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# NEO-LITHICS 1/11

The Newsletter of  
Southwest Asian Neolithic Research

map by the *Journal of the Royal Geographical Society*

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Editorial

Foreign Neolithic research, like other archaeological research, benefited for decades from the relatively stable conditions governments created in the countries we love. The projects enjoyed stability while privately we listened to the discontent of our workmen, our Arab friends and colleagues, the man on the street. We felt that we were witnesses to problems but behaved as guests should behave. Project interests ruled our sorrows and sympathies.

“Academic silence” continues, observes what’s going on. Some not trusting the restoration of stability in their country of research started to evaluate chances in countries whose governments seem to offer more stable conditions. Shifts in Neolithic research foci may result as a consequence.

Neo-Lithics editorials have always tried not to be opportunistic, and to link our research with the problems in which it takes place. But this time it is most delicate to write the editorial. Thus, we prefer to translate the question of revolution into the Neolithic.

Revolutions, it seems, are sudden, powerful and rapid events. They sweep away old orders and frameworks. Unlike the Neolithic Revolution that took place over thousands of years, Neolithic social and economic implosions must be visible by chronological sharpness: Productive Neolithic frameworks required new types of societal stability and hierarchy, thus creating the conditions for new types of incubator milieus of social and economic overthrow whenever the balance was disturbed. It all started with the Neolithic ...

In grief and deep respect we dedicate this issue of Neo-Lithics to our dear friend, colleague, and former director-general of the Jordanian Department of Antiquities, late Fawwas al-Kraysheh who passed away on July 29th.

Hans Georg K. Gebel & Gary Rollefson

# Insights into PPNB Architectural Transformation, Human Burials, and Initial Conservation Works: Summary on the 2010 Excavation Season at Shkārat Msaied

Moritz Kinzel, Aiysha Abu-Laban, Charlott Hoffmann Jensen,  
Ingolf Thuesen, and Marie Louise Jørkov

## Introduction

Since 1999 the MPPNB site Shkārat Msaied has been excavated by a Danish team from the University of Copenhagen, and throughout eight consecutive campaigns app. 600 m<sup>2</sup> of the settlement was exposed (Hermansen *et al.* 2006; Kinzel 2011). The team returned in the summer of 2010 with two main objectives: to resume further excavation mainly in the southern area of the site, and to conduct preliminary preservation and conservation operations.

Shkārat Msaied is situated *ca.* 13 km north of Petra in the Nemallah region and consists mainly of circular architectural structures which are arranged in clusters. There are open spaces and passages in between the clusters and also smaller room arrangements,

and semi-circular enclosures connected to some of the larger buildings (see Fig. 1).

The results from this season have led to some revisions of the occupation history of the site, as up to six construction phases are identified altogether. Some of the buildings – among others F – have more than two building phases, and most importantly some buildings such as building H bear clear evidence of alterations to more sub-rectangular layouts. Three further human internments containing more than 30 individuals were uncovered from building F. Simple, low impact conservation and preservation techniques of primarily the northern and centrally situated buildings were carried out. Using local material for conserving the constructions proved to be the most suitable at the time being.

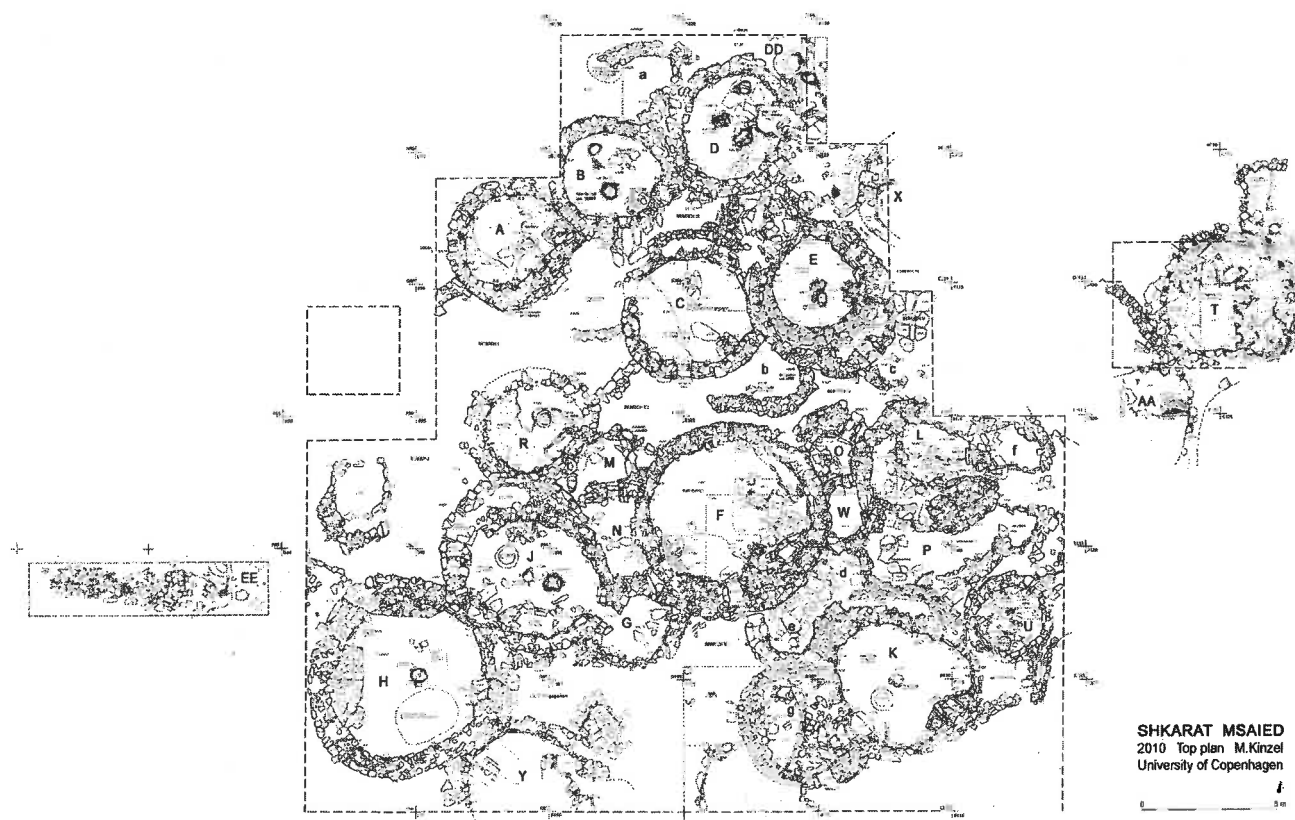


Fig. 1 Site plan, 2010 (after Kinzel 2011: Fig.2.007).

## Building H

Building H is one of the largest buildings discovered so far having a surface interior of *ca.* 28 m<sup>2</sup>. The floor surface was covered with plaster material and is intact in restricted areas. Damage to the floor is most probably caused by heat as a consequence of burning of the building.

A couple of large sandstone slabs were found among the collapsed wall and roof material. These stone slabs bear similar characteristics to the ones observed in building K and thus confirm the theory that large sandstone slabs were placed on the roofs used probably as work platforms (Kinzel 2011). One stone ring – measuring 40 x 40 cm – has a central circular hole measuring 17 cm in diameter. This stone ring might have been used in the roof construction as a frame of a ventilation opening (see Fig. 2). The other large stone feature worth mentioning measures 88 x 152 cm and is 8-13 cm thick (see Fig. 3). The stone slab has rounded edges with pecking marks in one end, and it is tempting to conclude that this stone was originally situated in an upright standing position similar to what has been observed in many of the other buildings such as F and K. Although the function and the original location of the stone slab are unclear, the context implicates that the stone slab seems to have been placed on the roof.

Eleven so-called “wall channels” or “post sockets” were identified along the inner face of the walls, as well as two door beams and a central roof post hole. Two entrances were documented; an eastern and a western entrance; the latter was blocked during the life span of the building. The eastern entrance had at least four stone slabs serving as a staircase leading down to the building. The entrances are quite wide compared to the other buildings, as they measure roughly 75 cm.

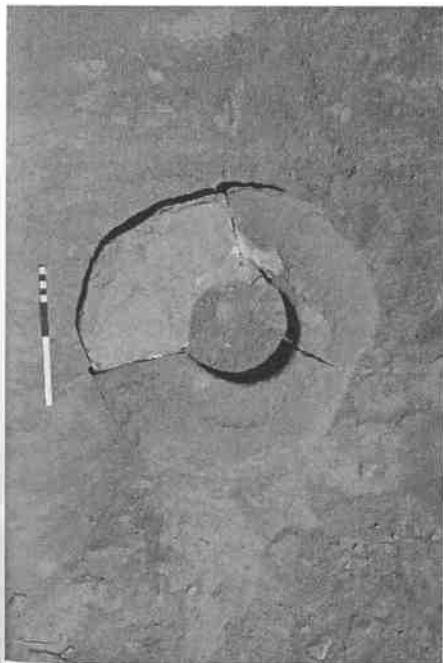


Fig. 2 Stone features in building H, stone ring.



Fig. 3 Stone features in building H: large stone slab with pecking marks and rounded edges.

Building H has proved to be one of the largest buildings in the settlement. There is a question if it served a “special purpose” function as is the case with building F and K (Hermansen *et al.* 2006). The building might have been for communal activities, however the finds retrieved from this building do not particularly point to a specific activity as the finds include the regular ground stone tool inventory as well as chipped lithics.

### The Missing Link?

#### Evidences of Sub-rectangular Constructions

It has previously been suggested that the partition walls belonging to the latest phase in building F were an attempt to create a more rectangular outline to the building. The walls run in a north-south direction on both sides of the building – *i.e.* the east and west (Kinzel 2004, 2011). This season alterations and additions in three buildings could also be of such attempt. In building H two wall segments – one in the west and one in the north – were added to the inner wall face of the encircling-wall of the building. These alterations to the building have transformed the outline of the building interior from circular to a sub-rectangular shape (see Fig. 1). In the area south of building F and west of building K a circular structure – Unit ‘g’ – was partly excavated, and seems to have been out of use, for part of building K was built into it and on top of the eastern half of the structure (see Fig. 4). Sometime during the use of building ‘g’, a wall segment was also added abutting the western wall, as it was observed in H. This gives the building a sub-rectangular or more polygonal outline. Finally, although badly preserved, unit DD, which is situated in the northern area of the site seems to be a rectangular or curvilinear building. A lime plaster floor, a few wall stones, and roof collapse material, together with a plaster feature and a post hole, are the only remains of this building. However, the dating of build-



Fig. 4 Building g (in relation to building K).

ding DD is still vague and conclusions have to wait until the  $^{14}\text{C}$  samples are analysed.

### Building F - Construction Phases

In most buildings two construction phases were identified, and in the 2003 season this was already established for building F. A white plaster floor under which most of the burials were interred belongs to the earliest phase. The later phase consists of a hard packed mud floor to which four partition walls belong as well as a stone circular construction situated at the centre of the building. This season, in the south-western part of the building, an even earlier plaster floor was uncovered. Part of an outer wall of the building was discovered which indicates that the original surface of the building was slightly smaller. Fill between the earliest occupation phase and the plaster floor is quite compact and clayey with an extremely low content of finds. This suggests that before expanding the size of the building and constructing the plaster floor, the building was thoroughly cleared and cleaned. Although only minor parts of the earliest phase have been excavated, it is suggested that the function of the building has clearly changed through its lifespan.

### Human Burials

During the 2010 field season one burial cist (Burial 6) was discovered in the northeastern part of the building, and one intact burial of a child (Burial 8) in the south-western area of building F. Additionally, disarticulated smaller human and animal bones were found in the surrounding fill of Burial 6 and between Burial 4 and 3 (Fig. 5). The area around it and the top of burial cist 6 were covered with several flat sandstone slabs, as was also the case with the other burial cists (Burials 2-5). The bones found in Burial 6 and the surrounding area belong to a total 37 individuals (MNI) – 17 adults and 20 sub-adults. Based on the unorganized positioning of the remains, it can be determined that the burials are secondary, as the bone remains were placed in the cist after decomposition had taken place. The bones seem to have been directly dumped into the cist without sorting or properly organizing them.

Due to the poor state of preservation of the remains, little pathology could be observed. However, one child *ca.* 1 year old exhibited small porotic pitting in the orbital roofs (mild *cribra orbitalia* [CO]). This may be related to anemia or malnutrition, although the etiology behind CO is manifold (Ortner 2003). The lesion was healed, suggesting recovery. Another child – estimated to be at the age of 6 years, showed horizontal lines in the enamel surface (*enamel hypoplasia*) on some of

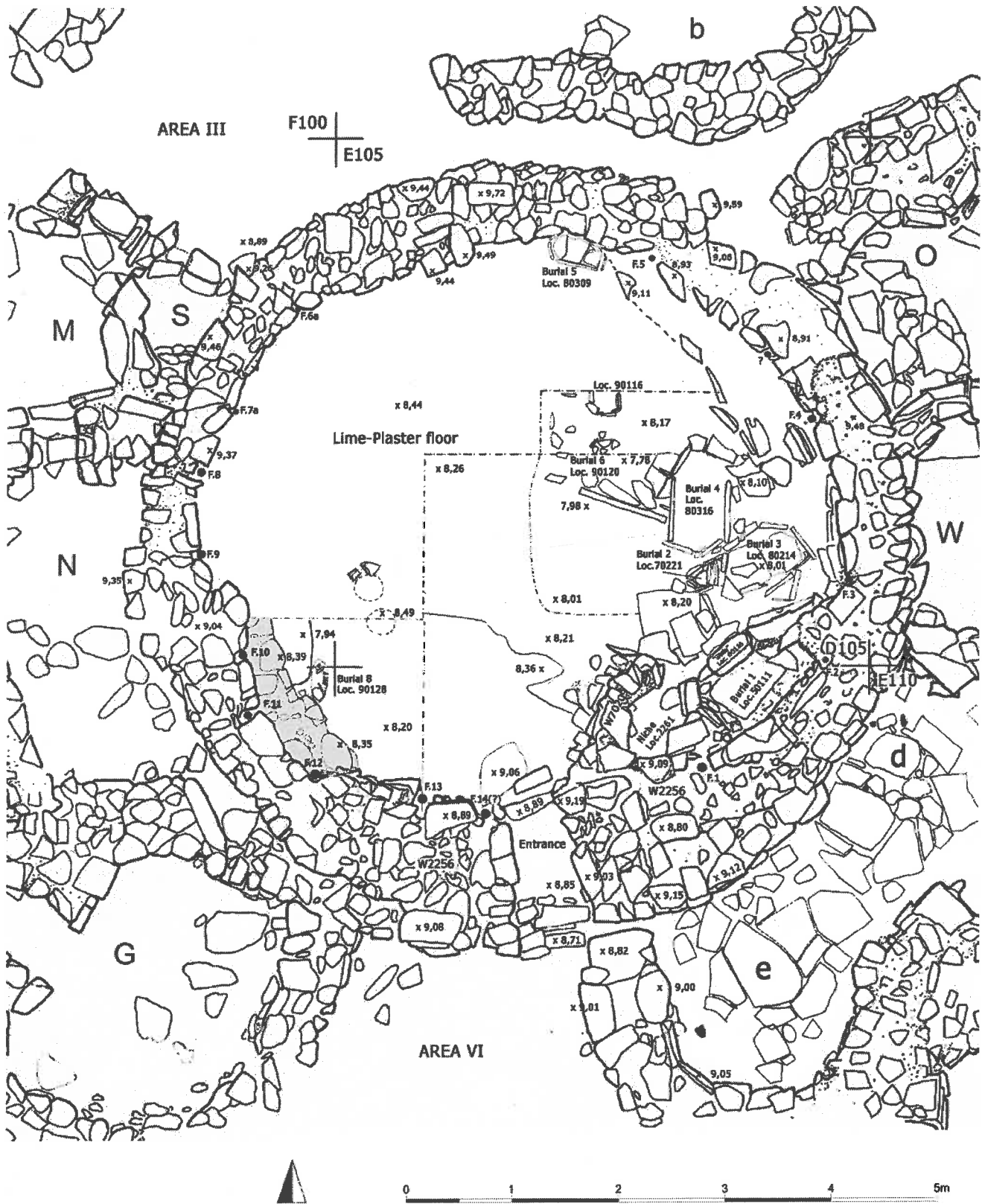


Fig. 5 Unit F plan drawing with indication of burial numbers (after Kinzel 2011: Fig.2.087).

the not fully developed teeth (permanent canines and lateral incisors in the *maxilla*). These lines indicate a disturbance in the formation of the teeth (enamel) and could be due to possible malnutrition, high fever or similar stress of the body (Hillson 1996). The position of the lines suggests the disturbance occurred when

the child was 1-2 years old. A few single adult remains displayed degenerative joint diseases in foot bones or vertebrae, which could be due to overuse and stress on joints.

Burial 8 consists of an articulated skeleton of a 2-year-old child. This is the only complete intact skeleton



Fig. 6 Photo burial 8.

found in this building. The burial was oriented North-South with the face towards the west, and the child was placed in a foetal position (see Fig. 6). Similarly, a child burial was also found in the eastern area of building R, estimated to be 1 year old with the same foetal position close to the outer wall of the building. This burial is the first to be found outside building F, but this discovery does not change our previous interpretation of the function of building F as “an architectural frame for mortuary rites of the inhabitants” (Hermansen *et al.* 2006: 3).

So far a total of 55 inhumations (MNI) have been retrieved from building F alone, and it is expected to find further burials in the areas below the rest of the plaster floor.

### The Finds

The finds consist mainly of chipped stone and animal bones as well as ground stone tools. The ground stone industry comprises a large number of grinders. The materials used to produce the grinders include limestone, granite and basalt as the most common. The grinding stones found were all fragmented. They are represented by seven examples, of which some seem to be unfinished and/or hardly used. A single mortar was found,

as well as some pestles and pounders. The pestles are mostly of basalt, while the pounders are of various materials. Other stone objects deriving from this year's excavation include bowls, polishers and shaft straighteners (Harpelund 2011).

The chipped stone material has not been closely examined yet; however the material in general shows the bipolar knapping technology typical of the PPNB period. Some worked pieces were discovered among the chipped stone material. These mostly consist of arrowheads, primarily of the so-called Jericho type. A few sickle blades, borers, scrapers, knives and hammerstones were also identified among the assemblage.

A possible dump or flint workshop area was identified in the area west of building 'g' as a very high concentration of chipped lithics, counting more than 200 pieces from a very restricted space measuring no more than 90 cm<sup>2</sup> (see Fig. 1).

### Preservation and Conservation Works

In order to avoid further damage to the uncovered archaeological remains, much effort was put on preservation and conservation this season. Most parts of the site were backfilled. The material used to backfill the buildings is of fine grained, sterile sand from the wadi adjacent to the site. The sand and its transportation was organized and conducted by the Petra Development & Tourism Region Authorities - Petra Archaeological Park & Cultural Heritage Department. According to the general guidelines for the preservation and presentation of sites within the framework of the “Neolithic Heritage Trail”-Initiative, to which Shkārat Msaied also belongs, it was decided to keep some of the structures without or with only a slight amount of backfill (Finlayson *et al.* 2007; Kinzel 2008). For the completely backfilled structures, it was considered that the wall tops and upper wall parts be still visible in order to give visitors to the site a clear picture of the settlement layout.

Minor consolidation operations were undertaken, especially of the collapsed door demarcation stones and tumbled wall stones. These were repositioned and fixed by using simple soil/mud mortar as bonding agent. Also some voids in wall structures and open joints were filled with the same soil mortar. The mortar was produced with sieved soil taken from the excavation dump, wadi sand, and water. The mortar should only stabilize the structures as long as the final backfill is not finished. Sand material was then added both inside the buildings and outside in order to prevent fragile walls from further damage and collapse.

For the presentation of the larger houses in the southern part of the site, different concepts for presentation and preservation were discussed with the Petra Archaeological Park & Cultural Heritage Department. A final decision still awaits, although the buildings which bear a high risk of being further damaged, *e.g.* Building K, were also partly backfilled. The measures

taken during this season, *i.e.* cleaning, backfill, consolidation, access-regulation/fencing should be seen as initial steps for more comprehensive site management and preservation investigations in the near future.

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