The Archaeology of the Kurdistan Region of Iraq and Adjacent Regions

Edited by

Konstantinos Kopanias and John MacGinnis
## Contents

List of Figures and Tables........................................................................................................................iv
Authors’ details .............................................................................................................................................. xii
Preface............................................................................................................................................................ xvii

**Archaeological investigations on the Citadel of Erbil: Background, Framework and Results**........... 1
*Dar al Yaqoobi, Abdullah Khorsheed Khader, Sangar Mohammed, Saber Hassan Hussein, Mary Shepperson and John MacGinnis*

**The site of Bazyan: historical and archaeological investigations**......................................................... 11
*Narmin Amin Ali and Vincent Deroche*

**Short notes on Chalcolithic pottery research: The pottery sequences of Tell Nader (Erbil) and Ashur (Qal‘at Sherqat)**............................................................................................................ 19
*Claudia Beuger*

**New Evidence of Paleolithic Occupation in the Western Zagros foothills: Preliminary report of cave and rockshelter survey in the Sar Qaleh Plain in the West of Kermanshah Province, Iran** ........................................................................................................ 29
*Fereidoun Biglari and Sonia Shidrang*

**Activities of Sapienza-University of Rome in Iraqi Kurdistan: Erbil, Sulaimaniyah and Duhok**........ 49
*Carlo Giovanni Cereti and Luca Colliva*

**The Achaemenid Period Occupation at Tell ed-Daim in Iraqi Kurdistan**........................................... 57
*John Curtis and Farouk al-Rawi*

**‘Inscription D’ from Sennacherib’s Aqueduct At Jerwān: Further Data and Insights**....................... 65
*Frederick Mario Fales and Roswitha Del Fabbro*

**The Land of Nineveh Archaeological Project: A Preliminary Overview on the Pottery and Settlement Patterns of the 3rd Millennium BC in the Northern Region of Iraqi Kurdistan**........... 75
*Katia Gavagnin*

**Animal husbandry and other human-animal interactions in Late Ubaid-Early Uruk northern Iraq: the faunal remains from the 2012 excavation season at Tell Nader**............................... 87
*Angelos Hadjikoumis*

**Hawsh-Kori and Char-Ghani: Why the Sassanids built two monuments in the west of Kermanshah and the south of Iraqi Kurdistan** ........................................................................................................ 101
*Ali Hozhabri*

**Across millennia of occupation: the Land of Nineveh Archaeological project in Iraqi Kurdistan: The prehistory and protohistory of the Upper Tigris rediscovered**................................. 125
*Marco Iamoni*

**The Iraqi Institute: Education for Archaeological Research and Conservation**............................ 135
*Jessica Johnson, Abdullah Khorsheed and Brian Michael Lione*
Two seasons of excavations at Kunara (Upper Tanjaro): An Early and Middle Bronze Age city …… 139
Christine KEPINSKI and Aline TENU

Excavations of the Chalcolithic Occupations at Salat Tepe on the Upper Tigris, Southeastern Anatolia ……………………………………………………………………………………………………… 147
Tatsundo KOIZUMI, Minoru YONEDA, Shigeru ITOH and Koichi KOBAYASHI

Insights into the settlement history of Iraqi Kurdistan from the Upper Greater Zab Archaeological Reconnaissance Project …………………………………………………………………………………………… 163
Rafał KOLIŃSKI

Two Ottoman Trade Buildings (Qaisariya) in the Bazaar of Erbil from Building Archaeology to Refurbishment Planning …………………………………………………………………………………………… 173
Dietmar KURAPKAT

Ninevite 5 – culture or regional pottery style? ………………………………………………………………………………………………………………………………………………………………………………… 181
Dorota Ławecka

Back to the Land of Muşaşir/Ardini: Preliminary report on fieldwork (2005-2012) …………………………………………………………………………………………………………………………… 189
Dlshad MARF

New Researches on the Assyrian Heartland: The Bash Tapa Excavation Project ……………………………………………………………………………………………………………………………………… 201
Lionel MARTI and Christophe NICOLLE

Materials from French Excavations in Erbil Area (2011-2013): Qasr Shemamok ……………………………………………………………………………………………………………………………………… 209
Maria Grazia MASETTI-ROUAULT and Ilaria CALINI

Current Investigations into the Early Neolithic of the Zagros Foothills of Iraqi Kurdistan ……………………………………………………………………………………………………………………………………… 219
Roger MATTHEWS, Wendy MATTHEWS and Kamal Rasheed RAHEEM

About Bakr Awa ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… 229
Peter A. Miglus

Magnetic investigations in the Shahrizor Plain: Revealing the unseen in survey prospections ……………………………………………………………………………………………………………………………………… 241
Simone MÜHL and Jörg FASSBINDER

The Bazār of Erbil within the Context of Islamic Trade Routes and Trade Buildings ……………………………………………………………………………………………………………………………………… 249
Martina MÜLLER-WIENER and Anne MOLLENHAUER

Halaf Settlement in the Iraqi Kurdistan: the Shahrizor Survey Project …………………………………………………………………………………………………………………………………………………………… 257
Olivier NIEUWENHUYSE, Takahiro ODAKA and Simone MÜHL

Contextualizing Arbīl: Medieval urbanism in Adiabene ………………………………………………………………………………………………………………………………………………………………………………… 267
Karel NOVÁČEK

Filling the Gap: The Upper Tigris Region from the Fall of Nineveh to the Sasanians. Archaeological and Historical Overview Through the Data of the Land of Nineveh Archaeological Project …………………………………………………………………………………………………………………………………………………………… 277
ROCCO PALERMO

Satu Qala: an Assessment of the Stratigraphy of the Site ………………………………………………………………………………………………………………………………………………………………………………… 297
Cinzia PAPPI
Helawa: A New Northern Ubaid/Late Chalcolithic Site in the Erbil Plain ........................................... 309
Luca PEYRONEL, Agnese VACC and Gioia ZENONI

From the banks of the Upper Tigris River to the Zagros Highlands. The first season (2013) of the Tübingen Eastern Ḫabur Archaeological Survey ............................................................... 323
Peter PFÄLZNER and Paola SCONZO

Gre Amer, Batman, on the Upper Tigris: A Rescue Project in the Ilisu Dam Reservoir in Turkey ................................................................. 333
Gül PULHAN and Stuart BLAYLOCK

In the Neo-Assyrian Border March of the Palace Herald: Geophysical Survey and Salvage Excavations at Gird-i Bazar and Qalat-i Dinka (Peshdar Plain Project 2015) ......................... 353
Karen RADNER, Andrei AŞANDULESEI, Jörg FASSBINDER, Tina GREENFIELD, Jean-Jacques HERR, Janoscha KREPPNER and Andrea SQUITIERI

New investigations at Shanidar Cave, Iraqi Kurdistan ................................................................. 369
Tim REYNOLDS, William BOISMIER, Lucy FARR, Chris HUNT, Dlshad ABDULMUTALB and Graeme BARKER

Materials from French excavations in the Erbil area (2010): Kilik Mishik .......................................... 373
Olivier ROUAULT and Ilaria CALINI

Kurd Qaburstan, A Second Millennium BC Urban Site: First Results of the Johns Hopkins Project .................................................................................................................... 385
Glenn M. SCHWARTZ

The Sirwan (Upper Diyala) Regional Project – First Results ............................................................. 403
Tevfik Emre ŞERIFOĞLU, Claudia GLATZ, Jesse CASANA and Shwkr MUHAMMED HAYDAR

Tracking early urbanism in the hilly flanks of Mesopotamia – three years of Danish archaeological investigations on the Rania Plain .................................................................................... 411
Tim Boaz Bruun SKULDBØL and Carlo COLANTONI

The Activities of the Italian Archaeological Mission in Iraqi Kurdistan (MAIKI): The survey area and the new evidence from Paikuli blocks documentation ........................................ 417
Gianfilippo TERRIBILI and Alessandro TILIA

The Kani Shaie Archaeological Project ................................................................................................. 427
André TOMÉ, Ricardo CABRAL and Steve RENETTE

Philological and scientific analyses of cuneiform tablets housed in Sulaimaniya (Slemani) Museum ............................................................................................................................. 435
Chikako WATANABE

‘Carrying the glory of the great battle’. The Gaugamela battlefield: ancient sources, modern views, and topographical problems ..................................................................................... 437
Kleanthis ZOUBOULAKIS
Magnetic investigations in the Shahrizor Plain: Revealing the unseen in survey prospections

Simone Mühl and Jörg Fassbinder

Prospection by magnetometer in urban environments outside the limits of excavation offers the possibility to unveil the layout of entire settlements, including street networks and residential and other architectural features, without the use of a spade. Questions about city planning, the use of built and open space and the organization of religious and other architecture at sites can all be addressed (cf. Fassbinder 2002; Fassbinder et al. 2005; Benech 2007). Magnetic prospections of sites in the Shahrizor Plain, which have been conducted since October 2013, have the potential to provide insights into the diachronic use of rural space in the region. This paper will focus on the results of investigations which were carried out at Gird-i Shatwan (bečuk – ‘the small mound Shatwan’; SSP-51 & 52), a small Parthian site in the rural environment of Wadi Shamlu in the center of the Shahrizor Plain.

Magnetometer Survey in the Shahrizor Plain: Avoided Spaces

The archaeology of urban spaces in the Shahrizor Plain (Fig. 1.) remains difficult to assess by magnetometer surveys. Due to the degree of settlement continuity, half of the detected sites in the Shahrizor Plain are elevated tell sites. The top layers of the region’s biggest sites date to Islamic periods (cf. Altaweel et al. 2012; Miglus et al. 2013), a time of growth and prosperity in the Shahrizor Plain when major building programs such as hydraulic features such as canals and qanats, which nowadays come to light during construction work in the expanding cities (pers. comm. Kamal Rasheed), shaped this urban landscape. These layers cover older periods and therefore it is difficult to gain information on pre-Islamic periods by magnetic investigations at these sites.

Figure 1. Map of sites in the Shahrizor Plain.

Copyright Archaeopress and the authors 2016
Furthermore large sites as well as middle sized tells are often affected by the region’s recent history. Many sites have not only been badly damaged by looting during the time of the Iran-Iraq war, but have also been damaged by the excavation of tank or gun emplacements. These and other military structures from that time have destroyed the upper levels of many archaeological sites in a region where until recently only very little research had been carried out since the Iraqi salvage projects of the 1960s (Directorate General of Antiquities Baghdad 1960; 1961; Wahbi 1961; Janabi 1961; Husaini 1962; Abu al-Soof 1964; Madhloom 1965; Hijara 1975; 1976). Tell sites were used as strategic positions which often served as observation posts or military positions. Metal shrapnel from both exploded bombs and grenades and from unexploded ordnance (UXO) are commonly found at sites where fighting took place.

Large and small calibre shells and even live ammunition are scattered widely over sites in the entire plain. Within the framework of the Shahrizor Survey Project, which is investigating the past landscapes of the Shahrizor Plain in southern Iraqi Kurdistan, these traces are recorded and documented as part of the historical landscape of the valley. However, the project is careful to only gather this information if the security of the team members is guaranteed.1 Nevertheless these remains also affect archaeological recording in many ways. For instance, they make it more difficult to apply magnetometer prospection in such areas since the metal pieces and disturbed surfaces cause strong spike anomalies in the magnetic field and thus mask the faint magnetic signal of archaeological features. Additionally, a fifth of the sites in the Shahrizor Plain are not safe to investigate due to the distribution of antipersonnel mines, even though these do not disturb the magnetic field dramatically (Fig. 2). The application of other geophysical prospecting methods such as ground penetrating radar or resistivity would encounter even more difficulties. The penetration depth of ground radar is limited by the consistency of the loamy soil which is rich in clay. The use of resistivity prospecting is in general restricted to stone buildings.

Small flat sites in the Shahrizor Plain: Investigation of the rural spaces

Between 2009 and 2011, larger and middle sized sites of the Sharizor Plain were investigated in order to determine the distribution of settlements through the ages as well as their relationship to each other. Starting in 2011, the project’s efforts were focused on the investigation of small flat sites which had been detected on satellite images prior to the survey. These sites, which have only one or a very small number of occupation layers, provide key data for the establishment of a preliminary regional pottery sequence, which is characterised by a large number of until recently unknown or little understood pottery types and chronological developments (cf. Altaweel et al. 2012). Additionally, high density survey methods are applied to examine these sites and to help understand the formation history of individual sites (cf. Nieuwenhuyse et al. forthcoming). Nevertheless, it is not possible to gain information on the use of rural space during certain periods without excavations, which of course remain the best method to examine households and small communal structures in rural regions. Interdisciplinary research teams can reveal not only the

---

1 Security measures also include reading mine reports in advance. In the field it is required to ask for the guidance of a local person from the village nearest to the site. In accordance with security standards for landmine monitoring survey teams (Information Management & Mine Action Programmes 9.11.2007, 132), if no sufficient information is available, sites in high risk areas are avoided and not surveyed.
physical layout of houses and other structures, they can also – by employing archaeobotanical, archeozoological and chemical analyzes, as well as micromorphology – help in reconstructing communal life in its economic setting. Excavations are costly and destructive by nature, though, limiting the degree to which this method of investigation can be applied.

Total field caesium-magnetometers enable us to cover large areas in a reasonable amount of time, while offering high sensitivity as well as a high degree of spatial resolution (25 x 20 cm). Therefore, it is possible to analyze settlement structures of specific periods at selected sites. With the financial support of the Ludwig-Maximilians University of Munich as well as the Johann Wolfgang Goethe University of Frankfurt am Main and in collaboration with the Directorate of Antiquities of Sulaymaniyah (Mühl and Fassbinder 2015; Fassbinder et al. 2015), four sites were investigated with this method in October 2014 and April 2015 (Fig. 1). One of the sites was Gird-i Shatwan (bečuk; SSP-51 & 52), south of the modern village Said Sadeq in the center of the Shahrizor Plain, northwest of Tell Begum on the western bank of Wadi Shamlu (Fig. 3). It consists of a small tell site which can be dated to the Ubaid period with, on the top of the mound, a concentration of Parthian pottery fragments including bowls (Fig. 4.1-3), jars with narrow (Fig. 4.4-7) and wide necks (Fig. 4.8-11) and whole mouth jars (Fig. 4.12-14). The prehistoric occupation did not extend beyond the eroded limits of the tell. A small area (SSP-52) measuring 0.3 ha which stretches up to 100 m to the north exhibits a noticeable change in the color of the ploughed soil, indicating ancient settlement traces. Collected sherds from this area also date to the Parthian period. In April 2015 the site was revisited to carry out a magnetometer survey on the top of the mound. An area of 0.3 ha was prospected within one complete 40 x 40 m grid and three areas within that grid. For the magnetometer survey we applied a Caesium magnetometer in a so called ‘Duo sensor configuration’. This offers the highest possible sensitivity while allowing the prospection to be executed at a high speed (Fassbinder and Gorka 2009; Fassbinder 2015). At this configuration normally more than 98% percent of the magnetometer data in a 40 m grid will vary in the range of ±20 nT from the corrected mean value of the geomagnetic field. The stronger anomalies can typically be ascribed to burnt structures, to lightning strikes, to pieces of iron containing slag or to
Figure 4. Selection of Parthian pottery from Gird-i Shatwan (SSP-51 & 52).
iron rubbish, and these are easily distinguishable both by their different direction of magnetic dipole anomalies as well as by their high intensities (> ±50 nT). To cancel the natural micro-pulsations of the Earth’s magnetic field, a band pass filter in the magnetometer processor was used. The advantage of the ‘duo-sensor’ configuration is that the resulting image provides more information on a site, especially from its deeper parts, thus revealing additional archaeological structures. The instrument measures the Earth’s magnetic field with a sensitivity of ±10.0 pT (Picotesla) with a sampling rate of ten measurements per second; in April 2015, the Earth’s magnetic field in the Shahrizor Plain varied in the range of 47,300±20.0 nT (Nanotesla). For a more sophisticated interpretation we applied a high-pass filter on the data and fused both magnetograms into one image. This procedure allows us to discriminate single features in large anomalies but at the same time also to trace ancient ground floors by their slightly higher magnetic susceptibility. A control unit allows fading in and out of the different magnetogram layers and thus optimizes the interpretation. Moreover the procedure can remove the deeper and mainly geological features and thus provides supplemental information on the type of the anomalies. The results are then displayed in a second grey scale magnetogram image.

At Shatwan, the complete surface of the mound was heavily disturbed by fresh plowing. A watermelon field, pump irrigated with the help of plastic tubes taking water from Wadi Shamlu, extended over the whole eroded mound. We were able to detect lines of broken mudbricks at the same level around the top of the mound with our bare eyes. A limestone pillar base, presumably ploughed out from the vicinity or from a higher spot on the mound, was found at the western border of the assumed mudbrick structure (Fig. 5). The pillar base has a round drum resting on a carved-out protrusion. The upper part has an elevated base for the pillar, which has a decorated torus at the bottom. With the segmented top it shows similarities with simple Ionian pillar bases and can be roughly compared to pillar bases from Azerbaijan which are assumed to have belonged to Parthian buildings (Kleiss 1972). The structure on top of the mound was at least partly constructed of fired bricks. Fragments of bricks, two examples of which showed deep finger imprints and a deep wedge shaped impression (Fig. 6), indicate that at least parts of the architectural remains on top of the mound were built of fired bricks.

**Interpretation of the magnetometry image**

The analysis of the magnetometer image, combined with soil magnetic measurements of selected samples from the top of Gird-i Shatwan, revealed a long rectangular structure measuring 35 x 25 m in a nearly perfect east-western orientation (Figs. 7 and 8). The building seems to rest upon a rectangular mudbrick platform (55 x 38 m), visible on the magnetic image to the north, west,
east and partly also south of the structure. The southern side of the mound is the face most heavily affected by weather related erosion, which is accelerated by the agricultural activities on the mound today. Therefore the observed structures are not as well preserved as on this side. It is difficult to assess the internal structure of the detected building from the magnetometry image. We can discern some linear features as well as the rectangular layout of the ground plan. The fact that the pillar base was ploughed out of the ground shows that the use of the tractor caused damage at the floor level of the structure. Very interesting is the discovery of a square shaped pit measuring ca. 3 x 3 m in the western part of the building. It is very likely that this pit contains burnt in situ material, as indicated by the high intensity of the magnetic remnant magnetization of the anomaly (Fig. 7). Structures protruding from the façade of the central structure might represent staircases leading up to the building or smaller protrusions like towers or semi-pilasters.

During the Parthian Period it was quite common to erect sacral buildings on platforms at elevated places. Therefore it is not unlikely that the structure at Gird-i Shatwan might have served as a sanctuary of a small rural settlement in the vicinity. The ground plan revealed shows multiple enclosures on top of the platform as well as, despite heavy disturbances, traces of a subdivision of the inner part of the structure on Gird-i Shatwan. The outline of the structure is reminiscent of liwans, or smaller temples found in the western sphere of the Parthian empire. The shrines X and XI at Hatra (Safar and Mustafa 1974, fig. 19, 20, plan XXI) are examples of Parthian sacral buildings with long rectangular outer
walls, accessed from one of the longer sides and a cella protruding from the backside of the building. If the interpretation of the detected protrusions as stairways is correct, the Shatwan structure had a regular rectangular shape. This outline with simple internal subdivisions corresponds to a plan known from shrines VI and VIII at Hatra (Lenzen 1955, fig. 7; Safar and Mustafa 1974, fig. 16, 19), where two chambers face each side of a forecourt of the cella, which in this case has a position corresponding to the liwan of Parthian residential and palatial architecture as known, for example, from Ashur (Andrae and Lenzen 1933) or Abu Qubur (Wright 1991). The reconstruction of the liwan or the general position of the cult image is also important for the reconstruction of the entrance to the building. Parthian architecture gives a variety of examples for both models: access from the long side of the building with a direct line of sight to the image or the centralized square plan (e.g. Jandial temple in Taxila (Colledge 1977, 44 fig. 16 E). If the fired structure in the western part of the Shatwan building is interpreted as a small altar, the reconstruction of a ‘Breitraum’ plan can also be suggested (see also Stein 1940, fig. 11). This reconstruction is favoured here. In the end, the true nature of this site can only be revealed by the spade. But we have to fear that the damage to the building is severe. The magnetic image of Gird-i Shatwan might be all that is left from this structure that once covered the top of the mound. Nevertheless, it provides us with a glimpse of Parthian material culture and represents an additional piece of information that will hopefully contribute to a better understanding of the classical history of southern Kurdistan.

Acknowledgements

The authors would like to thank the colleagues of the Directorate of Antiquities Sulaymaniyah for their support and collaboration, especially its director, Kamal Rasheed. In the field we were joined by the archaeologists Saber Ahmed Saber and Hero Saleh. Kak Saleh, the driver of the directorate, saved the campaign after the battery charger of the instrument had exploded.
and his car turned out to be the only possibility to charge the batteries of the magnetometer. In fate’s ungrateful exchange his car was broken by the harsh environment on a mud track near Gird-i Shatwan. We want to express our deepest gratitude to our colleagues who always work with us with patience and dedication.

Bibliographical References


Husaini, M. B. al-. 1962. ‘The Excavations at Tel Bakk-Awa (in Arabic).’ *Sumer* 18:141-64.


Wahbi, T. 1961. ‘The Etymology of the Name ‘Shahrzur’ (in Arabic).’ *Sumer* 17:129-44.