbasid wares but also presented creative and artistic types during the history of Islamic pottery production: some of the most impressive ceramics ever made in the Islamic world, and among the great ceramics of the world. Of the simplest materials, they are most beautifully made. Although these type of pottery are produced with an approximately same technique all over the centers of production but varieties in details of decorative method, color and combine decorative schemes such as abstract, figurative and calligraphic, make scholars to divide this wares into different groups like buff wares, black on white wares, polychrome on white wares, wares with a colored ground slip, yellow staining black wares and imitation luster wares. Archaeological evidence introduce Nishapur and Afrasiab (old Samarkand) as the main centers of the most interesting Slip-painted ceramics and also central Asia, Great Khurasan, Sistan, parts of southern region of Caspian Sea and Kirman as the area in which this kind of ceramics developed. This is obvious that development of Slip-painted potteries are in the lands which are underdominance of Samanids; It means that the production of Slip-painted wares widespread from central and southern Iran eastward deep into central Asia and not considerably in central and western of Iran. Production of large amount of the ceramics begins during 9th century A.D (3th century A.H) and it reaches its climax in 10th century A.D (4th century A.H). During 11th century A.D (5th century A.H) when the usage of alkaline glaze, Stone-paste for ceramic body and also transmission of political, cultural and artistic centers from east to central parts of Iran are common, the production of Slip-painted pottery decreased qualitatively and restricted to regional centers and their production are forgotten gradually.

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## **CISTERNS, RESERVOIRS AND FARMING – NEW EVIDENCE FOR URBAN DEVELOPMENT IN JARASH, JORDAN**

Recent archaeological work in Jarash, Jordan has produced new evidence about the economy of the town and its continuity into the early Middle Ages. Survey of the otherwise unexplored southwest quadrant of the site has revealed an extensive system of buildings, streets -and alleys and has documented several occupational phases, elucidating the final pre-modern use of this part of town, and hinting to the fate of Jarash at large.

A focused study of five adjacent areas above a series of agricultural terraces has documented a development from cemetery in the Hellenistic period, to streets and larger buildings aligned with the Roman grid system. In Late Antiquity and the Early Islamic period, buildings encroached onto the streets, possibly reducing them to narrow alleys and finally the site saw a transformation into field systems, laid out within a ruined cityscape. Of particular importance to our understanding of the infrastructure of the Islamic town was a water network comprised of a large open reservoir and at least nine cisterns that are likely to have constituted the principal water supply of the Islamic town centre.

Complemented by data from the Danish-Jordanian Islamic Jarash Project, and with reference to contemporary sites in the region, this paper offers a new perspective on the urban development of a provincial town in the eastern Mediterranean from Late Antiquity into the early Middle Ages.

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## **AN ARCHAEOLOGY OF LIGHT IN CLASSICAL ISLAM: STUDYING AN IMMATERIAL PHENOMENON IN MEDIEVAL MOSQUES**

Light is a universal theme, foundational for all three monotheistic religions. Scholars have discussed its theosophical points as a symbol of the divine, but it has rarely been addressed archaeologically. Can light, though immaterial and evanescent, be understood and thus become an archeological object? Different sources – photometrical, archaeological,

and textual – point to the possibilities of exploiting light, either directly – through objects that transform or redirect it – or indirectly – through references that mention it, and occasionally exalt its signification.

Mosques represent a pertinent subject for an archeology of light. These edifices take light into account in its three dimensions: as a vector of perception, spatial organizer, and significant symbol. In the mosque, light is used both to exalt God and for its functional virtues. The mosque is not only a place to celebrate God, but also a space for life and socializing. The architectural use of light obtains a certain visual comfort, as in any secular construction. It also helps create a particular space affirming its sacred character, contrasting to natural, raw and uniformly distributed light of secular space. Light can indeed participate in the creation of an immaterial architecture, one that superimposes itself on the concrete architecture of religious edifices

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## **AN ARCHAEOLOGY OF AN OPPOSITION**

Neshat garden is a late Qajar - First Pahlavi building which is located in northeastern Iran, Khorasan, Neishabour, Taqi Abad village. The garden owner is Salar Motamed, a political activist who was deported to Taqi Abad village by the First Pahlavi government. It was excavated during July and August 2011 by a group of archaeologists including the author. Neshat garden includes two buildings, the main one which is located at the central part surrounded by a circular belt of trees. The building on the north has been used by servants and other personnel who worked in the garden.

The excavation results revealed that the building has experienced 3 phases of architectural changes including creation of new spaces via partition making new ways for traffic.

The investigation of related documents as well as excavation results show that Neshat garden has acted as a place for political activities of an opposition group during the First Pahlavi period. The research discusses the nature of this opposition via presenting excavation results.

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## **A LABORATORY AND INSTRUMENTS RELATED TO CHEMICAL ARTS DATED TO THE EARLY ISLAMIC PERIOD DISCOVERED AT RAMLA, ISRAEL**

During the years 2004 – 2008, wide-scale excavations were carried out at Ramla, Israel. A vast industrial area was unearthed, revealing dozens of industrial installations related to different crafts. Among the most striking discoveries, was a small apparatus, most probably associated to distillation. It was identified as a primitive alembic. The feature, preserved only in its lower third, was star-shaped and consisted of several jars surrounding a central, larger one. The jars were linked by ceramic pipes. Hollow conical brass devices were found in the bottom of the recipients. The general layout of the device resembles distillation systems described in medieval sources and depicted in drawings and etchings, attributed to chemistry or alchemy laboratories.

Comparable, albeit not identical unpublished devices were previously revealed in the same area. These appliances, coupled with the present one, suggest for the first time the existence of a well-developed chemical industry during the Umayyad and Abbasid periods in Israel, when the chemical arts were highly developed in the Islamic world.

Interestingly enough, a rather similar installation was discovered lately in Valencia, Spain, dated by the excavators roughly to the same period and attributed an analogous identification. Therefore, it seems that we witness a remarkable chronological, typological, technological, functional and contextual similarity at both ends of the Mediterranean basin. This fact could significantly contribute to our understanding about the diffusion of knowledge during the early stages of the Islamic period.

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## **HISHAM'S PALACE IN CONTEXT: ARCHAEOLOGICAL LANDSCAPE SURVEY AT HINTERLAND OF KHIRBAT AL-MAFJAR, JERICHO, PALESTINE**

Hisham's Palace was destroyed by an earthquake in 749. It is typical of the 8th century Umayyad palaces found elsewhere in the Levant. The published 1940s excavations at the site focused solely on the architectural analysis of the ruins, and the various media of its decorative arts. However, these excavations stopped short from providing clear answers to numerous fundamental issues: the function of the palace and its relationship to the contemporary town of Jericho; who really built the palace and when; the complex water management system associated with the palace; the extent



of the seismic impact of the earthquake which destroyed the palace.

The joint Birzeit-UCL Khirbat al-Mafjar Archaeological Project was initiated to achieve a better understanding of the Umayyad palace within the context of its cultural landscape. The last two seasons of archaeological landscape survey, carried out in winter of 2011 and 2012, revealed spectacular results. These include the recording of various elements of the two major aqueducts bringing water to the palace from 'Ain Duyuk from the west, and from 'Ain el-Sultan from the south west; the discovery of a new Early Islamic settlement west of the palace.

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### **TRANSFORMATION OF THE MATERIAL CULTURE IN SYRIAN CITIES IN THE 12TH CENTURY. "CLASSICAL REVIVAL", "UMAYYAD REVIVAL" OR "SUNNI REVIVAL" - A MULTIDISCIPLINARY APPROACH**

The transformation from the Early Islamic period to the Middle Islamic era during the 12th to 13th centuries is one of the most significant watersheds in world history. For the first time the majority of the population in the Islamic realm was Muslim - with regional differences cityscapes became islamized, now being dominated by Islamic institutions. The blossoming included architecture, material culture and literature.

The material culture showed also different aspects: architecture included classicising elements, which can also be found in different materials, coin design, woodwork, and also in techniques which are new for Syria, such as lustre painted wares, and mosaics. The reasons for that artistic transformation are poorly understood and rarely explored yet. In a scriptural society such memories within the visual culture have to be reflected in the literary evidence, according to Jan Assmann.

The paper presents some new research in material culture and its purposeful design as reflection of cultural memory.

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### **ARCHAEOLOGICAL EXCAVATIONS AT GADARA (UMM QAIS), 2011 SEASON OF EXCAVATION**

This paper will present the results of excavation at the archaeological site of Gadara (Umm Qais), one of the ten Roman cities (Decapolis), at the region of northwest Jordan. The excavation was held under the supervision of the author, during the period between the 15th of June and the 28th of July 2011. It took place on Area Z at the site, which situates along the southern edge of the main colonnaded street (Documanus Maximus), west of the Ottoman village above the Acropolis.

Different phases of occupation were uncovered, the first phase shows the main building at the area, and witnessed the foundation and remains of the building, that is roughly dated to the Late Hellenistic - Early Roman Period. The second phase, most recognized one, was the Late Byzantine/Umayyad. This phase was well represented by a large number of pottery sherds, and a room with a mosaic floor.

The Abbasid and Ayyubid/Mamluk periods at the area was visible mainly through a number of pottery sherds, moreover, the architectural remains of the post-Umayyad periods (Abbasid and Ayyubid/Mamluk) were visible in some squares. The walls in those squares were built using either well cut stones reused from ancient buildings or even unwell cut stones mainly of smaller sizes. Some Ionic capitals, Corinthian capitals, and column drums mainly of basalt were also parts of the walls. These walls were based on soil.

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### **IDENTIFYING CHANGING AGRICULTURAL ECONOMIES AS KEY FACTORS OF SETTLEMENT SHIFTS IN MEDIEVAL ISLAMIC JORDAN: A PHYTOLITH ANALYSIS APPROACH**

Previous research on medieval Islamic period focused on the fall of the Mamluk Empire by the end of the 14th century and the political and economic transformations that followed during later periods; Ottoman and British Mandate periods. Central to these studies is historic and archaeological research on medieval Jordan, including Madaba Plains and North Jordan Projects. A selective agricultural and administrative investment was stressed as a possible major factor contributing to the prosperity of some regions and the sudden decline of previously thriving rural centres, in addition to environmental change. The focus of a political economic approach shifted towards the investigation of local environmental parameters too, such as the quality of agricultural land-soil properties, local rainfall variations and local land use changes.

Within this new methodological framework, this project aims to cross reference palaeo-ecological data with archival and archaeological information in order to contribute to this new direction of research on medieval Islamic Jordan.

Phytolith remains are used to assist the investigation of the cropping practices adopted by the Islamic state and villagers and how they affected the environment of the medieval villages and hinterland or migration patterns. The nature of the production and deposition of phytoliths as well as their persistence in time are major factors that make phytoliths a solid proxy data for palaeo-ecological research and archaeological interpretation. For the purposes of this project, soil samples for phytolith analysis have been acquired from selected sites under study, indicative of different geographical regions (Central, North and South Jordan). This paper presents some preliminary results of this work and what the results suggest so far regarding the political agricultural economy and subsistence economy of the sites under study.

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## **METAL WARE OF THE FATIMID PERIOD – THE STATE OF RESEARCH**

The attribution of a vessel as belonging to a particular period is often based upon an inscription that dedicates it to a person of high rank and/or bears the name of the artist. Another possibility is the identification of the decorative repertoire which is a factor of stylistic considerations.

This is particularly relevant for research in Fatimid metalware which, until very recently has suffered from a dearth of material. Until the 1990s, there were only a few publications dealing with the subject.

Grube in 1965 identified a bowl, made of brass and decorated with an inscription, as Fatimid. He based on its epigraphic resemblance to tombstones dated to the middle of the 11th century. Dodd in 1972, when dealing with a zoomorphic vessel compared it stylistically to Tulunid and Fatimid architecture. The exhibitions held at the Hayward Gallery in London in 1976 and in Paris and Vienna in 1998 presented several Fatimid metal vessels. About the same time, publications discussing Fatimid metalware by Fehérvárie and Baer appeared. The quantity of available material changed entirely with the discovery of several metal hoards in Israel over the past two decades. The first was found at Caesarea in 1995, encompassing 130 vessels and the second was discovered in Tiberias in 1998, where a workshop included 650 vessels and about 200 kilograms of waste. These major findings exposed various groups of vessels such as lampstands, ewers, basins and bowls, trays, buckets, incense burners, boxes, braziers, etc. Beside these hoards additional groups of metalware were found in Tiberias, Caesarea and Ramla.

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## **THE UPPER ORONTES VALLEY: NEW EVIDENCE OF A DYNAMIC RURAL ECONOMY IN THE ABBASID AND OTTOMAN ERAS**

Archaeological and ethnographic work in the Upper Orontes Valley of Syria in autumn 2010 has produced new evidence about rural settlement in a region whose extra-urban Islamic history is little known. Test pits at nine village sites complement survey data demonstrating a continuity of occupation from late antiquity through to the ninth or even tenth centuries. While this phenomenon is now attested in many parts of the eastern Mediterranean world, the excavation also revealed the development of new agricultural settlements at the end of this time range, potentially corresponding to the Abbasid period expansion documented in localised regions in northern Syria. Parallel investigation of Mamluk and Ottoman village sites show that the region was also of primary economic significance in the medieval and early modern eras. Watermills are a prominent landmark on the Orontes river, and provide another element of the rural infrastructure indicative of the prolific economic productivity of the area through to the twentieth century. This paper will synthesize the results of recent research exploring rural settlement and water use in this critical agricultural zone.

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## **THE ISLAMIC CERAMIC INDUSTRY OF THE DHAMAR BASIN IN THE CENTRAL HIGHLANDS OF YEMEN**

Located 100 kilometers south of Sanaa, the textual record states the Dhamar Basin was continually conquered by various Yemeni and foreign groups, and then integrated into their territorial holdings. While this political subjugation influenced the local architectural traditions, the basin's pottery reveals a highly localized industry exhibiting qualities more in common with its regional pre-Islamic predecessors than the internationally influenced Islamic assemblages found on the coasts of the Red Sea and the Indian Ocean. As a result, the diversity of forms and inconsistency of quality of the regional pottery seem to indicate a dispersed and informal production. At the same time, a bureaucratic financial document from the middle Islamic period, which details specific types of pottery vessels produced in the Dhamar

region, indicates some level of standardization was also present. Based on a preliminary analysis of the ceramics collected by the Dhamar Survey Project since 1994, this paper aims to investigate how the multiple dimensions of this persistent ceramic industry may reflect a more nuanced position of the local population within the wider political arena of Yemen during the Islamic period.

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## **CERAMICS TO THE CORINTHIANS: ISLAMIC POTTERY IN MEDIAEVAL CORINTH**

The city of Corinth in Greece is well-known for its ancient significance; however, the site was also probably the most important city in the Greek peninsula throughout the mediaeval period, being the capital in the Byzantine Period and also the Frankish occupation. During this period contact with the Islamic World is amply demonstrated by the abundant presence of ceramics from the region, revealed by excavations at the site since the 1920's by the American School of Classical Studies. Although it has not yet been possible to undertake petrographic analysis of the finds, examination of bodies, glazes, and pigments with 10X magnification enables identification of most types. These include lustre-ware from Abbasid Iraq, plus Fatimid Egypt and Syria, with associated wares. There seems, however, far less Ayyubid-era pottery, which I will contrast with the contemporary Amalfi region in Italy; and a complete lack of Mamluk-era pottery, also noticed at Amalfi. Apart from the significance of the pottery in the story of contact in the period, the ceramics include some unusual pieces, possibly required in larger numbers at Corinth than in Islamic contexts in the Middle East because of some specific function or cultural requirement, or the vagaries of archaeological preservation.

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## **"WHEEL-FREE": THE ISLAMIC HANDMADE POTTERY FROM TELL BARRI (SYRIA)**

The handmade pottery is a part of Islamic common ware category. This sub-ware comprises a wide range of shapes that are used in all areas of domestic life: storage, processing food, cooking, and lighting up. At Tell Barri, especially during the last excavation campaigns, a large amount of handmade ware sherds has been discovered.

The specimens analyzed come from two areas of the site; one on the northern slope (Area L) and the other in the lower town, south of the tell (Area R); both are dated back to middle Islamic period (XI-XIII century AD). In these areas the handmade ware is almost 45% of pottery assemblage.

The aim of this paper is the complete and detailed study of these vessels. First it will be shown a preliminary typology of all shapes, and then of the many decorative pattern.

The analysis of technical aspects will be also revealed through the last ethnographic research and experimental archaeology.

Moreover, glazed ware, found in the same contexts, will be presented aside of them, trying to define a more complete and accurate chronological assessment and a better understanding of the archaeological context.

Despite handmade ware is not enough published, we will try to provide parallels and differences with the materials in the region and in a broader area (Near and Middle East).

Analyzing all this features, we mean to make clear, at last, if primitives technologies are related to economic decline or related to free choices set by producers and consumers.

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## **RUWAYDA AND THE SEA**

The large historic site of Ruwayda is located on the northern shore of the Qatar peninsula and is clearly oriented towards the sea. The site has been excavated over three seasons by the University of Wales Trinity Saint David on behalf of the Qatar Museums Authority.

Excavations have concentrated on the central section of the site containing a large fortress, a mosque and a range of specialised buildings all located within twenty metres of the shoreline. This paper will consider the results of the latest excavations and research on the site which provide further evidence of the maritime nature of the site. Important areas of activity include pearl harvesting, fishing and fish processing as well as seaborne trade.

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## **THE EARLY ISLAMIC FORTRESS OF QINNASRIN (SYRIA)**

Initiated in 2008, the archaeological work on the site of al-'Is - Qinnasrin (north-west Syria) is co-operated by a Syrian & French team, under the direction of both Youssef Kanjo (General Directorate of Antiquities and Museums, Aleppo) and Marie-Odile Rousset (CNRS, France). The research program is sponsored by the French Ministry of Foreign and European Affairs and the Max van Berchem Foundation.

During our last session on the field (July-August 2010), we found significant confirmations that a fortress was, at modern times, built on the top of the mountain above the city. Geomagnetical surveys and soundings revealed that many buildings lay under the surface enclosed in the fortification, so we were able to complete the plan of the whole site. The study of building material and quarries gave new evidences for the dating of the building of that fortress, which was probably erected during the 7th-9th centuries.

The site is one of the very rare examples of military architecture of the early Islamic period, with an effective military function.

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## **UNPUBLISHED MAMLUK POTTERY AT THE ROM WITHIN ITS HIERARCHIC AND CULTURAL CONTEXTS**

The Royal Ontario Museum possesses a collection acquired from the 1930s of decorated glazed pottery of various types, forms and functions dating back to the Mamluk period (1250-1517) in Egypt and Syria.

The ongoing study of the collection by the presenter indicates that most of the objects bear pictorial, geometric and floral decorative elements and, most interestingly, calligraphy of sultans and emblems of emirs making them extremely important as primary sources for scholars of the history and art history of the Mamluks in Egypt and Syria in hierarchic and cultural contexts.

While these objects were not found in their archaeological contexts, they have not been displayed in the galleries nor previously dated or published. In light of the decoration, emblems and calligraphy of selected objects, this paper endeavor to highlight the cultural and hierarchic contexts and to shed light on the following multifaceted issues:

- Objects' owners based on the blazons and mottos decorating the objects.
- Decoration types and meanings.
- The decoration in context with the Mamluk hierarchic system and administration.
- The decoration as a line of evidence for dating.

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## **THE BYZANTINE AND MEDIEVAL VILLAGE AT KH. BIRZEIT IN RAMMALLAH REGION/PALESTINE**

Kh. Birzeit excavations continue exploring the objective of reconstructing the trajectory of the village life in the central mountains of Palestine. In specific, the 2010 excavation season aimed at the recovery of Byzantine Church and the medieval village plans at the upper and lower eastern summits.

The excavations at the upper summit explored the eastern boundary of the church building. The church was disturbed by a medieval building and modern constructions. A complete plan of a residential quarter was recovered at the eastern slope. The quarter is formed by several architectural units, typical of what is known as a "housh". Each unit is formed by a rectangular room with an open courtyard. Most of the Byzantine houses were destroyed or partially re-built during the later periods.

The archeological remains supported the notion that the village continues to be occupied from the Medieval toward the end of the early Ottoman period. The village was destroyed and abandoned during the mid 19th century. This is more likely the same village reported by the 16th century Ottoman records. Oral history pointed that Birzeit village was destroyed during the 19th century tribal war. The villagers scattered around nearby villages and later on return to build a new village in the existing old town of Birzeit. They continue living there until recently.

Therefore, Kh. Birzeit represents a strong case on the continuity and change of the village life in the central mountains of Palestine. The scarce finds proposed that the villagers were living in poverty and so maintain a simple farming economy through time. The economy is based on quarrying, olive and wine production.

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## **MADABA, JORDAN IN THE EARLY ISLAMIC PERIOD**

Excavations in the city of Madaba, Jordan have uncovered substantial evidence for the nature of occupation there in the early Islamic period. Excavations in the area of the Madaba Archaeological Park, established in the early 1990s, have revealed multiple churches and other structures such as a large Byzantine-early Islamic period residential complex known as the “Burnt Palace”, with major remains from the Byzantine through early Abbasid periods. Other excavations, especially at Tell Madaba in the southwest area of the city, have also revealed substantial Byzantine and early Islamic remains. Enough archaeological evidence is now available to enable an understanding of how the city of Madaba, a major urban center in the Byzantine period, continued to thrive into the Umayyad and Abbasid periods.

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## **AR-RAQQA/AR-RAFIQA (SYRIA) - ARCHITECTURAL CONCEPTS OF THE RESIDENTIAL BUILDINGS OF THE CALIPH HARUN AR-RASHID**

Located on the Euphrates River, the two neighbouring cities ar-Raqqa and ar-Rafiqā formed the largest urban agglomerations in Syria and northern Mesopotamia at the Early Abbasid time. Therefore its special geographic position at the crossroads of Mesopotamia, Syria and Byzantium led the Caliph Harun ar-Rashid (reg. 786-809) to move his residence from Baghdad to ar-Raqqa/ar-Rafiqā in 796. For thirteen years it was the centre of power of the entire Islamic world. This resulted in an extensive building programme, especially in the construction of a huge palatial quarter to the north of the two cities ar-Raqqa/ar-Rafiqā.

The extent of the palace quarter was first recognised in an aerial photograph taken by A. Poidebard in the 1920s. Initial archaeological investigations commenced in 1944. Four palatial complexes (palaces A, B, C, D) were revealed, first under French and later by Syrian archaeologists. Due to the urban expansion of the modern city ar-Raqqa a rescue project started in 1982 by the German Archaeological Institute under direction of M. Meinecke. Until 1994 five other large building complexes were investigated in the thus far undisturbed areas in the east and north-east of the palatial area (North Complex, East Complex, Eastern Palace, Western Palace, and Northeast Complex).

This paper presents the architectural concepts of the residential buildings and their urban context. It focuses on the similarities and variations in design and architectural decorations. The aim of the lecture is to determine the characteristics of the Early Abbasid architecture at ar-Raqqa/ar-Rafiqā and to discuss the influences of the Umayyad and Sassanian periods.

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## **TELL ABU SARBUT: FROM INDUSTRIAL SITE TO RESIDENTIAL VILLAGE**

Between 1988 and 1992 a team from Leiden University, the Netherlands, conducted four seasons of excavations at Tell Abu Sarbut in the eastern Jordan Valley. The aim of the project was to excavate a rural site from the Islamic period in order to collect enough pottery to establish a typochronology of the common household wares. More than 150,000 pottery sherds were dug up, as well some sixty (almost) complete pots and ca. 1850 fragments of glass, among which 400 glass bangles.

In the Ayyubid/Mamluk period the site first functioned as a industrial center for the processing of sugar cane and the storage of sugar; more than 75% of the pottery recovered came from so-called “sugar pots”. After a short period of abandonment, the site was used as a village whose inhabitants were still involved in the sugar industry. Although several sugar production sites have been excavated in the eastern Mediterranean area, this transformation from an industrial site to a residential village has not been documented before. This paper will focus on the functioning of the rural site of Tell Abu Sarbut within the Jordan Valley.

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## **MAMLUK-PERIOD POTTERY: BEYOND TYPOLOGY AND CHRONOLOGY**

Salvage excavations conducted by the Israel Antiquities Authority in the past decade or two have revealed sites with Mamluk-period occupation phases, containing abundant ceramic finds. Some of these pottery assemblages have



been studied, focusing mainly on the types and dates. However, numerous issues emerged during the analysis of these Mamluk-period assemblages, while trying to place them in the broader contemporary cultural context. Moving beyond typology and chronology, issues such as urban food consumption, dining habits and European involvement within the Mamluk Sultanate can be addressed through the study of the ceramic remains from these excavations. The selected issues to be discussed here include: 1. A type of a simple, unglazed bowl, found in large quantities in urban centers (Safed and Ramle), but absent in rural sites, and the meaning of this. 2. The appearance of the spouted jug and the increase of the glazed bowls diameter during this period, and their connection to contemporary dining habits. 3. Tracing the mechanism in which Italian ceramic imports found their way to Mamluk-period urban and rural sites in the Galilee, and the role that the then demolished city of 'Akka lead.

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## **AN ARCHAEOLOGICAL SURVEY OF TOMB TOWERS AND SEPULCHRAL BUILDINGS IN THE CITY SEMIRAN DURING ISLAMIC TIMES**

In the early Islamic Period, Semiran city was one of the important cultural and civil centers. Semiran as a capital of Musafirids dynasty has important role in socio-political history in north Iran. In chronology of Iranian dynasties, the Musafirids have been recognized as other names such as Kankarian and Salaris.

The Islamic City of Semiran constituted a Castle, Tomb towers, Qasem Shrine and Islamic graveyard. Due to the positioning of this city, located in northern part of Iran on the Qezel Ouzan River and the surrounding Alborz mountains around Semiran, it has been strategic center for local rulers in early Islamic centuries.

In this paper the archaeological and architectural characteristics of tomb tower of Semiran are discussed. This research has used documentation, sounding, and surveying methods in archaeology. The results show that sepulchral buildings have been influenced by Buyeed and Seljuq architecture. The plan, material and ornament of the tomb towers have coincided to Kharighan tombs and Ghonbad-i-ali in Abarghou in Central of Iran. Also, these tomb towers functioned as cemetery places and guarding center for protection to major castle.

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## **BUKHARA OF THE ABULKHAYRIDS: ARCHITECTURE AND URBANISM**

The Old City of Bukhara (Uzbekistan), since 1993 protected by UNESCO as a world cultural heritage site, is one of the most important historical urban fabrics in Central Asia. 462 significant building monuments and a unique cityscape, which consists of different quarters incorporating an intact historical urban tissue, characterise this city. Today Bukhara's skyline is still dominated by buildings from the 16th century. The urban development of this and other major cities in Central Asia after the Abulkhayrid takeover at the beginning of the 16th century is nevertheless a topic insufficiently investigated. Caused by this dynastic change a rich cultural life unfolded in Transoxania, in which Bukhara was to play a leading role. The construction activities in the urban centre are a vital evidence for the importance of the city under the Abulkhayrid ruling clan. Based on as well sumptuous buildings as less luxurious edifices a reconstruction and analysis of Bukhara's urban development in the post-Timurid period will be proposed in the paper.

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## **EXERCISING POWER ON THE MAMLUK FRONTIER**

The Mamluk state was not governed merely through provincial capitals (Damascus, Safed, Karak) and large castle towns (such as 'Ajlun). Much smaller rural centers with modest citadels, embedded in the local village society, played a particularly important role in subduing, co-opting, and administering frontier regions on the district level. Contemporary geographical treatises and chronicles allude to the presence of such centers and suggest that they were central to the fluid administrative structure of the Mamluk frontier and pivotal in actuating the seemingly idiosyncratic and changing policies of borderlands management. Hisban in central Jordan was one such district capital. Since 1998, excavations at Tall Hisban by Andrews University have systematically explored the Mamluk-era citadel that crowns the summit of the tell, as well as the contemporary village below. This paper explores the physical and functional transformation of the citadel over the fourteenth and fifteenth centuries. It also considers whether Hisban was typical of Mamluk rural capitals on the Syrian frontier - and could thus shed light on the appearance and roles played by other administrative centers/rural garrisons no longer extant - or was in some way unique.



## **ISLAMIC ARCHAEOLOGY IN QATAR: AL ZUBARAH AND ITS HINTERLAND(S)**

Three years of archaeological research at Al Zubarah on the northwest coast of the Qatar peninsula has produced detailed information on social, cultural, and economic structures of a major trading town of the Gulf in the 18th and 19th centuries CE. Detailed investigations, undertaken in partnership with the Qatar Museums Authority (HE Sheikh Al Mayassa Bint Hamad Al Thani, Chair, and H.E Sheikh Hassan Bin Mohammed Al Thani, Vice Chair), have revealed vital evidence on developments in urban topography and planning, water systems, the arrangement of commercial and private space, commerce and inter-regional trade, relationships with hinterlands, and material culture horizons. In this paper, a synopsis of recent discoveries and finds is presented, with an emphasis on the urban configuration, architecture, settlement profile, and objects of the site. The implications of these discoveries are also discussed in relation to the socio-economic history of Qatar in the transition to modern times.

## **DONALD WHITCOMB**

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## **KHIRBET AL-MAFJAR OR QASR HISHAM? CHANGING PERCEPTIONS OF A PALESTINIAN MONUMENT**

The Umayyad palace complex of Khirbet al-Mafjar, located near Jericho, is the most important cultural symbol of the early Islamic period for Palestine, comparable to Samarra in Iraq and Fustat in Egypt. The archaeological site was excavated by Dimitri Baramki in the 1930s and its architecture published by R. W. Hamilton in 1959. This was under the British mandate and Hamilton went on to create an interpretation involving the caliphate of Walid II.

The monument is popularly known now as Qasr Hisham, based on very minimal historical evidence. In winter of 2011, new archaeological excavations began as a joint project of the Palestinian Department of Antiquities and the University of Chicago; results of a second season may be presented here. The discoveries made there indicate the need for a new model of interpretation for this monument.

This paper will outline the background and milieu of the archaeology of Baramki and suggest some origins for Hamilton's model of the site. This will be contrasted with the current state of archaeology in Palestine and the need for new explanatory models. Among the significant discoveries of this season was a new gate, north of the palatial complex. This structure stands as a transition to the northern region of the site, a little known residential area of the same periods and never examined until the present fieldwork. Some very preliminary ideas may be offered toward the development of a new model for Khirbet al-Mafjar/Qasr Hisham.

## **PAUL WORDSWORTH**

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## **INFRASTRUCTURE AND INTERACTION: APPROACHES TO THE ARCHAEOLOGY OF MEDIEVAL TRAVEL AND TRADE ROUTES IN SOUTHWEST CENTRAL ASIA**

The concept of the 'Silk Road' is pervasive across Central Asia in both heritage discourse and the study of archaeological remains. Resulting analyses of movement and travel have often been coloured by the idea of trade and long-distance exchange. Nevertheless, there are few archaeological studies of the nature of routes themselves, or of infrastructure accompanying them. This paper problematises the concept of trade roads in Central Asia, highlighting the variety of evidence for travel and movement in the medieval period. The data presented here to illustrate some of the problems and possibilities in this field, are the current results of the Karakum Routes Survey, which aims to identify the remains of routes from the 10th-13th centuries across south-western Turkmenistan. Interpreting remote sensing sources and combining this information with field survey, it has been possible to identify a wide range of archaeological material across the landscape. Whilst there is clear evidence for significant investment in the infrastructure of specific 'corridors' of travel, there were clearly alternative pathways in use. Although currently in the early stages of interpretation, it is hoped that this analysis will promote further debate about the assumptions that underlie much of how we conceptualise trade and infrastructure in the region.

**WORKSHOP 1:**  
**IRON AGE ARCHAEOLOGY IN THE LEVANT: THE VIEW FROM THE MICROSCOPE AND BEYOND**  
**Results of the European Research Council-Funded Project**

**ORGANIZERS: ISRAEL FINKELSTEIN, STEVE WEINER**

<b>AUTHOR(S)</b>	<b>TITLE</b>	<b>DAY, HOUR</b>
ADI BEHAR, NAAMA MACK-YAHALOM	FROM BRONZE TO IRON: METALLURGICAL INVESTIGATION IN IRON I-IIA SITES	MON, 16.45
ELISABETTA BOARETTO, ISRAEL FINKELSTEIN, MICHAEL TOFFOLO	RADIOCARBON DATING A MULTI STRATA MOUND: TEN DATED HORIZONS IN 600 YEARS AT MEGIDDO	MON, 14.40
SHIRA FEIGENBAUM, ARIE SHAUS, BARAK SOBER, DAVID LEVIN, MURRAY MOINSTER, ELIEZER PIASETZKY, ELI TURKEL	IRON AGE OSTRACA IN THE SILICON AGE	MON, 17.10
ISRAEL FINKELSTEIN	SO WHAT HAVE WE LEARNED FROM ALL THIS?	MON, 18.25
ISRAEL FINKELSTEIN, STEVE WEINER	INTRODUCTION: FROM MICRO ARCHAEOLOGY TO MACRO HISTORY	MON, 14.30
DAFNA LANGGUT	THE DEAD SEA AND SEA OF GALILEE POLLEN RECORDS, PALAEO-CLIMATE AND HUMAN IMPACT DURING THE BRONZE AND IRON AGES	MON, 15.00
MARIO A.S. MARTIN	PETROGRAPHIC INVESTIGATION OF NEGEV HIGHLANDS IRON IIA POTTERY	MON, 15.50
DVORY NAMДАР, YUVAL GADOT	TRADE, ADMINISTRATION AND THE KINGDOM: ORGANIC CONTENT OF "YHD" STAMPED STORE JARS FOUND AT RAMAT RAHEL	MON, 18.00
LIDAR SAPIR-HEN, YUVAL GADOT	FROM KINGDOMS TO EMPIRE: CHANGES IN LIVESTOCK HUSBANDRY FROM THE LATE BRONZE TO THE IRON AGE	MON, 17.35
RUTH SHAHACK-GROSS	SUBSISTENCE ECONOMY IN ARID ZONES: GEOARCHAEOLOGICAL INVESTIGATION IN THE NEGEV HIGHLANDS	MON, 15.25

**ADI BEHAR, NAAMA MACK-YAHALOM**

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**FROM BRONZE TO IRON: METALLURGICAL INVESTIGATION IN IRON I-IIA SITES**

The transition from the use of bronze to iron in the Levant is widely accepted as a gradual process. Although in the Iron Age IB (late 11th – early 10th century BCE), iron is first used for utilitarian purposes, nevertheless bronze continues to be the dominant metal. During this period evidence for bronze working was found in many settlement sites, in contrast to evidence for iron production activity which is missing altogether from the archaeological record. During the Iron Age IIA (late 10th–9th century BCE), the number of iron objects grew considerably and surpassed that of bronze. Evidence for iron production dated to this period has been recently accumulated. Iron workshops have been identified at Tell el-Hammeh (Jordan) and at Tel Beth-Shemesh and Tel es-Safi/Gath (Israel). Additional iron metallurgical remains unearthed in past excavations have recently been analyzed in order to determine whether and where smelting and primary or secondary smithing activity took place. The artifacts were analyzed by means of optical and electron microscopy and X-ray fluorescence to determine their chemical compositions and microstructures. Evidence for smelting and/or bloom refining as well as secondary smithing was revealed at Tel Beer Sheva. Secondary smithing was also found at Hazor and Tel Rehov. The newly accumulated data adds important information to the emerging iron production activity during this time.

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## **RADIOCARBON DATING A MULTI STRATA MOUND: TEN DATED HORIZONS IN 600 YEARS AT MEGIDDO**

The mound of Megiddo features one of the densest stratigraphies in the Levant, accompanied by a well-established ceramic typology. The skeleton of this system is made up of an intricate set of destruction layers. Megiddo is mentioned in several reliable historical records. This combination makes it an ideal “laboratory” for radiocarbon dating. The lecture will present the results of an intensive dating project at Megiddo which deals with ten strata covering the period from the Late Bronze I to the Iron IIA (ca. 1400-800 BCE). The results make it possible to put the stratigraphy of this site in particular, and northern Israel in general, on firm ground. They also make it possible to investigate problems of context related to radiocarbon studies.

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## **IRON AGE OSTRACA IN THE SILICON AGE**

The discipline of epigraphy deals with comparative typology of characters and uses manually-drawn facsimiles of ostraca. Drawing facsimiles, however, may unintentionally mix documentation and interpretation. Our project introduces computerized methods to the field of epigraphy, including various image acquisition techniques, image binarization (producing automatic facsimiles), image quality assessment, character noise reduction and letter comparison metrics – all aimed at minimizing the epigrapher’s involvement in activities prone to influence and prejudice his judgment.

**ISRAEL FINKELSTEIN**

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## **SO WHAT HAVE WE LEARNED FROM ALL THIS?**

This short summary highlights the main achievements of the first three (out of five) years of the project described in the workshop, including the meaning of the finds for the study of the history of the Levant in the Iron Age. It stresses the importance of bridging between the different tracks of the project and puts special emphasis on the need to integrate macro- and micro-archaeology in the field and in the laboratory.

**ISRAEL FINKELSTEIN (1), STEVE WEINER (2)**

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## **INTRODUCTION: FROM MICRO ARCHAEOLOGY TO MACRO HISTORY**

The short presentation will introduce the project, ‘Reconstructing Ancient Israel: The Exact and Life Sciences Perspective,’ which is being funded by the European Research Council. The project involves over 40 researchers working on ten different tracks: radiocarbon, human genetics, geo-archaeology, palynology, ceramic petrography, metallurgy, daily mathematics of dimensions, computational methodologies in epigraphy, residue analysis of pottery vessels and archaeozoology.

**DAFNA LANGGUT**

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## **THE DEAD SEA AND SEA OF GALILEE POLLEN RECORDS, PALAEO-CLIMATE AND HUMAN IMPACT DURING THE BRONZE AND IRON AGES**

Pollen grains embedded in the sediments of the Dead Sea and the Sea of Galilee are a source of fascinating information about past vegetation, climate and human impact on the natural environment through agriculture, grazing and tree

clearing. Our project performs high resolution palynological investigation at intervals of ~ 20 years in the Bronze and Iron Ages. The climate reconstruction is chiefly based on the interplay between the members of the Mediterranean vegetation belt and steppe elements and on both lake level reconstruction and sedimentological information. Tracing the extent and composition of ancient agriculture derives from the differences in cultivated crop ratios (e.g., olive, cereals and walnut). The chronological framework is based on radiocarbon dates of short lived organic material extracted from the cores. The main vegetation and climate trends were observed at both ends of the Southern Levant (Dead Sea profile and the Sea of Galilee core). The Late Bronze and Iron Ages are characterized by a slight aridification in comparison to the relatively humid climatic conditions typifying the Early and Middle Bronze periods. It was thus found that peaks in human settlement history were not necessarily in synchronization with more intense agricultural activities. For example, while a clear settlement peak was evident in the highlands during Iron Age I and Iron Age II, a reduction in olive distribution was identified at the same time.

#### **MARIO A.S. MARTIN**

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### **PETROGRAPHIC INVESTIGATION OF NEGEV HIGHLANDS IRON IIA POTTERY**

In the Iron IIA (late 10th–9th centuries BCE) the Negev Highlands is characterized by an unprecedented settlement wave. The incentives behind this phenomenon have been a matter of debate. Modern archaeologists explained it as a sedentarization process of local, pastoral-nomadic groups. In an attempt to shed light on the identity of the settlers, the petrographic microscope has been brought in to investigate geographic provenance of ceramic assemblages at various sites. Both wheel-made and handmade wares have been included—the latter traditionally referred to as "Negebite ware" and linked to desert groups. Due to the fact that until today almost no such provenance analyses have been conducted, the present sample of more than 200 thin sections is of major importance. The provenance of a substantial portion of the vessels (wheel-made and handmade) can be pinpointed to the Wadi Arabah region (the rift valley between the Gulf of Aqaba and the Dead Sea), evidence based on both geological and archaeological considerations. Tempering materials include a variety of felsic rock fragments characteristic of this region. Furthermore, as much as 15–20% of the handmade pottery is tempered with crushed slags, suggesting that it was produced in the copper production centers in the Wadi Arabah, namely Wadi Feinan and/or Timna. Significantly, this distinct technological style has also been observed among the ceramic wares at both these locations. The archaeological and petrographic evidence suggests that the copper extraction systems in the Wadi Arabah were operated by tribal, desert groups. It also suggests that the subsistence economy of the Negev Highlands sites was supplemented by activity of at least part of the inhabitants in copper production and transportation.

#### **DVORY NAMDAR (1), YUVAL GADOT (2)**

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(2) Tel Aviv University, Israel, – ygadot@gmail.com

### **TRADE, ADMINISTRATION AND THE KINGDOM: ORGANIC CONTENT OF "YHD" STAMPED STORE JARS FOUND AT RAMAT RAHEL**

The administrations of the kingdom of Judah and the later province of Yehuda under the yoke of the 8th–4th century BCE empires feature a unique management system that included the stamping of storage jars with seals. Hundreds of handles bearing YHD stamp impressions dating to the Persian period were found at different sites in Judah, more than half of them at Ramat Rahel on the outskirts of Jerusalem. In 2009–2010, for the first time an assemblage of six complete jars were found at Ramat Rahel. The jars are stamped on their handles and sometimes also on their body with a variety of stamp impressions. These stamped jars were sampled and their organic content analyzed for lipids using gas chromatography coupled with mass spectrometer. Simultaneously the volume of the jars was measured and compared with that of Iron Age stamped jars in an attempt to reveal the measurement system employed by the administration systems of the Iron Age and Persian period. The lipid analysis of four stamped jars showed the presence of analogous even n-alcohols (18–30 carbons in the chain, with tetracontanol the predominant one), accompanied by odd numbered n-alkanes (with 23 to 29 carbon chains; heptacontane was the dominant one) and androstene. Phenols, diacids and short ketones are present as well in the extracts. This assemblage of molecules can indicate the presence of fermented beverage, originating or mixed with bee products. The volume of the jars seems to be standardized and to follow earlier measuring traditions used in Judah. The chemical results point to a bee industry and the use of bee products.

## **FROM KINGDOMS TO EMPIRE: CHANGES IN LIVESTOCK HUSBANDRY FROM THE LATE BRONZE TO THE IRON AGE**

It has long been recognized that faunal remains can contribute to our understanding of settlement processes. The livestock economy in the Late Bronze and Iron Ages has been studied extensively in the last 20 years. The wealth of zooarchaeological data collected in numerous studies, along with the progress in sub-dividing the Late Bronze and Iron Ages into well dated ceramic phases enables us to study the animal economy in finer resolution than before. We asked whether the cycle of empire-collapse – formative phase – state formation – empire domination and another collapse that represents the events during the Iron Age should find expression in the animal economy of the region. A database, including 35 zooarchaeological published and unpublished reports of 29 sites in the southern Levant was created for the meta-analysis. Livestock NISP's, body parts distribution and mortality profiles were recorded. We projected the data on eight sequential maps representing the Late Bronze II, Late Bronze III, early-to-middle Iron I, late Iron I, early Iron IIA, late Iron IIA, Iron IIB and Iron IIC, and studied the synchronic and diachronic changes revealed. Past research emphasized homogeneous and continuous survival in the Levant in the Bronze and Iron Ages. Our study reveals significant changes in the livestock husbandry from the Late Bronze to the end of the Iron Age, reflecting social and territorial-political transformations. We describe here two trends: a shift from self-sufficient toward market economy and the influence of neighboring sites on economic decisions. We demonstrate that various factors – not only the environment – influenced the decision of what to raise; among them are the existence and orientation of neighboring markets, local traditions, cultural decisions and above all the involvement of local bureaucracies in the daily life of both the rural and urban sectors.

## **RUTH SHAHACK-GROSS**

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## **SUBSISTENCE ECONOMY IN ARID ZONES: GEOARCHAEOLOGICAL INVESTIGATION IN THE NEGEV HIGHLANDS**

The subsistence base of past societies is of major importance for understanding their economy and the interactions between different socio-economic entities. Subsistence economy is often reconstructed based on macroscopic faunal and botanical remains. Here we present a study of microscopic remains that sheds light on the subsistence in the arid zone of the Negev Highlands during the Iron Age IIA. The study focused on remains of livestock dung identified at two sites in the region, dating to the 9th century BC (early Iron IIA) based on 19 radiocarbon determinations. Dung remains, primarily identified based on the presence of high concentrations of "dung spherulites", include the microscopic remains of the vegetal food ingested by livestock, the so-called "phytoliths". These microscopic remains can be related to plant taxonomy and anatomy. Phytoliths from Iron IIA livestock dung at both sites are few, indicative of brush and wood fodder, and do not include cereal inflorescence. A control Iron I site located in the Samarian foothills includes high concentrations of phytoliths, some of them representative of cereals. Another control site, an Early Islamic settlement in the Negev Highlands, includes median concentrations of phytoliths, some of them representative of cereals. The results from the two control sites indicate that there is no issue of phytolith preservation at the Iron Age IIA sites in the Negev Highlands, and thus there is no evidence for agricultural activity at that time. We conclude that subsistence of the inhabitants at these sites was based on herding without agriculture.

## WORKSHOP 2: CONTINUATION AND RUPTURE IN THE SETTLEMENT HISTORY OF LEBANON

**ORGANIZERS: HERMANN GENZ, HELENE SADER**

<b>AUTHOR(S)</b>	<b>TITLE</b>	<b>DAY, HOUR</b>
GASSIA ARTIN	RISE AND DECLINE OF CHALCOLITHIC BYBLOS AND DAKERMAN	TUE, 9.00
BETTINA FISCHER-GENZ	FROM NOMADISM TO VILLAGE LIFE? CHANGES IN SETTLEMENT PATTERNS IN THE RURAL HINTERLAND OF HELIOPOLIS/BAALBEK	TUE, 14.55
HERMANN GENZ	THE TRANSITION FROM THE 3RD TO THE 2ND MILLENNIUM BC IN THE COASTAL PLAIN OF LEBANON: CONTINUITY OR BREAK?	TUE, 9.50
HELENE SADER, HERMANN GENZ	FINAL DISCUSSION: WHERE DO WE STAND? POTENTIALS AND PROBLEMS OF ARCHAEOLOGY IN LEBANON	TUE, 17.35
MARLIES HEINZ	WHAT DOES MATERIAL EVIDENCE IN ARCHAEOLOGICAL CONTEXTS TELL ABOUT THE BACKGROUNDS AND CAUSES FOR CONTINUATION AND RUPTURE? KAMID EL-LOZ/LEBANON - A CASE STUDY	TUE, 11.15
JEANINE ABDUL MASSIH	LEBANON AT THE DAWN OF THE ROMAN CONQUEST	TUE, 15.20
JOYCE NASSAR	A NEW NECROPOLIS UNCOVERED IN BEIRUT: ANALYSIS OF THE FUNERAL SPACE MANAGEMENT INSIDE A CLASSICAL HYPOGEUM	TUE, 17.10
PAUL NEWSON	IS THE BEKAA A SPECIAL CASE? SETTLEMENT CONTINUITY AND CHANGE IN THE BEKAA VALLEY, LEBANON	TUE, 15.45
JESSICA NITSCHKE	LOCAL AND REGIONAL SETTLEMENT TRENDS IN LEBANON AND THE LEVANT IN THE HELLENISTIC PERIOD	TUE, 14.30
INGRID PÉRISSÉ	CHHÎM FROM LATE BRONZE AGE TO THE LATE ANTIQUITY: A MULTI-SECULAR SACRED PLACE?	TUE, 12.05
SIMONE RIEHL	ENVIRONMENTAL ASPECTS IN EARLY TO MIDDLE BRONZE AGE LEBANON	TUE, 16.45
VALENTINE ROUX	CONTINUITY AT TELL ARQA DURING THE 3RD MILLENNIUM BC: THE VIEWPOINT OF THE CERAMIC TRADITIONS	TUE, 9.25
HELENE SADER	SETTLEMENT DISCONTINUITY ON THE LEBANESE COAST: THE CASE OF TELL EL-BURAK	TUE, 10.15
ELISABETH WAGNER-DURAND	THE TREASURY OF KAMID EL-LOZ AND THE LATE BRONZE AGE SETTLEMENT HISTORY OF KUMIDI – CREATING COLLECTIVE MEMORY AND FALLING VICTIM TO OBLIVION	TUE, 11.40
TOMASZ WALISZEWSKI	TRAVELLING THROUGH THE AGES IN THE HINTERLAND OF SIDON: A CASE STUDY FROM CHHÎM AND JIYEH (PORPHYREON)	TUE, 12.30

### **GASSIA ARTIN**

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### **RISE AND DECLINE OF CHALCOLITHIC BYBLOS AND DAKERMAN**

The Chalcolithic period is an important and complex phase in the evolution and the development of prehistoric societies between the end of the Neolithic and the beginning of the 3rd millennium in the Levant. During this period some traditions persisted such as the production and use of chipped stone tools. However, innovations in the development of new types of arrowheads, blades, metallic objects, funerary practices and dwellings demonstrate that a new economic, social and urban organization was emerging.

The archaeological data from the coastal regions of Lebanon are unfortunately rare for the Chalcolithic period as only a limited number of sites are known and have been investigated.

This period is best illustrated on the Lebanese coast by two well-known settlements: Byblos (Dunand, 1973), and Dakerman (Saidah, 1977 and 1979). These sites are characterized by both dwellings (houses, silos and paved roads)



and funerary structures (plain, cave and jar burials). The chronology of human occupation of the Lebanese coast is essentially based on the Byblos excavation.

The site of Byblos, which has been almost entirely excavated, shows a continuous human occupation and reveals jar burials (2097 tombs) and an exceptionally rich and varied corpus of grave goods (3652 objects) (Artin, 2009).

The site of Dakerman, located south of Sidon and at 70 kilometers south of Byblos, revealed a fortification wall, funerary jars and dwellings. Unlike Byblos, the occupation in Dakerman is not continuous, the site was abandoned after this transitional phase for reasons that we will discuss in this contribution.

Therefore Byblos and Dakerman represent an ideal choice for a comparative study of the Lebanese coastal sites dating back to this transitional period. The interpretations presented here in relation to the nature of the settlements and the chronology of their occupation will eventually expand our knowledge of this period, and consequently help in understanding the Chalcolithic period in the larger frame of the Levantine area.

**BETTINA FISCHER-GENZ**

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## **FROM NOMADISM TO VILLAGE LIFE?**

### **CHANGES IN SETTLEMENT PATTERNS IN THE RURAL HINTERLAND OF HELIOPOLIS/BAALBEK**

The evidence for nomadism and transhumance is ambiguous in the archaeological and historical sources of the Beqaa and the Anti-Lebanon. The Baalbek Hinterland Survey carried out between 2004-2008 has found some archaeological evidence such as look-outs, rock-cut installations, troglodyte dwelling and lines of cairns that can possibly be connected to non-sedentary populations. In this study these features will be reviewed in the light of changes in the settlement patterns, pointing to the possibility of a sedentarization of nomadic or transhumant population especially during the Roman period.

**HERMANN GENZ**

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## **THE TRANSITION FROM THE 3RD TO THE 2ND MILLENNIUM BC IN THE COASTAL PLAIN OF LEBANON: CONTINUITY OR BREAK?**

Recent excavations at Tell Arqa, Tell Fadous-Kfarabida, Sidon and other sites in the coastal plain of Lebanon have provided a wealth of information concerning the 3rd and 2nd millennium BC. This new information allows us to contextualize the often ambiguous information from the older excavations at Byblos. While the northern coastal plain shows a strong continuity in settlement patterns and material culture from the Early to the Middle Bronze Age, evidence from the southern coastal plain suggests a discontinuity during the latter half of the 3rd millennium BC, thus following the pattern observed in the southern Levant. Interestingly the beginning of the Middle Bronze Age seems to be characterized by a marked contraction of many settlements and it is only from the middle of this period onwards that settlements grow in size again.

**MARLIES HEINZ**

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## **WHAT DOES MATERIAL EVIDENCE IN ARCHAEOLOGICAL CONTEXTS TELL ABOUT THE BACKGROUNDS AND CAUSES FOR CONTINUATION AND RUPTURE? KAMID EL-LOZ/LEBANON - A CASE STUDY**

Kamid el-Loz reveals currently a well documented settlement history that encompasses the Middle and Late Bronze Age as well as the Iron Age. In this time frame the material evidence shows both a wide range of continuities and ruptures. My contribution will deal with questions concerning the causes and backgrounds of both processes. I will put the focus on the question of what material evidence can tell about innovation and tradition and thus about human action, intentions and power and the possible material expression of these factors.

**JEANINE ABDUL MASSIH**

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## **LEBANON AT THE DAWN OF THE ROMAN CONQUEST**

The Ptolemaic and Seleucid Hellenistic kingdoms, while declining, persist in the East where they were facing increasing pressure from their immediate neighbors, Parthians, Jews and Arabs. "Equipped with diminished territory, internal

structure into disrepair, a decline of royal power and domestic disputes”, they contribute to creating a climate of lawlessness in Syria, and in Cilicia, which is distinguished by the introduction of local leaders, tyrants, in the Hellenistic cities and the growth of local infiltration of Arabs. The situation was such that local leaders did not hesitate to make use of brigands or to consolidate their power to secure their territory.

Faced with this anarchic situation Tigranes, king of Armenia, took the Seleucid throne from 83 BC and conquered Syria, the Levant, Cilicia and Commagene, with the aim of securing the area, and encouraging the expansion of the Hellenism. In 64 BC Pompey enters Syria and immediately takes over the city of Antioch, where he begins to put an end to the reign of the Seleucids and established the Roman province of Syria.

At the beginning of 63 BC Pompey leaves Antioch and goes to Damascus, delivering on his way several coastal cities of the tyrants who had settled there. He favored the permanence of the reign of the local rulers and the power of the cities with Greek inhabitants, in order to preserve their culture that contributed to the Hellenization of the population. Along the Mediterranean coast, the system of cities (with a large territory) is strengthened. Byblos, Tripoli, Tartus, Arados ... regain their independence and experience a significant development during the empire. Their economic and commercial activities and the extension of their territories, allow them to dominate the entire Levantine coast and the maritime commerce. Their importance in the eyes of Rome appears through the promotion of several of them to the rank of colonies as it is the case of Byblos, Berytus, Tyre, Sidon... Berytus or Heliopolitana, takes the title of Colonia Julia Augusta Felix Berytus. Its territory extends, in the time of Augustus, to the sources of the Orontes. Later, probably under Septimius Severus, the northern Beqaa came under the domination of Heliopolis, with the title of colony.

Sidon has under the Roman its own administration and takes the title Nanarchis of Colonia Augusta or Metropolis (Colonia Aurelia Pia Metropolis Sidon according to the coins). Her territory is adjacent to those of Tyre and Damascus. The Romans favored Tyre because of its extensive commercial network and influence. The city becomes a Roman colony under Septimius Severus and its countryside reached the limits of the territory of Caesarea.

#### **JOYCE NASSAR**

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### **A NEW NECROPOLIS UNCOVERED IN BEIRUT: ANALYSIS OF THE FUNERAL SPACE MANAGEMENT INSIDE A CLASSICAL HYPOGEUM**

Since the end of the civil war, Beirut has been witnessing massive re-construction works and a continuous thriving of the property market. The consequent building craze did require constant archaeological excavations in advance. Nevertheless, the numerous excavations carried out have hardly ever been published. Besides, the archeo-anthropological approach is still disregarded in the excavation programs, although a great number of funeral areas dated to the classical periods have been dug up particularly in the suburbs of Beirut like Ashrafiyeh. The aim of this contribution is to present the preliminary results of ‘salvage’ excavations that uncovered a rock-cut hypogeum in the Ashrafiyeh district (parcel 1598) composed of two square halls flanked with pairs of loculi. Only one hall is accessible through a unique entrance located on one angle, it communicates with the other one through a passageway. Those tombs were cut during the Hellenistic period and then reused during the Roman period. At a later phase one of the halls was the object of vandalism. The close collaboration between archaeologists and physical anthropologist gave the opportunity to understand the funeral practices of each period and the modalities of the use of these collective tombs. Besides, this project illustrates the challenge of adapting rigorous and precise methodology imposed by archaeology and physical anthropology to difficult conditions entailed by time limitation.

#### **PAUL NEWSON**

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### **IS THE BEKAA A SPECIAL CASE? SETTLEMENT CONTINUITY AND CHANGE IN THE BEKAA VALLEY, LEBANON**

The Bekaa Valley is an incredibly important feature of the Near East, with a very rich and varied past. Throughout antiquity it has served as one of the main communication routes between the interior of Syria and the Mediterranean Basin. In addition, the specific physical geography, natural environments, and ecology of the Bekaa region has accentuated its role as the interface between the Mediterranean and the Interior; it can be perceived as a special zone, a zone of multi-faceted transformations, including temporal, spatial, perceptual and cultural forms. It would seem that for many periods in the past, the region has been the stage for negotiations between these factors and people. For example, the physical geography of the region has led to a duality as both a conduit of controlled and channeled communication, while simultaneously acting in some regards as an impenetrable cultural barrier. In turn, this has resulted in different phases of settlement and adaptation of the environment by successive groups; the results of this long-term interaction have created the landscape encountered today.

The only substantial landscape survey work so far undertaken in the central Bekaa Valley has been the survey of

Leon Marfoe in the 1970s. While this work made a major contribution to understanding the main issues affecting human use of the valley, it used the broad brushstroke of the *longue durée* and concentrated on known sites of the prehistoric and proto-historic periods, particularly tells, within the Bekaa Valley plain. The aim of this paper is to begin to add detail to Marfoe's history of settlement with an exploration of the development and exploitation of this region during the Graeco-Roman period; that is from the Hellenistic to the Early Islamic using as an example the village of Hosn Niha. Previous work suggested this village was only occupied during the Roman period from the 1st century to the 6th century CE. This could make the region interesting and different to other neighbouring regions, for example, along the Mediterranean coast or the region of Homs during the same period. By undertaking comparative analyses of Hosn Niha with other later period examples, this paper will provide a more nuanced framework of long-term processes in which to understand settlement development and change. Additionally, this paper will explore new issues which can be applied to other periods. The settlement history of this region during the Graeco-Roman period may underline the transformational nature of the region.

**JESSICA NITSCHKE**

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## **LOCAL AND REGIONAL SETTLEMENT TRENDS IN LEBANON AND THE LEVANT IN THE HELLENISTIC PERIOD**

It has been a long held belief (especially among Classicists) that the establishment of the Greco-Macedonian monarchies following the conquests of Alexander III of Macedon brought about significant changes in settlement patterns and population distribution throughout the Eastern Mediterranean, both through direct interference (i.e. founding and refounding of cities by monarchs) and indirectly through migration, new trade routes, and war, among other causes. Regional investigations through excavation and survey in recent decades have increasingly shown that the picture is more complicated than once thought. While major changes can be witnessed, such as the establishment of new civic foundations (e.g. Antioch, Philadelphia/Amman, among many others) and the buildup of areas that were previously sparsely populated (e.g. Idumaea), a significant amount of continuity is also attested.

The picture in Lebanon is particularly murky, in part because of a prevailing lack of focus on the Hellenistic period that has only really recently begun to be remedied, and also because the evidence does not, at first glance, neatly parallel developments in surrounding regions. A particularly stark distinction that is often noted is that the royal civic foundations that are so prevalent elsewhere in the Hellenistic Levant are noticeably rare in Lebanon. Also, our best current evidence suggests that Greek migration was perhaps less in Lebanon than in some other parts of the Eastern Mediterranean seaboard. Although some explanations have been offered to explain this apparent discrepancy (the Ptolemies weren't very connected with this area; protracted warfare in the region; Seleucid decline, among others), this situation has not been vigorously scrutinized nor has the question been considered much in light of archaeological evidence of settlement patterns, either in Lebanon or in neighboring regions. Through a review of the current state of evidence (both archaeological and written) on settlement patterns of Hellenistic Lebanon compared with the immediate surrounding areas, this paper reconsiders to what extent Lebanon really differs from other Levantine regions and the plausibility of various explanations for this. Due consideration is given to the methodological problem of using the written sources, as well as to suggestions for future direction of work in this topic.

**INGRID PÉRISSÉ**

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## **CHHÎM FROM LATE BRONZE AGE TO THE LATE ANTIQUITY: A MULTI-SECULAR SACRED PLACE?**

The visible remains of the sanctuary and the village of Chhîm date back undoubtedly to the Roman and Byzantine periods, but the numerous pits dug down to bedrock in several areas of the site between 1996 and 2008 have given the opportunity for the first time in Lebanon to establish the complete chronology of a rural settlement, from the late Bronze Age to the end of the Antiquity.

The most interesting and amazing results have been obtained in the sacred area. The overall plan of the temenos in the 1st century AD refers back to older designs of sanctuaries such as, for example, the Iron Age "cultic enclosure" in Mizpe Yammim, Upper Galilee. But Chhîm still raises numerous questions about the conditions surrounding the appearance of the worship and about the shapes of this sacred area before the classical period.

From the start of excavations the structure referred to as Tower D has posed a mystery as far as function, inner organization and chronology. Likely place of the sacrificial altar during the Roman period, this "tower" has walled in a earlier massive rock-cut quadrangular accessible by steps (also cut in the bedrock). At least one layer with traceable connection with the former structure trenches can be dated provisionally to the Late Bronze Age. Therefore, the issue of the nature of this building (ancient place of worship?) will arise, by exploring possible regional comparisons, especially in the South Levant.

**SIMONE RIEHL**

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## **ENVIRONMENTAL ASPECTS IN EARLY TO MIDDLE BRONZE AGE LEBANON**

Few archaeobotanical studies have been conducted at Lebanese archaeological sites. Thus, there is very little information about the development of the environment and agriculture from prehistory through historical times. This is particularly problematic for our understanding aspects causally related to environmental and agricultural development, such as settlement history and political relations to neighboring regions. Without knowing local and regional environmental dynamics and their economic implications, it is impossible to gain a complete pattern of the causality of decline.

A recent archaeobotanical investigation at Tell Fadous provides some insight into crop preferences and the use of wood resources; however, as the evidence is meager, other proxy data for the environmental preconditions of agriculture need to be addressed.

Stable carbon isotope analysis has been used as an independent tool for several decades in archaeobotany to clarify the significance of environmental factors within agricultural change, because in arid and semiarid environments it provides a signal of water stress in plants. In many Near Eastern regions, water availability decreased after the Neolithic Age. At the end of the Early Bronze Age and partially at the end of the Late Bronze Age, sequences of increased aridity have been documented for several regions.

The research question of this contribution is to investigate whether there are parallels between the data, both, archaeobotanical and stable carbon isotope, from Tell Fadous and those from other sites further inland or whether a different pattern is visible, similar to what has been described for archaeological findings, i.e. no signs of disruption at the end of the Early and the Late Bronze Age.

**VALENTINE ROUX**

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## **CONTINUITY AT TELL ARQA DURING THE 3RD MILLENNIUM BC: THE VIEWPOINT OF THE CERAMIC TRADITIONS**

A technological study conducted on the 3rd millennium BC ceramic assemblages of Tell Arqa in the Akkar plain suggests that there is a strong continuity in the manufacturing tradition all throughout the centuries although some major changes can be observed in the potter's instruments or in the morphological types of the vessels. Based on these results, hypotheses are made in terms of continuity in the peopling of the plain of Akkar over more than a millennium.

**HELENE SADER**

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## **SETTLEMENT DISCONTINUITY ON THE LEBANESE COAST: THE CASE OF TELL EL-BURAK**

Tell el-Burak is located on the Lebanese coast, 9 km south of the city of Sidon. The joint German-Lebanese excavations, which are on-going since 2001 on the site, have shed light on its settlement history. Tell el-Burak presents an unusual and intermittent occupation. In the Middle Bronze Age I and II the site was occupied by one single monumental building which was abandoned towards the end of MBII. No decisive evidence has been found so far for a Late Bronze and Early Iron Age occupation of the site. Almost a millennium later, towards the end of the 8th c. B.C., settlement resumed on the site but only for four centuries as the occupation came to an end in the mid 4th c. B.C. Another long period of abandonment followed and traces of domestic settlements dating to the late Mamluk and early Ottoman period were found. This paper will attempt to explain the reasons for this intermittent occupation based on the available archaeological evidence from Tell el-Burak.

**ELISABETH WAGNER-DURAND**

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## **THE TREASURY OF KAMID EL-LOZ AND THE LATE BRONZE AGE SETTLEMENT HISTORY OF KUMIDI – CREATING COLLECTIVE MEMORY AND FALLING VICTIM TO OBLIVION**

Amongst the continuities and ruptures during the settlement history of Kamid el-Loz a single phenomenon concerning settlement development, political history and burial traditions seems to be outstanding: the so called treasury of the Late Bronze Age city of Kumidi. The treasury's uncommon construction, its usage history and its

abandonment designate crucial points in the political, social as well as religious history of the town. Considering the mortuary to be the only known elaborate burial place of the political elite of the city, the building has to be connected with questions concerning the creating and disappearance of a so called collective memory. For that reason the paper presented will deal with questions like: How is this collective memory induced, and how was it constituted in a material – and therefore an archaeological traceable – manner? How can this phenomenon be related with political changes and as such with the settlement history during the first centuries of the Late Bronze Age? How did this once created memory sink into oblivion?

Designed as a case study the analysis establishes relationships between the archaeological record, the political settlement history and the creation as well as destruction of memory (and therefore of social affiliations) as political implements.

**TOMASZ WALISZEWSKI**

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### **TRAVELLING THROUGH THE AGES IN THE HINTERLAND OF SIDON: A CASE STUDY FROM CHHÎM AND JIYEH (PORPHYREON)**

The question of disruption and continuity of settlement patterns in the Eastern Mediterranean is particularly interesting in case of Iron Age and Greco-Roman Phoenicia, a home for many traditions.

What was the real impact of political events on the local settlements and their economic situation? What were their sources of subsistence and did it change from one period to another? To what extent are we able to trace the parallel development of coastal and mountain located towns and villages between Berytus and Sidon and when they choose to develop in different directions? Did the geographical setting of the village or town determined their prosperity or decline?

Recent research conducted by the Polish-Lebanese team in Chhîm and Jiyeh (Porphyreon), two villages located some 15 km north of Sidon, enables to shed light on some of these issues. The image obtained through the analysis of stratigraphy based on the study of architectural remains, abundant local and imported pottery, coins or iconography of the mosaics and reliefs, is complex and reveal both the traces of adaptation to local conditions and surprising vitality. Chhîm shows a steady development from the Early Roman until the Early Islamic period, although the presence of the Bronze and Iron Age artifacts and constructions indicates clearly earlier occupation. Jiyeh (Porphyreon) reveals the scarce evidence for the Late Bronze Age occupation, but the true prosperity comes with the Iron Age II period and is continued almost uninterruptedly until the abandonment of the site that occurs in the 7th c. AD. Both sites indicate also a strong regionalism documented particularly by the pottery types. The natural gravitation of both settlements towards ancient Sidon is interrupted only once by a short period during the late Hellenistic and Early Roman period when Jiyeh enters into the zone of economic influence exercised by the nearby city of Berytus.

**WORKSHOP 3:**  
**DEFINING THE SACRED: APPROACHES TO THE ARCHAEOLOGY OF RELIGION IN THE NEAR EAST**

**ORGANIZER: NICOLA LANERI**

<b>AUTHOR(S)</b>	<b>TITLE</b>	<b>DAY, HOUR</b>
ANN ANDERSON	STANDING STONE MONUMENTS OF EARLY BRONZE AGE JORDAN	WED, 16.45
HEATHER D. BAKER	THE SPATIAL CONTEXT OF RELIGIOUS PRACTICE IN 1ST MILLENNIUM BC MESOPOTAMIA	TUE, 16.45
LAURA BATTINI	HOW BETTER UNDERSTANDING OF RITUAL PRACTICES CAN HELP THE COMPREHENSION OF RELIGIOUS FEELINGS?	WED, 12.05
MARIA GIOVANNA BIGA	RECONSTRUCTING SOME ASPECTS OF THE OLDEST SYRIAN RELIGION FROM ARCHAEOLOGICAL AND TEXTUAL DATA	WED, 11.40
DOMINIK BONATZ	RELIGIOUS SYMBOLS IN ACTION: THE PERPETUATION OF THE SACRED IN SEALS IN SEALING PRACTICES OF ANCIENT WESTERN ASIA	WED, 17.35
STUART CAMPBELL	ENCOUNTERING BELIEF IN THE LATE NEOLITHIC OF NORTHERN MESOPOTAMIA	WED, 14.30
JULIEN CHANTEAU	THE CHALCOLITHIC SHRINE AT EN GEDI: AESTHETIC - SYMBOLISM - STRUCTURE	TUE, 11.40
LECH CZERNIAK, ARKADIUSZ MARCINIAK	FROM 'HISTORY HOUSES' TO CULT STRUCTURES. THE EMERGENCE OF RITUALS OUT OF DOMESTIC SPACE AT ÇATALHÖYÜK EAST TOWARDS THE END OF THE 7TH MILLENNIUM BC	TUE, 15.45
AGATA CZESZEWSKA	SYMBOLIC IMAGES OF NEOLITHIC PERIOD IN NORTH LEVANT AND CENTRAL ANATOLIA	WED, 15.20
NADEZHDAH DUBOVA	ANIMAL BURIALS AND CULT OF THEM IN MARGIANA	TUE, 12.05
ISAAC GILEAD, MILENA GOSIC	CASTING THE SACRED: CHALCOLITHIC METALLURGY IN THE SOUTHERN LEVANT	WED, 14.55
HASKEL GREENFIELD	BEING AN "ASS": UNDERSTANDING THE REMAINS OF AN EARLY BRONZE AGE ASS BURIAL AT TELL ES-SAFI/GATH, ISRAEL	TUE, 12.30
OMUR HARMANSAH	PLATO'S SPRING: WATER, CAVES AND THE UNDERWORLD IN THE ANATOLIAN COUNTRYSIDE	TUE, 9.25
YAGMUR HEFFRON	DEITIES IN THEIR CUPS: THE MATERIAL CULTURE OF HITTITE 'GOD-DRINKING'	WED, 9.55
TIM HARRISON	THE RELIGIOUS DIMENSIONS OF NEO-ASSYRIAN IMPERIALISM AT TELL TAYINAT	TUE, 17.35
NICOLA LANERI	INTRODUCTION: DEFINING THE SACRED - APPROACHES TO THE ARCHAEOLOGY OF RELIGION IN THE NEAR EAST	TUE, 8.45
STEFANIA MAZZONI	AROUND TEMPLES, ACROSS THE LAND	TUE, 9.50
PIERRE DE MIROSCHEDJI	CULT AND URBANIZATION IN THE SOUTHERN LEVANT OF THE EARLY BRONZE AGE	WED, 9.30
ELIEZER D. OREN	DONKEY SACRIFICE RITUALS IN THE MIDDLE BRONZE AGE: NEW EVIDENCE FROM TEL HAROR	TUE, 10.15
MONICA PALERMO FERNANDEZ	THE BALAWAT GATES: DOORS AS CHANNELS OF COMMUNICATION AND EXPERIENCE IN ANCIENT MESOPOTAMIA	TUE, 17.10
LAERKE RECHT	IDENTIFYING SACRIFICE IN BRONZE AGE NEAR EASTERN ICONOGRAPHY	WED, 11.15
LICIA ROMANO	A TEMPLE LIFECYCLE: RITUALS OF CONSTRUCTION, RESTORATION AND DESTRUCTION OF SOME ED MESOPOTAMIAN AND SYRIAN SACRED BUILDINGS	TUE, 14.55
STEVE ROSEN	CULT AND THE RISE OF DESERT PASTORALISM	TUE, 9.00



KLAUS SCHMIDT, CIGDEM KOKSAL-SCHMIDT	THE FIRST TEMPLES OF MANKIND, GÖBEKLI TEPE (SOUTHEASTERN TURKEY)	TUE, 14.30
DANIEL SNELL	ARCHAEOLOGICAL CORRELATES OF PIOUS SOCIETIES	WED, 12.30
KRZYSZTOF ULANOWSKI	IDEOLOGY OR RELIGIOSITY? FACTUAL CONTEXT OF THE NEO-ASSYRIAN CONCEPT OF KINGSHIP	WED, 17.10
STEFANO VALENTINI	THE JEZIRAH COMMUNAL PLACES OF WORSHIP. RITUAL ACTIVITIES AND SOCIAL MEMORY DURING THE EARLY BRONZE AGE	WED, 15.45
MASSIMO VIDALE, FRANCOIS DESSET, ENRICO BATTISTELLA	DEATH AND RITUAL IN BRONZE AGE IRAN: TAPHONOMICAL OBSERVATION ON AN UNDISTURBED GRAVE OF THE HALIL RUD CIVILIZATION (KERMEN, IRAN)	WED, 10.20
TREVOR WATKINS	RELIGION AS PRACTICE IN NEOLITHIC SOCIETIES	WED, 9.10
HASANOV ZAUR	REFLECTION OF THE CIMMERIAN AND SCYTHIAN. RELIGIOUS RITES IN ARCHAEOLOGY	TUE, 11.15
SHARON ZUCKERMAN	TOWARDS AN ARCHAEOLOGY OF CANAANITE RELIGION: THE CASE OF THE MIDDLE BRONZE AGE LEVANT	TUE, 15.20

#### **ANN ANDERSON**

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### **STANDING STONE MONUMENTS OF EARLY BRONZE AGE JORDAN**

A phenomenon of erecting standing stones existed throughout the Early Bronze Age period in Jordan (3600-2000 BC). Even though these stone monuments have traditionally been interpreted as cultic in nature, their incorporation into the wider Early Bronze Age community is not well established. This paper will address the question of their function and symbolic meaning through an archaeological case study of a standing stone monument at the site Dhra'. The site is located in the Dead Sea Plain region (the southern Ghor). The site of Dhra' was excavated in the 1990's by a project associated with the German Protestant Institute of Amman. The case study focuses on the architectural features found at the site and the ceramic assemblage recovered from the excavation. Furthermore, an investigation of standing stone monuments of the Early Bronze Age period is incorporated into this study, in order to examine the significance of the stone features in this period. The case study and the broader phenomenon of standing stone monuments will be analyzed from the perspective of religious and cultic meaning and propositions of their incorporation in the Early Bronze Age society will be made.

#### **HEATHER D. BAKER**

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### **THE SPATIAL CONTEXT OF RELIGIOUS PRACTICE IN 1ST MILLENNIUM BC MESOPOTAMIA**

Using selected case studies drawn from 1st millennium BC Mesopotamia, this paper examines approaches to the spatial context of religious practice based on both textual and archaeological evidence. The focus is on the methodological issues involved in combining these different strands of data. The paper considers the role of religion in shaping the physical fabric of the city, taking into account 'official' cult as well as individual/domestic observance and their different spatial contexts.

#### **LAURA BATTINI**

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### **HOW BETTER UNDERSTANDING OF RITUAL PRACTICES CAN HELP THE COMPREHENSION OF RELIGIOUS FEELINGS?**

Ritual practices are not easy to be understood, even if when written material is known. Sometime the study of fittings and objects can help in reconstructing rituals. Can this reconstruction help us to understand mentality and religious mind? In this paper advantages and disadvantages of this approach will be studied from different periods and regions.

**MARIA GIOVANNA BIGA**

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## **RECONSTRUCTING SOME ASPECTS OF THE OLDEST SYRIAN RELIGION FROM ARCHAEOLOGICAL AND TEXTUAL DATA**

The correlation of archaeological data and written sources from some Syrian sites like Ebla, Mari, Tell el-Rawda, Emar and Qatna has improved our knowledge of some peculiar aspects of Syrian religion of the 3rd and 2nd millennium B.C. The cult of betyls, the cult of the ancestors and the kispum-ritual, some rituals of purification have become better known recently thanks to archaeological discoveries and new readings of some texts. Other archaeological data from the Temple of the Rock of Ebla from the 3rd millennium will be compared with textual data from the Eblaite archives for a better understanding of the oldest Syrian religion and of some rituals, including the ritual for the renewal of Eblaite royalty.

**DOMINIK BONATZ**

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## **RELIGIOUS SYMBOLS IN ACTION: THE PERPETUATION OF THE SACRED IN SEALS IN SEALING PRACTICES OF ANCIENT WESTERN ASIA**

Throughout the long history of ancient Western Asiatic seals the depiction of ritual scenes ranges among the most persisting motifs in the rich repertory of glyptic art. The meaning of such scenes might be distinct from others as they involve human subjects who can be identified as pictorial representations of the seal owner. The reasons for choosing this motif of self-representation obviously lie in the validity of the ritual for social interaction. Thus the visual reference to a ritual always relates to a performance that takes place in reality in order to support the ego of a social agent. One aim of this paper is to point out the relationship between the rituals as practiced in society and the ritual spaces depicted on seals. Considering the specific quality of the seal to perpetuate its visual message in many different functional contexts, it will be asked how far the evidence of sealing practices can be used to understand the role of the visual by representing personal identities and institutional facts. The other aim is to show the importance of religious symbols in this process. While ritual practice does not necessarily involve religion most of the seals with ritual scenes simply do so. The ritual object is a divine or supernatural being, or any other representation of institutionalized religion such as temple architecture. Through ritual interaction with religious symbols the human subject is grasping to the world of religious power. In this context, the seals depicting rituals can indeed be interpreted as materializations of shared ideologies. They contribute to the archaeology of religion for they testify to the interconnections among religion, economics, society and politics. The case study will be on seals and other artworks of the Mittani and Middle Assyrian period, which I consider as significant evidences for this argument.

**STUART CAMPBELL**

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## **ENCOUNTERING BELIEF IN THE LATE NEOLITHIC OF NORTHERN MESOPOTAMIA**

During the late Neolithic of northern Mesopotamia (here used as a term of convenience to encompass the period from the Ceramic Neolithic to the Halaf, ca. 6800- 5400 BC), religion, the supernatural and the sacred is difficult to approach directly. Unlike earlier and later periods, it is hard to identify obvious cult buildings or indisputable cult objects other than through a rather narrow focus on funerary activities. In past study of this time period, this has certainly led to the importance belief and religion being underplayed by archaeologists. However, the elusive nature of evidence may be an important characteristic in itself, perhaps pointing to a blurring of boundaries between the mundane and the supernatural. This paper intends to explore the ways in which belief systems may have been manifested in material culture in this period, and the potential for using this evidence to provide a stronger understanding of the role of religion, in a broad sense, in the construction of society.

**JULIEN CHANTEAU**

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## **THE CHALCOLITHIC SHRINE AT EN-GEDI: AESTHETIC - SYMBOLISM - STRUCTURE**

Located at the eastern edge of the Judean desert, overhanging the Dead Sea, the shrine at En-Gedi remains one of the most enigmatic Chalcolithic monuments in the Levant, in spite of the numerous studies that were dedicated to it. Even though the large chamber is commonly considered to be the real “temple”, with its altar and podium,

archaeologists still disagree on the function of the small chamber and the circular installation of the courtyard. Concerning the latter, two hypotheses still compete. The first one, formulated by David Ussishkin, is the most commonly accepted and reconstructs a basin in the centre of the installation. The second one, defended by Amihai Mazar, suggests a circular masonry initially built around a tree. The aim of this conference is to demonstrate, with an analytical method inspired by the structural thinking, that the shrine of En-Gedi is more than just an anarchical addition of architectural units and that its cultic space has been essentially conceptualized and organized in relation with a pre-existent natural element that overdetermined the building process: a sacred tree.

**LECH CZERNIAK (1), ARKADIUSZ MARCINIAK (2)**

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## **FROM 'HISTORY HOUSES' TO CULT STRUCTURES. THE EMERGENCE OF RITUALS OUT OF DOMESTIC SPACE AT ÇATALHÖYÜK EAST TOWARDS THE END OF THE 7TH MILLENNIUM BC**

The archaeological works at Çatalhöyük East conducted to date (J. Mellaart, I. Hodder) revealed only highly standardized dwelling structures integrating living, burial and ritual functions. Of special significance are the so-called history houses characterized by a number of burials underneath their floors and platforms and decorated by paintings and ritual installations. The works undertaken by the Polish mission in the last decade in the upper levels of the mound revealed a range of new types of architecture. They are indicative of a gradual reduction of the house to its living functions and marked by removal of burials and elaborated symbolism out of its realm. This tendency anticipates the emergence of separate shrines and extramural cemeteries in the Chalcolithic. A good example of this tendency is a complex of a house (B81), separate burial chamber (Sp327) and adjacent space previously used for storage and here full of ritual paraphernalia (standpots, bucrania, platforms) and traces of ritual activities related to the house abandonment. The complex is dated to 6400-6200 cal. BC. The paper intends to scrutinize changes in this complex as a manifestation of significant social changes towards the end of the 7th millennium cal. BC.

**AGATA CZESZEWSKA**

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## **SYMBOLIC IMAGES OF NEOLITHIC PERIOD IN NORTH LEVANT AND CENTRAL ANATOLIA**

The aim of this paper is to look at decorative motifs which are depicted in wall paintings, reliefs, sculptures and installations in North Levant and Central Anatolia region during Neolithic Period. Both North Syria and South East Anatolia were important regions of creating new, sedentary lifestyle. In conjunction with new economic strategies, changes within symbolic sphere appeared as well. New motifs appeared within new contexts. Most of them occurred in houses and public/cult buildings. They are visible at many of the discovered Neolithic sites which are rich in elaborate symbolic elements. Göbekli Tepe, Jerf al-Ahmar, Nevalı Cori or Çatalhöyük are the examples of sites filled to capacity with zoomorphic, anthropomorphic and abstract motifs. Most often they have been interpreted in religious, cultic or spiritual terms. I wish to consider these motifs in term of their dispersal, modification and variation within time and space. To what extent motifs popular for early Neolithic in South East Anatolia repeat the pattern during later period in Central Anatolia? Can we talk about one universal, standardized canon of used representation, or maybe each site has its own individual character? What can we tell about these motifs in terms of religion and spirituality?

**NADEZAH DUBOVA**

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## **ANIMAL BURIALS AND CULT OF THEM IN MARGIANA**

During excavation on the famous Bronze Age site Gonur (2300-1600 B.C.) in Turkmenistan 70 real burials and places with part of animal skeletons have been found. More often burials of rams/goats (34 burials with remains of 55 individuals), and also dogs (30 burials, 53 individuals) are found out. Special tombs for animals with funeral gifts make a little more than half of all (funeral food, doleful meat food etc. not discussed here). Their different types are met at Gonur: burials of animals in immediate proximity from human tombs or in them; variant of such burial places – a great number of different animals in "yards" of royal tombs; the burials having most likely ritual character – burial places of different animals in special tombs and also placing of parts of hulks of animals in the special small cists or pits. The greatest number of sites with remains of animals is found out at the royal necropolis. Here all kinds of animals (horses, donkeys, bulls, dogs, rams, pigs and camels) were found whereas at others areas of Gonur the overwhelming majority is made by burials of rams. Six of seven burials of donkeys are found at the royal necropolis, only one received

name «burial of a foal» on the Large Gonur necropolis. Tombs of rams are met in different territories of Gonur Depe except the Large and royal necropolises. Dogs' tombs are present basically at the royal necropolis and at the Large necropolis also. Two burials of bulls were dug out at the royal necropolis. The second territory on number of such tombs is area 16 – the isolated space on the southwest outside of bypass wall. Ritual burial of three rams and a donkey was organized also there. Different species were buried in different types of tombs. It is important to mention that the first material certificates of existence of the Margush country have been received less than half a century ago. Therefore nowadays we are only at the beginning of understanding of religion of Margush peoples. But received as a result of excavation the confirmation that different parts of animal body played important role in rituals already are available. So obviously it is not casual that the largest number (in comparison with separate independent burial places) of donkeys is presented in burials by separate parts of skeletons. Their full camel skeletons (this means that the whole animals have been buried) are found exclusively in royal tombs and huge pits there. Most likely they were used only as a victim for maintenance of conveniences buried in other life. Special rich burials of animals give the grounds to consider that such ceremonies were characteristic feature of local tribes. Presence in ram's tombs of symbols of the high military and administrative power can specify what big role animals played in Margiana.

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## **CASTING THE SACRED: CHALCOLITHIC METALLURGY IN THE SOUTHERN LEVANT**

While extensive research has been conducted on the technological aspects of copper working in the Ghassulian culture during the Chalcolithic period in the southern Levant (ca. 4500-4000 BC cal.), the production of copper artifacts has never been discussed in terms of the sacred. The aim of this paper is to examine ritualistic-cognitive features of the metallurgy of the Ghassulian culture and the sanctification of its products. In this respect, a necessary starting point is to understand what it means for objects to have ritual and/or magical powers and how those powers can be perceived by the participants of the ceremony. This perception influences ritual procedures, starting with rituals of production, mainly during the smelting process, and later, when the finished artifacts participate in rituals. On the basis of vast ethnohistorical record, two aspects of ritual behavior that are related to metal-working will be discussed. First, the magical- ritual behavior that ensures successful casting. This may include ceremonial recital of spells, ritual dancing, building and decorating furnaces and decorating copper artifacts with sexual attributes, sacrificing animals, placing medicines (such as herbs, animal parts, slag from previous smelt, etc.) and observing taboos that relate to interactions between smiths and women (in both historical and ethnographic records, smiths are men by default). The second aspect of ritual behavior involves consecration of objects in order to empower them ritually and magically. The consecration ritual was an indispensable phase in the production process of copper artifacts: a tool was finished only when it attained its full power and could be used ritually. Although the nature of the rituals is still obscure, recognizing their existence elucidates cognitive process behind Chalcolithic metalworking. Moreover, it suggests that certain aspects of behavior that we often understand as contrasting and exclusive, such as sacred-profane or religious-practical/utilitarian, are inclusive and merge harmoniously the case of metallurgy. This understanding is especially relevant in the case of Ghassulian metallurgy, since copper artifacts have been, and still are, divided into dichotomous groups: into prestigious or ritual tools on one hand and utilitarian or profane tools on the other hand. Although this division has been questioned before, their production has not yet been discussed in such terms. The proposed approach, which treats the Ghassulian copper production in the perspective of the sacred, emphasizes that religious and technological dimensions were inseparable and formed a continuum in the mind and behavior of the members of Chalcolithic communities.

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## **BEING AN 'ASS': UNDERSTANDING THE REMAINS OF AN EARLY BRONZE AGE ASS BURIAL AT TELL ES-SAFI/GATH, ISRAEL**

Burials of domestic asses appear in the Early Bronze Age of the Near East, yet there is little understanding of the nature and importance of such burials. Usually, they are treated relatively simplistically as the remains of adored pets (if carefully interned) or sick animals who have lost their usefulness (e.g. as beasts of burdens). Also, the relationship between the burials and the surrounding deposits and structures is rarely clear, e.g. were they buried in an abandoned area of sites or purposely buried beneath floors? In this paper, we discuss the excavation and analytical results of the burial of an ass found under the floor of an EB III house at the site of Tell es-Safi/Gath, Israel. By integrating the results of an integrated approach (zooarchaeological, architectural, stratigraphic, typochronological, radiocarbon, geochemical, and DNA) to this bioarchaeological deposit, it is clear that the ass was deliberately bound, slaughtered and buried as a foundation deposit under the EB III house. The importance of this taxon to the religious and economic realms of the EBA of the Near East are discussed. If this approach is applied to the other ass burials dispersed across the region, their significance is clarified.

**PLATO'S SPRING:  
WATER, CAVES AND THE UNDERWORLD IN THE ANATOLIAN COUNTRYSIDE**

This paper will present a comparative study of two well-known “sacred” pool complexes of the Hittite world, the spring monuments of Eflatun Pınarı and Yalburt Yaylası (Western Konya Province), from a place-based perspective. Through a discussion of the distinct architectural form and iconographic content of the monuments, their landscape context, as well as the stories that gathered around them, the paper will demonstrate two very different sets of place-making practices at work and discuss a variety of state interventions to sacred locales. Eflatunpınarı (“Plato’s Spring”) was built in the karstic landscape of Beyşehir Lake basin, possibly at an earlier holy place. Its architecture is characterized by an impressive assemblage of mountain deities, spring gods and composite mythological beings.

Since the Late Bronze Age, it never ceased to be a part of the cultural imagination in the watery landscape of Konya’s western countryside, and came to be associated with the local medieval cult of Plato along with other symbolically charged locales around Konya. Yalburt Yaylası monument was built at a spring in a high pasture landscape. Instead of divine imagery, it was inscribed with a lengthy, politically charged commemorative inscription of the Hittite King Tudhaliya IV (13th c. BCE), celebrating his victories further West. The pool was rebuilt in the Roman period at the time of a massive “yayla” (high pasture) settlement at the site, and was eventually buried below several meters of deposit. According to the preliminary results of a Brown University-based survey project in the vicinity of Yalburt, the monument seems to have been conceived within a program of agricultural rehabilitation, irrigation and resettlement at the time.

These two places of cultural memory and social practice tell two very different stories, both in terms of the genealogies of their making in the political landscape of the Hittite Empire as well as the trajectories of their use, although they are always typologically lumped together in Hittite studies. The paper will argue that places are never isolated, “authentic” locales abandoned to their own fate, but they are constituted by sustained local practices, far-reaching associations as well as political interventions to sacred places. Places are therefore always hybrid and eventful, as sites of negotiation between the cultures of locality and supra-regional processes.

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**DEITIES IN THEIR CUPS:  
THE MATERIAL CULTURE OF HITTITE ‘GOD-DRINKING’**

The elusive Hittite cultic phrase DINGIR eku-, “to drink a god” has long been controversial, variously interpreted as “to cause to drink” or “to give to drink”; “to libate”; literally “to drink” as an act of metaphysical undertones compared to the Eucharist; or else “to drink to (the honour of)” in the sense “to toast”. Continuing debate over the interpretation of the phrase centres on whether it is to be taken literally, that is, the god being the object of drinking; or figuratively, where the drinking is done to/for the god. Commentators have thus far drawn their conclusions solely from syntactic arguments, largely disregarding the wider context of Hittite religion in which the phrase clearly designates a very specific—and evidently rather common—ritual act. This paper offers a new approach to the question of god-drinking within the broader context of ritual meaning, focusing primarily on its paraphernalia: the vessels themselves. Particular attention is paid to zoomorphic vessels (BIBRU in Hittite texts) and their use in god-drinking rituals. The evaluation of zoomorphic vessels centres, in turn, on the early 2nd millennium forerunners of Hittite BIBRU, namely the large and varied repertoire recovered from Assyrian Colony Period sites (ca. 1950-1680 B.C.), particularly Kaneš/Neša. The resulting assessment of zoomorphic vessels as part of a continuous tradition promises a wider scope for understanding their use in the Hittite cult, and specific function in relation to god-drinking. The predominantly domestic context of the Colony Period vessels, moreover, presents an intriguing contrast to the later use of BIBRU in temple rituals of the Hittite state cult. Against this backdrop is offered a re-interpretation of god-drinking, in which material and textual evidence are given equal weight.

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**THE RELIGIOUS DIMENSIONS OF NEO-ASSYRIAN IMPERIALISM AT TELL TAYINAT**

Excavations at Tell Tayinat, located on the Plain of Antioch in southeastern Turkey, have uncovered the remains of a Late Assyrian settlement, including an Assyrian governor’s residence and, most recently, a temple and a cache of cuneiform tablets dating to this period. Historical sources attest that Tayinat was destroyed by the Assyrian empire-builder Tiglathpileser III in 738 BCE, and then transformed into an Assyrian provincial capital equipped with its own governor



and imperial administration. The Tayinat excavations thus offer an opportunity to examine the religious dimensions of the Assyrian imperial project. They reveal a symbolic landscape that functioned as a stage for enacting the rituals (and theatre) of divinely sanctioned Assyrian authority, cloaked within indigenous traditions.

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## **INTRODUCTION:**

### **DEFINING THE SACRED - APPROACHES TO THE ARCHAEOLOGY OF RELIGION IN THE NEAR EAST**

An initial effort to define an archaeology of religion through the recognition of archaeological elements helpful for reconstructing ancient beliefs (e.g. the 16 'archaeological indicators of ritual' defined by Renfrew 1994, 51-2) has now been developed into a more coherent process that evinces the inner meaning of religious beliefs by identifying the relationship between the practical and cognitive dimensions of ritual practices in ancient societies (e.g., Dornan 2004; Fogelin 2008; Hodder 2010; Insoll 2004; Steadman 2009; Whitley & Hays-Gilpin 2008).

Within this perspective, of fundamental importance is the identification of those archaeological elements (i.e. religious architecture, votive objects, ritual deposits, icons and symbols, etc.) that can be used to define ancient ritual practices and help in the process of reconstructing modes of religiosity (Whitehouse 2004). In so doing, specific attention must be given to the relationship between material culture, human perception and the conceiving of divine or supernatural beings by the involved participants.

Thus, the proposed workshop will focus on the interpretation of material culture that can lead to a reconstruction of ancient religious practices within Near Eastern societies from the Neolithic until the Iron Age; particular attention will be given to those approaches that investigate the relationship between the "mental" and the "material" in constructing the religious dimension of ancient human beings through the investigation of specific archaeological case-studies. In addition, when available, the importance of the entwining of archaeological data and written sources dedicated to religious subjects will be taken into consideration for a better understanding of the development of religiosity among ancient Near Eastern societies.

The workshop will thus attempt to investigate the religious dimensions of ancient Near Eastern societies in the broadest sense, with a particular interest in stimulating discussion on the following four topics:

- 1) Sacred nature - the role of nature in creating the religious dimension of ancient societies;
- 2) Housing the god - the creation of architecture and/or place within the urban fabric for worshipping deities;
- 3) Religious practices vs. religious beliefs -- the definition of the modes of religiosity based on an analysis of the archaeological remains of ritual practices as well as the written sources dedicated to the description of religious beliefs;
- 4) The materialization of religious beliefs -- the use of material culture in the expression of religious beliefs and practices.

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### **AROUND TEMPLES, ACROSS THE LAND**

Recent research has paid attention to the social and political dimensions of cult and religion, focusing on the dynamics of territorial control, social identity and ritual performance. Archaeological evidence provides a vivid illustration of regional sanctuaries with their cult installations and equipments for performing rites in the open air. Archaeology and texts also supply information on processional routes and itinerant rites across the landscape connecting a network of sacred places in a religious and political entity. From a perspective of symbolic landscape archaeology, this paper will illustrate a few cases from over a lengthy span of time, exploring the dynamics of continuity and development and will address the challenging problem of the limits of the interpretative framework in reconstructing ritual practices and religious belief including its ideological dimension.

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### **CULT AND URBANIZATION IN THE SOUTHERN LEVANT OF THE EARLY BRONZE AGE**

The evolution of funerary practices from the Late Chalcolithic to the Early Bronze Age shows a transition from family or kin-based practices, involving elaborate funerary rituals, to more socialized practices performed in the framework



of enlarged social groups. This evolution is paralleled in the religious sphere with the appearance of socialized cultic practices mobilizing the entire community. They are expressed by the development of temples and cultic festivities, the anthropomorphization of divinities and the first appearance of a male deity alongside a female great goddess. The paper will review these evidence and emphasize their correlation with the development of the urbanization process.

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## **DONKEY SACRIFICE RITUALS IN THE MIDDLE BRONZE AGE: NEW EVIDENCE FROM TEL HAROR**

Ritual interment of equids is a well-known, albeit diverse and complex, phenomenon in the Bronze Age Levant and Egypt, particularly alongside elite human burials, though most rarely in temple context. The discovery in the Middle Bronze Age (MBA) sacred precinct at Tel Haror, Israel, of a ritually deposited young donkey bridled with a bronze horse bit, and associated with what seems to be a saddle, is the first and one of its kind. Thus, not only is this to date the earliest known actual metal bit, it is the only specimen recorded thus far in the mouth of an equid in a well dated Bronze Age context. Also, the discovery of such a primary implement for directing horses bears on the vexing issue of the introduction of the light, horse-drawn chariot in the Levant and Egypt. This unique find demonstrably attests for the immensely important role donkeys played in Levantine Bronze Age culture and economy. The combined testimony of archaeological and faunal data from Tel Haror enhances the reconstruction of donkey sacrifice rituals in Levantine Bronze Age against the available archival and iconographic records.

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## **THE BALAWAT GATES: DOORS AS CHANNELS OF COMMUNICATION AND EXPERIENCE IN ANCIENT MESOPOTAMIA**

Abstract: Doors have a long established tradition in the symbolic realm of Mesopotamian society. The extraordinary examples recovered from the Neo-Assyrian site of Balawat in northern Iraq provide the perfect canvas for an interdisciplinary investigation on experience and visibility in Mesopotamian studies. Three analytical approaches are brought together: philological, art historian, and archaeological – with special attention to architecture and the built environment. Contemporary theoretical approaches are also investigated, such as the analysis of space and the experience of space. The third set of doors was found in a temple context by a team of archaeologists in the 1950s, and provides a wealth of information on the religious and architectural context of doors. Coupled with comparative information recovered from other Neo-Assyrian sites, we can attempt to reconstruct the religious experience of the doors and the space in which they were set. Theories of spatial experience, religious architecture, and other contemporary approaches to the experience of the religious space, will be discussed and the data tentatively interpreted accordingly. Contemporary Neo-Assyrian texts illuminating aspects of religiosity will also be taken into account when relevant to the discussion. The aim is to explore interdisciplinary and comparative approaches to the study of religiosity in ancient Near Eastern studies.

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## **IDENTIFYING SACRIFICE IN BRONZE AGE NEAR EASTERN ICONOGRAPHY**

Sacrifice contains an element of mystery (René Girard in *Violence and the Sacred*). What is sacrifice and how do we identify it? Images of sacrifice can be both evocative and subtle; some are instantly recognisable, while others require careful attention to detail and in-depth knowledge of 'artistic' practices. They may also depict various stages of a ritual process that is more than a single moment in time, and some parts may be easier or more memorable to identify, while others fade into the background. This paper attempts a set of guidelines in the identification of one specific type of religious activity usually referred to as 'sacrifice'. In doing so, it problematises common perceptions and assumptions concerning the definition of sacrifice in general, and its specific application in the Bronze Age Near East. It argues that 'sacrifice' is not a simple or universally applicable concept, and that the iconographic material from the Near East points to a great variety of rituals which involved sacrifice. Recently discovered glyptic material provides one of the most explicit scenes of sacrifice from the Bronze Age Near East yet.

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## **A TEMPLE LIFECYCLE: RITUALS OF CONSTRUCTION, RESTORATION AND DESTRUCTION OF SOME ED MESOPOTAMIAN AND SYRIAN SACRED BUILDINGS**

The paper will try to shed light on the different stages of ED temples' life through the analysis of textual and archaeological data. A particular attention will be given to the case study of the Eblaic Temple of the Rock (HH): the study of materials found inside the Favissae P.9719, P.9717, and P.9713 give the unique opportunity to observe the traces of a celebration, sealing the end of a city main Temple.

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## **CULT AND THE RISE OF DESERT PASTORALISM**

In the desert periphery of the southern Levant, beyond the agricultural core areas, open air shrines and sometimes associated tumulus fields constitute the earliest evidence for centralized cult and are dated to the mid-to-late 6th millennium BC. They thus post-date the transition from hunting to herding (and gathering in both cases) by half a millennium or longer, suggesting the rise of desert cult to be a concomitant of this fundamental change in subsistence. Examination of the shrine and tumulus complexes indicates a significant increase in organizational hierarchy, in the ability to actually build massive these massive constructions. The symbolism that is undoubtedly associated with the setting sun summer solstice, the mortuary ceremonies evident in complex interments, and other specific details of the shrines and their placement, must reflect new social needs, primarily involving such issues as territoriality and resource control and legitimation of social roles. These can be linked to the new demands of husbandry replacing hunting.

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## **THE FIRST TEMPLES OF MANKIND, GÖBEKLI TEPE (SOUTHEASTERN TURKEY)**

Located atop a mountain ridge near the modern town of Urfa in southeastern Turkey, Göbekli Tepe is one of the most fascinating archaeological sites in the world. It belongs to the period when in southeastern Anatolia during the 10th and 9th millennium cal. BC – much earlier than in any other regions of the world – the transition from hunting and gathering societies to food producing early village farming communities took place. One of the main questions that have exercised the minds of generations of archaeologists is: Why did people here first give up a hunting and gathering way of life and started to domesticate plants and animals? The new discoveries at Göbekli Tepe have turned up evidence for explanations that are quite different in comparison to the generally accepted theories on this issue. Göbekli Tepe is not a settlement, it consists of several monumental sanctuaries, dated to the second half of the 10th millennium cal. BC. The most characteristic element of the sanctuaries are menhir-like megalithic T-shaped pillars, each weighing several tons. The pillars usually are arranged in circles and are connected by walls, which are defining the inner and outer space of the enclosures. In the centre there are always two much bigger freestanding pillars, surrounded by the other pillars and the walls. The meaning of the T-shape can be interpreted easily as anthropomorphic, as some of the pillars have arms and hands depicted in flat relief, undoubtedly those of humans. The head is represented by the cross of the T-shape, the pillar's shaft is the body. Differentiation of sex was evidently not intended. It is also clear that the minimalistic form of representation was intentional, because more or less naturalistic sculptures and reliefs of animals and humans exist. They own probably an apotropaic meaning and are placed on the walls or on the pillars, which offer sufficient proof of the artist's ability to produce such works. The question whom the anthropomorphic pillars represent, is essential for the understanding of this new and unexpected iconographical world of the Stone Age. It is possible, that they represent mythical ancestors, or demons, or even the first Gods depicted in a monumental way in the history of mankind. Before the discovery of Göbekli Tepe there was a common believe, that the societies at the beginning of the Neolithic were organized into small bands of hunter-gatherers and that the first complex religious practices were developed by groups that had already mastered agriculture. When we look at the new data coming from the discoveries at Göbekli Tepe, we have evidence that Jacques Cauvin was right, when he was expressing that the belief and the social systems changed before, not as a result of shifts in the economic system.

**ARCHAEOLOGICAL CORRELATES OF PIOUS SOCIETIES**

The paper examines the question of whether piety can be seen in the archaeological record, and if so, how it may correlate to textual manifestations. We shall not attempt to judge religious practice quantitatively but shall attempt to approach questions that archaeologists might helpfully ask of societies more or less dead which they study.

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**IDEOLOGY OR RELIGIOSITY? FACTUAL CONTEXT OF THE NEO-ASSYRIAN CONCEPT OF KINGSHIP**

In Mesopotamia religion was not separate from the sovereignty. The most complicated example is the case of Naram-Sin, who was portrayed not simply by the iconographic device but also by a number of visual details which can be read as the image of the ideal King. His stele reproduced scenes from mythological combats among the gods and by this repetition king wants to be seen both pious and equal to the gods. Much later the Assyrian ruler, Adad-nirari II relates that the gods: "Altered my stature to lordly stature, made perfect my features and filled my lordly body with wisdom [and] surrounded my head with the aura of rulership". The inscriptions from the period of the Neo-Assyrian state affirm the gods' crucial role in its policy. The king's attitude to the gods is variable, from request to the submission to their will, and causes that it is very difficult to determine whether in fact we are dealing with religious sentiments or usurping religion for political purposes. The king independently replaces god at work in the construction of the temple and was led to a decisive combat by the gods. The Assyrian royal image was placed together with images or symbols of local gods in a sanctuary in subjugated cities. In certain situations king appears to his subjects as a god, in others as a governor (*šakkanakku*), that is only as a subordinate to gods, but anyway the term has a religious meaning and could be expending as *šakkanak ilāni* "governor of the gods". Some legal documents shows that the contracts were made before a royal image (*salam šarr*) as well as the gods Nabu and Shamash. The comparison between the physical likeness of god and king is insinuated in Ashurnasirpal's report about the installation of the royal image of Ninurta and archaeological evidences: presentations of rituals on Balawat Gates, panel from Fort Shalmaneser in Nimrud, rock reliefs from Malatya. On many steles we observe an image of king who was depicted in a typical gesture of communication with gods, the so-called pose *ubāna tarāsu*. Is the sign of equality or subjection to the gods? Could we exactly explain what the complex notion of "kingship" is, as the Assyrian term *salam šarrūtija* ("image of my kingship") means? Why is the king depicted as incarnation of Ninurta, the Divine Prince? Is it possible to find a clear distinction between the realm of religion and ideology taking into account that in the Neo-Assyrian period the king does not claim to be a god, but he is not averse to a claim of having been divinely shaped to being seen as the very likeness of a god?

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**THE JEZIRAH COMMUNAL PLACES OF WORSHIP.****RITUAL ACTIVITIES AND SOCIAL MEMORY DURING THE EARLY BRONZE AGE**

The late 4th millennium BC in Jezirah coincides with the end of the Uruk system. This scenario evolves clearly at the beginning of the 3rd millennium in which we can observe the first signs of the regeneration phenomenon of a complex society that ends, in the middle of the 3rd millennium, with the advent of the Second Urban Revolution. With the disintegration of the old socio-political and ideological structures, innovative elites, through exploitation of surplus derived by agricultural and breeding activities and by the intermediate role of 'gateway' in the long-distance trade between Anatolia and Mesopotamia, may find new avenues for the acquisition of power, elaborating an intricate system of ritualized ideology to reinforce a new social order. The Jezirah shrines represent a clear example of formal architecture adopted for religious purposes, and we can consider them as a means of materialization of a new ideology. This could be demonstrated by the fact that some of these shrines, for greater visibility, were built on top of a sort of platform. Furthermore, some of them were isolated from the rest of the buildings by an enclosure wall. They were built to be seen as a separate entity from the surrounding secular structures and ideologically it shows an elite that controls the ritual activities, revealing their power through a symbolic exclusion of the participants, probably in accordance with their rank. Concerning the objects related to the cultic activities found in the Jezirah Shrines, we could point out the presence of vessels belonging to 'luxury' wares, clay animal and human figurines, and small portable hearts or andirons. In the ritual context these objects, as Status Symbols, contained coded information, and they were used by the elites as a medium of information constituting a factor of consolidation power within a process of affiliation. The use of cylinder seals attested in the Jezirah Sacred Areas is also important. The sealing activities may

be related, besides the control of access to the Sacred Areas, with the administration and management of the products used during the ritual activities. In this paper we focus our attention also on the discoveries at the site of Tell Barri, in which were excavated a Sacred Area with a large open space (temenos). Here we analyse the fascinating case of three monumental adult burials located inside the open space previously occupied by the temenos. These tombs do not destroy the ancient sacred area structures; on the contrary, a spatial continuity exists between the temenos and the burials. The Barri's nascent elite may have erected the shaft burials in the sanctity place in which the Shrines were before, to claim a link to the revered elites of the preceding era. A case of stimulus regeneration in which the mobilization of social memory, real or imagined, was used to legitimate structures of hierarchy and continuity of power.

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## **DEATH AND RITUAL IN BRONZE AGE IRAN. TAPHONOMICAL OBSERVATION ON AN UNDISTURBED GRAVE OF THE HALIL RUD CIVILIZATION (KERMAN, IRAN)**

In 2009, the authors excavated at Mathoutabad, near Konar Sandal (Kerman, Iran) the only undisturbed grave of the Halil Rud civilization so far discovered. The grave dates back approximately to 2400 BCE. We found evidence of the killing of a sheep or goat, of offerings outside and inside the grave chamber, of a funerary meal, and – some months after the primary burial – of the reopening of the grave. In this, while the vault of the chamber had partially collapsed, some offering were placed above the dead, and the upper part of the skeleton was dug and re-buried in a nearby location. This information is considered in the light of similar evidence from the cemeteries of other early urban sites of protohistoric Iran.

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## **RELIGION AS PRACTICE IN NEOLITHIC SOCIETIES**

During the Epi-palaeolithic and early Neolithic periods in southwest Asia there emerged large, permanently co-resident communities with populations in the hundreds, and even in the thousands. The scale of the new permanent communities required new symbolic modes of binding together people who were not all related to one another, and who could not know well more than a fraction of those with whom they shared the settlement. It was important to be able to recognize that people that one did not know well could be trusted: for the community, it was important to know who you were, and where you fitted into the world, and to have shared codes of behaviour. Ideas about the cosmos and how the world works, codes of behaviour etc. need to be made material: while people can tell stories, and re-tell myths, shared ideas, beliefs and values require material forms. What we see in the early Neolithic settlements is evidence of the assurance of community in the form of shared performance, whether community projects or the sharing of ritual performance.

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## **REFLECTION OF THE CIMMERIAN AND SCYTHIAN RELIGIOUS RITES IN ARCHAEOLOGY**

By the way of comparison of historical, archaeological, mythological and ethnographic data author reconstructs major elements of the Cimmerian and Scythian religious rites. As a basis, for the comparison of ethnographic material with archaeological finds, the Shamanism of Siberian and Central Asiatic people is taken. Diverse archaeological elements are examined: 1) stratification of burials which represent the concept of worlds and travels between them (mound, dromos etc.); 2) construction materials, different bronze and ceramic objects and their location in graves (vertical log representing "tethering post", specific vessels representing "milky lake" etc.); 3) ornaments from the grave finds. By the way of comparison of ornaments in different periods and cultures their true mythological meanings are identified. E.g. it is determined that rhomb (or cross) shaped ornament in a circle represents the concept of the "Center of Universe", but not the "Sun" as it is often mistakenly stated. Information of written sources is tested by providing archaeological and ethnographic support. E.g. description of the Scythian cult of "bath tents" with cannabis in Herodotus and their specimens in Pazyryk burial mounds in the Altay Mountains are compared to the Shamanic cults.

**TOWARDS AN ARCHAEOLOGY OF CANAANITE RELIGION:  
THE CASE OF THE MIDDLE BRONZE AGE LEVANT**

The Middle Bronze Age (2000-1550 BC) was a time of fundamental transformations in the social and political situation in the Levant. The re-organization of Canaanite society and the absorption of northern social groups and cultural ideas, the foundation of new fortified and well-organized cities and their territories, the erection of monumental royal edifices and other public projects and the re-birth of international exchanges and maritime trade are some of the changes witnessed by the inhabitants of the southern Levant and neighboring areas. New religious ideas and ritual practices served as important vehicles of confronting these changes and coming to terms with them, and their study illuminates these processes and contributes to their understanding. The paper will explore the diverse roles of ritual and cultic activity within the framework of the emerging urban societies of the 2nd millennium BC. The varied functions of official cult locations within the Canaanite cities, as well as those of extra-urban foci of ritual activity, will be presented and critically discussed, using case studies from the Middle Bronze Age southern Levant.

**WORKSHOP 4:**  
**"SEVEN GENERATIONS SINCE THE FALL OF AKKAD": THE SETTLEMENT AND POPULATION DYNAMICS OF THE KHABUR PLAINS CA. 2200–1900 BC**

**ORGANIZER: HARVEY WEISS**

<b>AUTHOR(S)</b>	<b>TITLE</b>	<b>DAY, HOUR</b>
MONICA ARRIVABENI	THE POST-AKKADIAN/LEILAN IIC OCCUPATION IN THE LEILAN REGIONAL SURVEY	WED, 11.40
CARLO COLANTONI	TOUCHING THE VOID: THE POST-AKKADIAN PERIOD VIEWED FROM TELL BRAK	WED, 14.30
GEOFF EMBERLING, METTE MARIE HALD, HENRY WRIGHT	AFTER COLLAPSE: THE POST-AKKADIAN OCCUPATION IN THE PISÉ BUILDING, TELL BRAK	WED, 14.55
RAFAŁ KOLIŃSKI	GENERATION COUNT AT TELL ARBID, SECTOR P	WED, 15.20
ANDREW MCCARTHY	THE END OF EMPIRE: AKKADIAN AND POST-AKKADIAN GLYPHIC IN THE KHABUR REGION, THE EVIDENCE FROM TELL LEILAN IN CONTEXT	WED, 9.50
AUGUSTA McMAHON	HOW MANY POTS PER PERSON? POST-AKKADIAN CERAMIC ASSEMBLAGES OF THE CENTRAL UPPER KHABUR	WED, 12.30
CHRISTOPHE NICOLLE	TELL MOHAMMED DIYAB PRE KHABUR WARE OCCUPATION DURING THE AKKADIAN AND THE AMORITE PERIODS	WED, 12.05
VALENTINA ORSI	TELL BARRI BEFORE KAHAT	WED, 16.45
PETER PFÄLZNER	HOUSEHOLD DYNAMICS IN LATE 3RD MILLENNIUM NORTHERN MESOPOTAMIA	WED, 17.35
CLEMENS REICHEL	EARLY BRONZE AGE HAMOUKAR: 'AKKADIAN' - AND BEYOND?	WED, 17.10
LAUREN RISTVET	THE DEVELOPMENT OF UNDERDEVELOPMENT? IMPERIALISM, ECONOMIC EXPLOITATION AND SETTLEMENT DYNAMICS IN THE KHABUR PLAINS, CA. 2300-2200 BC	WED, 11.15
ŁUKASZ RUTKOWSKI	LATE 3RD MILLENNIUM BC PAINTED POTTERY	WED, 15.45
ALEXIA SMITH	AKKADIAN AND POST-AKKADIAN PERIOD CULTIVATION AT TELL LEILAN	WED, 10.15
HARVEY WEISS	THE FOUR QUESTIONS	WED, 9.00
HERVEY WEISS, ZEINAB BAHRANI, THOMAS GUILDERSON, ANDREW MCCARTHY, RICHARD MEADOW, STURT MANNING, LUCIA MORI, AJITA PATEL, PHILIPPE QUENET, LAUREEN RISTVET, ALEXIA SMITH	TELL LEILAN AKKADIAN IMPERIALIZATION, COLLAPSE AND SHORT-LIVED REOCCUPATION DEFINED BY HIGH RESOLUTION RADIOCARBON DATING	WED, 9.25



## **THE POST-AKKADIAN/LEILAN IIC OCCUPATION IN THE LEILAN REGIONAL SURVEY**

The results of the Leilan Regional Survey campaigns concerning the Leilan IIC phase (ca. 2200-2150/2100 BCE; Post-Akkadian Period) are conjoined to portray in detail the regional settlement of the last centuries of the millennium and to highlight the differences in occupation patterns from the preceding Leilan IIb phase (ca. 2300-2200 BCE; Akkadian Period).

During the IIb phase the region was densely occupied, with the first foundation of new settlements in the southern more arid area, and the number of occupied sites was the highest for the 3rd millennium (though the total occupied hectares did not exceed the Leilan IIa pre-imperialization phase). The Leilan IIC phase, however, marks a period of drastic reductions both in the number of occupied settlements and in their size (Ristvet 2005; Ristvet & Weiss 2005; Weiss 2010; Arrivabeni 2010). In general, the LRS data mirror the occupational history of Tell Leilan: 1) an expansive Akkadian phase, 2) only slight evidence for a short-lived post-Akkadian phase, and 3) the absence of evidence for occupation during the Ur III period (Ristvet 2005; Weiss 2010; Arrivabeni 2010).

## **CARLO COLANTONI**

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## **TOUCHING THE VOID: THE POST-AKKADIAN PERIOD VIEWED FROM TELL BRAK**

Tell Brak in the central Khabur region was a major urban centre traditionally dominating the settlement patterns of its surrounding region. This paper discusses the spatial distribution of Post-Akkadian settlement in region and the nature of urban occupation at the site; the primary focus is on questions regarding both absence and presence of occupation and its significance to our understanding of the period. These questions are approached through varying scales of analysis drawing on recent data from high definition surveys and targeted excavations, ranging from the regional Tell Brak Sustaining Area Survey and the localized Tell Brak Suburban Survey to work in the Outer Town halo and excavations across the main mound.

The range of recent investigations, accompanied by extensive previous excavations on the main mound, has given us new evidence that improves our understanding of the extent, density and nature of occupation in the Post-Akkadian period. Possibilities of fine temporal definition are now beginning to emerge through the comparative analysis of new cultural material and associated ceramics. As these elements of the full range of transitional material coalesce, a more finely nuanced understanding of the dynamics for this period following the fall of Akkad from the perspective of Tell Brak is emerging.

## **GEOFF EMBERLING (1), METTE MARIE HALD (2), HENRY WRIGHT (3)**

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## **AFTER COLLAPSE: THE POST-AKKADIAN OCCUPATION IN THE PISÉ BUILDING, TELL BRAK**

Monumental public buildings constructed at Tell Brak during the Akkadian empire suggest that Brak was a major regional center for imperial control of northern Mesopotamia. With the collapse of the empire and the associated deterioration of climate in the region, several of these monumental structures (buildings in Areas SS and FS) were deliberately infilled, and one of them (FS) was built over with smaller-scale houses in a neighborhood that lasted perhaps a century.

Excavation of Post-Akkadian remains in Area TC at Tell Brak, particularly in the “Pisé Building,” suggest a similar pattern: smaller domestic occupation built over a large, formally built structure of the Akkadian period. The Pisé Building is an informally built complex of rooms and associated courtyards that contained evidence of both domestic activities and more specialized craft production, including the manufacture of arrow shafts and ceramics. By contrast with largely specialized economic activities during the Akkadian occupation of northern Mesopotamia, evidence from the Pisé Building suggests that many productive activities were carried out at a household level after the collapse of the Akkadian empire.

**GENERATION COUNT AT TELL ARBID, SECTOR P**

The fieldwork carried out in the eastern part of the site in 2008-2010 revealed a sequence of strata covering the turn of the 3rd millennium B.C. Two subsequent strata of the Post-Akkadian settlement, the upper one featuring a substantial reconstruction of the structures was founded over the remnants of Akkadian houses. Then the area was abandoned and over the filled up Post-Akkadian remains two horizons of pits were observed, the younger one falling to the period of the “Early” Khabur Ware. Towards the end of this period first structures appear in the area but only in the MB/OJ II period it was build up with houses. If we speculate that each abandonment/construction episode is reflecting a generation than the following generation count may be proposed:

Layer Chronology	Character of activity	Generation
VII	Akkadian houses abandonment	0
	abandonment	1
	abandonment	2
VI	Post-Akkadian houses ?	2
Vb	Post-Akkadian Main Building, phase 1	3
Va	Post-Akkadian Main Building, phase 2	4
	abandonment	5
IV ?	Pit horizon 1	6
III	Middle Bronze/Old Jezira I Pit horizon 2, pottery kilns	7
IIc	Middle Bronze/Old Jezira I/II House 3, graves	8
Ila-b	Middle Bronze/Old Jezira II Houses 1-5, graves	8/9
I	Middle Bronze/Old Jezira III traces of settlement	10

**ANDREW MCCARTHY**

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**THE END OF EMPIRE: AKKADIAN AND POST-AKKADIAN GLYPHTIC IN THE Khabur REGION, THE EVIDENCE FROM TELL LEILAN IN CONTEXT**

The Akkadian administrative influence and its glyptic reflection in the Khabur region gradually accumulated through time, but eventually an outright replacement of the local system and local style occurred as a function of Akkadian imperialization. Akkadian influence that at one time had been accommodated as a hybridized or compartmentalized element in a local system was replaced suddenly by an imperial administrative glyptic that penetrated regional agro-production and its administration. At Tell Leilan this transformation happened in the Late Akkadian period, with evidence for abandonment of the site at the end of the Akkadian sequence followed by a period of post-Akkadian squatter accommodation with no administrative activity. While the evidence for post-Akkadian occupation across the Khabur Plains is scarce, the pattern in the administrative glyptic repertoire corresponds to the evidence from Tell Leilan: imperial collapse and site abandonments determined that there was no post-Akkadian indigenous glyptic style or administrative system. This suggests the abrupt end of the empire.

**AUGUSTA McMAHON**

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**HOW MANY POTS PER PERSON?****POST-AKKADIAN CERAMIC ASSEMBLAGES OF THE CENTRAL UPPER Khabur**

This paper will explore chronological and social aspects of ceramic production in the Post-Akkadian central Upper Khabur region. It will present Post-Akkadian ceramics from Chagar Bazar and will compare and contrast these with Post-Akkadian ceramic assemblages from recent and past excavations at Tell Brak. Stylistic connections with contemporary southern Mesopotamian ceramics will be noted.

Stratigraphy-based phasing of the Post-Akkadian ceramics at these two sites will contribute to the ongoing chronological debate about this transitional period. And detailed analyses of the ceramic assemblages will provide useful insights for the larger issues of economic and settlement dynamics. Ratios of vessel types, particularly storage versus eating/

serving, may reflect life-ways and food-ways (diet and consumption habits). Further, decorative and morphological simplicity and elaboration have implications for modes of production.

**CHRISTOPHE NICOLLE**

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## **TELL MOHAMMED DIYAB PRE KHABUR WARE OCCUPATION DURING THE AKKADIAN AND THE AMORITE PERIODS**

Tell Mohammed Diyab with an estimated size of 40 ha played a significant regional role. As it has been noted elsewhere in the Syrian Jezirah, the transition between these two periods seems to correspond to a drastic break and significant decline of the regional occupation. However, the site of Tell Mohammed Diyab is not completely deserted. The recent discovery of several walls revealed the existence of an occupation that if it doesn't reach the size of the Akkadian agglomeration has at least, the virtue of revealing a new ceramic corpus still rather unknown. These ceramic is characterized by a greenish vacuolar paste which is likely to be associated with a decline in its quality and the skill of the potters. Here, we intend to present the contexts of those discoveries mostly made during the 2005 and 2010 campaigns and our first analysis of this post-Akkadian ceramic. According to our first results, it seems that the ancient population of Tell Mohammed Diyab had abandoned the site and then was replaced by a new one belonging to different cultural substrate and living in a small agglomeration. Thereafter this population was replaced during the nineteenth century by a wave of dense regional reoccupation marked by the arrival of an Amorite population producing Khabur Ware. We will endeavor to describe this context. Although the documentation is sparse, the description of this post-Akkadian phase of occupation at Tell Mohammed Diyab provides additional information useful to understand the process of abandonment and reoccupation that affected Northern Mesopotamia.

**VALENTINA ORSI**

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## **TELL BARRI BEFORE KAHAT**

This paper will provide an overview of the archaeological data concerning the transition from EBA to MBA in the Upper Khabur valley, combining the evidence of already published sites with hitherto unpublished material. The long sequence of occupation exposed in area G at Tell Barri allows us to appreciate the development of ceramic production from the perspective of the *longue durée*, and to explicitly evaluate the repertory dating to the phase of de-urbanization in Jezirah at the very end of the 3rd millennium BC. Additional evidence comes from recent investigations in area Q: here, in the lowest levels, the southern periphery of the late 3rd - early 2nd millennium BC settlement has been brought to light, providing us with a new set of ceramics reminiscent of southern Mesopotamian Ur III and Isin-Larsa types, whereas the upper layers of Khabur Ware period testify of the urban growth of Middle Bronze Age Kahat.

Converging data in the correlation of the archaeological sequence of Tell Barri with those of the other sites in the region, and especially with that of Tell Mozan, helps us define the cycle of urban disruption and new sedentarization, but divergences force us to hypothesize chronological or 'cultural' distance.

**PETER PFÄLZNER**

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## **HOUSEHOLD DYNAMICS IN LATE 3RD MILLENNIUM NORTHERN MESOPOTAMIA**

During the Early Jezireh IV and V periods a change in household organisations is visible in the Khabur Region. This can be observed through a study of excavated house structures at several sites, such as Tall Mozan, Tall Brak, Tall Chagar Bazar and Tall Chuera. The house plans and their inventories are investigated in this presentation and compared to earlier domestic structures, particularly of the Early Jezireh III period. The observable changes in household organisation can be interpreted as a reflection of general changes in the socio-political organisation of Northern Mesopotamia during the final three centuries of the 3rd millennium BC. They have a strong impact on the endogenous organisational "turn" in the society and urban landscape of the Khabur region during the late 3rd millennium, and, at the same time, prepare the setting for Middle Bronze Age Northern Mesopotamia society.

## **EARLY BRONZE AGE HAMOUKAR: 'AKKADIAN' -AND BEYOND?**

Like many urban centers in the Upper Khabur region, Hamoukar reached its apex in size during the late Early Bronze Age period. The date and circumstance of its demise, which was marked by destruction, looting, and at least a partial abandonment remains poorly understood, and the city's fate during "post-Akkadian" period is shrouded in even more mystery.

This presentation will summarize the available evidence (or lack thereof) based on excavations at the High Mound in 1999 and recent archaeological and geophysical in Hamoukar's Lower Town, undertaken between 2006 and 2010.

## **LAUREN RISTVET**

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## **THE DEVELOPMENT OF UNDERDEVELOPMENT? IMPERIALISM, ECONOMIC EXPLOITATION AND SETTLEMENT DYNAMICS IN THE Khabur PLAINS, CA. 2300-2200 BC**

The relationship between abrupt climate change, settlement shifts, and political collapse at the end of the Early Bronze Age has been a fundamental research question for nearly twenty years in Near Eastern archaeology. In order to understand these developments, however, it is necessary to investigate not just the period in question, but also social and economic processes during the immediately preceding phase. The previous century saw increasing contact between local and Southern Mesopotamian polities, culminating in the Akkadian conquest and colonization of the Khabur Plains, another chapter in a long term relationship of contact and conflict between these two ecologically distinct regions.

Researchers have conceptualized the Akkadian empire using several different models, ranging from a military empire with little to no investment in areas beyond Southern Mesopotamia to a classically imperialist state focused on extracting the agricultural surplus of the Khabur Plains. This paper will evaluate these hypotheses through the analysis of settlement data, particularly that from the Leilan Regional Survey, although other published survey material will also be considered. First, the well-stratified and dated ceramic sequence for this period from Tell Leilan (Leilan IIb) will be defined. Second, the nature of the occurrence of these materials on other sites in the region and their position vis-à-vis a range of resources will be investigated in order to analyze a variety of social and economic relationships that may have been affected by imperialism. Do we see evidence for the economic exploitation of the Khabur Plains by Southern Mesopotamia? If so, how were settlements of different sizes integrated into the empire? How did imperial strategies affect local economic conditions? Did imperial exploitation result in the development of underdevelopment as 20th century dependency theorists may predict? Understanding the nature of settlement patterns, and the social, political and economic processes that helped form them prior to 2200 BC is critical to any analysis of later collapse.

## **ŁUKASZ RUTKOWSKI**

Polish Centre of Mediterranean Archaeology, University of Warsaw, Poland – luka.rutkowski@uw.edu.pl

## **LATE 3RD MILLENNIUM BC PAINTED POTTERY**

It is widely believed that painted pottery (related to Khabur Ware) reappeared briefly in northern Mesopotamia in the advent of the 2nd millennium BC after a long brake during the second half of the 3rd millennium BC when plain pottery had prevailed. Strictly speaking, the latest, well known 3rd millennium BC manifestation of painted pottery are "bichrome Jezirah stands", dated back to EJ IIIA, and the earliest 2nd millennium BC painted motifs can be recognized on pottery of OJ I period ("pre-Khabur Ware"). The question arises what happened to a painted ceramic tradition in the later 3rd millennium BC. Could it have disappeared completely or for some reasons (e.g. general unpopularity of painted designs, use of impermanent or washable paint) it is difficult to find in archeological record?

However, very occasionally painted ornaments on pottery occur in the later 3rd millennium BC Jeziran contexts. A few examples of painted pottery that evidently precede Khabur Ware painted style have been discovered in post-Akkadian layers at Tell Arbid. At least three different types of ornaments can be distinguished among these rare findings: (1) black dots of bitumen paint, most often used in combination with combed decoration – attested on many Jeziran sites in Akkadian and post-Akkadian contexts; (2) bichrome geometric decoration on fine-ware vessels – very rare and still unfamiliar ornament which finds parallels in Tell Brak, Nineveh, Tell Hammad Agha Saghir; (3) simple monochromatic bands of paint which can be regarded as harbingers of the Khabur Ware painted pottery. The aim of this paper is to present these interesting examples in the context of transition between the Early Bronze and Middle Bronze Age.

**AKKADIAN AND POST-AKKADIAN PERIOD CULTIVATION AT TELL LEILAN**

Over 200 archaeobotanical samples dating to the Akkadian and post-Akkadian occupation phases were collected from the large Akkadian Administrative Building on the Tell Leilan Acropolis Northwest. Employing data generated from these samples, this paper describes Akkadian cultivation and plant use at Leilan and documents the significant shift in plant use evident during the brief post-Akkadian reoccupation of the Akkadian Administrative Building. Akkadian cultivation focused on 2-row barley and free-threshing wheats. Large concentrations of *Aegilops* are also present together with smaller proportions of crops legumes, grape, and safflower. Numerous tannurs, fueled predominantly with dung, illustrate the intensive production of bread (possibly covered with poppy seeds). A grain storage facility and Redistribution Room highlight the control of grain. The post-Akkadian samples originate predominantly from dung and document the importance of pasture land and possibly intentional foddering for livestock management.

**HARVEY WEISS**

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**THE FOUR QUESTIONS**

1. When did Akkadian imperialization of the Habur Plains collapse?  
(Why?)
2. How many settlements/persons (Akkadian + local) abandoned the Habur Plains?  
(Where did they go? And how?)
3. What was the size of the remnant post-Akkadian settlement on the Habur Plains?  
(How did the post-Akkadian settlements differ from Akkadian settlement?)
4. What was the duration of remnant post-Akkadian settlement on the Habur Plains?  
(Why?)

**HARVEY WEISS (1), ZAINAB BAHRANI (2), THOMAS GUILDERSON (3), ANDREW MCCARTHY (4), RICHARD MEADOW (5), STURT MANNING (6), LUCIA MORI (7), AJITA PATEL (8), PHILIPPE QUENET (9), LAUREN RISTVET (10), ALEXIA SMITH (11)**

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**TELL LEILAN AKKADIAN IMPERIALIZATION, COLLAPSE AND SHORT-LIVED REOCCUPATION DEFINED BY HIGH RESOLUTION RADIOCARBON DATING**

Tell Leilan's extensive cultivable landscape, central location, high annual precipitation, and high cereal yields distinguished the site and its hinterland from other 3rd millennium BC Khabur Plains regional centers, and thereby concentrated Akkadian imperialization endeavors. The penultimate phases of Akkadian imperialization (Leilan IIb) have been defined at the more than 17-room Akkadian Administrative Building and The Unfinished Building, more than 20-meters wide, across the Akkadian street on the Tell Leilan Acropolis Northwest. Rapid and synchronous abandonment followed, both at Tell Leilan and across the region, with only a four-room post-Akkadian reoccupation (Leilan IIc) on top of the site's abandoned Administrative Building.

High-resolution, multi-aliquot, radiocarbon dates define the span of the Akkadian imperialization, the date of the abandonment, and duration of the short-lived post-Akkadian reoccupation that was followed, "seven generations" later, by the pastoralist Amorite resettlement of Shubat Enlil. These data sharpen the focus and meaning of excavation and survey data for the Akkadian, post-Akkadian, and regional abandonment periods' social dynamics across the Khabur Plains.

## WORKSHOP 5: SETTLEMENT DYNAMICS AND HUMAN-LANDSCAPE INTERACTION IN THE STEPPES AND DESERTS OF SYRIA

**ORGANIZER: DANIELE MORANDI BONACOSSÌ**

<b>AUTHOR(S)</b>	<b>TITLE</b>	<b>DAY, HOUR</b>
Wael Abu-Azizeh	CHALCOLITHIC AND EARLY BRONZE AGE OCCUPATIONS IN THE SOUTHERN BADIYAT ESH-SHAM ARID MARGINS	FRI, 9.00
Nils Anfinset	TOWARDS A POLITICAL LANDSCAPE OF THE SYRIAN STEPPE: CAIRNS, STONE STRUCTURES AND NOMADS	THU, 18.00
Olivier Barge	SETTLEMENT PATTERNS AND AGRO-PASTORAL ACTIVITIES IN THE REGION OF AL-RAWDA (SECOND HALF OF THE 3RD MILLENNIUM BC)	THU, 17.35
Maria Giovanna Biga	DATA ON THE SYRIAN STEPPE FROM THE TEXTS OF THE EBLA ARCHIVES (3RD MILLENNIUM B.C.)	THU, 10.15
Mauro Cremaschi, Andrea Zerbini	LATE PLEISTOCENE AND EARLY HOLOCENE ENVIRONMENTAL CHANGES AND CULTURAL DYNAMICS IN THE PALMYRENA (TADMOR REGION, CENTRAL SYRIA)	THU, 9.25
Frederick Mario Fales	CITIES, HAMLETS, AND FARMSTEADS IN THE NORTHWESTERN JEZIRAH: THE MIDDLE ASSYRIAN AND THE NEO-ASSYRIAN FRAMEWORKS	FRI, 9.55
Sumio Fujii	CHRONOLOGY OF THE BISHRI PASTORAL PREHISTORY AND PROTOHISTORY: CURRENT EVIDENCE AND FUTURE PERSPECTIVES	THU, 12.05
Bernard Geyer, Eric Coqueugniot	QUÊTE DE L'EAU ET STRATÉGIES DE SUBSISTANCE À L'ÉPIPALÉOLITHIQUE ET AU NÉOLITHIQUE DANS LES MARGES ARIDES DE SYRIE DU NORD	THU, 9.00
Kristina Josephson Hesse	NETWORKS OF EXCHANGE AND TRADE INVOLVING MOBILITY GROUPS AND URBAN SOCIETIES IN THE SEMI-ARID SYRO-MESOPOTAMIAN LANDSCAPE DURING THE BRONZE AGE	THU, 11.40
Christoph Konrad, Brian Beckers	HUMAN USE AND ADAPTATION OF LANDSCAPE CONDITIONS TO OPTIMIZE THE WATER RESOURCES MANAGEMENT IN RESAFA-SERGIUPOLIS/RUSAFAT HISHAM	FRI, 12.30
Hartmut Kühne	LANDSCAPE AND HUMAN IMPACT IN THE LOWER HABUR AND IN THE AJIJ DURING THE LATE BRONZE AND IRON AGE	FRI, 11.15
Shogo Kume	BURIALS AND NOMAD-SEDENTARY RELATIONS ON THE SYRIAN MIDDLE EUPHRATES DURING THE 3RD MILLENNIUM BC	THU, 15.20
Minna Lonnqvist	THE EMERGENCE OF PASTORAL TRANSHUMANCE AT JEBEL BISHRI IN CENTRAL SYRIA	THU, 15.45
Maria Grazia Masetti-Rouault, Olivier Rouault	FROM ONE VALLEY TO ANOTHER ONE: BIR EL-HADDAD, A NEO-ASSYRIAN TRADING POST?	FRI, 10.15
Jørgen Christian Meyer	PALMYRENA. CITY, VILLAGES AND NOMADS	FRI, 11.40
Daniele Morandi Bonacossi, Alberto Savioli	DESERT-KITES IN AN ARIDIFYING ENVIRONMENT: SEASONAL HUNTER COMMUNITIES IN THE PALMYRA STEPPE DURING THE MIDDLE AND LATE HOLOCENE	THU, 9.50
Bernd Müller-Neuhof	DESERT IRRIGATION AGRICULTURE: EVIDENCES FOR EARLY BRONZE AGE RAINWATER HARVESTING AGRICULTURE AT JAWA (NE JORDAN)	FRI, 9.25
Toshio Nakamura	14C CHRONOLOGY OF HUMAN ACTIVITIES AT TELL GHANEM AL-ALI AND SURROUNDING AREAS IN THE BISHRI REGION, MIDDLE EUPHRATES, SYRIA	THU, 14.55



YOSHIHIRO NISHIAKI	EARLY-MIDDLE BRONZE AGE STEPPE EXPLOITATION AS SEEN FROM AN ARCHAEOLOGICAL SURVEY OF THE MIDDLE EUPHRATES, SYRIA	THU, 14.30
KATSUHIKO OHNUMA, ATSUNORI HASEGAWA	NEW EVIDENCE FROM TELL GHANEM AL-ALI: A 3RD MILLENNIUM SITE IN THE MIDDLE EUPHRATES, SYRIA	THU, 12.30
GRAHAM PHILIP	CONTINUITY AND CHANGE IN THE SETTLEMENT OF THE HOMS REGION FROM THE NEOLITHIC TO THE OTTOMAN PERIOD	THU, 17.10
ELISABETTA RANDAZZO	LA STEPPE SYRIENNE À LA PERIODE OMEYYADE: MODES D'OCCUPATION ET UTILISATION DU TERRITOIRE	FRI, 15.25
MARION RIVOAL	SOME CLUES OF MANURE MANAGEMENT IN ARID MARGINS' SETTLEMENTS OF NORTH SYRIA DURING LATE ANTIQUITY	FRI, 15.00
DOROTHÉE SACK, DIETMAR KURAPKAT, MARTIN GUSSONE	RESAFA-SERGIUPOLIS/RUSAFAT HISHAM: A VIVID CITY IN THE 'SYRIAN DESERT'	FRI, 12.05
TONY WILKINSON, DAN LAWRENCE, STEFAN SMITH	AGRO-PASTORAL LANDSCAPES IN THE ZONE OF UNCERTAINTY: THE MIDDLE EUPHRATES & N SYRIAN STEPPE DURING THE 4TH & 3RD MILLENNIA BC	THU, 16.45
NELE ZIEGLER, HERVÉ RECULEAU	THE SUTEAN NOMADS IN THE MARI PERIOD	THU, 11.15

#### **Wael Abu-Azizeh**

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### **CHALCOLITHIC AND EARLY BRONZE AGE OCCUPATIONS IN THE SOUTHERN BADIYAT ESH-SHAM ARID MARGINS**

During last years, different surveys both in the Jordanian desert and Badiyat Esh-Sham have considerably renewed and enriched our knowledge about the settlements of the steppe. Mainly using data from unpublished field researches in the area of al-Harra and the Hauran in the north, and the Hamad based on al-Thulaythuwa survey in the south, we suggest a comprehensive picture of the Chalcolithic and Early Bronze Age settlement of these arid margins. Difference in environmental conditions, more favorable to the north than in south explains variations observed in land use patterns. The settlement is indeed mainly characterized in the south by temporary camps associated with pastoral activities, whereas in the north, in addition to similar camps, much larger sites sometimes fortified were found.

These two systems have different components and different scales. In view of the recent and prolific research on these desert areas, the data can however start to be considered in a wider chrono-regional perspective. Pastoral camps can be related to large flint production centers for instance, evidenced in the Jafr Basin and the north-eastern desert of Jordan. The outlines of a production and exchange network, in which desert pastoral populations and sedentary sites located in marginal locations were engaged, can be drawn. The identification of major funerary and religious sites, playing the role of fixing points on main migration itineraries, is completing the overview of what can be considered as a desert settlement system in southern Badiyat Esh-Sham.

#### **Nils Anfinset**

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### **TOWARDS A POLITICAL LANDSCAPE OF THE SYRIAN STEPPE: CAIRNS, STONE STRUCTURES AND NOMADS**

This paper is based on the recent surveys of the Joint Syrian-Norwegian project Palmyrena – City, Hinterland and Caravan Trade between the Occident and Orient. The paper discuss in particular the many hundred cairns documented within the concession area northwest of Palmyra. Here the dating of these cairns is discussed as well as the survey methodology and the dating technique of these. However, it is believed that these cairns represent a relatively intensive use of the dry-steppe, which created a political landscape of the region different from earlier, as well as different from the more settled societies in other regions. This intensive use of the stepped had significant impact on interaction with the

settled societies and created a network based on exchange creating a political and archaeological landscape of the steppe not seen before. The paper will therefore discuss the location of the cairns in the landscape, and connect the cairns to developments outside the dry-steppe in order to explain them.

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### **SETTLEMENT PATTERNS AND AGRO-PASTORAL ACTIVITIES IN THE REGION OF AL-RAWDA (SECOND HALF OF THE 3RD MILLENNIUM BC)**

The field survey combined with the information coming from the excavations of the site of Al-Rawda, allows us to make certain observations and to propose hypotheses concerning land use and the modes of subsistence in the steppe during the second half of the 3rd millennium. Three themes will be discussed: the settlement pattern, the agricultural development and the presence of “desert kytes”.

It appears that the sites of the region of Al-Rawda form a network of settlements which peter out abruptly to the east: this confirms the idea of a frontier site in the steppe and is corroborated by the discovery of a boundary wall (220 km long, roughly 10 km to the east of Tell Al-Rawda), a symbolic border, which separates the limit of sedentary settlements to the west from nomads to the east.

Archaeological evidence indicates a local agricultural economy. Observations during the field survey strongly suggest that irrigation was used. This will be discussed in relation to analyses of remains located in the valley floors during the survey.

“Kytes” were located in the surrounding area of the site, some aspects of these will be examined for their functionality. The cynegetic use of the kytes is questionable here; so we can't exclude the possibility of them being linked to pastoralism. This possibility would be more probable if these structures were in use during the occupation of the site.

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### **DATA ON THE SYRIAN STEPPE FROM THE TEXTS OF THE EBLA ARCHIVES (3RD MILLENNIUM B.C.)**

The geographical horizon of the Ebla archives is wide and includes Syria, Upper and Central Mesopotamia, the coast of the Mediterranean and perhaps also the Egyptian delta. From the texts of the archives of Ebla it emerges that Syria was divided in a series of kingdoms of varying importance sometimes allied sometimes fighting for power. At the head of each kingdom there was normally a king (en) or a chief (ugula). Several kings and chiefs of cities all qualified as pertaining to the territory of Ibal are attested together in some texts. Other texts quote “Ibal of the steppe” and “Ibal of the reservoir of water”. For all these reasons a confederation of Ibal and a localisation of Ibal in a region of steppes east of Qatna have been supposed. Cities of Ibal are not mentioned very often in the more archaic texts of the archives, but from year 7 to year 12 of vizier Ib-bi-zikir, the last vizier of Ebla, the Eblaite army led by him fought a series of military campaigns, defeating several cities of Ibal and possibly making the entire region submit to Ebla. Some administrative texts of deliveries of textiles are completely devoted to these military campaigns offering some itineraries of the Eblaite army. The data from these unpublished texts will be examined in detail.

**MAURO CREMASCHI, ANDREA ZERBONI**

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### **LATE PLEISTOCENE AND EARLY HOLOCENE ENVIRONMENTAL CHANGES AND CULTURAL DYNAMICS IN THE PALMYRENA (TADMOR REGION, CENTRAL SYRIA)**

Evidence of late Pleistocene to early Holocene occupation of the region surrounding the oasis of Palmyra/Tadmor (central Syria) consists of geometric Kebaran, Natufian and early Neolithic archaeological sites. These are distributed along the margin of the Sabkhat al Mouh and in the Abu Fawares area, in connection with lacustrine deposits, suggesting a period with a humid climate dated to the Upper Pleistocene. To the same phase a high stand of the level of the lake in Palmyra basin is dated, followed by arid conditions and the onset of evaporitic environmental conditions during the Last Glacial Maximum. Erosive surfaces and gypsum aeolian dunes are further geomorphological indicators for enhanced aridity in the Upper Pleistocene. A subsequent high stand of the lake level is indicated by organic lacustrine sediments found in the range of the Palmyra oasis and dated between the late Pleistocene and the early Holocene. The density of open-air sites, located close to the present day oasis and dating from the Late Epipalaeolithic to the Early Neolithic, confirms environmental conditions suitable for human and animal life. Finally, wet environmental conditions turned toward aridity during the early Holocene (9th millennium BP), in

correspondence with the early Neolithic exploitation of the region. As a consequence, later archaeological sites were concentrated in the area of the present-day oasis and marginally within the Abu Fawares basin. Possibly, as documented elsewhere in the Near East, an early Holocene arid event favoured a main shift in subsistence strategies and a population relocation; archaeological sites distributed within the limits of the oasis, especially the sequence at site 288 encompassing a span of time from the PPNA to the Chalcolithic, recorded this phase.

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### **CITIES, HAMLETS, AND FARMSTEADS IN THE NORTHWESTERN JEZIRAH: THE MIDDLE ASSYRIAN AND THE NEO-ASSYRIAN FRAMEWORKS**

On the basis of archaeological and textual evidence alike, the northwestern Jezirah – and specifically the sector of this steppeland around the river Balikh – proves to have been economically exploited both in Middle Assyrian times (13th-12th centuries BC) and, following the “dark age” of abandonment and Aramean takeover, during the heyday of the Neo-Assyrian empire (8th-7th centuries BC). While the status of this area shifted radically over time vis-à-vis the respective political borders of Assyria (from that of “outer frontier zone” to that of “inner transit zone”), its somewhat marginal geographical character remained largely unchanged; and the same may be said for the prevailing destination of its arable lands, on which the vast holdings assigned to the Assyrian elite were based.

This said, however, a comparison between the two phases as regards the settlement and socio-economic dynamics in this area has not hitherto been attempted on a vast scale, i.e. by utilizing the full gamut of available evidence relevant to both periods, ensuing from archaeological excavations or regional surveys as well as from the rich and detailed administrative archives. The paper for this workshop represents a preliminary attempt to bridge the gap on this matter.

**SUMIO FUJII**

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### **CHRONOLOGY OF THE BISHRI PASTORAL PREHISTORY AND PROTOHISTORY: CURRENT EVIDENCE AND FUTURE PERSPECTIVES**

A top-priority issue of the dryland archaeology in Syria is to establish a chronological framework for seriating various features dotted in steppe and desert. Bishri sites provide a breakthrough in the issue. Our recent investigations have located a Khiamian encampment (Wadi al-Hajana 1), a few PPNB flint workshops (Wadi al-Hajana 1 and 2), a Late Neolithic unique cemetery (Fakat Bidewy 1), a few Chalcolithic cairn fields (Fakat Bidewy 2 and 3, and Jabal Gala), and a large number of Middle Bronze Age cairn fields (Wadi Hedaja 1 and Tor Rahum 1, for example). In view of the harsh environmental conditions and the total absence of contemporary settlements, there is little doubt that these features (other than the Khiamian encampment) represent the very few archaeological footprints of initial pastoral nomads who migrated in central Syria. This lecture outlines the chronology of the Bishri pastoral prehistory and protohistory, and discusses its archaeological implications. Though still tentative, the new chronological perspective may offer a key to synthesizing patchy evidence and reconstructing the process of pastoral nomadization in Badia ash-Sham.

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### **QUÊTE DE L'EAU ET STRATÉGIES DE SUBSISTANCE À L'ÉPIPALÉOLITHIQUE ET AU NÉOLITHIQUE DANS LES MARGES ARIDES DE SYRIE DU NORD**

Les marges arides de la Syrie du Nord, région de steppe aride située au sud-est d'Alep, se sont révélées très riches en sites archéologiques. La répartition de ces derniers est principalement dictée par une contrainte majeure, l'aridité climatique, de plus en plus marquée d'ouest en est. Mais d'autres éléments interviennent dans cette répartition. Le relief local, la qualité des sols, la ressource en eau, très variables selon les lieux, génèrent une mosaïque de micro milieux aux potentiels différents et aux usages diversifiés selon les époques. Du Kébarien au PPNB récent/final, les espaces parcourus ou occupés ont de ce fait changé, en fonction de stratégies de subsistance. Ces dernières se révèlent avoir été fondées sur des ressources, notamment en eau, très variées, allant de l'exploitation de sources artésiennes pérennes à l'aménagement de < mares > artificielles.

## **NETWORKS OF EXCHANGE AND TRADE INVOLVING MOBILITY GROUPS AND URBAN SOCIETIES IN THE SEMI-ARID SYRO-MESOPOTAMIAN LANDSCAPE DURING THE BRONZE AGE**

Based on the economical aspect of food producing, exchange, and trade the aim of this paper is to give an image of the networks that involved pastoralists and urban societies in the special environmental conditions of the Bronze Age Syro-Mesopotamian landscape.

Nomadism and sedentism are often seen as two binary oppositions and much is written about hostility between those groups. However, nomadic pastoralists were not self-sufficient and therefore often lived in symbiosis and interdependency with the surrounding sedentary societies – a symbiosis built on exchange of goods and other services. Moreover, some pastoralist groups might have been more integrated in urban societies during parts of the Bronze Age than in later periods.

The economy and activities of nomad pastoralists as well as their interrelation with urban societies will be discussed in a wider social perspective using network theories, in which exchange and trade mediation play the important roles. Such networks also incorporate the relation between material culture, plants, animals and the landscape. Several ancient documents describe the interaction between pastoral nomads and urban societies. Some of the most prominent descriptions derive from the Mari Archives during the reign of Zimri Lim. Other ancient documents that contribute to the understanding of this interaction will also be used in this study. Simultaneously, recent field work results from the Syrian-Norwegian project, Palmyrena: City, Hinterland and Caravan Trade between the Occident and the Orient, will be considered in this analyses and applied on the special case of Palmyra.

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## **HUMAN USE AND ADAPTATION OF LANDSCAPE CONDITIONS TO OPTIMIZE THE WATER RESOURCES MANAGEMENT IN RESAFA–SERGIUPOLIS/RUSAFAT HISHAM**

The initial reasons for the foundation of Resafa were military and strategic considerations of the Roman Empire. Resafa was built as a part of the Roman Limes in the Syrian desert steppe 25 km south of the Euphrates in the second half of the 1st century AD. As with many of the settlements of the Eastern Limes, the environmental conditions in Resafa are unfavourable. Average rainfall is less than 200mm/year; droughts are a regular phenomenon and the only perennial water source, the groundwater, is brackish. However, with their technological knowledge, the Romans were able to adapt the environment to their needs, and allowed them to put strategic requirements before environmental constraints. In the course of the city's history, a constantly modified and diversified water supply system was implemented which enabled the inhabitants to minimize the risk of water scarcity. The rain falling on roofs and plastered squares was collected and stored in cisterns. Various deep wells were dug for domestic use and most notably a water harvesting facility was implemented to collect the periodical flash floods of the neighbouring wadis. This facility was made up of a dam, built across the main wadi which retained and channelled water into large cisterns within the city walls.

In the 8th century AD the Umayyad caliph Hisham b. 'Abd al-Malik took residence in Resafa-Sergiupolis, which was named Rusafat Hisham in the following. The water collection system has been expanded due to the increasing population. Now the systems of water collection became so effective that gardens, which were used mainly for representative purposes could be build. One of these palace gardens has been excavated in the year 2009. This garden and the irrigation system will be one further topic of this lecture. Thus it could be demonstrated how the landscape conditions are used for the optimisation of water management.

A separate paper (D. Sack, D. Kurapkat, M. Gussone) will focus on the development of the settlement of Resafa as a 'Vivid city in the desert'.

### **HARTMUT KÜHNE**

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## **LANDSCAPE AND HUMAN IMPACT IN THE LOWER HABUR AND IN THE AJIJ DURING THE LATE BRONZE AND IRON AGE**

For political as well as climatic reasons human occupation in the Lower Habur valley during the 2nd millennium BCE had reached a minimum in the Middle Assyrian period, e.g. in the thirteenth and twelfth centuries BCE. Nevertheless, the Middle Assyrian kingdom introduced a number of important innovations such as the formation of districts. In the Ajij region, the only major settlement seems to suggest that the penetration of the steppe occurred on

a special route and had become a routine.

A significant shift in settlement policies may be noticed by the 9th century. The developing of former void spaces, the foundation of new hamlets, villages, and towns as well as the upgrading of already existing centers are the hallmarks of a deliberate colonization program as exemplified in the inscription of the stele of Adad-nirari III from Tell Rimah. These efforts resulted in a growing population and a hierarchically structured settlement system that was mirrored by the society. It is suggested that the economical investment in the infrastructure (irrigation, roads) was rewarded by higher harvests and political stability of the region. Nevertheless, this development implied a heavy impact on the landscape that had remained under natural conditions for most of the 2nd millennium and was now transferred into a cultural landscape. The former nomadic interaction with the landscape was replaced by a controlled actions.

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## **BURIALS AND NOMAD-SEDENTARY RELATIONS ON THE SYRIAN MIDDLE EUPHRATES DURING THE 3RD MILLENNIUM BC**

Abu Hamed, a 3rd millennium BC massive extramural cemetery near the contemporary site of Tell Ghanem al-'Ali on the Syrian middle Euphrates, was investigated by a Syrian-German mission in 1990. Following the work, part of the cemetery has been investigated by a Syrian-Japanese mission since 2008. The deceased of the cemetery have often been attributed to pastoral nomads on the upland Bishri Plateau rather than inhabitants of the lowland settlement in the Euphrates Valley because of the numerous numbers of graves, compared to the size of the adjacent settlement. It is quite certain that pastoralism played a crucial role in the marginal environment of the region. However, recent growing concerns on nomad-sedentary relations suggest that those lifestyles were flexibly practiced. Who were the deceased of the cemetery? By analyzing mortuary data recently acquired from the cemetery as well as settlement and demographic trends in the region, this paper attempts to explore the nature of nomad-sedentary relations on the Syrian middle Euphrates during the 3rd millennium BC.

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## **THE EMERGENCE OF PASTORAL TRANSHUMANCE AT JEBEL BISHRI IN CENTRAL SYRIA**

The Finnish project SYGIS has archaeologically studied the mountainous region of Jebel Bishri in Central Syria by remote sensing, surveying and mapping in 2000-2010. The final report of the project was published in 2011. One of the results of the project demonstrates that the mountain has been occupied by mobile groups such as hunter-gatherers and pastoral nomads for millennia. The highland-lowland interaction belonged to the subsistence strategies of both economies. Surrounding oases and the Euphrates river valley attracted for semi-sedentary and finally sedentary ways of life and agricultural endeavours from the Epipalaeolithic and Neolithic periods onwards.

During the Neolithic period pastoral nomadism replaced the hunter-gatherer economy and mode of life in this desert-steppe region of the mountain, and some small semi-sedentary settlements emerged there. From the collected archaeological data, cuneiform sources and ethnographic analogies the present paper intends to inquire, how the pastoral transhumance between the mountain and the surrounding valleys developed in the region. So far, the archaeological evidence from the immediate area of that right bank stretch of the Euphrates which is limited with the mountain proper indicates a boom in sedentarization in the 3rd millennium B.C. Numerous small sites emerged beneath the mountain the edge of which follows the agricultural plains of the Euphrates valley. There are some locational differences in the settlements, however: most are in the river plain but a few are in the foot of the mountain. It is intriguing to study the contact zone of the settlements with the mountain and its pastoralism: do the locational differences of the settlements reflect differences in subsistence economy? The written sources indicating existence of pastoral transhumance in the region date from the Middle Bronze Age, but archaeological evidence is the only source to track the development from earlier periods and from a long-term perspective. Our hypothesis is that the Ubaid and Uruk periods and the Uruk world system encouraged a gradual move towards sedentarization through trade and possible colonization in the Euphrates valley beneath the mountain. Further we assume that the modes of pastoralism varied in different periods, and transhumance which started in a small scale in the Neolithic period developed only gradually intensifying in the Middle Bronze Age.



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## **FROM ONE VALLEY TO ANOTHER ONE: BIR EL-HADDAD, A NEO-ASSYRIAN TRADING POST?**

Syro-French excavations in Tell Masaikh, on the left bank of the Lower Middle Euphrates river, have revealed the presence of an Assyrian colony, Kar-Assurnasirpal, established there, in an Aramean country, since the mid- 9th century. Our researches have highlighted the impact on the natural and social environment of the valley of the construction, or reconstruction, of a very long canal, parallel to the river, at the beginning of the 8th century, connecting the Lower Khabur region to the hub point in the Hindanu area. A survey in the Jazireh steppe north of Tell Masaikh has recently shown the possible presence also of a road crossing it, joining the colony on the Euphrates bank to the Assyrian centers in the Khabur region, and, from there, to the Assyrian heartland. Along this itinerary, an Iron II-III sedentary occupation in the steppe, marked by the presence of two large apparently non-domestic buildings - looking like an Assyrian trading post - has been discovered near a well in the site of Bir el-Haddad, still exploited today by shepherds. While not far from the Khabur east bank, the different levels of occupation attested here are possibly evidence of a periodic intensive agricultural exploitation of the steppe area, depending on climatic, political and economic changes, and of the society's evolving needs.

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## **PALMYRENA. CITY, VILLAGES AND NOMADS**

In the ancient period the mountains and the dry-steppe north of Palmyra were exploited extensively. The Syrian-Norwegian surveys (2008-2011) have registered a very high concentration of villages and buildings with water-catching systems, and a series of military installations, which seem to have controlled the territory and its resources. By combining the archaeological material with the information from the famous Palmyra tariff and ethnographic data, it is possible elucidate the relationship between the city, villages and the seasonal nomadic population from the Roman period up to the early Islamic era. The paper will also discuss the changes that happened in the Osmanic period.

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## **DESERT-KITES IN AN ARIDIFYING ENVIRONMENT: SEASONAL HUNTER COMMUNITIES IN THE PALMYRA STEPPE DURING THE MIDDLE AND LATE HOLOCENE**

Palaeoenvironmental proxies resulting from geoarchaeological work conducted in the Palmyra steppe region by a joint Italian-Syrian survey project indicate a discontinuity between a wet Late Glacial/Early Holocene and a later dry period, which is presumed to have started at the end of the 7th millennium BC and resulted in the progressive nucleation of the Palmyra oasis and in the intensifying aridification of the region surrounding it. Permanent settlement and agriculture were concentrated within the oasis, whereas the surrounding dry steppe was exploited by mobile pastoral and seasonal hunter communities. This paper will bring into focus a specific aspect of the patterns of occupation and exploitation of natural resources on a regional scale characterizing the Palmyra steppe during the Middle and Late Holocene which is revealed by the large number of desert-kites used by specialized hunter groups for the large-scale killing of gazelles and possibly other ungulates. The presentation of this fresh archaeological evidence will also be an occasion to review the desert-kite horizon documented by archaeological research in Syria and the issue of their function, characteristics and chronology.

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## **DESERT IRRIGATION AGRICULTURE: EVIDENCES FOR EARLY BRONZE AGE RAINWATER-HARVESTING AGRICULTURE AT JAWA (NE JORDAN)**

Recent satellite image examinations and ground surveys in the vicinity of Jawa revealed evidences for rainwater-harvesting irrigation, which can be linked to the first and major occupation period at Jawa, the Early Bronze Age. This paper will discuss the setting of the "gardens", the hydro-technological planning of the irrigation system and the evidences for dating these structures in the Early Bronze Age.



These outcomes might open new views on our perception on the social and economical organisation of Early Bronze Age sites in the arid “marginal” regions.

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### **14C CHRONOLOGY OF HUMAN ACTIVITIES AT TELL GHANEM AL-ALI AND SURROUNDING AREAS IN THE BISHRI REGION, MIDDLE EUPHRATES, SYRIA**

We conducted a field survey at the Tell Ghanem al-Ali and around, along the middle Euphrates River in Syria. The aim of this study is to conduct a chronological analysis of the site by 14C dating. We have measured totally fifty-three 14C ages for charcoal samples collected from five trenches. The calendar dates calibrated from 14C ages range from 3300-2900 cal BC at the oldest level to 2400-2050 cal BC at the youngest level of the Tell Ghanem al-Ali, and concentrate to the period of 2650-2450 cal BC. These dates are consistent with the periods of Early Bronze Age EB-IV and EB-III, established based on the typological analysis on pottery fragments collected at the site.

On the survey of a number of graves in the form of a cairn, existing in the desert of the Bishri Mountain, several charcoal samples have been collected for 14C dating by excavation of the cairn tombs. The calibrated calendar dates, ranging from 1940-1670 cal. BC, coincide with a period of an early part of Middle Bronze Age. The calendar dates for the cairns are all younger than those for the samples from the Tell Ghanem al-Ali, and both dates are continuous smoothly.

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### **EARLY-MIDDLE BRONZE AGE STEPPE EXPLOITATION AS SEEN FROM AN ARCHAEOLOGICAL SURVEY OF THE MIDDLE EUPHRATES, SYRIA**

The 3rd-2nd millennium BC is a period in which major socioeconomic changes took place in the Bronze Age communities of the Middle Euphrates. In order to complement the current arguments of this issue that are mostly based on research of the tell-based sites in the river valley alone, we performed a series of archaeological surveys in the steppe hinterland between 2008 and 2011, targeting an area of 10 km radius of the Early Bronze Age site of Tell Ghanem al-Ali, the Middle Euphrates. The survey demonstrated a radical change in the land use between the Early and Middle Bronze Age: the relatively large EB mounds situated in the Euphrates lowlands at a regular interval significantly diminished, and the numerous flint scatters, which might well represent shepherd stations, and small settlements emerged in the steppe from the latest phase of the Early Bronze Age. The results indicate that the extensive exploitation of the Middle Euphrates steppe started during the Early-Middle Bronze Age interface period.

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### **NEW EVIDENCE FROM TELL GHANEM AL-ALI: A 3RD MILLENNIUM SITE IN THE MIDDLE EUPHRATES, SYRIA**

Tell Ghanem al-Ali is located some 50 km east of the city of Raqqa. It has an oval plan, 400 m long (west to east) and 300 m wide (north to south). The height of this mound is 10 m. Field work at this mound was started in 2007, and trench excavations were carried out until 2010 in Squares 1 to 8. In Square 2, several building levels classified into three phases were unearthed. The stratigraphy at this square demonstrated that Tell Ghanem al-Ali had been occupied mainly in Early Bronze Age (EBA) IVA through III. In Square 6, one simple pit grave of Middle Bronze Age (MBA) was unveiled overlying layers of EBA IVA/III. Surface survey on Tell Ghanem Al-Ali clarified multi-roomed buildings with traces of re-use and reconstruction. Through a series of field works, we reached a conclusion that Tell Ghanem Al-Ali had been at its height in EBA as settlement and later in MBA had been reduced in population, with activities such as construction of pit graves. This conclusion further leads us to suppose that small- to medium-sized EBA villages of the Middle Euphrates were changed in their natures in MBA.

## **CONTINUITY AND CHANGE IN THE SETTLEMENT OF THE HOMS REGION FROM THE NEOLITHIC TO THE OTTOMAN PERIOD**

Since 1999, the collaborative Syrian-British project Settlement and Landscape Development in the Homs Region, Syria has been studying human-landscape interaction in two sample areas of the Orontes Valley close to the modern city of Homs. This paper will present an overview of the main phases of continuity and change as these present themselves within the settlement record. The paper will seek to understand the patterns detectable in settlement organization in terms of changes in the local environment, agricultural regimes and technology, and broader political and economic developments in the wider region.

## **LA STEPPE SYRIENNE À LA PERIODE OMEYYADE: MODES D'OCCUPATION ET UTILISATION DU TERRITOIRE**

L'analyse des dynamiques d'occupation des terres arides du periode omeyyade est un aspect très intéressant dans le cadre des études de la politique territoriale de la première dynastie islamique.

Dans le cadre de cette recherche, on a considéré l'irrigation comme *condicio sine qua non* pour la présence omeyyade dans ce territoire où le système le plus utilisé c'est le barrage associé à un canal adducteur menant à une réserve dont des autres canaux partent pour conduire l'eau dans les bâtiments ou dans les terrains cultivés. Des considérations d'ordre stratégique sont cependant à l'origine des implantations omeyyades ponctuelles, par exemple sur des axes de communication comme la Strata Diocletiana ou les deux grandes voies dont une est celle de Damas à Palmyre par Nazala et l'autre c'est celle d'Émèse au Djôf.

La présence d'implantations comme Qasr el-Hair el-Gharbi et Qasr el Hair el-Sharqi est fortement indicative pour comprendre les dynamiques par les quelles un nouveau pouvoir conçoit et occupe son territoire. La parcellisation et l'irrigation du territoire sont, donc, liées aux *qusûr* parce-que l'approvisionnement hydrique était fondamental pour leur bon fonctionnement comme on déduit par les barrages, canalisations et citernes identifiés presque des ces implantations. Donc, on est en présence d'un système complexe de réserve d'eau, destiné d'une part à l'usage domestique, d'autre part à l'irrigation et enfin à la force motrice.

La valeur politique et économique des *qusûr* doit être considéré parallèlement avec l'important rôle commercial qu'ils jouaient dans la région aussi par la présence des caravansérails qui contribuèrent au développement des commerces et qui peuvent être considérés comme d'excellents indicateurs de la politique économique omeyyade.

La présence omeyyade dans la région est très évidente, en outre, du point de vue de la vie urbaine par les villes de nouvelle fondation ou préexistantes comme on peut voir dans le cas de Raqqa, de Rusafah et de Palmyre.

En outre, il faut considerer la diffusion des villages agricoles dans la vallée du Balikh où, entre le deux importants sites omeyyades de Harrân, au nord, et de al-Raqqa, au sud, il y a cinq sites que ne sont pas tous bien identifiés mais entre lesquelles il y a le site omeyyade de Hisn Maslamah. Le village recevait l'eau de la rivière affluente Balikh par un canal qui irriguait aussi les territoires agricoles qui étaient dans les environs du village.

La région steppique de la Syrie dont on parle était sous le gouvernement de Hisham (724-743) et donc il faut lier à ce calife et à sa politique la gestion, l'occupation et l'interaction avec ce territoire; on déduit, donc, une sorte de méthode d'implantation pratiqué systématiquement par la dynastie omeyyade par des programmes des construction et d'exploitation agricole bien évidemment fonctionnel à l'économie de la région.

## **SOME CLUES OF MANURE MANAGEMENT IN ARID MARGINS' SETTLEMENTS OF NORTH SYRIA DURING LATE ANTIQUITY**

This paper will focus on a specific kind of garbage, an organic one, encountered in the arid fringes of Northern Syria during surveys. This organic material, gathered in heaps of several meters high in the outskirts of nucleated settlements, as well as sometimes scattered among houses and related enclosures in villages of the steppe, is presumably to understand as goat and sheep's excrements.

Highly relevant with this kind of garbage are characteristic subsistence strategies of the area, geared toward complementary animal husbandry and locally toward cattle-raising, involving in some cases a meat production and trade specialization.

This paper intends to discuss the management of this waste material, from an archeological point of view, with some

insights from ethnography. Actually, in an area where soils may be especially thin and inconsistent and deprived from organic matters, excrements, as manure, are obviously a mean to overcome these drawbacks. But excrements are also used nowadays to compensate for the limited number of wood species which can be used as domestic combustible. This specific kind of garbage will be scrutinized from the process of build-up of the heaps surrounding late antique villages to the presumably high commercial value of manure, bearing in mind, as a background, the highly specialized economy typical of the Late Byzantine period in this area.

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## **RESAFA-SERGIUPOLIS/RUSAFAT HISHAM: A VIVID CITY IN THE 'SYRIAN DESERT'**

Already the different names of Resafa indicate a development starting with a Late Antique settlement phase, followed by an Islamic one. The image given by the ruined city, surrounded by a city-wall, is dominated by large monuments and still visible city structures. But the site includes also a three square-kilometre measuring settlement south of the city, mainly inhabited in the Umayyad period.

Systematic archaeological work, concentrated on research concerning the monuments, is ongoing since the 1950s. In 2006 a new phase of research was initiated, culminating in the analysis of the general urban development and the settlement dynamics of Resafa intra and extra muros, of which first results will be shown here.

Starting with a view on the landscape and the arid environmental conditions, which are important concerning the systems of water-collection and the choice of areas for settling, the development will be explained in eleven steps. The erection of a castrum and a vicus, being part of the Roman Limes, marks the beginning of the settling activities. Here, Sergios, an officer of the Roman army, suffered his martyrdom, because of his Christian faith, in 312. The place of execution, where his body has been buried first, was close to the castrum. But as worshippers tried to snatch the remains of the saint, the relics have been brought into a church inside the castrum. At the turn of the 5th cent. the relics have been transferred to the newly erected Basilica A. The rising number of pilgrims, increasing the wealth of Resafa, conditioned the construction of a city wall and a first cistern. So prepared, Resafa became chair of a metropolitan around 514. This led to the erection of further churches, the addition of more structures for water-collection and the completion of the street system. The importance of the saint and the pilgrimage to his shrine attracted also Christian tribes, like the Ghassanids, who constructed a double-cistern inside and the al-Mundhir-building – a church and/or reception hall – north to the city. But nature was always the greatest enemy, as Resafa has been afflicted several times by great earthquakes, in the 6th and the 8th cent. Nevertheless, the presence of Christian tribes and the attraction of the relics of St. Sergios, correlated with the fortified city, attracted also the Umayyad prince Hisham b. 'Abd al-Malik. He built the Great Mosque north to the Basilica A and took residence, after being appointed as caliph, south of the city, after 724. This area, including at least two great palaces, further residential buildings and supply services, was in use to the early Abbasid period (8th/9th cent.). Parts of this terrain have been resettled once again in the Ayyubid period (12th cent.), shortly before Resafa has been left by the last inhabitants (1269).

A separate paper (B. Beckers/Ch. Konrad) will focus on the human-landscape interaction of Resafa.

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## **AGRO-PASTORAL LANDSCAPES IN THE ZONE OF UNCERTAINTY: THE MIDDLE EUPHRATES & N SYRIAN STEPPE DURING THE 4TH & 3RD MILLENNIA BC**

Sample archaeological surveys conducted within representative enclaves of the Middle Euphrates and the north Syrian steppe demonstrate the existence of two distinct agro-ecological zones:

- A northern zone (to the north of the Sajur River in Syria) of relatively stable and long-term settlement.
- A southern zone within an agro-ecological "zone of uncertainty" and characterized by rapid phases of colonization whose constituent settlements show short-term boom and bust life cycles.

Drawing on the data bases of the Durham University Fragile Crescent Project, settlement patterns from the 4th and 3rd millennia BC are presented from the Euphrates to the western Khabur basin. These patterns enable us to compare the boom & bust trajectories of citadel cities in the zone of uncertainty with more stable and arguably sustainable trends of smaller settlements and villages in the ecological zone to the north. We then assess long-term trends in settlement by the use of new methods of aggregating and combining disparate data from archaeological surveys conducted over the past thirty years.

Settlement trends and the growth of citadel cities are discussed for these two ecological zones from the perspective of pastoral strategies, as well as risk-taking opportunistic strategies such as trading, and raiding. The discussion will include processes such as the commodification of textiles through pastoral production that may have operated within the margins of the states of Ebla and Mari. Evidence is drawn from archaeological surveys, palaeobotanical and faunal

analyses to provide a basic model of settlement development within the climatically marginal zone of northern Syria and southern Turkey.

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### **THE SUTEAN NOMADS IN THE MARI PERIOD**

The Mari archives are eloquent about the Suteans, a nomadic people living in the Syrian steppes. The communication will focus on the presently known data about Suteans and show how the databasis of the French-German project on Historical Geography (HIGEOMES, ANR/DFG) will be useful for this kind of studies.

## WORKSHOP 6: UNLOCKING HIDDEN LANDSCAPES – SURVEY APPROACHES TO CHALLENGING AND MARGINAL LANDSCAPES IN THE NEAR EAST

**ORGANIZERS: CLAUDIA GLATZ, EVA KAPTIJN, BLEDA DÜRING**

AUTHOR(S)	TITLE	DAY, HOUR
JENNIE BRADBURY	'TEXTURING THE SPACES IN BETWEEN': DEFINING AND EXAMINING PATTERNS OF 'SUB-OPTIMALITY' ACROSS THE LEVANT	THU, 14.30
JESSE CASANA	SETTLEMENT HISTORY IN INLAND DESERTS OF SOUTHEASTERN ARABIA: RESULTS OF THE DUBAI DESERT SURVEY	THU, 14.55
BLEDA DÜRING	SURVEYING A CHALLENGING LANDSCAPE: THE TURKISH WESTERN BLACK SEA	THU, 10.20
CLAUDIA GLATZ	PARADIGM AND PREJUDICE OR THE ARCHAEOLOGICAL INVESTIGATION OF CHALLENGING LANDSCAPES	THU, 9.05
CARRIE HRITZ	SURVEYING IN THE MARSHES OF SUMER	THU, 12.30
EVA KAPTIJN	THE DIFFICULTIES OF SURVEYING THE MOUNTAINOUS TERRITORY OF SAGALASSOS (SW TURKEY)	THU, 11.40
CATHERINE KUZUCUOGLU	BURIED SITES IN ANATOLIA AT THE TURN OF THE LATE GLACIAL/ EARLY HOLOCENE: A CHALLENGE FOR UNDERSTANDING SITE DISTRIBUTION IN THE EASTERN MEDITERRANEAN FROM THE EPIPALAEOLITHIC TO THE CERAMIC NEOLITHIC	THU, 15.20
STEVEN MARKOFSKY	WINDOWS ON A DELTA MARGIN: A CASE STUDY FROM THE MURGHAB DELTA, TURKMENISTAN	THU, 12.05
GIULIA DE NOBILI	GEORGIAN-ITALIAN SHIDA KARTLI PROJECT: ARCHAEOLOGICAL SURVEY IN CENTRAL GEORGIA	THU, 9.55
ANDREA RICCI	THE PACE OF INTENSITY: FIRST RESULTS OF THE MIL PLAIN SURVEY (SW AZERBAIJAN)	THU, 9.30
ULF DIETRICH SCHOOP	SITE TAPHONOMY AND LANDSCAPE DISRUPTION AT ÇAMLİBEL TARLASI, NORTH-CENTRAL ANATOLIA	THU, 15.45
ALI Umut TÜRKAN	ONCE UPON A TIME IN ANATOLIA: SURVEYS IN CHALLENGING LANDSCAPES OF NORTH-WESTERN ANATOLIAN VALLEYS	THU, 11.15
TOBY WILKINSON	EVERY LANDSCAPE IS A CHALLENGE: COMPARING SURVEYS AND COMPARING LANDSCAPES	THU, 16.15

### JENNIE BRADBURY

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### 'TEXTURING THE SPACES IN BETWEEN': DEFINING AND EXAMINING PATTERNS OF 'SUB-OPTIMALITY' ACROSS THE LEVANT

'D'une tristesse et d'une laideur exceptionnelles en Syrie'

Na'aman, A. (1951), *Le Pays de Homs: Etude de Régime agricole et d'Economie rurale*.

The above quote characterises the impressions of a researcher working in the region known as the Wa'ar (Homs Basalt) in central Syria in the early 20th century. This is an area which despite presenting considerable opportunities in terms of subsistence and dwelling requires significant input (i.e. labour, technology) in order for such opportunities to be realised. Through the combined use of satellite imagery analysis and field survey the area has since revealed considerable evidence for a rich and varied record of archaeological settlement dating to variety of periods. Similar 'sub-optimal' regions across the Levant, whilst lying outside the primary agricultural zones, also appear to have supported a diverse range of settlement forms and activity. With this in mind, it is timely to debate how past populations may have exploited regions which we now consider as inhospitable, challenging, or at least not worth exploiting. This paper aims to discuss how the advent of high-resolution satellite imagery within archaeological agendas has made the large-scale mapping and interpretation of such 'sub-optimal' landscapes possible.

It will illustrate how such techniques, when used alongside traditional field survey, can lead to an understanding of how the nature and intensity of exploitation of 'sub-optimal' zones may have changed over time and space. By using new technology it is now possible to explore the diversity of human settlement and related activity, forging the way for a re-examination of challenging landscapes, allowing a comprehensive but nuanced understanding to emerge.

**JESSE CASANA**

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## **SETTLEMENT HISTORY IN INLAND DESERTS OF SOUTHEASTERN ARABIA: RESULTS OF THE DUBAI DESERT SURVEY**

The deserts of southeastern Arabia offer a unique challenge to the archaeological survey methodologies typically employed in the Near East and Mediterranean. Unlike the rich archaeological landscapes found in those regions, much of inland southeastern Arabia is dominated by the Rub al-Khali, the so-called Empty Quarter where remains of ancient settlement are both sparse and ephemeral. Moreover, increasing aridity since the mid-Holocene has transformed what were once savannah grasslands into arid deserts. As a result, aeolian processes have deflated much of the landscape, scouring archaeological sites into poorly-preserved lag deposits, and have simultaneously buried ancient land surfaces by massive, mobile dune fields.

Due in part to the difficulties of archaeological survey in the Rub al-Khali, the region has generally been thought to be devoid of significant human settlement, particularly since the end of a mid-Holocene pluvial phase around 4500 BC. However, the recent discovery and excavation of two long-lived, permanent settlements in Dubai, UAE, Saruq al-Hadid and Al-Ashoosh, now show that occupation persisted in arid regions throughout the Bronze and Iron Ages (3000-150 BC) and suggest that there may be many more undocumented sites in the region. Since 2007, the Dubai Desert Survey has worked to uncover the settlement history of the desert interior through an integrated program of archaeological survey, paleoenvironmental investigations, and targeted excavations. To address the difficulties of survey in the region, our research has employed a wide range of techniques including vehicular transects, innovative satellite remote sensing, ground-based geophysics surrounding known sites, and low-altitude aerial thermography. Our results are now unlocking a previously unrecognized history of long-term human settlement in southeastern Arabia's interior desert while also developing new approaches to discovery and documentation of archaeological materials in similarly challenging environments.

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## **SURVEYING A CHALLENGING LANDSCAPE: THE TURKISH WESTERN BLACK SEA**

The Turkish Western Black Sea Region presents archaeologists with formidable challenges for obtaining a systematic understanding of the occupation history of the region. Problems include steep mountainous terrain, lush green forest cover, a spectacular decline in crop cultivation in recent decades, substantial processes of erosion and sedimentation as well as significant changes in coastal topography.

Over the past three years, the Cide Archaeological Project has endeavoured to develop a methodology for investigating this challenging landscape. This includes a combination of fieldwalking strategies and targeted survey and was informed by a geo-archaeological analysis of the landscape. This paper will evaluate the results obtained and methodological issues.

**CLAUDIA GLATZ**

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## **PARADIGM AND PREJUDICE OR THE ARCHAEOLOGICAL INVESTIGATION OF CHALLENGING LANDSCAPES**

Archaeologically challenging landscapes such as mountain or desert regions have received comparatively little systematic attention in the Near East. To an extent, this is certainly due to the methodological difficulties that such landscapes pose to archaeological investigation. Methodological challenges alone, however, cannot account for the often striking lack of interest in certain types of Near Eastern landscapes. It would seem that ancient and modern discourse on geographic and ecologically marginal regions and their portrayal as social and cultural peripheries and opposites to 'civilised' ways of life are part of the problem. In this paper, I want to explore the interplay between cultural prejudice and methodological paradigm and investigate how traditional perception has influenced the ways in which we conceptualise, investigate and interpret challenging landscapes, the societies which inhabited them and their significance in shaping regional and supra-regional developments.



**SURVEYING IN THE MARSHES OF SUMER**

To date, the little surveyed and unsurveyed areas southeast of the modern Shatt al-Gharraf, termed the Central Marshes, the Hawr Hawiza and the Hawr al-Hammar, have been something of an archaeological terra incognita - despite the location of key 3rd millennium B.C. Sumerian cities such as Lagash and Girsu in this area. Past archaeological survey was spatially extensive and focused on the irrigable alluvial plains to the north. Viewed as the fringe of urban society, the marshes present a complex landscape of survival and destruction. The natural formation processes of the marshes, primarily the delta of the Euphrates, Tigris and Karun/Karkheh rivers systems, and long-term cultural modification of wetland environments for subsistence activities resulted in a continual cycle of heavy blankets of sedimentation of archaeological sites and features which deterred formal archaeological survey. The combination of the active draining and resulting drying of the marshes in the late 1990s, and the availability of costly but high resolution satellite images provide a unique set of circumstances that make it possible to investigate land use and settlement patterns in the former Hawr al-Hammar for the first time. The integration of targeted and intensive surface survey, geological coring and remote sensing data can be used to begin to reconstruct the long-term settlement and land use patterns and the role of marsh/deltaic resources in the rise of urban society in Southern Mesopotamia.

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**THE DIFFICULTIES OF SURVEYING THE MOUNTAINOUS TERRITORY OF SAGALASSOS (SW TURKEY)**

The Hellenistic to Byzantine city of Sagalassos is situated in the Western Taurus Range in SW Turkey. The terrain conditions on this rugged and steeply sloping site and the much varied landscapes of its territory pose a true challenge for archaeological survey.

Since 1990 the town and its territory (ca. 1200 km<sup>2</sup>) are investigated as part of an interdisciplinary research project of the Katholieke Universiteit Leuven (Belgium) directed by M. Waelkens, including large-scale excavations as well as archaeological surface survey. The habitation pattern of the territory was first explored with a reconnaissance survey (1993-1998), forming the basis for a more intensive survey (1999-2006), which is being continued since 2008 in selected areas of the territory. In addition, between 1999 and 2005, two thirds (ca. 23 ha) of the inhabited urban area of Sagalassos were intensively surveyed as part of an integrated research strategy also including a programme of test soundings and geophysical survey.

Although the surveys have greatly enhanced our understanding of the settlement evolution, we are best informed on easily accessible zones with a relatively good surface visibility. This is particularly problematic in the territory, where hills and mountains with steep slopes, severely overgrown areas, bare rock faces are not conducive to intensive survey, thus resulting in an overrepresentation of the flat, mostly cultivated valleys. If these poorly accessible areas are simply left aside a whole set of (hill)sites will be missed. Furthermore, there is the problem of differential opening up of buried archaeological remains. In ploughed areas artefacts surface more easily. Yet, the higher mountain slopes as well as Sagalassos proper are not cultivated, which further complicates a comparison of the survey results.

This paper will address the problems of differential access to survey areas and the interpretative problems deriving from it. It will also discuss the level of comparability between the results of the different survey strategies and between the different areas within the territory. Surface-subsurface relationships, as tested through excavations in the city will be treated, as well as the effects of sample sizes. Finally, the repercussions these survey problems have on our understanding of the settlement pattern and past human society will be examined.

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**BURIED SITES IN ANATOLIA AT THE TURN OF THE LATE GLACIAL/EARLY HOLOCENE:  
A CHALLENGE FOR UNDERSTANDING SITE DISTRIBUTION IN THE EASTERN MEDITERRANEAN  
FROM THE EPIPALAEOLITHIC TO CERAMIC NEOLITHIC**

In Anatolia, Epipalaeolithic and Aceramic/Early Neolithic sites are known in the Mediterranean (Antalya), south-eastern (Euphrates and Tigris valleys) and Marmara regions, as well as in the southern Anatolian plateau (Lake district, Konya plain). Meanwhile, Aceramic and Ceramic Neolithic sites are sparse north-east of a line stretching from the Marmara region to the eastern Anatolian highlands. It has long been suggested that this scarcity is due to Holocene sedimentation concealing Late Glacial and Early Holocene sites.

Arguments sustaining this hypothesis are here provided by new evidence from buried archaeological layers discovered through coring, and dated to the Younger Dryas (YD: 10.5 - 9.5 kyrs BC) in Cappadocia near Aşıklı Höyük (Aceramic)

and on the Mediterranean coast near Öküzini cave (Epipalaeolithic); and to the Early Holocene (EH: 9 - 6 kyrs BC) in valleys north of the central plateau (Yozgat, Kastamonu) and in a cave near Van (Eastern Anatolia).

In all cases presented here, indicators of concealed archaeological sites (layers, artefacts, pollen) and/or forest fires (charcoals) have been identified during palaeoenvironmental research programs exploring YD and EH sediment accumulations. These results address, for periods prior to 6 kyrs BC in Anatolia (a) the reality of concealment of prehistoric sites by Holocene sediments, and (b) the space and time distribution and characteristics of human presence and activities.

**STEVEN MARKOFSKY**

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### **WINDOWS ON A DELTA MARGIN: A CASE STUDY FROM THE MURGHAB DELTA, TURKMENISTAN**

Marginal alluvial environments, which straddle the dynamic boundaries between fertile, habitable regions and barren, inhospitable zones, pose unique issues for archaeological survey. Transitional by nature, these regions at the limits of human occupation are often characterised by dynamic, complex and non-uniform landscapes that complicate both survey methodology and interpretation of settlement patterns. If survey-based approaches are to be used effectively in such environments, these limitations must be recognised and innovative approaches developed to address them. This paper examines one such region: the northern fringe of the inland Murghab delta in Turkmenistan. The delta represents a visually obstructed alluvial landscape between delta and desert that renders the reconstruction of past archaeological patterns particularly difficult. Factors including sand cover, alluvial deposition, erosion and deflation all contribute to a heavily-altered patchwork of surface material that is not always amenable to traditional survey methodologies. This paper addresses some new approaches to examining this complex marginal environment, including multi-scalar analysis, visibility analysis via remote sensing and anisotropic (directional) analysis. These methods are discussed in terms of settlement pattern analysis, post-depositional behaviours and recovery biases and their implications for interpreting marginal regions.

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### **GEORGIAN-ITALIAN SHIDA KARTLI PROJECT: ARCHAEOLOGICAL SURVEY IN CENTRAL GEORGIA**

We will discuss the main problems encountered during the three survey campaigns in the Shida Kartli region (Georgia). We will focus on the difficulties of surveying a not well known area, with characteristics that are quite different from the ones Near Eastern scholars working in Greater Mesopotamia are used to deal with. We planned the first campaign (2009) to get to know this new landscape, both from preliminary explorations and from satellite images analysis. We familiarized with new kind of soils, with heavy vegetation cover, with the presence of very complicated traces of recent (military etc.) activities, and above all with types of sites dramatically different from Ancient Near Eastern standards.

We will then discuss the following two survey seasons (2010-2011). The Shida Kartli region covers an area of 6200 km<sup>2</sup>. The 2010 campaign was focused on the Kaspi district, a territory of 1099 km<sup>2</sup> in the eastern part of the province, while the following year was devoted to the Khashuri district (550 km<sup>2</sup>) in the western part. In both cases we dealt with similar problems: small sites, which were rather difficult to spot in a hilly landscape, sites characterised by the presence of such a small number of sherds on the surface to leave us in doubt if they were sites at all; very dense vegetation areas, as well as areas that have been completely altered in recent years. In addition, being the main focus of our interest sites of the 4th and 3rd millennium BC, we often found ourselves dealing with deeply buried archaeological levels, covered by later occupation, that left very few traces on the surface.

We learned to rely on the local population that most of the time have very detailed information about where archaeological material have been found or about how the landscape has changed in the last fifty years.

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### **THE PACE OF INTENSITY: FIRST RESULTS OF THE MIL PLAIN SURVEY (SW AZERBAIJAN)**

Within the frame of the newly established cooperation between the National Academy of Sciences in Baku and the German Archaeological Institute, since summer 2010 a small team of geoarchaeologists conducts intensive survey

around the Neolithic site of Kamiltepe in the Mil Plain of South-Western Azerbaijan. In this region previous archaeological investigations are rather scarce while large portions of the landscape are still preserved. This survey project aims to document the cultural landscape signature for the entire course of the Holocene and explore regional occupational dynamics, subsistence patterns and human-environment interactions. The paper will outline the methodological approach undertaken by this investigation and first results will be presented in order to examine mound formation processes during the prehistoric periods. In addition, possible future steps of the research will be discussed. Particular attention will be devoted to a crucial methodological balance between intensity and speed of survey to recover archaeological remains on large areas now endangered by growing intensive agricultural practices.

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## **SITE TAPHONOMY AND LANDSCAPE DISRUPTION AT ÇAMLİBEL TARLASI, NORTH-CENTRAL ANATOLIA**

Çamlıbel Tarlası is a 4th millennium BC village site in North-Central Anatolia. It is suggested that such hamlet sites may have been the primary settlement mode in this highland region. Difficulties of preservation and a traditional research focus on mound settlements may have led to our present inability to define the nature of local prehistoric settlement. The site occupies a small island of stability in a sea of heavily disrupted landscapes. Interpretation of the archaeological site relies on survey analysis of the watershed. Hillsides near the site are deeply cut by a new stream network unrelated to Chalcolithic patterns but affected by subsequent human landscape use. Subtle patterns of artifact preservation and burial, anthropogenic soil alteration, and disruption of waterways by manuports constitute key evidence about the nature and timing of disruption in the watershed. The master stream had silted in by ca. 4 m since first settlement, but has eroded back to its previous level since the Byzantine period. Archaeological interpretation requires a conceptual inversion of the present landscape – the ridge-crest site was a valley bottom during occupation, for example. But the disruption is itself an archaeological feature, conveying information about how the land was used in the millennia since settlement.

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## **ONCE UPON A TIME IN ANATOLIA: SURVEYS IN CHALLENGING LANDSCAPES OF NORTH-WESTERN ANATOLIAN VALLEYS**

The survey in İnönü region (Eskişehir, Turkey) is in an area at the edge of Northwestern Anatolia between Central Anatolia and Marmara region where the sites tend to diminish or seem to be flat settlements. The survey which have been conducted in 2008 and 2009, focused first on Kanlıtaş Chalcolithic mound and its environs in a 6 km diameter. The survey area covered an area approximately 40 km<sup>2</sup> covering an area flooded by streams and disturbed by a dam lying on part of tectonical zone. New sites of which two are flat settlements and two mounds have been first discovered. The chronological evidence in survey area spans from Lower Paleolithic scatters to the Medieval rural small mound settlements (Post Selcukid and Ottoman of 12th-15th century). It is understood that the region has been densely habitated area with 7 EBA mounds, 2 Chalcolithic period sites, 4 Classical and Medieval period cemeteries and many off-site patterns such as a lithic workshop as well as Lower Paleolithic find spots around Kuzfindık Dam Lake. Moreover, the intensive survey aimed to investigate how land use changed through millennia in NW Anatolian valley according to the location of human activities including off-site patterns and how paleoenvironmental changes took place (alluvial fills, change in water resources, etc.). The survey also gave some clues on changing settlement models of Chalcolithic through EBA and resource use within the catchment area of Kanlıtas Mound.

The research aimed to cover an area to be handled in at least 2 years, including field walk almost on every km<sup>2</sup> of whole area rather than collecting on definite transects. However, different and dramatic change in topography (thick woodlands) sometimes prevented or being effective on systematic fieldwalking and recording. Moreover, growing off-site patterns made it possible to understand 5 km range of Lower and Middle Paleolithic clusters across the valley which was once a lake bed.

On the other hand, the silting of the alluvial plains might have covered many small sites as in Demircihüyük settlement within close vicinity of our research area, as 11 m down below the present valley level. This is much related with the absence of Neolithic settlements in Inner western Anatolia, only known from stray finds in contrast to Eastern Marmara and Aegean Region.

Actually, major factors became the differential “archaeological visibility” of particular groups of material, especially in different periods. Therefore, the repeatability of survey was a major advantage, yet there are very few examples of survey archaeologists actually repeating survey to test the validity of their data. Revisiting the former areas which were once growing crops, or non disturbed areas gave different results of invisible in different visits as if the surface sites “can come on and off like traffic lights” in different soil, vegetation and survey conditions.

## **EVERY LANDSCAPE IS A CHALLENGE: COMPARING SURVEYS AND COMPARING LANDSCAPES**

As the amount of data recovered from archaeological surveys and excavations increases exponentially year-on-year, the challenge facing us all is not only how to scrape representative information out of defiantly secretive landscapes in the face of the lurid abundance of others (simultaneously coping with expanding bureaucratic control of research worldwide), but also, long-term, how to manage the results to make our data comparable within our 'grand narratives'. At issue are questions of scale and methodology: how can we accommodate the minute scale of the intensive survey or single excavation with continent-wide processes of historical (or environmental) change without redundancy? How can we lock together the results of necessarily 'adaptive' survey methodologies, each designed to deal with their own particular landscape? Can we find ways to characterize such landscapes and such methodologies that will allow us to bring their particular 'biases' into relief? Can such inter-comparisons rely on quantitative methods, or must we instead rely on qualitative reasoning? Adjustments to the way we publish data in the light of new digital technologies may offer one way to address these issues. This paper will aim to raise more questions than it can possibly answer, but in the hope that it will open a discussion on comparative survey analysis.

## WORKSHOP 7: SOCIAL THEORY IN THE ARCHAEOLOGY OF THE ANCIENT NEAR EAST

**ORGANIZERS: THOMAS E. LEVY AND IANIR MILEVSKI**

<b>AUTHOR(S)</b>	<b>TITLE</b>	<b>DAY, HOUR</b>
SUSAN E. ALCOCK	DON'T FORGET MEMORY (IN THE NEAR EAST OF ALL PLACES)	TUE, 15.50
JOHNNY SAMUELE BALDI	SOCIAL THEORIES, TECHNICAL IDENTITIES, CULTURAL BOUNDARIES: A PERSPECTIVE ON THE "COLONIAL SITUATION" IN LC3-LC5 NORTHERN MESOPOTAMIA	TUE, 11.55
SIMONE BONZANO	GIS AND SOCIAL THEORY: CONCRETE APPLICATION IN EASTERN ANATOLIAN CONTEXT, URARTIAN LAKE VAN	TUE, 9.55
PATRYCJA FILIPOWICZ	SEMIOTICS IN ACTION: NEOLITHIC IMAGERY IN THE MOVE	TUE, 11.15
HILARY GOPNIK	MAYOR, LORD, KHAN, OR CHIEF? CONSTRUCTING SOCIAL IDENTITY IN ANCIENT MEDIA	TUE, 15.30
AARON GREENER	NEW SOCIAL PERSPECTIVES ON INTERMEDIATE BRONZE AGE BURIAL PRACTICES AT JERICHO	TUE, 14.30
MICHAEL HARROWER	SPACETIME MAPPING THE ANCIENT NEAR EAST	TUE, 10.15
THOMAS E. LEVY	INTRODUCTION: SOCIAL THEORY IN NEAR EASTERN ARCHAEOLOGY TODAY	TUE, 9.00
ALESSANDRO DI LUDOVICO	A LOOK INTO LATE 3RD MILLENNIUM MESOPOTAMIAN HISTORY SUPPORTED BY CROSS-DISCIPLINARY INTERPRETIVE TOOLS	TUE, 12.15
ELISE LUNEAU, JULIO BENDEZÚ-SARMIENTO	SEX, AGE AND BURIAL PRACTICES IN CENTRAL ASIA DURING THE BRONZE AGE: COMPARATIVE ANALYSIS OF THE GRAVES IN THE NECROPOLIS OF DZHARKUTAN (SURKHAN-SARYA, UZBEKISTAN, 2100-1500 B.C.)	TUE, 9.35
JOANNA MARDAS	GENDER AND THE ARCHAEOLOGY OF THE ANCIENT NEAR EAST: FEMININITIES AND MASCULINITIES	TUE, 9.15
IANIR MILEVSKI, BERNARDO GANDULLA	BIBLICAL ARCHAEOLOGY, PROCESSUALISM, POST-PROCESSUALISM AND BEYOND	TUE, 17.25
ADAM JOSEPH NAZAROFF	SOCIAL COMPLEXITY AND SOURCE ENTANGLEMENT IN ANATOLIA: A CASE-STUDY FROM THE NEOLITHIC CHERT ASSEMBLAGE AT ÇATALHÖYÜK, TURKEY	TUE, 11.35
SARIT PAZ	LIFE IN THE CITY: THE BIRTH OF AN URBAN HABITUS IN THE EARLY BRONZE AGE OF ISRAEL	TUE, 12.35
SUSAN POLLOCK	THE POLITICS OF THEORY: ARCHAEOLOGICAL PRACTICE IN WESTERN ASIA	TUE, 17.05
BENJAMIN PORTER	LOCATING NEAR EASTERN ARCHAEOLOGY IN AREA STUDIES	TUE, 16.45
JUAN MANUEL TEBES	SOCIAL THEORY AND THE ARCHAEOLOGY OF SOCIAL COMPLEXITY IN SYRO-PALESTINIAN ARCHAEOLOGY: THE CASE OF IRON AGE EDOM	TUE, 15.10
MICHEL DE VREEZE	INTEGRATING EVOLUTIONARY AND SOCIAL THEORY IN THE MIDDLE BRONZE LEVANT: A CASE-STUDY OF TELL EL-YAHUDIYEH WARE	TUE, 14.50

**SUSAN E. ALCOCK**

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## **DON'T FORGET MEMORY (IN THE NEAR EAST OF ALL PLACES)**

Hubbub around the subject of memory, especially social or collective memory, has proved one of the more active conversations within academic archaeology in the past two decades. Studies of 'the past in the past' have been approached from all manner of material evidence, from regional landscapes to mortuary assemblages to individual heirlooms. On one level, some excellent work along these explicit lines has been done on such topics in Near Eastern archaeology, if not perhaps as much as might be expected in a zone with such immense diachronic sweep and such a remarkable history of fieldwork. Various explanations could be put forward, from the nature of fieldwork methodologies, to modes of publication, to the (near universal) divide between 'academic research' and 'salvage work'. A more insidious issue, however, may be the particularly fraught nature of historical memory in many parts of the Near East, and the uses to which the past has been put in modern narratives. These are deep waters, but what must be acknowledged is the impossibility of removing 'archaeologies of memory' from any form of our discipline's theory, or practice.

**JOHNNY SAMUELE BALDI**

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## **SOCIAL THEORIES, TECHNICAL IDENTITIES, CULTURAL BOUNDARIES: A PERSPECTIVE ON THE "COLONIAL SITUATION" IN LC3-LC5 NORTHERN MESOPOTAMIA**

A wide archaeological literature deals with Uruk colonies in 4th millennium BC northern Mesopotamia, proposing many historical and anthropological models to explain this phenomenon. The case study here presented focuses on the ceramics (especially jars) of Tell Feres al-Sharqi, a Chalcolithic village in north-eastern Syria. The analysis of technical features (manufacturing methods, fabrics, morphology) allows to identify, alongside a local chaff tempered tradition, a southern one with mineral fabrics. Both the "colonial situation" between Uruk and local people and the technical borrowings between the two traditions represent a framework recognized in many northern Mesopotamian sites between Late Chalcolithic (LC) 3 and 5. But this is not the occasion to repeat well-known data on the culture contact in Upper Mesopotamia. On the contrary, the specific conditions documented at Tell Feres offer the basis for discussing the approach to techniques (the language between humans and things) as a bridge for applying social theories to the archaeological record. The concept of "technical identities" may allow the identification of different social entities (and some elements of their relationships) on a material basis and so to avoid aprioristic evolutionary and positivistic attitudes.

**SIMONE BONZANO**

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## **GIS AND SOCIAL THEORY: CONCRETE APPLICATION IN EASTERN ANATOLIAN CONTEXT, URARTIAN LAKE VAN**

Sociological and anthropological modelling are a very new approach in the use of GIS in archaeology, defining a very new way to use such software that goes beyond the 'intuitive' processual one. As one of the main tools for Landscape Archaeology the use of a 'post-processual' GIS methodology is still a debated theme without established methods or 'guidelines' ruling it. Due to this consistent lack, even heavier in Near East Archaeology where the application of Informatics has been slower than in other fields, enhanced and 'cutting edges' social modelling is still difficult. There are many samples of how to model regional networks and social agencies in archaeology, but there are very few that try to catch really the social landscape as the networks made it. In the last years, with my own research on the different aspects of landscape social-dynamics in Early and Middle Iron Age Lake Van, Eastern Anatolia, I have tested different approaches to obtain a comprehensive view of the social world beyond the archaeological data.

Starting from use of almost processual 'algebraic models', as XTENT models and the COST surfaces, I have then moved on a more 'post-processual' interpretative approach with combined use of GIS and intuitive mapping aimed to render a perspective view to the human geography inside the historical data, resulting on what I called the 'Bianili's Isles Model' and a visual interpretation of social landscape through the GIS lenses. The very aim of this model is to try a new way to use geography in archaeology, and specifically GIS, not as a way to draw points, lines or areas on a palimpsest, but to really deploy social agencies on it: a way to link new-geography and social archaeology.



## **SEMIOTICS IN ACTION: NEOLITHIC IMAGERY IN THE MOVE**

In the period 6500-5500 BC significant changes occurred in different parts of Central Anatolia. Those multidimensional transformations included changes of the Neolithic imagery exemplified by the gradual disappearance of in-house wall paintings and installations in favour of increase of decorated pottery, making imagery more mobile. In Neolithic sites like Çatalhöyük a whole range of motifs were used and reproduced through time. Some of them have been 'inherited' by younger communities. However, their meaning was transformed and modified. This paper investigates their presence in different media and context across the Central Anatolia. Theoretical approach employed here draws on the semiotics of Ch.S. Peirce. Its great potential as an useful interpretative framework to archaeological analyses has been recently advocated by R. W. Preucel, who stresses the advantage of Peirce's ideas over common notion of semiotics - de Saussure's semiology. The crucial concept is that signs are not abstract, separated from the reality and context of use. Meaning is multi-layered and under constant change, depending on temporal, spatial and social conditions. I would therefore argue that the Neolithic motifs cannot be investigated in isolation and simply termed 'symbols', what often takes place in archaeological interpretations, but considered in their specific context.

### **HILARY GOPNIK**

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## **MAYOR, LORD, KHAN, OR CHIEF? CONSTRUCTING SOCIAL IDENTITY IN ANCIENT MEDIA**

In spite of an overall impression that historically we "know" the medes through the stories of herodotus and contemporary Assyrian inscriptions, these accounts are clearly distorted versions of median society. The very existence of a well defined ethnic or political entity called media may even be an Assyrian construct for the people living in the central western zagros mountains. our view of these groups has also been coloured by analogy to 19th and 20th century accounts of pastoral "tribes" of the zagros mountains, which themselves were subject to the distorting lens of contemporary power structures. Recent historical and anthropological analyses have found that so-called "tribal" identity is as much a construct of state societies that strive to dominate peripheral groups as it is a consistent or definable form of social structure, and that groups often construct tribal identities only to cope with pressure from surrounding states. This paper examines the archaeological evidence from media in light of current anthropological theory in order to tease out the possible correlates between social identity and archaeological remains.

### **AARON GREENER**

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## **NEW SOCIAL PERSPECTIVES ON INTERMEDIATE BRONZE AGE BURIAL PRACTICES AT JERICHO**

Dame Kathleen Kenyon excavated a large Intermediate Bronze Age cemetery at Jericho in the 1950s. The good preservation state of the tombs and subsequent detailed excavation reports have enabled continued research and study of the archaeological data, and are invaluable for study of the Intermediate Bronze Age society in the Southern Levant. Yet, to date no researcher has considered Kenyon's original tomb-type division as a means to a comprehensive anthropological study of the burial patterns found there. In this paper I will re-examine the burial practices and the grave offering distribution, considering the cultural context and cognitive aspects that influenced the creation of the archaeological record. I will use social theory and various anthropological studies to better interpret the archaeological evidence and to further our understanding of the social organization of the Jericho community.

Beyond Kenyon's records, the burial patterns in Jericho attest to a degree of social complexity. I will argue that members of different social groups were buried separately, their bodies treated differently and the grave offerings placed with them accordingly distinct. The burial record teaches of a separation based on gender, age and marital status. In this paper, I will define which social group was buried in each of Kenyon's tomb types. This multidisciplinary approach and symbolic interpretation strengthen the argument for the great importance given to burial and its rituals during the Intermediate Bronze Age.

**MICHAEL HARROWER**

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## **SPACETIME MAPPING THE ANCIENT NEAR EAST**

History, geography and archaeology rely on understandings of space and time. The increasing time-space distancing (as Giddens referred to it) of contemporary societies, aggravated by the Internet and satellite imagery, complicates comprehension of ancient times and places. Arguably many conflicts in archaeology arise because of differences in the latent spatiotemporal scales of competing explanations. Particularly when informed by supra-technological spatial theory, emergent mapping technologies (including online, quantitative and qualitative GIS) hold considerable potential to move archaeology towards more informed understanding of ancient histories.

**ALESSANDRO DI LUDOVICO**

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## **A LOOK INTO LATE 3RD MILLENNIUM MESOPOTAMIAN HISTORY SUPPORTED BY CROSS-DISCIPLINARY INTERPRETIVE TOOLS**

The whole of data and indirect clues on cultures of late 3rd millennium southern Mesopotamia that are currently available have been largely used for in-depth studies on social, political and economic aspects of life in that age. In fact, the writing of Mesopotamian history and the study of specific cultural features of the ancient Babylonian region of late 3rd millennium have been out of necessity grounded more on the content of the many known written documents than on the products of material culture or other relics. Written sources revealed themselves useful to scholars to outline a number of central social and political features of this period, but many poorly-explored aspects of this cuneiform heritage are probably rich of interesting clues for interpreting Mesopotamian history. Adopting the point of view of cultural history, this contribution will present an effort to contextualize and critically investigate the uses and roles of communication technologies and procedures in Mesopotamia in the end of Early Bronze Age, and possibly observe them in a comparison with other periods. The basic problem that needs to be faced here is that of methodology, including logical strategies of investigating the societies under study. Then, the possible connection between social and political phenomena will be considered in a general and cross-disciplinary perspective.

**ELISE LUNEAU (1), JULIO BENDEZÚ-SARMIENTO (2)**

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## **SEX, AGE AND BURIAL PRACTICES IN CENTRAL ASIA DURING THE BRONZE AGE : COMPARATIVE ANALYSIS OF THE GRAVES IN THE NECROPOLIS OF DZHARKUTAN (SURKHAN-SARYA, UZBEKISTAN, 2100-1500 B.C.)**

The burial practices of the Sapalli culture established in the south of Uzbekistan during the Bronze age, belonging to the Oxus civilization (ca. 2300-1500 BC), are known since the 1960's by the excavations of big cemeteries. The new researches on the necropolis 3 of Dzharkutan led by a French and Uzbek team (MAFOUZ - Protohistoire headed by J. Bendezú-Sarmiento and S. Mustafakulov) with an archaeo-anthropological approach bring important results for these studies. In this way, we will examine the repartition of the funeral gifts between the different graves of Dzharkutan already published and recently discovered by the MAFOUZ - Protohistoire expedition. The previous studies revealed that some categories of funeral gifts, especially the metal objects and the seals, were more numerous in the female grave than in the male grave before the Late Bronze Age. However, some problems remained about the method of sex estimation. So, helpful to new methodological studies in use by the MAFOUZ-Protohistoire expedition, this question will be study with a new perspective. Can we note a distinct differentiation between funeral practices connected to each sex, to different ages and by chronological period ? This analysis contributes to better know the symbolic and social system, the perception of the death's world and their evolution in the Bronze Age society of Central Asia.

**JOANNA MARDAS**

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## **GENDER AND THE ARCHAEOLOGY OF THE ANCIENT NEAR EAST: FEMININITIES AND MASCULINITIES**

Neither femininity nor masculinity are given in advance, they are culturally constructed and diachronic. What is regarded as masculine or feminine in one society, might have completely different and even conflicting meaning in another. Body doesn't define masculinity and femininity, but body is defined and changed by ideology relating to the

relationships between sexes. We should consider gender identities and try to answer the question of how are they constructed, what are their material correlates and what is regarded as male or female.

Gender studies refer to both women and men but for a long time they have been understood mostly as a women's studies. Unfortunately men and masculinities are still ignored in gender studies. Focusing on women only may cause a shift from androcentrism to gynocentrism. Thus, social sciences have developed recently men's studies (which will be main issue of my dissertation). We can't study society, its diversity and relationships between its members if we concentrate on just one gender. Men have been connected mainly with strength, dominance and power, women with weakness and beauty. But both masculinity and femininity are not essential and monolithic identities. To be a man or a woman, one have to meet criteria defining masculinity or femininity.

**IANIR MILEVSKI (1), BERNARDO GANDULLA (2)**

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## **BIBLICAL ARCHAEOLOGY, PROCESSUALISM, POST-PROCESSUALISM AND BEYOND**

More than 120 years ago, archaeology emerged in Palestine strongly related to Biblical studies and religious-political interests that accompanied the European presence in the Orient. After the first half of the 20th century, and the creation of the state of Israel, archaeology was intensely developed as a scientific discipline, although Biblical bias still existed among local and foreign researchers. Through the years, new archaeological streams influenced Israeli and other researchers working in the southern Levant, mostly related with the processualist currents emerged in America. These currents put the accent more on economic, social and technological aspects of archaeology than the traditional political aspects related to Biblical studies. The social and political developments within Israel in the 90s, were the framework of post-processualist viewpoints, also related with American but mostly with European tendencies attested in the archaeology of these countries. The main accent here was put on the importance of human ideas and initiatives in the social developments, less on technology or ecological characteristics of ancient societies. The goal of this paper is to analyze these developments in the framework of the history of the region and suggest new possible developments for the archaeology of the southern Levant.

**ADAM JOSEPH NAZAROFF**

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## **SOCIAL COMPLEXITY AND SOURCE ENTANGLEMENT IN ANATOLIA: A CASE-STUDY FROM THE NEOLITHIC CHERT ASSEMBLAGE AT ÇATALHÖYÜK, TURKEY**

During the Pre-Pottery Neolithic period, greatly expanding social, economic, and ideological networks facilitated interactions amongst communities at local, regional, and pan-regional scales which actively shaped Near Eastern lifeways. During this period, changing relationships between humans and social and physical landscapes shaped a novel way of life. The procurement and circulation of goods and resources would've been an essential component of these relationships. Here I maintain that integral to the study of these materials is an understanding of how the sources of raw materials utilized in the manufacture of objects articulated with other phenomena. By offering new information pertaining to the sources of chert utilized at the Neolithic site of Çatalhöyük, Turkey, I suggest that we consider how source-choice was dependent upon relationships between physical characteristics of source material, cultural beliefs affiliated with source-locales, and other material, social, and economic practices which drew people into a relationship with any given source. I engage with recent developments in Entanglement Theory to recognize how source-choice was embedded within a multiplicity of socio-economic, communal, and ideological practices, and to demonstrate how perceptions of objects were informed by the origins of their constituent materials, noting that decisions to use these sources impacted different scales of social life.

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## **LIFE IN THE CITY: THE BIRTH OF AN URBAN HABITUS IN THE EARLY BRONZE AGE OF ISRAEL**

The emergence of the city is a central theme in the study of the Early Bronze Age (EBA) of the Southern Levant. To date, the study of early urbanization in the region has been characterized by an evolutionary approach that tends to depict the processes involved in broad strokes with little concern for details. The current study combines advanced methodological and theoretical approaches with a broad archaeological base, in order to fill in the gaps left by previous archaeological explanations, and offer a detailed discussion of the outcomes of the first episode of urbanization in the area, dated to the EBA II. The study employs the concept of habitus – the unwritten set of

values, behavioral rules, social structures and ways of life that produce and are reproduced by every human society – as the conceptual framework. This concept offers wide possibilities for archaeological research. Its application involves an examination of the practical and material manifestations of embedded values, rules, and structures, through the analysis of material finds, architecture, functional divisions, symbolic systems etc., extending from the household to the settlement system level. This approach allows to explore the various physical, practical and conceptual characteristics of EBA II urbanism, as experienced by the city inhabitants.

**SUSAN POLLOCK**

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**THE POLITICS OF THEORY: ARCHAEOLOGICAL PRACTICE IN WESTERN ASIA**

As an anthropological archaeologist trained in the USA, I have long understood archaeology to be a discipline in which social theory plays an integral role. However, by no means all archaeologists working in Western Asia (or probably anywhere in the world) share this perspective. In this paper I consider the extent to which social theoretical positions inform the work of foreign versus local archaeologists, using specific cases from Iran and Iraq. Drawing on the history of archaeological research in these countries, western Europe and the United States, in particular the political role(s) played by archaeological interpretation, I propose some reasons for the differential acceptance of archaeology as a discipline in which social theory cannot be disentangled from archaeological practice.

**BENJAMIN PORTER**

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**LOCATING NEAR EASTERN ARCHAEOLOGY IN AREA STUDIES**

The distributed nature of Near Eastern archaeological thought and practice described in this workshop's abstract is partly a consequence of the discipline's long-held position in interdisciplinary area studies departments. Despite critiques during the latter half of the twentieth century, area studies departments remain dedicated to the production of knowledge about the language, literature, and material culture of discrete regions and the societies that inhabit them. Although exceptions may be found, North American and European Near Eastern archaeology continues to be based in area studies departments. This paper explores how this position in the academy has shaped the discipline's intellectual endeavors in recent decades, particularly the reception of social theory. Rather than subscribe to the traditional meta-narrative that area studies-based archaeology commonly disavows social theory, the paper instead examines how the tension between cultural-historical particularism and theory is a potentially productive dialectic that echoes the interdisciplinary nature of contemporary area studies. However, the intellectual outcome is messy, preventing the creation of neatly divided theoretical zones so much desired in the social sciences. An example of such productive tensions is displayed in an analysis of the burial of a disabled individual from ancient Dilmun excavated in the Gulf country of Bahrain.

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**SOCIAL THEORY AND THE ARCHAEOLOGY OF SOCIAL COMPLEXITY IN SYRO-PALESTINIAN ARCHAEOLOGY: THE CASE OF IRON AGE EDMOM**

Syro-Palestinian ("Biblical") archaeology has been traditionally slow to incorporate the terminology, discussions and methods developed in mainstream world archaeology. Fortunately, the recent decades have seen a burst of studies trying to understand old and new archaeological data through the lenses of social theory. The history of scholarship on the emergence of complex societies in Iron Age southern Transjordan (the biblical kingdom of Edom) is a perfect example of this phenomenon. This polity has been studied since the beginning of archaeological research in the area under the lenses of the model of the modern nation-state. Edom was seen as a "kingdom" or "monarchy" with all those "national" attributes that we commonly ascribe to modern states. Since the 1990s scholarly views on Edom have been thoroughly influenced by a new current of research that stresses tribalism as the most important factor working in the Transjordanian societies in the Iron Age. Thus, Edom has been named a "tribal kingdom", a "segmentary society" and a "nation" of trans-local groups sharing an artificial kin relationship. However, models that acknowledge the important role of kin-based organizations in one way or the other implicitly view the State as the model upon which the local groups, being they tribes, clans or families, should be accommodated. Late Iron Age Edom, even if presents evidences of a hierarchical society in Buseirah, cannot be subsumed under the category of State. Buseirah can be better interpreted as a chiefdom, whose sovereignty was limited to its hinterland.

## **INTEGRATING EVOLUTIONARY AND SOCIAL THEORY IN THE MIDDLE BRONZE LEVANT: A CASE-STUDY OF TELL EL-YAHUDIYEH WARE**

Over the years, quantitative approaches to material cultural development and social theory on the use and appropriation of material culture have become entrenched in the processual/post-processual division. This has important consequences for our study of material culture, as we tend to compartmentalize our way of looking at artefacts in the archaeological record.

Subsequently, this has great influence on our way of recording and presenting information.

In recent years, evolutionary approaches in anthropology and archaeology have proven the possibility of studying material cultural development in evolutionary terms of 'descent with modification' using methods such as cladistics to reconstruct the development of artefacts. As such, this has opened up a powerful way of looking at artefact development and reconstructing the patterns of learning in ancient crafts. By using Middle Bronze Age Tell el-Yahudiyeh juglets as a case-study, this paper will try to illustrate how an evolutionary framework can integrate ideas on the fabrication, use, and social role of these juglets in the Levant. In this way, it can provide a valuable framework for archaeologists to integrate quantitative evolutionary methods and social theories on the role of artefacts in daily life within the archaeological past.

## WORKSHOP 8: BEYOND ORNAMENTATION – JEWELRY AS AN ASPECT OF MATERIAL CULTURE IN THE ANCIENT NEAR EAST

**ORGANIZERS: AMIR GOLANI, ZUZANNA WYGNAŃSKA**

AUTHOR(S)	TITLE	DAY, HOUR
ELEONORA CARMINATI	TRANSCAUCASIAN JEWELRY MANUFACTURE IN THE KURA-ARAXES AND BEDENI CULTURES: ANALOGIES AND DISTINCTIONS FOR THE RECONSTRUCTION OF A CULTURAL CHANGEOVER	THU, 12.30
MARCIN ANDRZEJ CZARNOWICZ	EARLY JEWELRY AND LITTLE WORKS OF ART FROM TELL EL-FARKHA AS MARKERS OF INTERACTIONS	THU, 11.40
AMIR GOLANI	REVEALED BY THEIR JEWELRY: ETHNIC IDENTITY OF ISRAELITES/JUDAHITES DURING THE IRON AGE IN THE SOUTHERN LEVANT	THU, 9.00
İLİA HEİT	THE BEAD WORKSHOP OF KAMILTEPE 4, AZERBAIJAN: EVIDENCE FOR MANUFACTURING PROCESSES OF SHELL JEWELLERY AND POSSIBLE CRAFT SPECIALIZATION IN THE NEOLITHIC	THU, 14.55
MONICA MARGARIT	FROM BLOCK TO FINISHED OBJECT. FUNCTION OF THE PERSONAL ORNAMENTS IN THE ENEOLITHIC SETTLEMENT FROM HÂRȘOVA-TELL (CONSTANȚA COUNTY, ROMANIA)	THU, 15.20
MARINA PUTURIDZE	ABOUT THE JEWELRY OF TRIALETI CULTURE IN CONTEXT OF NEAR EASTERN ITEMS OF ARTISTIC CRAFT	THU, 14.30
HAMAD BIN SERAY	MATERIALS, STUFFS AND TOOLS OF JEWELRIES, ORNAMENTATION AND COSMETICS DISCOVERED ON THE ARCHAEOLOGICAL SITES IN SOUTH-EAST ARABIA DATED TO THE PERIOD FROM THE 2ND MILLENNIUM B.C. TO THE 3RD CENTURY A.D.	THU, 12.30
DARIUSZ SZELAĞ	ZOOMORPHIC SHELL PENDANTS IN CHILD BURIALS FROM TELL RAD SHAQRAH (SYRIA)	THU, 11.15
JOSEPHINE VERDUCI	PERSONAL DISPLAY IN THE SOUTHERN LEVANT AND THE QUESTION OF CULTURAL ORIGINS	THU, 9.25
ZUZANNA WYGNAŃSKA	DIADEMS - CROWNS FOR THE LIVING OR GIFTS FOR THE DEAD?	THU. 9.50

**ELEONORA CARMINATI**

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### **TRANSCAUCASIAN JEWELRY MANUFACTURE IN THE KURA-ARAXES AND BEDENI CULTURES: ANALOGIES AND DISTINCTIONS FOR THE RECONSTRUCTION OF A CULTURAL CHANGEOVER**

The manufacture of jewelry in the Early Bronze age Transcaucasian Kura-Araxes and Bedeni cultures is characterized by clear analogies and differences as regards selected materials used by artisans, manufacturing techniques, objects typologies and iconographies. The Kura-Araxes phase is mainly characterized by few jewel types, manufactured by the help of simple techniques, usually discovered in burial contexts, associated to few depositions in egalitarian cemeteries. The transition to the Bedeni phase is characterized by a complete changeover in the manufacture and in the values expressed by jewels: precious metal ornaments are found in kurgans, associated with the principal deposition, the material repertoire is rich and varied (some items can be defined as works of art), and the new techniques employed were probably acquired from the South (Mesopotamia and Anatolia). The analysis of the jewelry production can be useful approach in order to further define the transition between the Kura-Araxes and the Bedeni cultures in Transcaucasia, highlighting the analogies in the manufacture, the technological abilities and skills of artisans, the use and selection of materials and the social and economic values these items expressed.



## **EARLY JEWELRY AND LITTLE WORKS OF ART FROM TELL EL-FARKHA AS MARKERS OF INTERACTIONS**

Recent researches carried by Polish Expedition to the Eastern Nile Delta, under the auspices of Polish Centre of Mediterranean Archaeology, at the site Tell el-Farkha give a very good opportunity to study a problem of early Egyptian jewelry and in the wider context the patterns of development of early Egyptian art. The golden statues of king and his son, a group of ivory figurines, as well as a significant number of objects of personal ornamentation – bracelets, beads and earrings made of copper, gold, greywacke or semi precious stones were not found at this site by chance. Their presence underlines the wealth of the Tell el-Farkha inhabitants and their vogue to wear different kinds of jewelry. This also marks the inner and inter cultural interactions. Tell el-Farkha is located in a natural resources desert. In its vicinity there is a lack of raw materials such as lapis lazuli, copper or gold. Also the accessibility to ivory and semiprecious stones is very limited. But it is clear that these materials reached Tell el-Farkha. Lapis lazuli from Afghanistan, was used for golden figurines' eyes. Copper bracelets were made of the raw material bartered in Southern Levant. Gold to make a figurines or beads were brought from Nubia. What is worth to underline, such precious objects appears parallel with imports or imitation of foreign pottery. This gives us an opportunity to learn about a long distance trade network of Tell el-Farkha. What's more we can prove that at the Tell el-Farkha site the workshops producing personal ornamentation objects were existing. Parallel to finds such a bracelets and earrings made of copper we have traces of melting processes at the site. Also at least two beads production centers were working. Other personal ornamentation objects, such as greywacke bracelets, could also be produced at the site for instance at the stone vessels workshop. It seems that at least the part of Tell el-Farkha's workshops production was bartered outside the area of Nile Delta. This last hypothesis is proven by imported beads or baboon figurines in Southern Levant or golden beads of the same kind as found at Tell el-Farkha in the vicinity of Kerak in Jordan. It still underlines the ties with other regions. At the beginning of my speech I will present the most interesting finds from different functional parts of Tell el-Farkha site: the beads and copper objects workshops from the site, groups of beads made of various materials, jewelry and works of art from cultic shrine found at Western Kom, personal ornamentation objects from the cemetery. All finds will be shown with their chronological and archeological context. In the second part, based on kinds of imported raw material and analogies to others sites located in Egypt and in the Near East observed within the jewelry techniques and style I will discuss the interactions of the Tell el-Farkha underlining how important information can archeologists get studying jewelry.

### **AMIR GOLANI**

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## **REVEALED BY THEIR JEWELRY: ETHNIC IDENTITY OF ISRAELITES/JUDAHITES DURING THE IRON AGE IN THE SOUTHERN LEVANT**

In ancient and modern times, certain symbolic items are worn not only for adornment, but also to publicize an association or identification with a cultural group or a set of beliefs. Because they are items of a very personal nature, jewelry is thus used to convey information about the cultural, religious or ethnic affiliation of its wearer, implying both a significance and function within society that went far beyond ornamentation. While this is often readily apparent in our own society, can we identify similar uses of jewelry in past societies?

As a part of the biblical narrative, the peoples of the southern Levant have aroused tremendous interest over the past decades, and archaeological research has often sought to characterize their presence or absence by their material culture remains. When a specific jewelry type is found recurring time and again at sites clearly affiliated by their material culture, their location and by textual evidence with a certain cultural or ethnic group, it may be considered a possible ethnic marker of that culture or group. In the present case, though they are not well known for their artistic creations in comparison to their contemporaries, the biblical Israelites and Judahites also wore jewelry, yet their choice of what to wear is not only a function of the prevailing fashions but was also an expression of their own austere ideology. An interdisciplinary study seeks to define what was the jewelry worn by the ancient Israelites and Judahites and if there were any distinctive jewelry forms that may be associated to them.

### **ILIA HEIT**

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## **THE BEAD WORKSHOP OF KAMILTEPE 4, AZERBAIJAN: EVIDENCE FOR MANUFACTURING PROCESSES OF SHELL JEWELLERY AND POSSIBLE CRAFT SPECIALIZATION IN THE NEOLITHIC**

Archaeological remains showing evidence for manufacture of personal ornaments are rare. One of these seldom cases, is the 8000 years old bead workshop found at Kamiltepe 4, a Neolithic site discovered in 2010 by

the German-Azerbaijani cooperation project "Ancient Kura" in South-Western Azerbaijan.

Here, around 3800 fragments of marine shells have been recovered in connection with a single structure. Besides debitage material and a few nearly finished objects, the shells present all the stages of manufacture of one type of disc bead, which can be identified by examining the working traces on bead blanks such as perforation, round retouching or polishing. As the Caspian Sea was located at a long distance from the site (today more than 200 km away), special long-distance trips were required for selective raw material procurement, as only one certain marine mollusc shell species was used for making beads.

In addition, more than 100 quartzite micro-points and borers as well as a few other stone artefacts, which show working marks as grinding or hammering on their surface, enable a direct correlation between products and tools. Furthermore, the relationship between products and workplace can be established, as the great majority of shell finds was found in the floor layers in a separated building structure of special nature: a circular pit house without hearth remains, possibly used as a workshop area separated from dwellings.

The above-described factors lead on one hand to discuss to which extent the craft specialization existed in early stages of farmer societies. On the other hand, it is arguable whether the bead products were used only locally or also for export. Nevertheless, the disc beads of Kamiltepe 4 belong to a common long spatial jewellery tradition of the Circumcaspien regions, recognizable at shell material of other Neolithic sites in eastern Azerbaijan, northern Iran and Turkmenistan.

**MONICA MARGARIT**

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### **FROM BLOCK TO FINISHED OBJECT. FUNCTION OF THE PERSONAL ORNAMENTS IN THE ENEOLITHIC SETTLEMENT FROM HÂRȘOVA-TELL (CONSTANȚA COUNTY, ROMANIA)**

In the settlement from Hârșova-tell (Constanța county) has been identified a series of personal ornaments of different raw materials, in varied processing stages, from entire valve-shells or bones, simply perforated, and irregular fragments, to finished pearls, used as decorative objects. The material we studied has been attributed to Gumelnița culture. The goal of such an approach is to recover the processes of raw material acquisition, production, use, abandon, with a view to understanding the way how the beads were made and their possible social or symbolical implications.

In the conditions in which the pieces confectioned in raw materials with aquatic provenience (Cardium, Spondylus, Dentalium, Unio sp., even fish operculum) represents a percentage of 75%, from the total of the studied pieces, it is very likely that this statistic situation represents a specific option of the Gumelnița community from Hârșova, suggesting an important position that the aquatic world, with its resources, had in the wider context of the spiritual life. The situation doesn't seem to be random, if we consider the general weight that the aquatic resources had in the economy of the animal resources management for the inhabitation on this tell. In exchange, it is very interesting, if we consider the way and the manner in which this structure of the food resources and, in general, the aquatic world, find their reflection in the spiritual manifestations of this community that, from other points of view, didn't differ from others. Another argument seems to complete these observations. It is the fact that at Hârșova, the lack of perforated teeth (at least in the case of the lot analyzed here), belonging to species of hunted animals, which were present all over Prehistory, may symbolize the fact that the ornament wasn't (or at least in a reduced manner) involved in the hunting ritual (for instance the tooth of an animal wore by the man who hunted it, in order to assimilate the qualities of the animal and to ensure success in hunting). The lack of perforated gastropods, plentiful in sites and easy to procure in the Danube proximity, raises the problem of a special symbolistic in the case of the settlement from Hârșova-tell.

In this stage of the analysis it is difficult to affirm the absolute specificity of this community, given the fact that the sampler techniques used here were not used in the research of other contemporary settlements from Romania. We can, on the other hand, observe a variety of the manifestation forms that can be documented, in the conditions in which efforts are made for the recovering, as complete as possible, of all the data categories that a site can offer.

This work was supported by a grant of the Romanian National Authority for Scientific Research, CNCS-UEFISCDI, project number PN-II-RU-TE-2011-3-0133.

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### **ABOUT THE JEWELRY OF TRIALETI CULTURE IN CONTEXT OF NEAR EASTERN ITEMS OF ARTISTIC CRAFT**

The appearance of the Trialeti Culture on the map of the Old World resembles not only the second, developed stage of the Middle Bronze Age, but also the beginning of great social and cultural changes in South Caucasian society. The process of deepest social stratification evidently shown by the numerous burials of the Trialeti culture, which indicates the stimulating process of concentration of wealth by ruling elite, who supposedly in prior gained the power and then the richness. In our viewpoint these changes are directly related to the process of activated interrelation with outer world, first of all with Anatolia and some regions of Mesopotamia.

Trialeti Culture attracts the great attention of scholars because of the unique patterns of jewelry. This region has played an important historical role as a bridge between the south Russian steppe and the Near East and indicate that was greatly influenced from the last one especially in late 3rd – early 2nd millennium BC. This process better than other artifacts reflects the Trialetian jewelry. From different cultures of this period existence of jewelery is one of the most symptomatic feature exactly for the famous Trialeti Culture.

In presented paper we turn our attention to different samples of jewelry which seems more important from the point of view of supposed interrelation with the Near Eastern cultures. Jewelry which comes from all regions of the Trialeti Culture provide a great deal of information about the innovations and changes in socio-economic sphere and also interrelation with neighboring southern civilizations during the Middle Bronze Age. The burial sites provide an excellent view on Trialetian social hierarchy and structure, the valuable items of high artistic craft of which considering in paper. Evaluated items allowed to conclude that nearly all achievements of the Near Eastern civilizations in the field of goldcraft were known and adapted by the Trialetian society. With the beginning of the Trialeti Culture we do encounter for the first time in South Caucasus most of the high artistic craft materials. Based on them we suppose that cultural bond and influences from Anatolia and partly from Mesopotamia were one of the factors that played a predominant role in the process of formation of artistic craft of the Trialeti Culture. Contemplation of all analogies between the Near Eastern - and Trialeti Culture considered in paper seems to allow us to conclude the well established relations and even exchange of goods between the considered regions of the Old World.

**HAMAD BIN SERAY**

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### **MATERIALS, STUFFS AND TOOLS OF JEWELRIES, ORNAMENTATION AND COSMETICS DISCOVERED ON THE ARCHAEOLOGICAL SITES IN SOUTH-EAST ARABIA DATED TO THE PERIOD FROM THE 2ND MILLENNIUM B.C. TO THE 3RD CENTURY A.D.**

This paper aims to give an overview of the archaeological sites from the 2nd millennium B.C. to the 3rd century A.D. discovered in the UAE and the Sultanate of Oman. It focuses on archaeological evidence and materials for decoration and tools found in these sites. These tools are: combs, plates and kohl tools, rings, anklets, bracelets, earrings, rings and neck loops and beads. The objectives of this research are to highlight the importance of economic activities in the region in ancient times and to learn how the people of the region treated with the environment and economic realities and how they lived in area in that period. It also studies the quality of cosmetics and their raw materials, such as bone, ivory, glass, gold, silver, copper, iron, bronze, onyx and precious stones. It also sheds light on the technology of the cosmetics industry. This kind of studies has been referred to many references and reports concerning the archaeological expeditions in the Arabian Gulf in general and in the U.A.E and Sultanate of Oman in particular. Archaeological finds and materials which have been discovered at several sites of the region are mentioned. This study uses two research methodologies depending on archaeological description and historical analyses. It also depends on some visits to archaeological sites and some museums in the UAE, which contain many examples of these tools.

**DARIUSZ SZELĄG**

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### **ZOOMORPHIC SHELL PENDANTS IN CHILD BURIALS FROM TELL RAD SHAQRAH (SYRIA)**

Polish excavations at Tell Rad Shaqrah in north-eastern Syria (1991-1995) have exposed remains of the settlement dated mainly in the second half of the 3rd millennium BC. During the excavations more than 30 burials were also found. Child burials were the richest among these. The grave goods included among others also zoomorphic beads and pendants made of variety of materials. The most distinctive part of these pendants was made of shell and mother of pearl, many of them with circle-and-dot design. This assemblage finds parallels among finds mainly from northern Syria and Mesopotamia (Tell al-Raqa'i, Tell Beydar, Tell Brak, Tell Bi'a, Mari, Habuba Kebira, Qara Quzaq), but also from southern Mesopotamia (Uruk). The zoomorphic pendants from Tell Rad Shaqrah will be presented and analyzed with respect to their potential magical significance. The second aim of this paper will be to examine the problem of production and distribution of the zoomorphic shell pendants in the northern Mesopotamia in the second half of the 3rd millennium BC.

## **PERSONAL DISPLAY IN THE SOUTHERN LEVANT AND THE QUESTION OF CULTURAL ORIGINS**

The Early Iron Age I-IIA periods of the southern coastal plain of the Levant (ca. 1200-900 BCE) have certain new features that suggest the appearance of the Philistines or other Sea Peoples. A study of Iron Age jewellery and its stylistic influences will shed light on a period of history that has as yet remained elusive and provide a foundation for constructive discussion of the relations and exchanges affecting the region.

Often marginalized as “small finds”, personal adornment is a crucial component in social interaction. The process of adorning the body can convey cultural identity, social status, ethnicity, gender, and age in a manner more immediate than verbal communication. An accurate jewellery typology for the period may assist our understanding of the cultural influences prevalent during the early stages of Philistine society.

Using Tell es-Safi/Gath, one of the Philistine pentapolis sites, as the primary case-study, and drawing on other sites in the region and from east of the Jordan River, this paper analyses methods of cultural display by using the personal adornment data available from each site, and focusing on the motifs and technologies occurring in the various assemblages, the aim is to create a typology of Philistine jewellery and comment on cross-cultural exchanges in Philistia.

## **ZUZANNA WYGNANSKA**

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## **DIADEMS - CROWNS FOR THE LIVING OR GIFTS FOR THE DEAD?**

Diadems - head ornaments in the form of a narrow ribbon, oval plate or a leaf - were made of gold, electrum or silver. They first appeared in Southern Mesopotamia at least as early as the Early Dynastic period and remained, in unchanged forms, in the repertoire of luxury ornaments until the Late Bronze Age. By that time, they spread to a much wider area - from Western Iran to Levant, and some surprisingly similar objects even come from Mycenaean Greece. But, although their distribution became much wider, they were still unique finds on particular sites. Most were found in graves. No doubt, their appearance was a manifestation of social complexity. But for whom they were actually intended, remains unknown. Two possible interpretations will be considered in this presentation: diadems as symbols of high rank and of hereditary high social position. Another open question is if the diadems were pieces of a ceremonial outfit or rather an element of a funeral garment. Also the pattern of the diadems' distribution will be traced through space and time in an attempt at obtaining a better understanding of their meaning.

**POSTER PRESENTATIONS**  
**POSTER SESSION: TUESDAY, MAY 1ST, 11.15-13.30**

**SUPERVISOR: JOLANTA MŁYNARCZYK**

<b>AUTHOR(S)</b>	<b>TITLE</b>
ALIREZA ABOLAHRAH, MOSA ZARE, SAEED EBRAHIMI	THE PRELIMINARY REPORT OF THE EXCAVATIONS AT MIANROOD TEPE, FRAS, IRAN
YASEMIN BAGCI, JOANITA A.C. VROOM	EARLY ISLAMIC POTTERY FINDS FROM THE GÖZLÜKULE EXCAVATIONS IN TARSUS
LAURA BATTINI	THE COLLECTION OF CYLINDER SEALS AND STAMPS OF THE NATURAL HISTORICAL MUSEUM OF LYON.
SILVIA BERNARDONI, RAFFAELE TROJANIS	OPTICAL VS. ELECTRONIC TOOLS IN NEAR EASTERN ARCHAEOLOGY: THE ACCURACY OF THE 1920 MAP OF KARKEMISH BY P.L.O. GUY CHECKED WITH A TOTAL STATION AND GPS SURVEY
GABRIELE BITELLI, EMANUELE MANDANICI, LUCA VITTUARI	A LAND IN ITS SETTING: REMOTE SENSING SATELLITE IMAGERY FOR THE CHARACTERIZATION OF THE EBLAITE CHORA (SYRIA)
NICOLE BOENKE, ABOLFAZL AALI, AYDIN ABAR, THOMAS STÖLLNER	THE USE OF NATURAL RESOURCES AND ENVIRONMENTAL ASPECTS AT THE CHEHRABAD SALTMINE, PROVINCE ZANJAN, IRAN IN ACHAEMENIDIAN AND SASSANIDIAN TIMES
MARIA BOFILL MARTINEZ, MARTA PORTILLO, ROSA M. ALBERT, MIQUEL MOLIST	INTEGRATING PHYTOLITHS AND USE-WEAR STUDIES OF GRINDING STONE TOOLS FROM THE LEVANT (NEOLITHIC AND EARLY BRONZE AGE)
DIAA ED-DIN AL-BUKAAL	ARCHITECTURAL AND SOCIAL EVOLUTION OF STRUCTURES OF COMBUSTION IN TELL ASWAD (PPNB IN THE SOUTH OF SYRIA)
MEREDITH S. CHESSON	FOLLOWING THE POTS: FIRST AND SECOND LIVES OF EARLY BRONZE AGE POTS FROM THE SOUTHEASTERN DEAD SEA PLAIN OF JORDAN
SILVANA COSTA, ANNA ANGISSOLA, LEONARDO BOCHICCHIO, ANTONIO CALABRÒ VITTUARI	THE TOMB OF THE DRAGONS IN HIERAPOLIS
NATHALIE DELHOPITAL, ISABELLE SACHET	THE NABATAEAN TOMB IGN 117 AT MADĀIN SALIH (SAUDI ARABIA): ARCHAEOLOGICAL ANTHROPOLOGY DATA
NADEZHDA DUBOVA, JAFAR MEHR-KIAN	A WOMAN LIVED NEAR RIVER KARUN (IRAN, KHUZESTAN) FIVE THOUSANDS YEARS AGO
ZEYNEP ERES	CONTINUITY OR BREAK IN ARCHITECTURAL PRACTICES IN THE RURAL SETTLEMENTS ALONG THE MIDDLE EUPHRATES REGION: A HISTORICAL SURVEY
PASCAL FLOHR, BILL FINLAYSON, STEVEN MITHEN, MOHAMMED NAJJAR	BUILDING WF16: RECONSTRUCTION OF A PISÉ PPNA BUILDING
GIANCARLO GARNA	LIFE IN THE DIRT: A DUMPING PIT AMONGST THE PALACES OF QATNA
LUCIANO GILIBERTO	HELP FROM SPACE: APPLYING THE FUTURE TO THE PAST
LUISA GUERRI	STONE VESSELS OF THE IRON AGE FROM KARKEMISH: A TYPOLOGICAL STUDY
ATSUNORI HASEGAWA	NEW DISCOVERIES FROM TELL EL-KERKH 1: A BRONZE AND IRON AGE SITE IN THE NORTHERN LEVANT

MEHDI KAZEMPUR, KAMALADDIN A. NIKNAMI, MRYAM SHADABFAR, ASADOLA SHAFIZADE, ESMAIL BAHMANABADI	NEWLY DISCOVERED BRONZE TO IRON AGE MEGALITHIC GRAVES FROM IRANIAN AZERBAIJAN, NW IRAN
ARWA KHAROBI	THE PLACE OF INFANTS IN THE ANCIENT SOCIETY OF TELL MOZAN (NORTHEASTERN SYRIA) DURING THE MIDDLE BRONZE AGE (1900-1600 BC): AN ANTHROPOLOGICAL APPROACH
RAFAL KOLIŃSKI, KSENIA KOLIŃSKA	KELEK MISHIK FIELD SCHOOL 2011
KONSTANTINOS KOPANIAS, CLAUDIA BEUGER	PREHISTORIC NORTHERN MESOPOTAMIA - THE POTTERY FINDS FROM TELL NADER (ERBIL)
TATIANA KORNIENKO	ON THE ISSUE OF THE ESSENCE OF THE CULT UNITING PRE-POTTERY NEOLITHIC SETTLEMENTS INTO A REGIONAL COMMUNITY WITH THE CENTER IN GÖBEKLI TEPE
RAHELE KOULABADI, SEYYED RASOOL MOUSVAI HAJI	SASSANIAN ROCK RELIEFS AT DARABGIRD
ALDONA KURZAWSKA, DANIELLA E. BAR-YOSEF MAYER	SCAPHOPOD BEADS FROM THE NATUFIAN LAYERS OF HAYONIM CAVE
GIOVANNA LIBEROTTI, CORRADO ALVARO	COMPARATIVE ANALYSIS OF BUILDING MATERIALS AT ARSLANTEPE (MALATYA, TURKEY). LEVEL VII AND VI A
NICOLO MARCHETTI, PAOLO MATTHIAE	THE CHORA OF EBLA: A MULTIDISCIPLINARY APPROACH
JULIETTE MAS	THIRD MILLENNIUM POTTERY FROM TERQA, SYRIA: FIRST INTERPRETATIONS
SARA DE MATTEIS	JEWELLERY AND OTHER ORNAMENTS FOR THE DECEASED. THE CASE OF TELL SHIYUKH TAHTANI, NORTH SYRIA
MATTEO MERLINO	SPACE SYNTAX ANALYSIS IN A LATE BRONZE AGE PALACE IN QATNA, CENTRAL SYRIA
ANGELO DI MICHELE	THE CULTIC TERRACE J OF IRON AGE II ON THE ACROPOLIS OF TELL AFIS
DIRK PAUL MIELKE, SONJA BEHREND	ARCHAEOMETRIC INVESTIGATION OF PHOENICIAN POTTERY FROM THE IBERIAN PENINSULA
IANIR MILEVSKI	THE EARLY BRONZE AGE SETTLEMENT AND LARGE-SCALE SILO COMPLEX OF AMAZIYA, ISRAEL
MARTA MOMOT	HELLENISTIC POTTERY FROM SECTOR A AT TELL ARBID
CRISTINA MONDIN	SELJUK CERAMICS AT TYANA / KEMERHISAR (SOUTHERN CAPPADOCIA / TURKEY)
JOYCE NASSAR	HUMERUS VARUS IN A TEEN-AGE SKELETON FROM TELL ARQA (MIDDLE BRONZE AGE-LEBANON)
KAREL NOVÁČEK	ARBIL: A MEDIEVAL CITY BEHIND THE ASSYRIAN TOWN WALL
GIULIO PALUMBI, CORRADO ALVARO	PASTORAL HORIZONS IN THE MALATYA PLAIN. GELINCIKTEPE AND THE SURROUNDING LANDSCAPE IN THE EARLY 3RD MILLENNIUM BC.
LUCA PEYRONEL, AGNESE VACCA, MARGHERITA VANDITTELLI, MARIA LAURA SANTARELLI	NATURAL RESOURCES, TECHNOLOGY AND MANUFACTURE PROCESSES. ARCHAEOMETRIC ANALYSES ON THE MATERIAL ASSEMBLAGES AND ARCHITECTURAL COMPONENTS OF MATURE EARLY SYRIAN EBLA
VINCENZO PICOTTI, LUIGI CANTELLI	FROM WETLAND TO DESERT: A GEOMORPHOLOGIC APPROACH TO THE EBLAITE CHORA (SYRIA)
FRANCES PINNOCK,	PALACE VS. COMMON GLYPHTIC IN EARLY SYRIAN EBLA AND ITS TERRITORY
VENUS PIRMOMEN, HAMED MEHDI ALAMDARLOO	RESEARCH ON PARAPETS OF PALACE H IN PERSEPOLIS WORLD HERITAGE ENCLOSURE



PAOLA ROSSI PISA, F. VENTURA, MARCO VIGNUDELLI, GIANNI MARCHESI	AGRICULTURE IN THE EBLA REGION: ANCIENT AND MODERN
MAHTA SHEIKHI	STUDY OF MYTHICAL CREATURES OF ZIWIYE IVORY PLAQUES IN SANANDAJ AND IRAN BASTAN MUSEUMS
TIM SKULDBØL, METTE MARIE HALD, AUGUSTA McMAHON	WHO TAKES OUT THE TRASH? NEW LIGHT ON THE SOCIOECONOMIC ORGANIZATION OF EARLY CITIES
PARVANEH SOLTANI-ALIABADI	TECHNOLOGY, CONSERVATION AND RESTORATION OF CLAY COFFINS OF NEO-ELAMITE PERIOD
AGNIESZKA SZYMCAK	A SET OF 2ND MILLENNIUM BC CLAY OBJECTS FROM TELL ARBID
FÜSÜN TÜLEK, BİRGÜL ÖGÜT	PREHISTORIC POTTERY OF THE OSMANIYE PROVINCE IN EAST CILICIA: A HOLISTIC APPROACH
JACOPO TURCHETTO	THE VIA TAURI AND THE ANCIENT ROAD NETWORK OF SOUTHERN CAPPADOCIA (TURKEY). A PRELIMINARY NOTE REGARDING THE TOPOGRAPHY OF A FRONTIER TERRITORY
THOMAS VAN DE VELDE	BITUMEN IN THE PERSIAN GULF - WHERE AND WHY?
MARTINE DE VRIES-MELEIN	A DISTRIBUTION MODEL FOR IRON OXIDE STONE ARTIFACTS IN MESOPOTAMIA
SIMA YADOLLAHI, ABBAS YALVEHI	INTRODUCING AND DEFINING A NEW APPROACH TOWARDS A REALISTIC RECONSTRUCTION OF THE PAST
KAROL ZAJDOWSKI	TRANSFORMATION OF THE BANQUET SCENE INTO THE PRESENTATION SCENE DURING THE EARLY DYNASTIC, AKKADIAN AND UR III PERIODS

#### **ALIREZA ABOLAHARR, MOSA ZARE, SAEED EBRAHIMI**

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#### **THE PRELIMINARY REPORT OF THE EXCAVATIONS AT MIANROOD TEPE, FARS, IRAN**

Mianrood Tepe is located northwest of Marvdasht in Fars province, southwest of Iran. This Tepe situated in the intermontane plain of Kor river basin. We conducted two seasons of excavation at the site in spring 2010 and winter 2011 which led to define three cultural periods.

Primary findings of this excavation indicate that unlike other excavated site in Marvdasht plain, Mianrood contains all three well-known prehistoric cultural periods of Fars. Furthermore investigating these cultural periods gives us an opportunity to study their transitional phases. Although the earliest layer of Mianrood includes pottery groups which are contemporary with those of the Neolithic Jari period (ca. 6000 B.C.) but they have different tempers, forms and motifs. On the other hand some pottery groups of this layer are unique among the prehistoric ceramic corpus of Fars province. Moreover, a distinct architecture which continues well into Shamsabad phase (5500 B.C) is another important finding of the Mianrood excavation.

Undoubtedly, ongoing fieldworks and systematic investigations at the Mianrood will improve our understanding on the Neolithic period of Fars and circumstances of cultural transition to the Chalcolithic period.

#### **YASEMIN BAGCI, JOANITA A.C. VROOM**

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#### **EARLY ISLAMIC POTTERY FINDS FROM THE GÖZLÜKULE EXCAVATIONS IN TARSUS**

This poster aims to show Early Islamic ceramics (circa 7th-10th centuries) from the site of Gözlükule in Tarsus, Southern Turkey. The pottery finds were discovered between 1935 and 1948 by a team lead by Hetty Goldman of Bryn Mawr College (USA). The excavations were relaunched in 2001 with the cooperation of Boğaziçi University (TU) and Bryn Mawr College (USA). The 'Tarsus-Gözlükule Archaeological Project' combines now Islamic archeology with archeobotanical and zooarcheological research.

An important pottery group, excavated in the 1930s and 1940s, is of Early Islamic times (circa 7th-10th centuries), although later material (13th century and beyond) is also present. The assemblage can be divided into two main categories: unglazed and glazed wares.

The unglazed wares mostly consist of light utility vessels made of a fine buff fabric. Their shapes include closed pots (such as jugs), decorated on the outside with elaborate molded designs. The other group is a variation of 'Brittle Ware' made of a dark brown/red fabric, such as cooking pots with small lug handles.

The glazed wares can be divided in four types. These include imports as well as local/regional products, among them Lusterware, White-and-Blue Glazed Ware and two groups of local/regional manufactured Polychrome Painted Wares.

**LAURA BATTINI**

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## **THE COLLECTION OF CYLINDER SEALS AND STAMPS OF THE NATURAL HISTORICAL MUSEUM OF LYON**

The Natural Historical Museum of Lyon shelters a large collection of cylinder seals and stamps never published before. Entered in the collection at the end of 19th century and in the first years of 20th century, the most part is genuine and dated from 5th mill. B.C. to 1st mill. A.C.

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## **OPTICAL VS. ELECTRONIC TOOLS IN NEAR EASTERN ARCHAEOLOGY: THE ACCURACY OF THE 1920 MAP OF KARKEMISH BY P.L.O. GUY CHECKED WITH A TOTAL STATION AND GPS SURVEY**

Modern topography has been based on the measurement of angles and the calculation of distances through trigonometry, with direct surveying limited to some but not all distances. More recently, the introduction of new optical and electronical instruments has allowed more direct measurements of distances, which is now finally superseded by a global georeferencing of all features.

The purpose of this work is to understand if and to which extent maps drawn with the technology available in the first half of the 20th century are consistent with those created using total stations and GNSS systems. The case of the 90-hectares large site of Karkemish, with a map drawn by Guy in 1920 and the new topographical survey carried out in 2011 by the joint Turko-Italian expedition of the Universities of Bologna, Gaziantep and Istanbul directed by prof. N. Marchetti, reveals several interesting details on the degree of accuracy of early maps and how they were surveyed and compiled.

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## **A LAND IN ITS SETTING: REMOTE SENSING SATELLITE IMAGERY FOR THE CHARACTERIZATION OF THE EBLAITE CHORA (SYRIA)**

The work shows some results derived from image analysis of multispectral satellite imagery for the area surrounding the archaeological site of Ebla (Syria), with the aim of characterize the region in the context of a multidisciplinary coordinated research. Image processing was devoted to automated or semi-automated land-cover classification in relation to different thematic views, to change detection along the last decades in the territory, to realization of reliable basemaps to support the overall multidisciplinary activity.

This research is part of the EBLA CHORA project funded by the European Research Council (FP7-IDEAS 249394).

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## **THE USE OF NATURAL RESOURCES AND ENVIRONMENTAL ASPECTS AT THE CHEHRABAD SALTMINE, PROVINCE ZANJAN, IRAN IN ACHAEMENIDIAN AND SASSANIDIAN TIMES**

The presentation is based on rich archaeobotanical material from the recent excavations. Due to the embedding in salt organic material is perfectly preserved at the mine. These fact leads to a dominance of plant material in comparison to other findings and offers an access towards a lot of archaeological questions which are usually not easy to handle.

The analysis of the distribution of waste, food and faeces in the Achaemenidian and Sassanidian occupation layers helps for the better understanding of the activities and working processes inside the mine.

The recent study introduces the plant species used for raw materials and food. Furthermore the interpretation of the data gives insight in consumption habits, agricultural use and environment during Achaemenidian and Sassanidian times. The variety of plants seems to be larger than what is present nowadays in the surrounding.

The Saltmine Exploration Project ([www.saltmen-iran.com](http://www.saltmen-iran.com)) is an international cooperation with the Iranian authorities, represented by the ICAAR and the Ruhr University of Bochum, Institute for Archaeological Studies as the main project partner.

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## **INTEGRATING PHYTOLITHS AND USE-WEAR STUDIES OF GRINDING STONE TOOLS FROM THE LEVANT (NEOLITHIC AND EARLY BRONZE AGE)**

Typological and technological studies of grinding stone tools have long played a major role regarding the characterization of such implements and the developments of early farming communities in the Near East. Functional analyses and interdisciplinary approaches are fundamental for delineating processing activities in the archaeological record.

We conducted phytolith and use-wear analyses of grinding stones from three Levantine sites: (I) Tell Halula, located in the Euphrates Valley (Syria), occupied from 7800 to 5200 Cal BC (Middle PPNB to Halaf period); (II) Tell Aswad, situated in Damascus Basin (Syria), spanning from 8700 to 7500 Cal BC (Early, Middle and Late PPNB); (III) and Early Bronze Age Tell Arqa (2800-2000 BC, EBA), in the Akkar Valley, Lebanon.

Phytolith assemblages may reveal the processed plant material. Morphometric analyses of phytoliths extracted from grinding surfaces allowed the identification of distinctive inflorescence dendriform silica cells from emmer wheat (*Triticum dicoccum*). The characterization of use-wear patterns observed on their active surfaces provide valuable data about how the tool was used as well as the nature of the processed matter (vegetal, animal, mineral). This study shows that the type of use traces (levelled areas, polish, striations) and its distribution over the tools surfaces are closer to the results obtained during experiments with plant-processing.

Integrating phytoliths within use-wear data provide a promising approach for tracing tool-use and crop-processing at the sites.

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## **ARCHITECTURAL AND SOCIAL EVOLUTION OF STRUCTURES OF COMBUSTION IN TELL ASWAD (PPNB IN THE SOUTH OF SYRIA)**

The importance of structures of combustion in prehistoric societies is essentially reflected by its contribution into the domestic life of the habitats. The ability to cook food offered by structure of combustion had certainly improved the daily menu of Neolithic families. But its social role is also essential for the population; it had probably contributed into the development of communication, because people always liked to gather around this source of heat and light. This poster presents a typological study of the structures of combustion in Tell Aswad, a Neolithic site in southern Syria (8700-7000 cal BC). This work is based on two principal concepts: the first concerns the technique of construction of the structures of combustion, the second describes the spatial distribution of these structures in their architectural contexts. These data allow distinguishing between collective use and family use of the structures of combustion.

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## **FOLLOWING THE POTS: FIRST AND SECOND LIVES OF EARLY BRONZE AGE POTS FROM THE SOUTH-EASTERN DEAD SEA PLAIN OF JORDAN**

Follow the Pots (FTP) employs archaeological and ethnographic research into first and second lives of artifacts in Early Bronze Age (ca. 3600–2000 BCE) cemeteries on the southeastern Dead Sea Plain, Jordan, investigating the mechanisms, logistics, and networks of stakeholders in an archaeological looting story. We focus on materiality and how people today and in the past value and use material culture, especially to establish a link with an “imagined”

place (e.g., the Holy Land). FTP encompasses the deep past, the contemporary world, and a dynamic future in which different stakeholders value, construct, use, and discard cultural heritage in legal and illegal endeavors. In this paper, we present results of recent fieldwork as we trace the first and second lives of Early Bronze Age pots from grave to store to display shelf. In 2011 we mapped the extent and groundtruthed sample areas of the extensively-looted site of Fife. We conducted a systematic survey of the cemetery, groundtruthing looters' pits to assess "success rates" and recording materials in spoil heaps to aid in comparing data from looted tombs to 60 previously excavated tombs. Our research demonstrates the necessity for groundtruthing and multidisciplinary approaches in analyzing heritage destruction and materials from looted sites.

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## **THE TOMB OF THE DRAGONS IN HIERAPOLIS**

Investigations on the south-western necropolis of Hierapolis in Phrygia began in 2008. The first three fieldwork seasons focused on the so-called "Tomb of Thalamos" (S10), a monumental complex dating to the early 2nd century AD, which has been presented at the 7ICAANE in London. The 2011 campaign concentrated on the neighbouring funerary building, the so-called "Tomb of the Dragons" (S2). This imposing monument in the shape of a cube, built in huge limestone blocks, consists of a broad upper funerary chamber, with two pillars supporting the ceiling, and an hypogean one. The portal leading to the interior was adorned by pilasters with marble capitals carved in the shape of dragons. Analysis of architectural and decorative features suggest to date the complex to the middle Imperial Age. The S2 Tomb provides crucial information to the understanding of one of the most important necropolis in the city of Hierapolis, its layout and arrangement. Besides, as supplement to the acquisitions on the adjoining "Tomb of Thalamos", contributes new arguments to the discourse on architectural traditions in the Roman Eastern Mediterranean and its funerary culture.

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## **THE NABATAEAN TOMB IGN 117 AT MADĀ'IN SALIH (SAUDI ARABIA): ARCHAEOLOGICAL ANTHROPOLOGY DATA**

The site of Madā'in Salih (Saudi Arabia) was one of the major Nabataean metropolises and was cited either as a necropolis or a place of cult but also as a caravanner city. The current archaeo-anthropological study which takes Madā'in Salih into account on an important site in the southern margins of the kingdom, is therefore particularly interesting, especially as it is an unexplored period and region. The IGN 117 tomb of Madā'in Salih has been excavated between 2008 and 2011. This tomb contains a burial chamber of 25 m<sup>2</sup> in which is dug a pit to a depth of 1.30 m. The excavation campaign of 2011 led to the discovery of two coffins in place and new items such as weapons and food depots. This last excavation has highlighted the different phases of occupation of this grave and has led to a new evaluation of the number of people buried. This anthropological study of 2011 has therefore highlighted the possible relationship between individuals buried in the tomb and has confirmed the under-representation of individuals under 5 years.

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## **A WOMAN LIVED NEAR RIVER KARUN (IRAN, KHUZESTAN) FIVE THOUSAND YEARS AGO**

In January 2009 thanks to cooperation of RAS with Ajapir branch of the Iranian Organization of Cultural Heritage, field study in Khuzestan (Iran) took place. The human and animal bone remains, which were found during rescue works in the course of building of Karun III Dam, were investigated. Despite a great number of the excavated sites in Iran palaeo-anthropological data are not numerous, especially from Elam historical territory. The presented material is unique also because of lack of such data from high-mountainous areas of Khuzestan. Bone material from Balutak and Balutak IV sites is dated archaeologically to the Late Elam period but radiocarbon date received at the Institute of History of Material Culture (Sankt-Petersburg) gives 5900±300 B.P. Only two skulls from eight individuals (2 adult female, 2 adult male, 4 children) have preserved faces: male № 1043 and female № 2710. Male and female skulls are mesocranic and not massive (CI only on male skull – 75,0).

On the base of the best preserved female skull № 2710 A. Nechvaloda has made a graphic reconstruction by method of M.M. Gerasimov. The skull (maturus II - senilis) is roundish, sphenoid with average expressed relief. Skull length is

large (181 mm); it was not possible to measure cranial breadth because of loss of the left half of cranium but visually the skull can be characterized as mesocranic. A forehead is slightly inclined, the skull arch roundish, smooth, a nape not acting. The face is orthognathic, its upper height - small, bizygomatic diameter – large (136??). The bizygomatic diameter is restored with low reliability. But visually it is obvious that the person couldn't be leptoprosopic and even mesoprosopic. A low nose (41 mm) has average breadth (24? mm) and average protrusion. As nasal bones haven't remained, it was impossible to define the angle of protrusion of the nose. Judging by other studied human remains it couldn't act strongly. The nasal bridge was slightly flattened (dacrion width is large – 26,0 mm; height – small – 8,6? mm).

Given the presented data the skull can't be linked to typical leptoprosopic Mediterranean forms. As its features are related to the Mediterranean populations it is possible to name a small size subnasale part of the face and ratio of symphysis' and body's heights of the mandible (the first is appreciable larger). The body height calculated by some formulas is small - 156,9 cm. Described type is fairly common now in different parts of Iran including modern Bakhtiari. The works were conducted within the RFBR project 10-06-00263.

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### **CONTINUITY OR BREAK IN ARCHITECTURAL PRACTICES IN THE RURAL SETTLEMENTS ALONG THE MIDDLE EUPHRATES REGION: A HISTORICAL SURVEY**

Even a brief survey of the rural architecture along the Euphrates basin is enough to reveal the presence of a rich and varied tradition. However, a detailed analytic assessment of the layout and organization of the villages as well as the plan-types and structural details of buildings would indicate that most of these are derivative of limited basic types that are deeply rooted in the historic past of the region. Our fieldwork at the Birecik-Suruç-Halfeti Districts of the Urfa Province has revealed the presence of two distinct types of village layout, either being "dispersed" or "conglomerate". Likewise, living aside the details, the village houses revealed three basic plan-types, as "rectangular with central entrances", "iwan houses" and "cellular houses". The presence of only three basic models, considering the political, social and economic turmoil's that the region had gone through during the last few centuries, the collapse of the Ottoman Empire, the emergence of national states, radical changes in the ethnic, religious composition of the population is rather striking. In particular, in the course of the last two centuries numerous villages had been either abandoned or newly established. However, the basic structural details, plan-types that are known from the archaeological records have sustained almost without any significant alterations. This poster will be a presentation of a comparative assessment of the present-day rural settlements with historic and archaeological records based on the work carried by our group in 410 villages in the region.

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### **BUILDING WF16: RECONSTRUCTION OF A PISÉ PPNA BUILDING**

Recent excavations at the Pre-Pottery Neolithic A (PPNA) site of WF16 (ca. 11.600-10.200 BP), in the south of Jordan, have uncovered a number of semi-subterranean elliptical structures consisting of pits lined with pisé walls. One structure had been burnt down and contained evidence that the roofs were made of wood, reeds and mud. Using this information, a replica was built with the two-fold aim of understanding better how the WF16 buildings were constructed and used, as well as showing the public what a PPNA structure would have looked like.

This poster shows the process of reconstruction and presents initial conclusions, such as on the needed materials and construction technique.

We thank the Department of Antiquities of the Hashemite Kingdom of Jordan for permission to excavate at WF16 and for assistance with the excavation. We also thank the Arts & Humanities Research Council for funding the 2008-2010 excavation (AH/E006205/1).

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### **LIFE IN THE DIRT: A DUMPING PIT AMONGST THE PALACES OF QATNA**

In 2008, the Italian Component of the Syro-Italian Archaeological Project at Tell Mishrifeh/Qatna (Syria) excavated a large LBA II dumping pit (30x16 m.), filled with different layers of various materials. These include: deposits of ash, debris, and crumbled mud-bricks. There were also more than 300 other objects (pottery plates, bowls, jars, bottles,



lamps, miniature vases, bronze arrowheads, spear points, basalt tools, animal bones, worked objects – like ivory inlays, cylinder seal impressions, wall painting fragments etc.). This large dump was later affected by episodes of squatting, which brought people to live on the filled refuse tip. This poster will focus on the formation processes of this dump, the different kinds of objects thrown in it, their function, and on how people in this site interacted with debris and rubbish.

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## **HELP FROM SPACE: APPLYING THE FUTURE TO THE PAST**

Modern technologies are beginning to play a key role in various branches of archaeological research and cultural heritage enhancement.

By presenting some relevant case studies from Syria, this poster focuses on the importance of using new techniques in the field of remote sensing and geographic information systems (GIS) for the identification of new sites, the assessment of landscape changes and the monitoring of archaeological areas threatened by modern urbanisation, industrialisation and current political instability.

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## **STONE VESSELS OF THE IRON AGE FROM KARKEMISH: A TYPOLOGICAL STUDY**

Among the archaeological material excavated at Karkemish (Gaziantep, Turkey) by the British Museum expedition between 1911 and 1920 - which is the subject of my PhD dissertation project at the University of Bologna - more than 600 unpublished stone vessels from the Iron Age represent one of the most interesting corpora (for the greater part they have been identified and studied in the Museum of Anatolian Civilizations at Ankara). Vessels may be grouped into several functional classes mainly dating to Iron II and they present outstanding features due to their belonging to urban elite sets.

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## **NEW DISCOVERIES FROM TELL EL-KERKH 1: A BRONZE AND IRON AGE SITE IN THE NORTHERN LEVANT**

Tell el-Kerkh 1 is a large tell site in the Tell el-Kerkh complex (including Tell 'Ain el-Kerkh and Tell el-Kerkh 2) located in the southeast part of the el-Rouj Basin 20km southwest of Idlib in northwest Syria. Since 1997, excavation and investigation of Tell el-Kekh has been conducted by the Syro-Japanese archaeological team directed by Akira Tsuneki, University of Tsukuba and Jamar Hydar, DGAM Syria. The mound has an irregular rectangular plan with a maximum width of 400 m (north-south). It covers approximately 16 ha with a maximum height of ca. 30 m. Previous surface surveys carried out on the mound indicate that settlement spanned from the Neolithic Period to the Islamic Period, most notably from the Bronze and Iron Ages and the Hellenistic to the Byzantine Period. Some excavations skirting the mound revealed Byzantine ruins, however investigation of remains prior to the Byzantine Period are still incomplete so investigation of these later Byzantine remains has not been undertaken.

Taking this situation into account, a new excavation project focused on the Bronze and Iron ages began in 2007 at Tell el-Kerkh 1. Its main objectives were to investigate the Bronze and Iron Age settlements and to ascertain the chronological sequence of the mound between the Neolithic and the Byzantine Periods. To fulfill the above objectives, trenches were set on the southwest part of the mound where the western part of the southern edge had been scraped off by recent land cultivation. Excavation revealed some building levels belonging to a period from the Early Bronze Age IVb to Iron Age II.

Floors paved with thick plaster and mud-brick walls with stone foundations belonging to the Early and Middle Bronze Ages were unearthed. The most notable finding recovered from the Middle Bronze level was an infant burial which utilised a big storage jar.

In contrast to the Early and Middle Bronze Age levels, remains from the Late Bronze Age were found in a fragmented condition. However, a fragment of a stirrup jar and a body sherd of White Slip ware (probably a Milk Bowl) were found in this level. These specimens probably indicate that a Late Bronze Age settlement existed and that there was interaction with the Mediterranean world. Through our excavations it was possible to establish a chronological sequence of local pottery between the Late Bronze Age and Early Iron Age.



## **NEWLY DISCOVERED BRONZE TO IRON AGE MEGALITHIC GRAVES FROM IRANIAN AZERBAIJAN, NW IRAN**

Zardkhāne region is located about 22 kilometers northeast of Ahar town in East Azerbaijan province in Northwestern Iran. In September 2011, an extensive archaeological survey was carried out in order to reconnaissance of Megalithic (Kurgan Type) graves of the region. Totally, 95 megalithic graves were identified, most of them were located on hilly mountains named Zardkhane which was divided to three hills entitled A, B, C respectively. Of these graves, 59 megalithic graves were identified around the hill A, 22 megalithic graves around the hill C and 14 megalithic graves were discovered in the surrounding hills of Zardkhane.

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## **THE PLACE OF INFANTS IN THE ANCIENT SOCIETY OF TELL MOZAN (NORTHEASTERN SYRIA) DURING THE MIDDLE BRONZE AGE (1900-1600 BC): AN ANTHROPOLOGICAL APPROACH**

This work deals with the relation between social background and biological characteristics of infants in funerary context. The specificity of burials is to deliver informations concerning the culture of ancient populations, in particular the relation to the death, but also some biological informations which allow to perceive biological status of the alive populations. The analysis of burial practices of the Khabur cemetery in Tell Mozan (1900-1600 BC) has shown specific characteristics linked to age. Infants received proper funerary treatment dissimilar to those practice on adults. Pot burials were reserved for neonates. Children over a year of age were placed on a sherd of ceramic pot, and covered with the complementary part of this same pot. It is interesting to mention that children aged from 1 to 4 years were always buried near, above or below a fire structure. These observations lead us to wonder whether infants had a special social status in the ancient society of Mozan. Indeed, the skeleton was part of a person that interacted within a social environment in a dynamic way.

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## **KELEK MISHIK FIELD SCHOOL 2011**

Iraqi and Polish archaeologists worked together on the site of Kelek Mishik located in the outskirts of Erbil (Iraq) within the framework of the Kelek Mishik Field School 2011 project for a period of three weeks in October and November of 2011. The project sponsored by the Polish Embassy in Baghdad was carried out in cooperation with Iraqi Institute for the Conservation of Antiquities and Heritage, the Salahaddin University of Erbil, the Adam Mickiewicz University of Poznań, the University of Warsaw and the "Past and Present" Foundation.

Test excavations of remains dating to the Islamic period provided opportunity for our Iraqi colleagues, representing the Mosul Archaeological Museum, and the archaeology departments of Universities of Erbil, Baghdad, Diwaniyah and Hilla, to develop skills in excavation and documentation techniques.

The most demanding part of the training consisted of preparing of 3D reconstructions of objects discovered at Kelek Mishik. The routine included measuring the exact position of remains with a total-station, transferring the measured coordinates into a computer, preparing a 2D drawing and developing it into a 3D image.

The results of the fieldwork will in the future be presented in a paper written jointly by the Polish and the Iraqi participants of the School.

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## **PREHISTORIC NORTHERN MESOPOTAMIA - THE POTTERY FINDS FROM TELL NADER (ERBIL)**

Excavations at Tell Nader (Erbil) started in 2011 under the direction of Konstantinos Kopanias (University of Athens). The preliminary analysis of the pottery finds allows the dating of the main levels of the mound, which fit well to the Northern Ubaid and Early Northern Uruk. Rescue excavations in 2010 and the general survey additionally have shown some occupation from the 3rd probably to the early 1st millennium B.C.

Some single sherds already promise a complete sequence from Late Neolithic to Chalcolithic and beyond. This

sequence provides the chance to create a well documented reference for older excavations such as Qalinj Agha, Ninive or Tepe Gawra.

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## **ON THE ISSUE OF THE ESSENCE OF THE CULT UNITING PRE-POTTERY NEOLITHIC SETTLEMENTS INTO A REGIONAL COMMUNITY WITH THE CENTER IN GÖBEKLI TEPE**

Göbekli Tepe is widely known due to some preliminary publications and the monograph by Dr. Klaus Schmidt, director of excavations. The exceptional character of the place is demonstrated through the dominant topographical position, size, distance from water sources and industrial raw materials, as well as through an amazing concentration of megalithic sites of cleverly designed architecture and sculpture in the absence of ordinary home life residues. Organizers of the excavations came to the conclusion that they are dealing with a cult center, whose design was being worked out by several generations of people from nearby settlements located within the radius of 200 km during PPNA-, PPNB-periods: Çayönü, Nevalı Çori, Tell Abra, Mureybet, Jerf el Ahmar, and others. The sites listed are synchronous. They show similarity in a complex of material culture objects.

Together the X-IX millennia BC data support the existence of long-term regional tribal communities that could have functioned in the form of agglomeration with the cult center in Göbekli Tepe. They could have shared a common ideology, common ritual practices and a system of symbols (T-shaped pillars, large-scale sculptures, reliefs and inscriptions, "Neolithic hieroglyphs"). Göbekli Tepe researchers' idea about totem concepts reflected in large-scale relief animal images inscribed on T-shaped megalithic pillars, in our opinion, seems quite promising. However, K. Schmidt's basic assumption that Göbekli Tepe structures served the cult of the dead ("Totenkult") does not seem plausible. No burial has so far been identified at the site. Yet there were found numerous sculpture and relief images of phalluses and ithyphallic protomes. There is a widely-known image of a squatted naked woman with hypertrophied genitals. It was found on the slab which lay close to the central pillars in the building with lion pillars.

During 2009 and 2010 seasons the so-called 'totem pole' was studied. Some of its images represent a few zooantropomorphous figures arranged one above the other, each coming out of the previous one's abdomen. These and other data, most of which are generally characteristic of the settlements of PPNA-, PPNB-periods, do not correlate with the hypothesis made by K. Schmidt that the grand complex Göbekli Tepe was devoted to the cult of the dead. At the heart of religious practices implemented here there are productive rituals encouraging birth and fertility in the broadest sense of these concepts, the rituals meant to ensure the development and prosperity of both communities performing them and future generations.

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## **SASSANIAN ROCK RELIEFS AT DARABGIRD**

Darabgird is one of the five khurreh in Fars during Sasanian period in which Ardashir started his career as an argbed. There are interesting rock reliefs in front of the spring- lake at Darabgird.

In the main scene the victory of Sasanian king over the Romans is depicted. There is also a small bas relief below the victory scene which presented bust of the lady and is regarded as part of the main relief. Furthermore a boulder is found from the lake with the picture of the king fighting a lion.

There are different views about the real identity of the king and the event which is commemorated in the victory scene. Some scholars believed that the king is Ardashir I while others identified him as Shapur I. According to the comparison made between Darabgird relief with other reliefs of Ardashir I and Shapur I, numismatic and historical evidence, the authors believe that the king depicted is Ardashir I. The bust of the lady resembles to Anahita, the goddess of water and fertility on Narseh investiture ceremony at Naqsh-e Rostam, so it belongs to Anahita. On the basis of Shapur I reliefs and coins, the king carved on the boulder is Shapur I.

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## **SCAPHOPOD BEADS FROM THE NATUFIAN LAYERS OF HAYONIM CAVE**

The archaeological site of Hayonim Cave has five layers of occupation, including a Late Epipalaeolithic (Natufian) occupation. The Natufian occupation of the cave featured circular structures with floors, with a thick midden of lithics,

ground stone objects, faunal remains, human remains, bone artifacts, and various ornaments – mostly scaphopod shells.

This study focuses on the shell assemblages collected during the archaeological excavations (1965 – 1979). The material consists of 3866 scaphopod shells discovered both in occupation layers and in graves. Most shells originated in the Mediterranean and were identified as *Antalis vulgaris* and “*Antalis dentalis* group”. Red Sea shells were mostly “*Dentalium reevei* complex”. Our research indicates that prehistoric humans chose specific species to be used as beads, and used them in the Early Natufian levels specifically in burials. Red Sea scaphopod shells derived exclusively from the Late Natufian levels, in occupation contexts. This phenomenon, known also from other Natufian sites, appears along with the sudden absence of shells in the burials, and might reflect increased mobility or exchange of goods during the Late Natufian, whereas a more sedentary lifestyle is evident in the Early Natufian. The shell assemblage of Hayonim Cave reveal the changing of socio-economic strategies during the Natufian culture.

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## **COMPARATIVE ANALYSIS OF BUILDING MATERIALS AT ARSLANTEPE (MALATYA, TURKEY). LEVEL VII AND VI A**

Over the last years an interdisciplinary study has been carried out on building materials (mud-bricks, mud-plasters and raw earth) and the construction techniques of Arslantepe (Malatya, Turkey). Representative samples were collected and chemical and physical analyses were performed: X-ray diffraction, X-ray fluorescence, porosity and scanning electron microscopy. This work focuses on the Late Chalcolithic structures (3800-3000 BC), shedding new light on the ancient technology and manufacturing processes. Some kind of choice between the available raw earths used to build the structures was noted. Also different methods of mud-brick installation were observed.

Those buildings where public activities were held, such as Temple C or stores of Level VII, are characterized by mud-bricks with a wide variety of colors and by an incipient intention to rationalize their dimensions. On the other hand, a different pattern was noticed in the housing units, where mud-bricks have homogeneous colors and different shapes.

Regarding Level VI A buildings, only a few private elitist houses have been excavated up to now, but observations on structures of the palatial complex confirm the use of several quarries for the supply of raw material. Moreover, the standardization of mud-brick dimensions suggests an increased control on labor force by the elites.

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## **THE CHORA OF EBLA: A MULTIDISCIPLINARY APPROACH**

Ebla Chora is a 4-years project fully funded by the European Research Council (FP7–IDEAS 249394) aiming at a study of the territory around Ebla with a limited timeslice around the third quarter of the 3rd millennium BC. The case of Ebla in northern Syria is certainly the most favourable one for enhancing our understanding of mechanisms of functioning of the early State. The discovery, in 1975, of royal archives consisting of 17.000 cuneiform tablets dating to ca. 2300 BC has supplied the scientific community with an invaluable mass of documents dealing with all aspects of state organization. Further, considerable progresses during the past decade have been made at Ebla in seriating material culture assemblages, in interpreting the rich evidence retrieved for ancient visual communication and in exposing the urban structure. In order to test theories and models about the rise and structure of the early State, we expanded the level of analysis to the landscape around Ebla: archaeological surface surveys, remote sensing, geomorphological studies are being evaluated together with the results of archaeological and geophysics investigations on village sites, in order to build a multi-tier explanatory pattern which can be applied to, or utilized for, other early foci of urbanization in the Near East.

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## **THIRD MILLENNIUM POTTERY FROM TERQA, SYRIA: FIRST INTERPRETATIONS**

Terqa, an important Syrian Bronze Age site located in southern Middle Euphrates, benefited from a key position which provided the settlement with the opportunity to gain from exchanges and innovations arriving from both the North and South, while developing its own identity and culture. The study of pottery carried out on material from eight excavation seasons provides us with a preliminary overview of Terqa's ceramic culture during the Early Bronze Age.

It was essential to bring this work to a successful conclusion in order to use the artefactual evidence to situate Terqa in the general archaeological and cultural landscape of Syro-Mesopotamia. The recovered material was used to identify the economic networks, as well as the cultural influences and inheritances from other regions involved in Mesopotamia's growth. It was also to find out if Terqa's local culture, which was marked in other components of its material culture, was recognizable in its ceramic production as well. With this objective in mind, we analysed the standard wares items, used on a daily basis, separately from the fine wares vessels. The other purpose of this work was to specify Terqa's chronostratigraphy with greater accuracy, comparing it with the neighbouring site of Mari and other contemporary ones. With this perspective in view, we decided to focus mainly on vessels found in situ in contexts characterized by a high degree of stratigraphical reliability such as floors or well-stratified graves which offer large assemblages.

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## **JEWELLERY AND OTHER ORNAMENTS FOR THE DECEASED. THE CASE OF TELL SHIYUKH TAHTANI, NORTH SYRIA**

The University of Palermo excavations at the site of Shiyukh Tahtani, on the Upper Syrian Euphrates, have brought to light a relevant amount of graves (ca. 120), about half of which can be dated to the Early Bronze Age. The graves usually consist of primary interments in oval pits, containing one or two individuals lying in a foetal position; in addition, a few large pits contained adults and children side by side, probably family groups (up to 5 individuals). Grave goods usually include a good number of vessels as well as personal ornaments, such as bronze bracelets, toggle pins, ear-rings and strings of beads of different material. Infant burials differ, since they contain a lower amount of small vessels and are characterized by the presence of beads and pendants. The present analysis focuses on the ornaments made from frit and semiprecious stones (mainly carnelian, rock crystal and mother of pearl) and tries to show how different kinds of beads and raw materials were associated in the grave inventories and how they could be related to sex and gender of the deceased. In particular, it will be shown how the use of frit artefacts is often closely connected with child interments.

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## **SPACE SYNTAX ANALYSIS IN A LATE BRONZE AGE PALACE IN QATNA, CENTRAL SYRIA**

The discovery of a Late Bronze Age Lower City Palace at the northern acropolis foot helps to elucidate Qatna's urban layout. The aim of this poster is to analyse this significant building with the use of space syntax theories in term of its adherence to the 2nd millennium BC architectural genotype and in order to capture the complexity and use of the different sectors of the Lower City Palace that together form a multifaceted structure. The analytical method transforms the architectural plan in a simplified map (wall layout, openings and stairways) in order to obtain a specific graph that allows quantitative and qualitative analysis. The architectural plan will be studied also through the Depthmap software that will permit a better understanding of the space complexity through visual analysis. Focus will be put on the spatial organization of circulation within the building in order to better understand the interaction between the different parts of the palace. This will contribute to the comprehension of the function of this important administrative structure.

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## **THE CULTIC TERRACE J OF IRON AGE II ON THE ACROPOLIS OF TELL AFIS**

The excavations conducted between 2007 and 2010 in Area A on the acropolis of Tell Afis investigated a structure, the Terrace J, made up of large mudbricks and limestone. The terrace, located on the top of the mound of Tell Afis, was part of a larger sacred area which characterized the landscape of the acropolis during the Iron Age II and which included buildings, installations and places of worship.

Archaeological investigations have identified two architectural phases of the terrace J and investigated the cultic installations located on its top. The discovery of a foundation deposit related to the first phase of the terrace is of great interest; the presence of bones of birds found in the deposit gives an important element for the reconstruction of the rituals in Aramean Age.

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## **ARCHAEOLOGICAL INVESTIGATION OF PHOENICIAN POTTERY FROM THE IBERIAN PENINSULA**

The Iberian Peninsula was the most important target of the Phoenician expansion at the beginning of the 1st millennium BC. From the 9th century onwards the newcomers from the Levant established a dense network of settlements on the southern coastal parts of the Iberian Peninsula and this region became culturally part of the Orient for a time of more than 200 years. For a better understanding of the cultural and economic development of these settlements a new large-scale pilot project for the archaeometric investigation of Phoenician pottery was initiated. Until today more than 800 pottery samples of all known wares and types from about 60 different sites were analyzed. The pottery covers a time span from the 9th to 6th century BC. Thanks to the great amount of analyzed pottery the project offers for the first time a solid scientific basis for the reconstruction of the economic network between the settlements and also of its supraregional connections.

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## **THE EARLY BRONZE AGE SETTLEMENT AND LARGE-SCALE SILO COMPLEX OF AMAZIYA, ISRAEL**

Two seasons of salvage excavations were conducted at Amaziya (Duweimeh) on the left bank of Nahal Lachish. The site is located on one of the hills of the Shephela (i.e., upland plateau adjacent to the Judean Incline). Excavations indicate the site was occupied, among other periods, during the Early Bronze (EB) Age I and IV in Areas B1 and B2. In these areas, located on the northern slope of the site, two major functional units were unearthed in a large exposure, a domestic area with house foundations and adjacent installations (Area B1), and a nearby large-scale complex of subterranean, circular silos (Area B2). A small, but highly indicative assemblage of imported Egyptian pottery and other Egyptian style vessels, was found in both areas.

A group of several rectilinear rooms and small, stone-lined silos and a constructed corridor leading to natural cave complex of several cavities linked by narrow passages were exposed in ca. 1250 m<sup>2</sup> in Area B1. The cave with carved installations and grinding stones suggests it was used for olive oil production and processing of grains and/or storage of those and other agricultural products in EB I and IV.

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## **HELLENISTIC POTTERY FROM SECTOR A AT TELL ARBID**

The poster will present Hellenistic period pottery found at a rural settlement located on the satellite tell (sector A) of Tell Arbid. The Hellenistic level comprised five occupational phases with domestic architecture and a large number of storage (?) pits. Over 90% of the pottery fragments belong to phases 3-5 which can be dated to the 2nd half of the 2nd century BC.

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## **SELJUK CERAMICS AT TYANA/KEMERHISAR (SOUTHERN CAPPADOCIA/TURKEY)**

Surveys have recently been conducted in the Niğde region by the University of Pavia (Prof. C. Mora and Prof. L. d'Alfonso) and the University of Istanbul (Prof. E. Bıçakçı), and there is also an on-going excavation being carried out by the University of Padova (Prof. G. Rosada). This research has identified a widespread distribution of settlements, which until the late Roman/early Byzantine period were located on the plains or in the foothills areas. During the Arab attacks which occurred between the second part of the 7th and the 9th centuries AD, the majority of the plains settlements were abandoned as the population withdrew into the mountain region. Under the Seljuk Sultanate of Rûm the plains areas were reorganized, leading to the reoccupation of sites such as Kınık Höyük, Neştepesi, Eski Köy, Tepe Bağları and the Roman Tyana (where, during the Arab attacks, the settlement was perhaps scaled down but not completely abandoned). Following these surveys, my aim here is to make a preliminary presentation of some pottery forms which can be considered as a guide towards the identification of the Seljuk settlements in this region. Many of these examples are of cooking and common wares with appliqué and/or burnished decorations. Less numerous are the glazed wares and in particular the sgraffito wares, probably produced within the Cappadocia region, although the forms and the decorations imitate Byzantine and Near Eastern productions.



## **HUMERUS VARUS IN A TEEN-AGE SKELETON FROM TELL ARQA (MIDDLE BRONZE AGE-LEBANON)**

The excavations of the Middle Bronze Age level at the site of Arqa (Lebanese coast), uncovered a burial of two teenagers. One of the skeletons exhibits a varus deformity of both humeri. The affected bones were shortened; their upper diaphyses were angulated. The head of the right humerus, the only one still preserved, is grossly deformed. The skeleton is otherwise normal. The etiology of varus deformity is a condition still highly debated in the paleopathological literature since different causes could be implicated (mucopolysaccharidoses, thalassemia, infection etc.). The analysis conducted on this skeleton led us to favor trauma. Besides, the latter would have occurred early in the life of the individual, given the severity of the bone changes. Bilateral humerus varus was hardly ever been published on an ancient Near Eastern skeleton. Therefore, this case contributes keenly in documenting the prevalence of this condition in this region.

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## **ARBIL: A MEDIEVAL CITY BEHIND THE ASSYRIAN TOWN WALL**

A large tell and citadel in the city of Arbil belong to famed sites in North Iraq, although its first archaeological evaluation could start only recently in 2006. Drawing attention to the immediate hinterland of the tell, a complementary use of writing sources, remote sensing and surveys has intermediated a view onto an extremely long-term evolution of the lower town, whose surface remains have totally disappeared due to modern building expansion. Despite serious lacunae in data and predominance of indirect hypotheses the urban structure of the Assyrian Arbail does now become comparable with other Assyrian residential centres. The town underwent a twofold urban foundation during the Islamic period (7th to 12th centuries AD), which cemented prosperous Sasanid provincial capital with the expanding muslim community.

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## **PASTORAL HORIZONS IN THE MALATYA PLAIN. GELINCIKTEPE AND THE SURROUNDING LANDSCAPE IN THE EARLY 3RD MILLENNIUM BC.**

Landscapes are a mixture of social spaces, geographical places and social times, and are at the same time mediums of social interaction and results of historical processes. Gelinciktepe is a large basaltic outcrop, located 3 km to the east of Arslantepe, which monumentally emerges from the Malatya plain and which represents one of the most visible geographical features of the local landscape.

The archaeological evidence from Gelinciktepe is mainly related to flimsy stone structures or to the floors of huts which exploited the natural shelters available in the basalt outcrops, and has to be dated to a rather precise span of time, 2750-2600 BCE, corresponding to the end of the Early Bronze Age I and Early Bronze Age II in the Upper Euphrates regional chronology.

This is exactly the period which records a disruption of the older settlement patterns. The temporary abandonment of the main artificial mounds of the plain is balanced with a growth in the number of small, newly founded and short-lived settlements, which is a phenomenon that may have been related to the increasing economic role which pastoralism seems to have played in the Malatya plain during this period.

From this point of view Gelinciktepe, which was not a permanent settlement, may exemplify the emergence of the new models of social aggregation, use of the territory and conception of the landscape.

But the presence of completely unusual megalithic structures dispersed on the site, suggests that Gelinciktepe was not only and simply a camp-site, but possibly also a site where some specific social activities were carried out. The physical prominence of the Gelinciktepe in the surrounding landscape could have contributed to confer to this place a strong symbolic connotation for all the communities living in (or crossing) the region.

Aim of this work is to present the geomorphological and archaeological conditions of the site (now endangered by illegal excavations, new constructions and basalt quarries) and of the neighbouring territory on the base of a topographic survey, and to submit a reanalysis of the excavation data by means of specific and explanatory IT models. These data will be finally employed to propose a new interpretation on the symbolic and social meanings which Gelinciktepe may have acquired in the 3rd millennium as a result of the mutual interaction between natural places, socially constructed spaces, economic activities and the visual collective experience.



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## **NATURAL RESOURCES, TECHNOLOGY AND MANUFACTURE PROCESSES. ARCHAEOMETRIC ANALYSES ON THE MATERIAL ASSEMBLAGES AND ARCHITECTURAL COMPONENTS OF MATURE EARLY SYRIAN EBLA**

A wide project of multidisciplinary archaeometric analyses on material assemblages (pottery and clay objects, base and precious metals, stone and bone items) dating from the Early Bronze Age IVA (ca. 2400-2300 BC) has been planned as a part of the Ebla Chora Project, funded by the European Research Council (FP7–IDEAS 249394), in order to investigate the relationships between the urban town and its environment and the strategies of procurement, exploitation and consumption of natural resources and raw materials in the region of Ebla. The first results and achievements are here presented, showing the high degree of specialization and the intensive exploitation of the town surroundings, which corresponds to the growth of an articulated settlement system with minor sites and villages located in strategic regions, such as the basaltic area to the South, or the Matah depression to the East.

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## **FROM WETLAND TO DESERT: A GEOMORPHOLOGIC APPROACH TO THE EBLAITE CHORA (SYRIA)**

In the frame of the Ebla Chora project, funded by the European Research Council (FP7–IDEAS 249394), we are addressing a geomorphological study to the Ebla territory. Presently, the climate of the region is semi-arid, characterized by a strong negative gradient of precipitations from the Mediterranean to the east. The Eblaite chora embraces, therefore, different vegetational belts, Eu-Mediterranean to the west, steppe to desert to the east. This makes the region particularly sensitive to relatively small climatic variations, such as those occurred in the middle to late Holocene.

Different climatic regimes in the 3rd millennium BC favored the development of farming in the Eblaite chora, as documented by the size of the city, as well as the study of the clay tablets from the Royal Archives from 2300 BC. Recent paleobotanical studies show that Ebla, as many other sites in the Near East, enjoyed a higher precipitation regime, increasing at the beginning of the 3rd millennium, peaking at around 2500 BC, but later decreasing leading to an aridity crisis at around 2200-2100 BC. After ca. 1500 years of aridity, wetter conditions reestablished at around 600 BC.

Our study focuses on these dramatic climatic oscillations, and the associated strategies for continuing settlements in the Eblaite chora. Therefore, we address our study on the natural vs. artificial channel network, as well as the sedimentary record of the alluvial activity in the lower reach of the channels. We are checking the presence of shallow lakes – swamps in the whole region, where we expect to find a complete palinological record. We also try to reconstruct the evolution of the groundwater table within the city of Ebla, based on the various wells and cisterns.

Our preliminary results document the presence of a dense network of natural channels, some thick alluvial deposits, likely of early Holocene age, the presence of a shallow lake in the al-Matk depression (on the fringe of which lies Tell Tuqan), and a much higher water table within Ebla during the Early Bronze Age.

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## **PALACE VS COMMON GLYPHTIC IN EARLY SYRIAN EBLA AND ITS TERRITORY**

Glyptic evidence at Ebla includes a number of clay sealings with cylinder seals impressions and a number of impressions made on clay jars before firing. The two groups of evidence feature completely different iconographies and are the evidence for two different modes of administrative operations. The main lines of this ongoing research, included in the general project “Ebla and its Chora” funded by the European Research Council (FP7–IDEAS 249394), are 1) to highlight the specific characteristics of the corpus of clay sealings; 2) to try analyze the different operational modes within the sphere of the Ebla administration, and 3) to focus on the administrative processes of the central administration of Ebla with regard to the town itself and to its relations with the surrounding territory.

## **RESEARCH ON PARAPETS OF PALACE H IN PERSEPOLIS WORLD HERITAGE ENCLOSURE**

Palace H is located in southwestern corner of the Persepolis terrace, near to Xerxes palace. The date of the building's construction is indicated by inscription of Artaxerxes I. Artaxerxes III Ochus added a staircase on the northern side of the palace. It seems that it has been used also after Achaemenid period. Some puzzling elements were found during the cleaning and excavation conducted by Ann Britt-Tilia in the autumn of 1964 below the western side of the building. It is a question of a group of "horns". They were fixed by Tilia at the edge of the terrace, near the palace H where they can be seen today. Their unusual shape have caused a lot of questions about origins and date of these elements. Recent researches indicate that the "horns" have Hellenistic roots and that similar elements were used in the architecture of the Seleucid period as it is proved, for example, by architecture of Bagram in Afghanistan.

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## **AGRICULTURE IN THE EBLA REGION: ANCIENT AND MODERN**

The study of the epigraphic documentation from Tell Mardikh provides us with information concerning the crops and vegetation of the territory of Ebla in the mid-3rd millennium BC. These data allow us to reconstruct, to some extent, the ecological and environmental situation of the region. The data extrapolated from the texts are compared with data about the agriculture of the same area in modern times, which were collected in two surveys carried out by a team of the University of Bologna in the framework of the project Ebla Chora. During these land use surveys the main crops and spontaneous species were recorded. The comparison between the evidence provided by the ancient written sources and the modern data highlights some persistences and changes through time, which also allow us to better understand the ecology of the region on a diachronic scale.

The Ebla Chora project is funded by the European Research Council (FP7-IDEAS 249394).

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## **STUDY OF MYTHICAL CREATURES OF ZIWIYE IVORY PLAQUES IN SANANDAJ AND IRAN BASTAN MUSEUMS**

In 1947, following a chance discovery in a village in north-western Iran, called Ziwiye, an invaluable treasure containing gold, silver, and ivory objects was uncovered and as in many other similar cases, was looted and soon exhibited in museums and private collections throughout the world. Despite all discussions and ambiguities about the discovery, its genuineness, the real identity of objects, the true owner of this treasure, etc. and attributing them to traditions of Assur, Urartu and Saka among others, today, several objects are exhibited in different museums as Ziwiye which contain very interesting mythological, religious and artistic motifs and symbols, crafted skillfully and artistically. Studies done in this area attribute the above mentioned objects to 7th to 8th centuries BC. In this period, the north-western areas of Iran were attacked by neighbors including the Assyrians, Urartians and Sakai and were deeply influenced politically, economically, culturally, artistically, socially and religiously.

The present study with emphasis on ivories attributed to Ziwiye, kept in Iran Bastan and Sanandaj Museums, deals with anthropomorphic and zoomorphic figurines. Among these invaluable objects, decorative plaques with representations of mythological creatures are more noticeable because in addition to features demonstrating the local art, indicate similarities with arts ascribing to the above mentioned neighbors.

The purpose of this research which is based on comparative studies is to identify the role of cultural, artistic and religious elements in paving the ground for creating these handcrafts which was later established in arts of Achaemenids and survived till today. The results of this research shed light on religious beliefs and cultural and economical status of this particular period of time.

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## **WHO TAKES OUT THE TRASH? NEW LIGHT ON THE SOCIOECONOMIC ORGANIZATION OF EARLY CITIES**

Garbage forms a major source of archaeological material but has so far been undervalued as a tool for studying the organization of ancient societies. Recent archaeological investigations at Tell Brak, an early city in northern Mesopotamia, show that urban growth transformed the surroundings of the city from farmland to a zone consisting of middens and rubbish mounds, mud quarry pits, and industrial workshops.

We present new data reflecting how people interacted with and managed the accumulation of garbage at Tell Brak. The methods include coring, excavation, small soundings, and X-ray fluorescence soil studies, the combination of which throws new light on how strategies for handling and managing garbage were spatially expressed in early urban societies.

We stress the importance of treating garbage as a crucial element in ancient daily life as well as a major element in modern excavations. The accumulation of garbage in ancient cities needs to be taken into careful account and treated as an important archaeological deposit in its own right.

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## **TECHNOLOGY, CONSERVATION AND RESTORATION OF CLAY COFFINS OF NEO-ELAMITE PERIOD**

Burials in clay coffins are known, thanks both to the scientific excavations and accidental discoveries in Khuzestan Province. Probably the most famous example of this type of burial are that discovered at Arjan and two bronze coffins from Ramhormoz, all dated back to the Neo-Elamite period. Among the objects transferred long time ago from Susa to the National Museum of Iran is a clay coffin very similar to characteristic Neo-Elamite coffins. In this paper, we will present the methods of conservation and restoration used in the case of the coffin from Susa as well as the results of complementary analyses which were carried out to assess the structure of the clay material of the coffin.

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## **A SET OF 2ND MILLENNIUM BC CLAY OBJECTS FROM TELL ARBID**

The poster will present a unique assemblage of almost 60 objects of unbaked clay from Tell Arbid's Sector W, unearthed in the 2010 season. The assemblage included three concentrations of various clay objects. The assemblage included e.g. 15 very similar, spool-shaped objects, at least two distinct types of tokens or gaming pieces(?) and several other small objects. Six items were decorated with an identical motif. All the objects were recovered from a narrow test trench, which - despite providing a poorly interpretable context for the finds - gave them a Khabur Ware-period date. Although some of the object types have analogies at other sites in northern Mesopotamia, the assemblage as a whole seems to be unparalleled.

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## **PREHISTORIC POTTERY OF THE OSMANIYE PROVINCE IN EAST CILICIA: A HOLISTIC APPROACH**

The Osmaniye Archaeological Survey localized quite a number of archaeological places dating from Neolithic, Chalcolithic, Bronze and Iron Ages, up to the Classical, Hellenistic, Roman and Medieval Ages. The ongoing project conducted by the Kocaeli University documented 40 mounds in the Osmaniye Province, whereof 27 contained an astonishing high number and variety of pottery from prehistoric times, i.e. the Neolithic/Chalcolithic period, to the Late Iron Age. The present study employs a holistic approach to evaluate the prehistoric pottery of the province and attempts to contextualize the pottery finds in relation to the neighbouring cultures. Since there is no complete master sequence equally reliable for all periods within this region, earlier and present excavations provide a broad chronological framework for provisional dating. So, the investigation was based on comparative analysis of established ceramic sequences from other sites in this region, which supports the attempt to define settlements with more local character. The comparison shows strong similarities to ceramics from Cilicia, especially examples of the Tarsus-Type, many pieces

of the Amuq assemblage and ceramics from North Syria, i.e. red-burnished-ware. Likewise parallels to ceramics from other parts of the Levant, Cyprus, Mesopotamia and possibly even from Iran, could be established, as indicated e.g. by Mycenaean style, Cypriot white-slipped-ware, or even examples similar to Ubaid and Kura-Araxes ceramics. This shows vivid regional but also transregional interaction with the region of Osmaniye as a hub for different crossing roads.

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## **THE VIA TAURI AND THE ANCIENT ROAD NETWORK OF SOUTHERN CAPPADOCIA (TURKEY). A PRELIMINARY NOTE REGARDING THE TOPOGRAPHY OF A FRONTIER TERRITORY**

In any consideration of the ancient road network of central and southern Anatolia, the road which led to the Cilician Gates merits our special attention on account of its strategic importance both in the military and in the economic senses. It was, moreover, the only route that offered smooth and easy communication between Cappadocia and Cilicia. Linking the uplands and the Mediterranean coast, the via Tauri assumed its own peculiar specificity, even from very remote times. This is borne out not only in the better-known literary sources, but also in the ancient itineraries (in particular in the *Itinerarium Burdigalense*). It was, for example, the road along which Caesar drove his army in forced march from the shores of the Mediterranean to Mazaka/Caesarea; it was the road which Cicero used to travel to Tarsus immediately after his nomination as governor of Cilicia; and it was the road which Marcus Aurelius followed with his legions after his military campaigns in the East – and the road upon which he was parted (by her death) from his wife Faustina.

A renewed study of literary and epigraphic sources, new archaeological data and new research conducted on site – all these have led to a reconsideration of the various hypotheses advanced by scholars with regard to the actual line taken by this fundamentally important arterial road, and they have drawn us to propose, albeit in preliminary terms and in the context of research which is still ongoing, a different concept of the ancient road network which existed in this border territory that linked East and West.

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## **BITUMEN IN THE PERSIAN GULF - WHERE AND WHY?**

Sites along the shoreline of the Persian Gulf witness the introduction of Mesopotamian pottery and materials from the Ubaid 3 period onwards. Beside the pottery, which has been studied extensively, there is the first appearance of bitumen in this area. Geochemical studies prove that this material is not indigenous to the Gulf-area. The presence of bitumen is obviously linked to the Ubaid expansion during the middle Chalcolithic Period, but unlike the pottery, bitumen appears on a more limited number of archaeological sites. This observation goes also for later periods.

This poster will give an overview of prehistorical sites on the Persian Gulf where bitumen is observed. This dataset forms the base for a hypothesis which tries to explain the irregular spread of this material along the shorelines of the Persian Gulf. Different questions will be tackled: Why is there so little bitumen during the Ubaid period in contrast to the Bronze Age? At what particular sites do bitumen appear and why? How come there is almost no bitumen in the Iron Age? And how can we explain the massive presence of bitumen during the last centuries of the 1st millennium B.C. and the first centuries of the 1st millennium A.D.?

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## **A DISTRIBUTION MODEL FOR IRON OXIDE STONE ARTIFACTS IN MESOPOTAMIA**

Hematite, goethite and magnetite rock were used in the Ancient Near East to make small artifacts, mainly cylinder seals and weight stones. The source(s) of these materials are not known yet, and are difficult to establish geologically, since the materials occur in various regions around the Mesopotamian floodplains.

The question of the natural origin of the iron oxide rocks was therefore addressed by statistically analyzing ca. 800 provenanced artefacts from the archaeological literature. A distribution model was developed to understand how the custom of using hematite, goethite and magnetite for small artefacts spread through time and space. This model suggests a region of origin for the raw materials in the limestone plateau of Northern Mesopotamia.

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## **INTRODUCING AND DEFINING A NEW APPROACH. TOWARDS A REALISTIC RECONSTRUCTION OF THE PAST**

Theories and models involving subjects such as “analysis and explanation of individual and social practices of persons, the effect of biological inheritance and environment on human behaviour patterns, social motions and changes, cultural transition and diffusion, and like these”, are of those fields which still cause serious challenges in the related disciplines. While they are supposed to come into long- term processes, in archaeology, they may yet set foundations for more confusions and mistakes. To reduce such unfavourable situations we may use the hypothesis so called “Motivational- Instructive Energy, and Agent Persons” as below. In the hypothesis, considering bio-neurological based differences among individuals, along with constituting a linkage between neurological capacities of individuals and the motivational- instructive energy sent to, or received by particular parts of their brains, on one hand, and their behavioural differences on the other hand , plus a unique definition of society and societal motions based on the concept “motivational nets” one may obtain an appropriate theoretical base to explain past cultural changes in a more realistic manner.

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## **TRANSFORMATION OF THE BANQUET SCENE INTO THE PRESENTATION SCENE DURING THE EARLY DYNASTIC, AKKADIAN AND UR III PERIODS**

The problem of evolution of Mesopotamian cylinder themes is crucial for the understanding of changes in function of seals and, more general, for understanding administration system and sometimes cultural context of the period. Since we are able to determine that the banquet evolved into the presentation scene, we may suppose that the meaning of the two themes was similar, or at least related to a certain extent. It is argued here that the banquet scene was replaced by the later presentation scene.

Many seals, especially of the late Early Dynastic and Early Akkadian periods, can be called “transitory”, because they bear certain traits of the two themes. In the first of these periods, the most popular subjects were the banquet and the contest. Later on, during the Early Akkadian period, contest scenes still remained vital but banquets were gradually disappearing and were possibly replaced by, hitherto unpopular, presentation scenes.

What is especially common for the banquet scene and the later presentation scene, is the cup being held in the hands of the depicted figures and the sitting position of the most important characters. The use of the drinking vessel was a symbol of vassalage and sovereignty in Mesopotamia from early times.

Presentation seals were distributed, similarly as banquet cylinders, among important officials. It seems probable that the presentation and the banquet themes expressed the same idea. Both scenes conveyed the message of high status, subordination and legitimation, and informed the “audience” about the place of an individual in the administration hierarchy.

**PLENARY CLOSING SESSION,  
Communications by Heads of Antiquity Services**

**MAY 4TH, FRIDAY**

**AFTERNOON SESSION**

<b>Hour</b>	<b>Name</b>	<b>Title</b>
15.00-15.15		
15.15-15.30	ABDULLAH KOCAPINAR	GENERAL VIEW OF THE EXCAVATION WORKS AND POLICY IN TURKEY
15.30-15.45	UZI DAHARI	NEW DISCOVERIES IN THE ARCHAEOLOGY OF ISRAEL
15.45-16.00	VAKHTANG LICHELI	COLLECTIVE GRAVES FROM SOUTHERN GEORGIA – BEGINNING OF COLCHIAN TRADITION
16.15-16.30	MAISA RAHIMOVA	TBA

**16.30-17.00 COFFEE BREAK**

**EVENING SESSION**

<b>Hour</b>	<b>Name</b>	<b>Title</b>
17.00-17.15	JEHAD HAROUND	TBA
17.15-17.30	SULTAN MUHESEN, FAISAL NAIMI	AN OVERVIEW OF ARCHAEOLOGY IN QATAR
17.30-17.45	HAMDAN TAHA	RECENT ARCHAEOLOGICAL ACTIVITIES IN PALESTINE
17.45-18.00	ASA'AD SEIF	OVERVIEW OF THE DGA ACTIVITIES 2010-2012: SELECTIVE PROJECTS
18.00-18.30	PAOLO MATTHIAE PIOTR BIELIŃSKI	CLOSING OF 8TH ICAANE



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