Preliminary Report on the Second Season of Excavation at Shubayqa 1
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NEO-LITHICS 1/14
The Newsletter of Southwest Asian Neolithic Research
Within a few weeks, we editors of *ex oriente* paved the way for three important publications (D. Henry and J. Beaver, eds., on Ayn Abū Nukhayla; by guest editors M. Benz and J. Bauer the pioneering *Neo-Lithics* 2/13 special issue on *The Symbolic Construction of Community*; the book of M. Kinzel on the architecture of Shkārat Msaied and Ba‘ja in our *SENEPSE* series). We are proud of these publications, as are our co-editors Reinder Neef and Dörte Rokitta-Krumnow.

But this would not be an editorial of Neo-Lithics, if we would not be thoughtful about this output: Who can read all these, process all the information, and who can afford to buy all these, in addition to the rapidly increasing enormous output of equally important publications on the Near Eastern Neolithic by other authors, editors and publishing houses? And even more problematic: Who can intellectually and fairly evaluate the constantly emerging new approaches and schools of thought? If one has to publish one’s own material and thoughts without first consulting the eruption of new literature for one’s own topic, doesn’t this severely impact the academic quality, discourse and progress of one’s own publications? More and more we see that colleagues apparently were unaware of recently published materials and ideas on their subjects and have forged ahead in order to cope with the publishing constraints.

Research has become governed by highly problematic tools and concepts since it is fueled by various uncontrollable acceleration mechanisms and developments, such as funding institutions that grant shorter and shorter research terms, the “authority” of rating systems in academic publishing, the ever-growing possibilities of the internet and computer software; the list goes on and on. Does what has been thought to facilitate research gradually become the grave digger of research? Can we continue to hope that things are not that dramatic or worse?

Hans Georg K. Gebel and Gary Rollefson
Introduction

In August 2013 a team from the Department of Cross-Cultural and Regional Studies at the University of Copenhagen returned to the Harra desert to carry out a second, three-week season of fieldwork in the Qa‘ Shubayqa (Fig. 1). Fieldwork involved excavations at the Natufian site Shubayqa 1, kite aerial survey of the historic village site Khirbet Shubayqa, fieldwalking survey along the edges of the Qa‘ Shubayqa, geoarchaeological sampling and salvage excavations at a looted tomb to the east of the Shubayqa mudflat (see also Richter this issue). This report focuses on the excavations at the Natufian site Shubayqa 1, while other elements of the fieldwork will be reported elsewhere.

The 2012 excavations at Shubayqa 1 had focused on three areas, labelled A, B and C (Richter et al. 2012). In this season we concentrated our efforts on further excavating the remains of a circular structure in Area A and clarifying the extent of a pavement in Area B. One key question was to resolve the stratigraphic relationship between the pavement in Area B and the building in Area A. In 2012 a 1 meter wide baulk had been retained between Area A and B to facilitate access and for taking micromorphological samples. Although it seemed highly likely that the pavement in Area B post-dates the structure in Area A, one of our aims was to resolve this ambiguity by removing the baulk.

Shubayqa 1

We already described the geographical context and current appearance of Shubayqa 1 in last year’s report (Richter et al. 2012), but both shall be briefly reiterated here. The Qa‘ Shubayqa is situated in northeastern Jordan in the basaltic Harra desert, ca. 20 km north of Safawi. The Qa‘ itself is a 12 km² large basin that is dominated by an extensive alluvial fan, which interrupts the extensive, low rising basalt boulder fields characteristic of the Harra. The area is situated today in a semi-arid steppe zone that receives less than 200 mm of mean annual rainfall. However, the Qa‘ Shubayqa is fed seasonally by a series of wadis, the largest of which is the Wadi Rajil, that transport extensive amounts of water from the Jebel Druze to the mudflat. This causes at times extensive and rapid flooding in the area. This hydrological situation allows Bedouin to seasonally grow cereal grasses here, which are then used as grazing grounds for sheep and goat herds during the late spring and early summer. It is probable that this hydrological situation is of great antiquity and was intact until the recent construction of dams by Syrian authorities on the other side of the border. It would have provided the area with a seasonally reliable source of fresh water and could have thus enabled periodically recurrent and intensive settlement.

Shubayqa 1 was originally reported by Alison Betts (1998: 27-28) as a Natufian site, and was briefly test excavated in 1996. The site occupies a low mound that rises 3 m above the surrounding area. It is situated 130 m north of a wadi channel that forms the edge of the Qa‘ Shubayqa. The mound consists of basalt boulders, windblown sediment, archaeological deposits, as well as a series of later constructions, including field walls, two rectangular buildings (probably early Islamic) and a recent Islamic tomb that crowns the top of the site (Figs. 2 & 3).

Further inspection of the area surrounding the mound during this season has shown that chipped stone artefacts extend over a wider area around the site, which...
suggests that the original Natufian settlement was considerably larger than previously assumed. Significant bulldozing to the northwest and southeast of the site appears to have truncated a large part of the original settlement and has removed archaeological deposits and architecture. A close inspection of the bulldozed fieldwalls and the walls constructed as part of the early Islamic and later occupation has produced multiple finds of ground stone artefacts that were reused as building material. Based on the dense concentration of lithic artefacts covering the surface of the mound we originally estimated the size of the site to be around 2000 m$^2$. We now believe the site to have originally been more than double that occupation area and estimate the original size to have been between 4000-6000 m$^2$.

**Architecture**

**Area A**

Excavations in 2012 finished as the top of a semi-circular wall became visible across this 5 x 4 m area (Richter et al. 2012: fig. 4). Part of this wall had already been exposed during the 1996 excavations in a trench that was reduced down to the level of a flagstone pavement that was apparently in the interior of what we have now labelled Structure 1. In this season our aim was to remove the remaining fill inside the semi-circular wall to expose the remainder of this flagstone paved floor.

In the first instance this required removal of the circular stone fireplace that had produced a large amount of plant remains last season. We initially thought that this feature might be directly related to Structure 1 below. However, excavation and removal of that feature showed that it bottomed out well above Structure 1’s floor level. There was no clear occupation floor evident that this feature could relate to. It appears to be part of an intermediate occupation event that occurred after the abandonment of Structure 1 and the construction of Structure 2 (see below).

Further excavation of the ca. 40 cm of fill that remained inside Structure 1 produced several patches of dense concentrations of animal bone. These included multiple mandibles that appear to have been left on the floor somewhat randomly. They sat within a deposit of rock tumble mixed with fine windblown sediment. The tumble consisted of medium to large sized basalt boulders, which were however too few to represent substantial amounts of collapsed wall building material. Beneath this rock tumble we found a nearly sterile clayey silt sediment that appeared to slope downward from west to east, banking up against the western wall.
Fig. 3  Shubayqa 1 topographic plan (© Shubayqa Archaeological Project).
This appears to have resulted from aeolian deposition following the building’s abandonment. A very similar pattern can be observed in many abandoned buildings in Khirbet Shubayqa, where deposition of material along the western side is a common sight. This corresponds with the prevailing wind direction in the Shubayqa area, which is generally west to east. This windblown sediment directly overlay a flagstone paved floor that covers the interior of the structure (Fig. 4). Few artefacts or other finds were found sitting on the paved floor, which was somewhat surprising. One was the partial cranium of a gazelle with two horn cores still attached. Set into the centre of the floor was a circular, stone lined fireplace, as evidenced by scorch marks and discolouration on the lining stones, as well as an ash-rich basal fill that contained abundant charred plant remains (Fig. 5). The hearth was dug into natural sediment, suggesting that it represents the earliest occupational phase at Shubayqa 1.

Although only about half of Structure 1 has so far been excavated, it is possible to say that this building was extremely well constructed with great attention having been paid to the assembly of the floor. The building is semi-subterranean, having been built in a hollow that was dug out of the underlying silt. Large basalt slabs were placed standing upright to form the exterior walls. The floor was constructed using large basalt flagstones that were fitted together very neatly with little space in between. Some were evidently worked around the edges and possibly pecked to smooth the surface to make them as even as possible. Heights taken across the pavement show that the floor is nearly perfectly level, which shows the great care taken and time invested in its construction. It is possible that an entrance was located in the southern wall where one flagstone appears to protrude slightly outside the wall line. However, when we cleared out the 1996 excavation trench during the previous year’s season there was a lot of collapse and erosion in this area, which has blurred the original arrangement of exterior wall and pavement. Part of Structure 1 is still buried beneath deposit in Area B and further excavations are required to expose the entire building in plan.

Area B
Excavations during the 2012 season exposed a flagstone paved floor in Area B, which incorporated several ground stone tools, a mortar and a hearth. Disarticulated human remains were found in two locations on top of the pavement and the remains of a neonate were found buried beneath a later pavement repair (Richter et al. 2012). The 2012 excavations did not reveal the full extent of this pavement and since no
Extending Area B revealed that the pavement was in fact not an outside area, but was originally an interior space. A semi-circular wall constructed of large basalt boulders, arching in a semi-circle for c. 4 meters, partially enclosed the structure to the north and east (Fig. 4). It appears that erosion and robbing had removed the remainder of the wall to the south and west, although there is no actual way of reconstructing its original shape and length. One basalt

Fig. 5 Post-excavation view of the circular hearth set into the floor of Structure 1 (© Shubayqa Archaeological Project).

Fig. 6 Truncated burial of a neonate beneath the pavement of Structure 2 (© Shubayqa Archaeological Project).
the mound, basalt slabs put upright to form a circular exterior wall, and finally a pavement was laid down on the inside.

Having clarified the full extent of the structure we began to remove the interior pavement. This showed very clearly that the dark brown sediment that filled the interior of Structure 1 was situated beneath Structure 2. The articulated burial of a neonate was recovered from beneath a repaired part of the pavement in 2012 (Richter et al. 2012). This burial was found to have been cut into a preceding neonatal burial. The removal of the remainder of the pavement in this season allowed us to fully excavate this earlier burial, of which only the left and right humeri, radius and ulna, as well as some metacarpals and phalanges remained (Fig. 6).

So far our excavations have not allowed us to convincingly reconstruct the original appearance of the Shubayqa buildings. The arrangement of the roofs is particularly unclear as there is too little tumble associated with the buildings to suggest that the exterior walls were much higher than at present. There is also so far no evidence for any postholes in the floors or niches that could have held posts in the walls. Either postholes have so far simply eluded us or they could be situated on the outside of walls. The latter seems unlikely in particular for Structure 2, as we have not found any extra-mural postholes here. It is possible that the structures simply were not roofed at all and were in fact open-air structures. However, this idea requires further excavation and study.

Finds

Finds were once more ubiquitous and included chipped stone and ground stone artefacts, worked bone, shell and stone beads, faunal remains, as well as charred plant remains. As previously noted (Richter et al. 2012) the chipped stone assemblage consists of rather small debitage (bladelets, flakes and shatter) and exhausted cores. There is a high degree of secondary reuse of debitage as cores as well, represented by a sizeable group of burinated and splintered pieces. It appears that the distance to flint raw material sources, as well as perhaps longer time spent in residence at the site, led to a high recycling rate of flint. Technological and typological analysis of the ‘tool’ component is ongoing. The preliminary analysis shows that non-geometric microliths, retouched flakes and blades, and notches/denticulates are particularly common. Geometric microliths are also common, but are not as abundant as non-geometric microliths. Geometric microliths are almost entirely composed of lunates. These are generally narrow and short and dominated by abrupt or bipolar backed examples. However, short and narrow Helwan retouched lunates are also present in moderate numbers. Pieces with gloss, scrapers and perforators are rare, as are microburin products. Over 800 ground stone mortar was reused in the wall construction. Further excavation outside this wall to the east showed that this building – Structure 2 – was built in a shallow depression that was dug out of the natural silt of the mound. This was evidenced by a construction cut in which the exterior wall was set. The construction methods evident in Structure 2 closely resemble those used to build Structure 1: first a hollow was dug into...
tools and fragments thereof have so far been recovered. Most are broken pieces and include vessels, mortars and handstones, as well as rarer examples of grinding slabs and pestles. There are over 70 shells beads (Figs. 7-8), as well as a dozen or so stone and bone beads. The stone beads include examples of green stone beads, which become much more common in the early Neolithic (Wright and Garrard 2003). The worked bone assemblage includes several bone points (Fig. 9), a few pins and several fragments.

The faunal assemblage is highly fragmented, which suggests heavy exploitation for meat, marrow, skins, sinew and the bone tissue itself. The preliminary study of the material so far suggests that gazelle is the most dominant species, closely followed by wild sheep/goat. Equids and cattle are present, but are not well represented. Amongst the small mammals we found fox and hare. Tortoise are also present, while a significant number of bird bones have also been recovered. It was possible to identify a number of wild sheep bones in the sheep/goat group in the assemblage. The presence of Ovis Orientalis is highly intriguing, as sheep are not thought to have arrived in the Azraq Basin prior to the introduction of domestic animals during the LPPNB and early late Neolithic (Garrard et al. 1996; Martin 2000). A small number of wild sheep were reported in the very small faunal assemblage recovered from Khallat Anaza (Garrard 1998a), but the Shubayqa 1 material hints at a much larger and persistent wild sheep population. This issue, as well as the faunal assemblage as a whole, requires further study.

Extensive sampling and floatation work has led to the recovery of yet more charred plant remains from Shubayqa 1, adding to the considerable archaeobotanical assemblage from 2012. The material was particularly ubiquitous in the fills of the fireplaces, but significant amounts were found throughout the sedimentary sequence. The analysis of this material is ongoing, but initial assessment suggests the presence of tubers, wood charcoal, fruits and cereal grains (barley in particular). The assemblage suggests that the local environment provided a much richer and more stable supply of water than at present. The Shubayqa 1 archaeobotanical assemblage will in time provide a valuable insight into Late Epipalaeholitic plant use, plant food economies and local vegetation cover and palaeoenvironment.

The abundant charred plant remains recovered from Shubayqa 1 have enabled us to begin to construct a detailed radiocarbon chronology. While the results of this work will be published in detail elsewhere in due course, the dates obtained suggest three distinct occupational signals, one falling into the early Natufian, and two falling into the late Natufian. This suggests occupations during the early and late Natufian phases at Shubayqa 1. Further dates using materials from the 2013 seasons will be analysed in due course, to extend this sequence further.

Discussion

The discovery of an early Natufian occupation in the Harra is significant for a number of reasons. To date, the early Natufian of eastern Jordan has been difficult to define archaeologically, with many key features of this phase being absent, including substantial architecture, large Helwan lunates or large ‘base-camp’ type sites (Betts 1991, 1998: 34-35; Garrard 1991, 1998b). Given the lack of suitable samples many sites had to be dated on the basis of chipped stone tool typologies alone, despite the recognition that the applicability of these typologies outside the Mediterranean zone is circumspect (Olszewski 1986, 1988, 1991; Richter and Maher in press). Our work at Shubayqa 1 shows that this was a substantial early Natufian site, which shows many of the features that are commonly associated with sites in what has usually been described as the ‘core zone’ of the Natufian (Bar-Yosef and Belfer-Cohen 2000; Bar-Yosef 2004, 1998; Byrd 2005; Valla 1995). The site has substantial architectural remains, a large number of heavy-duty ground stone tools, thick occupational deposits, dense concentrations of faunal remains and other material culture, as well as human burials – in other words, many of the features usually thought to be characteristic of a typical early Natufian ‘base camp’. Moreover, Shubayqa 1 shows continuity of settlement: the stratigraphic sequence is relatively unbroken with only slight evidence for the abandonment of Structure 1 (which could have been brief). This is confirmed by radiocarbon dates showing occupations during the early and late Natufian, which suggests that the site was reoccupied on several occasions.

The 2013 excavations at Shubayqa 1 have solidified and confirmed some of our initial findings from the 2012 season and highlight the site as a key locality to better understand the Late Epipalaeholitic occupation of the Harra. Further work at the site will provide us with a more detailed insight into the Late Pleistocene occupation in this eastern semi-arid zone and will allow us to gain a much better understanding of the economic, social and cultural practices and lifeways of these gatherer-hunters.

Acknowledgements: The 2013 fieldwork season was made possible through grants from Det Frie Forskningsråd Kultur og Kommunikation and the Danish Institute in Damascus. We are grateful to Dr. Eng. Monther Jamhawi, Director-General of the Department of Antiquities of Jordan, for granting permission to undertake excavations at Shubayqa 1. We also grateful for the support we received from the Royal Bedouin Police Safawwi as well as the Royal Jordanian Army.
References

Bar-Yosef O.

Bar-Yosef O. and Belfer-Cohen A.

Betts A.V.G.

Byrd B.F.

Garrard A.N.

Olszewski D.I.


Richter T. and Maher L.A.

Valla F.R.

Wright K. and Garrard A.N.
The Construction of Neolithic Corporate Identities

Invitation to a Workshop organized by Trevor Watkins (University of Edinburgh), Marion Benz (University of Freiburg i. Br.) and Hans Georg K. Gebel (Free University Berlin)


http://9icaane.unibas.ch (early bird registration until March 31st, 2014)

One of the most momentous thresholds in the longer-term evolution of human sociality was neolithisation - the transition from more flexible mobile foraging communities to sedentary and complex corporate societies. For too long Neolithic research has concentrated on the economic side of this transition, while the formation and maintenance of these early large-scale communities could not have developed without unprecedented cognitive and social capacities. More than ever before, in these sedentary milieus the human ability to perceive selectively, to memorize associatively, and to act in a collaborative way, evolved by steadily valorizing, symbolically charging and communicating practices, discourses, spaces and things, including building “traditions”. Corporate identities in the Near Eastern Late Epipalaeolithic and Neolithic were not only formed and sustained by commonly accepted tangible things (images, paraphernalia, practices etc.), they were also promoted and transformed by intangible modes, codes and ideological concepts.

The workshop aims to identify and translate the empirical evidence of the different intangibles that helped to form Epipalaeolithic and Neolithic group identities. One of the approaches might be the concept of (inter-)mediality by which cognitive competences behind corporate strategies can be identified. In addition to prehistoric archaeologists, the workshop invites contributions from specialists in evolutionary and cognitive sciences.

Participants with contributions

Prof. Dr. Kurt W. Alt, Institute of Anthropology, Johannes-Gutenberg University Mainz, Germany.
Dr. Eleni Asouti, School of Classics, Archaeology and Egyptology, University of Liverpool, UK.
Dr. Marion Benz, Science Associate, Department of Near Eastern Archaeology, Albert- Ludwigs-University Freiburg i.Br., Germany.
Dr. Amy Bogaard, Lecturer in Neolithic and Bronze Age Archaeology, School of Archaeology, University of Oxford, UK.
Dr. Lisbeth B. Christensen, Department of the Study of Religion, University of Aarhus, Denmark.
Dr. Hans Georg K. Gebel, Institute of Near Eastern Archaeology, Free University Berlin, Germany.
Dr. Theya Molleson, Science Associate, Department of Earth Sciences, The Natural History Museum, London, UK.
Dr. Tobias Richter, Department for Cross-Cultural and Regional Studies, University of Copenhagen, Copenhagen, Denmark.
Prof. Dr. Gary O. Rollefson, Department of Anthropology, Whitman College, Walla Walla, USA.
Dr. Christa Sütterlin, Film Archive of Human Ethology of the Max-Planck-Society, Andechs/Munich, Germany.
Prof. Dr. Trevor Watkins, Emeritus, School of History, Classics and Archaeology, University of Edinburgh, UK.
Domestication of Plants and Animals in the Near East

Invitation to a Session organized by Maria Saña Seguí, maria.sana@uab.cat (Departament de Prehistòria, Universitat Autònoma de Barcelona, Barcelona - Spain) – Jean-Denis Vigne, vigne@mnhn.fr (UMR 7209: Archéozoologie, Archéobotanique: Sociétés, Pratiques et Environnements, Muséum National d’Histoire Naturelle – CNRS, Paris - France) – Sue Colledge, smcolledge@gmail.com (University College London, Institute of Archaeology, London - UK) – Miquel Molist, mimolist@gmail.com (Departament de Prehistòria, Universitat Autònoma de Barcelona, Barcelona - Spain)

XVII World Congress of the International Scientific Association UISPP, Burgos-Atapuerca (Spain), between the 1-7 September, 2014.

The aim of this session is to provide a platform to discuss and exchange ideas, opinions and new theoretical-methodological perspectives on the study of plant and animal domestication. ... One of the main points raised in the debate on the phenomenon of Neolithisation is the need for integration of studies of animal and plant domestication within the context of economic and social change that took place in the early Holocene. Our session is to present and discuss from different sights the processes of domestication, for example, their causes and consequences, based on the wealth of accumulated data from recent research and, most important, with a particular emphasis on drawing together evidence from archaeozoological, archaeobotanical and archaeological studies. Special attention will be paid to new conceptions about early domestication (i.e. “predomestic” agriculture or control of wild animals), to new methodological, technical and high resolution approaches to the study of the processes, to different temporal and spatial scales and to the exploration of the variables that interact during the domestication of animals and plants.

With these aims in mind, the session will be interdisciplinary, including presentations and discussions on the following aspects:

- concepts used in the study of domestication in the Near East;
- new methodological and technical approaches to the study of plant and animal domestication, for example, criteria involved in the definition and classification of the first domestic animals and plants;
- the empirical record and new archaeological evidence for domestication – micro- and macro-spatial approaches;
- economic strategies and the integration of animals and plants: the origins of agricultural and pastoral practices;
- explanatory models for animal and plant domestication;
- the role of the Near East in the study of the domestication and Neolithisation processes: its distinctiveness and heuristic power.

Communication proposals have to be submitted by the 30th of April 2014 to the congress organization. Registrants must indicate which Congress sessions they will attend, before May 31, 2014 (www.burgos2014uispp.es). Please also send a copy of the abstract to us (contact: maria.sana@uab.cat). On the congress webpage you should also find information on the guidelines for the abstracts and the posters, congress inscription and financial assistance for participants:

- registration and proposal forms at www.burgos2014uispp.es
- technical information: uispp2014@viajeseci.es
- scientific information: uispp2014@fundacionatapuerca.es
2014 ToRS International Food Workshop

Food, Identity and Social Change

25-26 September 2014
Department of Cross-cultural and Regional Studies (ToRS),
University of Copenhagen, Denmark

Call for Proposals

Food draws people into the web of life and touches upon everything that matters: it expresses personhood, marks membership (or non-membership) in practically any kind of social grouping and draws lines of where morality begins and ends. Yet, food can also signify very different things from place to place, from kitchen to kitchen and from one time period to another. Social changes – such as peoples on the move (nomads, migrants, tourists), changes in intergroup relations within societies, new technologies (in mass media, biotechnology), mass production of foods, increasing globalization of food and changes caused by war – have been relatively neglected in food studies.

Food is a powerful lens for analyzing identity. This is clearly illustrated in the works of food studies that include Bourdieu’s inquiry into the taste and preferences of the French bourgeoisie and Mintz’s pioneering historical study of how high status sugar produced in the Caribbean became a working class staple to the exciting growth of more recent works by Appadurai on how to create a national cuisine and Wilk’s scrutiny of the complex culinary reactions of Belizeans to colonialism, class differentiation and modernity.

Keynote Speakers
Professor Tamara L. Bray, Wayne State University
Professor Mandy Thomas, Queensland University of Technology
Professor Richard R. Wilk, Indiana University

We welcome contributions on food, identity and social change: Why do we eat what we eat and why have different cultures and societies at different times eaten other things? What fosters social change to affect dietary patterns and changing identities? How can food offer the lens to understand the cultural and social affinities in moments of change and transformation? The topic offers an opportunity to excavate the past, to examine the present and to project into the future.

Anyone interested in presenting a paper at the ToRS 2014 International Food Workshop should submit a proposal of 300 words and relevant contact information by 1 April 2014 to Katrine Meldgaard Kjær (katrinemkjaer@gmail.com)

Organizers: Cynthia Chou (cynchou@hum.ku.dk) and Susanne Kerner (kerner@hum.ku.dk)
Organizing Assistant: Katrine Meldgaard Kjær (katrinemkjaer@gmail.com)
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The Desert Neolithic Settlement at Ayn Abū Nukhayla
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(with 19 chapters, XI+380 pages, 149 figures including 8 colour illustrations, 64 tables. hardcover - 118 Euro)

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Chapter 4. The Stratigraphy, Occupational Phases, and Chronometry, by Donald O. Henry and Joseph E. Beaver
Chapter 5. The Built Environment: Architecture at Ayn Abū Nukhayla, by Joseph E. Beaver
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References Cited

Digital Appendices 2.1, 16.1, 17.1-17.19, and 18.1 can be accessed at http://orgs.utulsa.edu/sands
Recently published by ex oriente:

**Am Beginn des Hausbaus**

**Studien zur PPNB-Architektur von Shkārat Msaied und Ba‘ja in der Petra-Region, Südjordanien**

by

Moritz Kinzel


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